



A History of The United States Forest Service In Alaska

*By
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Cover photo: Ranger 10 at Old Kasaan village in 1941; a killer whale totem is in the foreground
(Courtesy of U.S. Forest Service).

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Foreword

The Forest Service, the largest bureau within the U.S. Department of Agriculture, has occupied a central place in the historical development of natural resources administration in America. This is especially true in Alaska, where, in contrast to the older West, no significant utilization of forest resources preceded the bureau's establishment. On March 5, 1905, only one month after transferring control of a vast system of western forest reserves from the Department of the Interior to the Department of Agriculture, Congress created the Forest Service in its modern form. In the seventy-five years since those beginnings under Theodore Roosevelt and Gifford Pinchot, the Forest Service has grown and matured, not only in terms of forested lands administered but, especially since World War II, in the numbers and sophistication of its personnel and in the intensity of resource management. With this growth has come increasing controversy about the development and protection of the treasure-house of resources entrusted to it.

The characteristic *esprit de corps* of the Forest Service remains strong, but its policies are constantly challenged by special interest groups motivated by a range of economic and philosophical assumptions. The challenges often evolve into political campaigns in which the contending parties sometimes distort the facts of the past and the present to serve their particular needs and ambitions. The issues are often blurred by public servants themselves, whose goals always include obtaining the budgetary appropriations necessary to maintain current activities and provide for additional "good work." There are, of course, regional variations to this profile. In Alaska, the great land and resource issues of the past decade have drawn a level of public attention to the Forest Service that would have been scarcely imaginable in earlier times.

Public controversy prompts scholars to take stock from time to time—to examine the record of discrete units of our historical past, to measure them in the evolving context of larger themes, and to offer judgments that might yield better understanding of present and future concerns. Students of the Forest Service have gone about this stocktaking in various ways. John Ise in 1920, Jenks Cameron in 1928, and Darrell H. Smith in 1930 offered broadly similar interpretations of federal forestry that remain useful even if reflective of the times in which they were written. More encyclopedic in approach was Samuel T. Dana's *Forest and Range Policy* (1956), which is still widely used as a text and authoritative reference. Henry Clepper's *Professional Forestry in America* (1971) looked more broadly at the guild—also from an insider's viewpoint. Political scientist Herbert Kaufman offered insights into the operation of field personnel in *The Forest Ranger: A Study of Administrative Behavior* (1960), and law professor Glen O. Robinson evaluated recent issues in *The Forest Service: A Study in Public Land Management* (1975). The authoritative history, viewing its subject principally from "the tip of the administrative triangle," is Harold K. Steen's *The U.S. Forest Service: A History* (1976). The serious student must examine all of these books to ascertain the subject's scope—only then to discover that there are many additional scholarly works that contribute detail through the study of biography, organizational functions, programs, special projects, and issues.

Although the Forest Service has been a decentralized bureau almost from its inception, there are surprisingly few studies of its regional and local units. With a few notable exceptions, professional historians have passed up opportunities to examine the Forest Service in the context of its various operational settings. One exception is Charles S. Peterson's *Look to the Mountains: Southeastern Utah and the La Sal National Forest* (1975). There are also some histories of national forests by scholars recently produced as contracted "cultural resource overviews." More typical efforts, usually old-timers' colorful reminiscences brought together by Forest Service staff, are symbolized by *Early Days in the Forest Service* (4 vols., 1944-1976), which are stories out of Region 1 in Missoula, Montana, and *Men Who Matched the Mountains: The Forest Service in the Southwest* (1972), by Edwin A. Tucker and George Fitzpatrick. These are

rich in nostalgia and narration but short on interpretation. The activities of several regional forest and range experiment stations and subsidiary laboratories have been chronicled, but a general scholarly study of research in the Forest Service is badly needed.

The only book-length scholarly study of a Forest Service administrative region is Lawrence Rakestraw's *History of Forest Conservation in the Pacific Northwest, 1891-1913*, a 1955 doctoral dissertation published in facsimile edition by Arno Press in 1979. Focusing on a limited time period in the timber-rich states of Oregon and Washington, Rakestraw's study established a model that finds fruition in his present work.

In relating the history of the Forest Service in Alaska, Rakestraw provides an outline of evolving forest policy nationwide as a context for detailed illustration of the pioneering initiatives and workaday tasks of forest officers on America's last frontier. Alaska's first federal forest, the Afognak Forest and Fish Culture Reserve, was established in 1892 from the efforts of scientists concerned with the conservation of fisheries. The Alexander Archipelago Forest Reserve was proclaimed in 1902 and enlarged five years later to become the Tongass National Forest. It is today the largest of the more than 150 national forests. Also established in 1907 was the Chugach National Forest, which absorbed the Afognak and covered vast regions of south-central Alaska before being reduced at the insistence of opponents.

The central figure of nearly all forestry activity in Alaska from 1903 to 1911 was William A. Langille, an Oregonian who combined romantic adventure with hard-headed management in Forest Service duties performed across endless reaches of timber, swamp, stone, and ice. Langille got help from a small corps of rangers who adapted to Alaskan conditions by learning the use of boats and dog teams (instead of pack mules and saddle horses), enforcing regulations among handloggers, Natives, and other local users of forests (there were few genuine "lumber barons"), and patiently awaiting national recognition and development of Alaska's boundless resources.

During the administrations of his successors—supervisors and regional foresters like William Weigle (1911-1919), Charles Flory (1919-1937), and B. Frank Heintzleman (1937-1953)—national attention finally came, sometimes in an overwhelming rush, and put an end to much of the romance and boyish innocence of the territory. Intensive utilization of forest resources, particularly in the form of a pulp and paper industry promoted by Heintzleman (who later served as governor of Alaska), only began to be realized when such developments as statehood introduced new claimants to resources, and a burgeoning environmental movement erected obstacles to the easy disposition of lands and timber.

Preservationist groups zealously sought to "save" the last of America's wilderness, often without fair regard to the welfare of Alaska's residents. Through publicity campaigns, political lobbying, and court actions, they interposed constraints on the ambitions of resource managers and developers. In the process they besmirched the reputation of an agency that itself had taken many initiatives to preserve scenery, protect wildlife and fisheries, and provide recreational facilities for swelling numbers of residents and visitors. Despite the Forest Service's historic stewardship and its unflinching efforts to assure the "greatest good of the greatest number," it never quite caught up with the environmental pulse, at least in terms of public perceptions. The turbulent issues of the 1970s, ranging widely over the disposition of Alaska's lands and natural resources, have been fought out largely in the "lower 48," often to the consternation and frustration of those who make their livelihoods in the forty-ninth state.

In the pages that follow, Lawrence Rakestraw traces all the issues and the men and forces behind them. His view of nearly eight decades of Forest Service work in Alaska presupposes that the general welfare is best served by a cooperationist approach between the managers and users of natural resources. Whatever their ultimate judgment of Rakestraw's vision of the past, present, and future, all readers will find his treatment of the subject to be original, thoroughly documented, and carefully considered.

Ronald J. Fahl
Forest History Society

Acknowledgments

I am indebted to a large number of people for aid on this project—so many that a listing would resemble Homer's Catalogue of Ships. Five people deserve special mention in this connection. They are W. Howard Johnson, retired regional forester of the Alaska Region; D. Robert Hakala, retired head of Visitor Information Services, Alaska Region; John A. Sandor, current regional forester; Robert A. Frederick, former executive director of the Alaska Historical Commission; and Ronald J. Fahl of the Forest History Society.

Howard Johnson and I became acquainted during the 1940s when he was an assistant ranger on the Wind River Ranger District in Washington State and I was a lowly forest guard. Our trails crossed again in 1968 in Juneau when we discussed this project and got it implemented. He gave me strong support and also a long taped interview that is of great historical significance.

I had used Bob Hakala's historical work while doing historic site studies on Isle Royale National Park, before I met him in 1968. He got me the assignment of reporting the history of Forest Service work in the preservation of totem poles, as part of the Alaska State Museum's totem pole retrieval project. This study, not yet published, should be of great use to those interested in historic preservation.

John Sandor, on becoming regional forester in Alaska, pressed for updating and publication of this manuscript. I had become acquainted with him at the Washington Office of the Forest Service in 1969, while checking on Alaskan sources, and we discovered a mutual interest in history and pinochle. I later visited with him when he was deputy regional forester in Milwaukee, Wisconsin.

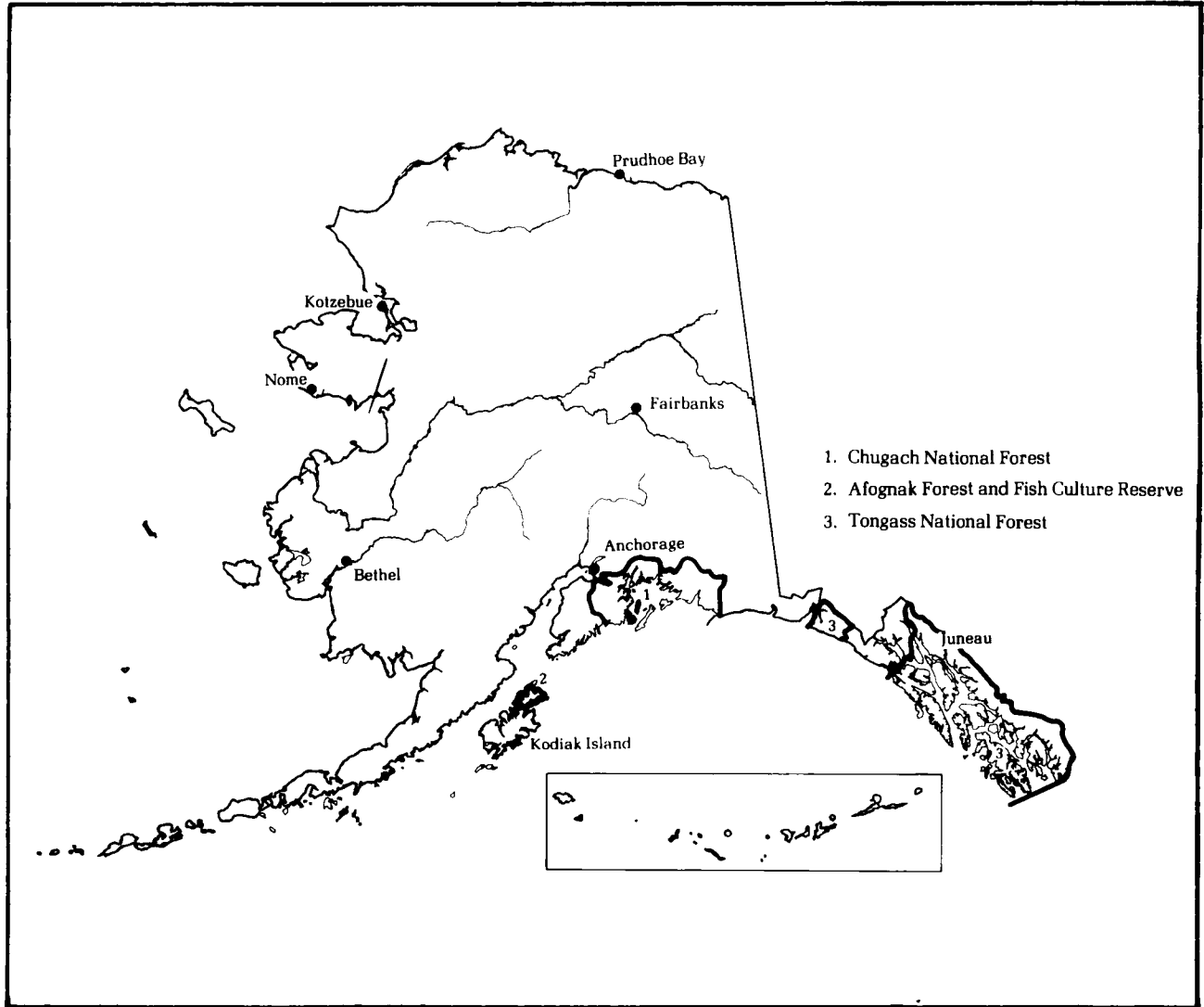
Robert Frederick and I have shared a common interest in natural resources history for many years. Our trails crossed in 1965 when I taught at an NDEA institute at the University of Alaska and again, later, when I was invited to Alaska on NEH projects. To him is largely due the fact that this work is carried to publication.

Ronald J. Fahl, editor of the *Journal of Forest History*, has done editorial work on the manuscript. He asked the necessary questions that saved the writer from egregious errors; he corrected typos and grammatical errors and did a great deal to make this manuscript readable.

Others who deserve mention include Ted C. Hinckley, professor of history at San Jose State University, who made his own researches on Governor John G. Brady available to me and allowed me to make his home my headquarters for a long spell of research; Morgan Sherwood, professor of history at the University of California, Davis, with whom I have had many profitable discussions; the late Martin Schmitt, who, as curator of Special Collections at the University of Oregon Library, steered me to many useful sources; Orlando Miller and Herman Slotnick from the faculty of the University of Alaska, with whom I have discussed much of this work; and Robert N. De Armond of Juneau, to whom most of those who work in Alaskan history are in debt.

My wife Mary has played the role of unpaid research assistant, trail partner, and typist during all of this project. We have shared the high adventure of work in natural resources conservation and history for nearly forty years now, from the rain forests of the Pacific Northwest to the Great Lakes cutovers, the John Steinbeck country of California, and the coastal forests and taiga of Alaska. The partnership has been a rewarding one.

L.R.



I. The three major national forest areas in Alaska

Introduction

There are three geographical approaches possible in the study of forest history. It may be studied as a part of a world movement, as Bernhard Eduard Fernow did in his classic *Brief History of Forestry in Europe, the United States and Other Countries* (1907); or from the standpoint of a single nation, as Jenks Cameron, John Ise, and Samuel Trask Dana studied the movement in the United States; or from the standpoint of a single region, as Filibert Roth studied the movement in Wisconsin, as Charles McKinley treated the Pacific Northwest, or as others have studied particular localities.

As a world movement, forest history offers an interesting and inspiring western story. Forest conservation principles were well established in western Europe by the beginning of the nineteenth century when the movement spread to the European colonies and to the newer nations of the world. In the United States, forestry practices of the Old World were introduced and adapted to different physiographic conditions and governmental structures. From the United States, in turn, forestry practices were exported to the Philippines, China, Canada, and Latin America. There was a great deal of interdependence in the movement, for science and scholarship do not recognize national boundaries. The comparative history of the movement offers both interesting and challenging opportunities for research.

Yet, though the movement was worldwide, its history varied from nation to nation. The structure of the various governments, differences in soil, topography, and economic structure, and political, historical, and cultural traditions all affected the movement. The earliest forestry movements in the Philippines and in China, for example, were started by American-trained foresters and modeled on the forest administration of the United States; but the forces and accidents of history created in the Philippines significant modifications of the American system—and in China a complete break. The study of forest history, from a national point of view, is a significant field of scholarship.

A third approach—the one used in this study—is regional. National policies of resource management have never operated uniformly in all parts of the United States. Our government is federal rather than

unitary, its power divided between a central government in Washington and governments on the state and local levels. The transition from dual federalism to cooperative federalism has historically involved both federal and state court decisions, as well as state, local, and national politics. The effects of land legislation must be studied from a regional point of view; in fact, much federal land legislation has been designed for particular regions. Land resource problems frequently become important regional political issues, as did the Alaskan national forests in 1910, 1915, 1921, and in the 1970s.

The regional approach is useful from another standpoint. Administration in all federal bureaus and agencies having to do with resource management is decentralized, with a great deal of interplay in decision-making between national and regional offices. The national forests of Alaska were originally part of District 6, which also encompassed those in Oregon and Washington. In 1921 they became an autonomous administrative unit, District 8 (later, Region 8 and then Region 10). Just as the states have served as social laboratories for working out experiments in administration, so the administrative regions have served as technical and scientific laboratories for working out plans for resource management. The history of the Forest Service is not only that of the central or Washington Office but also that of the various regions.

In undertaking this regional study, the historian must bear two things in mind. First, the Alaska Region of the Forest Service does not exist in isolation. Its relationship to the national story of resource management and to other administrative regions must be recognized. A study referring only to the region is likely to be antiquarian in nature; one related to national developments will illuminate both regional and national history.

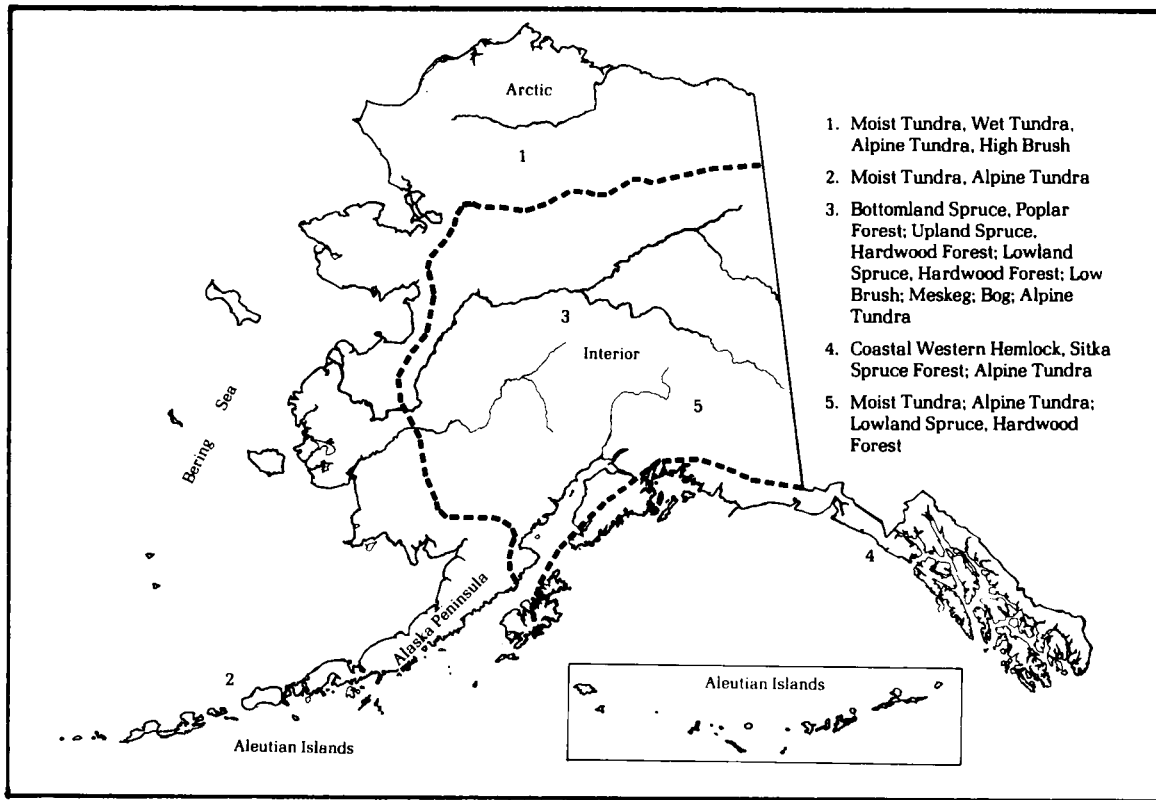
Second, subregions within the region must be recognized. In Alaska, the Chugach and the Tongass national forests represent both different physiographic provinces and divergent historical and economic developments. The differences here are paralleled in the Pacific Northwest by the distinct economic and social climates of opinion on the east and west sides of the Cascades.

The Alaska Region of the Forest Service is a significant area for study from several points of view. It was, with the exception of the Philippines, the most isolated area to come under American forest management; but where George Patrick Ahern was able to build on the Spanish forest regulations in the Philippines, William Alexander Langille started from scratch in Alaska. The early political and administrative history of the forestry movement has been marked by conflicts between conservationists and frontiersmen, and indeed it still is. These frontiersmen included the "frontier individualists," who resented regulation as an infringement on their freedom, and the "corporate frontiersmen," who desired to exploit resources for business reasons. Both frontier individualism and economic colonialism manifested themselves in the public land states of the West, but in no area did they come into such direct confrontation with federal foresters as in Alaska. In his "Rhyme of the Three Sealers," Rudyard Kipling wrote, "and there's never a law of God or man runs north of fifty-three." This phrase was often quoted by Alaskans to apply to the forests as well as to the sealing industry.

The setting and forest resources of Alaska were also wholly different from those in the other states and territories. The spruce-hemlock forests of the coast and the boreal forests of the interior found no counterpart

in other areas. The early history of most other administrative regions in the West had much to do with range and grazing issues, but grazing was of minor concern in Alaska. Logging in the western regions was by animal and steam power; in Alaska, handlogging was the common practice. Fisheries and mining claims presented greater administrative problems in Alaska than in other areas. In the backcountry of the West, pack mules and saddle horses were the standard mode of transportation; in Alaska, boats and dog teams were essential. At the time that the first forest reserves were created, in the 1890s, all the public land areas in the West were either states or organized territories on the verge of statehood; in Alaska the long struggle for self-government, and the frustrations that accompanied it, had a strong effect on the programs of resource management.

Individual personalities and achievements play a major role in history. Regional leaders, such as Edward T. Allen in the Pacific Northwest, Charles Shinn in California, and Smith Riley in the Rocky Mountain West, greatly aided the national forestry movement. In Alaska a similar group of men played great and often heroic parts in the forestry movement. Here the roles of such Forest Service men as William A. Langille, William Weigle, Charles Flory, and B. Frank Heintzleman deserve major recognition.



II. Forest varieties of Alaska

1



The Forests of Alaska: From Prehistory to Creation of the Afognak

The Forests of Alaska: From Prehistory to Creation Of the Afognak Reserve

The Forests of Alaska

Alaska, purchased from Russia in 1867, was the last major area acquired by the United States that has been considered part of the original public domain and to which the public land laws have applied. The public lands and their resources—among them fur, minerals, timber, and agricultural lands—were major influences in the development of national policy in the United States. This study is largely concerned with timber resources, although development of forest policy cannot be separated from other uses of the land. The forests of Alaska, therefore, should be examined in their regional setting.

The forests of southeastern Alaska are the northernmost stretch of a humid, West Coast forest that extends from the southern Oregon coast to Kodiak Island. It is composed of Sitka spruce and western hemlock in the southern Panhandle, with Alaska-cedar (yellow-cedar) and western redcedar in some areas. It is a dense rain forest, with a thick ground cover of devil's club, huckleberry, and other woody shrubs, and an abundance of fallen timber. Because of the heavy rainfall, this coastal forest has been little modified by the action of fire. The forest comprises a relatively narrow strip along the coast and islands, reaching up to an elevation of about 2,000 feet in the south and 1,000 to 1,500 feet in the north. The country is mountainous, and, except along inlets and river bottoms, the forest is largely located within three miles of the coast.

In the Cook Inlet and Kenai Peninsula area there is a transition from the coastal forest to that of the interior. There, the forest cover is not uniform but rather forms a mosaic, comprised of heavily timbered river bottoms, open woodlands, large areas of grasslands, marsh, old burns, and barren ridges and mountains. The timber is predominantly white spruce, black spruce, birch, and black cottonwood. From the Kenai Peninsula northward most areas of the inland forest

have been damaged by fire. All of these forestlands, since the purchase of Alaska, have been owned and managed by the national government of the United States.

Land economists and historians have identified five major phases of federal land ownership in the American past. The initial one was that of acquisition, when the United States acquired territory by treaty, purchase, political maneuvering, or as the fruits of war to obtain satisfactory national boundaries and to extend these boundaries in the interest of security, national pride, or economic welfare. Next was the era of disposal, in which the public lands were used as a substitute for capital in helping to develop and settle the country; they were sold, leased, or given away to individuals, states, and corporations. The third stage was that of reservation, in which individuals became concerned over the consequences of unrestricted land disposal for a variety of reasons, ranging from the aesthetic to the scientific, and during which lands were reserved in federal hands to protect areas of unique scenic beauty, protect endangered species of wildlife, protect watersheds, or preserve forestlands.

The fourth period was one of extensive management, in which the government gave to the reserved areas management that was compatible with the state of scientific and technical knowledge of the time. We are now moving into the final era of intensive management; the body of technical and scientific knowledge is now sufficient to bring resource management to a stage of maximum productivity.

Alaska is unusual in that the time interval of the first four stages was accelerated. The period of acquisition was followed almost instantaneously by those of disposal, reservation, and extensive management. After a long period of extensive management, the transition to intensive management has occurred with dramatic suddenness.¹

The Forests and the Indians

The first use of the Alaskan forests was by its original inhabitants. Here we find two widely different uses of, and influences on, the Alaskan forests.

The Indians of the southeastern Alaskan coast and islands—the Haida, Tlingit, and Tsimshians—were a people of plenty who lived on the bounty of the sea. Theirs was a wooden civilization. They developed an advanced, stratified, and highly complex culture, using the spruce, cedar, and hemlock forests for both utilitarian and artistic purposes. The great Alaskan forest favored the development of woodworking crafts, and the Indians developed methods of using steam and fire to supplement their advanced wood-splitting and carving skills. Houses were large, rectangular, gable-roofed dwellings built of logs and split boards. Water travel, a necessity in the coastal region, was carried on in canoes shaped by fire and adze. They ranged from ten- or twelve-foot crafts for river travel to war canoes fifty or sixty feet long. They were usually propelled by paddle, but some had stepped masts and sails of cedar bark. Bows and arrows, fish spears, pikes, and lances were made of wood. Household furnishings were usually carved of wood or woven from cedar bark. Spruce roots were used in basketry, and rain clothes and hats were made from cedar bark.

Indian artistic and ceremonial life included an elaborate and sophisticated use of wood. The most striking examples of this use were in the elaborately carved cedar totem or mortuary poles, set up as mementos or to display the family crest. Intricately carved rattles, boxes, masks, and other objects were fashioned of wood and used in complex ceremonial rituals.

During the period of Russian occupation, the forests of Alaska received use characteristic of a frontier economic base of extractive industry. The forests were utilized largely as building material for the purposes of settlers. Houses, official buildings, and churches were made of wood, ranging from the massive stockades and government buildings at Sitka to individual wooden dwellings made of logs and held together with wooden pegs. Some shipbuilding was carried on at Sitka, Afognak Island, and Woody Island. Wooden dams and fish traps were constructed, and land on Kodiak Island and the Kenai Peninsula was cleared for agriculture. The Russians established a few sawmills, three of them near Sitka. They were small-capacity, waterpowered mills for the most part, though one was run by steam. But much of the lumber was laboriously whipsawed by hand.⁵

The coastal Indians had very little influence on the original forests. Villages were isolated, and the population density, though relatively dense by aboriginal standards, was not great. Consequently, the toll on timber was not heavy until the coming of the white man. The climate was such that there was very little danger of fire in this region.²

In the Alaskan interior the use of timber and the influence of the Indians on the forest was wholly different. Indians of interior Alaska were of the hunting and fishing, nomadic type, with neolithic civilization. Their influence on their natural habitat, however, was great. Inhabiting a boreal forest with an extremely high fire hazard in summer, they were the cause of innumerable fires.

In his excellent studies of fire in the boreal forest, Harold Lutz found accounts of many fires started by campfires that had been left smoldering. Smudge fires, used to combat gnats and mosquitos, probably caused more fires than any other single type. Fires made to heat pitch, used in gumming birchbark canoes, may have caused occasional forest fires. Alaskan Natives, like other primitive peoples, used fire in hunting, both to clear underbrush in moose drives and to kill trees for use in constructing caribou fences.³

Authorities have varied in their opinions as to the extent and culpability of the Indians as a cause of fire. William A. Langille, for example, felt that in their primitive state they had been extremely careful of fire. It seems certain that prior to the white man, however, aboriginal man was responsible for frequent and destructive fires in the boreal forest, and that these fires had profound ecological effects.

The Russian Era

The effect of Russian occupation on the forest was inconsiderable. Contemporary photographs and paintings show the Russian settlements, like most frontier towns, as clearings in the forest. Around Sitka the supply of yellow-cedar was depleted, and Langille found evidence of extensive Russian cutting in his explorations of the Kenai Peninsula. Some fire damage in the Kenai and in the Kuskokwim regions was attributable to the Russians.⁶

Russian scientists collected and classified plants in Alaska, but the only major attempt at forestry was carried on in 1805. In that year a plantation of Sitka spruce was made on the Aleutian Islands at Unalaska, far beyond the conifer belt. Some of the trees have survived to the present day.⁷

Forest Conservation in the United States, 1870-1891

In American public land policy, the period after the Civil War was marked by two contradictory tendencies. The trend toward exploitation of grazing and forestland increased. There were many causes, including developments in technology and engineering that enabled a speed-up in production, both in the woods and in the mills; the movement of the lumber industry from the Lake States to the West Coast; a liberal land policy and reluctance on the part of the government to punish timber trespass; the shift in business organization from individual owners or partnerships to corporations; a swelling demand for wood and wood products; and a close alliance between business and politics.⁸

During the same period, however, there developed countervailing forces, the roots of which were many and diverse. One was a growing appreciation of nature for aesthetic or recreational purposes and, with it, a desire to retain in public ownership areas of unique scenic, historic, or recreational value. A second and stronger force was the growth and professionalization of science and the desire to bring the forces of science and technology to the management of natural resources. The period after the Civil War was marked by the development of scientific agencies and bureaus of the national government, such as the Bureau of Fisheries, the Geological Survey, and the Division of Forestry, which supplemented the scientific work carried on earlier by the Topographical Engineers and the Smithsonian Institution. A third force was the desire by reformers, such as Carl Schurz, Theodore Roosevelt, and Senator George Edmunds of Vermont, to bring morality into public life and to check an often corrupt alliance between business and politics.⁹

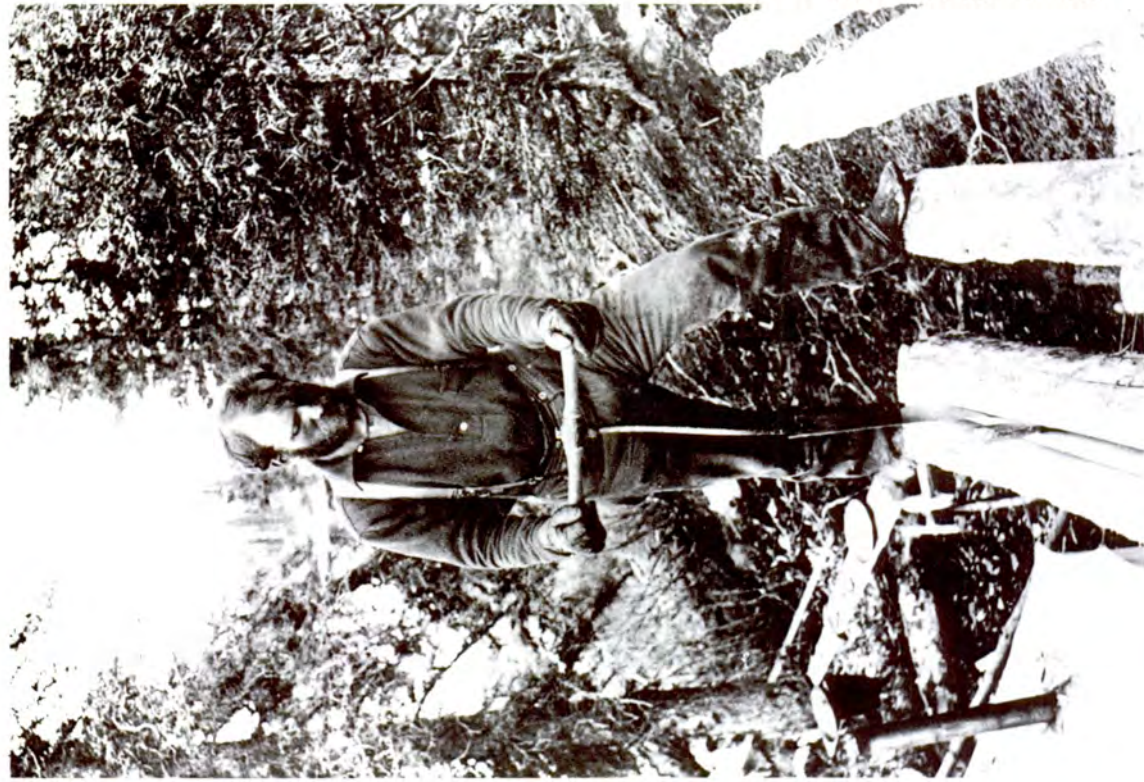
In regard to the forested lands, the movement took many forms. Strong administrative officials like Carl Schurz and Edward Bowers recovered land illegally stolen from the public domain and made efforts to establish better land laws and policies. On the state level, men like Edgar Ensign of Colorado and John Waldo of Oregon petitioned Congress to establish reserves in the mountainous areas to protect city watersheds, perpetuate the forests, and provide recreational areas. The first national park, Yellowstone, was established in 1872, and groups like the Sierra Club and the Oregon Alpine Club agitated for more parks. In New York and in California, state park movements grew.

The early conservation movement was the work of many men, but the leader, both on the federal and the guild level, was Bernhard E. Fernow. A Prussian, educated as a professional forester, he fell in love with an American girl, followed her to the United States,

and married her. Fernow's work in forestry began when ironmasters in Pennsylvania hired him to develop cutting practices that would perpetuate the supply of hardwoods needed in processing iron. In 1886 he became head of the Division of Forestry in the U.S. Department of Agriculture, a post he held until 1898. His term was marked by formidable accomplishments. He carried on a program of public education to inform the people of the need for forestry legislation, thus paving the way for constructive public laws. He aided Edmond Meany and George P. Ahern in establishing forestry education in Washington and Montana. Fernow carried on research in timber physics and in silviculture. He advised state legislators in the framing of state laws for forest protection and utilization, and he recruited into the forestry movement such men as George P. Ahern and Filibert Roth.¹⁰

Fernow's most lasting achievement was the passage in 1891 of the Forest Reserve Act, which permitted the president to create forest reserves from the public domain. There had been demand for such legislation for a long time from informed individuals, states and organizations. Bills were introduced in Congress from 1876 on, but they generally died in committee. Finally, in an omnibus bill dealing with revision of land laws, Fernow, with the aid of Land Commissioner Edward Bowers, was able to add Section 24, subsequently known as the Forest Reserve Act of 1891.¹¹

Within two years after passage, a large number of reserves were created. Most were established by President Benjamin Harrison at the request of local interests and for a variety of reasons. The Ashland and the Bull Run forest reserves in Oregon, for example, were created at the requests of Ashland and Portland to protect their city water supplies. The Cascade Forest Reserve realized the dream of John B. Waldo to preserve the crest of the range in public ownership. The Pacific Forest Reserve, through demand of the cities of Tacoma and Seattle, was created so that Mount Rainier might be preserved unsullied in its natural setting. The reserves in California were established to protect city watersheds and areas of scenic beauty. These early forest reserves, created from 1891 to 1894, represented local interests and aspirations.¹² Such would not be the case in Alaska.



Early residents of Alaska took timber where they found it and sawed boards the hard way.



Forest History Society

Bernhard E. Fernow, a German-born scientific forester and head of the Division of Forestry from 1886 to 1898, paved the way for conservation in America with many unheralded achievements. Upon retirement from federal service, he visited Alaska in 1899 and reported on its forest resources.

University of Washington Library

Forests and Industry in Alaska

Alaska remained isolated from the forestry agitation characteristic of the other states and territories. The early records of the American Forestry Association show no Alaskan members. The civil government was of the most rudimentary nature, and the population was to a large degree transient, rather than made up of men who linked their fortunes with the territory.

Even factual information on Alaska's forest resources was lacking. Fernow's records of forestry investigation in the Division of Forestry show no Alaskan projects. For the most part, government reports on Alaska dealt very little with its timber resources. The most valuable of these early reports, with one exception, is that of William H. Dall, who dealt in some detail with the forests both of the interior and of the coast.¹³

The most important account of the Alaskan forests during the early years of American occupation is that of Ivan Petroff. Petroff had been stationed as a soldier in Alaska and in the mid 1870s collaborated with Hubert Howe Bancroft in historical research. Petroff wrote an account of Alaskan resources in a special report for the Tenth Census (1880), in collaboration with H. W. Elliot; and his account of timber resources is also printed in Bancroft's *History of Alaska*. Petroff wrote that the timber values of Alaska had been both exaggerated and disputed. He reported timber in commercial quantities in the Alexander Archipelago, Prince William Sound, and Cook Inlet, with an abrupt transition to grassland in Kodiak Island and the Kenai Peninsula. Cutting of yellow-cedar near Sitka during the Russian occupation, he reported, had "nearly exterminated" the species. He found Sitka spruce widely used for buildings, fuel, and sled runners, and by the Tlingit Indians to make canoes and planks. Hemlock was favored for fuel. He reported that there were a few sawmills in southeastern Alaska, largely producing for local use, but that dressed lumber was usually imported from Puget Sound or British Columbia. In western Alaska, a sawmill on Woody Island produced sawdust for packing use. Some shipbuilding was carried on, notably on Afognak Island.¹⁴

Some speculative interest in the Alaskan timberlands developed during the 1870s. In 1874 and 1876, bills were introduced in Congress asking for timberland to be sold to California corporations for shipbuilding purposes. The bill of 1874 asked for cutting privileges with the right of purchase after clearing the land.

That of 1876 was to give the Alaska Shipbuilding and Timber Company the right to occupy the island of Kuiu, purchase timberland at \$1.25 per acre, and allow cutting privileges on 100,000 acres of land in adjacent areas. William G. Morris, a special agent of the Treasury Department for Alaska, regarded the project as a land grab. Both bills died in committee.¹⁵

Between 1884 and 1891 frontier extractive industries utilized Alaskan timber more intensively. Mining activity increased rapidly, especially with development of the Treadwell mine on Douglas Island. Fishing also increased, and there was a greater demand for timber for piling, fish houses, and cannery buildings. In 1889 the governor of Alaska reported eleven sawmills in operation. Steam mills were located at Sitka, Metlakatla, Klawak, Howkan, Fort Wrangell, and Juneau; water-power mills at Sitka, Juneau, Klawak, Shakan, and Silver Bay. The major difficulty, he reported, was that there were no suitable laws by which the mill owner could acquire timberland. Agents of the General Land Office recognized the situation, and in a charitable spirit overlooked the trespass. Two years later, however, the governor reported that the Land Office had become less forgiving. Thirteen mills were held in trespass, and the Land Office began proceedings against them. The greatest offenders were the Wilson-Sylvester interests in Wrangell, who had allegedly cut in trespass 1 million board feet plus 3,000 logs; the William Duncan interests at Metlakatla, 3 million board feet; Alaska Mill and Mining Company in Douglas, more than 5 million feet; and Eastern Alaska Mining & Milling Company in Douglas, 300,000 feet.

The logging was primarily for hemlock and spruce; the hemlock was used for lumber and the spruce for salmon cases, barrels, and buildings. There was some utilization of western redcedar and yellow-cedar. Logging practices were of the most primitive nature, wrote the governor: "The loggers are not equipped with teams. They go along the margins and where they can fell a tree on the incline, they do so. It is trimmed well and started with logging jacks, and if everything progresses well it will shoot into the water."¹⁶ The logs, in long lengths, were rafted to the mills. These practices and uses were typical for the period prior to forest reservations.

Afognak Forest Reserve

The initial forest reservation in Alaska came in through the "back door." It related to the conservation of salmon rather than to timber. The creation of the Afognak Forest and Fish Culture Reserve is a significant story in its own right, and it also demonstrates that from the beginning the conservation of Alaska's many natural resources was interrelated.

The U.S. Commission for Fish and Fisheries, established in 1871, was one of the scientific agencies that grew up in the 1870s. Spencer F. Baird, while director of the National Museum and assistant secretary of the Smithsonian Institution, observed during his summer vacations on the New England coast a depletion in the supply of food fish. Baird felt that there was need for research on American fisheries and on the whole ecology of oceanic life. In 1871 Congress established the Fish Commission by joint resolution. Baird, appointed to head the commission, recruited many dedicated men. The commission soon published a scholarly monograph on the fisheries of the Great Lakes; later studies were made of shad and other fish typical of the Atlantic, and experiments were made in establishing hatcheries for whitefish. In 1881 the commission obtained a vessel, the *Albatross*, a naval craft equipped for deep-sea bottom exploration. Baird cooperated with state and private groups in establishing fish hatcheries and had strong support not only from commercial organizations but also from the American Fish Cultural Association. His agency had powerful friends in Congress; by 1887 the budget for fish hatcheries alone totaled \$161,000. Basically, the interests of the Fish Commission were research; they included operation of hatcheries, study of fishing methods, and recommendations on how to obtain a sustained yield of fish.¹⁷

The interests of the commission extended to salmon and thus to Alaska. Two hatcheries were established on the West Coast, one at McCloud in California and the other on the Clackamas River in Oregon. Moreover, the commission gave advice to state agencies and private individuals on the artificial propagation of salmon. During the 1880s the commission made a series of studies of salmon runs on the Sacramento, Columbia, Rogue, and Fraser rivers. By 1889 its interest extended to Alaska.¹⁸

Salmon harvesting in Alaska dates back to the Russian occupation and was continued on a small scale during the first decade under the American flag, most of the product being preserved by salting. The first salmon canneries were built in 1878 when two plants produced 8,159 cases. By 1883 this had increased to 48,337 cases, produced in six canneries. Two years

later six canneries packed 83,415 cases. Both the annual pack and the number of canneries continued to increase, although with some ups and downs. By 1889 there were thirty-seven canneries with a pack of 719,196 cases, and the pack topped the million-case mark for the first time in 1899, although only thirty-two canneries operated in that year.

Government studies of the Alaskan salmon fisheries began during the 1880s, the first being by Ivan Petroff for the 1880 census. The *Albatross* made cruises to Alaskan waters, and the reports of the Fish Commission for 1884 and 1887 included accounts of Alaskan fisheries. The immense pack of 1889, however, both attracted the attention of canners and drove down the price of salmon. Congress, prompted by the Fish Commission, became aware of the danger that Alaskan streams might become overfished and the salmon runs destroyed by reckless and improvident fishing. Consequently, on March 2, 1889, Congress passed a bill for the protection of salmon, forbidding the erection of "dams, barricades or other obstructions in any of the rivers of Alaska, with the purpose of impeding the ascent of salmon or other anadromous species to their spawning grounds." In addition, Congress "authorized the Commissioner of Fish and Fisheries to investigate the habits, abundance, and distribution of salmon in Alaska, and the present conditions and methods of fisheries, in order to recommend to Congress additional legislation."¹⁹

Baird appointed Tarleton H. Bean, the commission's ichthyologist, as head of the investigating group. Bean had previously visited Alaska. Franklin Booth, a cartographer, and Livingston Stone, who had been in charge of the California and Oregon hatcheries of the Fish Commission, accompanied him. They were instructed to make an intensive examination of the Kodiak and Afognak Island areas and to study the natural history of the salmon, the conditions, methods, and statistics of salmon fisheries, and the artificial propagation of salmon on the Alaskan rivers. The party carried on investigations during most of August 1889. They found that gill nets, traps, and seines were used; but the bulk of the catch was by haul seines, which swept the estuaries of the small rivers or were laid from and landed on beaches adjacent to the mouth of a river. This process covered all approaches to fresh water and effectively prevented fish from moving upstream. Gill nets were often stretched from bank to bank, as well.

Livingston Stone's particular interest was in the establishment of fish hatcheries, and he and Booth visited Afognak Island. They found two canneries at

the mouth of the river, the source of which was Afognak Lake. Ascending the river, they noted a dense growth of spruce and an abundance of salmon berries, blueberries, and huckleberries. The stream, except from a small waterfall and a ruined fish trap that dated from the Russian occupation, was without obstruction. Aside from the canneries, there was a small village of about forty dwellings, inhabited seasonally by Natives for harvesting salmon and berries.²⁰

The Fish Commission made a preliminary report in 1889 and another in 1892. The latter noted that since the investigation in 1889 there had been violations of the law forbidding erection of obstructions to spawning salmon in the Alaskan stream. The *Albatross* had investigated such a fish trap on the Wood River, and of this T. H. Bean wrote:

*The Alaskan salmon firms are in the territory to get fish. They prefer to get them without injury to the future of the business if possible, but get them they must or be overcome by financial disaster. In their efforts to win success they have often stretched nets across the mouths of small streams and prevented the salmon from going up until a sufficient number has collected to make a good seine haul possible. They have erected traps in rivers in such a way as to stop every salmon from ascending and, in some cases, actually built impassible barriers to prevent the ascent of fish entirely until the demands of the canneries are satisfied. Even when fishing regulations were adopted by mutual agreement among the firms interested, individual infractions of the rule were only too frequent.*²¹

As fish conservation measures, the Fish Commission recommended a closed season each week, from Saturday evening to Monday morning, and a closed season during September and October of each year; prohibition of the capture of salmon by use of nets or other apparatus within 100 yards of the mouth of any river; the prohibition of more than one seine in the same seine berth; and regulation of the taking of salmon, and limitation of the catch by the Commission of Fish and Fisheries. Finally, the Commission recommended "the establishment of national salmon parks or salmon reservations, as proposed by Dr. Livingston Stone," as a means of keeping up reproduction.²²

Stone's proposal for a national salmon park, as set forth in a paper read before the American Fisheries Society, was a significant and influential piece of conservation literature. It was reprinted in *Forest and Stream*, which under George Bird Grinnell's editorship had emerged as a major national publication in regard to conservation and sport. Stone drew an analogy between the fate of the salmon and that of the buffalo; he

felt that parks for salmon would preserve the species, just as Yellowstone Park was playing a role in preserving the buffalo. He pointed out that the yield of Atlantic salmon was scanty and that there had been a decline in salmon production on the Pacific Coast. He wrote in an eloquent passage:

I will say from my personal knowledge that not only is every contrivance employed that human ingenuity can devise to destroy the salmon of our west-coast rivers, but more surely destructive, more fatal than all is the slow but inexorable march of those destroying agencies of human progress, before which the salmon must surely disappear, as did the buffalo of the plains and the Indian of California. The helpless salmon's life is gripped between these two forces, the murderous greed of the fishermen and the white man's advancing civilization, and what hope is there for the salmon in the end? Protective laws and artificial breeding may be able to hold the first in check, but nothing can stop the last.

He dealt not only with overfishing but with the advance of civilization and particularly water pollution, which made the streams uninhabitable for salmon and other fish. The growth of the country, and particularly the growth of industry, had limited the salmon on the Atlantic coast. In California the debris from mining activities had driven the salmon out of all tributaries of the Sacramento except the McCloud and the Pit rivers. Later, railroad buildings and the establishment of a sawmill destroyed the salmon runs on the McCloud. Similarly, sawmilling toward the headwaters of the Clackamas destroyed the value of the government hatchery on the Oregon river.

In order to save the Alaskan salmon, Stone felt that artificial propagation would do part but not all of the work. Suitable places, he wrote, "can not be relied on to a certainty when they are found, for they are always in danger from logging, mining, railroad building, lumbering, manufacturing, and other causes."

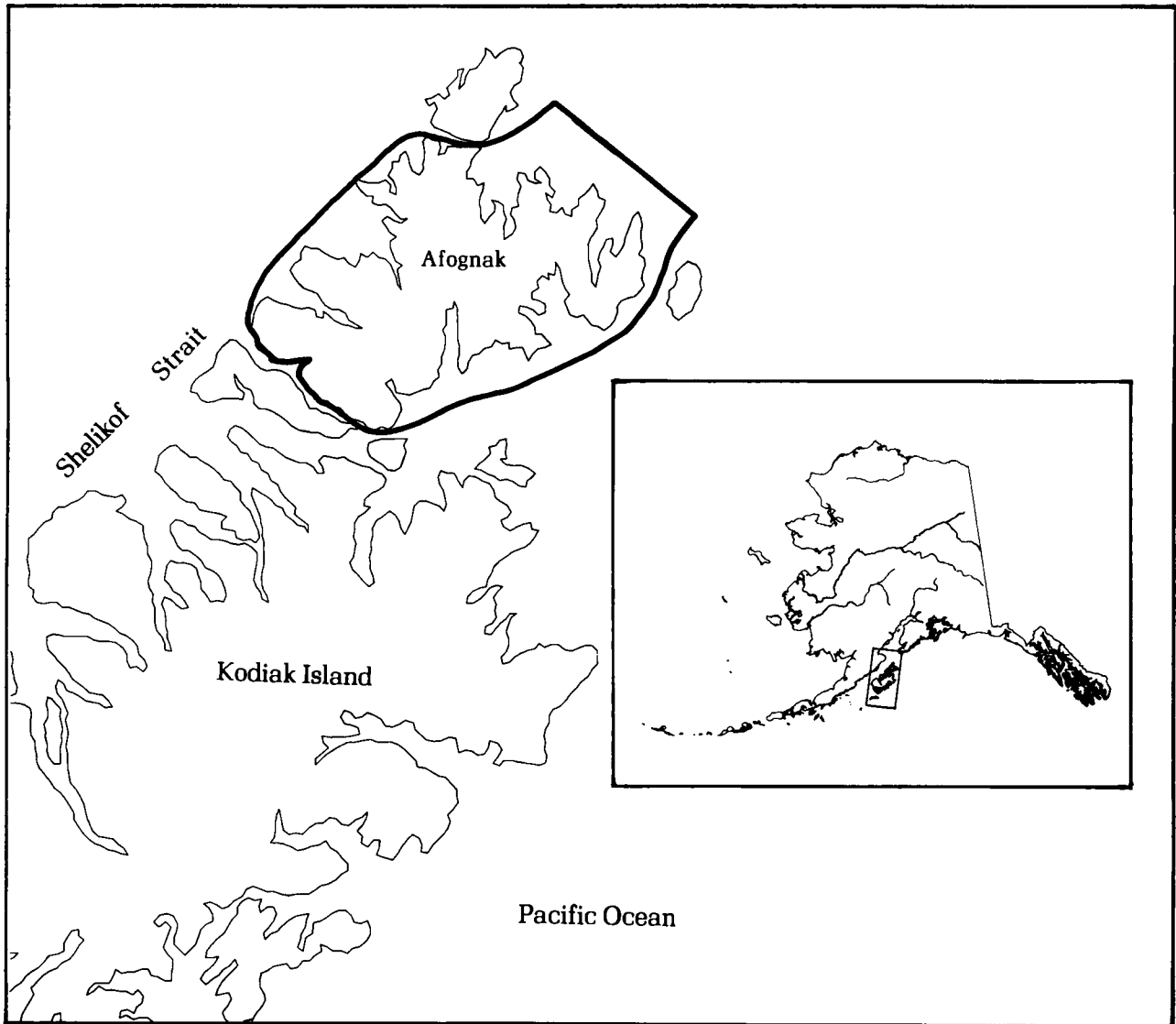
Stone therefore recommended that a salmon reservation be established on Afognak Island. The streams there, particularly the Litnik, which drained Afognak Lake, were well adapted for establishment of a hatchery. The island streams included all varieties of salmon in the Pacific. The climate was mild. There were no mines, mills, or railroads on the island. There were no private holdings of property. There was sufficient timber to utilize for buildings, flumes, and construction of boats, and Natives from a village near the proposed site of the hatchery could serve as a work force.²³

Stone's eloquent plea was heeded. The General Revision Act of March 3, 1891, in which the highly important Section 24 permitted the president to set aside

forest reserves, included several other sections that related to Alaska. Section 11 permitted Alaskan townships to be platted; Section 12 permitted application of the Trade and Manufacturing Act to Alaska, with the individual permitted to take up 160 acres of land for establishing mills or canneries at \$2.50 per acre; and Section 14 permitted the U.S. Commission of Fish and Fisheries to establish fish culture stations on Kodiak and Afognak islands.²⁴

The act was soon utilized. At the request of the

Commission of Fish and Fisheries, Benjamin Harrison created by executive proclamation on December 24, 1892, the Afognak Forest and Fish Culture Reserve. President Harrison stressed the values of the island, both for timber and vegetation and as a site for fish hatcheries.²⁵ Thus Alaska's initial forest reserve came about through concern for salmon conservation. Afognak's major significance is that it was the first forest reserve to be created in Alaska and the only one to be created primarily for fisheries purposes.



III. Afognak Island Forest and Fish Culture Reserve

2

The Alexander Archipelago and Tongass National Forests Through 1910



The Alexander Archipelago And Tongass National Forests Through 1910

Take the Sierra Reserve and place it directly on the coast, sinking it down until the highest peaks are from three to four thousand feet above sea level. Let the Pacific break through the main divide in three or four big straits making as many islands out of the principal range. To seaward, at distances of from ten to fifty miles, sprinkle in innumerable islands of all sizes and drop a few also to the eastward. In place of rivers, creeks and canyons let the reserve be cut into on all sides by countless deep water ways with soundings of from ten to one hundred fathoms, the shores rising abruptly. Throw in many small streams with precipitous falls and cascades. Then strip off the whole surface down to bedrock and boulders. In spots put on a thin layer of muddy soil and cover the whole with moss. Over all except the highest elevations plant a dense forest of spruce, hemlock and cedar, leaving some of the flat places as swamp or "muskeg" dotted with a scrubby growth of pine. Throughout this forest, cover the ground with an exceedingly dense and often almost impenetrable undergrowth of all kinds of brush (chiefly devil's club) and let the ground be as rough as possible. Spread patches of brush, grass and meadow on the higher tops and let the bare rock stick out occasionally. On this area of over 5,000,000 acres imagine a population of only 1,500 Indians and about 500 whites, industries represented by a dozen small copper mines, as many salmon canneries and half a dozen little sawmills. Then consider that, practically speaking, there are no roads or trails and that travel by land is out of the question. Remember that communication is by water only and very uncertain at the best. Picture three or four work horses, a couple of cows and one mule in the whole region. To the climate of the Sierras add perpetual rain in the summer and rain and snow in the winter and the characteristics of the southeastern Alaskan forest may be partly understood. To be thoroughly understood, they must be felt.

—F.E. Olmsted Inspection Report, 1906

The National Conservation Movement, 1891-1909

The years from 1891 to 1897 were an interim period for the forestry movement in United States. Presidents Benjamin Harrison and Grover Cleveland set aside as forest reserves 17.5 million acres of land, largely at the request of local interests. These areas were reserved from use, however, rather than for use; their creation of the reservations not only withdrew them from sale and entry but from any type of use. A number of bills were introduced in Congress between 1891 and 1896 for administration of the reserves, but all failed to pass for one reason or another. Meanwhile, the presence of large reserved areas, and the failure of Congress to provide legislation for their production or management, stirred up vigorous protest among those who normally used them. These included four groups:

stockmen, primarily sheep grazers, who used the mountain meadows of the Cascades and the Sierra Nevada for summer range; settlers, who desired to establish farms in mountain valleys and wanted a supply of firewood; lumbermen, who claimed that too much of the timbered area was in government hands; and politicians, who sought a popular issue.¹

In order to reach a solution to the problem, Secretary of the Interior Hoke Smith was persuaded by Gifford Pinchot and others to request that the National Academy of Sciences make an investigation in the field and recommend specific legislation.² A committee of eminent scientists was appointed, \$25,000 was appropriated to defray their expenses, and the committee made an extensive western trip in the summer of 1896.³

Pinchot and some other members of the committee favored both submission of a plan for management of the reserves and recommendations that new reserves be created; but a majority of the commission recommended creation of the new reserves immediately, prior to perfecting a scheme of administration. Cleveland heeded the latter's recommendations and created thirteen new reserves with an area of 21 million acres—without a management plan.

Creation of the new reserves stirred up a storm of protest and precipitated congressional action. Congress passed the Forest Reserve Act of June 4, 1897, which stated the purposes of forest reserves and provided for their administration. (Often known as the Organic Act, it was actually an amendment to the Sundry Civil Appropriations Act.) Its major feature authorized the Secretary of the Interior to protect the forest reserves against fire and depredations and to "make such rules and regulations and establish such service as will insure the objects of such reservations, namely to regulate their occupancy and preserve the forests thereon from destruction."⁴

Within a month the Department of the Interior issued rules and regulations for administration of the forest reserves. A forest supervisor was placed in charge of each reserve, and fieldwork was handled by forest rangers. The reserves were divided into eleven districts, each under a superintendent who reported to the General Land Office in Washington. There were one or two roving inspectors. The system was not a success, since the superintendents and rangers were political appointees, not foresters, and the General Land Office was ridden with corruption. Therefore, in 1901, a forestry agency, Division "R," was set up in the department under a trained forester, Filibert Roth.⁵

Meanwhile, Bernhard Fernow resigned in 1898 as head of the Division of Forestry, in the Department of Agriculture, and was succeeded by Gifford Pinchot. Pinchot had been educated in forestry abroad, in France and Germany, and had become a consulting forester on the Vanderbilt estates in North Carolina and New York. He was independently wealthy and had access to men of influence and power. His own idealism captivated the imaginations of young men seeking careers of public service, and he became so adept at learning the wilderness skills that many westerners accepted him as one of their own. Above all, he was a personal friend of Theodore Roosevelt, who would become vice-president in 1900 and president the following year.⁶

Roosevelt's interest in resources and conservation stemmed originally from his hobby as a naturalist and his delight in hunting. In 1887 he organized the Boone and Crockett Club, which played an important role in wildlife conservation. Influenced by Pinchot, Frederick

H. Newell, and W J McGee, this interest was extended into other areas—notably into forestry and reclamation. In addition, his own experience in life played a part. He had been a rancher in the Badlands of North Dakota during the 1880s and had developed a firsthand acquaintance with the problems of the West. His own political career as a reformer and his belief that the president should be a steward of the people led him to bring leadership to the conservation movement. Through executive action, seeking appropriate legislation, and personal leadership, he was able both to lead and direct the first conservation movement.

Once in office, Roosevelt created new national forests and national parks, implemented the Antiquities Act of 1906 to preserve areas of significant historic value, established wildlife refuges, progressed toward a satisfactory water policy, modernized old departments and agencies, and created new commissions. He did so in the face of opposition from both political parties, but he was aided by some support in Congress, by capable administrators, and by general support from the people.⁷

The story of the Pinchot-Roosevelt forestry and conservation movement is a familiar one and need not be repeated here. Nevertheless, some aspects of it related to the development of resource management in Alaska and hence require mention. These include, first, Pinchot's administrative philosophy and techniques; second, his relationships with other agencies; and third, the general climate of opinion in which the conservation movement worked.

The years from Roosevelt's accession to the presidency in 1901 until 1905 were marked by the evolution of the Division of Forestry to the Bureau of Forestry to the Forest Service. During this period jurisdiction over the forest reserves was divided. The commissioner of the General Land Office had general control over the public domain, but Division "R," under Filibert Roth, exercised actual control over the forest reserves. In the Department of Agriculture, the Division of Forestry (from 1901 to 1905, the Bureau of Forestry) provided technical advice on the forests. There developed a symbiotic relationship between the Division of Forestry and Division "R." Some men, including Edward T. Allen and Harold D. Langille, held dual appointments in both bureaus. The General Land Office, on the other hand, had the duty of disposing of the public domain. The position of commissioner of this office was a political one, usually given to a man from a public land state. The registers and receivers of the local land offices were also political appointees, and the field men were not all of high caliber. There was often friction between the resource-managing agencies and the Land Office. This friction was a constant theme in the resource history of western states, and nowhere was the friction greater than in Alaska.⁸



U.S. Forest Service

President Theodore Roosevelt and Forester Gifford Pinchot, here photographed in 1907, collaborated to establish a vast national forest system and to bring it under management, but not without political controversy.

Pinchot desired transfer of the forest reserves to the Department of Agriculture, a goal achieved in 1905. Another act a month later designated the Bureau of Forestry as the Forest Service. Two years later, the term forest reserves was changed to national forests. In 1908 an important administrative change was made, decentralizing the administration of the national forests so that all but the most important decisions could be made on the regional level. The national forests of Washington, Oregon, and Alaska, for example, were made part of District 6, with Edward T. Allen as district forester. Allen was the son of a Yale professor who became tired of the academic life and homesteaded in the wilderness of the upper Nisqually River in Washington. Young Allen became a reporter for the

Tacoma Globe. Pinchot met Allen on his 1896 trip west and interested him in forestry. Allen served with both the Department of the Interior and the Department of Agriculture forestry bureaus and became the first state forester in California. A unique combination of public relations man, philosopher, writer, and forester, he was an able administrator.⁹

Several features of Pinchot's administrative ability should be mentioned. He was fortunate in his close relationship with Theodore Roosevelt, who gave him the strong political backing he needed against a conservative Congress and powerful and hostile pressure groups. Pinchot was a good judge of men, and much of his success came from his skill in picking the right men for the right jobs. This related to the field officers, such

as E. T. Allen and William A. Langille, and also to the men in the Washington Office—Overton Price, his associate forester, and F. E. Olmsted, assistant forester in charge of general inspection. He was a good administrator in that he gave his field men full authority and backed up their decisions.¹⁰

The field men working for Pinchot were composed of two different groups. One was the "easterners," trained foresters who had received their education from forestry schools abroad or the American schools at Yale, Biltmore, Cornell, or Michigan. They were technically competent but knew little of the West. The others were "westerners" who knew the country and the environment in which they worked but had little "book learning" in the relatively new profession of forestry. They were practical men, concerned with making forestry work, and impatient of theory when it did not coincide with facts.

At first there was some friction between the westerners and the easterners. Thornton T. Munger, who went west from Massachusetts, resented the fact that trained foresters often found themselves working for men who knew less about forestry. E. T. Allen regarded his first task as getting the college men into the woods "to rub the Harvard off them." Melvin Merritt found himself regarded with suspicion by a supervisor whose education had come from the "University of Hard Knocks." Seth Bullock quit as supervisor of the Black

Hills National Forest when a young forester began quoting to him the Latin names for pine beetles.

Pinchot and others were well aware of this problem. Westerners were necessary to the program, particularly at the ranger and supervisor levels. Americans have always been distrustful of "carpetbag" government, and the westerners were necessary to make national programs palatable to local communities. Meetings of supervisors and rangers, intensive inspection work, directives relating to interpretation of the *Use Book*, and establishment of ranger schools at state colleges—all of these helped the westerners gain the technical skills needed for forestry. At the same time, the easterners, with residence in the West, learned local folkways and practical skills and became accepted by the local communities.¹¹

Pinchot adopted a program of cooperative federalism in his relationships with other agencies and units of governments. Some examples may be cited. The Geological Survey, between 1898 and 1904, surveyed and mapped the reserves, preparing the results in a series of illustrated volumes. The Forest Service cooperated with the Biological Survey in studies of animal distribution and with states in enforcement of game laws. Cooperative agreements were made with state universities and land-grant colleges for ranger schools where men could learn forest skills during the off-season. The Indian Bureau made cooperative arrangements with the Forest Service to manage forests on Indian reservations. An abrupt change came in 1910 with the appointment of Richard Achilles Ballinger as the secretary of the interior. Ballinger insisted on a strict "chain-of-command" administration, and his abrogation of several such agreements were links in a chain of events that led to Gifford Pinchot leaving government service.¹²

The forestry and conservation program of the federal government was controversial, and the attitudes of Oregon and Washington are of significance as they applied to Alaska. Oregon, under the Roosevelt-Pinchot conservation program, became a model of cooperative federalism. Its major use problem, that of grazing rights on the national forests, was settled early. Publicity surrounding the Oregon land frauds of 1904-1908 made Oregonians decide to do better. The leading recreational group, the Mazamas, worked closely with the Forest Service. A number of prominent public servants came to office and made Oregon a showplace of conservation activity. Washington presented a different picture. Although many lumbermen cooperated with the Forest Service against the common enemy, fire, the Puget Sound area provided the Forest Service with its bitterest critics. Julius Hanford, Wesley Jones, J. J. Donovan, Richard Ballinger, and many others expressed the frontier "grab-and-get" philosophy. Their interests often extended to Alaska, which they regarded as an economic dependency of Washington.¹³



U.S. Forest Service

Edward Tyson Allen was made district forester for the Pacific Northwest and Alaska in 1908. Pinchot's policy of decentralization gave much authority to Allen, who was determined to put college men into the woods, "to rub the Harvard off them."

Creation of the Alexander Archipelago Forest Reserve

In Alaska, the period from 1891 to 1902 was marked by slow growth in the lumber industry, due primarily to increased mining activity. Handlogging was the rule; as late as 1902 there were only three steam donkeys in all of southeastern Alaska. On the Afognak Forest and Fish Culture Reserve, the Fish Commission put up a hatchery in 1907 and a few buildings made of planks whipsawed from knotty spruce trees.¹⁴

Knowledge of and interest in Alaska also increased during this period. As early as the 1880s, scenic tours of the Inland Passage were promoted, and ships began to carry tourists as well as freight and prospectors. Propagandists like Sheldon Jackson, Hall Young, and John Muir wrote of Alaska's scenic beauties, and a host of lesser talents wrote of the area for newspapers and magazines. A standard Alaskan tour developed. Ships put out of West Coast ports—Portland, Tacoma, Seattle, or Port Townsend—stopped at Victoria and Nanaimo, British Columbia, and then included in their Alaskan itinerary Wrangell, Juneau, and Sitka, as well as Indian villages and some of the coastal glaciers. The number of tourists increased: in 1884 there were 1,605 sightseers; in 1886, 2,753; and in 1890, 5,007.¹⁵ In addition, the gold rush of 1898 brought up thousands of miners to Skagway, Wrangell, Valdez, and Nome. A large number of guidebooks—most of them inaccurate or of ephemeral value—were published for the benefit of those bound for the Klondike. Finally, business magnates traveled in their private steam yachts to view the country and investigate business investments.¹⁶

The most elaborate and significant of these expeditions was that of E. H. Harriman, the railroad magnate, in 1899. Harriman chartered an Alaskan steamer, the *George W. Elder*, and made what a scholar has called "the most luxurious reconnaissance in the history of nineteenth-century Alaskan scientific investigation." The expedition had cooperation from the Smithsonian Institution and the National Academy of Sciences. The group traveled to Metlakatla, Wrangell, Juneau, Sitka, Prince William Sound, the Aleutian Islands, and up to the Bering Strait, stopping periodically to explore, collect, and investigate—and on one occasion to enable Harriman to shoot a bear. The results of the expedition were published in a series of elaborate volumes that contain a mine of information on Alaska.¹⁷

Bernhard E. Fernow, who had just resigned as head of the Division of Forestry, accompanied the expedition and wrote a report on the Alaskan forests. He knew of the interior only by hearsay and reported the forests as poor by the usual standards. They were, however, an important source of mining timbers and of

fuel for steamboats, and he stressed the need to protect these forests from fire. The coastal forests, though dense and merchantable, could not rival the forests of the Puget Sound area because of their distance from markets, difficulty in logging them, and the preference for Douglas-fir lumber. He thought their best economic use would be as a source of pulpwood. During the tour he examined and photographed the spruce plantation established by the Russians in 1805; he also examined plant succession in the Glacier Bay area.¹⁸

Henry Gannett, head of the Geological Survey, also made the trip and wrote on the forests. He disagreed with Fernow as to the value of the interior forests: "In this enormous region there must be a very large supply of coniferous trees, sufficient to supply our country for half a generation in case our other supplies become exhausted." On the scenery he wrote: "Its grandeur is more valuable than the fish or the timber, for it will never be exhausted. This value, measured by direct return in money received from tourists, will be enormous; measured by health and pleasure it will be incalculable."¹⁹

This turn-of-the-century period was marked by increasing activity on the part of the federal government to gain knowledge of the geography and resources of Alaska. The Army, the Coast Survey, and the Navy carried on active programs of exploration and reconnaissance during this period to aid reckless, improvident, or distressed miners, locate routes to the interior, and chart the coast and harbors. Most of this work came as a result of the gold rush of the 1890s. To this should be added the work of the Geological Survey, which carried on dozens of reconnaissances in Alaska. A tremendous mass of material was collected dealing with the resources, including the timber resources, of Alaska.²⁰

In forestry, tangible results of this interest began shortly after Roosevelt succeeded to the presidency in 1901. Roosevelt desired information as to the possibility of creating forest reserves in Alaska, and he asked a well-known authority on Alaska, Lieutenant George Thornton Emmons, to write him such a report. Emmons, although at the beginning of his long career as a collector, was already well known as an authority on Indian culture and art. In 1886, as lieutenant on a Navy gunboat, he had furnished transportation for the *Princeton-New York Times* expedition to climb Mount St. Elias, and had collected Tlingit artifacts for the American Museum of Natural History and the United States National Museum. He later collected for the Field Museum of Natural History in Chicago, for the Columbian Exposition of 1894, and collaborated with Franz Boas on some anthropological studies. It is reasonable to

suppose that Roosevelt, with his wide-ranging interests, became personally acquainted with Emmons and asked him to carry out this assignment, just as three years later he asked Emmons to carry out another Alaskan investigation.²¹

Emmons's report, sixteen handwritten pages in length and titled "The Wood Lands of Alaska," was sent to Roosevelt in February 1902. The report is a careful and scholarly document. Emmons thought that the forests of the interior Alaska were primarily of value for local use.

While the timber is generally small and of an inferior quality, yet from an economic standpoint, it is of incalculable value to the placer miner, who in the process of melting and sluicing the auriferous gravel deposits—which form the natural wealth of the region—requires wood of almost any character. And it is also very evident that at such inaccessible points fuel and lumber for the necessities of life must be at hand, while the light draft steamboats that ply the thousand miles of shallow river channels must depend on the local wood depots, at short intervals along the shores.

Emmons evaluated the forests of southeastern Alaska, including yellow-cedar (the most prized wood), Sitka spruce, and western hemlock. He remarked that the coastal area had much the same type of forest as did the islands of the Alexander Archipelago but that the timber was not of as good quality, due to the colder climate caused by the immense glaciers. There had been, he wrote, no inroads on the timber. Government regulations forbade the export of timber, so it was cut only for local use.

In making his recommendations, he wrote:

In setting aside of Government timber reservations, I understand that it is the department's desire to interfere as little as possible with the settlement and development of the country, and where conditions are equally favorable to select islands—the limits of which are clearly defined by nature—which are the more sparsely inhabited, and to this end I would suggest the following list of localities fulfilling these conditions:

- (1) The Prince of Wales Island and associate islands to seaward
- (2) Zarembo Island
- (3) Kuiu Island
- (4) Kupreanof Island
- (5) Chichagof Island and associate island to seaward.

He wrote of the conditions on each of the islands. Prince of Wales Island, the largest, contained an abundance of timbered land, including substantial quantities of redcedar and yellow-cedar as well as spruce

and hemlock. There were only about 800 Natives and no white settlement of any size. There were small sawmills at Howkan, Shakan, Kasaan Bay, and Hetta Inlet, and a few canneries. Zarembo Island was an uninhabited island west of Wrangell. Kuiu had a Native population of about 100 and no white settlement. Kupreanof had a Native population of about 500 with no white settlement. Chichagof Island, to the northwest, was heavily forested; it had a mission at Hoonah and a small settlement in Tenakee Inlet. The report was accompanied by a copy of the General Land Office's 1898 map of Alaska, with the islands recommended for a reserve marked by shading.²²

Roosevelt transmitted this report and map to Secretary of the Interior Ethan Allen Hitchcock on April 15, 1902, with the following note:

This Alaska forest reservation strikes me favorably. Let us look into it and if it is proper have it done. Ought not the proclamation to be made to conform a little more fully to the real objective of the case? I have been told that at present they have rather the effect of scaring, and of conveying the idea that we are trying to drive all the people out.

The department took no immediate action. On August 9, 1902, Roosevelt's secretary, William Leob, sent a personal note to the secretary.

My Dear Sir:

The President wishes to know what has been done in reference to the forest reserves of Alaska, which reserves were indicated on the map which he forwarded to the Department with a full report of Lieutenant Evans (sic). It is the President's desire that those reserves be established at once.

Ten days later Secretary Hitchcock sent to the president a draft of the proclamation. The following day, August 20, the Alexander Archipelago Forest Reserve was established by presidential proclamation.²³

There were early protests about the creation of the reserve. Representative J. T. McCleary of Mankato, Minnesota, asked reassurance that the sawmills on Prince of Wales Island—some of which were owned by Mankato residents—would be able to continue operating. James O. Rountree of Baker City, Oregon, who had mining interests on Prince Wales Island, carried the idea of forest influence on rainfall to its logical—or illogical—conclusion. "It is well known," he wrote, "that rain is attracted by large bodies of timber. The rainfall in southeastern Alaska is excessive. If the commercial timber on Prince of Wales Island were cut off, the miners would have the wood they needed for operations, the ground would be rid of its encumbering trees, the climate would become more livable, and prospecting would be easier." He claimed some support of his views by the citizens of Ketchikan, including Alfred P.

Swineford, formerly governor of Alaska and at that time editor of Ketchikan's *Mining Journal*. However, the files of the *Mining Journal* do not bear out this claim. The paper noted editorially that the claims of the *Daily Alaskan* and the *Seattle Post-Intelligencer*, that the reserve would prevent development of the country, were without substance. While the reserve was probably not necessary, noted the *Mining Journal*, regulation of lumbering would do no harm.

Protests also came from Protestant missionary groups. Harry P. Corser, who operated a mission at Wrangell, protested on behalf of the Tlingit and Haida Indians. The reserve would hurt the Indians, he wrote, because they were "loggers by occupation" and, with timber cutting regulated, would have to "revert to primitive conditions or else starve." The reserve would hamper their search for firewood. The mission was trying to persuade Indians to live in individual homes,

rather than in communal houses; the reserve would hinder this effort. Corser also thought the reserve would aid monopoly and injure the small lumber operators of Alaska. It would benefit only the "millionaire lumber trusts of Puget Sound." The reserve was not needed, moreover, due to the rapid growth of timber in southeastern Alaska. Some of the areas, he wrote, had been logged over two or three times since transfer to the United States. The loggers took only the mature timber, which otherwise would die of old age. Finally, the Indians considered the land theirs by right of occupancy and inheritance, and Corser regarded the reserve as an immoral confiscation of property.²⁴

The commissioner and secretary sent out reassuring letters, and the protests were short-lived. It was left to William A. Langille, one of Pinchot's westerners, to bring the reserve under administration and to handle the protests on local grounds.

W. A. Langille

The Alexander Archipelago Forest Reserve was created late in 1902, but management of the reserve was slow in developing. Langille made some examination of the reserve in the spring and summer of 1903 and in the summer of 1904, but not until 1905 did it come under any real management. For the first six years of its management, the story of the Alexander Archipelago and of the Tongass national forests is essentially the story of one man—William Alexander Langille.

Langille came of a family that played an important part in the history of forestry and conservation in Oregon. He was born in Yarmouth, Nova Scotia, in 1868. His family moved to Hood River, Oregon, in 1880. The Langille family became interested in mountaineering. Will and his younger brother, Harold Douglas Langille, made winter trips to the north side of Mount Hood on skis, dispelling the myth that the winter climate at timberline could not be endured. Their father, James Langille, helped construct Cloud Cap Inn, and in 1891 the Langille family took over its management. At that time it was one of the most attractive alpine inns in the country.

Will and Harold became guides on the mountain, taking part in such patriotic rituals as illuminating the summit with red fire on the night of the Fourth of July. They pioneered many new routes to the top of the mountain, were charter members of the Mazamas (the first mountaineering organization on the Pacific Coast), played a part in the creation of the Cascade Range Forest Reserve, and guided the Forestry Commission when it visited the Mount Hood area in 1896.²⁵

At Cloud Cap Inn, the Langilles became acquainted with professors and scientists who visited the area, including William H. Brewer, Henry Gannett, J. G. Lemmon, Frederick V. Coville, and C. S. Sargent. Years later, Will Langille wrote, "These men were the inspiration that awakened better things in our young lives."

In 1897 Will joined the gold rush for the Klondike. He summarized his Alaskan experience as follows:

Left Cloud Cap Inn July 23, 1897. Left Portland on S.S. G. W. Elder July 27, 1897. Left Lake Bennett for Dawson Sept. 11, down Yukon in an open boat. Arrived at Dawson Sept. 25, 1897. Left Dawson for Nome Jan., 1900, with dog team. Arrived Nome March 26, 329½ hours travel time. Left Nome Nov. 10, 1902. Left Washington D.C. for Ketchikan April 6, 1903. Left Washington D.C. April 1, 1904. To Nome July 1904 via Prince William Sound and Dutch Harbor. Left Seward January 1905 to Fairbanks via Matanuska Pass & Mt. McKinley region. Left Fairbanks May 10 walked to Circle City arrived May 14. Then to Dawson, Juneau & Wrangell. Left Alaska September 1911.

Thus, briefly, Langille summarized a northern career with enough adventure in it to fill a book. In the Klondike, he shared a cabin with Jack London and became acquainted with the dog "Buck," the hero of London's story, *The Call of the Wild*. He hunted game for the market on the Stewart River, cooked in a restaurant in Dawson, and later became night man for the Alaska Commercial Company. Finally, feeling his "string had

played out," he traveled over the winter ice to the black sands of Nome. He was prospecting there in 1902 when he received word that Pinchot wanted him to work in Alaskan forestry. Langille went to Washington to confer with Roosevelt and Pinchot on the Alaskan forests.²⁶

Pinchot employed Langille as a forest expert. In April of 1903, Langille returned to Alaska to report on the administrative needs of the forests. There he made his headquarters at Yes Bay, a cannery settlement near Ketchikan. He traveled up the Stikine River by canoe to the Canadian boundary, visited mills on or near the reserve, and sailed up Portland Canal, the southern boundary with British Columbia, to investigate timber theft by Nass Indians on the American side. He returned to the states in the fall. Early in 1904, he examined and reported on a proposed addition to the Sierra (North) National Forest in California. Then in April he made a long reconnaissance from Juneau to the Controller Bay and Prince William Sound areas and thence north to Norton Bay. He returned to Valdez in the fall and spent most of the season and early winter making an examination of the Kenai Peninsula and writing up reports. Between January and March of 1905, Langille traveled by dog team from Seward to Fairbanks to examine the forests of the interior. He then returned to Ketchikan to take on new duties as forest supervisor of the Alexander Archipelago Forest Reserve.²⁷

Langille was a man of magnificent physique, an accomplished mountaineer, and a skilled hunter. On his long overland reconnaissances, he lived off the land on rabbits and ptarmigan shot with his .22 rifle or grayling caught with improvised flies. He was a good field botanist and mammologist, an expert on mining law in Canada and the United States, and an able cartographer. His skill as a photographer dated back to his Oregon days when he took many scenic views of Mount Hood. He had a bluff, hearty manner, highly acceptable to most Alaskans. He was utterly honest and carried out his work in the face of attempted intimidation. His letters to reserve users were blunt, forceful, and at times undiplomatic. A perfectionist, he was impatient of shortcomings in others, found it hard to delegate authority, and at times seemed to his subordinates to be overbearing. Like his brother Harold, he was an accomplished writer, having a keen sensitivity to natural beauty coupled with a somewhat sardonic sense of humor. His reports are the best sources available for an accurate picture of forestry in a unique setting.²⁸

In Alaska, he had as many duties as Pooh-Bah of Gilbert and Sullivan's *Mikado*. "I can tell you of the travels of Langille and Wernstedt," wrote Melvin L. Merritt; "these stories read almost like those of the early explorers, as indeed they were." Langille

traversed and mapped boundaries for the reserves, traced down timber trespass, made timber sales, acted as disbursing agent, examined mining claims, made out special occupancy permits, enforced game laws, and did cooperative work with such federal agencies as the Biological Survey, the Fish Commission, and the Geological Survey. He kept a meticulous set of books and records under the most difficult of circumstances. In addition, he explained to the Alaskans the purposes and uses of the reserve, and he kept the Washington Office informed of its needs—all on the magnificent salary of \$1,800 to \$2,000 per year.

Langille first set up headquarters at Wrangell, but he soon moved to Ketchikan, which was a larger trade center and where the mail boats stopped more often. He shared offices with a customs collector at first but within a month wrote, "Quarters are scarce, but I have secured a good isolated place built on pilings for twenty dollars a month, heat light water and caretaker furnished."²⁹

His main problem was to secure a boat for travel around the islands and to use as an office afloat. Much of the correspondence between Langille and the Washington Office dealt with the need of a boat and its specifications, but not until 1909 was one obtained. Meanwhile, Will improvised. Records show that he traveled by mail boat a good deal and at times chartered boats at \$10 per day. During the Olmsted inspection trip of 1905, he rented a launch, the *Walrus*. For much of his work he chartered a sloop, the *Columbia*, from Peter Makinon, a Nova Scotian, at \$5 per day; it had no engine. Langille was often stormbound and sometimes he and Makinon had to row the vessel for long distances because of adverse winds and tides. In 1908, however, a large gasoline launch, the *Tahn*, was built to Langille's specifications; it was put into service the following year.³⁰

Langille worked alone during much of his stay in Alaska, but there were many companions, too. His letterbooks show that he occasionally hired scalers on a day-to-day basis. In 1905 he acquired an assistant ranger, Richard Dorwalt, a former Navy man, but he was unsatisfactory and resigned in 1906 at Langille's request. In 1908 W. H. Babbitt, a ranger from California with two years' experience, was brought up and stationed in Chomly Sound to handle timber sales there. He had a small rented launch, the *Elk*. A man named Howard M. Conrad also served between 1908 and 1909 as deputy forest supervisor. James Allen and George Peterson both came to the forest in 1909, and Roy Barto came to Alaska in 1910. With the creation of the Chugach National Forest, Lage Wernstedt came to assist Langille in handling the northern area. Lyle Blodgett was hired as engineer of the *Tahn*; he was a



Mrs. Ivan Langley Collection

William A. Langille "dressed in his best suit of clothes" when called to Washington in 1902 to discuss his Alaskan duties with Gifford Pinchot and Theodore Roosevelt. The young man from Oregon pioneered federal forestry in Alaska.



George Drake Collection

Lyle Blodgett (in cook's cap) and unidentified companions aboard the *Tahn*.



Tongass Historical Society

U.S. Rush, mining entrepreneur of the Ketchikan area and archfoe of the Forest Service.

native of Iowa who worked his way north to Alaska by 1904 and served the Forest Service for many years. Langille also acquired a clerk named Bush in 1908.³¹

The population of the Alexander Archipelago Forest Reserve was mainly engaged in mining and fishing. There were several types of mines in the area, located principally on Prince of Wales Island. These included copper prospects in the Hetta Inlet area and at Niblack; and marble quarrying on both the northwestern and southeastern coasts of the island. Most of the mining claims had not passed to patent. There were dozens of fisheries and salteries within the reserve limits. Both the mining companies and the fisheries used the timber—the miners for buildings, tramways, and timbering, and the fishermen for their docks, buildings, fish boxes, and dory construction.

There were only a few small sawmills on the reserve in 1905. These included a mill on Kasaan Bay with a 25,000 board-foot capacity per day, but idle in 1905; one at Hunter Bay, capacity 10,000, owned by a fishing company; a small mill at Howkan, capacity 5,000; a waterpower mill at Coppermount that cut 600,000 feet in 1905; one at Shakan, then being rebuilt to have a capacity of 50,000; and two small mills of limited capacity in Wrangell Narrows. The larger mills, which used timber rafted from the reserve or from the mainland, were those at Juneau, Douglas, Wrangell, and Ketchikan.³² They were not located on the reserve.

Sentiment toward the reserve in the beginning was mildly hostile. Langille wrote to Pinchot in 1903 that he found Wrangell the main center of discontent. Some hostility flared up when Langille became supervisor in 1905, because the inattention of the government since 1902 had given many people the idea that nothing would be done in reserve regulation. General Land Office officials were frankly hostile toward the reserve. Recorders of mining districts claimed that they had never been officially notified of its creation and, as late as 1906, were recording any land claim even though they knew its location was a trespass on the reserve.³³

The "bellwether" of the antireserve forces was U.S. Rush of Kasaan Bay. Rush was one of the owners of the Rush and Brown Copper Mine at Karta Bay, an arm of Kasaan Bay. Powerful in local politics, he had been U.S. commissioner for the area but resigned his post in order to attend the Republican territorial convention and introduce a plank calling for abolition of the reserve. Writing to Theodore Roosevelt on October 17, 1905, he asked for abolition of the reserve for a variety of reasons. He claimed that, first, there was not enough good timber to justify a reserve; second, timber was not necessary to insure rainfall in the area; third, the country was chiefly valuable for minerals; fourth, all

available timber would be needed for development of the country; fifth, use of timber and occupancy of the land should be a right, not a privilege; sixth, inability under the law to gain title to the land retarded development; and seventh, the rules for forest management when applied to Alaska were not suitable for the territory. A man of many grievances, he elaborated on them in letters to Pinchot, Langille, and the *Seattle Post-Intelligencer*.

Faced with these protests, Pinchot sent Frederick E. Olmsted, assistant chief in charge of general inspection, to examine the Alaska forest situation in 1906. He was to examine not only administrative problems but also the possibility of creating new reserves. Olmsted discussed Rush's problems with him in Alaska; toward the end of their discussion, Rush remarked that the system was one "perfectly constructed for the intrusion of graft." Thereupon, Olmsted wrote, "The small amount of self-control which still remained with me gave out, and I at once refused to discuss the forest reserve system with him any further."³⁵

Olmsted made a detailed study of public sentiment toward the reserve. He found sentiment friendly in Ketchikan and Juneau, where the largest mills and users of lumber were located. Ketchikan's *Mining Journal* strongly supported the reserve. At Shakan, sentiment was also friendly. Wrangell and Petersburg were centers of the opposition, with the *Wrangell Sentinel* the strongest antireserve paper. There was also hostility at Coppermount and Kasaan. Many, however, were indifferent to the reserve and its policies. Governor Wilford B. Hoggatt, as time went on, became a supporter of the reserve, but both the Republican and Democratic parties, in their 1906 territorial conventions, adopted planks calling for its abolition.

There were many reasons for favoring, or failing to favor, the reserve. The proprietors of the Dunton & Inman Shingle Mill and the Ketchikan Power Company obtained some of their lumber from the reserve; they favored it and desired to see all the country in a forest reserve. If this were the case, they argued, they would know just what to pay for timber and where to cut it, instead of having it settled as a trespass case. The manager of the Treadwell Mine and of the mill at Douglas (owned by Treadwell interests) favored the reserve on the same grounds and advocated its extension. On the other hand, mill owners at Petersburg and Wrangell objected to the reserve on the ground that timber on the public domain was cheaper. Mining companies at Niblack, Dolomi, Sulzer, and Coppermount complained about slowness in negotiating sales and in scaling. Many believed that the mines should have free timber, and others objected to Langille's examination of mining claims.

Boundary Work in Southeastern Alaska

As a result of his 1903 explorations in southeastern Alaska, Langille recommended creation of a reserve on the mainland, as far north as Lynn Canal, to include Wrangell, the Sumdum mining district, and Native villages. Pinchot conferred with him on these reserves during the winter of 1903-1904, but no action was taken at that time.³⁶

In 1906 Olmsted strongly recommended putting the whole area from Mount St. Elias to Portland Canal into a reserve. Olmsted gave a number of reasons for this sweeping recommendation.³⁷ One was the anomalous situation in regard to timber sales on the unreserved and unappropriated public domain, as opposed to the forest reserves. Although the secretary of the interior had full authority under the act of May 14, 1898, to sell timber in Alaska to mill operators, no timber had ever been sold under this law.³⁸ Instead, the standard procedure was for the logger to go where he pleased and cut whatever he wanted, without getting permission from anyone and without notifying any official of the action. Once a year each mill was visited by a special agent of the General Land Office who would inquire how much timber had been cut. Settlement was made on the basis of innocent trespass, at twenty cents per thousand board feet for sawtimber, one-half cent per linear foot for piling, and twenty-five cents per cord for firewood. There was no supervision of the cutting or allocation of cutting areas. Further, Olmsted thought there was an element of hypocrisy in having all mill owners regarded not as trespassers but as "innocent thieves." They had no assurance that trespass would not be looked upon at some future time as deliberate trespass—and triple damages assessed. The need for a businesslike management of sales was, in Olmsted's opinion, a strong reason for bringing the area under Forest Service supervision.

Forest Service jurisdiction, Olmsted believed, would not interfere with legitimate development of the area. Mining claims would be examined by the Forest Service, but this would not prevent legitimate claims from coming to patent. There would be little use of the Homestead Act, since arable lands are scarce in southeastern Alaska. There was need, Olmsted felt, for the Trade and Manufacturing Act to be applicable on forest reserve lands, as it was on the public domain in Alaska.

Another reason for creating a reserve, in Olmsted's opinion, was the fact that sawtimber on the reserve sold for fifty cents per thousand feet, while across the channel on the public domain it sold for twenty cents. The timber was worth fifty cents and more, and Forest Service management would bring in more revenue. In

fact, Olmsted thought, it would make the reserve self-supporting. Finally, Olmsted wrote, though there was at present no danger of large bodies of timber falling into the hands of corporate interests, Puget Sound interests might look eventually to Alaska with the intention of making speculative investments. The land could be best preserved in federal hands by creating a forest reserve including all of southeastern Alaska, "bounded by the international boundary on the south, east, and north, and by the 141st meridian and the open sea on the west."³⁹

Olmsted's recommendation and those of Langille were studied in detail, and in 1907 plans were made to withdraw most of southeastern Alaska into a forest reserve, or national forest, as they were called beginning that year. A map was prepared, marking the area to be withdrawn under the name of the Baranof National Forest. But at this point the Forest Service came up against the opposition of the commissioner of the General Land Office, Richard A. Ballinger. Ballinger strongly opposed the creation of any national forests in Alaska, and he was already exasperated by plans to create the Chugach National Forest. A conference involving Ballinger, the Forest Service, and the law officers of the Forest Service and the Land Office resulted in the map being withdrawn. Meanwhile, Langille prepared an alternative, and less controversial, suggestion.⁴⁰

Langille's recommendation was a 2-million-acre tract of land on the mainland, with natural geographic boundaries, from Portland Canal on the south along Behm Canal to the Unuk River and up the river to the international boundary. The area, he reported, was rough, unfit for agriculture, and had no permanent habitations except a mining company on the Unuk River. "The only objection to creation of the reserve," he wrote, "will come from those who oppose the national forest policy on general principles." The area was well forested, through much of the area available for handlogging had been partially cut over since 1905. In the future, he believed, cable logging would be the general practice.

There was local support for the proposed national forest. The Ketchikan Power Company favored Forest Service control in order that it might export its lumber. Governor Hoggatt and the businessmen of Ketchikan favored the addition. Moreover, the Alaskan timber along the Portland Canal would be protected against Canadian depredations. Langille stated that while it was not known that timber theft was occurring at that



Tongass Historical Society

Original mill of the Ketchikan Power Company, about 1905 to 1910.

time, it had happened in the past, and the rapid development of recent mineral discoveries in British Columbia would create a demand for timber and induce someone to take it from the Alaskan side.⁴¹

Ballinger, commenting on Langille's report, remarked that he was opposed to the creation of any national forests in Alaska because the forests were not needed to preserve the water supply, there was no fire hazard, and there was no need for artificial reforestation. His assistant commissioner, Fred Dennett, was highly critical. Citing Langille's report to the effect that the Ketchikan Power Company wanted the national forest in order to be able to export timber, he termed the project a "conspiracy" designed to evade the law forbidding export of timber from Alaska. Notwithstanding these objections, a draft of the proclamation was prepared in July of 1907, and the formal proclamation creating the Tongass National Forest was made on September 10, 1907.⁴² On July 1, 1908, the Alexander Archipelago and the Tongass were consolidated into a single national forest, the Tongass, with a total area of 6,756,362 acres.

The Forest Service continued studies of further national forest extensions between 1907 and 1909. There was general agreement that the remaining islands of the Alexander Archipelago and the mainland from Skagway south should be reserved. The resignation of Ballinger in 1908 as commissioner of the General Land Office eliminated a major enemy of such an enlargement.

Consideration was given during this time to the area between Yakutat Bay and Dry Bay. Langille had traversed this area in 1904 and had reported commercial forests on the coastal plain, extending sometimes three to five miles back from tidewater, of Sitka spruce, hemlock, mountain hemlock, and yellow-cedar. The timber, particularly the hemlock, tended to be defective and overmature, but there were numerous isolated bodies of sound timber. The only lumbering activity in the area was at Yakutat Bay, where the Yakutat and Southern Railway Company had a mill capable of cutting 35,000 board feet a day and was engaged in cable logging. In 1903 the mill cut 13 million board feet. Langille reported that a great deal of the land was alienated, much of it filed on as placer claims, although "the individuals making them have not the slightest intention of ever doing a cent's worth of assessment or development work. In most cases the persons in whose names they were staked never saw the land nor did they ever think of seeing it." Many of the claims covered forest land. Langille thought that a national forest would be needed for future use and to prevent waste in its utilization, but, due to the large amount of alienated land, he recommended in 1904 that no reserve be created at that time.

In 1908, at Pinchot's request, Langille reviewed his recommendations for the area near Yakutat Bay. He noted that the General Land Office, in June of 1903, had initiated a timber sale policy instead of settling on the basis of innocent trespass. The Land Office sold the

timber at \$1 per thousand board feet—after examination and approval of the tract by a special agent. But whereas the Forest Service distributed 25 percent of the proceeds of a sale to the district in which the timber was cut, all proceeds of Land Office sales went to the U.S. Treasury, except 1 percent as a fee to the register and receiver of the local office. The Forest Service, moreover, had trained men to handle the sales and could handle them more economically and promptly than the Land Office. In regard to the Yakutat area, Langille noted that there had been little change since 1904, except that the placer claims had been abandoned. The Yakutat and Southern Railway was extending its line to the south in order to reach timber bodies on the Alsek River. Langille recommended creation of a

Yakutat National Forest to include the west side of Yakutat Bay to Cross Sound and from the ocean to the international boundary. To the south, he recommended addition of all the area between the 141st parallel and the international boundary to the Pacific Ocean, except for areas around the towns of Haines and Skagway and the major cities in the Alexander Archipelago and the mainland.⁴³

In 1909 the Forest Service made recommendations for withdrawal of the remaining islands, the mainland to the south of Skagway to Icy Strait, and the area from Dry Bay to the south shore of Yakutat Bay. On February 16, 1909, the second proclamation relating to the Tongass added 8,724,000 acres to its area.⁴⁴

Timber Sales

Timber sale problems and policy in the Alaskan national forests differed from those in the states. In the older states and territories much of the timber was in private hands; in southeastern Alaska virtually all the timber was owned by the national government. In the states the reserves were isolated and largely remote from population centers. They were used to supplement settlement and development in their vicinity. In southeastern Alaska, with creation of the national forests, the miners, fishermen, and lumbermen were already living within the newly created reserves.

Moreover, there was an immediate need for the timber. In the states Pinchot encouraged timber sales to persuade Congress that the national forests were reserved for use, rather than from use, and to bring in revenue. He faced two obstacles. First, many men in the regional offices—among them E. T. Allen, Fred Ames, and Thornton Munger—believed that silvicultural studies and a preliminary forest inventory should take precedence over sales. Second, once private companies had title to the most accessible timberlands, they were not particularly interested in national forest sales.⁴⁵ In Alaska, on the other hand, there was a continuous demand for timber for local use, and the only local source of such timber was the national forest.

There were other anomalies in the timber situation. Federal law forbade the export of lumber from Alaska, but, on the other hand, lumber cut on national forests could be exported. Forest Service timber sold at fifty cents per thousand board feet, and General Land Office timber at twenty cents. The policies were contradictory and confusing. In addition, the Forest Service *Use Book*, designed to establish sales rules in the West, did not always apply to Alaskan conditions in regard to slash disposal, marking of trees, and scaling

regulations. There were many questions unanswered. To whom did driftwood or unmarked logs belong? What free-use provisions applied to users of the national forest? What were the rights of the Indians?

Langille's first efforts at timber sales management in 1905 were concerned with settling timber trespass cases. Cutting had continued on the Alexander Archipelago Forest Reserve in the interim period between its creation in 1902 and the time it came under active management in 1905. With characteristic zeal and energy, Langille tracked down and settled trespass cases. Most of the cases settled in 1905 involved cutting in 1903 or 1904 and were settled on the basis of unintentional trespass. In each case, the trespassers denied any intention of wrongdoing. They professed that they did not know reserve regulations applied, or thought they might cut for their own use, or assumed canneries had free use of timber for cordwood. Langille assessed them the stumpage value of the timber: fifty cents per thousand for sawtimber, one-half cent per linear foot for piling, and twelve and a half cents per cord for cordwood.

There were, however, two cases of intentional trespass; in these Langille took strong and drastic action. One case involved the Alaska Copper Company at Coppermount, one of the centers of antireserve sentiment. Langille seized the logs at the mill, shutting down operation for the time being. Of this action Olmsted wrote, "I believe that strong and decided action was necessary in order to convince this company that a certain respect for law and the officers of the Forest Service were matters not to be overlooked, and that Mr. Langille's action was quite justified." The other



U.S. Forest Service

National forest timber sales were claimed to furnish labor to Native tribes. This typical logging camp was located on the Tongass, and handlogging was the rule.



U.S. Forest Service

Logging operation at Whitewater Bay ca. 1909.



Mrs. Ivan Langley Collection

Fred Ames on the deckhouse of the *Tahn*, flagship of the "Tongass Navy." Ames made an inspection tour of Alaska in 1909.



Tongass Historical Society

A crowd gathers at the dock in Ketchikan.



Tongass Historical Society

Early view of the waterfront at Ketchikan.

case involved the Wilson and Sylvester mill at Wrangell. Timber cut by one A. M. Tibbetts on Zarembo Island was towed in a raft to Wrangell by the Wilson and Sylvester tug. Tibbetts at first denied, then admitted, cutting the timber, but all persons connected with the mill, in Langille's words, "denied any knowledge of the logs coming from reserve land, denied ownership of the logs, or making payment when in their possession, and payment had been made on them." Langille seized the logs, scaled them, and posted warnings to all persons against removing them. He recommended to Pinchot that the Wilson and Sylvester Company pay full value on the logs at time of seizure (\$4 per thousand board feet) and that Tibbetts pay fifty cents per thousand stumpage value. On the authorization of the secretary of agriculture, Langille posted notices offering the logs for sale to the highest bidder—the sale to take place before the Wrangell courthouse at 2 P.M., November 20, 1905. At this point the Wilson and Sylvester firm acknowledged ownership of the logs, and settlement was made on the basis of intentional trespass (\$3 per thousand).⁴⁶

In 1905 Langille made sales of 526,371 board feet of sawtimber, 976 cords of wood, and 93,820 linear feet of piling. Twenty-two cases of trespass were settled, amounting to 1,173,528 feet of sawtimber, 43,186 feet of piling, and 733¼ cords of wood. Sales for 1906 (from January until October) amounted to 6,881,070 feet of sawtimber, 35,600 feet of piling, and 2,310 cords of wood. With the additions to the reserve in 1909, sales exceeded 15 million board feet.⁴⁷

Operations were primarily handlogging; as late as 1905 there was only one cable operation on the reserve. The loggers, Indians and whites alike, cut trees under contract with the mill, mining company, or cannery concerned. Trees were cut close to the coast—in almost every case so close that the tops reached the water. Hemlocks eighteen inches to two feet in diameter were felled to use as skids to ease the logs into the water. Logs were rafted and towed in rafts of up to 200,000 board feet to the mill. In the raft they were priced at \$4.50 per thousand; stumpage was fifty cents and towage from fifty cents to \$1 per thousand. The cutting was wasteful; there was a great deal of breakage and poor utilization of the tops. The hemlocks cut for skids were left in the woods. There was no attempt to clear up the debris from logging, but there was also no fire danger. Logs were scaled in the raft, usually at the site of cutting.

Langille was concerned with the effect of logging on the fishing industry, and in 1909 he worked out regulations with the Bureau of Fisheries to preserve salmon runs. These regulations included prohibiting logging on streams with established salmon hatcheries, such as the Naha River, McDonald Lake and stream, and rivers

and creeks in the Boca de Quadra, Klawak, and Hetta Inlet areas. On all other streams with runs of salmon, logging was prohibited between August 1 and December 1. No logging would be permitted in stream beds and no debris or obstructions should be left in the water.⁴⁸

In his inspection report of 1906, F. E. Olmsted recommended various changes in the *Use Book* to apply to Alaskan conditions. He recommended, for example, a liberal interpretation of the free-use clause. He felt that the confusion in the law, with one law forbidding export of lumber from Alaska and another permitting export of lumber cut on forest reserves, should be clarified. He advised that it be advertised widely that timber cut on the reserves could be sold outside Alaska, and that the Treasury Department instruct its collectors to clear timber from any point on the reserves to foreign ports or those in the United States. He saw no need to mark trees for selective cutting, since the hand-loggers took single trees located on the shores of a beach or inlet. Rather, the forest officer should only designate the general area in which the trees were to be cut. Olmsted suggested that cutting small trees to be used as skids should not be considered as unnecessary damage, provided that spruce not be used when hemlock was available.

By 1910 Forest Service cutting policies were becoming accepted by logging interests on the Tongass National Forest. Governor Walter E. Clark, investigating a complaint by F. S. Wilson on the handling of timber sales, found no complaint as to the charge for stumpage, or in general to Forest Service management policies. He found the only justifiable complaint to be that which Olmsted had noted: inadequate transportation, resulting in delays in cruising and scaling the logs. Aside from this, Clark felt the Forest Service did an adequate job. Fred Ames, in his inspection tour of 1909, noted that the sale sites were characterized by high stumps and inadequate utilization of tops. Like Olmsted, he recommended more boats. Ames noted an increased amount of cable logging, largely limited to areas within a thousand feet of the beach. Most of the cutting was still for local use, though the Ketchikan Power Company had found a market for clear spruce in Seattle. George Cecil, in a 1910 inspection, felt that the main needs were for long-term sales and establishment of a pulp mill. He suggested revision of the land laws and regulations to suit Alaskan conditions, including that of permitting purchase of land for business purposes. Scaling, he said, should be at the mill rather than at the place of cutting.⁴⁹

Land Titles

The question of land title was complex. It involved the status of alienated land within the national forest, the validity of land titles, the manner by which land could be acquired within the forest boundaries, and the relationship of the Forest Service to the General Land Office.

When the reserve was established in 1902, there were no perfected land claims within its borders. Some of the lands were held through squatters' rights, still others through purchase or intermarriage with Natives, and others through application of the Trade and Manufacturing Act—largely for speculative purposes. Law permitted application of the soldiers' additional homestead scrip (a benefit for veterans), but the scrip was expensive and apparently was not used. There was virtually no use of the Homestead Act (though later the Forest Homestead Act of 1906 was extensively used), and the Timber and Stone Act did not apply in Alaska. Many tracts had been filed on as mineral claims by 1906, and two islands were operated as fox farms under Interior Department leases. The Trade and Manufacturing Act had not, by 1906, been applied to the national forests of Alaska.⁹⁰

One of the first needs, then, was establishment of rules governing occupancy of national forest lands. This gave Pinchot the opportunity to establish a precedent for charging grazing fees for livestock in the national forests, a plan sure to meet with opposition from western stockmen. He needed a legal opinion from the attorney general as to the right of the Forest Service to charge such a fee, but he hesitated to raise such a controversial issue. Early in 1905 an application came for a permit to occupy an area on Grace Harbor for a salmon saltery. Secretary of Agriculture James Wilson sent a letter, prepared by the Forest Service, asking the attorney general if the Forest Service could issue such a permit or lease for the occupancy of forest reserve land, and whether the Forest Service could require compensation for the occupancy. Attorney General William H. Moody replied that such leases or permits could be given and a fee charged. This precedent permitted Pinchot to charge for occupancy of the range, as well as for the shoreline.⁹¹

Given the authority to issue such permits, Langille received fifteen special occupancy requests in 1905 and granted five. The requests involved land for toolsheds, stores, mineral springs bathhouses, fox ranches, houses, fish canneries, a powder house, a cold-storage plant, gardens, and rights-of-way for tramways. A lease was usually granted for a year; it was renewable and terms were nominal.⁹²

The question of mining claims became vexing. Alaska operated under United States mining laws. Previous to the creation of the reserve, it had been an easy matter to get any claim patented. Officials of the recording districts considered it desirable to allow patent whether or not a claim contained mineral—and without regard to assessment work. The creation of the reserve changed all that.

Because surface rights, including timber, went with the mineral rights, Langille made his own examinations and reported actual conditions as required by law and regulation. This stirred up opposition to the reserve. Olmsted wrote:

I have carefully looked at his [Langille's] reports on mining claims and believe them to be just in every way. The difficulty is that the mining laws are not complied with and Mr. Langille so reported. To put it plainly, and to touch on a delicate subject, the Deputy Mineral Surveyors made reports which were not in accord with the facts, and the local Land Office took favorable action on these reports. Mr. Langille reported actual conditions, and upon his recommendation the General Land Office refused patent. In most of these cases it was desired to secure lands for purposes other than those contemplated by the law under which entry was made.⁹³

Two cases may be cited. The Alaska Copper Company was refused patent on a mill site claim at Coppermount, and the claim was cancelled. There were two saloons on the claim. One was, in Olmsted's words, "an exceeding low down resort in every way; it may be called, in polite language, a saloon, but in actual fact it is nothing but a house of ill fame." The saloon was on ground occupied by a squatter in 1900. He had sold whatever right he had to the land in 1902, and the new owner in turn sold out to the saloon owner in 1906. The company claimed that the squatter's rights extended to present occupants. The other saloon occupied land under a lease from the president of the Alaska Copper Company—a company that had not title to the land.⁹⁴

A second case resulted in the elimination from the forest of a tract of 11,878 acres on the Kasaan Peninsula. The background of this matter involved the claims of the Brown-Alaska Company and its subsidiaries. This company had established Hadley, a mining town, at Lyman Anchorage on the Kasaan Peninsula. On the mining claim were a hotel, store, and smelter. Langille, on examining the claim, recommended that it be refused patent because there had been no discovery of

minerals or assessment work on the claim. An additional complication was that one Hans Anderson ran a saloon on a mining claim leased by the company. Robert Pollock, an employee of the Brown-Alaska Company, also had established claims and done the necessary assessment work but was using the claims for purposes not wholly consistent with their development. In addition to the mining, Olmsted reported, "there are two cabins on the claim, which are inhabited by various and sundry women of ill repute from whom, it is reported, the claimant receives a rental of \$100.00 per cabin."⁵⁵

In February 1907 the Brown-Alaska Company began to put pressure on the Forest Service to eliminate the area from the national forest. The officers of the Brown-Alaska Company and its subsidiary, the Alaska Smelting and Refining Company, made solemn affidavit that there was little timber on the area and that they needed the land to develop their claims. Langille informed Pinchot in March that he opposed any elimination. The sole purpose of the Hadley interests, he wrote, was to avoid a forest officer report on the claims soon to come to patent. The company, he asserted,

wanted the claims for townsite purposes, not mining. He believed that the Brown Alaska Company was violating the law and opposed the elimination of any area from the reserve until the right of the company to the land was determined.

The company brought political pressure to bear. Attorneys Brown, Leckey and Kane of Seattle protested Langille's action in filing information with the General Land Office that there had been insufficient assessment work to bring the claims to patent. This was, M. C. Brown wrote, "a piece of officious intermeddling." The company apparently protested to Senator Francis Warren of Wyoming, a leading foe of the reserves, and he protested to Pinchot. In May Pinchot recommended reducing the reserve area by eliminating most of the Kasaan Peninsula. Apparently he thought the value of the timber involved was not great enough to risk a political battle.⁵⁶

There is a sequel to the episode. In 1924 the claims and town were abandoned. In that year, J. M. Wyckoff, Ketchikan district ranger, recommended that the area be restored to the Tongass National Forest. On June 10, 1925, the area was reacquired.⁵⁷

Grazing, Game, and Totem Poles

Grazing was a major problem in reserves in the West, but in southeastern Alaska the problems were nonexistent. F. E. Olmsted's report on grazing in 1906 deserves to be quoted in full:

Foxes are the only live stock on the reserve, and they graze on salmon at the rate of 4 cents an acre.

There is a trespassing mule somewhere in the Klawak region but he cannot be located.

Attempts at grazing cattle have absolutely failed on account of the ruggedness of the country and the prohibitive cost of winter feeding. The same holds true for sheep.⁵⁸

In southeastern Alaska, as in the north, Langille knew that the game laws were shamelessly abused. Many camps hired men to hunt deer, and these men killed does in and out of season. On occasion Langille took drastic action; at Shakan he seized two does killed by Indians for the Alaska Marble Company. When the company denied any knowledge or responsibility for killing them, Langille turned the deer over to some poor Indians. He believed that the forest officers should be deputized to enforce game laws and also be made assistant fish commissioners. At Indian villages, he warned Natives that any dogs caught running deer would be shot.⁵⁹

Langille also played an important part in the preservation of American antiquities. The Antiquities Act of 1906 permitted the president to set aside as national monuments areas containing natural wonders or historic and prehistoric sites if they were on federal lands. Administration of such monuments was to be in the hands of the agency having jurisdiction over the lands. The secretaries of the interior, agriculture, and the army agreed to allow the Smithsonian Institution to pass on all applications for archaeological excavation or collection. Gifford Pinchot, in his Forest Reserve Order No. 19, required all field personnel to report on natural curiosities in their districts and to recommend suitable sites as national monuments.⁶⁰

F. E. Olmsted examined many such areas during 1906 on his inspection trip through the West. When Olmsted arrived in Alaska, Langille recommended to him that the totem poles and community houses at Tuxekan and Old Kasaan be set aside as monuments.⁶¹ Olmsted strongly supported the recommendation and further suggested that the poles be preserved in situ rather than be removed to another place, even though the Indians had lost interest in them. Title to the poles rested with the individual owners or clans, though the land belonged to the United States. Olmsted's recommendations were put in a letter from the secretary of

agriculture to the secretary of the interior, but no action was taken for a decade.⁶²

Langille later played an important part in the creation of Sitka National Monument. The governor of Alaska had recommended in 1890 that the site of the Indian village at Sitka, where the Russians won a battle in 1804, be set aside as a public park. It was so declared on June 21, 1890, but the lands were not protected from vandalism. The Arctic Brotherhood, Sitka Post No. 6, desired better protection and in November 1908 asked Langille's advice. He recommended that they prepare a petition asking for national monument

status, together with photographs. He volunteered to prepare a sketch map of the area and see to its transmission to the president. These were duly prepared. Langille then sent the petition and illustrated report to the district forester, who transmitted the documents to Pinchot with an approving note. The area was not within the national forest, but rather within the Sitka elimination. Langille called the project to the attention of Governor Walter Clark, and he heartily approved it. Secretary of Agriculture Wilson submitted the reports, recommendations, and photographs to the secretary of the interior, and on March 23, 1910, Sitka National Monument was created by presidential proclamation.⁶³

Inspections—Olmsted, Ames, and Kellogg

As mentioned earlier, Pinchot sent F. E. Olmsted on an inspection trip to Alaska in 1906. Olmsted had graduated from Yale in 1894 with a degree in engineering and went to work for the U.S. Geological Survey. He met Pinchot while the latter was forester for the Vanderbilt estate in North Carolina, and Olmsted too decided on a career in forestry. He studied at the Biltmore Forest School and at the University of Munich and then went to work for Pinchot in the Division of Forestry in 1900. He was in charge of boundary work from 1902 to 1905. He then wrote *The Use of the National Forest Reserves and the Use Book*, the latter a manual of information, directions, regulations, and instruction for forest officers.⁶⁴

Olmsted was the first professionally trained forester to make a detailed examination of the forests of southeastern Alaska. His inspection report of 1906 is a mine of information on the forest.⁶⁵ It is also basic source material on the social, economic, and intellectual characteristics—the "political ecology," to use the terminology of George Rogers and Ernest Gruening, of the region.⁶⁶ Cruising in the launch *Walrus*, Langille and Olmsted visited all the settlements in the area. They made a special effort to see everyone connected with the forest reserve and to discuss relevant matters with them.

Olmsted, a strong proponent of decentralization, praised Langille highly as an able, conscientious, and trustworthy forest officer who had been criticized much the same as forest reserve officers had been in the western states a few years earlier.

He has had to contend with just the same opposition, due largely to ignorance and misunderstanding of the objects of the reserve, and besides this has had to meet the universal feeling that still clings in Alaska to some extent that

all laws are pretty well out of place "north of fifty-three" and that the people should be left alone to do as they like. I believe that the "Pioneer" plea is somewhat unduly cherished in southeastern Alaska and that the industry and energy of the people have already lifted the people out of that stage in a great many ways.

Criticisms of Langille had centered around his reports on mining claims and timber trespass. Olmsted thought Langille's actions were proper and thoroughly justified, but his "abrupt, outspoken and occasionally mildly terrifying manner" sometimes antagonized people. Olmsted recommended that Langille be commended for his work and given a salary increase of from \$1,800 to \$2,000 per year—but be urged to be more diplomatic.⁶⁷

At the time of Olmsted's visit in 1906, Langille was running the reserve single-handedly. Olmsted recommended the appointment of a deputy supervisor to handle matters in the northern part of the reserve, from headquarters in Juneau. There were, he wrote, "none of the ordinary ranger duties of those officers in the states; no road or trail building, no fire patrol nor fire fighting, and no stock to look after. Their chief duties are to sell timber, scale logs and report on mining claims (together with a good deal of special privilege work) and they must be able to do these things well and without help." He emphasized, however, that the key was not men but transportation. He echoed Langille's plea that the proper running of the reserve depended upon the acquisition of satisfactory boats, writing, "Spike the supervisors of the Sierra Reserve to a rock at the top of Mt. Whitney and instruct them to run the reserve; that's the position of the officer in Alaska without a boat." He recommended a sixty-foot boat,

with an engineer and a cook, to be used by the supervisor both for transportation and as an office afloat. The vessels for his deputies, he thought, could be auxiliary-engine yawls, but they must have sleeping quarters on board. The costs ordinarily put into reserves with roads, trails, cabins, telephone lines, and protection should be put into transportation in Alaska. The candidate for deputy supervisor should be able to demonstrate skill in boat handling and navigation, which, in coastal Alaska, were the equivalent of horsemanship in the states.⁶⁸

In administrative use, Olmsted advocated extending the Trade and Manufacturing Act to land within the national forests, so that fishermen, settlers, and canneries could obtain title to the land they occupied. Regulations should also permit settlers to take up home lots. No permits would be required to build trails within the national forest, and the free-use clauses in the *Use Book* should be liberally interpreted.⁶⁹

In regard to timber sales, Olmsted advocated changing some of the rules in the *Use Book* to suit Alaskan conditions. The provisions regarding logging and piling of tops and limbs did not need to apply. Logs should be scaled in sixteen-foot lengths, sawtimber should be cut to a minimum diameter of twenty inches, and piling to eight inches. Sawlogs should be utilized to a twenty-inch top and stumps cut low. He approved the price of sawlogs at fifty cents per thousand, but felt cordwood should be priced at twenty-five cents per cord and yellow-cedar at \$2 per thousand.

Olmsted recommended a survey of timber resources in the forest, immediate advertising in the states of 10 million feet for sale, and encouragement of export of Alaskan timber. The Forest Products Section of the Forest Service should make timber tests of hemlock and spruce to determine their qualities, and also of yellow-cedar to examine its value as cabinet wood. He supported Langille's recommendation that the reserve be enlarged to include most of southeastern Alaska, but reported there was no need to extend the reserves to the Prince William Sound and the Kenai area. Like Langille, he was highly critical of the Department of the Interior's failure to protect the forests of interior Alaska.⁷⁰

Three years later another inspection was carried out, this time by the district office in Portland. In 1909 District Forester E. T. Allen sent the head of the Silvics Section, Fred Ames. Ames, a tall, slender graduate of Yale Forest School, had come out to Portland in 1907. He had earned the respect of lumbermen in the Northwest by his competence, judgment, and honesty. Ames kept a personal diary during his youth and much of his maturity; his Alaskan diary is a delightfully written account of the work of the forest officer.⁷¹

Ames met Langille at Ketchikan in July 1909 and

then left for Wrangell on the newly acquired Forest Service launch *Tahn*. The *Tahn* had been built to Langille's specifications in 1908; it was a sixty-four-foot vessel with a fifty-horsepower gas engine and a sheet-iron strip at water's edge to protect the hull when running through thin ice on winter trips. It had electric lights, a galley, a head, seven bunks, a bookcase, and a desk. On the trip with Ames were Langille, engineer Lyle Blodgett, a Japanese cook named Joe, and Royal S. Kellogg, who was on assignment to examine the forests of Alaska. Ames noted the wreck in the Wrangell Narrows with its sign, "Drink Yellowstone Whiskey," and the addition, "We did." He scaled log rafts at Wrangell and Portage Bay and examined sales (a standard operation)—"stumps pretty high and tops not well utilized"—and traveled on to Juneau. At Juneau he attended some hearings involving trespass cases, visited Taku and Norris glaciers, and then traveled to Hoonah and to Sitka. Ames attended the Russian church at Sitka (he was an inveterate, eclectic, and highly critical churchgoer), shot his first deer at Silver Bay, visited the whaling station at Tyee, scaled rafts at Port Beaulerc and Shakan, and visited Indian villages at Howkan and Klinkwan. He returned to Ketchikan in August, where he received new orders relating to mining claims in the Chugach National Forest—claims that will be described in detail in the next chapter.⁷²

Ames, like Olmsted, gave Langille very high marks as forest supervisor. "Few men," he wrote, "could have done what he did." By this time Langille had a number of assistants, and Ames also rated them favorably. W. E. Babbitt he characterized as hardworking and conscientious, James Allen as competent, and Lyle Blodgett as a capable engineer. Like Olmsted, he stressed the need for deputy supervisors who had the authority to act in the absence of the supervisor. He also urged better transportation.⁷³

Assistant Forester Royal S. Kellogg made the trip for the Washington Office of the Forest Service in 1909 to collect material for a bulletin on the Alaskan forests. He examined both interior Alaska and coastal forests and accompanied Ames on his tour of the Tongass. The result of his research was published in 1910, the first Forest Service bulletin ever devoted to the forests of Alaska. By contrast, the other "peripheral" areas of American forestry, Puerto Rico and the Philippines, had been the subject of a series of studies before 1910.

Kellogg estimated the coastal forest, including both the Tongass and that added by the creation of the Chugach in 1907 and 1909, at about 75 billion board feet. Stands of 25,000 feet to the acre were not uncommon in southeastern Alaska. There the trees were overmature, with a great deal of decay and stagheadedness. Handlogging and rafting still remained the common practice. His report shows a photograph of one

such log raft—probably the one scaled by Ames near Wrangell—containing 190,000 feet, and shows a spruce log measuring 37 inches at butt, 21 inches at top, and 78 feet long. He estimated the amount of timber cut in the coastal forests at 27 million feet per year. Stumpage by 1909 had gone up to \$1 per thousand for spruce.

Kellogg recommended increased use of hemlock. Spruce was the favored species, but its heavy harvesting, coupled with the ability of hemlock to reproduce under shade, made the proportion of hemlock reproduction too high. He believed that the Alaskan forests would continue to be valuable mainly for their home market and that Douglas-fir would continue to be im-

ported for construction work. The best use of the forest, he thought (echoing the opinion of Fernow a decade before), was for pulp production. There was an abundance of water for pulp mills, and ship transportation to the states would be cheap.

Forests on the coast, he wrote, were in no danger from fire. The chief need there was for a planned harvest of the mature timber. Kellogg voiced his alarm at the hazards faced by the interior forests through unrestricted cutting and lack of fire control. In this, he repeated the warnings of Fernow, Langille, and Olmsted.⁷⁴

These inspections and visits created greater understanding of the forest situation in Alaska and also reinforced Langille in his vital work.



3



The Chugach National Forest Through 1910

Errata

Page 53

Column 2, paragraph 3, line 3, change "Day" to "Kay."

The Chugach National Forest Through 1910

Regarding this country I have this to say that it suits me to perfection and I am going to stick to it right here as far as this depends on myself. Here we have an absolutely virgin country, unscarred by fires and uninhabited and unexplored except for those little spots where man has put up a few shacks. The land is covered by timber, snow and glaciers, and in the wilds there roam the bears, and the porcupines, the mosquitos, the crab, the shrimp and the whale. The rainfall is amazing. It rains 24 hours a day and after the rainy season is over the snowy season begins. We do not mind that, however. Imagine a country where for a thousand miles—from Cook Inlet to Ketchikan—there is not, nor ever was, a dry spot large enough to set a weary ass on.

—Lage Wernstedt to Arthur Ringland,
August 20, 1908, in Historical File,
Cordova Office, U.S. Forest Service.

*We're too slow for the new breed of miners,
Embracing all classes of men,
Who locate by power of attorney
And prospect their claims with a pen;
Who do all their fine work through agents
And loaf around town with the sports,
On intimate terms with the lawyers,
On similar terms with the courts.*

—Sam C. Dunham, "The Lament of the Old
Sourdough," quoted in S. A. D. Puter and
Horace Stevens, *Looters of the Public Domain*
(Portland, 1908), p. 439

Boundary Work: The Norton Bay Area

In 1904 W. A. Langille received his field orders for the year from Pinchot:

Dear Sir:

During the season of 1904 you will undertake the examination of the forest lands contiguous to the coast of western Alaska from Lynn Canal to the Alaskan Peninsula, including Kodiak Island and other islands lying in the forest region; then proceed to the Norton Bay country via Dutch Harbor and Nome to examine the lands included in the withdrawn area designated as

the "Proposed Norton Bay Forest Reserve." Upon the conclusion of this examination you will return to Dutch Harbor and proceed to the Sushitna Valley, make an examination of this and the tributary valleys, and return to this office upon the conclusion of the season's work unless otherwise ordered.

Your route of travel will be to Juneau, Alaska (via Seattle, Washington), where you will procure, if possible, a small seaworthy sailing craft with an auxiliary gasoline engine to be used in case of emergency, and will cruise along the

western Alaska coast. You will confine your observations to the coastal line in the glaciated region, but will penetrate the valleys of the larger streams. Note particularly the extent, quality, and accessibility of the forests in the vicinity of the mines, salmon canneries, saw-mills, oil fields, and contemplated railroad terminals.

Special attention should be paid to species, age, and distribution of the forest bodies in different sections, noting relative sizes, etc., in ref-

erence to geographical, physical, and altitudinal position.

In the absence of any surveys in the Norton Bay region, you will determine approximate positions and boundaries by the use of the plane table stadia or other means, mapping streams and prominent topographical features as accurately as possible.

Very truly yours,
(Signed) Gifford Pinchot
Forester¹



U.S. Forest Service

Gifford Pinchot gave W.A. Langille detailed directions for reconnaissance work in Alaska but allowed him great latitude in the administration of the new forest reserves.

Langille's letters illustrate the difficulties of transportation in Alaska at that time. He was able to obtain a suitable vessel in Juneau, so he traveled up the coast to Orca on the *Santa Anna*. At Kayak Island he secured a launch to make a reconnaissance of the shore, but the launch ran out of fuel and he left it at Ellamar. At Ellamar he was unable to take the steamer *Dora* to

Dutch Harbor. There he made connection with the *Victoria* for Nome, where he was delayed in landing for five days until July 15 because of storms. Storms again delayed his departure for the Norton Sound area until after July 20. There he acquired a camp hand, A. A. Eubanks, and one pack horse and set out from Council City on July 26.²

"I met me Waterloo in the Norton Bay region," Langille wrote:

Most of the time the weather was intolerable. My camp hand proved incompetent, and to make bad matters worse I cut my instep with the axe, laid up ten days, traveled too soon, opened the wound, it developed proud flesh, we got out of supplies then had to raft down the Tubutulik, found some Scandinavian fishermen who took us in, were stormbound on Norton Bay six days, but arrived in Nome in time to catch this ship for Unalaska.

For 26 days we never saw a soul, white or Eskimo, until we reached the coast, then I couldn't get a native to cross country with my man—"too much wet"—he never would have found his way alone, I couldn't walk, so it forced me to trade the horse for passage up the coast, all regulations to the contrary notwithstanding, very joyful.³

He took the *St. Paul* from Nome to Unalaska Island but missed passage on the *Dora* to Valdez by a day, thus facing the prospect of laying over at Dutch Harbor for thirty days. Rather than do this, he persuaded the captain of the *St. Paul* to take him all the way to Seattle, from which he could take passage to Valdez in the *Santa Ana*.⁴

The Norton Bay area had been withdrawn from settlement on June 30, 1903, pending an investigation to determine its suitability for forest reserve purposes.⁵ The area involved was the southeastern portion of the Seward Peninsula, covering Norton Bay, Norton Sound, Golovnin Bay, and extending inland approximately fifty miles. This encompassed an area of 3,497,611 acres. The area is of mixed topography, with the Darby Mountains reaching elevations up to 3,000 feet. The many stream valleys are swampy and filled with a great deal of detrital material. There are poorly drained sloughs, numerous ponds and swamps, and, in addition, there are areas of high land and tundra.

The trees were restricted in area, poor in quality, and limited to a single species, white spruce. The timber bodies existed in the lower stretches of the Koyuk and Tubutulik rivers, in the meanders of the streams, and on the better-drained slopes. The trees were of almost equal height and diameter throughout, with slim, tapering outlines and short, scraggy limbs reaching nearly to the ground. The crowns were light, the rapid taper giving them strength to withstand winter winds. Hence, there were relatively few windfalls. In addition, a few stands of cottonwood, some reaching heights of sixty feet and diameters of eighteen inches, were found east of the Darby Mountains. The gross volume of spruce he estimated at 1,500 board feet per acre. Allowing for decay, this gave 900 feet per acre of spruce

over eight inches in diameter. The total volume for the area he estimated at 30,127,000 board feet of commercial forest and 1,071,508 cords of wood.

There had been no lumbering in the area of the proposed reserve, and the only sawmill on the Seward Peninsula was at Council City. The mill had cut 30,000 to 50,000 board feet per year from 1902 to 1904, for local mining purposes and house logs. Logging was done by horse during the winter months when miners were idle. Although the logging operations were near the border of the proposed reserve, Langille thought that completion of a railroad in the area would make "outside" lumber in a position to compete favorably with that locally produced.

Langille realized that there was grave danger of fires in the area:

*While there is a general absence of the usual forest litter, and the trees are not close, there is a period in the early summer of each year when the prevailing north winds dry the surface of the tundra and forest mosses to such an extent that they readily ignite, and once caught, fire spreads rapidly, generating sufficient heat to take hold of the resinous bark, the thin sap trees being easily killed. Where burned, every living thing, even to the heavy sphagnum moss was killed, the moss being succeeded by a scattering growth of grass, one variety, similar to the western bunch grass, much liked by the pack animal, in places the blueberry bushes (*V. uliginosum*), then loaded with fruit, were renewing themselves as were the willows and dwarf birches; but not a single spruce seedling was seen in the areas burned four years before.⁶*

A further danger in fire was the slowness of reproduction. The trees were not prolific cone barers, and many of those cones that did develop were immature. In addition, small seedlings were often killed by the browsing of the Arctic hare.

In considering whether there should be a forest reserve made from the area, Langille weighed the various factors and recommended against it. Mining, he wrote, was the only occupation that would ever attract a population to this cold, inhospitable area or create a demand for timber. Placer mining locations would, under existing laws, absorb most of the timber along the streams, in gulches, and ravines. On the other hand, if no mining development occurred, the forest would not be destroyed. On these grounds, therefore, Langille recommended that the Norton Bay Forest Reserve not be created.⁷ The area remained withdrawn until 1907 and then was restored to the public domain.



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The waterfront at Nome.



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Logging along the line of the Alaska Central Railroad, 1905.

Boundary Work: The Kenai Peninsula, 1904

Langille made an examination of the Prince William Sound area during September of 1904. He traveled from Valdez to Seward on the steam launch *Annie* in late September and made a short trip to Kenai Lake, returning October 7. October was spent in examination of the Kenai Peninsula. Purchasing a twenty-foot dory at Kenai Lake, he floated down the river. From Kenai he proceeded to Seldovia, hired a native, Alsent Roman, as guide and packer, and traveled to the head of Coal Bay by boat, thence overland to Tustumena Lake and back. He then went by boat from Seldovia to Resurrection Bay, arriving at Seward on the *Dove* on November 27, 1904. Later he made a trip up the Resurrection River to investigate homesite locations.⁷

The Kenai Peninsula at the time was just beginning a twenty-year boom period involving land, resources, and railroad building. In 1903 Seattle capitalists had formed the Alaska Central Railroad Company with plans to build inland across the peninsula and then north to tap the Matanuska River coalfields and eventually to reach the Yukon. It was one of several such projects to reach interior Alaska by rail from the coast. Like most of the others, its promoters were high in optimism and low in capital. In the wake of the railroad, there had come a group of mineral and land speculators who hoped to gain from the railroad venture. In addition, the Kenai area had become famous for its population of the larger carnivores and herbivores of the North American continent; members of the Boone and Crockett Club and similar sportsmen's groups came to shoot bear, Dall sheep, caribou, and moose. The permanent human population was sparse—200 at Seward, mostly connected with the railroad; 200 at Kenai; 100 at Hope; and a scattering of smaller settlements inland and fishing villages along the coast—but it was a time of great expectations, with a boom-town atmosphere at Seward.

On the peninsula Langille found a region of transition between the coastal type of forest and that of the inland area. The topography was divided between rugged mountains on the east, heavily glaciated, and a central and western plateau, poorly drained and with a network of streams, marshes, and lakes. Here were forests of mountain hemlock, white spruce, birch, aspen, and cottonwood, with some Sitka spruce and western hemlock near the coast. He found the forests bordering Prince William Sound to be of poor quality. At Port Wells he found a woodland type of forest that would be suitable for railroad ties but not for sawtimber. West of Kings Bay the timber improved. In Resurrection Bay there was an overly mature stand of spruce; the best

stands along the railroad line were being cut rapidly for railroad purposes. Inland he found evidence of early forest destroyed by fire before the Russian occupancy. There the swamp had steadily encroached on what had formerly been forestland. Reproduction in the forests on the coast was good, though the new trees were not so clear of limb or free from defect as the old had been. In the interior and the mountains, on the other hand, he found the reproduction of conifers after fires "almost hopeless." There were very few spruce seedlings in the burns; reproduction consisted of deciduous shrubs and trees.⁸

Fire was an ever-present menace. As in the Norton Sound area, the forests were particularly susceptible to fires, and on the Kenai Peninsula they had taken their toll. Fires were prevalent for a number of reasons. One large fire had been set to get rid of mosquitos. The timber was destroyed, but the mosquitos remained. Some fires, set to free the land of dry grass, had spread into the forest. The railroad was a particular threat. In cutting ties and timber, wood crews left a great deal of slash, and the locomotives were wood-burning engines without spark arresters.⁹

Much of the lumber used in the area was imported from Puget Sound. Local wood was consumed as firewood. At Homer, a Philadelphia coal company had established a dock and facilities, although the quality of the coal was poor. Two sawmills had been established at and near Hope—one of 10,000 feet capacity per day, the other cutting 20,000. They had evidently been established in the hope of profiting when the railroad reached the area. The Alaska Central Railroad had in 1904 completed eleven and one-half miles of track, established a sawmill and a cable logging operation, and had cut about 13,000 feet per day, with a great deal of waste in the milling. Most of the timber was cut from land claimed by homesteaders, over the strong objection of the claimants. Their protests, however, were to no avail. The chief engineer and manager of the Alaska Central Railroad said he had been informed by the register of the General Land Office that he could cut on any location. The U.S. commissioner had told the claimants that there was no legal resource. A large number of the entries had been made for the timber alone, Langille observed, with the intention of holding up the railroad.¹⁰

Much of the land on the Kenai had been alienated under various land laws. The Alaska Central Railroad had a right-of-way franchise, but it had difficulty building the required amount of track each year to keep its franchise. It also had permission to take timber from

the public domain to build bridges, trestles, and to make ties. At the Land Office the practice was to record homestead and mineral locations, even though the descriptions were incomplete. Langille listed 32 homestead entries, 32 coal land entries, 340 gold placers, 80 quartz mines, and 240 placer oil claims. However, no assessment work had been done on the oil claims. Groups of twelve to twenty men would associate to file on claims, let them lapse, and then refile under a new name, having no oil rigs or developments of any kind. The Alaska Colonization and Development Company had been organized to establish a Finnish colony on Coal Bay, acquiring the land by use of soldiers' additional homestead scrip. Langille condemned the venture as purely speculative. No paying gold prospects had been found, and Langille reported abandoned workings and unused hydraulic outfits.¹¹

Big game, Langille noted, was an important resource of the Kenai Peninsula. The moose range was in the white spruce area near Coal Bay, that of the few remaining caribou in the same area, sheep were in the Sheep Range, and bear were scattered throughout. According to Langille, the settlers in the area killed little game, but Indians were wanton killers and visiting trophy hunters were wasteful. The latter stayed for a short time, killed as many good heads as they saw, and then took out the best. Traders also hired Indians to kill trophy-sized heads for sale to sportsmen. Langille recommended a stricter permit system, with all game bagged reported, permits recorded, and licensed guides to prevent abuse of the game laws. Settlers, he reported, believed that a bounty on wolves would help the game to survive. "The game of the region," Langille wrote, "should be a source of revenue to the people and of pleasure and sport to the outsiders who wish to hunt, and there should be some meeting place where the game can be conserved, clashing interests harmonized and trophy hunting permitted."¹²

Public sentiment on a forest reserve in the area varied. "Old-timers" feared restrictions on their frontier privileges, but they recognized the need for timber conservation and prevention of fire. Of the railroad followers, some were transients but others who lived in the immediate area were interested solely in developments that offered immediate profit. They opposed a reserve. A few people recognized the importance of the forestry movement, but most were indifferent.¹³

With many qualifications, Langille recommended creation of a reserve encompassing most of the Kenai Peninsula. Although there were no large settlements in the area and the timber was not of high quality as compared with that in the coastal area, he thought that the needs of the future, plus the necessity of protecting the area from fire, justified its creation. He recommended that its boundaries run from Passage Canal to Prince William Sound, thence southwest to Cape Puget, thence

west to Coal Inlet, and north to Turnagain Arm, and across the portage to Passage Canal. He said a portion of the reserve should be made a game preserve, stating:

*...it is further recommended that certain portions of the area included in the bounds of the recommended Kenai Forest Reserve be made game preserves, for perpetuating the game species of the region, one to be located so as to include the favored habitat and breeding ground of the mountain sheep (*Ovis dalli kenaienses*), another to include the year round haunts of the moose (*Alce americanus gigas*) and the range of the few remaining caribou. For the first, I would respectfully suggest an area to include the headwaters of both branches of Sheep Creek Valley, extending ten miles in an easterly direction from the timber line at the east side of Sheep Creek Valley; for the second I would suggest an area 20 miles long by 13 miles wide, the center of its northern end about opposite the T spit, one mile south from the shore line of Kasiloff Lake, to include the Caribou Mountains.¹⁴*

Langille's report is an important document from several points of view. First, in making one of the first recommendations that game preserves be established in the region, it is closely connected with the history of wildlife preservation in Alaska, particularly with establishment of the Kenai Moose Range. In this, as in his efforts to preserve the totem poles, Langille played a pioneering role.

A second matter, which came to be of major importance, was that of agricultural land. Langille doubted that the area would have agricultural possibilities. Writing to Pinchot in November 1904, he stated:

In my reports I shall hold these glacial valleys with a covering of alluvial sediment supporting a forest growth, forest lands, and not classify them as possible or actual agricultural lands, considering the possibility of anyone using them for farm lands or grazing purposes is so small as to preclude their possible classification in this way.¹⁵

Besides an uncertain climate and thin soil, there was no market for farm produce or any foreseeable growth of such a market. Yet, the matter of land classification troubled Langille. In the established states and territories, he wrote Pinchot, there was a precedent, based on experience, for classifying agricultural land. But in the Kenai area, where no one had ever made a living by farming and the agricultural possibilities of the land, when cleared, were unknown, there was no precedent to follow. Who, in such circumstances, was to make the decision? Langille operated on the assumption that all well-forested lands were better for timber growing

than for agriculture, but he recognized that the question of agricultural land in national forests would arise not only in the Kenai area but also in the Matanuska and the Susitna valleys: "I don't know where to begin to call timbered lands cultivable and should like to know who will settle the question finally."

Another question raised in the same letter, one that was to have repercussions for the future, was that of revenue. Langille asked what the policy of the

government was in regard to making money. Should revenue cover only the cost of administration, or should it be based on the value of timber in the reserve? Should the value of the timberlands be based on the costs of their production and protection, or on the value of the timber as set by competitive bid? In an area of sparse volume per acre and a high cost for protection, the problems were far different from those in the wet forests of the south.¹⁶

Boundary Work, 1905: From Cook Inlet to Circle

During the late fall and early winter of 1904-1905, Langille enthusiastically made plans for his winter trip from his headquarters in Seward. He wrote his reports on Norton Bay, Prince William Sound, and the Kenai Peninsula and mailed them to F. E. Olmsted, who at that time was chief of the Section of Reserve Boundaries. He sent specimens of plants, cones, and leaves to Chief of Dendrology George Sudworth. He straightened out his accounts with Chief of Records James B. Adams and wrote to Pinchot of his reflections on forestry in Alaska. The injured foot, which had given him trouble during the Kenai reconnaissance, had an opportunity to heal so that by November 30 he could write, "its inability to do its work is but a faded memory." He secured the services of an old friend, James Watson, as a trail companion on the journey. During early winter he began to collect the equipment for the trip—tents, a sled, film, snowshoes, mapping equipment, and a .22 rifle which, he wrote to Adams, "though unusual in your accounts, is a most necessary part of a winter outfit, it being a large item in the sustenance of a winter trip." He had difficulty acquiring suitable dogs, writing, "The Tanana stampede has created a great demand and raised the price of good dogs out of reason, almost as bad as Dawson's palmy days, when I paid \$300 for a yellow hound, but he was worth it then."¹⁷

Langille's winter campaign involved travel up the Matanuska River in advance of the railroad survey and timber speculators, exploration of the Susitna and the Talkeetna river valleys, and travel on to Fairbanks and Circle to look at the interior forests. Watson set out early in January, and Langille joined him at Kenai Lake on January 26. One incident illustrates the spirit of the place. Langille had purchased a quart of Hennessy brandy for trail emergencies. On the day he left, every saloonkeeper and storekeeper saw Langille to wish him farewell and each brought a parting gift, a quart of the finest brandy available. He departed with thirteen bottles. Langille and Watson were accompanied as far as

Knik by two Indians who had been accused of murdering a white man in the Kuskokwim Valley and brought to Seward for trial. No evidence had been found against them, so the deputy marshal asked Langille to take them as far as Knik in exchange for their assistance on the trail.

Langille and Watson explored the Cook Inlet area for a time, then traveled up the Matanuska Valley and down the Tazlina River to Copper Center, traveling under excellent trail conditions. From Copper Center Langille mailed film to the Forest Service in Washington and samples of coal and fossils to Alfred Brooks of the Geological Survey. They then traveled up the Gakona and down the Delta and Tanana rivers to Fairbanks, which they reached on April 14, and from there made the trip to Circle.¹⁸

The Cook Inlet area was geographically and topographically an extension of the area Langille had examined on the Kenai Peninsula. Cook Inlet, Knik Arm, and Turnagain Arm are flanked on the eastern side by a spur of the Chugach Mountains. On the north shore of Turnagain Arm, the mountains approach closely to the water. Rounding Point Campbell, he found a limited amount of plateau land along the shore, narrowing as the head of Knik Arm is approached, until below the Knik River the Chugach Mountains rise abruptly from the water's edge. The Knik River, in its lower reaches, is a narrow glacial floodplain, devoid of timber or even soil. The Matanuska River, with sources in both the Chugach and the Talkeetna mountains, broadens in its lower stretches, varying from seven to eight miles wide further downstream. The valley is of uneven surface, with traverse tributary streams and valleys, and has a gravel and sandy surface soil that assumes a loamy character near the foot of the mountains. Climatically, it is the most favored section of the Cook Inlet area, with warmer and drier winter seasons than are found in other parts of the valley. From this standpoint, Langille regarded it as the area best suited for agricultural purposes of any part of Alaska.

The area was virtually uninhabited in the winter of 1905. The only settlements were a few small Indian villages and the trading post at Knik, with a population of four white men. George Palmer, the trader at Knik, purchased skins from the Indians and also grew a garden, which, Langille observed, demonstrated the agricultural possibilities of the area. Unlike those of the Kenai Peninsula, the Indians were not wanton slaughterers of game, living instead mostly on rabbits. Langille feared, however, that the coming of the railroad would encourage market hunting and debauch the Indians.

The timber in the Cook Inlet area was of varying quality and quantity. On the north shore of Turnagain Arm were excellent stands of black hemlock and spruce. These were on or near the railroad right-of-way, however, and Langille feared that "indiscriminate cutting" by the railroad threatened the existence of the forest. There was, he wrote, immediate need to protect this forest in order that the mining interests might have lumber. Beyond Point Campbell the timber deteriorated. Both sides of Knik Arm were devoid of commercial forests, and there was a large amount of fire damage on the eastern side. In the vicinity of Knik Station, there was a 2,000-acre stand of pure birch containing 1.5 million board feet. The rest of the forest in the area consisted of typical mixed inland stands of white spruce, black spruce, birch, and aspen, not suitable for sawtimber. Stands in the Matanuska Valley were essentially of the same type, but with some good growth of cottonwood on the river bars. There had been extensive fire damage, both recently and in the remote past. In view of the need for fire protection, Langille suggested cutting or burning fire lines around the better tracts to protect them.

In 1905 there were few alienated lands except for the coal land locations on the Matanuska and its tributaries. The coal locations covered a large part of the western side of the main valley, especially on Granite, Moose, King, and Chickaloon creeks. The claims, Langille reported, were of questionable legality, having been recorded "by and without power of attorney," and the locations "lapped and overlapped on the ground and the recorded descriptions are so indefinite that it is impossible to determine the located area until surveys and amended location have been made."¹⁹

In the Susitna and the Yentna valleys, Langille found swampy floors having black spruce; the higher ground had white spruce and birch. The forests were of the woodland type, with the best stands carrying 1,000 to 2,000 board feet of spruce and 300 to 500 board feet of birch to the acre. Reproduction, he reported, was slow, with development of willow, alder, and birch before the spruce reproduced itself.²⁰

Near Fairbanks Langille visited the lumber camps on the upper Chena, from which 10 million board feet had been cut in recent years to supply the needs of the city. There were at the time eight sawmills in Fairbanks, cutting from 5,000 to 20,000 board feet each day. Many homestead locations had been made for speculative purposes on the timbered land. Finding a high fire hazard and slowly growing timber, Langille regarded restocking burned areas as hopeless. On the question of reserves, he found opposition to any extension of the system into the interior. He hoped other methods than the reserve system could be used to protect the forests.²¹

The Forests of the Interior, 1905-1911

The problems of Alaska's interior forests, with their high vulnerability to fire and the failure of the government to establish a sale or management policy, concerned the Forest Service continually for many years. F. E. Olmsted, in his 1906 report on the Alexander Archipelago, described the forests of the interior as being scattered in strips along the streams and promiscuously over the hills and mountains. The timber was small and scrubby but of great local value in connection with the mining industry. The interior was so large and so little known, however, that it would be impossible to establish reserves without including great areas that should, from the timber-producing viewpoint, be left outside. The innumerable mineral locations would create chaos in reserve administration.

Olmsted compared the American and Canadian systems of handling the boreal forest. In Canada the timber was sold for revenue at a minimum cost of \$2 per thousand, a figure based on the assumption that the average life of a placer district is from five to fifty years and that it would be foolish to provide for a future supply of timber when the area would later be abandoned. Assuming that the locality would be abandoned, Olmsted wrote, this policy made sense. On the other hand, in the United States the General Land Office had the same policy in the interior that it had in southeastern Alaska; namely, that of allowing cutting without supervision and settling at twenty cents per thousand on the basis of innocent trespass. Olmsted believed it was foolish of the government virtually to give



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Wood cut along river banks in the interior fueled the steamboats during the gold rush era. The *Prospector* takes on a load on the Stewart River in Yukon Territory.



U.S. Forest Service

Royal S. Kellogg of the Forest Service and A.S. Hitchcock of the Bureau of Plant Industry, on the trail between Rampart and Hot Springs in the Interior. Kellogg's bulletin, *The Forests of Alaska* (1910) was the first Forest Service publication about the territory.

away its timber, particularly in an area where common lumber sold at \$50 to \$70 per thousand and finished lumber at \$100. It was also foolish to be unable to sell the timber without making a trespass case out of the transaction. Olmsted recommended that the secretary of the interior appraise the timber of the Tanana and Yukon watersheds, set one price for the district, and call for bids, thus ending the "innocent trespass" fiction. He assumed that such power could be legally delegated to the local Land Office agents.²²

A large number of scientific reports during this period also gave the Forest Service a better evaluation of the interior forests. These included reports by members of the U.S. Geological Survey, such as Alfred Brooks, Fred Moffitt, W. C. Mendenhall, and E. C. Barnard; Wilfred Osgood of the U.S. Biological Survey; Joseph Herron of the War Department; and Judge James Wickersham. One report, that of E. C. Barnard of the Geological Survey, on the forest conditions in the Forty-mile Quadrangle, was made at the request of the Division of Forestry, which had under consideration a forest reserve there. These reports gave the Forest Service a better knowledge of the forest conditions in the interior and aided it in planning for future reserves and recommendations for forest policy.²³

Royal S. Kellogg, in preparation for his monograph on the forests of Alaska, examined the forests of the interior in 1909 and reported them to be of the woodland type, covering about 80 million acres, of which probably half had timber of a size suitable for cordwood or sawlogs. The better stands, he reported, might carry twenty cords per acre of birch and aspen, or several thousand feet of sawtimber. The major use of timber near Fairbanks was for fuel, with an annual consumption of 15,000 to 20,000 cords. Steamboats on the Tanana and the Yukon also consumed much fuel. Fairbanks at that time had three sawmills, two with a capacity of 20,000 feet per day and one smaller. They were supplied by loggers who did their cutting on the Chena River, seventy-five miles above Fairbanks, and floated the logs down. In the interior there were mills at Council, Rampart, and on the Copper and the Susitna rivers, but Kellogg estimated that the total cut of sawtimber in the interior did not exceed 4 million board feet per year. The Land Office, by 1909, had raised its price on stumpage to \$1 for sawtimber and twenty-five cents per cord for fuelwood.

Fire was a major hazard. As Kellogg wrote, "It probably would not be far from the truth to say that in the Fairbanks district ten times as much timber has been killed by fire as has been cut for either fuel or timber." Fire was caused by miners and hunters leaving campfires or mosquito smudges burning, by miners clearing land so they could follow the rock outcrops, and by others who deliberately set fires to secure dry

timber. All of this loss was aided by the dry hot summers and by trees particularly susceptible to fire. The greatest need in the interior, Kellogg wrote, was for some system of fire protection.²⁴

During the early fall and winter of 1903-1904, Langille had pondered the problems of forest administration and protection in the inland forests. On the basis of his own observations and experience, he later presented Pinchot with a provocative plan for the management of the Alaskan forests, adapting the law to Alaskan conditions. The letter deserves to be reproduced in its entirety. It summarizes the dilemma of the Alaskan resource manager in reconciling the need for conservation with the necessity of development. His plan for the forests of Alaska foreshadowed those developed later by Harold Ickes and the Bureau of Land Management.

Seward, Alaska, Jan. 10, 1905

Chief Forester
Bureau of Forestry
Washington, D.C.
Dear Sir:

In a recent letter I intimated sending to you my reasons for asking the setting aside of all forest lands of Southeast Alaska as a forest reserve. I will even go farther now and say that all the forest lands of Alaska if not set aside as forest reserves, should at least be placed under the control and care of foresters, and the cutting carried on under their supervision, with such regulations as the different districts with their varying conditions demand.

It is difficult for one not acquainted with the forests of this region to comprehend their generally impoverished condition and the small amount merchantable timber that really exists in a territory so generally forested as this is. In moving to the north and west the study of the forest always results in favor of those previously seen, there being a constant decadence in size and quality, but still of relative value to the community where it exists and needs the same attention. Observations on the Kenai Peninsula this fall, coupled with previous experience on the Yukon, brings to mind a realization of the really small amount of saw timber which exists away from the coast and this subject to fire which is generally fatal to the thin barked white spruce whose slow reproduction—in places almost hopeless—with the slow growth of the trees after they do start, puts the time that they will attain a size suitable for use so far in the future that it makes a forester's arguments for forest protection seem farcical to the layman with utilitarian tendencies who

sees only the need of the hour. It is these conditions of slow reproduction and growth which emphasizes the necessity of cutting timber under regulations and demands the protection of the living trees whose existence represents so many years of time and though small are invaluable to the people where every new resource is a new demand for timber and at the same time an added menace to the living forest.

The existing forest reserve law does not exactly meet the requirements of Alaska. It is too restricting and in a measure unjust to so new a country to include in a forest reserve an entire region with its latent possibilities so little developed or understood which at the same time is so much in need of forest protection to maintain its forests.

I would propose a measure placing every foot of timber in Alaska under government control and provide for its disposition and care under forest reserve regulations, without withdrawing the land from settlement, the one drawback to the present reserve law. The Alaska Code, Carters Annotated Alaska Codes, Sec. 11 P.460 provides: "That the Secretary of the Interior under such rules and regulations as he may prescribe may come to appraise the timber or any part thereof upon public lands in the District of Alaska and may from time to time sell so much as he may deem proper for not less than the appraised value thereof, in such quantities to each purchaser as he shall prescribe to be used in the District of Alaska but not for export therefrom."

This law makes no provision for cutting under regulations nor for the classification of the lands to segregate the agricultural areas as would be necessary under a new measure nor does it provide for the administration of the forest lands in any specific manner.

It strikes me that the withdrawal of large areas of wild land with no development to demonstrate its possibilities, especially in this region with its future all before it, there is a weakening of the reserve policy if reserves are created, administration provided for and, later it is found necessary to reopen to settlement any part of them, whereas my idea would prepare for this and at the same time protect the forests for the future settler and care for those which would surround him.

I would be pleased to have an expression of your view on this matter and if you thought it worthy of consideration, the earlier it could be brought about the better it would be for all concerned.

The time for a sentimental consideration of the time honored privileges of the pioneer has passed, the conditions which have brought about a relaxation of law in his favor are no more. Civilization in Alaska anyway, follows too closely in his footsteps with an element who abuse every right and privilege ever granted in his name without them deriving any of the benefits and he should no longer be considered a factor in the enactment of the laws for frontier communities or regulations under such laws.²⁵

The Chugach National Forest, 1907: Initial Proclamation

In accordance with Pinchot's instruction, W. A. Langille made an examination of the Prince William Sound area in 1904 and made recommendations to the chief of reserve boundaries in January 1905. He stated in an accompanying letter that the report was incomplete and was only intended to give an idea of conditions there.²⁶ A year later he discussed the area with F. E. Olmsted when the latter came to Alaska on his inspection trip. Olmsted was indifferent about the proposed reserve at the time. There were, he said, no strong reasons either for or against creating the reserve.²⁷ In 1907, however, there came a flurry of activity within the Forest Service regarding new reserves, partly because of a movement within Congress

to curb the president's power to create reserves by executive proclamation. The Alaska reserves came up for consideration, and by March the Forest Service had decided to create new reserves both in southeastern Alaska and in the Prince William Sound area.

The proposal met with strong opposition from Richard Ballinger, commissioner of the General Land Office. In a meeting with Forest Service officers, he discussed the reserves, succeeded in cutting down on the size of that in the Panhandle, and objected strongly to that in Prince William Sound.²⁸ He quoted Langille's report to the effect that there was relatively little sawtimber in the Prince William Sound district in proportion to its area and that there was no danger that the forest

would fail to perpetuate itself. Ballinger expounded at length on his belief that the reserve would nullify most of the laws used to acquire land in the area and would render the existing laws more difficult to enforce. He quoted Langille's statement, in his 1905 report, that creation of a reserve might be premature and inconsistent with the sparse population and lack of economic development in the area. He referred to Langille's assertion that it would be better to regulate the forest lands in Alaska by forest officers, without withdrawing the area from settlement "when the resources are entirely undeveloped and might be retarded by reservation."²⁹

Despite Ballinger's objections, the Chugach National Forest was proclaimed on July 23, 1907; it extended from the Copper River on the east to the borders of the Kenai Peninsula on the west and inland to the Chugach Mountains.³⁰

Langille received news of the proclamation at his headquarters in Ketchikan. He made plans to visit the area but had his usual difficulties with transportation. The Alaska Coast Company steamers did not stop in Ketchikan, so he had to arrange for transportation to Juneau. He left Ketchikan on August 7, caught the *Portland* at Juneau a week later and arrived at Valdez the morning of August 20. There he spent a week interviewing people and explaining forest policy. He caught the *Portland* on its return from Kodiak on August 28, reached Juneau on September 2, and Ketchikan on September 6.

The Chugach National Forest, comprising 4,960,000 acres, consisted of the narrow coastal plain and extensions back from the coast to the crest of the Chugach Mountains. It was located on Prince William Sound, a magnificent body of water, protected from ocean swells and storms by large offshore islands—Montague, Hinchinbrook, Hawkins, Latouche, and many smaller ones. The largest river then marking the eastern border of the reserve was the Copper, a glacial stream with a wide delta. The Lowe River, at the head of the Valdez Arm, was next in size. The principal mountain range was the Chugach, rough and rugged, with peaks up to 13,000 feet and many glaciers. There was but little level land, and this mainly on the flood plains of glaciers. The climate was one of excessive rain in the summer and fall and heavy snow in the winter; in the winter of 1906-1907, Valdez reported twelve feet of snow on the level.

Valdez was the most important town. Located on an excellent harbor, it had been the scene of a major mining rush in 1898-1899, when thousands of men crossed the Valdez Glacier in search of gold in the interior. In 1907 it had a population of 500 to 700. It was the coastal terminus of the all-American mail route to the interior, the connecting point of the U.S. cable with

the telegraph lines that kept interior Alaska in touch with the world. Valdez was the supply point for fishermen and for prospectors working toward the headwaters of the Copper River.

There were a few other settlements. Cordova had experienced a railroad boom a few years before but had declined in population until, in 1907, it had only a half-dozen inhabitants. Ellamar, a post office twenty-eight miles from Valdez, had a few miners in residence. Latouche and Reynolds were small towns on Latouche Island. Orca, near Cordova, was a cannery site, inhabited only in the summer. There was, in addition, Langille reported, a floating population of 500 to 1,000 miners and prospectors.³¹

Langille went to Valdez during a railroad boom. In this area, as in Seward, projects were under way to reach the interior by railroad. Also, just outside the eastern edge of the reserve, two railroads, one controlled by the Bruner interests and the other by the Guggenheims, were planned to reach the interior by way of Copper River from Katalla. The Valdez and Yukon Railroad had an established right-of-way from Valdez about twenty miles inland and had completed about five miles of grading by 1907. Just prior to Langille's visit in that year, however, another promoter entered the race to the interior. H. D. Reynolds, of the Reynolds-Alaska Development Company (a company backed by Boston capital and with Governor Wilford B. Hoggatt as one of the directors), announced his plan in August to build an electric railroad to the interior. He asked the town for moral and financial support. The Alaska Home Railway Company was formed, stock issued, and construction begun on a narrow-gauge railway with the intention of reaching the summit of the Chugach Mountains before winter. The H. D. Reynolds interests also purchased copper properties and formed subsidiary companies to control virtually every business in town, including the sawmill and roadhouses. Local men whose businesses were absorbed were generally put in charge of their former concerns if they purchased sufficient stock. With all these fireworks, Reynolds lacked a right-of-way across the newly created national forest. Langille gave him tentative permission to go ahead on construction of the line, pending a formal application.

The chief economic activity of the Prince William Sound area was copper mining. Four mines were active in 1907 at Landlocked Bay, Ellamar, and Latouche Island. The Reynolds interests also had developed properties at Landlocked Bay, Boulder Bay, and Latouche Island. There were, in addition, many mineral locations "made for all sorts of purposes." Fishing was carried on principally near Orca, where there was a cannery, and, prior to 1907, there had been fox farming on some

of the islands. Transportation, as in the Alexander Archipelago, was mostly by boat. The Northwestern Steamship Company, owned by the Guggenheims, carried mail to Katalla, Valdez, and Seward. The Alaska Coast Company's steamers, owned by the Reynolds interests, carried mail to the same ports and also to Selkovia and Kodiak. Local transportation was by small boat, costing for charter \$60 per day for short trips and \$45 per day for charters of ten days, everything furnished, or \$15 to \$20 per day if the charter party furnished everything. There was relatively little alienated land in the forest, since most of this land had been excluded by the proclamation creating it. Langille reported, however, that there were some homestead entries evidently designed to control the timber sought by the railroads.

The timber in the area was largely Sitka spruce, black spruce, and black hemlock. Good bodies of timber were infrequent and largely confined to the settled bays of the islands. But, while not abundant or of the best quality, the timber was needed to supply the mines. There was a dense undergrowth, as was typical of the coastal forests. Reproduction was spontaneous; forest fires were unknown. Though good sawtimber was limited, there was an abundance of material for ties, piling, and mining timbers.

Only a limited amount of lumbering was being carried on in 1907. Most of the lumber used was imported from Puget Sound. The Copper River Lumber Company operated a mill in Valdez and also sold Puget Sound lumber. The mill was a fairly modern circular-saw outfit, with combination planer, edger, and cutoff saw, and a capacity of 14,000 board feet per day. There was an inactive mill near a cannery on Galena Bay, and a permit was pending to set up a mill on Latouche Island to supply local mining needs. Handlogging was the common practice. The Copper River Lumber Company owned the only steam logger on the sound; it operated from a scow and moved from place to place. The loggers received \$7.50 per thousand for logs at the place of cutting, ready for rafting; towage was about \$3.50 per thousand. Spruce was the sawtimber most sought; hemlock was little used. In scaling logs and observing the mill operation, Langille noticed that the timber was free from heart shake, unlike that further to the south, and that the spruce, though small, was sound.

Langille found that creation of the reserve had not brought about much antagonism in Valdez. Mining interests regarded control of cutting by the government as a right and preferred the businesslike handling of sales by the Forest Service to that of the Land Office. There was an undercurrent of hostile feeling among the mining men on the Sound, based on a rumor that the reserve was created at the request of the Guggenheim

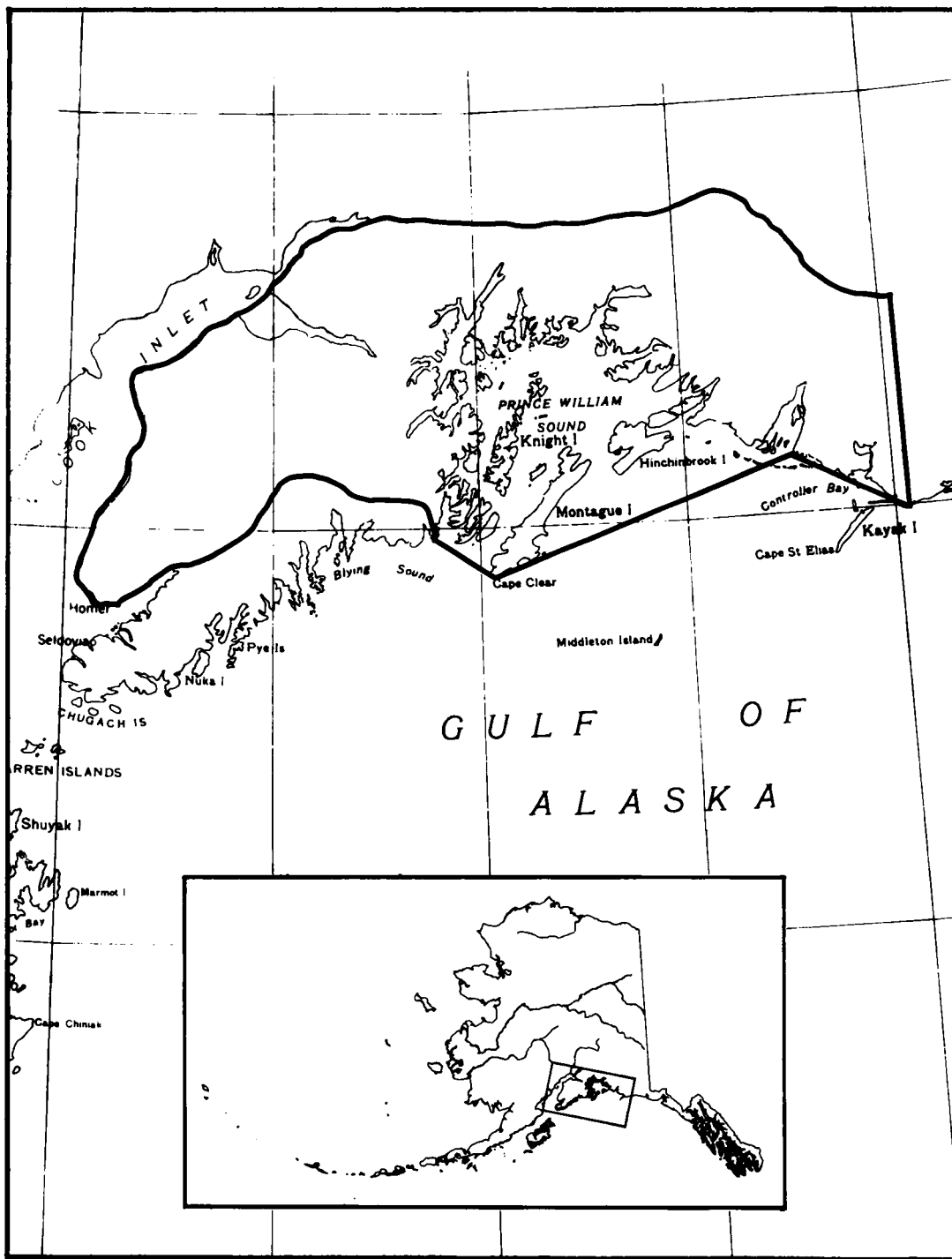
interests and that the timber would not be sold or disposed of until the big operators could use it. Langille made a "complete and emphatic" denial of this rumor and secured the miners' support. H. D. Reynolds also supported the reserve idea.

Langille's recommendations regarding the reserve reflect the dominant political and social tenets held by the Roosevelt conservationists. Langille claimed that a national forest was justified in "the surveillance the Forest Service will maintain over the location and usage of its public lands by vested interests, who would exploit them for their own selfish interests to the exclusion of the individual. While it is true," he wrote, "[that] the mineral resources of such a region cannot be brought to the producing stage by the individual, he still has his rights and should be encouraged in his efforts; no less should capital in its efforts at development be protected from unscrupulous individuals who seek by every known method of extortion to obstruct and hinder every enterprise undertaken." Roosevelt himself could not have expounded more eloquently the tenets of his "Square Deal."

Langille believed that Latouche and Knight islands might be excluded from the reserve in view of their mineral locations. He anticipated that the railroad boom would lead to large sales of sawtimber, ties, and piling. In such cases, the settlements for trespass should be on the basis of those then charged in the Alexander Archipelago; later, when the forest was organized, prices should be based on accessibility and local needs. He recommended that headquarters for the forest be established in Valdez, which had cable connections with Ketchikan, and that a powerboat be purchased for transportation.³²

With characteristic energy, Langille settled timber trespass cases in the area before he left. He made a settlement with the Valdez and Yukon Railroad Company for 10,000 feet cut in trespass, with the Valdez Dock Company for 3,170 feet of piling, and with the Copper River Lumber Company for 560,290 feet. In addition, he made sales amounting to 403,000 feet of sawtimber.³³





IV. Chugach National Forest boundaries in 1909

Additions and Eliminations in the Chugach, 1907-09

Shortly after the initial proclamation of the Chugach, some areas were eliminated in the vicinity of Valdez. Made at the request of business interests, they included an area one mile back from tidewater on Valdez Arm, amounting in all to 83,000 acres, on which mineral locations had already been made.³⁴

In his 1907 report on the Chugach National Forest, Langille also recommended that additional areas be withdrawn from entry and added to the forest: the north shore of Turnagain Arm; Knik Arm; and up the Knik River to the junction with the Chugach. His reason was wasteful cutting by the Alaska Central Railroad, notably in the Rainbow, Indian, Bird and Glacier creek areas. Excellent stands of spruce and black mountain hemlock were located in these areas. The Alaska Central Railroad, between 1905 and 1907, had set up two sawmills and cut 3 million feet of timber, which had been left in the woods to decay. The railroad itself would need timber for construction purposes, and it was also the most available sawtimber in Alaska for the coal mines to be developed on the Matanuska River. Failing other means of preventing such "wanton waste" of timber, Langille recommended addition of this area to the Chugach National Forest.³⁵

In another change, President Roosevelt added the Afognak Fish Culture and Forest Reserve to the Chugach National Forest by executive order July 2, 1908. Afognak Island, however, remained under joint jurisdiction of the Forest Service and the U.S. Fish Commission, with the dominant use of the island being for fish culture.³⁶

In 1909 Langille submitted to E. T. Allen, the district forester of District 6, further recommendations on the Cook Inlet area. He reported that since 1905 there had been little general development in the area except on the tributaries of the Yentna, where gold had been discovered. In consequence, there was some interest in

steamboat transportation on the Yentna and the Susitna. He warned that the rush of prospectors for gold and the need of timber by coal miners made an additional threat to the forests. "This year is an opportune time," Langille advised, "to begin a system of forest production that will so far as possible save the live timber." He ended his report by writing:

This is a region vast, isolated, almost uninhabited, possessing a rigorous climate and meager forests, but it has latent possibilities, and although it may seem a far cry to their development and the interests of the intervening period unworthy with little hope of a sustaining income, the project is nevertheless a worthy one.

His recommendations for a Talkeetna National Forest included a 10,294,720-acre tract, including the valleys of the Talkeetna, Yentna, Susitna, and the Matanuska rivers from Cook Inlet to timberline along the divide.³⁷

With the creation of the Chugach National Forest, Langille received additional help. A man named H. M. Conrad, a Forest Service employee from Wyoming, was sent to Valdez in January 1908. More important, Lage Wernstedt came to Ketchikan in 1908 and was stationed at Cordova. Wernstedt, a graduate of Yale University, had studied in Sweden where the forests resembled those in Alaska. He had great physical endurance, liked Alaska, and was a good physicist and mathematician, as well as a capable forester. He was also the bane of government inventory and property clerks because of carelessness with both personal and government property. His major duties in Cordova were to administer a large timber sale on the Copper River and Northwestern Railway, do boundary work, and make silvicultural reports.³⁸ In 1908 Wernstedt reported on a proposed addition to the Chugach National Forest along the coast between Copper River and Icy Bay. This area was one in which there had been a great deal of speculative interest. Langille had reported in 1904 that everything was staked well up the side of the range, wherever free from ice, including most of the forest area of the region. It was held as coal lands or placer oil claims, much of it not recorded but restaked from time to time to avoid paying recording fees. Recorded claims were renewed under new company names by the same individuals to avoid payment for assessment work. The recording was done by agents, operating under powers of attorney given them by individuals who never saw the land.





Rakestraw Collection

Katalla, a center of mining speculation on the Chugach National Forest.

Near Katalla, where some oil wells began to produce, timber was being cut on the oil claims and disposed of to the sawmill there. The situation had not changed by the time Wernstedt made his examination and wrote: "It is understood that irregularities have occurred in the location of a number of these claims. The claims, it is said, were staked for other interests than those of the claimants."³⁹

Railroad speculation affected Katalla, as it did Valdez. In 1906 and 1907 Katalla had been chosen as the terminus for two rail lines, one backed by the Bruner interests, the other by the Guggenheim-Morgan interests. Both had projected rail lines to reach the Bering coalfields and inland. The Guggenheim interests shifted their activities to Cordova. The Bruner interests, after spending a fortune in building a breakwater that a storm destroyed, went out of business. By 1909 Katalla had lost its period of prosperity.⁴⁰

Along the coastal strip, Wernstedt found good commercial forest made up of spruce and hemlock, the spruce growing lower in elevation than the hemlock. Trees three feet in diameter were not uncommon, and at Yakataga he found some six feet in diameter. He

estimated volumes at from 15,000 to 25,000 board feet per acre, with better timber at Yakataga than Katalla, and at Katalla better than at Prince William Sound.

Cutting for the projected railroads had led to much waste. At Clear Creek and at Martin Creek, 2 million board feet had been cut in the expectation that Katalla would become a railroad terminus. When the bubble burst, the fallen trees were left in the woods to rot. Because of the commercial value of the timber and in order to eliminate wasteful cutting, Wernstedt recommended creation of an extension of the Chugach, to extend as far south as Cape Yakataga.⁴¹

Action on the proposed additions to the Chugach National Forest was delayed for some time, though E. T. Allen strongly urged that Langille's recommendations be followed.⁴² Finally, in the closing days of Roosevelt's administration, the Chugach National Forest was enlarged by executive proclamation. The new area included most of the timbered area of the Kenai Peninsula, plus the Turnagain Arm and Knik areas. It also included an extension to the east along the coast to Cape Suckling, and thence north to the mountains. By Roosevelt's proclamation of February 23, 1909, the Chugach reached a total of 11,280,640 acres.

Ballinger and Pinchot

The years of 1909 and 1910 were crucial in the history of the Alaskan forests. They were marked by the transition of power from Roosevelt to Taft, the affair involving Ballinger and Pinchot, and the replacement of Chief Forester Pinchot by Henry S. Graves. The crisis in conservation during the first year of Taft's administration has been variously evaluated by historians. Some, like John M. Blum, have dismissed it as sound and fury, signifying nothing. Others have treated the matter as one of profound political significance.⁴³ It is appropriate in this study to deal with the matter from the standpoint of resource management and forestry in Alaska. Seen from a regional rather than a national viewpoint, the affair marks a watershed in Alaskan conservation history.

The changing of the guard led to concerns about conservation policy. Conservation work had been carried on smoothly with Roosevelt as president, Pinchot as chief forester, and James Garfield as secretary of the interior. The two departments, Interior and Agriculture, had a working arrangement and cooperative agreements regarding examination of claims within national forests, forestry on Indian reservations, and the like. Pinchot became concerned over the possibility that Taft would fail to follow the Roosevelt-Pinchot policies. He became even more concerned when he learned that Garfield would be replaced by Ballinger as secretary under Taft. One result of this concern was an effort to secure the gains already made. Administrative withdrawals of ranger station sites were made to protect power site possibilities. In view of Ballinger's hostility to the creation of the Tongass and the Chugach national forests, it may be conjectured that additions to them in February 1909 were made to consolidate the position of the Forest Service in Alaska.

With the acquisition of Ballinger's papers by the University of Washington, historians have tried to get at the roots of his personality and ideology. The interpretation that emerges, and which is probably correct, pictures Ballinger as a self-made man. He came from humble beginnings, went west, and grew up with the country, becoming a successful lawyer, a reform mayor who cracked down on gambling and prostitution in Seattle, and a capable and efficient administrator. Though he enjoyed the company of men of power, position, and wealth, he was without personal political ambition. He was reticent, controlled, self-righteous, proud, and considered himself a good Republican in the Roosevelt tradition. He managed the Land Office with efficiency from the businessman's point of view, removing superannuated clerks and inefficient employees,

replacing pens and ink with typewriters, simplifying forms for homestead applications, and reorganizing where necessary.

The Roosevelt tradition embraced elements other than business efficiency. In resource management, Ballinger's ideas represented reaction rather than progress. He believed in the traditional function of the Land Office—that it existed to get the public domain into private hands. He was ignorant of resource problems and management and tended to misinform himself. In the Pacific Northwest's major struggle for fire control—which involved state, federal, and private cooperation—Ballinger actively opposed such cooperation. He believed in departmental autonomy and a chain-of-command administration, and he disliked what he considered to be Pinchot's empire-building and close association with Roosevelt. He had the distrust of the self-made westerner for the easterner of inherited wealth, and of the common-sense businessman for the expert.⁴⁴

There are other aspects of Ballinger's environment and character that deserve further research. He was a Republican, but a Puget Sound Republican. Puget Sound was the center of opposition to Pinchot and to the Forest Service. Cornelius Hanford, John Wilson, William Humphrey, J. J. Donovan, E. W. Ross, and others were among the men with whom Pinchot and E. T. Allen had to battle in order to implement their programs. These doctrinaire opponents to the Forest Service were Ballinger's customary associates, and they undoubtedly told Ballinger what he wanted to believe.⁴⁵

Historian James L. Penick has stressed economic colonialism as a factor in Ballinger's opposition to Pinchot. His thesis is that the Puget Sound area became frustrated at the invasion of eastern capital—the Hills, the Weyerhaeusers, and others, and at the draining of the West's wealth by the East. Ballinger emerged as a champion of the small local businessmen and capitalists who desired their own opportunities to expand.⁴⁶ Whether or not Penick's thesis is true, the fact should be noted that Puget Sound protests against economic colonialism did not extend to their own activities in regard to Alaska. Since the gold rush of 1898 (and even before), Puget Sound entrepreneurs had looked upon Alaska as an area for their own exploitation. Some of these have already been noted—the Rush and Brown group and the promoters of the Alaska Central Railroad—and others will appear on the scene. Ballinger knew these men as friends and colleagues, and he shared their views. Evidence of this affinity include his statements protesting creation of the Chugach and the

Tongass national forests, his approval of the law that forbade export of Alaska timber (it would compete with that of Puget Sound), and his concern for speeding up patent for the Cunningham claimants.

As Ballinger came to office as secretary of the interior, a series of clashes with Pinchot arose. Some involved administrative matters and interdepartmental cooperation. One of significance was that of land claims within the national forest. Although the reserves were transferred to the Forest Service in 1905, land titles still remained within the jurisdiction of the General Land Office. The Forest Service wanted authority over titles so that mining claims could not be used to gain control of forest or grazing land. Pinchot and Secretary of the Interior E. A. Hitchcock had worked out an agreement whereby the Forest Service would investigate, report on, and make recommendations on claims within the national forest. This agreement was formalized in May 1905 and was the authority by which Langille worked in examining land claims.

Ballinger objected to this arrangement, however, arguing that the Forest Service interfered with Land Office prerogatives and duplicated the work of his agency. A compromise formula was arranged whereby the Forest Service could investigate but could not recommend.

Other clashes involved Ballinger's desire for change in reclamation and irrigation policy, a cooperative arrangement between the Indian Bureau and the Forest Service regarding cutting practices and fire control on Indian lands, the "ranger school," a cooperative arrangement between the Forest Service and state universities for technical training of rangers on the off-season, and withdrawal of power sites in the West. Ballinger abrogated both cooperative arrangements on legal grounds. All of these matters led to a worsening relationship between Pinchot and Ballinger. Taft, a completely inept politician, lacked Roosevelt's skill in the management of differing men. The problem came to a head over the Cunningham claims in the Controller Bay area of Alaska.⁴⁷



National Archives

Richard Achilles Ballinger, a Seattle lawyer here photographed in 1907 as commissioner of the General Land Office, became President Taft's Secretary of the Interior in 1909. Ballinger's clash with Pinchot over Alaskan issues marked a turning point in American conservation history.

The Cunningham Claims

As early as 1904, Langille noted that most of the Controller Bay area, from the coast back to the glaciers, was blanketed by coal and oil placer claims, many of questionable legality. Several groups of claims were located in the area tributary to Bering River, an area bounded by Bering Glacier, Martin Glacier, Martin River, and Bering Lake. At least 1,100 separate groups of claims were involved, most of them staked in the names of men who never saw them but gave power of attorney to some prospector or agent. The English Syndicate, Harling group, Chezum group, Hunt-Harriman group, and Green-Young group are among those that appear on the records.

The Cunningham claims were a group of thirty-three claims situated near the 144th meridian and inland from the coast about twenty-six miles. Of these, twenty-one were included within the Chugach National Forest under the 1909 addition. The claimants were businessmen, many from the state of Washington, for whom Idaho mine owner Clarence Cunningham had staked claims under power of attorney. The plan of the Cunningham interests was, in addition to working the claims, to take up sufficient timberland, as mining claims, to supply their construction timber and stulls and to utilize the waterpower of Bering Lake and Bering River. Plans were also made to acquire more timber by use of scrip. Access to the claims was by the Bering River and by a series of trails through a jungle of devilscub and willow. Elevations on the claims ran from 200 up to 2,500 feet, and the terrain was dissected by steep-bank streams, including the Stillwater, Canyon Creek, and Trout Creek.

The claims had first been explored in 1903. Prospecting was done on some of the claims, a survey run, and a wagon road built. But no actual mining was carried on. In due time, the claimants paid \$10 per acre for their parcels and applied at the Juneau branch of the General Land Office for entry of all thirty-three claims. All that remained was the clearlisting of the claims and issue of patents.⁴⁸

Meanwhile, rumors of possible fraudulent practices in obtaining Alaska coal lands reached the General Land Office. In 1907, when Ballinger was commissioner of the General Land Office, he received conflicting reports on the claims from field agents. Horace Jones recommended a rigorous investigation on rumors that the claims were tending to the Guggenheims; H. K. Love said the claims were bona fide. Meanwhile, the claimants did sign an agreement with the Guggenheim-Morgan group, agreeing to consign a partial interest in the claims when they came to patent.

During Ballinger's period of private law practice, between his term as commissioner of the General Land Office and his appointment as secretary of the interior, he advised the claimants. A question remains as to whether he consulted with them as a friend or as a lawyer with clients. On becoming secretary of the interior, Ballinger requested the clearlisting of the Cunningham claims. Louis Glavis, the field officer of the General Land Office in Seattle, wished to delay clearlisting of the claims pending field examination in the summer of 1909. He became convinced that Ballinger and his successor as commissioner, Fred Dennett, were erecting a roadblock to his investigation. James Sheridan, another agent appointed to look into the Alaskan claims, supported this view.

Glavis's objections to clearlisting the claims rested on three major grounds: first, that the claims would be worked as a unit rather than as individual holdings; second, that the coal mine laws applicable were violated; and third, that the mining laws were being used to obtain timber.⁴⁹ In regard to the last matter, the administrative decision pertinent was *Grand Canyon Railway v. Cameron*, a case involving fraudulent claims on the rim of the Grand Canyon. The decision stated: "Lands belonging to the United States cannot be lawfully located or title thereto by patent legally acquired, under the mining laws, for purposes foreign to mining or the development of minerals." Pinchot had felt this decision to be of such importance that he had it printed in the *Field Program* of the Forest Service for 1908.⁵⁰

The Forest Service became concerned with the Cunningham claims through a series of circumstances, accidents, and mishaps. In 1908, with the establishment of a regional system of administration, District Forester E. T. Allen initiated the practice of conferring with the chief of the Field Division of the General Land Office for the Pacific Northwest and Alaska. This practice was necessary for the transfer of timber sales from Land Office jurisdiction to that of the Forest Service, as well as to keep the Forest Service informed on land claims within the boundaries of national forests.⁵¹

On July 13, 1909, a disturbed Louis Glavis met with Allen in Portland. Five days earlier Glavis had sent his superior, H. H. Schwartz, a letter stating the necessity for a field examination of the Cunningham claims before clearlisting them for a patent. The letter was referred to the wrong file and did not reach Schwartz until July 17. Meanwhile, Glavis received orders to proceed with the hearings. Allen asked Glavis for information on claims work within the national forest and became alarmed at his account. Allen's alarm stemmed,

first, from the intimations of fraud, which tended to substantiate previous reports by Lage Wernstedt and W. A. Langille on speculative activities in the area. Second, the Land Office had failed to inform him of the pending hearings, an omission of established practice. Third, Glavis reported that the claimants were taking up four of the claims for timber rather than mineral values—a violation of the law. Allen realized that a field examination of the claims was necessary, with Forest Service participation to determine the truth of the allegations. He decided to write a letter to Pinchot, requesting a field examination, and he asked Glavis to send a supporting telegram to A. C. Shaw, the Forest Service law officer, to make certain that there was no misunderstanding.

Allen wrote the letter on Thursday, July 15. It could not have arrived in Washington before Saturday, and probably not until Monday, July 19. Glavis, meanwhile, waited until Friday, July 16, and then sent his telegram to Shaw. Therefore, the first word that the Forest Service in Washington received of the matter came from Glavis. The result was very much of a mix-up. Shaw, much alarmed, requested the Land Office to hold off any further hearings and asked Allen for further information. Allen was out of the office on July 16, and George Cecil, acting district forester, knew nothing about the situation. The Land Office, meanwhile, was deeply alarmed and affronted. It appeared to the Land Office that Glavis's telegram was designed to initiate action by an appeal to another department.⁵²

The misunderstanding was never cleared up. Glavis was removed from charge of the Alaska coal cases. His visit with Allen and the telegram to Shaw were among the charges on which Ballinger asked for his dismissal. Ballinger wrote:

I call attention to the fact that Glavis went into conference with the office of the Forest Service in Portland, who are his subordinates, and wired Mr. Shaw, of the Forest Service in Washington, without authority from the Chief of the Special Agent Service, Mr. Schwartz.⁵³

In a long letter to Pinchot, which deserves to be quoted in full, Allen explained the matter:

September 4, 1909

The Forester
Washington, D.C.

Dear Sir:

The newspaper stories about the Cunningham Coal cases seem to agree pretty well on one point which I fear may be an injustice to Mr. Glavis. Certainly it will be if he fails to support his contentions. This is the statement which, if not originally made by the Forest Service, at least has not been challenged by it, that the first information received by it of the true

and acute situation came from a personal telegram by Mr. Glavis to Mr. Shaw of July 16. It may easily be charged that such action by Glavis was both wrong and irregular and in itself showed questionable motives.

Mr. Glavis told me personally the whole story on July 13. It came about as the result of our discovery that some of the claims involved were in the Chugach National Forest. We discussed the best method of delaying the precipitate action which seemed imminent and agreed that I should notify you officially, while in the meantime he sent a telegram to Shaw to make sure there would be no misunderstanding. In short, my official notice to you was to be used as a means of securing delay and hence would probably have to be shown in its entirety to the Department of the Interior and require cautious wording. This was particularly true because Mr. Glavis requested protection against the very sort of compromising charge which has actually resulted—that he acted irregularly in an attempt to enlist the Forest Service against his superiors. The real truth is that as Chief of Field Division in charge of the cases, he gave their status upon the request of the District Forester, responsible for the Chugach National Forest, who demanded this information immediately [when] he found that the Forest was involved, and Glavis could not refuse to give it to him without official discourtesy.

I had no opportunity to write to you the following day, being obliged to attend a lumberman's meeting, but did so upon the 15th. I also added a personal letter to Mr. Shaw explaining Glavis' request that we make it very clear how he came to give me the information.

In spite of all this, the public impression has been given that Glavis wired Mr. Shaw personally and that as a result, I was informed of the case and instructed to help him.

I think it should be made very plain that the way the whole thing came to us was through my taking it up with Glavis as a District Forester naturally would with the Chief of Field Division when he found that a case in a National Forest under his jurisdiction was soon coming to hearing and desired all possible knowledge as to how the Forest interest was being taken care of. Any other public impression is very unfair to Glavis under the circumstances and consequently weakens his position and ours.

Very truly yours,
E. T. Allen
District Forester

However, the matter was never clarified. In a letter dated September 4 to Associate Forester Overton Price, Allen explained that the position stated in his letter was the true one and tactically the strongest for the Forest Service. In view of the existing situation, however (Glavis had just presented his case to President Taft on September 3), Allen feared that it might be too late. If the record was to be called for, it might look like a frame-up. Allen asked Price to treat the letter to Pinchot as a personal letter and to decide for himself whether to put it in the record. Later, in a telegram to Pinchot dated September 13, he asked him to disregard the letter and to take it as a personal one, because Glavis had said that it would only complicate affairs.⁵⁴

The failure to clarify the relationship of Allen's letter and Glavis's telegram was unfortunate from several points of view. It has led generations of historians to believe that Glavis behaved in an unorthodox or questionable fashion in telegraphing Shaw; that he acted, as Pinchot's biographer put it, "in a mood of desperation," rather than being a victim of the communications system.⁵⁵ The interests of the Forest Service in the affair were not made clear at the subsequent investigation. Though mentioned, they were lost in a mass of extraneous material, to the extent that the most recent account of the affair does not clarify the matter.⁵⁶

Had E. T. Allen's testimony been called for, he would have been an ideal witness for the Pinchot forces. A westerner who strongly supported the Pinchot policies, he became secretary of the Western Forestry and Conservation Association in 1910. Allen was popular in the business community of the Northwest and could have effectively countered Ballinger's claims that the Forest Service hindered development in the West and in Alaska.

During the time that the Glavis misunderstanding developed, Fred Ames of the Portland office was in Alaska on his inspection trip. On July 29, 1909, he received a letter at Ketchikan from George Cecil, acting district forester, who wrote:

There is considerable evidence that the claimants in the above cases are not only trying to get valuable coal land fraudulently, but are attempting to secure in addition to the coal claims, timber land for the purpose of supplying timber to work their mines. Clarence Cunningham, in one of his reports to the stockholders, admits that four of the claims are more valuable for timber than coal, so the department has secured a continuance in the cases in order to investigate this more thoroughly.

Cecil went on to direct Ames to proceed to the area with Langille and a coal expert named Gabriel Wingate, who was hired to work with the Land Office coal experts.

Definite charges will be preferred against each claim not containing coal. The claims are located on the meridian line at the extreme eastern boundary of the Chugach National Forest about 23 miles northeast of Katalla. Mr. Langille undoubtedly knows the location.⁵⁷

Langille, Ames, Wingate, and Lage Wernstedt traveled to Cordova on the Ohio, then by gas launch toward Katalla, until they stranded on the mud flats and carried their gear ashore. They went up the Bering River as far as possible in "Billy the Kid's" gas boat, then hiked the remaining distance to the Cunningham cabin on the Lucky Baldwin Claim. For the next two weeks Ames and Wernstedt cruised timber while Langille and Wingate investigated the coal claims. Then they headed out for the coast and south to Portland.⁵⁸

Ames found a fair stand of spruce and hemlock on nine of the claims. He reported that the timber had obviously not been taken for commercial purposes, since the nearest market was Cordova, one hundred miles away. It had, therefore, been taken for use by the miners. However, since no assessment work whatsoever had been done on some of the most heavily timbered claims—the Lucky Baldwin, Ansonia, Adrian, and Avon—there was evidence that the claims had been taken up for their timber, rather than for their mineral value.⁵⁹

Langille spent much of his time during 1910 making a survey of coal claims in the Controller Bay area. He had the assistance of a Professor Day, a geologist from the University of Iowa. At the close of the field season, every known deposit in the field had been examined, and measurements of all the openings had been made, giving their strike, dip, and discernible widths.⁶⁰

Pinchot, meanwhile, supported Glavis's views as to complicity between Ballinger and the Cunningham interests. The drama of the firing of Glavis and Pinchot and the subsequent hearings are not central to our main theme. They did disclose that Ballinger was not a good resource manager and that the mineral laws were unsatisfactory. The issue of the Alaskan forests did not enter in to any great degree. One senses a feeling of frustration when Ballinger's attorney stopped his examination of Pinchot with the creation of the Chugach National Forest. The investigation of the validity of the claims themselves indicated that the Glavis contentions were well taken. Walter Fisher, Ballinger's successor as secretary of the interior, sums these up admirably in the 1911 decision invalidating the claims.⁶¹

There are a number of unsettled questions in relation to the Ballinger-Pinchot affair. The relationships among the field officers and the administrative bureaucrats of the Land Office were, by Forest Service standards, unusual. A characteristic of the Forest Service,

then and now, has been to give great weight to the opinions of field officers, the men in the area or region who know the situation and can evaluate it. Ballinger's activities, in the face of reports by Glavis, Jones, and Sheridan, represent different standards of administration than those within the other resource agency. A second question is Ballinger's place among the Puget Sound Republican hierarchy. A man is known by his associates; a keener understanding of Ballinger's character and interests may be found in an examination of his clients and friends. These are tempting byways but not pertinent to the main purpose of this study.

In Alaska the Ballinger-Pinchot affair had serious repercussions. The Cunningham claims were cancelled in 1913 by the Department of the Interior. Press reaction was strong against Pinchot and the Forest Service as a whole. A wave of anticonservation sentiment swept the territory. Angrily, Langille wrote of

...a biased antagonism toward the Forest Service which is the outgrowth of the more or less radical anti-conservation movement in Alaska, engendered by the delays in the settlement of the pending coal claims or legislation to relieve this situation, conceived to be so radically unjust to Alaska and its development, a sense of wrong that has been fostered by selfish personal interests until the public or even those who should know, no longer have any just conception of the actual existing conditions

*which are so much at variance with those facts that should be the basis of a spirit of fair mindedness in dealing with a question of forest preservation which is only indirectly connected with the coal or mineral land around which has centered so unjust a spirit of opposition to the Forest Service and the now firmly established policy of the government regarding timber preservation....*⁶²

Langille resigned as supervisor in 1911. His importance in the forestry movement in Alaska can scarcely be overestimated. He established the boundaries of the Chugach and the Tongass national forests and opened the reserves to use. He began the silvical and scientific study of forests that was necessary to their proper management. His reports, letters, and recommendations are of tremendous value for historians and scientists who seek an understanding of conservation and its problems in Alaska. He started a movement to save the totem poles from destruction and made one of the first suggestions toward reserving a moose range in the Kenai Peninsula. He was a Roosevelt and Pinchot progressive in his views: applying the rule of reason in regard to business, enforcing the law fairly and impartially, idealizing the frontiersmen and frontier virtues but recognizing that the day for an orderly management of resources had come. Langille was a unique combination of talents—woodsman, scholar, scientist, writer, artist, and philosopher.⁶³



4



The Weigle Administration, 1911-1923

The Weigle Administration, 1911-1923

The Politics of National Conservation, 1911-1923

The years from 1910 to 1923 were crucial for the Forest Service. It was subjected to stronger attacks than in any previous period in its history, and its very existence was threatened. Much of the storm centered over Washington, but the regions were subjected to their own attacks—Alaska more than most.

When Gifford Pinchot was removed as chief forester in 1910, he was succeeded by Henry Solon Graves, dean of the Yale Forest School and Pinchot's close associate for many years. Graves had planned at first to return to his post as dean after a year of service. Events changed his mind, however. A strong sense of duty and the need for professional management of the national forests led him to continue in office for a decade.¹

Graves, a graduate of Yale in 1892, had studied forestry abroad at the University of Munich. He had accompanied Pinchot on the National Academy of Science's tour of forest reserves in 1896 and, later the same year, worked as consulting forester for the Cleveland-Cliffs Iron Corporation in Michigan. He was assistant chief of the Bureau of Forestry under Pinchot from 1898 to 1900. With the establishment of Yale Forest School, he became its director and later dean.

Graves became an outstanding chief forester and was a worthy successor to Pinchot. He broadened the scope of Forest Service activity into the fields of research and recreation. He was able to maintain morale in the agency and did much to professionalize the regional and field forces by replacing many old-time foresters, whose education was in the "University of Hard Knocks," with academically trained men. He concentrated on internal affairs rather than publicity. At times he tended to underestimate the strength of local public opinion in favor of the forests and hence made sacrifices of forestland where none were needed, but in the larger issues he was a shrewd promoter of good public relations.²

Both Graves and his successor, William B. Greeley, took a deep and personal interest in the Alaskan forests. Pinchot had, for the most part, delegated authority to Langille and followed his recommendations to the letter. Graves not only inspected the forests of Alaska himself—and wrote well and wisely about them—but also sent a series of inspectors from the Washington Office (Earle H. Clapp, James B. Adams, and Arthur Ringland) to bring him recommendations and information to supplement the regional and district reports. He believed, as had Langille, that the Forest Service should be a force for the orderly, rather than haphazard, development of the country. He fought fearlessly for the forest interest in Alaska against forces in Congress, the General Land Office, and the Alaska Railroad. His trip to Alaska was a successful goodwill tour, and he strongly supported Langille's ideas in regard to recreational management in Alaska.

In Washington he faced a great deal of political and bureaucratic infighting. When he took office, he had some difficulties with Secretary of Agriculture James Wilson on determining the sphere of his authority, and only by appealing personally to President Taft did he obtain the authority he thought necessary. After this episode his relationship with Secretary Wilson was excellent. David F. Houston, President Woodrow Wilson's secretary of agriculture, strongly supported Graves and the Forest Service. In the Department of the Interior, Ballinger was succeeded in 1911 by Walter L. Fisher, a strong conservationist who made a trip to Alaska and settled the Bering River coal claims but felt that the Forest Service might logically rest in his department. President Wilson believed that the post of secretary of the interior should go to a westerner and so chose Franklin K. Lane of California. Lane was reputed to be a friend of conservation, but his record was indifferent. His main accomplishment was the creation of the National Park Service, an agency at



U.S. Forest Service

Henry Solon Graves replaced Pinchot as chief of the Forest Service in 1910 and served for a decade in that position. Graves, a great forestry educator at Yale University before and after federal service, took a special interest in Alaska and made a much publicized tour in 1915.

first opposed, then favored, by Graves. A greater enemy of the national forests was Clay Tallman, commissioner of the General Land Office. Like Dennett and Ballinger before him, Tallman was suspicious of the Forest Service's actions and motives.³

In the political realm President Wilson was indifferent to conservation. He had carried some of the western states in part because of the assumption that he would be friendly toward a states-rights philosophy in regard to resource management. In the Congress, Representative William E. Humphrey of Washington and A. W. Lafferty of Oregon, along with Delegate James Wickersham of Alaska and Senator Albert Fall of New Mexico, were all highly critical of the Forest Service. Graves and William B. Greeley spent a great deal of time testifying before congressional committees. Bills were introduced to turn the national forest

lands over to the states, or to cut appropriations. But there were countervailing forces. Conservation had good friends in Congress, such as Senator Miles Poin-dexter of Washington and Senator Charles L. McNary of Oregon. Of the several good pieces of legislation passed, one of particular importance to Alaskan forests was the Agricultural Appropriations Act of August 10, 1912. One part of the act provided that 10 percent of all receipts from national forests should be used for the construction of roads and trails within the forests. Another part of the act authorized the secretary of the interior to select, classify, and segregate all lands that might be opened to settlement under the homestead laws. Even more important, however, were court decisions in support of conservation. In a series of decisions between 1911 and 1920, the Supreme Court gave constitutional validation to most of the Roosevelt-Pinchot conservation policy.⁴

The Politics of Alaskan Conservation, 1911-1919

The backlash against the national forests during Graves's administration took different forms in different regions of the United States. Thus, grazing problems in Colorado and Wyoming, timber claims in Washington, agricultural lands in eastern Oregon, and light burning in California all represented local crises for Graves and for the district foresters.⁵

Guild-group resolutions and public land conferences all served as forums from which to publicize grievances. Alaska had its own peculiarities. The rhetoric involved in most cases was the time-honored cry of the frontiersman against the "Broad Arrow" policy of the government: locking up resources that rightly belonged to the farmer or the miner, red tape in getting land, faulty allocation of resources (favoritism showed to the big interests, the Morgans and Guggenheims), and lack of self-government for Alaska. Selfish personal interests were involved, as well as misinformation. The strained relations between the Interior and the Agriculture departments, and between the General Land Office and the Forest Service, were often reflected in their field divisions.⁶

Attitudes toward the national forests and the Forest Service varied from place to place in Alaska. Generally speaking, the people living on or near the Tongass National Forest were not unfriendly. They had no particular grievances; timber sales flourished and were satisfactorily managed, and there was a boom in salmon fishing after 1914. The staff in the area—

Supervisor William G. Weigle, George Drake, Roy Barto, George Peterson, Kan Smith, and William Babbitt—were generally liked. Farther north, on the Chugach, there was sporadic hostility. In the Bering River country the Forest Service was unjustly blamed for cancellation of coal claims and lack of development. There were timber trespass difficulties in the Katalla area. Inland, Andrew Christensen and C. W. Ritchie of the General Land Office pursued a vendetta against the Forest Service, and by 1915 the Alaska Engineering Commission (predecessor of the Alaska Railroad) had begun its long era of bad feelings with the Forest Service in the Kenai area. Yet, public opinion is difficult to evaluate. The Service had such disparate friends as Jack Dalton, the Cordova bad man, and John E. Bala-laine, the Seattle-Seward capitalist. There was certainly no monolithic wave of ill-feeling against the Service, and after 1915 general relations tended to improve.

Opposition to Alaska national forests took many forms. In Congress a bill was introduced to abolish the Chugach National Forest and another to eliminate funds for its operation. The argument was made that the national forest held up development, was unnecessary, had no commercial timber, and had valuable agricultural land. Graves and Greeley spent many hours at committee hearings defending the Forest Service and its policies against the uninformed questions of Senators Wesley Jones and Thomas Walsh, and the hostile questions of Delegate Wickersham. The annual

RED TAPE AND CIRCUMLOCUTION IN ALASKA

Nine National departments, through twenty-three separate offices or bureaus, deal with the public business of Alaska. Their several duties and responsibilities are graphically shown below:

DEPARTMENT OF AGRICULTURE

Forest Service. Controls use and sale of lumber, homesteads, mineral rights, power sites, etc., in Chugach and Tongass National forests, with combined area of more than 25,000,000 acres.

Biological Survey. Has charge of bird reserves; controls scientific investigations and experiments in propagation and development of animal life.

Experiment Stations. Maintained for encouragement of agriculture, experiment and demonstration of farming methods, crops, battle breeding, etc.; sells crops grown on experimental farms.

NAVY DEPARTMENT

Maintains buildings, conducts coaling station, and makes tests of native coal; sends vessels to coast in course of cruises; maintains and operates wireless telegraph stations along coast.

WAR DEPARTMENT

Road Commission. Controls building of roads and trails with funds appropriated by Congress and set aside from license receipts.

Engineer Corps. Controls surveys, estimates, and work on river and harbor improvements.

Signal Corps. Controls construction, maintenance and operation of cable between Alaska and the United States and inland telegraph lines and wireless telegraph stations.

The War Department also maintains barracks and troops in Alaska.

TREASURY DEPARTMENT

Controls collection of customs duties, internal revenue, income tax; supervises and plans construction of public buildings; maintains revenue cutter service; makes public health regulations; maintains life-saving service.

POST-OFFICE DEPARTMENT

Controls mail service.

DEPARTMENT OF COMMERCE

Bureau of Fisheries. Protects seals and foxes and sells sealskins and fox skins on Pribilof Islands; controls leasing of certain islands in Aleutian group for fox ranching; employs war-

dens and makes regulations for protecting fur-bearing animals; supervises and regulates fisheries, canneries, etc.

Census Bureau. Takes the decennial census.

Bureau of Lighthouses. Constructs and maintains lighthouses, fog and light signals along coast.

Coast and Geodetic Survey. Charts and channels rocks and obstructions to navigation along coast.

Steamboat Inspection Service. Inspects and licenses steamboats, engineers and officers of steamboats.

Navigation Bureau. Makes and enforces navigation rules and regulations.

DEPARTMENT OF JUSTICE

Controls court machinery, marshals, United States attorneys and commissioners, and generally administers law and justice in the Territory.

DEPARTMENT OF THE INTERIOR

General Land Office. Controls entry, patent, and disposal of public domain; controls and disposes of timber on public lands outside the National forests; disposes of applications for homesteads, mill sites, mineral claims, trade and manufacturing sites, town sites, coal and oil sites, and rights of way in public lands; controls water power and power sites outside of National forests; handles accounts and returns of Surveyor-General's office.

Geological Survey. Investigates mineral formations, coal and oil fields, water supply and stream flow, hot springs, etc.; makes topographical and geological maps of the Territory.

Bureau of Mines. Supervises inspection of mines and mining; enforces mining laws.

Bureau of Education. Supervises education of Eskimos and other natives and reindeer industry among natives.

Secretary's Office. Supervises care and custody of insane; handles general correspondence as to Alaskan affairs; disburses appropriation for protection of game by wardens appointed by the Governor under rules and regulations of Departments of Commerce and Agriculture; acts as clearing-house for general Alaskan matters, and performs other functions not specifically charged to other departments.

from Franklin K. Lane (Secretary of the Interior), "Red Tape in Alaska," The Outlook. January 20, 1915. p. 139

reports of Alaskan governors also called for abolition of the Chugach, as did the first territorial legislature.

A greater threat was the suggestion of Secretary Franklin Lane of the Interior Department that an Alaskan Commission, similar to the Philippine Commission, be set up to manage all resource matters in Alaska. The commission would consist of five members, including the governor of Alaska, the surveyor general, and three others, to replace the federal agencies. In a 1914 article in the *National Geographic*, Lane blamed all the trouble of Alaska on the numerous uncoordinated agencies with overlapping functions in the area. Graves opposed the commission and enlisted the aid of Herman H. Chapman in fighting it. Chapman, a Yale professor of forestry and a noted fighter for forestry and conservation, enlisted the support of the American Forestry Association, which passed a resolution protesting the idea. The commission idea had a hardy life; it was revived again during the Harding administration by George Curry of New Mexico.⁷

A minor furor arose over a proposed elimination in Controller Bay; for a time it gave reporters a field day. Richard Ryan, a Seattle capitalist, wanted to have 320 acres on the west side of the Bering River eliminated from the national forest to be used as a site for a railroad terminal, pipeline, and docks for his projected Controller Bay Railway and Navigation Company. He planned to use soldiers' additional homestead scrip to obtain the land. In December 1909 Ryan made the request to Pinchot, who referred it to the local officers. Langille conferred with Ryan, examining Ryan's maps and the intended elimination. The area consisted solely of untimbered mudflats, and Langille had no objection to the elimination. However, the Catalla and Carbon Mountain Railway Company had already applied for a special-use permit to set up a terminal in the same area. The Alaska 80-Rod Law provided that a settler or manufacturer could not take up more than 80 rods of the coast or a navigable stream, and a space of 80 rods was required between each occupant. Under this law, a 320-acre elimination would have given Ryan a monopoly on the tract. Langille recommended a larger elimination, that of twenty square miles of mudflats. The Forest Service at that time was in the process of eliminating untimbered land from the Chugach Forest, and the larger tract would avoid giving Ryan a monopoly. Langille also insisted that the Navy be consulted, but the Navy had no interest. Ballinger consulted with the Forest Service and, after consideration, recommended a 12,800-acre elimination. This was made in 1910.

Unfortunately, the newspapers, their appetites whetted for scandal after the Ballinger-Pinchot affair, printed erroneous reports on the elimination to the effect that it was a scheme to aid the Guggenheim monopoly. The Senate passed a resolution asking for an investigation. Miss M. F. Abbott, a newspaper writer, was

given permission to examine Land Office files. She claimed to find a letter showing a fraudulent connivance in the elimination involving Ryan, Ballinger, and the president's brother, Charles P. Taft. An investigation was held, and in the end Congress decided that the Abbott letter was a hoax.⁸

Gifford Pinchot became concerned with the Controller Bay incident and decided to make a trip to Alaska to see for himself the area that figured importantly in his recent firing. In September 1911 he traveled to Ketchikan, where the Forest Service impressed him with the size of large spruce logs brought into the Ketchikan Power Company mill. At Ketchikan he met U. S. Rush, who he characterized as a "kicker against the Forest Service." He traveled to Cordova and acquired Jack Dalton as a traveling companion or, the less charitable said, a bodyguard. Dalton was a colorful character; he had traveled to Alaska in the 1880s. During the gold rush of 1897, he had established a toll road to the interior, the Dalton Trail, over much of what now is the Haines cutoff. In an early encounter Dalton had threatened to shoot Langille, but the unarmed ranger had faced him down. Since then Dalton had become a friend of Forest Service policy. Pinchot then went to the Kenai, where he traveled on the Alaska Central Railroad—a "badly built and badly laid line"—and spent some time in and around Katalla, inspecting the Cunningham claims. He helped W. G. Weigle, George Johnson, and T. M. Hunt get the Forest Service launch *Restless* off the beach where it had suffered one of its frequent mishaps. He traveled on to Chitina and explained Forest Service policy at a mass meeting there, returning to the states in October.⁹

The attacks on the Alaskan forests prompted a large number of inspections from the Washington Office. James B. Adams and Earle H. Clapp made inspections in 1913. Graves himself, with E. A. Sherman, traveled around the national forests and inspected the forests of the interior in 1915. Arthur Ringland made a reconnaissance of the Kenai Peninsula in 1916. In addition, there were inspections from Portland. To a large extent, the inspections concerned Forest Service efforts to eliminate untimbered areas from the forest and to classify agricultural land. They were also concerned with administration, timber sales (especially pulp possibilities), recreational development, game refuges, settlement, and personnel.

Graves went to Alaska to get firsthand information with which to meet attacks from the Department of the Interior. He obtained copies of Langille's reports, especially those dealing with the Chugach and the interior of Alaska, and also reports from Adams and Clapp. His journal of the Alaskan trip is a fascinating account of the state of the region and of Alaskan forest conditions in 1915; it deserves publication. He started his journey

by train to Portland, where he conferred with the district office and the Portland Chamber of Commerce about recreational development in the Mount Hood area and along the Columbia River Highway. He went by steamer to Ketchikan, boarded the *Tahn*, and, with Supervisor W. G. Weigle, E. A. Sherman, and Lyle Blodgett, visited the fish canneries and the Thorne Arm area, where there was interest in a pulp proposition. They visited Metlakatla, saw the totem poles at Cat Island, the Ryus homestead on Duke Island, inspected Sulzer and Coppermount and the woods of Prince of Wales Island, inspected the quarries of the Vermont Marble Company on Marble Island, and reached Wrangell on July 23.

Graves went from Wrangell to Petersburg and was struck by the beauty of the Wrangell Narrows. Along the shores of Frederick Sound, he looked over the timber, visited Kake, inspected totem poles, and talked

with Charley Grant, the village's totem carver. Then he went to Warm Springs Bay and between Chichagof and Baranof islands to Sitka. At Sitka he inspected the experiment station and the timber sale at Silver Bay. He then visited Tenakee and Hoonah and traveled to Juneau, where he visited Taku Glacier and took the newly constructed road to Mendenhall Glacier.

Graves desired to see the forests of the interior, so they set sail for Haines and Skagway. He traveled over the White Pass Railroad to Lake Bennett and Whitehorse, then took a riverboat down the Yukon and up the Tanana to Fairbanks. From Fairbanks he traveled by Ford stage down to Valdez, where he boarded the launch *Restless* for trips around Prince William Sound. He took the Copper River & Northwestern Railway up to Chitina, inspected the Alaska Railroad and the new town of Anchorage, and then headed home in September.



U.S. Forest Service

Chief Henry S. Graves examined heavy stands of timber on the Tongass in 1915.



U.S. Forest Service

Chief Forester Henry S. Graves photographed Main Street in the new city of Anchorage during his 1915 trip to Alaska.

There are themes in the Graves journal that illuminate both his personal interests and his character. He had a keen aesthetic appreciation of the Alaskan landscape, both in the Inside Passage and in the interior. He gives a striking description of a sunset over Mount McKinley:

At nine P.M. we stood on the bridge and saw Mt. McKinley. The sun was setting, red, and with a marvelous setting of thin strata clouds, giving a pink glow to the mountain. High above the horizon, it rose with its three peaks, snow covered and monumental, though 130 miles away. It was one of the rare moments when one catches his breath, looks hard and eagerly, for fear the sight will vanish. There is an unreality about the scene, making it seem a vision, not a fact. And as the boat swung round a point blotting out the mountain, I turned to the flaming clouds, still colored by the sun that itself had sunk below the horizon. And as the colors faded to slaty blue I felt that rare elation one sometimes experiences after hearing a wonder strain of Music.

Sights of the Indians in their birchbark canoes on the Yukon evoked memories of his early reading of James Fenimore Cooper. He was also impressed with the beauty of the Copper River near Childs Glacier, where Langille had desired to establish a national monument.

Graves had a keen interest in human nature as well. He was delighted by Weigle's large fund of mildly Rabelaisian frontier stories and recorded a number of them in his journal. The journal abounds with vignettes of the men he met. Graves was particularly critical of Woodrow Wilson's political appointees. He was shocked by the recreational management of the mineral warm springs at Warm Spring Bay and Tenakee. Of Tenakee Springs, he remarked: "It is a dirty, unsanitary place and sure to carry diseases. A public bathtub, with no one to look after it, is a dirty filthy improper affair and must be changed."

Graves was impressed with the large timber values on the Tongass, and with the waterpower and possibilities for pulp development. He also remarked favorably on the timber on the Chugach; though it was not as great in volume as the Tongass, he noted "This reminds me of the miner at Nome who complained of certain diggings because it was half dirt." The vast destruction of timber in the inland, both on the Yukon side of the boundary and in Alaska, distressed him. Graves noted that the General Land Office men did a satisfactory job in claims and timber work but did nothing toward fire prevention or suppression. He also noted that many of the fires were set by railroads or the Alaska Road Commission. This reinforced his desire that the Forest Service take over the task of fire protection for the entire territory.

Graves examined agricultural possibilities both inland and in the southeast. In the coastal area, he noted, farmers usually cultivated gardens to supplement fishing. He felt that the Forest Service could render service to farmers by building farm-to-market roads, using proceeds from timber sales. He was interested in the possibilities of farming combined with ranching in the interior.¹⁰

Graves's visit, as well as his recommendations, had a salutary effect. One of his purposes was to make a goodwill tour; this he achieved. He talked with influential men, explained Forest Service purposes, and succeeded in persuading people that Washington had their welfare at heart. His success was particularly marked in the interior, where his visit had a good press. Under Pinchot, concern with the national forests in Alaska had been largely delegated to Langille, whose recommendations were usually accepted in the Washington and Portland offices. Under Graves and his successor, W. B. Greeley, Washington took a direct interest in the national forests of Alaska.

One of the men not impressed by Graves's visit was Andrew Christensen. He had grown up in Nebraska during the homestead era, had become a railroad attorney, and was favorably impressed with the land and immigration policies of the land-grant railroads. He joined the General Land Office in 1908, first working near Portland, and then coming to Alaska as chief of the Field Division. He believed sincerely that the Land Office should hold to its historic function of disposing of the public domain. He believed that the future of Alaska was in agriculture and felt that the Forest Service hindered Alaskan development. His views in these respects were similar to those of Ballinger, but with two exceptions: Christensen was concerned with the local settlers, rather than with keeping Alaska an economic dependency of Puget Sound, and he was highly self-assertive, in contrast to the reticent Ballinger. Aggressive, loquacious, self-righteous, and sometimes unscrupulous, Christensen was a highly effective adversary of the Forest Service and an able propagandist for disposal and development." His battles with the Forest Service are revealing and deserve consideration at length.

On August 15 and 29, 1915, C. W. Ritchie, special agent of the General Land Office in Fairbanks, sent Christensen letters relating to the Graves journey and clippings from the *Fairbanks Daily Times*. Ritchie was under the impression that Graves and his party were planning to establish national forests in the Yukon and the Tanana valleys. The *Daily Times*, he reported, was impressed by their plan to hire men to fight fires and by the fact that local districts in Alaskan national forests participated in funds from timber sales. Graves had advocated setting up a chief of fire protection, or fire

warden, in each of the judicial districts, paying men to fight fires, and following the California plan of allowing wardens to draft men to fight fire.

Ritchie referred to Graves's trip as "a junket pure and simple." Christensen wrote to Clay Tallman, commissioner of the General Land Office, on October 18 and 19, enclosing Ritchie's letters and clippings. He stated that the Forest Service did nothing to protect the forests that could not be done at less expense by the General Land Office, that the Forest Service delayed settlers who wished to get title to land, and that much of the land was better for agriculture than for growing timber and should be burned off, both to clear the land and because the ash would be good fertilizer.

Probably at Tallman's request, Robert Leehey, of a Seattle law firm, wrote to Tallman urging abolition of the Chugach National Forest, both to open it up to agriculture and to open up the Bering and Katalla coal fields. Leehey asserted that the land could be better handled by the General Land Office. Tallman gave the file to Secretary Lane, who forwarded it to Secretary of Agriculture Houston, asking for his comments.

Houston's response was firm support of the Forest Service and of Graves. He felt that there were three questions involved: requests for abolition of the Chugach National Forest; fire protection in the interior of Alaska; and the propriety of Graves's visit. On the first, he stated firmly that the Chugach should not be abolished. He felt that there was need for further decentralizing authority but pointed out that 95 percent of the problems were settled locally—and most of the others in the Portland office. Only a small percentage of the problems came to Washington. There was, he wrote, apprehension as to the extent and value of the Chugach. The rugged terrain and glaciated mountains gave the impression of an untimbered land, but below the timber line there were 6 to 8 billion feet of commercial timber of great potential value as sawtimber, ties, and piling.

Secretary Houston then turned to the Christensen protests. He denied Christensen's statement that the Forest Service did little to protect the forest and that the General Land Office could do a better job. He pointed out that the Forest Service had a fire suppression force, though it was inadequate in size, and that the Land Office had no suppression force whatsoever. He suggested that there might be cooperative fire control in the Lynn Canal area, where Graves had seen untended fires on the public domain adjacent to the national forest. "The handling of forests is not mere routine administration," Houston stated. "Practically all the work involved specialized knowledge and experience." Scaling, cruising, and timber-sale work involved skills and education that the average Land Office employee

lacked. He denied that the Forest Service held up settlement or hindered individuals from taking up forest homesteads. "The existence of the Forest does head off timber speculators," Houston wrote, "but it substitutes orderly and permanent development for hasty and ill-considered occupancy." Finally, as to the Graves trip being lacking in propriety, he asserted that it was made "with my entire sanction and partly at my suggestion." Commenting on the letter, Tallman wrote to Christensen that he was "more or less impressed by it."

But Christensen was not impressed, as he explained in a forty-two-page letter to Tallman. He dealt with his boyhood in Nebraska and how he had witnessed the drama of the railroad, under liberal land laws, opening up the West and conquering the frontier. Acknowledging that the General Land Office had no timber sale officers, he stated that they could hire some and do the job more cheaply than the Forest Service could because of a unified administration. He denied that the cruises had really showed 6 to 8 billion feet of timber on the Chugach; the volume, he stated, had been grossly overestimated. The land, moreover, would produce more revenue if put to potatoes instead of raising spruce. In regard to fire protection, he felt that there was no need for a withdrawal into a national forest for fire protection; the Land Office could do the job on the public domain. Christensen took exception to Houston's term, "ill-considered occupancy"; the history of the West showed that the liberal land policy of the government had resulted in creation of prosperous farmers and thriving industrial communities. There was, he stated, more ill-considered occupancy within the national forest than without. He cited the report of Hugh Bennett on agricultural land on the east side of Cook Inlet, suggested that the answer to cooperation in fire control on Lynn Canal was to abolish the national forest in that area, and stated that if the forests were to be opened to homesteading, they should be abolished. Finally, he regarded Ritchie's statement on Graves's "junket" as unfortunate.

Christensen continued his attacks during 1916. Supervisor Weigle reported to the district forester in Portland that Christensen had asked C. B. Walker, register of the General Land Office in Juneau, to submit a statement showing how "the National Forests of Alaska interfered with the development of Alaska." He had also requested a letter from Charles E. Davison, the surveyor general, on the same subject. Walker drew up a rather mild statement, a copy of which he submitted to Weigle. The statement ended, "I have seen no friction or want of cooperation between the Land and Forest Bureaus since I have been in Alaska, or any just reason for it."

On March 26, 1916, a conference was held in the office of Assistant Secretary of Agriculture Carl Vrooman to deal with the problems of Alaska. Attending

were representatives of the Forest Service, Bureau of Mines, General Land Office, and Alaska Engineering Commission. Christensen was one of those in attendance. The conference was too short for him to say all that he wanted, so he wrote a 150-page statement to supplement his spoken remarks. He delayed submitting it to the Land Office, because the next day, March 27, he was appointed land manager to the Alaska Engineering Commission.¹²

Christensen's *magnum opus*, entitled "A Statement of Facts Relating to the Chugach National Forest Reservation with Reasons Why the Lands Within it Should be Restored to Entry So as to Encourage Development," is an interesting piece of work. He dealt with the creation of the reserve, citing Langille's doubts and speculations in regard to the Kenai and the Knik Arm areas and Langille's statements that the area might well be preserved without withdrawal. Christensen expounded at length on the idea that the purpose of the railroad was to develop the country and that there was a conflict between the railroad and the reserve ideas. He cited local petitions criticizing the reserve and the committee hearings of 1914, which had been highly critical of the Chugach. He felt that the reserve should be abolished on many grounds: there was no danger of fire or of timber monopoly; no need for grazing regulations or watershed protection; there was a large amount of agricultural and mineral land in the national forest; the existing eliminations from the reserve had been of no value to the public; and the railroad needed traffic from agricultural and mining lands to make it a success. He questioned the estimates of Langille and Graves as to the commercial timber in the area and substituted estimates of his own from reports of Alfred Brooks and George A. Parks, mineral examiner of the Land Office in Alaska. He pointed out that the Alaskan timber was poor for construction purposes, as compared with that of Puget Sound, and that Alaska imported a large volume of timber. He cited the recent studies of Hugh Bennett and E. C. Rice on agricultural land in the Knik Arm area, claiming that if the timber were burned over the land would come up with grass and be suitable for agriculture.¹³

Arthur Ringland of the Forest Service was assigned the task of answering Christensen. Ringland had been in Alaska the year before and had been very much impressed with the possibilities of the Kenai for recreation and for photographing of wild game. He answered Christensen with a 150-page report of his own. About Christensen he remarked, "He has designedly conveyed wrong impressions, with no doubt the purpose of stirring up prejudice." Ringland stated that Christensen had ignored the Forest Homestead Act of 1906 and the Agricultural Appropriations Act of 1912 in his claims that the Forest Service hindered settlement. He pointed out that Alfred Brooks, whose timber



U.S. Forest Service

Arthur C. Ringland of the Forest Service was assigned the task of answering the charges of Andrew Christensen of the General Land Office. Ringland had made a reconnaissance of the Kenai Peninsula in 1916. Here photographed at Albuquerque, New Mexico, in 1912, Ringland was at the time of this writing (1979) the oldest living veteran of the Forest Service.

estimates Christensen cited, had not visited the area. He asserted that the General Land Office did not protect the timber and that the Tanana Chamber of Commerce had protested about the agency's indifference to fire. He questioned Surveyor Parks's competence to make timber surveys, pointed out counterreports about the durability of Alaskan timber, and demonstrated that the federal Alaska Railroad, then under construction, was using local timber. Ringland's report was a point-by-point refutation of the Christensen report.¹⁴

With Christensen's appointment to head the Land Department of the Alaska Engineering Commission (then building the Alaska Railroad), he gave his attention to promoting agriculture in the area tributary to the railroad, and his vendetta against the Forest Service took other forms.¹⁵ His successor as head of the Field Division of the General Land Office in Alaska was George A. Parks, later governor of Alaska. He was also hostile to the Chugach but easier for the Forest Service to get along with.

The divergent views of Christensen and of the Forest Service, particularly as expressed by Langille (and later by W. B. Greeley), show in sharp contrast two aspects of the relationship of the frontier to conservation. Christensen idealized the farming frontier, with its

hardworking, self-reliant homesteader. Langille admired the trapping and mining frontier of the past, with its self-reliance and individualism, but he felt that the frontier's lack of controls must make way for regulation in the public interest. Christensen had an optimistic view of the future of agriculture in Alaska. Langille was skeptical, pointing out lack of markets and uncertain weather conditions. Christensen desired a promotional development, with the railroad serving to further a hot-house colonization of the area. There might initially be some chaos, but order would develop out of it, as it had on other land-boom frontiers. Langille desired an orderly and guided development, with the government preventing the waste in men and resources inherent in haphazard and speculative development. Christensen saw the forest as an obstacle to settlement and an encumbrance on land that could be put to more productive uses. Langille saw the forest as the building material for miners, fishermen, trappers, and farmers as they slowly developed the resources of the country. Christensen saw the area as a future Dakota or eastern Oregon, with full-time farmers harvesting bountiful crops. Langille envisioned its future as one of mining, fishing, subsistence agriculture, and as a vacationland for the hunter and photographer.

Supervisors, Rangers, Boats, and Sporting Women

During this period of interdepartmental and inter-agency infighting, the basic work of the Forest Service went forward. Much of the infighting appeared primarily as froth and bubbles, while real work of substance was going on.

William G. Weigle was the successor to Langille, who resigned from the Service on July 31, 1911. Weigle, like Langille, came to Alaska with a varied career behind him. In age a contemporary of Langille, he had taught in a normal school and worked on a railroad before being attracted to forestry by an advertisement for a course at the Milford Summer Forest School of Yale University. The school was run on the Pinchot estate at Milford, Pennsylvania. He took the course there and then continued at Yale. He worked as a student assistant for the Bureau of Forestry in New Hampshire in 1903, spent 1904 examining woodlots in Ohio with Raphael Zon, and gave lectures in forestry at the state universities of Utah and Ohio. He became a member of the Forest Service in 1905, making pulp mill studies in Pennsylvania and examining woodlots in New York.

Later in 1905 Weigle took charge of a timber sale to the Anaconda Copper Company in Montana and then a railroad tie sale in Wyoming and Colorado. He subsequently did timber sale work in Wisconsin and had a series of assignments in western New Mexico, Nevada, Oklahoma, and southern Oregon. In 1909 he became supervisor of the Coeur d'Alene National Forest at Wallace, Idaho. One of his first jobs was to clear saloons and other unlawful dives from the national forest land—a task that foreshadowed later work at Anchorage. He was a hero of the famous 1910 fire in Idaho and Montana. Early in 1911 he went to Alaska. Langille gave him in-service training in running boats and navigation until Weigle succeeded him as supervisor.

Weigle was a large, powerful, redheaded man of German ancestry. He was a man of action rather than a philosopher, a practical forester who liked fieldwork. He was well liked by his staff, and inspection reports give him good ratings. Graves had him as a student and later enjoyed his rough frontier humor and store of jokes. Arthur Ringland wrote of him: "He has served for five years in Alaska under adverse and often trying conditions. He is a very human type of man, well liked and respected. Above all, he has the essential quality of aggressiveness tempered with push."

To the men who worked with him, Weigle was often a figure of fun. Langille had the capacity for unbending, but at times and places of his own choosing;

his relations with men under him were somewhat formal, with the exception of such intimates as Blodgett and Wernstedt. Weigle, on the other hand, was on more relaxed terms with his men. His foibles, stubbornness, bachelorhood, style of doing his job—all were matters of comment, and a large number of stories and legends have grown up around Weigle. George Drake remarked of him:

I learned a lot about how to get along. I didn't push things. If I wanted to do things a certain way, I'd talk to him and if he'd rebuff it, I'd just clam up and wouldn't say any more; then I'd just go ahead and do things as I thought it ought to be done, and he could see the results. If they worked, he never said anything. But if you asked him, he'd have to tell you how to do it.¹⁶

Forest Service staff in Alaska increased during Weigle's tenure. George Drake came to Ketchikan in 1914 as forest examiner. A New Englander who was educated at Penn State, he was a highly competent surveyor and the only man in the Service in Alaska who could run a transit. In the Kenai area, Thomas M. Hunt came in 1911 as deputy supervisor. He had several assistants and scalers and rangers at Cordova and at Katalla. George Peterson became ranger at Sitka in a large district that extended to Yakutat. His diary has a great deal of unconscious humor in it. Some men came on special assignments, as did Kan Smith, a timber expert who examined pulpwood shows, or Asher Island, who came from eastern Oregon to classify land.¹⁷

Alaska remained under the jurisdiction of District 6, with headquarters in Portland. The district forester during this period was George H. Cecil. A native of Baltimore, Cecil had graduated from the Biltmore Forest School and went to Wyoming and Montana, where in 1906 he did some of the first roadside beautification work in the Forest Service near Yellowstone National Park. He came to the Portland district in 1909 and succeeded to the post of district forester in 1911, when C. S. Chapman resigned to work for the Weyerhaeuser Timber Company. Redhaired, freckled, and youthful in appearance, Cecil was an able and popular district forester. He had a deep interest in Alaska and made several inspection trips to the area.¹⁸

With additional staff came more boats. The beloved Tahn remained the supervisor's boat and the flagship of the Tongass navy. For the Prince William Sound area, the thirty-three-foot launch *Restless* was built at Ketchikan and sailed up. A tender, the *Prospector*, was also used there. The *Restless* was an unfortunate boat, highly accident-prone. Its log and the diaries of rangers



U.S. Forest Service

William G. Weigle, 1910-1919



George Drake Collection

George Drake, here photographed in Alaska about 1916, later became president of the Society of American Foresters.



Rakestraw Collection

Boats served as homes and offices in the field.

carry many accounts of broken propeller shafts. Once the *Restless* drifted helplessly for three days until it was taken in tow by a fishing vessel. In 1911 Weigle made a miscalculation and ran the *Restless* onto rocks near Katalla, punching three holes in the hull. Temporary repairs were made with canvas, thin boards, and tar, but it cost the Forest Service \$50 to have it pulled into the water again. In Anchorage, while being loaded with gasoline, the boat caught fire and was damaged. The *Restless* was taken out of commission in 1919, having completely worn out.

Three boats of the Ranger class, thirty to sixty feet long, were purchased and brought up from Puget Sound. They were of good construction but underpowered. The original motors were 12-horsepower engines, "as the result," wrote Ray Taylor, "of a decision made by some clerk or accountant somewhere in the states." For this reason they sometimes went backward in a "skookum-chuck" or when faced by strong winds, ending up on the beach in some isolated inlet. The motors were replaced with 25- or 30-horsepower engines. The Ranger 4 was built in Ketchikan, according to George Drake, "by some house carpenter from a knockdown plan you could get out of Detroit." It had a good motor, but the hull construction was such that it shipped water in a headwind. With these boats, the rangers were at least mobile.

In addition, a wanigan house scow was built in 1909 as a portable field station. It was towed around by the Tahn or one of the other boats to timber sales and other projects that involved a stay in one place for a period of time. It was much more comfortable for a small crew than tents on the beach. As fieldwork increased, the small wanigan could no longer take care of large crews and equipment; in 1920 a much larger one was built. The smaller one was taken over in 1948 by the Alaska Forest Research Center.¹⁹

Handling the boats called for special skills. "In the administration of the forests," Weigle wrote, "the motorboat takes the place of the saddle and pack horse, hip boots and a slicker the place of chaps, and it is much more essential that a ranger know how to adjust his spark plug than be able to throw a diamond hitch." E. A. Sherman wrote:

With its 12,000 miles of shoreline the Tongass National Forest is completely equipped with an admirable system of waterways. The Forest Ranger in most of the National Forests in the United States depends usually upon his saddle and pack horses for travel and transportation. Not so the Forest Ranger in Alaska. Here...he rides a sea-going motor boat. His steed may do just as much pitching and bucking, but this is prompted not by a spirit of animal perversity but by the spirits of climatic adversity. He

guides his steed by means of a wheel instead of reins; feeds it gasoline instead of oats; tethers it at night by means of an anchor in some sheltered cove instead of a picket rope in a mountain meadow, and uses a paint brush in lieu of a curry comb....

The Alaskan ranger is just as proud of his boat as the Bedouin horseman is of his steed, and the Ranger boats in Alaska are the most distinctive craft sailing the waters of the Alexander Archipelago. They are named Ranger No. 1 to 5, consecutively, have yellow sides and decks, with carmine trimmings. They are staunch boats, several of them having been built at the Bremerton (Washington) Navy Yards according to a special design which gives strength, seaworthiness, and special ability for the particular service expected to them. In case of any trouble or disaster in southeastern Alaska, shipwrecks, sickness, or sorrow, the public appeals to the nearest Ranger boat, and if the request is a proper one or a reasonable one, the appeal is never in vain.²⁰

The fieldwork of the men varied a great deal. Usually in pairs, sometimes with a cook if several men were in a party, the Forest Service men did a tremendous variety of work and put in a good deal of "coal oil time" in addition to the regular day's work. They surveyed occupation sites, or sites of June 11 homestead entry (Forest Homestead Act), mapped power sites, set up gauging stations, marked timber sales, cruised timber, scaled log rafts, and taught the loggers to abide by Forest Service cutting rules. They enforced the fishing regulations, especially preventing fishermen from setting nets at the mouths of streams. They surveyed and mapped fox farms, rabbit farms, saltery and cannery sites, an aerial tramway, cabin sites, hay meadows, net racks, pastures, powder houses, residences, sawmills, railroads, whaling stations, town-sites, roadhouses, hot springs, and Indian villages. They furnished transportation for a large number of individuals on business or on junkets, including inspectors for the district or Washington offices, the governor of Alaska, the head of the experiment station at Sitka, senators and representatives from the Lower 48 and the Alaska legislature, employees of the Lighthouse Service, Fish and Wildlife Service, Bureau of Fisheries, Geological Survey, Bureau of Soils, General Land Office, National Park Service, and businessmen looking for pulp prospects.

The men did a great deal to break down the isolation of the scattered villages and settlements and cabins around Alaska. A ranger, going into one of the larger settlements would carry with him a shopping list

"as long as a peace treaty," one ranger wrote, "and involving about six months pay." Usually the individuals didn't know what the items cost, promising to pay the ranger when he got back. Tobacco, whiskey, 45-70 shells, materials for making a dress, toys and books, nursing bottles and nipples, stovepipes, nails, hip boots, net floats—all were typical of the items ordered. They carried on rescue work, towing in boats whose engines had broken down and organizing search missions for men missing or lost. When a flu epidemic hit Hoonah, George Peterson ran nonstop from Hoonah to Juneau and back to get serum, going seventy-two hours without sleep. Sometimes they found tragedy. Ranger J. M. Wyckoff once found a lonely handlogger who had got his foot pinned by a log and had starved to death while waiting rescue.²¹

Work was hazardous, with danger from storm, tides, and accidents in isolated areas. There were other difficulties as well. "The ground cover is mostly mosquitoes," Asher Ireland remarked of his classification work in the Kenai. Though the men wore veils and gloves, the mosquitoes were active during most of the long daylight hours. Bears were a hazard in many areas, particularly in the thick forests of the Tongass; there were many close calls.

Cruising timber on the Tongass was difficult. There was a thick undergrowth of skunk cabbage, huckleberry brush, and, above all, devilsclub. Trees had huge buttressed roots, so the traditional method of taking the tree's diameter at breast height (DBH) was difficult if not impossible. Here is one forester's description:

To correctly measure the DBH of a tree, one must locate the ground, a point 4½ feet above it on the bole, and finally the calipers or diameter tape. This is so simple a procedure that all seems hard to apply. Many of us have missed too many boats, it is agreed, but it is also a fact, that S. E. Alaska as a whole has rather a weird appearance.

The man with the calipers in D.8 must be a man of courage and resourcefulness. He must be able to climb great heights on slender roots; he must cling with his knees to the bark of trees and jump 12 feet from DBH to the ground. He must exercise judgment and know where the ground is. He must be able to land from great heights with one foot on a down log and the other extending through it three feet, retaining the calipers in one hand and the scribe in the other, and a smile on his lips; all the while repeating aloud the diameter obtained so the tallyman will finally get it. He must know that moss covers abysmal caverns, and how to fall easily on his face in the mud when slipping from

a log with only devil's club to grab. He must learn to walk mostly on his knees and be able to pull himself up out of slimy rock-strewn chasms hand over hand on a devil's club.

The tallyman must be a man of great judgment and patience. He must be able to stand poised on one foot on a slippery log with no-see-ums in each ear while receiving diameters from loft. He must be able to pick diameters from streams of adjectives heard in anguish from the line of battle. He must know, as a gymnastic teacher does, the little touches necessary to land a man properly on his stomach when falling from DBH in awkward positions. He must be able to jump from rotten log to mossy rock with eyes glued to note book, and without hesitation or oaths tally the numbers as they come, even while hysterical, cold and wet and full of devil's club thorns,—and when no-see-ums are exploring the tonsils.

If there were any known ground and the trees grew anywhere near it, DBH could be reached on stilts or with a step ladder, and foresters in Alaska wouldn't have to visit the States so often to recuperate.²²

Another major problem of the national forest was "sporting women." Prostitution flourished on the Alaska frontier, and policies ranged from setting up restricted areas, as in Ketchikan and Juneau, to having a highly permissive society, as at Tenakee. George Peterson, whose ranger district included Tenakee, had many difficulties with the whores. A typical diary entry reads:

Dec. 10, 1919

Went to Mr. Flory to see U.S. Attorney in regard to sport. Ladies and bootleggers at Tenakee.

Dec. 11, 1919

Told Mr. Ed. Snyder, Tom Turke, Lewis Thompson and could not find Nels Pherson that they would have to clean up other place of sporting ladies dives and bootleggers. Ed Snyder said that it was up to the Marshal. And I told them it was not up to Marshal but up to property holders or that we would cancel their permits and left Tenakee at 1:30 P.M. Arrived at Chatham at 5:30 P.M. Very rough out in Chatham straits.

One problem that occurred was that some madams tried to take up land in order to practice their profession. Though the Forest Service had regulations regarding a great number of special-use permits, it had none to fit this type of goods and services. The result

was what the Service emphatically called "nuisance trespass." One woman tried to take advantage of the Forest Homestead Act. George Drake recalled:

We had a ranger at Juneau named Babbitt who came into the Forest Service in the early days....When he asked his supervisor what his job was, he was told to go out and range....I had a tough time to get Babbitt to submit reports, especially June 11 reports. We had a flood of applications for June 11 claims come in from several fishermen around Auke Bay—no report from Babbitt so I set a deadline. In came a single page report with all the claims listed. The substance of the report was as follows:

*"These applicants are fishermen who were attracted to Auke Bay by Mrs. X [a well known lady of easy virtue], who was living there. Mrs. X has moved back to Juneau and there is no more interest. The Gordian Knot is cut. I recommend these applications be cancelled and the cases closed."*²³

The most embarrassing problems in regard to "sporting women" came in Anchorage. In 1914 the federal government began work on the Alaska Railroad. At Ship Creek, on Knik Arm, a construction site was set up and a townsite laid out by the General Land Office, with Andrew Christensen in charge. Lots were sold under Alaska townsite regulations, which provided, among other things, that lots and payments for them would be forfeited if "used for gambling, prostitution, or any other unlawful purpose."

With the construction work came a large number of pimps, gamblers, and sporting women. They formerly had occupied land at the mouth of Ship Creek, along with others, before the Alaska Engineering Commission formally took possession of the area. The commission notified the trespassers that all available land at the mouth of Ship Creek would be needed for headquarters and railroad terminal purposes and ordered the trespassers to move. Meanwhile, the new city of Anchorage had been located on a flat bench above the valley, at the mouth of the creek, and those with legitimate occupations purchased lots and began improvements. The first sale of lots was in mid-July 1915.

The question arose as to the prostitutes, who, under terms of the sale of lots, were barred from purchase. Deputy Supervisor T. M. Hunt was emphatic that under no circumstances would they be allowed to occupy national forest land. (The Forest Service still maintained administrative control of the area inside of the Ship Creek withdrawal, but outside the specific Anchorage elimination.) This left the question up to Christensen. The women had to be moved but could not be admitted to Anchorage. The group reached no solution

for the moment and left it temporarily until the commission had need of the land they occupied. Hunt, meanwhile, plotted a free campground outside the Anchorage elimination to take care of the transient workers who followed construction and could not be expected to purchase lots.

Hunt soon left Anchorage for another section of the national forest. During his absence Christensen took advantage of the situation. In conjunction with the deputy U.S. marshal, who himself owned a lot on which a gambling house was located and who lived with a lady bootlegger not his wife, Christensen had a blind street built to the area adjacent to the campground. He permitted the sporting women to set up their establishments there, on land under jurisdiction of the Forest Service.

Henry Graves, with E. A. Sherman and W. G. Weigle, visited the red-light district in 1915. It had been named "Hunt's Addition" or "Huntsville." Graves was furious, but Christensen thought it solved their problem. Deputy Marshal Wardell assured Graves that his office would police and maintain order in the two areas and that proper sanitation would be maintained by two doctors, one a public health officer. Graves protested strongly, but the situation remained during the fall and winter.

In July 1916 the Alaska Engineering Commission ordered the area vacated, so that the land could be surveyed into lots and sold. All persons occupying the campground and the lots where the prostitutes had their cribs were ordered out before October 1. The women sold their houses, the buildings were torn down, and practically all the women left the area, some going to Seattle, some to other parts of Alaska. The Forest Service considered the problem solved. In early fall, however, word was quietly passed to the scattered women that they could return. It is not known who passed the word, but it was evident that those in charge of the complicated administrative structure in Anchorage knew of the invitation. Hunt knew nothing of the matter, nor did the local ranger.

This time an area under Forest Service jurisdiction was openly selected as the red-light district. Two streets a block or so long, with twenty-five lots, were plotted. This was immediately south of the area recently vacated and close to the south boundary of the reservation, beyond which the land had been taken up by homesteaders. By November 1916 there was an established settlement, with houses going up, community wells, and plank sidewalks. There were no telephones, but an electric signaling system had been set up connecting each house with the railway station and restaurant. Lots were distributed among the women at a public drawing. There were about sixty houses in all, most of them cribs but two of substantial size.

When Hunt discovered the plot, the Forest Service was faced with administrative control of a large red-light district. Though innocent as a party to the condition, it could be subject to public criticism. The problem of removing the district as a nuisance trespass was also difficult. Navigation to Anchorage had closed in November, and it was impossible to send the women out overland. Drastic action by the government in trying to remove them by force would result in fights with the unsavory elements and, at best, would lead to unfavorable publicity. The U.S. deputy marshals in the area were allies of the pimps and prostitutes and would be of no aid. Christensen admitted that Hunt had "caught him with the goods" but offered no remedy.

Weigle and Charles Flory, chief of operations for District 6, discussed the matter. They finally agreed

that the Forest Service would formally and immediately renounce all jurisdiction over the withdrawal area of the original Ship Creek Townsite and ask for its elimination from the forest by presidential proclamation. There was little timber in the area and little land available for homestead purposes. Elimination of the specific nuisance area would be interpreted as a slap at Christensen and thus the Alaska Engineering Commission and General Land Office; but elimination of the entire area from the forest would not be so interpreted and thus could be handled as regular departmental procedure. The Forest Service could "quietly withdraw from the scene without scandal." The Forest Service renounced jurisdiction over the area, but not until 1919, with the Ship Creek elimination, was the Service free from this embarrassment.²⁴

Boundary Work

Boundary work was a major task of the Forest Service during the period 1910-1920. During the spring of 1909, Secretary of the Interior Ballinger and Secretary of Agriculture Wilson agreed to classify land within the national forests and remove agricultural land. Generally speaking, the lands to remain within the forests would include timbered land, land necessary to check erosion, cutover or partly timbered land more valuable for timber production than agriculture, and land above the timberline in the mountains. Lands not timbered and not in the above categories would be eliminated from the forests. In 1912 appropriations were made for classification of the lands within the forests and the U.S. Bureau of Soils did the work.²⁵

Langille, in laying out the boundaries of the Alaskan national forests, had been working on unsurveyed lands. Rather than the usual legal descriptions by township, range, and section, he had established easily recognized boundaries such as watersheds, crests of mountain ranges, streams, mountain ridges, and latitude and longitude lines. There was, therefore, a considerable amount of tundra, barren mountain ridges, and some agricultural land within the forest boundaries. The task, particularly in the Chugach, was to reduce these areas and at the same time protect national forest objectives. A second aim was to eliminate areas around villages and towns, so that they could grow.

Two eliminations were made from the Chugach during Langille's administration. The first was the 12,800-acre elimination by presidential proclamation in Controller Bay, already mentioned. Also, near Cordova, a townsite of Nelson Bay was eliminated from the

national forest by congressional action. A town and railroad terminal were projected, but neither materialized.²⁶

In a report on the Chugach in early 1911, Langille stated that the national forest had no agricultural land worth note, save for a few points on Cook Inlet and Knik Arm. Areas of tillable land, he noted, existed in isolated areas of a few acres each. There was no market for the produce, and the hardy vegetables that might be raised could be imported more cheaply than they could be grown. The areas of land were not large enough or contiguous enough to permit close settlement and development of villages and schools. Subsistence agriculture, as a supplement to fishing, was probably the greatest development that could be expected. Such agricultural land as was available could be listed under the Forest Homestead Act of June 11, 1906.

Langille expanded on this in a letter in May. There was, he wrote, some agricultural land at Knik Arm that might be eliminated from the forest. There was also some agricultural land around Tustumena Lake and the Kenai River. The cost of clearing land, however, was \$800 per acre, the season was short, and agriculture did not have a great future. Langille also pointed out the unique value of the Kenai as a wildlife and hunting preserve, writing, "There is room for the frontier settler and fishermen on the shore land; there let them abide in peace and prosper, but keep out the fire and wanton game destroyers."

On the 1909 addition to the Chugach, from Copper River to Cape Suckling, then under attack, he pointed out that it had been made to preserve the timberlands. "If this action ultimately prevented non-resident

claimants from fraudulently acquiring coal lands and kept a guileless public from investing huge sums in the many claims that will never produce coal, this work was well done." But all this had no bearing on the real reason for the addition. "It was alone to control the use and prevent wasteful destruction of the limited supply of not too good, but most necessary timber and hold it available for future citizens and operators."

Langille's formal recommendations included eliminations along the northern boundary of the Chugach National Forest, including mountains above timberline, tundra, and glaciers. He also recommended eliminations around some of the towns, such as Cordova, and enlargement of the Controller Bay elimination to include more of the mudflats and tidelands in that vicinity. He also suggested some additions to the forest; these included the southern shore of the Kenai Peninsula from near Seward to the head of Kachemak Bay, Kayak Island, Shuyak Island, and Marmot Island.

In the Tongass, Langille reported on a petition for elimination of the settlement of Hyder at the head of Portland Canal. There had been a mining boom at Stewart, located at the head of the canal on the Canadian side, and a rush to the area began in 1909. On the American side, a man named Dan Lindeborg had patented a homestead in 1905. Americans joined the rush, and a settlement named Hyder grew up near the Lindeborg homestead. When Langille visited the area in the winter of 1910, a settlement had grown up of fifteen to twenty tents, three or four rough lumber buildings, a house scow, and four cabins—all on the Lindeborg claim. Plans were made to erect buildings on the pilings. Langille was critical of the Alaska Boundary Commission for its decision on the boundary line. It ignored, he wrote, the Russian Ukase of 1821 and the English-Russian convention of 1824-1825 in drawing the boundary. The decision, wrote Langille, gave the Bear Creek Valley with its mineral resources to "our Canadian cousins," leaving to the United States barren granite. However, Langille recommended building a wagon road up the Salmon River to divert business to the United States. For the present, he wrote, the tideflats and the Lindeborg homestead would be sufficient land for the mining settlement, and he recommended that the proposed elimination be rejected.²⁷

Intensive boundary work began in 1913, following the provision of funds by Congress. The Forest Service was under particular attack at this time from the Senate Committee on Territories. Graves asked George Cecil, district forester of District 6, for all available material on Alaska, including commercial timber areas, maps, reason for establishment of boundaries, probable alienation of lands if they had not become national forest, and present and prospective uses of the forests. Cecil replied that there were large untimbered

areas in the west Kenai, both muskeg and areas burned by prospectors in 1898. The west Chugach, west of the Valdez trail in the mountains, had never been explored and had no inhabitants. He estimated the total volume of timber on the Chugach at 8 billion feet of commercial timber. These boundaries had been set up on the basis of natural features, so well defined that they could not be mistaken. The addition in the Kenai of February 23, 1909, had been planned to include the south coast, but commercial interests in Seward objected, so the crest of the range to Kachemak Bay was used. It should have included the south coast, Cecil reported, since there was more timber south of Kachemak Bay than to the north. Two thousand acres had been located near Katalla with the use of soldiers' additional homestead scrip, and about 1,000 acres near Seward. More scrip would have been used near Knik Arm if the national forests had not been created. He reported some agricultural lands near Knik Arm and in the Cook Inlet area. Finally, he suggested that the Forest Service re-examine timber values in the Susitna, Matanuska, and Chitina areas for a possible new national forest.²⁸

James B. Adams of the Washington Office traveled to Alaska in 1913 in company with George Cecil and E. H. Clapp. They traveled over the right-of-way of the Alaska Northern Railroad to the east end of Kenai Lake, explored the Kenai area, examined Prince William Sound, and then returned to the Panhandle. Clapp recommended elimination of an area east of Seward and another in the Tustumena Lake area. He also recommended elimination of the Ellsworth Glacier and Chugach Mountains, the lower Copper River, the lower Kenai, the Susitna, Matanuska, and Chitina areas, and also Afognak Island. Clapp recommended additions to the Tongass. These included reannexation of the Kasan elimination of 1907, an addition of the Mansfield Peninsula on the northern end of Admiralty Island, the area on the mainland to the west of Lynn Canal, as far as the mountains, and the area to the north of Icy Strait and Cross Sound, as far north as the Yakutat and Dry Bay additions to the Tongass.²⁹

The problems of boundaries were particularly complicated on the Kenai Peninsula, west of the rail line, and in the Cook Inlet area. The nature of the timber was different here from that in the Prince William Sound area and in the Tongass. The yield was sparser, and it was of poor quality—comparable with that of the Rocky Mountain West rather than the Pacific Northwest. This relative lack of timber was a favorite reason given by Delegate Wickersham and Senator Walsh for their efforts to eliminate the Chugach National Forest.

The boundary examinations, moreover, took place in an era of economic and social change. In 1915 the federal government got into the business of railroad

building and set up the Alaska Engineering Commission. Andrew Christensen, formerly with the General Land Office, became head of its Land and Industrial Department, a promotional agency for encouraging settlers to come into the area. It was similar to the land boards of the transcontinental railroads. The work of Christensen's department was to propagandize the values of the area for homesteads. His efforts to establish a permanent agricultural colony were largely unsuccessful, but he did bring a nucleus of settlement into the Matanuska Valley and along Knik Arm, which created more pressure for elimination of national forest lands in that region. Christensen's constant barrage of propaganda about agricultural possibilities stimulated the Forest Service's land classification work, though it had been authorized as early as 1912.

To aid in this classification effort, the U.S. Bureau of Soils sent Hugh H. Bennett to Alaska. Bennett, who would later gain much fame as a soil conservationist, made two trips, one in 1914 and another in 1916. On the first trip Bennett was accompanied by Thomas D. Rice, a fellow employee of the Bureau of Soils. They began their soil reconnaissance along Knik Arm, traveled up the Susitna and Matanuska valleys, visited the Kenai Peninsula, and concluded with studies of the soils of interior Alaska and adjacent areas of Canada. They worked closely with the Forest Service, the Alaska Engineering Commission, and the Alaska Agricultural Extension Station.

In 1916 Bennett made a detailed reconnaissance of the Kenai Peninsula and the Prince William Sound area. He traveled through Cook Inlet with Keith McCullagh of the Forest Service on the launch *Wilhelmina*, hiked through the interior of the Kenai with Arthur Ringland, examined the soils work that T. M. Hunt and Asher Ireland were doing between East Foreland and Kachemak Bay, and took Lage Wernstedt to Afognak Island for topographical mapping. Bennett's reports are valuable historical documents, not only for the soil maps but also for descriptions of other aspects of the country—its timber resources, game and fish, hunting practices, and scenic and recreational values.³⁰

The net effect of Bennett's soil studies and land classification work was to give the Forest Service more reliable information about agricultural possibilities. Thus, eliminations could be made on a sound basis, rather than in response to Christensen's propaganda.

The Forest Service conducted much other fieldwork between 1913 and 1918 in an effort to redraw boundaries of the Chugach National Forest. H. W. Fish made a reconnaissance of the Cape Suckling area in 1913. He found good stands of spruce and recommended additions to that far southeastern part of the forest.³¹ Asher Ireland, a dry, humorous, laconic man from Oregon's Umpqua National Forest, came to the

forest in 1916 to further the land classification effort. He recommended a small addition of 8,641 acres of land on the Resurrection River, adjacent to the southern border of the Chugach, near Seward, as being of value for both timber and protective cover.³² The area contained 42 million feet of spruce and hemlock and was, in Ireland's opinion, "the best body of timber in southwestern Alaska." The tract was within the Land Office withdrawal for Seward, but Ireland felt that the land was needed to prevent the timber from falling into the hands of speculators. Weigle and Cecil both endorsed this proposal.

Ireland and T. M. Hunt also examined an area to the north, between Indian Creek and Bird Creek and beyond the Knik River and Knik Arm. They found an area of great fire danger along the right-of-way clearing for the railroad and believed that it should be retained within the national forest. The soil values were as yet untested, and the timber was of potential value for the railroad and building. "The seemingly poorer stands of today may become the valuable stands of tomorrow," they noted. Later, with intensive classification, the area might be eliminated. They thought that such classification might take place when the Alaska Railroad's free-cutting permit expired on July 1, 1919. Cecil and Weigle, however, believed that the area might be eliminated because of the low timber values.³³ Charles Flory, to the contrary, felt that the area should be retained for pulp and timber needs.³⁴ Weigle favored an elimination from Knik Arm to Potter Creek and along the Knik River, as well as the area already homesteaded.³⁵ He favored a new survey of the Matanuska and Susitna rivers for possible reserves, as well as reserving the timber along Indian, Rainbow, and McHugh creeks. Ireland also examined the land to the head of Knik Arm, between the Matanuska and the Knik rivers, an area of 169,240 acres. He found the land to be primarily agricultural in nature, with settlement on the increase, and recommended that the area not be included in the national forest.³⁶

To the southwest, a major area of controversy was Kachemak Bay and the coastland up to Kenai. Lage Wernstedt and H. Nilsson examined the area in 1916 and recommended elimination of a three-mile-wide coastal strip from East Foreland to the head of Kachemak Bay, totaling 205,670 acres. The area was timbered with spruce, birch, and aspen, with a volume of 80 million feet of spruce suitable for sawtimber and piling, and 315,000 cords of wood. The area had been heavily culled, however, and tie timber was not of the best quality. Bennett and Rice had classified the lands as having agricultural possibilities, and Wernstedt and Nilsson recommended its elimination from the forest.³⁷ George Cecil also recommended its elimination.³⁸ In all,



U.S. Forest Service

The agricultural prospects of Alaska were hotly debated and had some effect on eliminations from the Chugach National Forest. Above is a Matanuska farm photographed in 1941.

581,274 acres in the Chugach were classified as agricultural land by August 1920. These were largely in the Ship Creek, Turnagain Arm, and Kachemak Bay areas.³⁹

The Forest Service also made studies regarding eliminations around towns and villages in both the Chugach and Tongass national forests. These involved increasing the areas of village eliminations and making the eliminations rectangular to conform with the existing system of survey.

The series of eliminations made between 1915 and 1919 reduced the total area of the Chugach from 11,268,140 to 5,232,250 acres. The two major eliminations were those made in 1915, reducing the forest by 5,735,235 acres of untimbered land, and in 1917, involving Ship Creek and Kachemak Bay, an area of about 300,000 acres. The other eliminations included

townsite areas around Ship Creek, Kenai, and Potter.⁴⁰

On the Tongass National Forest, a number of small eliminations were made by executive order. These included bird reservations, Indian reservations, dock sites, the Old Kasaan National Monument, and eliminations at Petersburg, Craig, and Ketchikan.⁴¹ Of more importance than the eliminations were Asher Ireland's reconnaissance at Lituya Bay. He reported heavy stands of spruce and hemlock averaging 15,000 board feet to the acre. He found one stand of pure spruce, the best in Alaska, with a volume of 200 million feet. Ireland estimated the total stand of all timber in this area at 5 billion feet. There were no towns or settlements, and he recommended addition of the area to the national forest. During World War I the military withdrew the Lituya Bay area as an important source of spruce for airplane construction.⁴²

Timber Sales

Timber sale activity in Alaska increased during Weigle's years as supervisor. Wartime demands for fish increased the sale of timber for piling, fish boxes, and construction timber. Some Sitka spruce in Alaska was logged for airplane construction, and a mill was established at Craig for cutting it. The Alaska Railroad also used several million feet of Forest Service timber per year under a free-use agreement. The amounts varied as follows: 1916, 2,267,000 board feet; 1917, 7,358,000; 1918, 5,576,000; 1919, 5,758,000; and 1920, 4,067,000.⁴³ The total national forest cut grew from 9 million board feet in 1909 to 20 million feet in 1920, with a large amount for free use by the railroad and others.

Cable logging had largely replaced handlogging by the 1920s, and stands of spruce near the shore were diminished in most areas. "Most of the timber accessible to tidewater," Kan Smith wrote, "has been culled over at least once, so that the remaining stands do not make practical hand logging areas....The hand loggers as a class invariably waste as much timber as they get into a raft." Logs were usually cut by contractors, many of them Indians, for mills. They were scaled in the raft by scalers using large calipers.⁴⁴

There were generally protests against the scale—folklore persists that any government scaler is out to mulct the operator—and rangers often had to learn the local Indian language to answer such protests. Clyde Nettleton, in the Cordova area, was alternately threatened and offered bribes by "Crooked" Nelson, one of the Copper River and Northwestern Railway lumber contractors, for having taken his scaling duties too seriously. On one occasion George Peterson, the ranger at Sitka, mislaid two pages of his scale book and charged an operator for 250,000 feet instead of 350,000 feet in his log raft. The operator said nothing. Later, Peterson found his error and added the 100,000 to the next raft. The operator protested, calling Peterson a crook, but Weigle backed Peterson. Threats were not uncommon. A sawmill operator in the Kenai tried to threaten J. P. Williams with a Winchester when the ranger found him cutting without a permit. Williams out-bluffed him.⁴⁵

One of the major tasks of the rangers was to supervise timber sales and to see that Forest Service standards of utilization and slash disposal were met. Diaries and sales reports are full of stories of poor utilization, high stumps, long butts, and logs left in the woods. One diary entry is typical; at a sale on Farragut Bay, the sales officer reported:

Went up the creek and looked over the old cutting area....On the south side the stumps in some places average six feet in height and

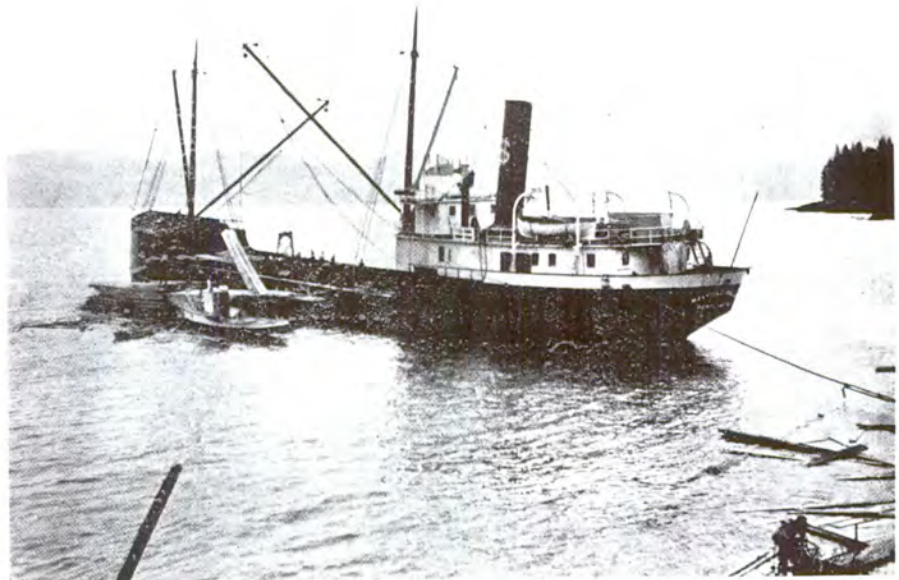
*there is about 60,000 feet of logs left in the creek that could easy have been floated out and about 100,000 left in the wood sales cut and left in the woods.*⁴⁶

As time went on, however, there was greater compliance with the sales regulations. Sales up to 2 million feet were made by the supervisor; larger sales were made by the Portland or Washington offices. Customarily, sales called for stumps cut either above the butt swell or no more than double the diameter of the tree. Logs were cut to a ten-inch top, and, increasingly, hemlock as well as spruce was specified. Sales were advertised for competitive bidding, usually with a minimum price of one dollar per thousand for spruce and fifty cents per thousand for hemlock. Some timber was priced at a sliding scale, depending on distance from tidewater. Logs were scaled either at the mill or the booming ground.⁴⁷

Milling operated under many handicaps. The crews were small and fluctuated in number. Equipment was generally in poor repair, and shutdowns were frequent. Freight rates to the mill were typically double that from Seattle to Ketchikan. A large amount of construction timber was shipped in to the Alaska Railroad from Puget Sound, because it was cheaper to buy from Seattle and Tacoma mills than from local ones. Railroad construction engineers also preferred Douglas-fir to spruce and hemlock.⁴⁸

Sitka spruce was in demand for airplane construction during World War I, and mills on the West Coast did a large business in processing clear spruce. William Weigle made a trip to Lituya Bay in 1917 to examine the spruce reservation.⁴⁹ Meanwhile, other areas of spruce timber were surveyed, but the amount of timber suitable for airplane construction was limited. The stands were decadent and defective, often mixed with hemlock, and would not produce the requisite number of clears desired for aircraft production. In November 1917, however, Jay Williams reported on a tract near Howkan on Long Island. The only cutting, he reported, had been old handlogging shows along the shore. He estimated the stand to contain 24 million board feet, of which a little over one million was hemlock. The logs, he said, would cut 70 percent No. 1 (clear), 20 percent No. 2, and 10 percent No. 3. The area could be logged readily by donkey engine. Weigle corresponded with the district office, recommending a sale at not less than \$3 per thousand, and the sales notice was sent out in January 1918.

The only mill nearby was that at Craig on Prince of Wales Island. This mill, of about 35,000-foot capacity, had recently been bought by F. J. Tromble. Tromble



U.S. Forest Service

Some lumber was exported from Alaska during the years before World War I, but even more had to be imported from the Pacific Northwest.



U.S. Forest Service

Spruce timber at Lituya Bay was harvested for the war effort in 1918.



Rakestraw Collection

A wanigan, the *Tahn*, was one of the *Ranger* boats at a logging operation, 1922.



Mrs. Webb Trimble Collection

Forest Service float and warehouse in Ketchikan about 1916. The *Tahn* is on the left.

wrote to Weigle that he "simply had to have that timber" but found himself in competition with two other men. One, a man named Thane, thought he might ship the logs out by Davis rafts. The other, Henry Shattuck, said that if he got the tract, he would build a mill. A third man, William Bricker, who apparently was associated with Shattuck interests, got the Signal Corps to apply pressure on the Forest Service. Eventually the bids were let on January 26, 1918, and Tromble obtained the sale at the cost of \$3.85 per thousand for spruce. Shattuck then leased the Craig Lumber Company.

The sale had difficulties almost at once. The Forest Service scaler, E. L. Erickson, reported that not more than 20 percent of the cut was clear timber, suitable for airplane stock. The rest would have to be used as box shooks. Two bargeloads were sent to Vancouver, Washington, in August; they totaled about 400,000 board feet. Of that, 50 percent was rejected for airplane stock. By August 10, loggers had not been paid and quit work. Weigle inspected the sale, reporting that the mill was under capacity and that the company had paid too much for the timber. Williams, meanwhile, reported that by "70 percent No. 1" he meant not clears, but 70 percent merchantable logs. Shattuck asked that the terms be modified to permit long butting, since the butt logs often had twisted grain, which led to rejects. This was not allowed. A request that the terms of the sale be modified to permit a selection cut, rather than clearcut, was likewise rejected. By September 1918 the mill could no longer make payments; in November operations were suspended. Government timber contracts for spruce were cancelled on December 11, 1918, and the company was in the hands of a receiver by January. The logs cut but not shipped out were sold at auction at \$2.25 per thousand board feet to the Ketchikan Power Company. Due to the collapse of the airplane spruce market, no damages were assessed, but the contract was cancelled.³⁰ After the war a new sale on the tract was made, and the timber was sold to the O. W. Brown Box and Lumber Company of Craig for \$2.60 per thousand for spruce and \$1 for hemlock.³¹

The pulp timber potentialities of the Tongass were the subject of a major reconnaissance during this period. George Drake, working with Roy Barto, set up a series of stream-gauging stations to study water flow. When B. Frank Heintzleman came to Alaska in 1917, he succeeded Drake at this work.³² Stream traverses, waterflow, dam sites, and potential mill sites were studied. Meanwhile, Kan Smith made a series of timber reconnaissances of pulpwood potentialities, assisted by Jay Williams and R. A. Zeller. The men traveled in a launch (*Ranger 4*), with two twelve-foot skiffs and Evinrude motors, and made a series of strip cruises of Prince of Wales, Admiralty, and Revillagigedo islands.

One of Smith's major accomplishments was a detailed base map of the Tongass on a scale of one inch to the mile. It was based on surveys of the General Land Office, Coast and Geodetic Survey, Geological Survey, and private sources.³³

Some operators from outside Alaska investigated the possibilities of establishing pulp mills in Alaska. In 1910 a Norwegian company became interested in establishing a mill in the Thorne Arm area, but it desired freedom from cutting regulations and title to the land. Roy Barto cruised the area and examined the waterpower possibilities in 1911. On the basis of his report, the Forest Service attempted to interest other companies. L. A. Stockley of the *San Francisco Chronicle* examined the area in 1912, and negotiations were carried on for a sale. A tentative sale contract was signed in 1913, but various obstacles arose. Stockley desired a twenty-acre plat for his plant, and Weigle reserved an area for this purpose. Other problems arose over a waterpower permit and charges for the water. Negotiations continued and Henry Graves made a personal examination of the area during his 1915 trip to Alaska. But by 1917, the *Chronicle* lost interest. Some 300 million board feet were offered for pulp on the Stikine River in 1913 and a billion feet in the Behm Canal area, but there were no takers. In the north, Jack Wilson, who had a copper mine on Latouche Island, had a project for putting up a twenty-five-ton pulp mill, and T. M. Hunt made some surveys. But the economic climate was not yet right for establishment of pulp mills in Alaska.³⁴

In the Cordova, Katalla, and Valdez areas, one of the major problems was the settling of trespass cases inherited from the Department of Interior. These involved cutting operations by the railroad companies that had been pushing their lines into the interior. They had done their original cutting under the jurisdiction of the Department of the Interior, but, with the creation of the Chugach National Forest and the extension of its boundaries in 1909, the Forest Service had inherited their sales. The Alaska Pacific Railway and Terminal Company of Katalla, which represented the Bruner interests, had cut 650,000 feet of spruce sawtimber in 1907 and left it in the woods. The Willoughby interests, a subsidiary of the Copper River and Northwestern Railway, cut more than 2.5 million feet of timber, plus a large amount of piling, in two separate trespasses. They wanted, wrote Wernstedt, "to grab the timber for construction purposes ahead of the Alaska Pacific Railway and Terminal Company, who were doing the same thing." These cases were referred to the Department of Justice in 1913. In addition, there were small trespass cases by the Reynolds interests on Fidalgo Island in the Valdez area. These were settled on the basis of innocent trespass. The Alaska Northern Railroad, before it

went into receivership, cut 21 million feet of timber near Turnagain Arm and left it to rot in the woods.⁵⁵

In the Kenai, timber sale relations revolved about the Forest Service relationship with the Alaska Railroad. A predecessor, the Alaska Central, financed by the Ballaine interests in Seattle, had built slowly northward from Seward until 1907. It was a victim of the panic of that year but reorganized with Canadian backing as the Alaska Northern Railroad and continued building slowly to the north. These railroads had difficulties with the Forest Service from the first. The Alaska Central had been careless with fire and had cut recklessly. The Alaska Northern's application for a right-of-way on Turnagain Arm was turned down for failure to meet Forest Service standards for fire protection and timber utilization.⁵⁶ The Alaska Northern was soon purchased by the federal government to become part of the Alaska Railroad.

From 1915 to 1917, there arose a series of controversies regarding timber use and fire protection. The Alaska Railroad, by agreement with the Forest Service, cut 2 million feet of timber per year from the national forest for ties, bridge timbers, and piling. Cutting was to be under Forest Service supervision, following agency standards for cutting, utilization, and slash disposal. These regulations included: use of dead timber, if available, for cabins and corduroy roads; eighteen-inch stumps, trimmed tops, and full utilization; cutting only in areas designated by Forest Service officers; and assistance of railroad workers in case of fire near the railroad right-of-way. The timber was cut by contractors and sold to the Alaska Engineering Commission, which was in charge of the railroad. In July 1915 Keith McCullagh complained to Deputy Supervisor T. M. Hunt that the contractors were making no effort to follow regulations regarding cutting and brush disposal. Weigle, on examination, found a pattern of high stumps, long butts, untrimmed tops, and bad utilization.

Claims, Amenity Values and Administration

As the business of the national forests increased, the problems relating to claims became more complex and time-consuming. In addition to the agricultural land boom, there was a speculative boom in 1914 and 1915 that complicated the Forest Service's claims work. In the Tongass, before the 1907 proclamation, 30,000 acres were taken up near Ketchikan under the soldiers' additional homestead scrip. The New York Development Company acquired the area for its timber values. It was the only substantial area of alienated land in the Tongass.⁶⁰ In the Chugach, near Katalla,

He asked permission to close down the operation if the contractors did not obey regulations. Hunt and George Drake also found failure to obey regulations and even failure of the commission to notify operators of the terms of the agreement.⁵⁷

By 1917 most divisions of the railroad had cooperated with the Forest Service. The major exception was in relation to R. J. Weir, engineer in charge of the Seward-Turnagain Arm section, and Frank Youngs, timber inspector. Weir was hard to deal with; he disliked Hunt, ignored Forest Service regulations, and would not order spark arresters put on the donkey engines and locomotives. Protests went up from rangers and field men to Deputy Supervisor Hunt, Supervisor Weigle and finally District Forester George Cecil. Cecil wrote to Graves about the matter on April 13, 1917, and the chief forester in turn wrote a formal protest about Weir and Youngs and their lack of cooperation to William Edes, head of the Alaska Engineering Commission. Edes denied the charge but at the same time instigated corrective measures. Spark arresters appeared on the donkeys. The cutting and forest fire regulations, formerly passed by word of mouth, were printed in the *Alaska Railroad Record*, and the major difficulties were ironed out.⁵⁸

Fire was an ever-present menace in the area, and most of the fires were man-caused. The country was dry from the end of April to August, with tall grass, dry vegetation, and high winds in July and August. The coal-burning locomotives, formerly used on the Panama Canal, presented real fire hazards. Engineers were ordered to use spark arresters, but they often took them off when going up grades. The Forest Service set up a protective service involving the use of speeders for transportation, but between 1914 and 1924 there was an average of twenty-six fires per year. The worst fire year was 1915, when sixty-seven fires covered 14,823 acres.⁵⁹

some 20,000 acres of timberland had been acquired by the Cunningham, Green, and other companies before the creation of the national forest. In the Turnagain Arm area speculators interested in producing piling desired to locate on 100,000 acres of forestland; they pressed for removal of this land from the national forest.⁶¹ The Cunningham interests, hoping to compete with the Alaska Northern for a route to the interior and the Matanuska coalfields, projected the "Flour Sack" Railroad from Passage Canal. In 1913 Supervisor T. M. Hunt reported that the whole shoreline was staked

with timber claims and placer claims and that the Guggenheim interests had applied for a right-of-way, filing the application in Juneau. Henry S. Graves, on his trip in 1915, reported that a New York man had plastered 140 townsite, trade, and manufacturing sites and timber claims along Passage Canal; a Bostonian had staked 18 eighty-acre claims along the same canal.⁶² When the federal government took over railroad building in 1915, the speculative excitement died down somewhat.

The era was also marked by a close examination of mineral, oil, and coal claims in the Bering River area. During his last year as supervisor, Langille and a geologist from the University of Iowa examined and reported on every coal claim opening in the area. Sometimes Langille was assisted by Lage Wernstedt or Bruce Hoffman. He found some claims, particularly in the Christopher group just to the north of Bering Lake, that had been taken up for timber rather than coal values. Court tests were made of some speculative claims. The decisions, particularly that for the case of *United States v. Munday* in 1912, ameliorated the situation and lessened the backlash from the Cunningham cases. Registers and receivers supported the new interpretations of the law. By 1921 Melvin Merritt found that sentiment toward the Forest Service on the part of claimants had become friendly rather than hostile.⁶³

Oil claims also presented a problem in the Katalla area. Both Langille and Wernstedt had made reports on the claims there and south to Cape Yakataga. Under Weigle's administration the Forest Service and the General Land Office cooperated in studies of these claims.

The first of these oil claims in the Katalla area were located in 1897 by the Alaska Development Company, a Seattle corporation whose directors also had interests in local coal claims. In addition to 30 coal claims of 640 acres each, this syndicate located more than 150 oil claims of 160 acres each in the Katalla area and more than 100 in the Yakataga fields. Several years later other claims were located by W. A. Abernethy Associates, by J. W. Ivy, and by Harry White. The result was that practically all the accessible land not claimed as coal land between Cape Suckling and Martin River was claimed as oil lands by some company or syndicate.

Oil land was located under the Placer Act of 1897. This, like the law on metalliferous minerals, required annual assessment work and gave the prospector no legal right to his discovery until he had begun to produce. But oil required drilling, which was expensive. The result was that the companies, to avoid spending the \$100 worth of assessment work required by law, relocated the land claimed by them each year. Usually the same ground was relocated each year, but sometimes lines were redrawn or areas abandoned. Drilling

took place on only thirty sites. Assessment work and improvements consisted largely of building roads and cabins and cutting rig timbers or firewood. Some of the firewood was sold in Katalla. Often the timbers were left to rot, or the roads were abandoned.

More than a half million acres were filed on between 1897 and 1911. Much of this was relocation of claims, however, and the total never exceeded more than 100,000 acres at any one time. The companies, all incorporated in Oregon or Washington, had a total stock of about \$100,000,000. Their main interest was in selling stock to the gullible, not in drilling for oil. Only four wells were brought in, all near Katalla; they each produced about twelve barrels per day. A small refinery was built near Katalla, and the gas and oil was sold locally.

The General Land Office had been lax in enforcing the law or checking the authenticity of the claims. With the creation of the Chugach National Forest, land on which assessment was not performed had to be abandoned. Consequently, about one-fourth of the land held in 1911 was abandoned in 1912.

Weigle determined to settle the oil claim question. Two rangers, John H. Schurr and H. W. Fiske, examined claims in the vicinity of Katalla in the fall of 1912, collecting data and making maps. In 1913 Andrew Christensen, chief of the Alaska Field Division of the General Land Office, sent a field agent, Stanley Hindricks, to work with the Forest Service. After a searching investigation, Hindricks made his report. There was, he said, no discovery of oil prior to creation of the Chugach; therefore, there were no prior claims to patented land within the national forest. All pending claims, he believed, could be canceled—first, because no oil had been discovered as of that date, and, second, because dummy entrymen had been used. However, Hindricks urged holding off on any action. The promoters had made their money out of selling stock, not producing oil. They had done little or no prospecting and lacked the financial resources to do so. He feared that they would welcome the opportunity to "pass the buck to the government for their own failures." In another year or so, Hindricks predicted, oil stock sales would fall off and the companies would abandon their claims.

District Forester George H. Cecil agreed with the field agent's conclusions. Cecil was already faced with a movement to eliminate the Chugach and "open up" Alaska. A highly publicized investigation of or action against oil claims at this time, Cecil thought, would "complicate a situation which, to say the least, is at present very acute." As predicted, the oil claim question died a natural death.

Homestead applications began to mount during this era, and they were processed more rapidly than before. The Forest Service had been criticized by

Christensen and others for delay in processing homestead applications, and genuine efforts were made to speed them up. Increased use of the Forest Homestead Act arose from the fact that the Forest Service paid the cost of surveying the forestland. On the public domain the cost of surveying to the men who filed amounted to about \$500.⁶⁴

There were various technical and jurisdictional problems connected with all claims. The interpretation of the 80-rod law was difficult. This law provided that no entry of land would be allowed extending for more than 160 rods along the shore of any navigable stream, with distances of 80 rods between each claim. There were disputes concerning the definition of navigable streams. And there were problems concerning prior Native claims. In the Tongass, particularly, cleared areas had often been occupied by Native villages or cabins. These were often filed on by whites. The Forest Service generally accepted as evidence of past occupancy garden spots, houses, burial grounds, and the like. The agency worked closely in such matters with the Office of Indian Affairs.⁶⁵

Another use of the forest during this period was fox raising on islands, an activity that had begun in Alaska during the 1890s. The Treasury Department had leased islands under an act that permitted granting five-year leases to "unoccupied and unproductive" land. The Treasury Department delegated jurisdiction over the fox ranches to the Commerce Department, which established a leasing system. Langille received his first application for a fox island in 1910. More applications followed, and several hundred head of foxes were shipped to Alaska from eastern Canada, where fox raising was well established. District Forester Cecil decided that a price of \$25 per year for each island would be fair rental. By 1913 there were eight fox ranches on the Chugach and four others on the Tongass. By 1920 there were fourteen on the Chugach and eleven on the Tongass. Various jurisdictional problems arose. The Forest Service rented islands for a cheaper rate than did the Commerce Department, which charged \$100 per year. This disparity led to petitions by some fox ranch operators outside the national forest that their islands be included within the forest. Controversies also arose over the proper payment for islands that had been used for fox raising before they came under national forest jurisdiction—would the old or the new rates apply? The solicitor of the Department of Commerce held that the old rates would apply to these islands, because the Chugach withdrawal proclamation had made the land subject to prior reservations.⁶⁶

Yet another new problem was that of hot springs. Hot springs in Alaska had been withdrawn from entry in 1899. National forest land could not be leased if there were hot springs on the land. But settlements

grew up around the hot springs, and problems of sanitation and vice developed at Tenakee, Warm Springs, and Bell Island. In the interest of good administration, the policy was reversed, and on January 24, 1914, the Forest Service secured jurisdiction over hot springs on national forest lands. The Forest Service then found itself in the position of investigating and validating old claims in the vicinity of hot springs, surveying lots, and aiding in the management of recreational areas.⁶⁷

Laws were modified to grant recreational sites by lease within the national forests. There had been an increasing demand for such sites for resorts, summer homes, stores, and the like. In 1915, on Graves's recommendation, legislation was passed authorizing the lease of five-acre sites for not more than thirty years. Much of the land classification work in the Juneau area had to do with recreational sites. By 1920, 22,288 acres of land and two miles of railway were under lease in the Chugach, and 13,355.6 acres in the Tongass. The listing of uses was diversified, including agriculture, cabins, camps, drift fences, fox and rabbit farms, hotels and roadhouses, mills, a logging railroad, a tramway, a park, a school, wharfs, wells, telephone lines, cemeteries, canneries, ice plants, and water transmission facilities. ⁶⁸ Many resorts, however, took advantage of the townsite law. The Forest Service administered them as special-use towns. Streets and water systems were put in, and road money was used for constructing plank walks. Lots were mapped and frontage provided.

The Forest Service continued to be active in game and fish conservation. It prevented seiners from placing salmon nets at the mouths of streams to catch schools of fish (and thus prevent spawning).⁶⁹ In 1912 T. M. Hunt opened three major streams that had been closed in this way by fishermen.⁷⁰ Ringland recommended in his 1916 report that rangers be made fish wardens, and he repeated Langille's recommendations regarding establishment of a game refuge in the Kenai. He attempts to enlist the aid of Harold McCracken and the Biological Survey in this enterprise.⁷¹ Other Forest Service men reported on game poaching by trophy hunters in the Kenai.⁷²

Historic preservation work also concerned the Forest Service. An old Russian settlement on Russian River near Kenai Lake was identified and marked as a historic site.⁷³ More important, of course, was the creation of Old Kasaan National Monument under the Antiquities Act. As mentioned previously, Langille had recommended preservation of the totem poles at Old Kasaan and Tuxekan under this act, and F. E. Olmsted, in his inspection report of 1906, had forwarded the idea to Pinchot. Pinchot in turn had made a recommendation to the secretary of the interior. The president reserved the tract by executive order in 1907, but no

formal proclamation was made.⁷⁴ No particular supervision of the area was made, except by casual patrol work.

In 1913, however, the Alaska Cruise Club revived the effort to give the area formal national monument status. The club, which had about 1,000 members from all parts of the country, made a cruise in Alaskan waters in 1913. It adopted a resolution to petition for creation of a park or national monument at Old Kasaan. The resolution was endorsed by the whole membership in July 1914, and copies were then sent to the president of the Senate, speaker of the House, and to senators and representatives of the western states.⁷⁵

Kan Smith, in his reconnaissance report of September 1914, recommended protection of the "exquisite specimens of native art" in the pole and house construction at Old Kasaan. District Forester Cecil wrote to Weigle on the subject, and he in turn talked the matter over with a special agent of the Department of the Interior. Weigle also prepared a map and plan of the area and made an inventory of graves, buildings, and poles. He suggested that the best poles be taken to the Sitka National Monument for preservation and protection and recommended that about \$5,000 be spent in constructing cement bases for the poles. Weigle agreed that national monument status for Old Kasaan would be desirable.

The movement to create a monument gained momentum. Chief Forester Graves got in touch with the Smithsonian Institution on the matter, stating that the major needs were for a custodian and for protective money. Andrew Christensen of the Alaska Field Division of the General Land Office favored creation of a national monument, as did Land Office Commissioner Clay Tallman. Territorial Delegate Wickersham lent his support. On October 25, 1916, the proclamation was made.⁷⁶

Assistant Forester James B. Adams suggested that a special appropriation for protection could be added for fiscal 1919. Meanwhile, he authorized the supervisor to make some repairs at the monument. At this point, however, the Alaskan foresters belatedly informed the Washington Office that a fire had swept through the village in the summer of 1915. It had destroyed three houses and three totem poles and had damaged others. The Washington Office literally "hit the ceiling" at this news. Acting Forester Alfred Potter and E. A. Sherman severely criticized both Weigle and Cecil for not informing them sooner. They felt that the appropriation could not be justified since the main purpose for establishing the monument had been to protect the buildings, now burned. What, asked Sherman, could be done with the area? How much worthwhile material was left? How could this be protected? Should the monument order be revoked?⁷⁷

Shortly after taking office as the new district forester in 1919, Charles Flory made an examination of the area. In a detailed report he stated that the Natives had been influenced by missionaries to go to villages where they could acquire educations. They had abandoned villages, the whites had pillaged the settlements in search of artifacts (even breaking into graves and coffins), and the totem and house poles had been used for rifle practice. The poles themselves were neglected and had decayed; those that had fallen lay rotting in thickets of devilsclub. Flory felt that the poles should be preserved through some agency, but the Forest Service had neither time, money, nor staff to act as custodians and restorers. He felt that there should be action at an early date. There were, he thought, enough pieces of lumber remaining to reconstruct some of the old houses. However, these were privately owned by the Indians, and the Forest Service could not proceed without their permission. He suggested that the best poles and house material be moved to Sitka National Monument and placed under Park Service custodianship. There a Native village could be constructed. This could be accomplished, he thought, at a cost of \$10,000.⁷⁸

The Forest Service corresponded on the matter with the Smithsonian Institution, which approved the project of moving the poles to Sitka. It was suggested that each pole be photographed before moving and that records be kept of the history of each pole. Greeley, commenting on the fact that some poles had been sold to Ketchikan businessmen, expressed the view that if the Indian seller could prove bona fide ownership, such sales were valid. H. W. Krieger of the Smithsonian Institution made an archaeological survey of the site in 1926 and did some restorative work on the poles by removing decay. He, too, felt that the poles should be moved to Sitka. Not until 1932, however, was anything further done to save the totems.⁷⁹

William Weigle's tenure as supervisor of the Tongass and Chugach national forests came to an end in 1919. No longer a bachelor, having married a Ketchikan schoolteacher, he left Alaska to become supervisor of the Snoqualmie National Forest in Washington. He was later involved in the creation of Washington's state park system.

Weigle was a worthy successor to Langille, and his administration was marked by many achievements. He opened the forest to agricultural as well as to timber use. The Forest Service during that time was under fire almost continually, and Weigle stood firm against many pressures. He gave the forests strong administration and through the use of common sense settled many disputes amicably. Sometimes a heroic and sometimes a comic figure, he was admired for his best qualities and loved for his foibles.



U.S. Forest Service

A forest ranger's camp in winter, ca. 1915. With the aid of dog sleds, much reconnaissance work was carried out during the snow season.



U.S. Forest Service

Around 1915, some seventy-five canneries, salteries, and other fishing stations operated on the Tongass and Chugach. These establishments used lumber for packing boxes, piling for docks and traps, and other local wood products for plank walks and general construction needs.

5



Team Management: Flory, Heintzleman, and Merritt, 1919–1937

Errata

Page 94

Column 2, line 5 from bottom of page, add footnote number “32” at end of sentence “. . . *Pocket Guide to Alaska Trees.*”

Team Management: Flory, Heintzleman, Merritt, 1919-1937

December 4, 1930

Reference is made to your letter relative to butter received in the last Seattle purchase. The brand received here is marked Montequilla Marc. Brookfield. Was probably made some years ago for export to Mexico but the Mexican government refused it. I believe it is butter, or would prove to be on analysis, but it has been removed from the cow for too many years. There are rust spots through and on it, it does not taste very good, and has a queer grainy effect when placed in the mouth. It looks more like tallow than butter but this is probably an optical illusion. Never saw butter like this before.

Chas. Burdick to R. A. Zeller, quoted in
Sourdough Notes, October 1, 1951

Politics of Forestry: The 1920s

The Taft and Wilson administrations had been marked by political battles over forestry and conservation—battles in which Alaska was prominently involved. This was also the case for the first three years of the Harding administration. Harding chose Albert B. Fall of New Mexico to be his secretary of the interior. Fall had as a goal the transfer of the Forest Service to the Department of the Interior. As an opening wedge, he testified in 1922 before the Senate Committee on Territories in favor of transferring the Forest Service in Alaska to the Interior Department. This would, in his opinion, make mining and homesteading in the territory much simpler and would at the same time allow forest use. The project found some friends in Congress, particularly in Fall's successor in the Senate, Holm O. Bursom, and from George Curry, a former congressman and governor of New Mexico, now Bursom's "private secretary." However, it was characterized by the American Forestry Association as a land grab. Pinchot used his considerable political influence against it, as did Secretary of Agriculture Henry C. Wallace. Dan A. Sutherland, Alaska's delegate to Congress, also opposed the transfer. This controversy was probably a factor in Harding's decision to visit Alaska in 1923. The president became a convert to Forest Service views while in Alaska, and in a Seattle speech he strongly supported Forest Service management and advocated

development of a pulp industry in Alaska.¹ The political threat to Alaska's forests disappeared during the 1920s, and it was in general a period of quiet but steady progress.

Calvin Coolidge, Harding's successor, was pledged to economy in government and to noninterference with the existing governmental departments. He provided no leadership to conservation, but he offered no obstacles. Herbert Hoover was more knowledgeable regarding resource administration. His philosophy involved businesslike efficiency, scientific management, cooperation with the states, and decentralized administration. These were not antithetical to the Forest Service objectives. Hoover was unfortunate in the time in which he served, however, spending much of his energy explaining and dealing with the economic depression.

In Congress there emerged a strong leadership for forestry and conservation. Senator Charles L. McNary of Oregon, with his strong personal interest in forestry, his legislative skill, and his working alliance with E. T. Allen, was the notable leader. Others included Louis C. Cramton and Arthur H. Vandenberg of Michigan, Henrik Shipstead of Minnesota, and George W. Norris of Nebraska. The decade witnessed important legislation, especially in the area of state and federal cooperation. The Clarke-McNary Act, the General Exchange Act,

the McSweeney-McNary Act, the Knutson-Vandenberg Act, and the Copeland Report were among the accomplishments.

The two chief foresters of the period, William B. Greeley (1920-1928) and Robert Y. Stuart (1928-1933), built substantial records. Greeley was a graduate of Yale who came to Washington after service in California and Montana. A capable, competent man who had earned the respect of the lumber industry, he had a good relationship with both the administration and the Congress. He rejected Graves's idea of federal regulation of private cutting, preferring voluntary cooperation. He gave high priority to fire control—the result of his personal experience in the big fire of 1910 in Montana. He continued Grave's emphasis on recreation in the national forests, which involved both road building and reserving of primitive areas. Scientific research was advanced greatly during his term as chief. In all these areas, except the regulation issue, he followed the views of his predecessor. Graves had been denied full achievement of his goals by political hostility. Greeley, on the other hand, took advantage of the era of good feelings in politics to get through the legislation he wanted. Greeley faced minor clashes with the grazing interests over the matter of fees, and there was some infighting with the National Park Service in recreational areas, but his was an administration of substantial accomplishments. He retired from the Forest Service in 1928.²

Robert Y. Stuart, successor to Greeley, was another Yale man. He entered the Forest Service in 1906, served until the United States entered World War I, became a major in the 20th (Forest) Engineers, and returned to the Forest Service in 1920. Shortly thereafter, he went to Pennsylvania to serve as assistant commissioner of forestry; Pinchot was commissioner. When Pinchot was elected governor of Pennsylvania in 1922, Stuart was advanced to commissioner and then to secretary of forests and waters, when the name of the state agency was changed. Stuart returned to the Forest Service when Pinchot's term as governor expired in 1927, and in 1928 he became chief. During Stuart's administration, the important legislative accomplishments of the Greeley era were continued; he made no real break with the Greeley policies. In the latter part of his term, Stuart pushed for emergency relief work on the national forests in order to carry out projects primarily in construction and recreational areas. He died in office on October 23, 1933.

Stuart was succeeded as chief forester by Georgia-born Ferdinand A. Silcox. After graduating from Yale, he went into the Forest Service, serving as district forester in Missoula. He served in World War I and then went into labor management for the government. He was called back from his assignment to be

chief forester. Silcox was intensely sympathetic with and loyal to the New Deal—so sympathetic that Ickes sought to have him transferred to the Interior Department. He favored public ownership and management, public cooperation, and public regulation. In addition to the existing relief and reform work during his term, several new pieces of legislation were passed, including the Norris-Doxey Cooperative Farm Forestry Act. He supervised the Shelterbelt Project in the prairie states, ordered a study of the western range, and established a timber salvage project after the great blow-down of 1938 in New England. Silcox favored federal regulation of cutting and devoted much time to working for this, until his death in 1939.³

In Alaska, the 1920s were a period of transition for the Forest Service. Recommendations for creation of a separate administrative district appear all through the inspection reports of the Weigle administration. Graves favored the change, and in 1919 the area was divorced from the Portland office and made District 8, later to become Region 10. Part of the pressure came from within the Forest Service, but part of it came from outside demands for further decentralization of the agency.⁴ With this transition, Charles H. Flory, who had succeeded Weigle as supervisor in 1919, now became Alaska's first district forester.

The Alaska District had a curious relationship with the Washington Office. Chief Forester Greeley traveled to Alaska and made a firsthand examination of its forests. Early annual reports are filled with plans for Alaska, particularly plans for pulp mills that did not materialize. Meanwhile, Alaska's national forests were underfinanced and understaffed; transfers of personnel out of the forest were infrequent. It was the most neglected of all districts, but there were many who liked the Alaskan way of life and completed long terms of service there.

Charles H. Flory, the first district forester in Alaska, had a curious career. He was a Yale graduate who went out to District 6 and served as chief of operations in Portland until coming to Alaska in 1919. His title was superintendent of Alaska forests until 1921, when Alaska was made a separate district, District 8. Though he had been a good lieutenant for George Cecil, he proved to be a poor captain. He was too imaginative and had too low a boiling point to be an outstanding administrator. He had many sideline activities that took time away from his regular duties, and his health was not robust. He was generally looked upon as a man of great qualities that were not fully realized.⁵

Flory had two close and able associates. Melvin L. Merritt, assistant district forester in charge of operations, was the very model of a career forester. Born in Iowa in 1870, he became a professor of horticulture at



U.S. Forest Service

William B. Greeley, chief from 1920 to 1928, served during an era of relatively "good feelings" and built a record of solid accomplishments. He traveled to Alaska and made a firsthand examination of its forests.



U.S. Forest Service

Forest Service Chief William B. Greeley visited the Tongass National Forest in 1921.



U.S. Forest Service

Robert Y. Stuart, chief of the Forest Service from 1928 until his death in 1933, continued the policies of his predecessor, William B. Greeley.



U.S. Forest Service

Ferdinand A. Silcox, yet another Yale forester, was chief of the Forest Service from 1933 until 1939.

Iowa State University. After deciding that he should devote his life to public service, he went to the Philippines as a member of the Philippine Bureau of Forestry in 1905. He returned to the states in 1909, served in District 6 in various capacities, and then came to Alaska at Flory's request in 1921. After a long tenure in Alaska, he returned to Portland in 1934 and was assistant regional forester in the Pacific Northwest for the remainder of his Forest Service career. A man of deep religious convictions, he usually taught Sunday school in the communities where he served. In Juneau he also served several elected terms on the school board. Merritt was a hardworking, competent, and conscientious public official.⁶

The second associate was B. Frank Heintzleman, born in Pennsylvania in 1888 and educated at the Pennsylvania State Forest Academy and Yale. He served with the Forest Service in the Pacific Northwest for some years and then went to Alaska in 1918 as a deputy forest supervisor. He was attracted to Alaska from the first, and he dedicated his life to its affairs. Heintzleman was short in stature, tremendously energetic, an able public speaker, and devoted to community affairs. He gave much time to the promotion of timber sales, to waterpower surveys, and to the establishment of pulp cutting areas, but, he was also interested in the recreational potential of the area, particularly in fishing and tourism. A lifetime bachelor, he loved social



U.S. Forest Service

Charles H. Flory, district and regional forester from 1919 until 1937.

life and the amenities. He was a poor administrator by technical standards, somewhat hostile to organized labor and politically conservative, an inept politician, and occasionally indiscreet in speech and writing. But his energy, intelligence, and professional ability greatly overshadowed some of his human weaknesses.⁷

The decade of the 1920s in Alaska was one of quiet growth. Alaska was not directly involved in the major controversies of the period. Since the forestland was nearly all government owned, the question of federal regulation of cutting did not affect the area. Neither did the controversies over grazing. Conflict between Forest Service and Park Service over recreation areas did not greatly affect Alaska; the movement for the Glacier Bay National Monument had Forest Service support. The General Land Office and the Forest Service reached accommodations over boundaries during the early part of the decade.

There were efforts during this period to increase interagency cooperation in Alaska through both formal and informal methods. One aspect of this was the establishment of formal commissions of the various bureaus and departments. The Forest Service rejected both Franklin Lane's idea of a development board to take the place of the established agencies and Albert Fall's idea of having the Department of the Interior take over all functions. However, the Forest Service did take part in a number of ventures.

In April 1920 an Interdepartmental Alaska Advisory Board was set up, consisting of members of the various federal departments with interests in Alaska. The board recommended establishment of an Interdepartmental Alaska Committee to coordinate the work of the various departments in the field. E. A. Sherman of the Forest Service strongly opposed establishment of the committee, but it was set up nevertheless in 1920.⁹ It had a large membership, and Charles Flory was the Forest Service representative. Greeley spoke on the need for cooperation, pointing out that in fur farming there were three agencies involved: the Forest Service, the Biological Survey (in the Aleutians), and the General Land Office. There was need for a coordinated policy. In settlement there was no conflict, but the General Land Office was too inefficient. The Land Office in Alaska was the office of record, but the other steps—allowance of entry, acceptance of final proof, survey, issuance of certificate, and final patent—all had to go through Washington. The Land Office had three branches—the Land Office proper, with its registers and receivers, the surveyor general, and the Field Division in charge of inspection—and all operated independently.⁹

The Alaska Committee was abolished by the president on April 1, 1922. It probably had no great effect,

but it may have helped to get Flory together with the Land Office on boundary matters.

In 1930 an Alaska Commission was set up to coordinate activities of the Department of Agriculture, Department of Commerce, and the Land Office in Alaska. Charles Flory served as chairman of the commission for a time. He was listed in the *Forest Service Directory* as ex-officio commissioner for the Department of Agriculture for Alaska, as well as regional forester. (All districts were renamed regions in 1930; all district foresters became regional foresters.) Flory accepted the commission post feeling that it would not interfere with his regular duties. From a study of inspection reports, however, it is evident that the job did take Flory away from his office a great deal, constituted about half of his work load, and may have contributed to his reputation as a weak administrator.¹⁰

Of more importance than any of these things, however, was Forest Service membership in the Alaska Game Commission, which was established by act of Congress in 1925. This participation helped to coordinate the work of the Forest Service and the Fish and Wildlife Service in regard to fish and game management. W. A. Chipperfield, as a member of the commission, gave outstanding service.¹¹

The Politics of Conservation and the 1930s

The 1930s and the New Deal marked the revival of conservation as a crusade. Aside from the Republican Roosevelt, Franklin D. Roosevelt probably had more firsthand experience with forestry than any other president. He had operated a tree farm at Hyde Park, New York, and had a practical knowledge of forestry in all its technical and economic aspects. He had served in the New York legislature as chairman of the Senate Committee on Forestry, and as governor he had pushed a program for reforestation and managing abandoned farmlands. Roosevelt's presidential programs took many forms. They involved the emergency conservation work of the early 1930s and later the Civilian Conservation Corps (CCC), with its philosophy of using relief funds both to rehabilitate men and for socially desirable conservation work. The Shelterbelt Project, the NRA Forest Conservation Code, and the Taylor Grazing Act were other monuments to his administration. He pushed creation of national parks and monuments, and with the Reorganization Act of 1933 put all national monuments under the Department of the Interior. In the national forests, primitive areas were established and fish and game sanctuaries set up.

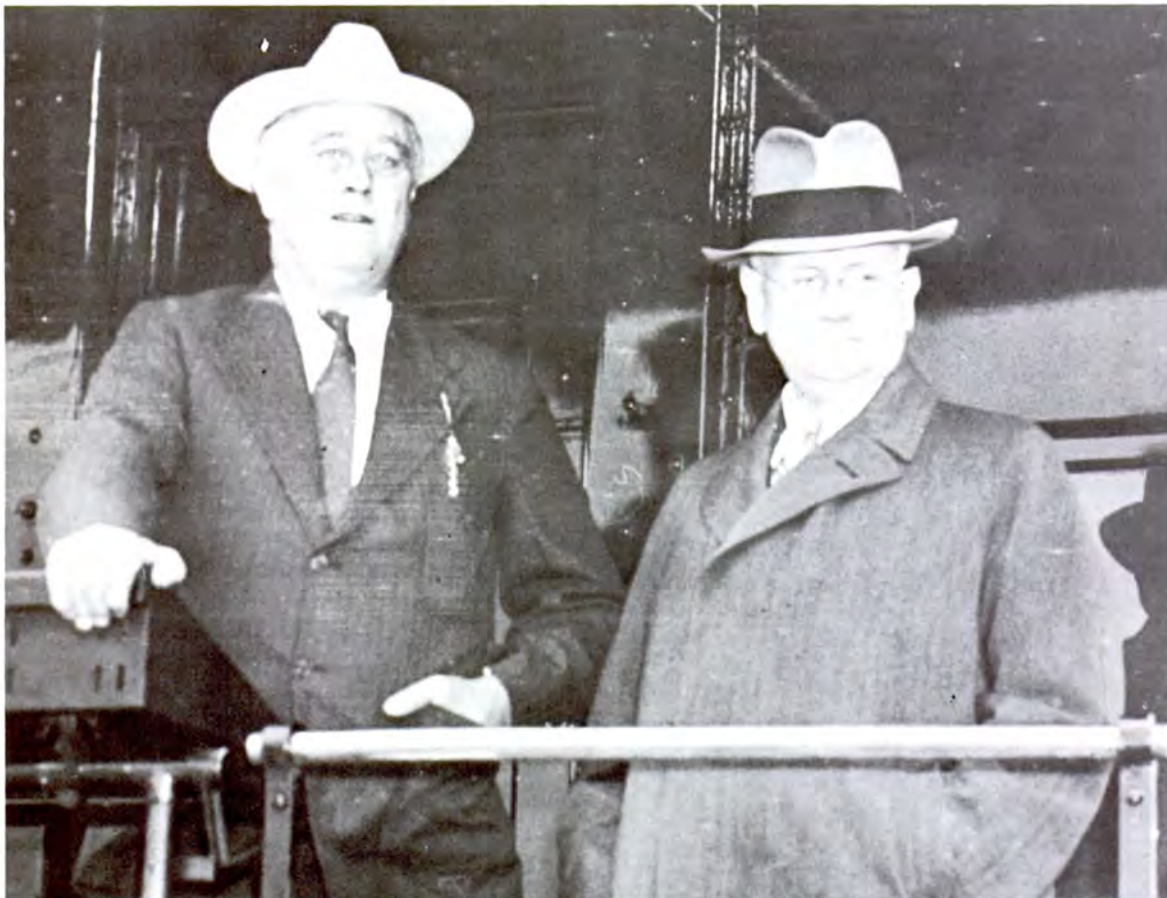
Roosevelt had his personal quirks and idiosyncracies in conservation. Some advisors outside of the ordinary chain of command influenced his decisions, as did Rex Beach in regard to mining in the Glacier Bay National Monument, John Holzworth with the proposed Admiralty Island National Monument, and Irving Brant regarding the Mount Olympus National Monument. He alternately pleased and tormented Secretary of the Interior Harold Ickes, probably relying on him more for advice than on any other single cabinet officer but frustrating Ickes's desire to transfer the Forest Service to the Interior Department. He had a weakness for parkways—possibly because of his physical infirmity—and probably had more of them built than was desirable.

Roosevelt surrounded himself with outstanding men. Ickes, a Bull Moose Republican turned Democrat, was one of the strong men in the cabinet. Irascible, honest, suspicious, committed to democracy and minority-group rights, and hungry for power, he was the most colorful of the Roosevelt group. Henry A. Wallace, as secretary of agriculture, was a quietly capable individual. The son of Henry C. Wallace, who had served so

well in Harding's cabinet, he was very different from his hard-drinking, somewhat flamboyant father. Inclined to be mystical in beliefs, sometimes openly radical in his thinking, he was an odd combination of qualities.

Congress continued its good bipartisan legislative record. Senator Charles McNary played a responsible role as minority leader, and other helpful pieces of legislation were passed. It was a period of great progress also in regard to state forestry and to forest industry. Though the National Industrial Recovery Act was invalidated by the Supreme Court in 1935, private owners continued its conservation features. States, meanwhile, established good forestry practices and enlarged their park systems through purchases of land.¹²

Alaska had been out of the mainstream of forestry development until the Great Depression; after 1933, it was in the middle of things. The Depression placed special responsibility on the Forest Service, which was put in charge of all emergency conservation work and later of the CCC program in the entire territory. The addition of a large area to Glacier Bay National Monument involved the Forest Service directly, as did Ickes's machinations regarding Admiralty Island and Indian claims. The Forest Service played a direct part in the development of a forest fire program for the interior of Alaska, and, by the end of the decade, it was deeply involved in matters of defense. It was a period of planning and of preparation for the approaching shift from custodial to intensive management of the 1940s and 1950s.



Roosevelt Library

President Franklin D. Roosevelt and Secretary of the Interior Harold Ickes were the principal architects of federal conservation policy during the New Deal era. Ickes visited Alaska in 1938.

Boundaries

Boundary problems on the Chugach continued after the 1917 eliminations. Associate Forester E. A. Sherman wrote in 1921 that he considered the chief timberland of value to be in the Prince William Sound area and in the area east of 150 degrees of longitude and south of Turnagain Arm. These areas, he wrote, should be retained. North of Turnagain Arm, from the head of the arm to Indian Creek, the values were low. There was some timber near Bird Creek and Indian Creek, but these areas were isolated. Sherman suggested eliminating Turnagain Arm and all the area north of Turnagain Arm and west of 150 degrees of longitude; he also questioned the value of retaining Afognak Island. Answering his letter, Heintzleman favored keeping the "fishhook" from East Foreland to Kasilof River. He felt that the south side of Knik Arm could be eliminated, but not the area south of Turnagain and west of 150 degrees until more was known of the area.¹³

In 1923 efforts were made to reach a final settlement on the boundaries. On the way back from Alaska on the Harding trip, William Greeley conferred with Secretaries Henry C. Wallace and Hubert Work and Land Office Commissioner William Spry on boundaries. The Forest Service was particularly interested in the Icy Straits-Lituya Bay area. The Land Office, on the other hand, wanted eliminations from the Chugach National Forest in the Kenai and the Copper River areas. An agreement was reached that Charles Flory of the Forest Service and George Parks, head of the General Land Office's Field Division in Alaska, would meet and work out boundary adjustments on a give-and-take basis. Parks apparently went on the erroneous assumption that Flory would be given a free hand to make additions in the Tongass, while he would be given a free hand in the Kenai.¹⁴

The Forest Service carried on investigations in 1924 and 1925. Wellman Holbrook made a reconnaissance of the Chickaloon Flats area and the strip along the coast from East Foreland down to Kenai, recommending its elimination. Melvin Merritt recommended elimination of the Knik Arm area because of its inferior timber, settlement, and fire danger. Chief Greeley was opposed to these eliminations from the forest, but he finally agreed. W. J. McDonald, supervisor of the Chugach, made a trip to Afognak Island and reported favoring retention of this area and adding to the national forest some of the adjacent islands, including Raspberry, Shuyak, Whale, and Marmot. There was an increase in demand for use of the islands. These included a saltery application on Redfox Bay and two fox farms. The Bureau of Fisheries had no objection to Forest Service administration on Afognak, but there was

no agreement between the Forest Service and the Commerce Department over administration of fox farm islands. Parks objected to the proposed addition on the ground that the General Land Office had timber sales on Raspberry Island, so the plans for additions were dropped. However, Latouche Island was added, and fox farmers on Wingham and Wooded islets petitioned for annexation by the national forest. Langille had already recommended the addition of Kayak Island. In addition to these, the Orca and Ellamar eliminations were cancelled. Also, at Eyak and Tabulik rectangular eliminations were substituted for circular ones. In the Copper River Delta there were no changes; McDonald and Merritt examined the area and felt it should be held for recreational purposes. These changes were made by proclamation on May 29, 1925, and the boundaries were stabilized.¹⁵

From time to time, there was some demand that the Anchorage Ranger District, the 1,063,673 acres along the Alaska Railroad, be eliminated. Charles Flory, in a report of February 19, 1931, declared against it. By that time, however, public sentiment had changed. The Forest Service was managing the area not only for its timber values but also in cooperation with the Alaska Game Commission for game and recreational values. George Parks, by now governor and head of the Alaska Commission, favored Forest Service management.¹⁶ There was also some local support for establishing national forests in the interior, particularly around the Susitna River area where John Ballaine was making plans for a birch veneer manufacturing plant.¹⁷ In 1938 Heintzleman recommended an addition for recreational purposes in the Russian River drainage, and he was supported by Ernest Gruening, who was then director of the Office of Territories in the Interior Department. There was need for the addition, Heintzleman said, to reduce fire danger and to check fishing regulations. But the addition never came through.¹⁸

In the Tongass, a major addition was made to the north of the existing forest. In 1917 Asher Island had made a reconnaissance of the area to the north side of Icy Straits and up as far as Cape Fairweather. He reported good stands of spruce and hemlock and an excellent stand of pure spruce at Lituya Bay. This latter area with withdrawn, on Weigle's request, as a military reservation in 1918. Heintzleman examined the area in 1923, taking with him a group of the Seattle Mountaineers, and was impressed with its recreational as well as economic value. At the time of Harding's visit to Alaska, Wallace, Greeley, and Work conferred on the matter; Greeley urged addition of Lituya Bay, the

north side of Icy Strait, the west side of Lynn Canal, and the Mansfield Peninsula to the national forest.¹⁹ In 1924 Flory and Parks conferred on boundaries. The main task was to determine the relative boundaries of the Glacier Bay National Monument, now being planned, and the new national forest area. Meanwhile, on their return from Alaska, Greeley, Leon Kneipp, and E. A. Sherman conferred with officials of the Interior Department. Lituya Bay was restored to the national forest in 1924, and on June 12, 1925, the Icy Straits ad-

dition to the Tongass was proclaimed.

There were also numerous small additions and eliminations. These included changing the boundaries in Sitka, Wrangell, Skagway, Ketchikan, Hydaburg, and Juneau from circular to rectangular survey. Later, there were numerous small boundary changes within the national forest. These included a military reservation near Sitka, an administrative site near Petersburg, lighthouse eliminations, and townsite eliminations in Hoonah, Tenakee, Hyder, and Warm Springs Bay.²⁰

State of the Region, 1920-1937

During its first years as a separate district of the Forest Service, Alaska was one of many anomalies. As in forestry nationwide, there was a shift from the use of westerners (who had gained their experience in the "University of Hard Knocks") to professionally trained foresters from Yale, Penn State, the University of Washington, and other forestry schools. The old-timers became boatmen, as did George H. Peterson of Sitka, or trail and road construction foremen. The number of personnel increased, both in the field and in the office staff.

The Alaska District was poorly financed. In the Tongass, timber sales were more than the cost of forest administration. Promotion was slow and transfers difficult. There were, consequently, some feelings of frustration and a large staff turnover. Annual leave was hardly sufficient to permit trips to the states, considering the poor transportation. The work schedules were difficult, with long hours in the field. On the other hand, there were compensations. Alaska offered a unique way of life for those who loved the out-of-doors. Some of the problems of the states were lacking, particularly fire (except in the Kenai area) and grazing problems. It was good country for those who liked to live off the land and who were interested in photography and outdoor sports. There was also a large degree of independence for men in the field; ranger districts were large, as large as some national forests in the states, and inspections were few. The result was the growth of a core of men who remained in the Forest Service and who became devoted to Alaska—men like C. M. Archbold, W. A. Chipperfield, and Lee C. Pratt.²¹

Administration after 1921 was based on a system of a forest supervisor for the Tongass in Ketchikan and a forest supervisor for the Chugach in Cordova. When Alaska became District 8 in 1921, Flory's office was moved from Ketchikan to Juneau, which has remained headquarters for the district and region ever since. From a technical standard, the Alaska District was

poorly administered. Flory spent a great deal of time serving on the Alaska Commission. He also had a great number of sideline activities, including rock collecting. He was a founder of the Juneau Garden Club, then a largely male organization. He spent much of 1928 compiling a history of the Ballinger-Pinchot dispute from sources in Alaska; the manuscript is now unfortunately lost. Merritt was an extremely capable and tireless field man as assistant district forester, but he left Alaska in 1934. Heintzleman spent much of his time in the states promoting pulp sales and in the 1930s was called there to assist in NRA work. Fortunately, the caliber of the field men was high, and there was probably less need for formal supervision than in most districts in the states.

There were also localized administrative problems. Before 1921, both the Tongass supervisor and Flory were stationed in Ketchikan, and the latter took on some of the former's functions. The supervisor was not given full responsibility, as on other national forests. Later, Tongass Forest Supervisor Robert A. Zeller was not consulted about road plans, the proposed pulp sale to Alaska Pulp and Paper Company, or land classification work; the supervision of timber sales was given to B. F. Heintzleman. There was no orderly planning. Assistant Forester E. E. Carter wrote in 1924 that the state of the Chugach "averaged with that on most national forests about 1907 or 1908, with the work in some lines not even on standards which would have been regarded as suitable then." Carter did not blame it on the staff—Supervisor W. J. McDonald, Deputy Supervisor Pratt, and Rangers John G. Brady and Thomas E. Murray were excellent men—but rather on the district and on Washington, which "failed to ascertain or take proper action on the Chugach in regard to such fundamental matters as fire protection, the administration of timber cutting, and the adjustment of boundaries." Carter felt the need for both fire control



Rakestraw Collection

Forest Service employees W. J. McDonald, E. M. Jacobsen, and L. C. Pratt on the Copper River and Northwestern Railway.

and timber management in the area tributary to the Alaska Railroad and questioned the need for the Anchorage Ranger District as an administrative unit.²²

In order to assign duties more clearly and to get a better administration, a new scheme was set up in 1931. Field divisions were established to replace ranger districts. These included the Southern, with headquarters at Ketchikan; the Petersburg, with headquarters at Petersburg; the Admiralty, with headquarters at Juneau; the Kenai, with headquarters at Anchorage; and the Prince William Sound, headquartered at Cordova. Headquarters for the Kenai Division were later established at Seward.²³ In the meantime, though not related to the aforementioned reorganization, there were other changes in terminology. All districts became regions in 1930; district foresters like Flory became regional foresters. Alaska became Region 8; in 1934, through renumbering, it became Region 10.

The Washington Office conducted several inspections during the period. Assistant Forester E. E. Carter made a searching general inspection in 1923; R. H. Headley and C. H. Squire came in 1925. E. W. Lovelidge made an inspection in 1930 that was marked by highly strained feelings between him and members of the Alaska force, particularly Melvin Merritt and C. M. Archbold. Assistant Chief C. M. Granger made a detailed inspection in 1936 and had high praise for the general quality of the local administration.²⁴

The year 1936 was also marked by a visit of the Department of Agriculture's Bureau of Personnel, headed by Frank Russell, and a highly disruptive report. The Russell report revealed an investigation rather than an inspection; it contained as much gossip and as many unsubstantiated accusations as an FBI file. Harold E. Smith, district ranger in the Prince William Sound Division, was criticized because of discrepancies in vouchers of shipments with the Alaska Transfer Company. Accusations were made that he had used a local lawyer's office to study law on official time. Administration of payrolls was criticized; overtime was the rule, with no compensatory time. Wellman Holbrook, assistant regional forester, had taken some condemned, worn-out blankets home to his wife, who had donated them to charity. Hearsay evidence was used to accuse one man of using government labor to build a private house. Russell condemned the use of Forest Service boats to take families on picnics. The region was held to be lax in the use of annual leave and travel on official time; some personnel had taken a trip to the interior and not charged the time properly. Finally, Regional Forester Flory was criticized for inefficiency, for being a "playboy," and there were hints of "woman trouble." He was soon transferred to Washington State, where he became supervisor on the Mount Baker National Forest.

Heintzleman, the new regional forester, was infuriated by the charges. He wrote:

The striking feature of this examination was its dissimilarity from the Forest Service "official inspection" which is always welcomed because of its constructive criticism and suggestions for betterment which are its primary purpose. This, however, was an "investigation" conducted along the lines employed by judicial agencies to obtain evidence in cases involving definite and serious charges of law violation. I know of no such charges having been placed against any member of the Region 10 organization in justification of such an investigation.

The constant questioning of subordinate Forest officers about supervisors; of officers of one Federal Agency about those of another Federal Agency; of merchants from whom purchases were made, and of all classes of the local public with respect to possible infractions by Forest officers of specific laws and regulations (whose breach involves grave consequences) leads to an inference, both inside and outside of the organization, of serious misconduct on someone's part and that a search for evidence to ensure the conviction of the culprit is being conducted. The point needn't be emphasized that in

Alaska, as elsewhere. Forest officers are almost invariably outstanding and highly respected members of their small communities, and such investigations are embarrassing to them and detrimental to their standing with the public and with their subordinate Forest Service employees. I strongly urge that such type of investigation be restricted to serious charges and not be made a routine practice in the Department.

On the specific charges, he pointed out that it was desirable for the field men to see the country outside the national forest. He termed false the charges against Smith, those relating to the vouchers, house building, and lax office hours. He pointed out that the Forest Service had always permitted field officers to take their wives to see the country and that the privilege was not abused. Such travel was also used to check the winding of streamflow recorders, saving a special trip to do this on official time. He acknowledged the charges involving the condemned blankets but felt it trivial at best. As far as the charges against Flory were concerned, it was not necessary to meet them. Flory had just been transferred, but Heintzleman implied nonetheless that the charges were false.

Chief Forester F. A. Silcox supported Heintzleman on several of the points. In regard to leave, he wrote, "I think there is sometimes a tendency on the part of auditors to forget that the humanities of certain situations merit some consideration in applying the rules as to leave or similar matters." On the boats: "If occasional water trips are denied Service residents in Alaska, one of the few sources of pleasure they will have will be taken from them." On Flory, he "questioned the wisdom of such interrogations by inspectors or auditors," while he dismissed the charges against Smith as "gossip."²⁵

Inspections notwithstanding, the work of the rangers and supervisors was ordinarily in the field. W. A. Chipperfield reported that his usual routine was three weeks in the field followed by one week in the office writing up reports. Hours were long, with twenty-hour days not uncommon. It often took a long time to go by boat from the ranger station to work. George Peterson noted that he had worked 291 hours and traveled 700 miles by boat in March 1921. The men faced the hazards of storm, shipwreck, and inclement weather. The work itself involved scaling, cruising, surveying town lots, patrolling, and the like. During the 1930s an increasing amount of time was spent on CCC projects. They also did rescue work, as revealed by a typical entry from the diary of Harold Lutz:

July 16, 1925

Found a scow boat from the Nellie Juan canery wrecked just outside of the skookum

chuck. Men intended to go in late p.m. before the high tide, wind rolled boat, broke mast and boom. Men camped on beach lagoon. Gave coffee, bread, matches, etc.

As before, the boats were put to the service of a variety of people—members of the Game Commission, Park Service men, visiting dignitaries, archaeologists, researchers, and the like.²⁶

Boatmen accompanied the rangers on their work. They were responsible for seeing to the upkeep of the boats and also aided the rangers. Boatmen were a distinctive breed of men, as individualistic as the old-time packers of the Forest Service in the states. Their logs are a good source of information on day-to-day activity. They vary in content. Bernie Aikens, in the logs of Ranger 1, comments cheerfully on a colleague's sobriety and on the quality of Ranger Kane's profanity. On the other hand, there is occasionally stark tragedy, as in the log of the Weepose dealing with the death of Jack Thayer:

Oct. 16

Elija Harbor. Thayer killed by bear. Thayer and Fred (Herring) left about 8.15. Fred back at 3 p.m. Report bear got Jack about 2.10. Carl Collins of Weepoose and Fred left to get Thayer and found him at dusk. He was pretty bad. Passed on at 10.30 p.m. Tried packing him out and got ½ miles and had to leave him and go for help. Too much for two men. To Weepoose.

Oct. 17

Weepoose left Elija Harbor 11.15 a.m. Went to Pybus Harbor for help, got 5 men.

Oct. 18

Left Pybus Bay 4.30 a.m. got to Elija at 7.10 and 5 men left at 7.30 and got back with Thayer's body at 11.30 p.m.

Oct. 19

Arrived Juneau at 8:30 p.m. running all night.²⁷

The number of boats in use on the Tongass increased. By 1921 there were five boats of the Ranger class, from thirty-five to forty feet long, powered with 20-25 h.p. engines; these were the workhorses of the Forest Service. The Tahn continued in service. A ninety-eight-foot yacht, the Hiawatha, was purchased in 1921; it had twin 80 h.p. motors. It had been a patrol boat for the Navy. The Hiawatha was a bad investment; the engines were in poor shape, and it was too large and expensive to run regularly. It was used to some extent to take visiting dignitaries around and as a floating camp, but eventually it was traded for the sixty-five-foot Chugach. The Weepose was also purchased in 1921. It was a sixty-five-foot boat with an 80 h.p. motor. Its log indicates that there was continual trouble with its engines and toilets. There was also a tender, twenty-two feet long with a 5 h.p. engine. The marine station

on Gravina Island near Ketchikan was a busy place, and its facilities for boat building and repair had to be enlarged.²⁸

Skiffs with Evinrude outboard motors were used for station work and for work on the rivers. This, too, had its hazards, as one diary entry indicates:

August 2

Started up river after noon and found river overflowing banks, making progress very slow. Caving banks fill the river with sweepers. At 3 p.m. the boat swamped and entire outfit washed away. Succeeded in rescuing Mr. Ball after narrow escape. Beached the boat and recovered tent, bedding and a few other articles. Lost rifle, all clothing, ax, tools for engine, oars and all provisions, notebooks, papers, etc. Cached recovered property in trees near lake and walked to lake, where we found an old skiff, in which we crossed to south shore, where there is an old trail. Walked to Ray's cabin and camped without food. Mr. Nettleton and Mr. Ball will return for the boat when river falls again.²⁹

Air travel came to be of increasing importance during this period. The Navy played a major role in the development of the region before 1928 by making aerial photographs, which were of tremendous importance in developing the timber resources of the country. As accurate as ground surveys, the photographs located

bodies of timber, waterpower sites, streams, lakes, and logging shows, and were a major asset in planning. Airplanes were also used increasingly for inspection trips by supervisory personnel. A several-day inspection trip over enormous areas—the Juneau Ranger District alone covered 9 million acres—could be done in a day by plane. Planes also supplied CCC camps, especially those on the inland lakes of Admiralty, and isolated trail crews. They began to be used in the Kenai for spotting fires.³⁰

Motorized transportation also became more important in the forests. After the building of roads, trucks were used to haul equipment within the forests. Trucks became a key part of the protective picture in the Chugach, where roads to Moose Pass and Hope made it possible to move men more quickly than by railroad.

The public relations of the Forest Service also improved during this time. The road-building program was particularly popular in the coastal cities, where the highways gave breathing space to the people, and in the Kenai with the development of that region's enormous recreational possibilities.³¹ The CCC programs were well liked, particularly the totem pole program. The Forest Service took an active part in National Fire Prevention Week in the Anchorage area. Both the overhead and the rangers were well liked as individuals and as members of the community.

Forest Research

(written by Raymond F. Taylor)

When Frank Heintzleman was put in charge of forest management in the new District 8, he was well aware that the Tongass lacked many technical tools. The volume tables used for cruising were those used for spruce and hemlock in Oregon and Washington. There were no growth tables to show what second-growth stands would do after the decrepit and ancient climax forest was cut. How best to get reproduction of desired species or to treat cutover areas was more or less unknown.

Efforts had been made to get funds for forest research, but not until 1928, when a pulp operation on the Tongass looked very promising, did Congress authorize a forest experiment station for Alaska. Then, when the Depression caused the pulp company to lose interest, no funds were appropriated for the station. That's the way it stood for twenty years. Heintzleman, in the meantime, using timber management money, had

started studies of forest reproduction on small cutover areas and of growth of young stands of various age. Measurements were taken of trees being cut for saw-timber and piling in order to make local volume tables.

James M. Walley and Harold J. Lutz, young technical assistants, were assigned to this work in 1924. No transportation was furnished, so they had to descend on the local ranger and crowd into his boat for short periods in order to work on promising areas in his district. Sleeping under a tarp draped over the boom in wet weather or lying alongside a leaky gas engine did not put the researcher in the best of moods to go forth with enthusiasm. But they did, and they ate wet sandwiches, standing up, at noon.

In 1925 Lutz transferred to the Chugach, and Raymond F. Taylor took his place on the Tongass. There was some "boarding out" with rangers, to their disgust, but later a boat was assigned for research and a



Harold Lutz photographed the Paxson Roadhouse along the Richardson Highway in the Interior.

boatman hired for the summer. Some of these men knew how to start an engine and steer but not how to lay a course. A few liked to take wild chances, hoping the bottom would miss the rocks the chart showed so plainly. The boatman was also supposed to cook, and he made valiant efforts.

The researchers would tie up at a logging show, measure logs by sixteen-foot lengths, take diameters with sixty-inch calipers, measure lengths with an 8.3-foot bamboo stick, and the top length with a steel tape. Age was counted at the stump. Sometimes, to get good distribution of sizes, they would wait for certain trees to be felled, and occasionally, due to poor judgment as to which direction the tree was to fall, there was a good deal of leaping from log to log. In those days of the long two-man saw and springboards, fallers were often ten feet in the air and had their own problem getting the saw out and themselves out of the way when the tree began to go. Researchers in the area were expendable.

Studies of second-growth had to be made wherever there were such stands. Since logging by cable was relatively new, many areas studied were where windstorms had leveled the old trees. There were also abandoned Indian villages or mining towns, as at Hollis and Sulzer, growing up to trees. A few acres had been burned. The idea was to get a range of sites from poor to good and a range of ages of stands. Plots were laid out, usually from a quarter-acre to one acre in size, and some trees were bored for age of stand. All trees were measured for diameter, and sample heights were taken. From this basal area, volumes in cubic and board feet were computed.

Walley transferred to the Lake States in 1928, a. Taylor moved to Juneau to take charge of research. He was assigned a boat, usually one that was ready to be condemned, and a summer assistant was hired. Taylor and Lutz had both gone back to Yale in the fall of 1926 for master's degrees. Lutz remained to teach, but Taylor returned with a little more know-how in research.

During the years from 1924 to 1934, research continued in this manner—fieldwork from about April to October and working up results in the long dark days of winter. Permanent plots were established in second-growth stands to be remeasured at five-year intervals, and the total of all plots brought up to the number required to construct a set of yield tables. This same sort of work was going on at newly established forest experiment stations in the states. Richard E. McArdle was working in Douglas-fir and Walter H. Meyer in spruce-hemlock stands under Thornton T. Munger, director of the Pacific Northwest Forest Experiment Station. Leo A. Isaac of the same station was deep in studies of reproduction. Experimental forests were being established at all stations. In Alaska, however, one man with one assistant worked like crazy to get basic information for management under a pulp cutting regime. While still a bachelor, Taylor found time during evenings to write and illustrate a *Pocket Guide to Alaska Trees*.

In 1929 Taylor returned to Yale under a Charles Lathrop Pack Fellowship to work on a doctorate. He finally received it in 1934, the delay being mostly caused by his insistence on working on a dissertation titled

"Available Nitrogen As a Factor Influencing the Occurrence of Sitka Spruce and Western Hemlock Seedlings in the Forests of Southeastern Alaska."³³ Fieldwork for this study was in addition to the regular studies of reproduction. Also in 1934, Taylor's work on growth and yields of future stands was published as a technical bulletin.³⁴

The dissertation was published in *Ecology* in 1935 and pretty well summarized what had been revealed in the reproduction studies; namely, that clearcutting and tearing up the raw acid humus resulted in a good stand of new young trees with adequate stocking in about ten years. There were other reports on the details. The growth and yield bulletin summarized the work of ten years and showed that the climax forest, in which decay and mortality offset any growth, would be replaced, when cut for pulp, by a new stand of fast-growing trees, which in about a century would have twice the volume of the climax stand. The tables, charts, and manuscript for these were all worked up in the Juneau office. On the side, new volume tables were issued for

the main species. The figures for the yield tables were borrowed by the Pacific Northwest Station to add to Walter Meyer's yield tables for the Pacific Northwest.

It was lucky that all this work was completed by 1934, as emergency conservation work had taken over in Alaska and there was no money for research. Taylor, not wanting to boss CCC crews, transferred to the Washington Office as assistant chief of the Division of Silvics. He escaped to the newly formed Rocky Mountain Forest and Range Experiment Station a year later, and, after fourteen years at three stateside stations, returned to Alaska in 1948.

This research work, though old, is still of great value. Old reports and publications should be studied. There has always been a tendency for new researchers to discard as valueless anything that is over ten years old. Because of that, they "discover" that seeding cut-over areas by helicopter is, after all, not necessary. That was known in 1930, but using helicopters and treated seed is wonderful public relations.

CCC Projects

General Projects

The Civilian Conservation Corps was one of the major accomplishments of the New Deal. During the closing days of the Hoover administration, funds were made available for putting men to work in conservation projects, largely road and trail and construction projects. Incoming President Roosevelt called for full-scale use of manpower in work relief to conserve, protect, and renew natural resources. The Emergency Conservation Act was passed on March 31, 1933. Roosevelt used the term "Civilian Conservation Corps" as an equivalent for the emergency conservation work, and the name gained currency. The act was extended by Congress and in 1937 was supplemented by formal establishment of the Civilian Conservation Corps, set up for a period of three years.

The CCC program was administered by resource agencies in the Departments of the Interior and Agriculture. The Department of Labor did the recruiting, the War Department operated the camps and ran the educational program, and the resource agencies carried on the field activities. Enrollment was open to young men from eighteen to twenty-three years of age. Foremen were largely local men, often loggers or Forest Service retirees.

The venture was a new and a challenging one for the Forest Service. As Chief Robert Y. Stuart pointed out, the Forest Service had always been able to be selective in choosing its personnel. With the establishment of the Forest Service, the old Land Office policy of

allowing political appointees had been dropped for the merit system and for standards for retention and promotion. The new men in the CCC program were chosen by another agency, on criteria other than merit; they were untrained and unmotivated. The Forest Service had the test of giving both technical and vocational training and working with somewhat refractory human material.

The program proved highly successful, and it is generally regarded as one of the most successful of the New Deal efforts. It achieved its basic goal of relieving unemployment; it gave 3 million young men a new start and a new outlook; it awakened the public to a new concern for conservation; and it aided in its main objective of conserving and renewing natural resources. There were many factors that accounted for its success. The Army career officers, in the doldrums and out of public favor because of the isolationist temper of the times, found the work challenging and brought great professional ability to bear on the project. The Forest Service worked with imagination and judgment. It developed new techniques, such as the progressive method of fire fighting in which it was able to make maximum use of untrained men.³⁵

In Alaska the CCC program was unique in many ways. There was unemployment in Alaska, and the Forest Service was given authority by the government to handle disbursement of relief funds voted by Congress

in the national forest area. The first of these were Federal Emergency Relief Act funds to care for unemployed people. In the beginning, these allotments had few strings attached and were used to relieve unemployment by local projects. In Craig, a water system for the village was put in; in other areas, roads and trails were built.³⁶

When the CCC program started in 1933, there were no federal troops in Alaska except for an infantry contingent of 200 men at Chilkoot Barracks near Haines and a nearly equal number of Signal Corps men stationed at the many telegraph and wireless stations throughout the territory. It was therefore impossible for the Army to carry out its function as it did in the states. Consequently, Regional Forester Flory secured the president's permission for the Forest Service to take charge of all CCC activity in Alaska. This included enrolling, clothing, housing, transportation, as well as supervision of projects—everything, in fact, except disbursement of funds. The Army paymaster at Chilkoot issued the checks; the Department of Labor selected the enrollees. Unemployment in Alaska was not primarily of the young, but of the middle-aged. It was also seasonal, involving men who did not have a winter "stake." Age restrictions on enrollees were dropped, therefore, as were restrictions on re-enrolling. This latter provision made it difficult to keep leaders and cooks, but it met Alaskan conditions. A one-year residence requirement was established to eliminate young men who had come to Alaska for seasonal work and became stranded.³⁷

The problem of clothing, which had to be adapted to a variety of climates, mostly bad—including rainy, snowy, and cold—was worked out through the Army Quartermaster's Office in Seattle. A list of clothing necessary for Alaskan conditions was prepared. The

Seattle purchasing agent for the Alaska Railroad, who already handled Alaskan purchases for the Forest Service, prepared specifications and called for bids. The plan worked well.³⁸

Charles Burdick was put in charge of the CCC work for all Alaska. He held the post until about 1938, when he was transferred to the reindeer project. After that, Heintzleman managed the project. Because of the distances and slow travel, small camps were set up instead of the large camps characteristic of the states. By the end of 1934, the Forest Service had 325 men enrolled: 125 in the Southern Division out of Ketchikan; 25 at Petersburg; 130 in the Admiralty Division working out of Juneau; 25 in the Prince William Sound area; and 20 in the Kenai.

Their work in the early years was varied. In the Kenai it consisted of building trails and truck roads for recreational and protective purposes, stream-gauging stations, bridges, a warehouse, and small boat facilities; burning on the right-of-way of the Alaska Railroad; and most important of all, fire suppression. Around Ketchikan and Petersburg, truck roads and trails were built, and log jams from the Unuk River were removed. The greatest work was in recreational planning, including the building of campgrounds and water systems.

In the Admiralty Division some roads were built, but the prime work of the men was planning and building recreational areas. These included a shooting range and skaters' shelter cabin near Mendenhall Glacier and shelter cabins and trails on Admiralty Island in the lake area. Near Sitka, by 1934, twenty-two miles of trail and several log cabins were built and the beginnings made, under both Forest Service and Park Service personnel, of archaeological exploration on the site of the Russian settlement at Old Sitka.³⁹



The Civilian Conservation Corps put young men to work on the national forests during the Depression. Recreational facilities built at Mendenhall Glacier near Juneau included a skaters' shelter cabin (foundation being laid in this 1936 photo) and a rifle range in the center background.



U.S. Forest Service

This CCC crew, posing in front of rented quarters, worked on the Basin truck trail near Juneau.



U.S. Forest Service

CCC crew at Quartz Creek Camp in the Kenai Division. Middle-aged men served along with younger fellows.

By 1937 there were 1,037 men enrolled in the national forest area: 262 in the Southern Division working out of Ketchikan; 101 at Petersburg; 245 in the Admiralty Division working out of Juneau; 77 in the Prince William Sound area; and 240 in the Kenai. In addition to continuation of the work projects noted earlier, there were many special projects. These included a trout hatchery at Ketchikan to provide trout to plant in nearby lakes; at Sitka, landscaping the U.S. Coast and Geodetic Survey station, restoring the old Russian cemetery, and building trout traps and floats in cooperation with the Bureau of Fisheries; building a dock and a small boat harbor in Cordova; building a bear observatory on Admiralty and skiffs for use on the inland lakes; and wing dams for channel control and a suspension bridge on Eagle River near Juneau. At Little Port Walter, houses were built for the Bureau of Fisheries, along with shelter cabins, floats, a salmon weir, and a fifteen-room biological laboratory.

In the Kotzebue area Heintzleman worked out plans with the Office of Indian Affairs for the wolf-reindeer project. He conferred in September 1927 with officials of the U.S. Biological Survey and the Indian Office. The program emphasized trapping, shooting wolves, and teaching the Natives to close-herd reindeer. Logan Varnell was put in charge as foreman. One hundred-eighteen Natives were hired in the Kotzebue area; their salaries were paid from November to July by the Biological Survey and the rest of the year by the Forest Service.

The wolf-reindeer project was not particularly successful. Varnell felt that the Eskimo community ownership of the reindeer lessened their feeling of individual responsibility. Many herds were unattended. The wolves were not under control, reindeer would elope with caribou, and there was need of a few large herds, rather than many small ones, for control to be effective. Varnell recommended putting the herds under individual ownership, building line cabins or igloos for the herders, and giving the Eskimos formal training in range management. The project was abandoned in September of 1938.

Other work in the Kotzebue area was more successful and lasting. This included building drainage ditches, community wells, landing fields, herders' shelter cabins, and cold-storage facilities.⁴⁰

Nowhere was the work of the CCC more appreciated than in the isolated Native villages and missions in the interior. Seventy-six enrollees worked on the lower Yukon. The CCC built a muskox corral on Nunivak Island. They razed the Army barracks at St. Michael. Lumber from the barracks was used to build a workshop for Father P. C. O'Connor's mission at Kaulurah. At Galena there was extensive flood damage; the debris was cleared away, the land cleared, and prepared for a garden. Community houses and sanitation

drainage projects were common. A telephone line was built between Nulato and Unalakleet. These projects broke down isolation and supplied some amenities. Letters written to the regional forester from the teachers and missionaries are among the most touching documents in the entire history of this enterprise.⁴¹

A forty-man camp was set up in Fairbanks, and W. A. Chipperfield was placed in charge of it. A variety of work was carried on, including salvaging twenty miles of fence that had been used to enclose muskox pasture before the herd was moved to Nunivak. Landing fields were built, and fire and flood control was introduced on the Chena.⁴²

Totem Pole Project

The CCC work took on other aspects by 1938. The Forest Service had always been interested in Indian antiquities. W. A. Langille had been partly responsible for the creation of the Sitka National Monument, and he and F. E. Olmsted had initiated the movement toward setting aside Old Kasaan. Boat logs contain some accounts of early efforts to preserve Indian antiquities under the provisions of the 1906 act.⁴³

Between the creation of Old Kasaan National Monument and 1938, a great deal of planning for totem pole preservation took place. Flory visited the national monument in 1921 and suggested the necessity of getting an overall plan of preservation to prevent artifacts from being looted and to protect totem poles from the weather. He felt that the most practical thing would be to move the outstanding poles in Old Kasaan and elsewhere in the Tongass National Forest to Sitka National Monument and there to set up a primitive Native village. The Smithsonian Institution favored the program, as did the Bureau of American Ethnology. Territorial Delegate Dan Sutherland introduced a bill to finance the operation, but it died in committee. Other attempts failed for lack of funds. After the Reorganization Act of 1933 transferred jurisdiction over all national monuments to the National Park Service, that agency's officials sought appropriations to move the best totems in Old Kasaan to Sitka. This effort also failed for lack of funds.

In 1934 the Forest Service and the Park Service developed new plans to move the Old Kasaan poles to Sitka. Flory pointed out that although the Sutherland Bill for a special appropriation to move the poles had not been approved, he nevertheless hoped to get the project funded through the general appropriation bill. It would be a waste of time, he thought, to try to rehabilitate Old Kasaan. The poles should instead be shipped to Juneau or Sitka and Native labor used to rehabilitate them. Meanwhile, Wellman Holbrook examined the Sitka poles and found them in bad condition.

Some sections had rotted away, and there was a great deal of decay in the wood, particularly at the bases of the poles. He recommended that expert help be brought in to rehabilitate the poles, with the CCC furnishing manual labor, and that action be started in Washington.

In Washington, Associate Regional Forester Melvin Merritt called on Harold C. Bryant, head of the Park Service's Branch of Recreation and Education. Merritt urged the abandonment of Old Kasaan, the assembling of the good totems at Sitka, and the transfer of qualified men to the area for the repair work. The Forest Service pledged its cooperation. Merritt supported Flory's recommendation that a community house be constructed out of the remains of existing ones. Forest Service photographs and descriptions of Old Kasaan were transferred to the Park Service. In June W. J. McDonald examined Old Kasaan and estimated that there were about twenty serviceable totems. He recommended repairs on the poles to consist of cutting them off at ground level, replacing rot with sound wood, and replacing the poles on concrete bases. He estimated costs would be from \$5,000 to \$7,000.

By the fall of 1934, the Park Service had made plans to move four of the best totems to Sitka. These were large poles, about fifty feet high, three and one-half feet at the base, and one and one-half feet at the top. Native owners were sought out. They asked \$125 for each pole, saying that they had originally cost \$2,000 at the potlatch in which they were erected. The Forest Service estimated that the cost of shipping the poles to Sitka would be about \$2,500. The Park Service abandoned the project for lack of funds.

The Forest Service became involved during this time, both directly and indirectly, in archaeological work. In 1932 Frederica DeLaguna made the first of her many expeditions to Alaska. She sought an archaeological permit to do work in the Tongass and the Chugach national forests, and the Forest Service aided her in transportation to the archaeological sites. Flory, in commenting on her work, complained that too much of the material recovered from such excavations went out of the territory; he suggested that half the Indian artifacts recovered be donated to the University of Alaska. No agreement was reached, and after the exploration was over, Flory again commented unfavorably on this failure.

The second enterprise involved using CCC money to excavate Old Sitka, site of a fort established by Baranov in 1799. A stockade, bath house, and various buildings had been built at the site, on a bay to the north of Sitka, but the settlement had been wiped out by Tlingit Indians in 1802. The site had been occupied by a cannery in 1878 and a smokehouse in 1910. In 1907 it became part of the Tongass National Forest. In 1914 Father Sergius George Kostrometinoff of the Sitka

Cathedral was issued a special-use permit by the Forest Service to erect a cross at the burial site of the Russians.

Charles Flory had a deep interest in Alaskan history. In the fall of 1934, he used CCC funds to start archaeological excavations on the site of Old Sitka. W. A. Chipperfield supervised the project; it was directed by John Maurstad, CCC foreman. A fifteen-man camp was set up in the vicinity. Bancroft's *History of Alaska* and a translation of an account of the massacre by George Kostrometinoff were used as background. The area was mapped, with notations as to the sites of the buildings from postholes, relics, and Native traditions. In the year's work about 1,000 artifacts, some Russian and some Indian, were located. The most important find was a copper plate bearing a cross and an inscription claiming the land for Russia, probably buried there by Baranov in 1795.

The artifacts were first stored in the basement of the capitol building for safekeeping. On Flory's suggestion, they were transferred to the University of Alaska in 1937. They remained there until 1963, when they were shipped to the Western Regional Office of the National Park Service for study by the regional archaeologists. They were then transferred to the museum at Sitka National Monument, where they are now located.

Recent critics have stated that this operation was not carried out by trained archaeologists, and indeed the work lacked some of their refinements. The records show, however, that Chipperfield and Maurstad exercised all the care and skill one could reasonably expect of the intelligent layman. In any event, the excavation was carried out in the nick of time. During the war a Navy installation was planned for the area, and extensive bulldozing was carried on.

There was a lull in the planning between 1934 and 1937. The first two years of CCC work revolved around badly needed recreational work in the southeast and the archaeological work on Old Sitka. In 1937, however, there was a revival of interest in totems. It came partly from requests by the Alaska Native Brotherhood, through William Paul, Sr., that more Indians be employed on relief projects. Also, Charles Flory was transferred to the Mount Baker National Forest and was replaced by B. Frank Heintzleman, a skilled public relations man who dedicated his entire life to Alaskan interests and gave the movement more momentum than it had had previously. Heintzleman found support in the higher echelons through Chief Ferdinand A. Silcox of the Forest Service; Secretary of the Interior Harold Ickes; Ernest Gruening, director of the Office of Territories in the Department of the Interior; and Arno Cammerer, director of the National Park Service. Through their efforts, most of Flory's dreams were realized. Early in 1937 a series of letters was exchanged and

conversations held among Silcox, Gruening, and Heintzleman. Silcox informed Gruening that the poles, including those on the national monuments, were private property and that the Indians asked large sums (\$1,000 each) for them. Ownership was also often in dispute, so the validity of a given purchase was unpredictable. Silcox suggested use of CCC work on villages on deserted shorelines along the lines of travel, building totem villages, and buying totem poles at public subscription.

During 1937 and 1938 field examinations were made of villages. Forest Service men photographed poles and community houses, evaluated their condition, talked with Indians over matters of title, and outlined plans to get title to the poles and move them to central locations. To support this work, Heintzleman borrowed a large number of books and photographs on the Indians of southeast Alaska from the Smithsonian Institution, American Museum of Natural History, National Museum at Ottawa, and American Geographical Society. Meanwhile, he kept the mails and wires to Washington busy, seeking money for the project. He initially sought \$51,760 in WPA money for rehabilitating poles and constructing community houses. But these applications failed, and most of the money spent was from CCC funds, except for the Sitka project.

Eventually, the Sitka project got started when the Forest Service made an agreement with the National Park Service to restore the Old Kasaan poles. This involved their removal from the site and restoration with WPA money. The Park Service recommended that a trained ethnologist be in charge of the work. Meanwhile, Heintzleman conferred with the head of the Office of Indian Affairs, Claude Hirst, who recommended that meetings be held with the Indians and that blanket authority be given by all claimants of the poles, making them the property of the entire community. The poles could then be set up on a public site dedicated to that use. The Forest Service, for its part, agreed to meet costs of inspection, transportation, reconditioning, and erection from CCC and Forest Service funds. With all the concerned agencies in agreement, the Forest Service experiment in totem pole preservation and restoration was ready to begin."

Sitka National Monument

In January 1939 the Forest Service secured a WPA allotment for totem pole restoration. Heintzleman wrote to Arthur Demaray of the National Park Service, offering to use the funds to restore the poles at Sitka National Monument. He asked if the Park Service could furnish a technically trained foreman. The Park Service had no specialist available and suggested that Heintzleman hire one from the University of Washington or the University of Alaska; it told him to go ahead with the project if he found none available. Support

came from other institutions. The Alaska Road Commission gave the Forest Service use of its dump truck, and the Forest Products Laboratory sent advice on the use of Permatox D, a flat, colorless preservative similar to spar varnish. It directed that the poles be soaked in the solution when dry; if soaking were impracticable, the poles should be brushed with the solution. The purpose was to prevent moisture from entering the pole and causing rot. Charles Burdick, associate regional forester, made a survey of the poles in March, sending pictures and reports on the condition of each pole. With the expiration of WPA funds in the same month, CCC funds were used to complete work.

The project was carried on with nine Indians as workers, John Maurstad as foreman, and George Benson as chief carver. Some of the poles were badly deteriorated; they had for years been held together by wire and were hollow shells under the ground. A complete photographic record was kept of all poles, both originals and duplicates. A community house designed by Forest Service architect Linn Forrest was built, and most of the work at Sitka was completed by March 1940.

Sitka National Monument received a full-time superintendent for the first time in 1940 when Ben Miller arrived from Glacier National Park. Miller was highly enthusiastic about the totem restoration and the caliber of the work being done, writing, "After we have Sitka National Monument in the shape it should be in, there should be erected a monument to the Forest Service and Regional Forester Heintzleman." There was some debate as to the fate of the old poles. Frank Been, regional park superintendent, wrote, "Personally, I don't think they are worth building a shed for, especially after we have exact duplicates." Even if they had a shed, he noted, it would be hard to guard them against theft, and poles so rotten could be destroyed. Pending design of a shed, however, it was decided to store the old totems in the open on skids.

Been and Forrest thought that a new historical totem giving the history of Sitka would be appropriate. A pole was commissioned to show Baranov and his dealings with Chief Keeks-Sady. This was planned to be placed at the Sitka dock site, an area set aside for national forest use by executive order in 1920 and amended by executive order in 1933 to establish a public park. The Baranov pole was duly commissioned, but it ran into all sorts of difficulties. George Benson, the head carver at Sitka, took another job. The cedar log was taken to Wrangell and fashioned by another carver using the Benson design. But Sitka Natives protested when it was erected; it did not, they said, repeat the true story of the peace between Baranov and Keeks-Sady. Baranov was placed on top of the pole, dishonoring the Indian chief. Also, the double eagle given

Keeks-Sady, now in the Alaska Museum, was to have been on the pole. There were threats by the Indians to burn or mutilate the pole, but eventually the dissension died down.

The Sitka venture would rank among the highest accomplishments of the project. The poles were very old; they had been old when Governor John Brady collected them for showing at expositions in St. Louis and Portland. Later returned to Sitka, they were badly deteriorated. About half the poles were restored and the rest duplicated. The quality of the carving was, in general, good. The community house was new, following the design of the old dwellings, and was well constructed.⁴⁵

Linn Forrest and CCC Totem Pole Work

Linn Forrest was put in command of the totem pole project, and he remained in charge as long as the project lasted. Forrest was educated at the University of Oregon and Massachusetts Institute of Technology, majoring in architecture. As an architect for the Pacific Northwest Region of the Forest Service, he had been in charge of the construction of Timberline Lodge on Mount Hood. This alpine lodge, designed to give work to artisans, was built with WPA funds and was a show-place of alpine architecture. The lodge featured a great deal of hand carving and hand-wrought iron-work, and building it was good training for the totem pole project. Forrest came to Alaska in 1935 to build alpine lodges at Sitka and in the Kenai. Instead, he was given charge of the totem pole project.

The work was set up as a year-round project. At each of the sites selected for totem parks, large open sheds were built to serve as workshops and later as sheds in which to store the old totems. These were built near school playgrounds so that they could better be used as shelters for children and as recreation centers. The workers were chosen from local villages, eliminating problems of transportation. Carvers were chosen from among the older men who had retained such skills; the carvers in turn trained younger men.

Tools for carving were handmade, modeled after older tools used before the coming of the white man. The Indians demonstrated much skill in making these, using car springs and old files, and showed an astonishing knowledge of metallurgy. Samples of the Native paints were made, using ancestral techniques. Black was made from veins of graphite, white from clam shells, yellow from lichen and yellow stones, and green from copper pebbles. The Indians knew where to locate the veins of rock from which the colors came. These were ground up in mortars with pestles. Then salmon eggs were wrapped in cedar bark and chewed; the saliva was spit out and ground up with the coloring. The paint made was authentic and permanent, but, for a project of this proportion, larger quantities were



Linn Forrest Collection

Linn Forrest with an entrance pole at Saxman Park, which he designed and laid out during the 1930s.

needed. So Forrest duplicated the colors with commercial pigments. Following is the estimate of material necessary to preserve and paint forty totems:

Dutch Boy white lead soft paste	750 lbs.
Boiled linseed oil	20 gal.
Turpentine	15 gal.
Pale Japanese drier	45 gal.
Chrome yellow light color in oil	1 gal.
Italian burnt sienna in oil	5 gal.
Chrome green medium color in oil	2 gal.
Prussian blue color in oil	2 gal.
Bulletin stay red color in oil	2 gal.
Refined lamp black color in oil	12 gal.

This would make 10 gallons of white, 10 yellow, 10 blue-green, 20 frog green, 20 red, 20 bear brown, 20 beaver red, and 20 of black paint. In addition to this, 40 gallons pentrared, 120 gallons permatox, and 20 gallons avenarius carbolium were needed for the preservative work. Permatox B was a preservative developed by the Forest Products Laboratory in Madison, Wisconsin.

The poles were carried into sheds to be worked on. They were transported whole—none were ever dismembered, except the Seattle pole, of which more later—and placed within the sheds on skids. If the pole was to be restored, it was worked on there. If the old pole were badly deteriorated, a new pole would be carved.

Careful measurements, with calipers, were taken of parts to be replaced. Indians felled cedars of suitable size for new totems, and these were rafted to the totem worksite. The Forest Service vessel, *Ranger 7*, was used for transportation. The new log would be laid alongside the old pole to be copied. The old men themselves knew the stories of the totems, and they took great pride in their work, making every effort to strive for authenticity. They inspired the younger men, too, with much of their own pride in craftsmanship, and the communities became devoted to the project. As one carver, Charles Brown, said:

The story of our fathers' totems is nearly dead, but now once again is being brought to life. Once more old familiar totems will proudly face the world with new war paints. The makers of these old totems will not have died in vain. May these old poles help bring about prosperity to our people.

Both the Smithsonian Institution and the National Park Service had suggested that the work be directed by a trained ethnologist. Heintzleman sought one, but no agency could provide him with one. He finally hired Dr. Viola Garfield (Mrs. Charles Garfield) as a part-time collaborator. Garfield was well acquainted with Alaska. She had traveled there with her husband and had done research among the Tsimshians along the coast of British Columbia. As a member of the Department of Anthropology at the University of Washington, she had for eight years been taking students to Alaska on field trips for university credit. Heintzleman hired her to collect stories of the totems and Indian folklore as she went around the area. She traveled to each of the areas—Klawock, Hydaburg, Ketchikan—talking with people, taking photographs of old totems, and getting their stories. She collected twenty-seven volumes of notes and pictures.

Linn Forrest, meanwhile, collected stories on his own. Like Garfield, he found the Indians to be great storytellers. He collected the stories dealing with the totems located in the parks and mailed them to Garfield for editing. They were collected in the book published by the University of Washington Press, *The Wolf and the Raven*. Some of Linn Forrest's stories appeared in the *Alaskan*, official publication of the Alaskan CCC; others still remain in manuscript form.

Once the poles were completed, they were placed, for the most part, in totem parks laid out by Forrest in harmonious settings. Some poles were set in the ground with the bases buried about six feet deep; the poles were raised by block-and-tackle apparatus. Others, especially the small poles, were set on blocks.

This is the general pattern the project followed. Each of the totem parks and locations had its own history, however, and we may here look briefly into the history of each separate project.

Wrangell, because of its strategic location and early occupation, had become a major center for totem collection and display. Two dealers and collectors, W. Waters and Alex Rasmussen, lived there. There was interest in retaining Indian arts at Wrangell Institute, where Edward L. Keithahn, then a teacher for the Office of Indian Affairs, taught his students totem carving.

Alex Rasmussen was one of the major latter-day collectors of Indian artifacts. Of Scandinavian descent, he was born in Indiana in 1886. As a young man he was ordained a Presbyterian minister and preached in North Dakota. In 1917 he became a teacher and in 1921 resigned his pastorate to give full time to teaching. He came to Alaska in the late 1920s. As superintendent of schools at Wrangell, he became interested in Indian arts and began to collect. He gained the confidence of the Tlingit Indians, notably Mrs. Kay Shakes and Mrs. Fred Wiggs. Eventually, he bought the late Chief Shakes's house on a small island on the outskirts of Wrangell and used it to display his collection. In 1937 he went to Skagway as superintendent of schools, taking his collection with him. Ultimately, his collection went to the Portland Art Museum.

The Wrangell Women's Civic Club and Library Association became interested in the task of totem restoration. In 1938 the president of the club, Mrs. M. C. Johnson, wrote to J. M. Wyckoff, district ranger at Petersburg, suggesting that a plan be developed for protection of the old totems in the Wrangell area. She felt that they would have to be moved from their present location. The club also apparently corresponded with Rasmussen, since he telegraphed to Wyckoff that he would sell Shakes Community House for \$1,700. This sale would include four corner totems inside the house and two totem poles and one marble marker outside.

There followed a long period of negotiation. Rasmussen owned the northwest end of the island on which the house was located. A part of the other end had been sold, and a central strip sixty to seventy feet wide was still in possession of the heir of Mrs. Shakes. Heintzleman wrote to Wyckoff, stating that no money was available for purchase of land or poles. He made several alternative suggestions, one that a Forest Service recreational site, a mile outside town, be used. Another was that the island be acquired with funds available under the Wheeler-Howard Act, which authorized federal acquisition of lands to distribute to tribal units. Rasmussen suggested that he be left in possession of the house and that the rest of the island be made a national monument.

Territorial Delegate Anthony Dimond supported the idea that the island be made a national monument, as did the Wrangell chapter of the Alaska Native Brotherhood. Regional Forester Heintzleman, however, had other thoughts. He pointed out that the Indians of



U.S. Forest Service

Totem poles at Old Kasaan National Monument, 1930.

southeastern Alaska needed other means of making a livelihood than fishing, especially since increased mechanization was reducing employment in canneries. He suggested that a curio shop, in which the Indians could sell handicrafts, be set up on or near the island. There had always been some market for handicrafts, especially in the tourist season; Heintzleman thought such sale could be institutionalized. Eventually, the Wrangell City Council raised money to buy the island from Rasmussen and then transferred ownership to the Office of Indian Affairs. The Forest Service was authorized to commence work on the restoration of Chief Shakes's house and totem poles.

Work got under way in June 1939 when Linn Forrest came to Wrangell to supervise restoration of the community house. Logs for the siding were sawed in the local mill and then gone over with handmade adzes to give a hand-hewn effect. Joe Thomas and Thomas Ukas, both full-blooded Indians, were the carvers. Two mortuary poles in front of Chief Shakes's house, the Gonadeck pole and the grizzly bear, were both badly deteriorated, so duplicates were carved. One fine totem belonging to Charles Jones, a descendant of Chief Shakes, was located in the cemetery and transferred to Shakes Island under an agreement with Jones. Two fine totems, the Kadashan poles, had title secured by the Wrangell chapter of the Alaska Native Brotherhood. The poles were badly deteriorated, so much rotted, in fact, that there was not enough sound wood to hold inserted figures. So Thomas Ukas duplicated them. Also, a ridicule totem, the three frogs, was duplicated.

The potlatch—the ceremony given on the erection of totems—had died down in Alaska but was not entirely forgotten. In Wrangell, Charles Jones, the descendant of Chief Shakes, expressed a desire for a potlatch to celebrate the restoration of the house and poles. In order to finance the ceremony properly, the entire Wrangell Chamber of Commerce was adopted into the Nanyaayi Clan. Several thousand dollars were made available for the ceremony. Heintzleman, Claude Hirst of the Office of Indian Affairs, William Paul, Sr., of the Alaska Native Brotherhood, and many others attended the lavish "blowout."

Another project took place at Old Kasaan, a village that had been deserted since 1902 or 1904, either because the Indians were employed at the cannery at New Kasaan or because the stench of shallowly buried bodies made Old Kasaan unlivable. In 1937 Wellman Holbrook made a study of Old Kasaan to see if any restoration was practicable. He reported a scene of desolation but recommended that the six totems in best condition be moved to a new location. In 1938 Linn Forrest and C. M. Archbold examined the Whale House of Son-I-Hat, built in 1880, near New Kasaan. They found the forty-five-foot-square structure badly deteriorated, with walls and roof caved in, but the basic timbers were sound and little decayed. They obtained permission from James Peele to restore the house and its totem. The Park Service gave permission to move suitable totems from Old Kasaan to New Kasaan, and agreements were negotiated for transfer of the poles with the Peele, Thomas, and Young families. Forrest

laid out a totem park near the Whale House; in all, eight totems were transferred from Old Kasaan to New Kasaan. They were restored there; rotted parts were cut out and replaced with new wood, missing or rotted pieces were duplicated exactly, and the poles were painted and coated with preservative.

At Hydaburg the town council reserved lots for a totem park, and the project got under way with Walter Aiken as CCC foreman and John Wallace as chief carver. Old poles were brought in from Howkan, Klinkwan, and Sukkwan by the *Ranger 7*. Most of these were badly deteriorated. Of the twenty-one poles, five originals were restored and the others copied. The basement of the town hall was used as a shop for carving the totems. Forrest laid out a totem park, 125 by 250 feet. Blanket agreements were made by Charles Burdick, assistant regional forester, with the Indians of Klinkwan, Klawock Creek, Hydaburg, and Sukkwan for transfer of the poles to the park.

At Klawock the town council, acting through Mayor Robert Petratovich, reserved town lots for a totem park. There, twenty-one poles from Tuxekan were duplicated. Walter Ketah was the chief carver. The carving on these poles was of exceptionally high quality.

In addition to these totem parks, plans were made to set up work at Klukwan, a small village of 112 inhabitants on the Chilkat River, twenty-one miles west of Skagway. During 1939 and 1940 there were discussions with the Office of Indian Affairs about setting up a park near the village, where there were twenty totems and a community house worth restoring. The project did not get under way, however, partly because of the difficulty of finding a satisfactory carver.

The Forest Service also decided to establish totem sites in the vicinity of Ketchikan. One was designed as a primitive Indian village, fulfilling a plan Charles Flory had suggested some years before. A suitable site was found for it at Mud Bight, an old Tlingit campsite about seventeen miles from Ketchikan. It had a gravel beach and salmon stream, with the forest in the background, and a headland on which the village would be in full sight of steamers. Mud Bight was thought to be an inappropriate name for the site, so it was changed to Totem Bight.

A second site was chosen at Saxman, a Native village at Tongass Narrows, accessible to Ketchikan and within view of the steamers. At Saxman, Forrest laid out a rectangular plot with an approach to be bordered with poles and a square bordered with hand-adzed logs ornamented with frog heads. Two stairways were planned to lead to the area, one flanked by raven figures, the other by bear figures, in token of the two phratries of the Tlingit. An obstacle to establishment of the park occurred in the shape of a much dilapidated

Presbyterian church that stood on a part of the approach. The pastor, David Christensen, was willing to have the church moved to a new site, but the building was so shaky that there was doubt that it could stand the moving. Meanwhile, the move had to be approved by the Presbyterian Mission Board in New York, and the board had difficulty getting a clear picture, through correspondence, of just what was wanted. The matter was finally settled by a fire, which burned the church. The building was insured; the CCC cleared up the debris and the church was rebuilt on a new site.

Agreements also were made in 1938 with the owners of poles at Cape Fox, Pennock Island, Metlakatla, Old Tongass, Cat Island, and Dog Island for the transfer of poles to public totem parks. The poles were brought in from these outlying areas and a totem shed built for carving.

The community house at Totem Bight was designed by Linn Forrest and modeled on those built in the beginning of the nineteenth century. The inside was one large room with a central, square fireplace, around which was a planked platform. The smoke hole was protected by a movable frame for keeping out wind and rain. Charles Brown, the chief carver, designed a housefront painting of a stylized raven with each eye elaborated into a face. On each of the four corner posts sat a man wearing a spruce-root hat. The carved posts within symbolized the exploits of a man of the raven phratry. The house was beautifully done in its framing design and joinery workmanship. It was put together with wooden pegs; no metal went into its construction.

The poles brought to Totem Bight were mostly in poor condition and had to be duplicated. The majority were carved by Charles Brown, though some were carved at Hydaburg by John Wallace and shipped to Totem Bight. In all, twenty-seven poles were erected on the site, all copies of originals. At Saxman, thirteen of the original poles were repaired and ten original poles copied; three new poles were carved.

In addition, there was miscellaneous totem pole work. The Seattle totem, which stood in Pioneer Square for many years, had originally been stolen from Tongass Island. It was in poor repair, and the city of Seattle asked that a duplicate be carved. The totem was cut into ten-foot sections for shipping and was duplicated at Totem Bight. The duplicated was a better pole than the original.

In Ketchikan, near the junction of Mission and Stedman streets, stood the Chief Johnson Pole—the only pole in town in its original position. It stood on a campsite of the Kajuk House of the Raven Clan, on land owned by the clan. It was erected in 1901. The title to the pole and land was clouded, but the citizens of Ketchikan thought it appropriate that the pole be restored. They managed to get title to the land and then to convey



Linn Forrest Collection

Linn Forrest supervised the Forest Service's totem pole preservation and restoration project during the New Deal period. The photo was taken at Howkan on Prince of Wales Island in 1938.



U.S. Forest Service

C. M. Archbold, B. F. Heintzleman, and Linn Forrest examine an old Haida pole at East Skowl Arm on Prince of Wales Island.



U.S. Forest Service

Street scene at the village of New Kasaan, 1941.

the land to the federal government. The pole was repaired. In addition, a number of poles in the city ball park, owned by the American Legion and brought to the city from Old Kasaan and Tongass Island, were repaired at city expense.

North of Juneau, Auke Bay Village had been occupied by Indians at the beginning of the century but later abandoned. The Juneau Chamber of Commerce suggested that the village be reconstructed, and Forrest made studies. Funds were lacking for a village reconstruction on the scale of the Totem Bight project, so eventually plans were made to erect a single pole in a simple setting to the north of the highway near Auke Village recreational site. The legend involved in the pole was collected by Linn Forrest, and the actual carving was done by an Indian named St. Clair and two assistants.

The CCC totem pole project, supervised by the Forest Service, was a noteworthy success. In all, forty-eight old poles were restored. Another fifty-four, beyond restoration, were duplicated, and nineteen new totems were carved. In addition, eighteen poles at Sitka

National Monument were restored or duplicated under Forest Service auspices. In 1941, because of construction of Annette Island Air Field, which took away many of the younger corpsmen, work on the totems began to slow down, particularly in the nearby Ketchikan area. After war was declared, work came virtually to a stop, though the program did not officially terminate until June 30, 1942.

The work was a marvelous achievement. It was particularly noteworthy in that the Forest Service, as an organization, was not professionally prepared to engage in creation and restoration of Native art; it relied on experience guided by judgment rather than on professional training. The Forest Service was able to duplicate or to repair the best of the totems that were left rotting in the woods, and it recovered, at close to the last possible moment, the Indian legends connected with the totems. The quality of work varied, as would be expected in a project of this type. Some was outstanding; in general, it was good. Both as a relief project and as an artistic project, the CCC totem pole work was a great success.⁴⁶



U.S. Forest Service

Entrance totems and the Abe Lincoln pole at Saxman Park, south of Ketchikan, 1958.



U.S. Forest Service

During the New Deal years the Forest Service supervised Native craftsmen under the CCC program in a project to preserve and restore totem poles. These poles, photographed in 1958, are at Totem Bight, north of Ketchikan.

Annette Island

A final CCC project was the building of the Annette Island Air Field. CCC Director Robert Fechner made a trip to Alaska about 1939. He felt that the CCC should make some contribution to national defense. In 1940 corpsmen were brought up to build the airfield, along with the Army engineers, at Annette Island. The plans were drawn up by the Corps of Engineers, while the Forest Service was in charge of construction work under an outstanding foreman, Walter Peterson. Archbold and A. E. Glover supervised the work, which was performed under difficult climatic conditions in swamp and muskeg. Rivalry developed between the Engineers and the Forest Service men to the extent that the latter's hours of work were lengthened, at their request, to coincide with those of the former. Troops were recruited from Washington and Oregon, where the climatic conditions were similar to those in Alaska. Special transportation was provided to get weekend trips into Ketchikan for the workers. The airfield job gave the CCC men a great deal of experience running heavy equipment and they made a good safety record. The project was completed on December 1, 1941.⁴⁷

With few exceptions, the CCC projects were strongly supported by the communities in which they were located. Morale in the camps was generally high.

Timber Sales

Timber sales flourished during the 1920s and 1930s. In 1913, 84 percent of the timber used in Alaska was imported and 16 percent was produced locally; by 1925 this proportion was reversed. Demand grew for spruce lumber, and by 1923 the mill at Ketchikan was exporting merchantable clears to Seattle for transshipment to the East and to the United Kingdom and Australia. After 1933 CCC construction work increased the demand for timber, and after 1940 defense construction further increased it. The main mills were those at Juneau and at Ketchikan; the Wrangell mill had business difficulties and underwent several reorganizations. There were small mills at Craig, Sitka, Seward, Cordova, and other places.

The Forest Service tightened up regulations for timber sales. Handlogging had formerly been conducted on request of the logger, without much supervision of cutting. Logging was now put under revised regulations that required inspection of the area and marking of trees. After 1917 there were relatively few handlogging shows left. Ordinary sales were made by competitive bidding, with payment in advance of cutting, inspection after the cutting, and a penalty scale for logs

Camps varied in quality; tent camps were generally used for summer work on Admiralty Island and the Kenai fire control area, but, for the most part, more permanent buildings were built or rented, since drying clothing was necessary in the southeastern region. In Juneau, old mine bunkhouses were utilized. Camps were generally adequate, though Charles H. Forward was quite critical of the facilities at Kenai Lake.⁴⁸ Recreation grounds and ball parks were built, and hunting and fishing were favorite pastimes. Six CCC men got into the toils of the law for illegal killing of ptarmigan and caribou—a low record considering the opportunity and the size of the operation. Libraries were established in the camps. One library list included such books as Dupuy's *Green Kingdom*, Sudworth's *Forest Trees of the Pacific Slope*, Sargent's *Sylva of North America*, F. A. Loomis's *Field Book of Rocks and Minerals*, various field guides to fishes and birds, Colby's *Guide to Alaska*, Sheldon's *Wilderness of the Denali*, Kephart's *Camping and Woodcraft*, and various technical and engineering books. Other educational facilities were provided, too. The University of Alaska Extension Service gave instruction in cooking, truck maintenance, carpentry, logging, bridge construction, drafting, and road surveying. Many CCC enrollees took instruction as cat operators or boat engineers. Opportunities to obtain high school diplomas were provided.⁴⁹

left in the woods, poor utilization, and high stumps. Scaling usually was performed on the raft. Check scalers were brought in and scalers were trained to examine logs on the mill deck to see how they cut out in order better to allow for defect. Cruising was usually done in the winter months of February and March, when snow was still on the ground and had crusted. This covered up the thick underbrush and devilsclub and allowed cruisers to get around more freely. Logging was usually done by donkey engine, working inland from the shore as far as 4,000 feet. There are some records of river drives on suitable streams. Logging work was aided tremendously by aerial surveys of the forest that the Navy made from 1919 to about 1928. These surveys, when interpreted, allowed the Forest Service to map the area more accurately, to locate timber bodies and estimate their volume, to locate streams and watercourses for power development, to map out logging shows, and to develop a timber inventory.⁵⁰

In the early 1920s Alaska was highly optimistic about the possibilities of a pulp sale. Fourteen separate zones, each with timber and a mill site, were mapped out by this time, and a thorough survey of waterpower

facilities had been made. By 1921 two of the sales materialized. One was to the Alaska Pulp and Paper Company at the head of Speel Arm of Snettisham Inlet. This was a sale for 100 million feet of timber and a hundred-ton pulp mill. The other was to the Alaska Gastineau Company, which had ceased milling gold ore at Thane in 1922. It made plans to install a 200-ton pulp mill, to utilize timber from Admiralty Island, and to develop a waterpower project on Hasselborg Lake. In addition, two other companies expressed interest.⁵¹

But these enterprises were doomed to failure. The Port Snettisham venture sent a shipment of 100 tons to Seattle (as well as several smaller ones) but found shipping charges too great and ceased operations. The sale was canceled by mutual consent. The Alaska Gastineau Company sale was also canceled. A third company lost interest. There were several factors involved in these failures. One was high shipping costs to the outside; another was that the economic climate was not suitable for any new, large-scale pulp operation; and a third was the control of finance and market by those already involved in pulp and paper mills. Yet another reason was the expansion of existing mills in Newfoundland and other parts of Canada.⁵²



Steam donkey engine and A-frame in logging operations at Cosmos Pass, Kosciusko Island, on the Juneau Logging Company sale, 1941.

U.S. Forest Service



The pulp plant at Port Snettisham was doomed to failure in the early 1920s by high shipping charges and poor financial conditions.

U.S. Forest Service



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Seattle businessman, John E. Ballaine, had grand plans for the development of Alaskan resources.

John Ballaine was another entrepreneur who sought to break into the pulp business in Alaska. A Seattle-based capitalist and speculator, Ballaine had been the main mover in an attempt of the Alaska Central and the Alaska Northern to build a railroad from Seward. He had also offered to lease the coalfields on Chickaloon Creek in 1910. Ballaine's plans were to combine export of birch veneer with pulp manufacturer. In 1923 and 1924 he sent cruising parties into the Susitna Valley, north of Anchorage, which was an area that Langille had examined twenty years earlier. Ballaine's party reported a good stand between the Susitna and Yentna rivers; it was an area about eighteen by twelve miles in size, and the birch trees were eighteen to thirty inches in diameter. In applying for a sale of 500 million feet, he suggested to George Parks, chief of the General Land Office's Field Division, that a railroad might be built into the area from mile 185 to Susitna. Ballaine also negotiated at this time with the Robert Dollar interests about shipping, apparently considering operational sites either at Anchorage or at Seward.⁵³ In January 1925 he received a sales contract calling for 2,000 acres of timber at \$1 per thousand feet, with reappraisal after five years. The Alaska office of the General Land Office was to record the cut. The sale included all available saw or veneer timber more than six inches in diameter. But Ballaine was unable to move into the area, and an application in 1928 for an extension of time was rejected.⁵⁴

By 1929 Ballaine got further financial backing and applied for another sale. His plan this time was to cut up birch for veneer stock and to ship that out through Seward. He also intended to apply for spruce and hemlock on the Chugach National Forest and to set up a 100-ton sulphite pulp mill, using cull lumber and tops from logging operations. He planned to cut 400,000 cords per year at \$11 per cord. Ballaine's financial support came from Ossian Anderson, a pulp manufacturer with operations at Anacortes and Bellingham, Washington. Anderson advised Ballaine to start small, first shipping out birch veneer logs, for which there was a good market, and working from that to the pulp operation. Ballaine desired and got a long-term contract that called for him to cut 15,000 cords of pulpwood and 3.5 million feet of sawtimber annually from 1932 to 1949. He agreed to establish a pulp mill before February 21, 1935. Ballaine estimated that he would invest \$2.5 million in Alaska and greatly boost the Alaska Railroad with traffic. But, as with the other ventures, the Depression put an end to the project.⁵⁵

Meanwhile, the Forest Service continued plans for sales on the Tongass National Forest. The Weepose took visiting industrialists around the forest to see pulp shows.⁵⁶ Chief Greeley had a deep personal interest in the development of a pulp program in Alaska, but some logging interests in the Northwest were critical of such development, feeling that the size of the sales offered was too large and that a greater attempt should be made to use waste from mills in Washington and Oregon before utilizing Alaskan forests. Greeley's answer was that the waste in Oregon and Washington could be used to make variety paper and fiberboard and that in Alaska for newsprint. Meanwhile, he reported, there were better waterpower facilities in Alaska, and it was time that its timber be utilized.⁵⁷

Action on another sale was held up by the possessory rights question. This case foreshadowed a great many issues involving Indians' rights to the forestland. J. T. Jones of Tacoma claimed all the Swan Lake watershed because Indians had used the area for hunting and fishing. He asserted that he had obtained a quitclaim deed for the area from one Will B. Bell, who had obtained it from the Indians. In 1914 Jones had planned to build a pulp plant, and two years later he applied for a pulp sale. A gauge was installed on the stream in 1916, but he made no waterpower application. With a sale to the Crown Zellerbach Corporation pending in the area, Jones asked a federal injunction to prevent construction of a dam on Swan Lake. Merritt examined the area, found no trace of Indian occupancy, and referred the problem to the Department of the Interior. In 1933 the case was closed; Jones lost it.⁵⁸

Two sales were made in 1927, in Juneau and in Ketchikan. The Juneau sale involved two newspaper



A stand of hemlock and spruce on the Tongass National Forest, 1930. Some sawtimber and pulpwood was sold, but the economics of the period retarded development.

companies, the *San Francisco Chronicle* and the *Los Angeles Times*. The Ketchikan contract was won by the Crown Zellerbach Corporation over the International Paper Company. The sale involved 1,670,000,000 cubic feet of timber, but, once again, the Depression put an end to the sales.⁵⁹

In the Chugach the Forest Service continued to have a bad relationship with the Alaska Railroad and its contractors. Harold Lutz wrote in his diary for November 3, 1925:

With Ranger Brady—also saw Mr. Smith General manager of the RR. Spoke to him regarding his cleaning up the brush left along the telephone and telegraph line. He said that the railroad would not do it unless they were forced to, and under no circumstances would he take orders from the Forest Service.

Several days later he warned one contractor that he would close down his operation if he did not lop the tops. A week later he told another contractor that if his cook did not stop throwing cans and garbage into the lake, he would close down the operation.⁶⁰ Orders from the railroad general manager regarding spark arresters and burning on the right-of-way were disregarded. In 1923 there were fifty-eight right-of-way fires. "The only thing that surprises me," Merritt remarked, "is that we have any forest at all north and west of the Seward-Kenai Lake divide." The railroad recognized its responsibility but was operating at a loss, so it was not interested in reducing fire hazard. The troublesome situation continued into the 1930s.⁶¹

Some improvements in fire control and suppression were made during this period. Supervisor W. J. McDonald, aided by Rangers Brady and Murray, carried on an effective public relations program in the Anchorage and Seward areas to alert the public to the need for fire prevention. As roads were built to Hope and Moose Pass, Ford trucks were used for transportation. Telephone and telegraph lines were installed and a dispatcher system set up at headquarters. The CCC workers made fine fire suppression crews.⁶²

Fire protection for interior Alaska was finally organized in 1939—more than three decades after Langille had recommended it. When Secretary of the Interior Harold Ickes made his Alaska trip in 1938, he was horrified at the ravages of fires. He conferred with Ernest Gruening and B. Frank Heintzleman about it. Before long, W. J. McDonald was transferred to the General Land Office to set up a protective organization, and people trained in fighting fires in Montana were shifted to Alaska. An appropriation of \$38,000 was made for fire control, and the Forest Service gave further advice on a protective system.⁶³

There was also need for timber management on the Chugach, especially in the Kenai area. The major aims had been to provide the Alaska Railroad with

timber for free use, to keep the country from burning up, and to have minimum standards of utilization. There was need, E. E. Carter reported in his 1923 inspection, for a "hard-headed technical man" who could introduce silvicultural practices into the area. W. J. McDonald recognized this problem but had no technically trained men; he himself was an engineer. He administered the sales competently but could not manage the area as a tree farm. In response to Carter's request, Harold Lutz, a young and talented Yale graduate, was sent to the area.

Lutz's diaries show that he accomplished a great variety of work. Early in 1925 he examined timber in the Cordova area, developing volume tables and estimates of defect from butt rot and porcupine damage. Later, he cruised Prince William Sound in rented launches, the *Shamrock* and the *Buckeye*, getting growth data, taking increment borings, cruising, and seeing to the possibility of using the area on the east side of the Kenai Peninsula as part of a working circle for the Alaska Railroad. He concluded that the timber in the area was too sparse and inaccessible for this purpose. During the summer and fall months, Lutz set up sample plots in the Kenai and developed volume tables for that area.⁶⁴

Meanwhile, in the interior of the Kenai, J. P. Williams carried on a study of the forests to develop a working circle tributary to the Alaska Railroad. Williams was a major figure in Alaska conservation during the first half of the century. A University of Wisconsin graduate, he was a veteran of the Spanish-American War, a former hunter and packer for the International Boundary Survey, and had served in the Forest Service in Washington State before coming to the Tongass. During the 1920s he was a district ranger and forest examiner. Later, he became a wildlife specialist and took an active part in the bear census and the bear management plan of the Forest Service.⁶⁵

Others preceded Williams in research, however. James M. Walley and Harold Lutz began in 1924, as noted earlier, and Ray Taylor came along a year later. Melvin Merritt studied plant succession before the Mendenhall Glacier from 1929 to 1934. In 1923 E. E. Carter wrote that, as a result of examination of old cuttings, a definite body of knowledge about reproduction and growth was becoming available for development of timber management policy. Increasingly, however, the need was felt for an experiment station for research on a continuing basis.

In the Tongass, timber values were gradually integrated with other uses, including game management and recreation. Some aspects of this have already been mentioned, including the recreational developments carried on by CCC labor. This movement would also include plans worked out by the Forest Service with the Alaska Game Commission, the Biological Survey, and other groups on

the relationship of cutting to game management (particularly bear), and the bear census work, in which J. P. Williams was particularly important.

Studies of the recreational possibilities of the Alaska forests, from a wilderness standpoint, began by 1925 but did not become intensive until 1939. One reason for this delay was the large amount of wilderness and the fact that much of it would remain de facto wilderness. Regional Forester Flory was extremely sensi-

tive to public opinion and press criticism; the Juneau newspapers had been hostile to the national monument and the national park ideas. But with the accession of Heintzleman in 1937, there was a new shift. Part of this may have been due to Heintzleman's own keenly developed aesthetic sense and partly with his energy and his ability to dominate public opinion instead of being swayed by it.⁶⁶

Recreation: Glacier Bay and Admiralty Island

The Forest Service in Alaska has always been interested in recreational values. Langille, in his 1904 report on the Kenai, had recommended addition of this area because of its value as a game sanctuary and a wilderness. In 1908 he had recommended creation of a national monument in the Wrangell Mountains. Ringland and Graves also had been concerned with recreational potentialities in the Kenai. Roads, particularly the Mendenhall Glacier Highway, were constructed for scenic purposes.

During the 1920s the Forest Service set up several wilderness areas in the stateside national forests. Greeley, as chief forester, asked Flory to review the forest road plan and to make arrangements for safeguarding the wilderness. Flory replied that there was no particular problem in Alaska since some of the area would be de facto wilderness in perpetuity, especially above timberline. Chief Stuart asked in 1932 that national forest planning take wilderness areas into consideration. Two years later, Chief Silcox stated that public sentiment was pro-wilderness and that the Forest Service must recognize the need to reconcile local population needs with this sentiment, especially in road building.

The regional response to this national directive took several forms. The roadside screen idea, developed first in Montana and in Oregon, was extended to Alaska. The Forest Service cooperated with the Bureau of Roads in road location to see that they were back from the water's edge and that a screen of trees and brush protected the roads from views on the water. Establishment of game sanctuaries began in 1931. By 1939 there were 2,448,144 acres of game sanctuaries on the Chugach and 830,320 acres on the Tongass, in addition to several bird sanctuaries.⁶⁷

The major controversies that occurred during this period were in relation to Glacier Bay and Admiralty Island. The original proclamation of Glacier Bay National Monument occurred about the same time as the

Icy Straits addition to the Tongass. Its immediate cause was a recommendation by William S. Cooper of the Ecological Society of America. In 1923 Cooper had been studying plant succession on the glacial moraines, and he recommended that Glacier Bay be reserved for scientific reasons. The Ecological Society of America endorsed the idea, as did other scientific organizations. E. C. Finney, assistant secretary of the interior, recommended that a national monument rather than a national park be established, since a national park would require an act of Congress. Gifford Pinchot supported the movement, though he thought the area deserved national park status. George Parks, head of the Field Service of the General Land Office in Alaska, recommended the park, provided it be limited to the basin of the bay, north of a line from the summit of Mount Wright to Peak 4030, near Geikie Inlet. He opposed a larger area because of settlement and commercial timber values. Support was obtained from the American Association for the Advancement of Science, the National Resource Council, the National Park Association, and the U.S. Geological Survey. The monument was created in 1925.⁶⁸

The possibility of extending the boundaries of the monument came up almost immediately. As early as 1923, Heintzleman had under consideration the recreational as well as economic values of the Icy Straits addition and the Lituya Bay area.⁶⁹ Joseph Dixon, field naturalist for the National Park Service, made a field examination of the area in September 1932 and recommended extending the boundary to the west to include forested land and the habitat of the brown bear. During that year, Heintzleman conferred with Paul G. Redington of the Biological Survey, Joseph Dixon, Frank Dufresne of the Alaska Game Commission, and Horace Albright on the park possibilities. Arthur Demaray of the Park Service made a field investigation of the area in 1936 and sought the advice of W. S. Cooper of the Ecological Society of America.

Heintzleman favored extension of the monument to include the coastal timber, including Lituya Bay for its scenic beauty, value as a bear sanctuary, and for its salmon streams. He desired that Excursion Inlet be excluded because of its canneries and its value for pulp production. As head of the Alaska Planning Board, Heintzleman enlisted its support and also that of the territorial legislature. He also got the support of George Parks and Ernest Gruening. The Forest Service put its boats at the service of Park Service examiners. In 1938 Harold Ickes took a trip to Alaska and examined the proposed addition with Heintzleman and Gruening. The extension to the national monument was proclaimed on April 18, 1939.⁷⁰

The chief problems of the Glacier Bay area came not with the Forest Service but in regard to mining in the national monument. This is an interesting way trail that deserves a full treatment, but is not directly related to our story. Here is a brief summary.

At the time extension of the boundary was under consideration, Rex Beach was writing a novel with an Alaskan setting. One of Beach's main themes in his Alaska writings had been the problems the hardy pioneer faced with the dead hand of federal bureaucracy. In *The Spoilers* it was the alliance of outside capitalism with a corrupt federal judge. In *The Iron Trail* a theme was the uninformed attacks of conservationist journalists on business enterprise seeking to develop Alaska. During the 1930s, Beach was writing a sequel to *The Spoilers* to be published in *Cosmopolitan*. He based it on the experience of Joseph Ibach, a prospector then living on Lemesurier Island. Ibach apparently had become acquainted with Beach while the latter was writing *The Iron Trail*. During the 1930s, Ibach was operating a claim in the Glacier Bay withdrawal and complained bitterly to Beach about the way the federal government was hindering his mining operations. Beach took the case to Delegate Anthony Dimond and to President Roosevelt. Beach touched Roosevelt's romantic streak, and the president supported the efforts of Dimond to open the monument to mining and permit miners to carry firearms for protection against bear.⁷¹

The problems related to Admiralty Island were much more complex and disruptive. Admiralty Island had been the scene of logging and mining operations, especially on its west coast, since before creation of the Forest Service. The federal agency was especially interested in the resources of the island, particularly waterpower and pulp timber. Kan Smith, Heintzleman, and others thoroughly examined the island between 1917 and 1930, and plans were made to develop the area as a pulp producing unit. A few squatters, fishermen, and hunters lived on the periphery of the island, and there was an Indian village, Angoon. Moreover, there were as many as seven salmon canneries scattered along the island's shores.

Many of the problems on Admiralty related to bear. Early in the century, C. Hart Merriam collected specimens of the island's fauna, especially the large brown bear. A "splitter," Merriam identified five species of brown bear, of which two were unique to Admiralty Island. Allen Hasselborg, a squatter, built a cabin at Mole Harbor on the island's eastern coast. He became a collector of bear for eastern museums and cultivated the looks and style of a backwoods sage.⁷² Meanwhile, sportsmen came in larger numbers to Alaska in search of trophy bear and other game. The majority went to Kodiak Island, where the sparse vegetation made hunting more feasible, but a sizable number came to Admiralty.

Brown bear presented an everyday problem for Forest Service men on cruising or reconnaissance trips. The men had their hands full of equipment (axes, calipers, tapes, and compasses), the undergrowth was thick, and bear traveled the same trails as men. When startled, bear were apt to charge, and there were frequent close calls. After Ranger Jack Thayer was killed by a bear, foresters were required to carry rifles and sometimes had to kill bear in self-defense. Elsewhere in Alaska, the policy of the game commission was to control their numbers by the bag limit, but it passed an ordinance allowing residents to kill bear within a mile of their homes in defense of persons and property.⁷³

Between 1927 and 1930 John M. Holzworth photographed bear and collected hides and skulls on Admiralty for the New York Zoological Society. He lived with Hasselborg, used him as a guide, and admired him tremendously as a self-taught philosopher and authority on bear. In 1930 Holzworth published a lavishly illustrated book, *Wild Grizzlies of Alaska*, in which he pictured the grizzly as being in danger of extinction because of hostility of the Alaska Game Commission, the Forest Service, and the people of Alaska. In an appendix to the book, Harry McGuire of *Outdoor Life* dealt further with the bear as an endangered species. The Mammalogical Society of America passed a resolution in May 1930 asking that Admiralty be set aside as a bear sanctuary.⁷⁴

Heintzleman dealt with this proposal in the *Service Bulletin* of May 2, 1932. He considered the "Save the Bear Movement" to be overenthusiastic. If withdrawn as a bear sanctuary, Admiralty Island would be the "world's largest zoo." He admitted that bear had been a problem to the Forest Service, but, he claimed, the agency had not attempted to exterminate them. It had killed only twenty-two bear in a ten-year period—most of these in self-defense. Heintzleman proposed that the Forest Service and the Alaska Game Commission work out a bear management plan for Admiralty, limiting the kill and working on the sustained-yield philosophy used for timber crops.

The plan was soon put into effect, and certain kinds of areas were treated as refuges. According to an Alaska Game Commission report in 1937, these included National Park Service areas (Mount McKinley National Park, Katmai National Monument, and Glacier Bay National Monument), bird refuges on Unimak Island in the Aleutians and on Afognak Island, and in national forest areas. The latter included an area contiguous to Glacier Bay and two areas on Admiralty Island—the Thayer Mountain unit of 38,400 acres, and the Pack Creek unit of 13,400 acres. Heintzleman reported in a letter to H. H. Chapman that the bear management plan on Admiralty Island was working well. H. L. Schantz, chief of the Forest Service's Division of Wildlife Management in Washington, was also satisfied.⁷⁵

Meanwhile, the movement for monument status had increased. Stewart Edward White, the well-known writer and big-game hunter, entered the fray with an article in the *Sierra Club Bulletin* in 1932. He praised Allen Hasselborg as "perhaps the most informed bear man in Alaska." The Forest Service, he said, was using Ranger Thayer's death as an excuse to exterminate the bear. Regardless of what was officially stated, Forest Service men killed bear whenever possible, he said, and this policy was "quasi-official." Bear were also at the mercy of residents, fox farmers, and visiting yachtsmen, and the use of planes, he claimed, would make them even more vulnerable. He asked that a bear sanctuary be created on Admiralty, Chichagof, or Baranof island. The Glacier Bay area, he said, was too small and too inaccessible. Finally, he asked that pressure be put on the secretary of the interior, the Biological Survey, and Congress to create such a sanctuary.⁷⁶

White's article was followed by others in outdoor magazines, and the Forest Service received letters supporting the project. Roosevelt received communications regarding bear being shot from yachts. He referred them to Ickes, who replied that the Alaska Game Commission had been notified and that plans were being made for an enlarged Glacier Bay National Monument.⁷⁷

By 1937 the agitation was in full swing. In April Roosevelt received a letter from Representative Caroline O'Day of New York, a close personal friend. She asked that something be done about the bear on Admiralty before the hunting season began. Roosevelt passed the suggestion on to the Department of the Interior. The National Park Service informed Ickes that it had never urged Admiralty as a national park or monument. There was commercial development on Admiralty. In addition, Glacier Bay offered a bear sanctuary because the Forest Service had closed the adjacent national forest land to bear hunting. A copy of the Forest Service bear management plan for Admiralty was enclosed, and it was suggested that an addition to Glacier

Bay be made instead. Harry Slattery, Ickes's aide, informed Fairfield Osborn that he was opposed to Admiralty as a national park. Suggestions were made for a joint study by the Interior Department and the Department of Agriculture, but the latter resisted this suggestion until the Alaska Territorial Board was organized.⁷⁸

When Ickes traveled to Alaska in 1938, he refused to commit himself immediately on the desirability of a national park, but by early 1939 he was convinced that a national park would be desirable. He drafted a proclamation stating that the climax forest, the five varieties of bear, and geological and ecological features justified park status. In a separate note to President Roosevelt, Ickes pointed out that the only town was Angoon and that there were very few other settlers. There were, he said, archaeological features of note. He repeated the points in his proclamation and stated that the whole area was a "natural outdoor laboratory."⁷⁹

Ickes had earlier sent Roosevelt a 1932 editorial by Irving Brant of the *St. Louis Star* that pressed for the addition of Admiralty to the national monument system. Brant had repeated the false charges of the New York Zoological Society that the Forest Service had given 5,000 square miles of virgin timber on Admiralty to San Francisco capitalists. Brant, apparently informed of Ickes's action, wrote to Ickes to say that Crown Zellerbach had abandoned its pulp plan and that Admiralty was eliminated for consideration as a pulp production area for many decades. However, he repeated the charges that Alaskans disliked grizzly on the grounds that they killed salmon and raided fox ranches. Roosevelt, meanwhile, sounded out Secretary Wallace. He raised the specter of timber monopoly, stating that in Hoover's day there had been attempts at such monopoly and "you and I blocked this." He asked what Wallace thought of setting up a tract as a wildlife sanctuary. Wallace replied that the pulp sale had fallen through but that there were numerous small local sales. Less than half the island, he wrote, was commercial timber; the volume was about 8.5 billion feet or about 11 percent of the volume in southeastern Alaska. He felt that timber production, as well as bear protection, deserved attention. Bear protection could be managed without withdrawal of the area from commercial use. Wallace suggested that the president create a primitive area on the island and said he would confer with Chief Silcox and Secretary Ickes.⁸⁰

Delegate Anthony Dimond of Alaska, meanwhile, got wind of the matter. In a strong letter to Roosevelt, he termed the proposal for a national monument "conservation gone mad." He wrote: "There is no more occasion to withdraw Admiralty Island into a national park or national monument than there is to build a trap to capture the aurora borealis. I earnestly hope you

will put a stop to such foolishness." Roosevelt's secretary, Stephen Early, referred the letter to the Department of the Interior for a reply. Ickes argued that Admiralty was biologically one of the most desirable areas for protection of timber and wildlife, "which are certain to disappear within a few years if it continues open to exploitation." Roosevelt did not use Ickes's letter as the basis for a reply but instead sent a noncommittal note to Dimond.⁶¹

The Park Service remained opposed to creation of a national park or monument, but Ickes went ahead on his project with presidential support.⁶² He sent drafts of his proclamation to the bureaus within the department but through an oversight failed to send one to John Collier, head of the Indian Bureau. Collier was somewhat annoyed at this, especially since there were Indian rights involved in the area. In a firm note to Ickes, he stated his objections to any proclamation that did not consider the fishing, hunting, and occupancy rights of the Indians in the area. Ickes apologized to Collier for the oversight, and the proclamation was withdrawn. Ickes could not do otherwise; he was hoisted by his own petard. Since he was at the time taken up with the Indian rights question and the proposal that the Indians be given title to the shorelines of the Alaska islands and coast, at the expense of the Forest Service, Collier had very deftly pulled the rug out from under him.⁶³

From 1940 to 1942, the National Park Service made a full examination of the area. Frank Been of McKinley National Park made a tour of Sitka, Old Kasaan, Glacier Bay, and Admiralty. He thought that Admiralty was not an outstanding area and that Baranof Island would be a better national park or monument. He met with Hasselborg and did not share the admiration that Stewart Edward White and John Holzworth

had for the famous guide, characterizing him instead as a nature faker. Been wrote: "He classified me as a scatologist because I mentioned a bear dropping he displayed as being scat.... In my opinion he is 'bull' scatologist of the first water and his comments should have little weight or bearing on any matter." Victor Cahalane of the Park Service made an inspection of the area in 1941, accompanying an inspection trip of W. A. Chipperfield. The timber, he reported, was hemlock and spruce, much of it unmerchantable. It was short, limby, and stag-headed. The bear were under management; the Forest Service had built platforms for observing the bear in the two sanctuaries of Thayer Mountain and Pack Creek. He also believed that the area was not of national monument caliber. The inlets were not outstanding, as compared with those of Tracy Arm or Baranof Lake. The fauna was "neither diversified nor remarkable." Also, there were other obstacles to national monument status—the use for timber, fishing, agriculture, fur farming, trapping and hunting, and the Indian agitation for exclusive use. It was desirable that the inland lake area be developed for recreation, but he was opposed to national monument status. The U.S. Geological Survey also opposed national monument status on the grounds that there were mineral values present and that the area was not of national monument caliber.⁶⁴

On November 27, 1941, top Interior Department officials met to discuss the Admiralty Island matter. Ira Gabrielson of the Fish and Wildlife Service persuaded them that game could be protected by regulation rather than by creating a national monument. There were also budgetary problems within the department, so the consensus was to table the whole question. Some agitation continued, but, without Ickes's active support, it presented less of a threat to Forest Service management.⁶⁵



6

The Heintzleman Administration, 1937-1953



Errata

Page 117

Column 2, paragraph 1, line 5, change “Cliff” to “Crafts.”

The Heintzleman Administration, 1937-1953

National Conservation Background

In 1937 B. Frank Heintzleman succeeded Charles H. Flory as regional forester in Alaska. He served until 1953, when he became governor of Alaska. His tenure as regional forester coincided with the second and third terms of Roosevelt's presidency, and that of FDR's successor, Harry S. Truman. It would be well to examine the trends of national politics and the development of forest administrative policy during this period.

Forest Service Chief F. A. Silcox died in 1939 and was succeeded by Earle H. Clapp, who had been associate chief since 1935. During his four years in office, Clapp served as acting chief. His failure to gain the title of chief of the Forest Service was probably due to his militant resistance to the efforts of Harold Ickes, secretary of the interior, to have the Forest Service transferred to his department. Clapp fought the move vigorously, aided by Pinchot and by friendly members of Congress. In defeating Ickes, the Forest Service had to spend time and energy it would have liked to devote to more important matters. Clapp had headed the Office of Research when that branch was founded in 1915, and he had been a capable administrator. He and Silcox had been dedicated to public regulation of the forest industry. He carried on an uncompromising program for regulation, even asking the president to force compliance with Forest Service regulations under the presidential war power authority, but these efforts failed.

In January 1943 Clapp was succeeded by Lyle Watts. Watts was a graduate of Iowa State University who had worked both as a director of a research station and as a regional forester. He served as chief until June 1952. During this period much of the Forest Service's work was devoted toward the war effort. Procurement of timber, cooperation with other agencies, work with the Aircraft Warning Service program, and close cooperation with the War Production Board on a variety of projects occupied Watts during the war years. With the end of the war, he took a major part in helping to

organize the Forestry Division of the Food and Agriculture Organization of the United Nations, participating in a number of international conferences on conservation.

Watts had other achievements to his credit. The Timber Resource Review, a comprehensive appraisal of the forest conditions in the United States, was started by Watts early in 1952. The six-year study was completed by Assistant Chief Ed Cliff in 1958; it examined in depth the current status and projected future of the nation's wood supplies. Also during his term of administration, the Sustained-Yield Forest-Management Act of 1944 was passed, calling for federal-private sustained-yield units under which federal stumpage could be sold to responsible bidders without competitive bidding and thus support communities and industries dependent on federal forests. The Cooperative Forest Management Act of 1950 expanded the Norris-Doxey Act. The Forest Pest Control Act of 1947 established the principle that the government had responsibility to protect all forestlands from destructive insects and diseases.

Like Silcox and Clapp, Watts was an advocate of public regulation of cutting. His program called for federal acquisition of timberlands, federal cooperation with state and private owners, and federal regulation. By this time, however, the states had passed laws regulating forest practices, including cutting, and the U.S. Supreme Court upheld the constitutionality of a Washington State law. After Watts's administration, the campaign for federal regulation of cutting was dropped, and state regulation took its place.

Ickes resigned from his post in 1946, and his successors, Julius Krug (1946-1951) and Oscar Chapman (1951-1953) were less troublesome to the Forest Service than Ickes had been. Truman, Roosevelt's successor, was a man of the soil and made a creditable record in conservation. His secretaries of agriculture, Clinton P. Anderson and Charles Brannan, were capable administrators. Nevertheless, political attacks



U.S. Forest Service

Earle H. Clapp was acting chief of the Forest Service from 1939 to 1943. He fought for public regulation of the forest industries and struggled to keep his agency from being transferred to the Department of the Interior.

threatened the Forest Service once again. This time the agitation came from western members of Congress—Pat McCarran of Nevada, Frank Barrett of Wyoming, Wesley D'Ewart of Montana, and others—who planned to destroy the Grazing Service of the Department of the Interior, to remove grazing lands within the national forests from the jurisdiction of the Forest Service, and eventually to turn national forest land over to the states. The movement was exposed by a group of writers—Bernard De Voto, Arthur Carhart, and Wallace Stegner were the most prominent—who published the plan and mobilized public opinion against it. When some of these members of Congress lost in the Democratic victory of 1948, the threat was removed for a time.

These were crucial and exciting years for the Forest Service. Under two capable chiefs, it carried out great tasks, both foreign and domestic. Abroad, the



U.S. Forest Service

Lyle F. Watts, chief from 1943 to 1952, was the last in a series of chiefs to advocate federal regulation of cutting practices.

Forest Service began to play a role of world leadership in forestry and conservation. Men like Tom Gill, Hugh M. Curran, and Walter Lowdermilk contributed to this giant task. In the United States the Forest Service experienced a period of transition from a policy of extensive management to one of intensive management.¹

In Alaska there was a transition from the old order to the new. Alaska became directly involved in the production of lumber for the war effort and even more directly involved in the revival of Japan as an industrial nation. New problems arose in regard to Indian rights, recreation, and wilderness. The rising aspirations of Alaska for statehood created a series of new interagency problems and relationships.

The new regional forester, B. Frank Heintzleman, was an interesting and complex individual. A builder and dreamer, his major interest was to recruit capital and big industry for Alaska, for without capital the region could not develop. Much of his time was spent in the states attempting to interest outside capital to invest in lumbering and power development. A political conservative, he was liked and trusted by the business community. From a purely technical standpoint, he was not an outstanding administrator. He was hard on the men, expecting a full day's work and more for each workday. He was slow to give raises in pay and reluctant to give transfers. Soft-spoken and modest in manners, he liked to deal with men in individual meetings rather than in group conferences. As the Russell report indicates, however, he fought like a lion for his fellow workers in the face of unjustified criticism. He was a visionary, anxious to move ahead and impatient of details in planning. In his 1939 inspection report, Silcox wrote of him: "My impression is that love of Alaska and determination to help solve its problems are perhaps his strongest motivating forces. It is also my distinct impression that he does a good administrative job."²

Heintzleman was not a politician and was at times indiscreet in written communications. One example may be cited. In May 1939 he wrote a letter to Secretary Harold Ickes, writing directly rather than clearing the letter through the chief forester. In it he suggested the need to coordinate action by the various federal agencies in Alaska; he recommended a coordinator, or "Resident Federal Secretary for Alaska," to be appointed by the president. His duties would be to act as a clearinghouse through which the federal bureaus in Alaska could deal with Alaskan matters and report directly to the executive office. He also recommended a Committee of Alaska, made up of cabinet members with the secretary of the interior as chairman. Ickes was at this time deeply committed to transferring the Forest Service to the Interior Department, and the Washington Office of the Service did not receive the suggestion with good grace. Christopher Granger wrote to Silcox:

It seems to me Frank let loose all holds in his letter to Secretary Ickes on coordination. Frank's love for Alaska and his intense interest in its welfare leads him to get out of focus on Alaska's importance and its problems.

Ickes and Granger felt that a planning council, with periodic meetings of bureau heads, would accomplish the same thing.³

Heintzleman was highly involved in the cultural and community life of Alaska. He was active in the work of the Presbyterian Church and of the Masonic Order. His interest in the totem pole project has already been pointed out. He was a patron of the Juneau Public Library, buying many books for it and instituting a loan system through which books could be taken by Forest Service boats to isolated settlements. He was instrumental in securing the books and manuscripts of Judge Wickersham for the Alaska Historical Library and Museum. A lifetime bachelor, Heintzleman was a dapper dresser and something of a *bon vivant*, besides being a collector of Alaskan books and artifacts.



U.S. Forest Service

Regional Forester B. Frank Heintzleman

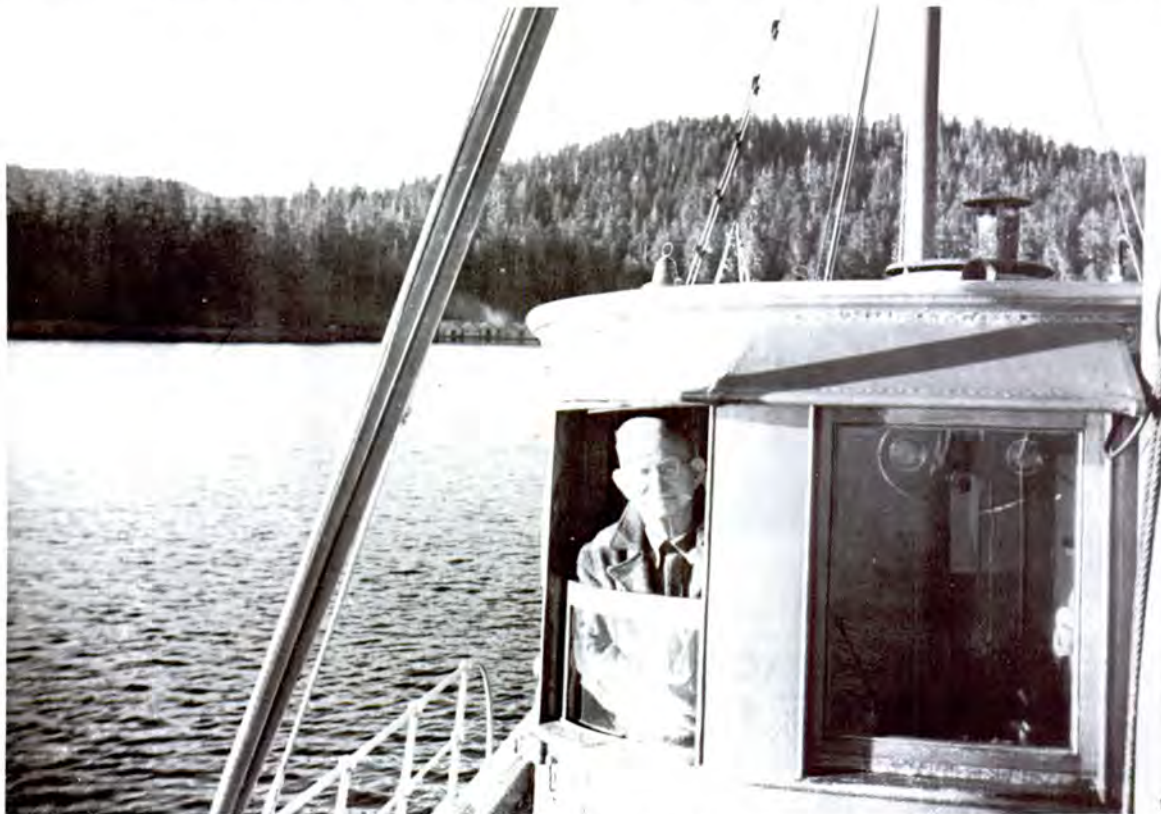
Alaska Spruce Log Program

World War II brought many changes to the Forest Service in Alaska. A large number of the staff were called to the armed services. Forest Service men cooperated with the military by reporting suspicious boats or planes or submarines. Army installations brought about an increase in wood production. At Yakutat a large airstrip was constructed, and the building of the base there increased timber sales from the national forests. With the building of a military base on Kodiak Island, a nearby source of timber was needed, and for the first time Afognak Island was used as a source for lumber.⁴

Probably most important of all, however, was the Alaska Spruce Log Program. One of the planes used by the British in raids over Germany during the early years of the war was the Mosquito bomber, a medium bomber made of plywood. It carried little armament but used speed and maneuverability for defense against flak and fighters. Spruce for these planes were logged on the Queen Charlotte Islands of British Columbia, just south of the Alaska Panhandle. As the war

went on, however, demand exceeded supply and the War Production Board sent a request to the Forest Service for more spruce. The accessible supplies of airplane-quality Sitka spruce in Washington and Oregon had become depleted during World War I. James Girard, a Forest Service man who was an authority on spruce grading, went to Alaska to look for spruce stands. He reported that the Alaska forests contained enough spruce of high quality for a large-scale operation. Heintzleman asked the advice of Edward H. Stamm, logging manager of Crown Zellerbach, about the feasibility of the operation. He replied favorably, recommending that, rather than having the Army run the show as it had in the World War I spruce program, experienced loggers should get out the logs and sell them to mills specializing in spruce sawing and the production of airplane lumber.

The Alaska Spruce Log Program (ASLP) was set up as an agency on June 4, 1942; it was administered by the Forest Service and financed by the Commodity



James W. Girard, a cruising genius of limited education, visited Alaska in 1942 and reported that its Sitka spruce stands would support a vital wartime program for airplane lumber. The Alaska Spruce Log Program resulted.



U.S. Forest Service

Falling a giant spruce, 1941.

Credit Corporation. Its immediate objective was to produce 100 million feet of airplane lumber per year. Heintzleman headed the operation as regional forester, and Charles G. Burdick acted as general manager. William B. Ihlanfeldt was put in charge of the Seattle office as an assistant general manager. J. M. Wyckoff was made assistant manager in Alaska; C. M. Archbold, division supervisor, was put in charge of cruising; and R. A. Zeller, a former supervisor of the Tongass, acted as chief cruiser. The Forest Service kept four three-man parties in the field and, using *Wanigan 12* as headquarters, cruised timber and located logging chances. Ray Kidd and Clarence Cotterell were scalers.

The Seattle office was set up in the Joseph Vance Building. It furnished supplies of all kinds. Fred Brundage made timber sales to the mill men. Recruiting was done through the War Manpower Commission. Equipment was supplied by the ASLP and purchases expedited through a central purchasing office.

Field headquarters were set up at Edna Bay on Kosciusko Island, to the west of Prince of Wales Island. The Nettleton Logging Company brought in prefabricated wooden dwellings and laid out a two-mile truck road system—Spruce Street, Hemlock Street, and Alaska Way.

Burdick called on gypo loggers (small, independent contractors) in the Northwest, and they began moving to Alaska by the winter of 1942. Ed Buol, the first, brought with him six, 110-by-40-foot scows loaded with goods and machinery. These included two rock crushers, five 10-ton logging donkeys, six diesel donkeys, a village of prefabricated buildings, fifteen miles of steel cables, and fifty tons of food.



U.S. Forest Service

Log pond at Coning Inlet sale, Long Island, August 1945.



Davis raft of high grade spruce logs nearly completed, 1944.

U.S. Forest Service



J. M. Wyckoff photographed the *Roamer* taking Camp 9 in tow during the Alaska Spruce Log Program in 1942.

U.S. Forest Service

For this operation, the Forest Service contracted for logging, towing, and rafting. The operator got the logs to tidewater and towed them in flat rafts to Edna Bay, where they were made into Davis rafts 250 feet long, 60 feet wide, and 30 feet deep, each raft containing nearly a million feet of timber. (A Davis raft is an ocean-going log raft, more or less square in cross-section, not tapered like the Benson raft.) The rafts were towed by tug to the Puget Sound mills, hundreds of miles to the south.

At first the operation was planned for selective logging, high-grading only the better spruce that was suitable for airplane stock. However, Archbold recommended that the hemlock and lower-grade spruce be taken as well and shipped to local mills for use in defense construction in Alaska.

Nine camps were established, four of them A-frame operations and the others truck or tractor and arch. Four were floating camps with bunkhouses, cookshacks, and washrooms. The others were built on shore. One was on the site of the old Indian village of Tuxekan, with totem poles and the chief's grave in the settlement. Buildings were prefabricated, insulated with Celotex, and set on stilts to keep them off the wet ground. Coal was used for fuel so that time would not be wasted in cutting wood.

In the camps, a horn awakened the loggers at 6 A.M. and the gut hammer sounded at 6:15. By 7, loggers were

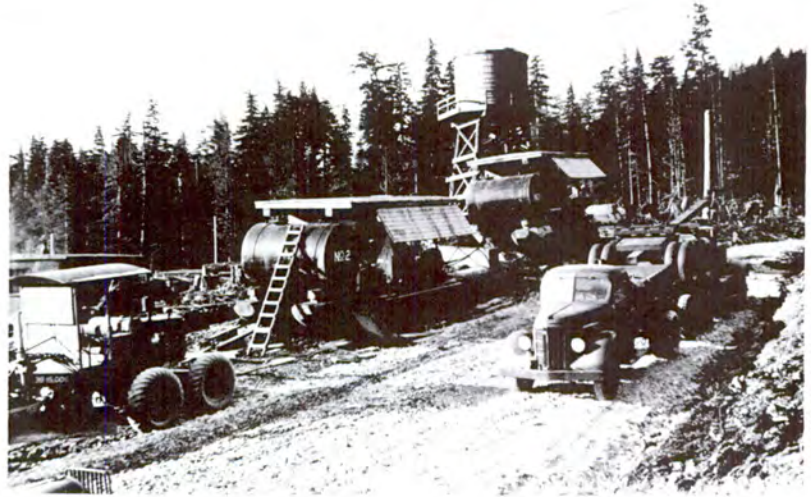
on their way by truck to the woods. Falling was done by power saw, usually on the hourly basis. Logs were yarded and loaded by donkey engine. At the A-frame operations, logs were brought in as far as 1,000 feet from a spar tree to the A-frame mounted on its raft.

At Edna Bay large headquarters were set up for the operation. These included houses for Forest Service personnel and for loggers and their families, a two-bed hospital, a machine shop, and a radio-telephone link. At least 250 people lived in the village.

A fleet was assembled for the Edna Bay operation. The Forest Service vessels, *Forester* and *Ranger 7*, were used for administrative purposes. The *Relief* and *Beaver* were used as boom boats and the *Pearl Harbor* as an oil boat. For towing the flat rafts to the point where the Davis rafts were assembled, the *Elsinore* and *Salmon Bay* were used. For the Seattle run, the *Gloria West* and the *Roamer*, boats rented by the Forest Service, were put into duty. The Forest Service also chartered planes for inspections and for travel to Juneau or Ketchikan.

In March 1943 the first Davis raft loaded with airplane spruce reached Anacortes, Washington, towed in by the tug *Sandra Foss*. It contained more than 900,000 board feet of logs, including about 50,000 feet of western hemlock for experimental purposes. The logs averaged thirty-four feet in length and three feet in diameter at the small end, scaling about 2,000 board feet each. Around 38 percent of it was of top grade.

Preparing donkeys for loading on logging trucks, 1943.



U.S. Forest Service

(below) J. M. Wyckoff photographed a crib raft of high-grade Sitka spruce embarked from Annette Island to Puget Sound in 1943.



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For Angela C. Janszen, a young Forest Service statistical clerk, this was a period of high adventure. She had transferred from Washington, D.C., to the Seattle office of the spruce program and then, at Burdick's request, took a job as accountant and clerk at Edna Bay. She was initially the only woman on the Forest Service payroll there. Angela went to Edna Bay toward the end of March 1943 and lived in a twelve-by-twenty-four-foot prefabricated house consisting of living room, kitchen, and bath. Hers was one of the few bathrooms in camp, so it was frequently used by guests. She ate at the mess hall with the loggers and Forest Service staff. Her work was varied; in addition to clerical work, she helped out in the hospital and made a good photographic record of the operation.

Angela's "Sprucelogue"—letters home to her family—gives a singularly fresh and vivid account of the work, through the eyes of discovery. She learned the technical vocabulary of the loggers and what they meant by a *schoolmarm*, *widow-maker*, *flunkey*, *cold deck*, *corks*, *A-frame operation*, *spar tree*, and *wanigan*. She acquired a skiff and rowed around the area. She accompanied the brass when they arrived on official trips to the camps, took the loggers' children for walks, or went into the woods to watch the topping of a spar tree. There was a lively social life at Edna Bay, with poker a favorite pastime and dancing to music from an old nickelodeon. High points were the arrival of the mail boat with letters and packages from Sears or "Monkey Wards," the occasional visits of Father Matthew E. Hoch on the Coast Guard boat to celebrate mass, the unloading of barges carrying machinery, and rafts taking off for the south. Occasionally, she was able to take a flight in to Ketchikan where she visited Ward Lake, then an evacuation center for the Aleuts. Angela took an active part in the jokes and horseplay that mark any Forest Service community. She and others who ate at Table 5 in the mess hall formed the Order of Poland China. Here is one of their typical verses:

EDNA BAY

(Written by the cook after one of the loggers on the Alaska Spruce Log Program complained about burned bacon.)

Oh! The dark clouds frown
 And the clouds swoop down
 On the shores of Edna Bay,
 While the Bull Cook's song
 Rings loud and strong
 In the wild Scottish way.

If the loggers howl,
 And the loggers scowl
 For each my heart is achin';
 But who in hell
 Would dare to tell
 Who burned the breakfast bacon.

If the boss gets drunk
 With the Whistle Punk
 And the Buckers hold a meeting
 Who gives a rap
 For Wop or Jap
 If we can have good eating.

We are sick of fish
 For a Friday dish
 And hot cakes in the morning.
 Grouch on! Good Friend!
 The bitter end
 May come without warning.

It was, for Angela and the others who took part in the enterprise, a period of high purpose and high adventure.

By February 1944 the program began to come to an end. The War Production Board said that metal would take the place of spruce planes and that the cutting was to cease on March 15. The last rafts of logs were shipped out to Puget Sound or towed away by tug to the local mills, and the camps began to close down. By August 1944 Edna Bay, which formerly had a population of 250, was a ghost town, down to 15 men and 1 girl. Equipment was sold off—cats, miles of cable, donkeys, floating camps, buildings, mess halls, and the like. By October 1944 the operation was closed. In about a year and a half of existence, 38.5 million board feet of high-grade spruce was sent to the states, and 46 million board feet of grade 3 spruce and hemlock went to local mills. Heintzleman, meanwhile, once the operation was finished, renewed his search for investors in pulp production.⁵

Possessory Rights

During Heintzleman's term of office, his ambition to establish a pulp industry in Alaska was badly complicated by the question of Native claims and possessory rights. This issue had come up during the administrations of Langille and Weigle. By Flory's administration, it became a major concern. The story is complicated, involving as it does legal questions, administrative policies, ethnic aspirations, and personal ambitions. It involved relationships of the Forest Service with the Alaska Native Brotherhood (ANB), Alaska Native Sisterhood (ANS), and the changes that took place within these organizations.

Theodore Roosevelt had been interested in the status of the Native Americans in Alaska and asked Lieutenant George Thornton Emmons to make a report. Emmons did so, stating that the Indians in southeastern Alaska were a relatively advanced class of people, capable of self-support and mainly needing supervision, education, and moral support. They worked in mills, mines, and lumber camps and were able to bridge the gap between civilization and tribal life. They needed, however, technical education, hospitals and dispensaries, and legal status to acquire land and practice professions. Roosevelt echoed these recommendations in his State of the Union message in 1904.⁶

Several land laws were passed with application to Indian rights. Indians were entitled to take up land under the Forest Homestead Act of June 11, 1906. In addition, an act of May 7, 1906, permitted the secretary of the interior to make allotments of up to 160 acres to Indian family heads. No money was appropriated, however, to carry on the survey work. Secretary of the Interior James R. Garfield urged its implementation in 1908, and Richard A. Ballinger, in 1911, secured a new bill repeating the principles of the old and setting up machinery for acquiring land through the General Land Office. In 1915 some Land Office surveys were made for this purpose in the Tongass National Forest, and Land Office officials worked out arrangements with the Forest Service to avoid conflicts with the surveys made under the Forest Homestead Act.⁷

The Forest Service men concerned with Indian claims developed common-sense practices. Native villages were surveyed and roads built under both revenue-sharing statutes and special appropriations. Indian claims of prior occupancy and consequent title were based on physical evidence, such as garden spots, graves, fish houses, and smokehouses. Such occupancy did not need to be continuous. Areas occupied by Indians prior to creation of the Tongass National Forest, and then abandoned, could be reopened for entry if the Indian allotment were valid. If a tract had no

history of prior use, it could be opened for settlement under the Forest Homestead Act.⁸

During the 1920s there was a great deal of classification but little real difficulty in regard to Indian land claims. Two crises did arise. One, relating to the J. T. Jones claim to a pulp mill site, has already been described. Another related to a fox-farming project on the west side of Prince of Wales Island.

In 1921 a petition reached District Forester Flory, signed by 180 people in the Anguilla Island area. They protested the leasing by the Forest Service of the island for fox farming, alleging that they had used it as a campsite and garden spot. Flory called for a field investigation. Meanwhile, H. H. Butler, vice-president of the Anguilla Island Fur Company, protested the trespass of individuals on the island. He stated that the leasee could not physically prevent people from landing but that he had a right to have his fur farming free from interference. The Forest Service suggested that he post trespass notices. At the same time, E. W. Nelson, chief of the Biological Survey, informed Chief Greeley that he was having similar reports from islands leased by his agency.

In a long letter to Greeley, Flory outlined the problem. Alaska, he reported, was overrun by a "thieving class of whites and natives who seem to make their living by robbing fish traps, slaughtering game for sale, bootlegging, robbing launches, poaching on fox farms and similar acts of depredation." Flory felt that the problem was one for the Justice Department. The Forest Service could give aid but already had too many demands on its boats. The governor, attorney general, and U.S. marshal, he complained, insisted on the right to use Forest Service boats for bringing to justice people accused of civil offenses. Flory recommended that the fox farms keep armed guards on duty, as did fish-trap owners, and that the fur raisers organize for mutual protection. J. M. Wyckoff made a field examination and recommended that the leases be cancelled. The San Lorenzo group of islands, of which Anguilla was one, was, Wyckoff reported, an Indian fishing site with 2,000 seasonal campers and 20 buildings. It was the only safe anchorage in the vicinity. Merritt, meanwhile, suggested that the fur company fence off Indian garden sites on the island. The lease was canceled on the basis of prior Indian use.⁹

By the 1920s some Natives were playing parts in territorial politics, electing one of their own to the territorial legislature. The Alaska Native Brotherhood acted as a pressure group to insure civil and political rights for Indians. Territorial Delegate Anthony Dimond, who served from 1933 to 1944, was particularly



U.S. Forest Service

A. W. Blackerby photographed Steve Vlacoff, lay priest, in front of the Greek Orthodox Aleut Church at Chenega, Chugach National Forest, 1946.

interested in Indian affairs. The Wheeler-Howard Act of 1934 and supplementary legislation in 1938 gave to the secretary of the interior the right to set up reservations and to enlarge existing ones but forbade ownership in severalty. The creation of a reservation, however, had to be endorsed in a special election by 30 percent of the Indian residents thereon.

In southeastern Alaska local reservations were used largely for school purposes. Native villages were governed by tribal councils, and self-government, rather than wardship, was their goal. During the 1940s, however, a new concept of Native rights was adopted by the Department of the Interior. This was an interpretation of possessory rights giving to the Indians lands or waters on which their ancestors had hunted or fished; these would include virtually all of southeastern Alaska. Ickes appointed R. H. Hanna, a former judge of the Supreme Court of New Mexico, to hear the testimony on native possessory rights, especially in regard to Kake, Klawock, and Hydaburg. Hanna's report did not support the departmental views, but Ickes reversed Hanna and in a July 1945 ruling declared that the public domain was both land and water and that submerged lands were available for Native possession. He asked that land to the extent of 176,000 acres be reserved for three villages. Decision on an additional 2 million acres was postponed. Ickes further affirmed the rights of the Indians to sue under the Haida-Tlingit Jurisdictional Act of 1935, which entitled Indians to sue in the court of claims for any claims they might have against the United States.¹⁰

The judgments of the Department of the Interior were alarming to the Forest Service. If Ickes's views were realized, the whole timber industry in southeastern Alaska would be jeopardized. Pulp companies would be discouraged from making investments, since

the right of the Forest Service to make timber sales would be in doubt. Heintzleman expounded his views in a letter to Harold Lutz. The effort to give Indians title to southeastern Alaska, he wrote, was "under the theory that they are the owners of all the lands and resources through their heredity of aboriginal rights and that these rights have never been extinguished by the federal government." Heintzleman blamed the Department of the Interior for the matter, particularly Secretary Ickes. "With the assistance of the Interior Department, and on the basis of some legal opinion given by the Secretary of the Interior by the Solicitor's office of that department," he wrote, "each village, as S. E. Alaska has never had a tribal organization, has made application for hundreds of thousands of acres of land and tidewater fishing areas that blanket all the fishing sites and large areas of trolling grounds." He went on to summarize the existing laws under which the Indians could acquire land. He concluded, "The thought is often expressed by private citizens that the move to set up vast Indian reservations in S. E. Alaska is based, in large part, on a desire to eliminate the National Forests in Alaska."¹¹

In order to permit timber sales without danger of the sales being terminated because of clouded title, a Tongass timber bill was introduced into Congress. It provided that the secretary of agriculture might make contracts for timber sales but that receipts from the sales be put in a special fund to remain untouched until the issue of Native claims was settled. Senator Warren Magnuson of Washington and Delegate E. L. Bartlett of Alaska played a major part in developing the bill. The draft bill was agreed on by the departments concerned—Agriculture, Justice, Interior, and the Bureau of Indian Affairs. The Tongass Timber Act was finally passed on July 27, 1947.¹²

Pulp Mills at Last

During Heintzleman's administration the timber cut increased from 43 million board feet in 1936 to 60 million in 1950. Heintzleman continued his search for pulp investors, and his efforts were finally successful. American Viscose Corporation, the largest manufacturer of rayon in the United States, became interested in the possibilities and formed a combination with a Bellingham firm, Puget Sound Pulp and Timber, to form the Ketchikan Pulp Company and to set up an operation at Ward Cove. There were numerous obstacles to circumvent. The site of the mill was the former location of a real estate speculation called Wacker City, after its founder Eugene Wacker. When in need of money, Wacker had sold lots, sometimes selling and reselling the same lots numerous times and letting each purchaser

think he had clear title. Local attorneys were retained by the company, titles were finally cleared up, and options on the land obtained. A preliminary award was made on August 2, 1948, and the final contract was signed on July 26, 1951. The mill agreed to purchase 1.5 billion cubic feet of timber on a fifty-year contract, which called for 85 cents per cubic foot for wood cut for the manufacture of pulp prior to July 1, 1962, and for review by the Forest Service every five years. The company also agreed to pay \$3 per thousand board feet for spruce, \$1.50 for cedar, and \$2 for other species.¹³

Water pollution was a major concern for the Forest Service, and intensive studies of this problem were made on each of the sites examined for possible pulp mills—Sitka, Ketchikan, and Wrangell. These studies

were carried on from 1948 to 1956. Heintzleman worked closely with the Alaska Water Pollution Board. Edward G. Locke, a chemical engineer from the Pacific Northwest Forest and Range Experiment Station, and Gardner H. Chidester, chief developer of pulp and paper for the Forest Products Laboratory, gave him advice. Raymond Taylor of the Alaska Forest Research Center and officials of the Fish and Wildlife Service were consulted about the possible effect of logging on the salmon streams. Locke and Chidester reported that if a magnesium-base process were used at Ketchikan, there would be no damage. But they recommended that the effluent pipeline extend into the Tongass Narrows. They saw little possibility of ecological damage at Wrangell and felt that the projected site in Sitka was a good one. The question of water pollution was also raised by Samuel Ordway of the Conservation Foundation; he called on C. M. Granger for information and later wrote to Heintzleman about the matter. Heintzleman told of his conference with the Alaska Water Pollution Board, and Ordway was apparently satisfied.¹⁴

The first pulp mill was the fruition of long-standing dreams. These included the early suggestions of Bernhard E. Fernow, made after his first trip to Alaska on the Harriman expedition; the recommendations of William A. Langille after his long and lonely trips through the archipelago; the studies made by William Weigle; the arduous work of George Drake and Roy Barto, who set up stream-gauging stations; the timber estimates of Kan Smith; the aerial mapping of the Navy; and above all, the efforts of B. Frank Heintzleman. They included frustrations, such as the failure of the Speel River plant. The mill was a major triumph for Ketchikan. But Heintzleman's administration saw new developments in timber and pulp production that arose from immediate political, trade, and economic conditions.

As a result of World War II, Japan lost a major part of the timber resources (namely, Manchuria and Sakhalin) on which she had relied for domestic use and manufacturing. The postwar military government in Japan set up a system of forestry within the country, but the amount of available timber was insufficient. Japanese interests first turned to the Philippines as a source of round logs, but the Philippine government curbed export in order to develop its own industrial forestry. In 1951 Japanese groups approached the Forest Service for sales in Alaska. Their suggestion was that the Japanese furnish the labor and build the logging facilities. The Forest Service refused on the grounds that it wanted to use Alaskan timber locally. The next year, on February 22, a formal petition was made to the supreme commander of the allied powers, asking again for softwood timber from Alaska to be harvested by Japanese workers. It was pointed out that

the timber deficit for home industry amounted to 3 billion board feet, plus 400 million cubic feet of timber needed for fuel. The plea was considered by the Defense, Interior, Agriculture, Labor, and State departments, but it was turned down on a variety of grounds.

In October 1952 a Japanese mission came to the United States to investigate the possibilities of a mill to export sawed timber and of a pulp mill in Alaska. They were told that the enterprise must meet specified conditions. It would have to fit into national and regional Forest Service timber-sale policy and meet sustained-yield standards. It would have to aid in the economic development of the territory, which meant compliance with the primary processing requirement. The enterprise would also have to be an American corporation and get the timber required by competitive bidding.

By 1953 the Japanese were ready to act. They sent a team of technical experts to the United States to examine alternative mill sites. The Japanese were well received in southeastern Alaska and were given highly favorable publicity in the press. They particularly liked Sitka because it had a good location at Sawmill Creek, a power site, and a climate and atmosphere attractive to the Japanese. They were astonished at the waste in American wood processing and asked if the waste could be baled and shipped instead of being discarded. Public sentiment in Alaska grew in favor of the venture; Charles Burdick made talks before the Chamber of Commerce in Juneau and O. F. Benecke, president of the chamber, was one of its strongest supporters. He performed yeoman service by writing to other chambers of commerce in Alaska, informing them of the project and giving reassurance. Only from the Pacific Northwest came objections. Representative Walter Norblad of Oregon protested the project. In a public letter to Secretary of State John Foster Dulles, he characterized the affair as "improper," and "an outgrowth of a secret agreement FDR had made at Yalta" to give the Russians Sakhalin Island. Development of such a mill, he said, would hurt the Oregon economy, since Oregon mills needed the Japanese market. However, the Alaskan press backed the project, and the territorial Senate supported it by resolution.

In September 1953 the contract was finally made. A Japanese company, Toshitsugu Matusi, formed the Alaska Pulp Development Company, incorporated in the United States and financed in part by a loan from the Export-Import Bank. The plan called for building a large sawmill and a pulp mill at Sitka. Meanwhile, by the end of 1953, wood scraps were being compressed and shipped to Japan. By 1959 the Alaska Lumber and Pulp Company was in operation.¹⁵

Research

Forest research in Alaska got under way during this period. In 1928, at the time Crown Zellerbach was considering pulp production in Alaska, Congress passed an authorization for a research center in Alaska. No funds were appropriated, however. In 1948, when prospects were bright for a pulp mill, Congress appropriated \$50,000 to be used for research in Alaska. The Forest Service decided to set up the Alaska Forest Research Center, and Raymond F. Taylor won the job of director.

As noted in the previous chapter, Taylor had first arrived in Alaska in 1925. Working as a scaler, he began research on defect analysis and extended the research interest, shared with Jim Walley, to growth and yield studies on Admiralty and Prince of Wales islands. These early years of forestry work enabled him to travel widely over southeastern Alaska. He wrote several articles for forestry journals and published a pocket-book of Alaska trees. After holding research positions at several forest experiment stations and in the Washington Office, Taylor returned to Juneau in 1948 to take up the job of director of the new research center in the regional office.

An early problem was to keep the research center under the Branch of Research. There were several who wanted the regional forester to be in charge—among them B. Frank Heintzleman. Upon arrival, Taylor discovered that Frank had just found out that Ray Taylor's nearest boss was to be in Washington, D.C. This may have caused the sudden unavailability of a ranger boat that had been promised for research use. One of the older boats, however, the *Ranger 7*, was provided for the cost of running and maintaining it. After a brief interval to store equipment and files in a corner of the sign shop, and to find living quarters for the family, Taylor started fieldwork.

No new boats had been built during the fourteen years Taylor had been away, so he knew the *Ranger 7* well. It was the first diesel boat built for the Alaska Region. A skipper-cook was hired, and Richard M. Godman was transferred to Alaska from the Massabesic Experimental Forest in Maine. In October, Betty Corey, a secretary in the Division of Forest Management in Washington, D.C., transferred to the research center. By then, two rooms in the "crewhouse" at the sub-port, a part of the Admiralty Division set of buildings, was loaned to the research center. The U.S. Geological Survey shared the quarters. These frame buildings were on a gravel fill, formerly part of the tide flats. The CCC had laid the sewer lines level; when the spring and fall tides came, the toilets backed up. During the war, the National Guard had occupied these buildings. Whether

'crewhouse' refers to them or to CCC groups is unknown.

As the Alaska Forest Research Center grew, it gradually took over the whole crewhouse and then moved to a leased office uptown. Soon after Taylor's retirement in 1959, the new Federal Office Building was constructed, and all Forest Service agencies moved into it. The name was changed to Northern Forest Experiment Station, and the forester-in-charge became a director. Later still, the station was taken over by the Pacific Northwest Forest and Range Experiment Station in Portland and renamed the Institute of Northern Forestry.

According to Taylor, research organizations are most productive when they have small staffs, simple quarters, and are hard up for money. When expansion comes, overhead grows and the "idea-men" are promoted to an overheated office with good-looking secretaries and have no time for fieldwork.

The first job was to bring old work up to date. Old sample plots, transects, and reproduction study areas were revisited. At Traitors Cove reproduction plots established on land clearcut in 1924 were remeasured. Rod-square plots that had hundreds of two-inch tall seedlings in 1926 now had one or two trees, but they were ten to twelve inches in diameter. The yield tables on which the cutting rotations were to be based were checked by actual growth on the plots over a twenty-year period, and the tables were found to be fairly accurate. Areas clearcut in the early 1920s were almost impenetrable stands of second-growth, with trees six inches to a foot in diameter.

During the next few years, the Maybeso Experimental Forest was established at Hollis, where the first pulp timber cutting was to start. Here studies of regeneration before and after cutting of a large area were begun. Regional Forester Heintzleman wanted an answer to one question as soon as possible: would clear-cutting on watersheds of salmon streams ruin these streams for spawning? There were many who were certain that this would be the result of any logging near such streams. The Hollis area had three salmon streams—Maybeso Creek, Indian Creek, and Harris River. A study was set up with the cooperation of the Water Division of the U.S. Geological Survey, the Fish and Wildlife Service, and the Fisheries Research Institute of the University of Washington. After five or six years, it was apparent that the salmon were still spawning in as great numbers as ever, although the usual variations due to unknown causes occurred. At the conclusion of logging in these large watersheds, a yes or no answer should have been broadcasted, but by

then there were many detailed minor studies—siltation, egg hatch, etc.—and the main theme seemed to have been forgotten. It could be that caution prevailed until the last site-study was concluded, and these have a way of expanding into smaller and smaller fields.

In the first years the men of the research center constructed their own wanigan on a small scow loaned to them by the Southern Division. Materials were scrounged, and the plumbing and electrical work was done by the technical foresters, boat skipper, and summer helpers—ingenious men who made a little money go a long way. Larry Zach, formerly a division supervisor, ramrodded these jobs. Stream-gauge houses and cable cars for measuring flow were built by putting in long days.

After the *Ranger 7* become worn out from long service, a twenty-six-foot "speedboat" was bought, but its twin engines could not force it against a light wind. It rode like a duck. This was sold and money was finally obtained to build a good work boat, the *Maybeso*. It was the size of the *Ranger* boats, built for hauling materials, towing, and living. Harold Andersen, formerly division supervisor at Petersburg and with long Alaska experience, designed it, supervised its construction, and ran it up from Seattle when it was ready.

The research center was not expected to do work in Alaska's interior, but some research on the effects of fire, which burned at least a million acres per year, seemed necessary. A field analysis was made by Taylor and R.R. Robinson of the Forestry Division of the Bureau of Land Management. Professor Harold Lutz of Yale, who had made a study of this nature in southern New Jersey, was employed for summer work. The study ran four seasons with the cooperation of the Bureau of Land Management's Fire Division.

Results of research were published as articles in technical journals, station notes and papers, and in annual reports. The report for 1955 described work on the Forest Survey, which eventually covered all of Alaska's forestland; a black-headed budworm survey and study of the hemlock sawfly; silvicultural studies of seed dispersal, seedbed types, and soil temperatures in relation to seedling growth; and miscellaneous work on long-log scaling, fire weather, and chemical brush control.¹⁶



Forest History Society

(above) The Forest Service has studied the effects of logging on salmon streams for many decades. This stream gauge on the Old Tom Creek Natural Area (part of the Society of American Foresters' system), here photographed in 1950, has been in operation since about 1940.



Forest History Society

(left) A fish-counting wier at Old Tom Creek Natural Area, August 1951. A gate in the wier is raised to allow adult salmon to pass upstream; fry that pass downstream are counted in order to determine survival rates. Research here has been conducted since about 1940.

Administration, Lands, and Amenity Values

As an administrator, Heintzleman clung to the old ways of keeping the division system and a relatively small staff. The old familiar officers—C. M. Archbold (who played an important part in helping to develop the pulp mill sales), Alva Blackerby, Charles Burdick, Spencer Israelson, and Ralph Ohman—were the mainstays of the staff. Some retired—J. P. Williams, who had been a tower of strength in the organization, both in timber cruising and in wildlife management, and E. M. Jacobsen, who served long in the Chugach as ranger and boat skipper. His district suffered from the usual chronic lack of funds, especially needed in recreational planning. The boats were growing old, and planes were not always available. In the period between 1934 and 1948, not a single new boat was added to the Forest Service fleet.

In 1931 the regional office in Juneau was moved from the Goldstein Building to the Federal and Territorial Building. In addition, more land was acquired for a warehouse site at Juneau, on the tidelands. In 1921 the Forest Service had acquired some property from the Alaska Road Commission and had built a wharf, which was used not only by the Forest Service but also by the Coast Guard and other boats. CCC labor was used to raze the old buildings and to build a rock fill, construct a garage, and a warehouse. These were loaned to the Army in 1942 but came back to Forest Service ownership in 1946.¹⁷

A variety of problems relating to lands arose during the Heintzleman administration. One has already been dealt with, that of possessory rights and Indian reservations. In addition, a series of bills was introduced in Congress, usually sponsored by Representative William Lemke of North Dakota and designed to give war veterans homesteads in the national forests. Title would be granted on seven-month habitation and the building of an eight- by-ten-foot cabin. They were similar to other bills introduced in the period after World War I. None of them passed.¹⁸

A major change came in 1941 with the establishment of the Kenai Moose Range. The proposal had been initiated by W. A. Langille in his 1904 report on the Kenai. The attempted agricultural boom of Andrew Christensen at Anchorage, however, stopped this movement and helped force the Forest Service to relinquish a great share of the area. But agriculture did not thrive there. Ira Gabrielson, as head of the Fish and Wildlife Service (successor to the Bureau of Fisheries and the Biological Survey), pressed for creation of a game refuge in the area and was successful in getting it by 1941. There was close collaboration with the Forest

Service in the Kenai, as well as with the Alaska Game Commission, in regard to fire control study of the moose habitats, regulation of hunting, and apprehension of poachers.¹⁹

Fire remained a continuing problem in the Kenai. The Alaska Railroad by this time had become more cooperative than in the past. Right-of-way burning was controlled, and section gangs were given suppression and presuppression training. However, the main problem was the coal-burning locomotives. The locomotives were old and decrepit; they had barely enough power to get over the summit under the best of circumstances and could not do so with spark arresters. There was no diesel equipment; the railroad officials stated that the roadbed was not heavily enough ballasted to carry the heavier equipment.

Another problem in the Kenai, one that grew with the war, was that of mining claims. The government had declared a moratorium on assessment work on claims for the duration of the war, and the moratorium was extended. Consequently, fraudulent or dubious mining claims flourished, not only in Alaska but also in the states. Those in Alaska were commonly located on the Kenai River and served as fishing cottages or summer homes for the claimants. They were also used for commercial purposes. Afognak Island was used increasingly as a recreation center for Army personnel during this time. The buildings of the Afognak salmon hatchery were utilized by the Army as fishing or hunting camps for the troops stationed at Kodiak.²⁰

Some eliminations were made from the Alaskan national forests during this period, mostly at the recommendation of the secretary of agriculture or for transfer to the Bureau of Land Management. In the Tongass these included areas for suburban development, highways, small homesites, public services, and the like—places where national forest values were outweighed by settlement values. Such areas were recommended for elimination by the secretary of agriculture in June of 1950 and eliminated on January 25, 1952. The amount eliminated from the Tongass amounted to 29,000 acres, mostly on the outskirts of Juneau, along the Glacier Highway, and near Ketchikan, Craig, Petersburg, Wrangell, and Sitka. At the same time 76,000 acres were eliminated from the Chugach. These included areas along the railroad, on the highway, and on the north side of Turnagain Arm, for disposal under public land laws and the Small Tracts Act.²¹

There were a few sporadic revivals of the Admiralty Island affair. Writer John M. Holzworth did not



U.S. Forest Service

A homestead along the Unuk River on the Tongass National Forest, 1941.

give up his struggles to make the island a bear sanctuary. The issue came up from time to time between 1944 and 1947, but the reports of Victor Cahalane, Joseph Dixon, and Frank Been of the Park Service were instrumental in preventing any real new flurry of interest in the matter. During Heintzleman's administration, other national parks were also considered by the Forest Service and the National Park Service. Newton Drury, director of the Park Service, gave some consideration to creation of a national park in an area south of Juneau involving Tracy Arm, Endicott Arm, and Fords Terror. At Governor Gruening's suggestion, studies were also made of the areas around Mount St. Elias and in the Aleutian Islands.²²

Still other areas were considered for special treatment. The Skagway Chamber of Commerce suggested that a tract in its vicinity be added to the national forest, primarily for recreational values. The area was rich in history from the gold rush days of 1898, when the two main trails to the interior started from Skagway and Dyea. Wellman Holbrook and W. A. Chipperfield suggested that the area be added because of its historical value, containing trails, Indian antiquities, and the like. The plan was backed by Leon S. Kneipp in the Washington Office but finally was abandoned because there were no real timber values in the area.

Harold Lutz, during his research in the interior in 1952, recommended to inspectors passing through the creation of national forests to the north of the mountains in the Prince William Sound area and in the birch area along the Talkeetna River. He also recommended that areas be set aside as an experimental forest on the Chugach National Forest.²³

During Heintzleman's administration there was much discussion of primitive areas, amenity values, and natural areas. In planning his timber sales, Heintzleman had taken into detailed consideration matters of pollution, game management, and commercial fishing. A further consideration was preservation of scenery along the steamboat lanes. He recommended that cutting zones be established along the main steamship lanes that were less than 2.5 miles wide. Narrows less than 1,000 yards wide would be closed entirely to cutting. He felt that these areas should have special treatment in order to preserve scenic values for travelers. The method would depend on the terrain.²⁴

There was continuing interest during this period in classifying wilderness and natural areas. In 1949 the Society of American Foresters, through its Committee on Natural Areas, recommended that such areas be set up in Alaska by the Forest Service and the Bureau of Land Management.²⁵ Wilderness areas, however,

were much larger in size. The idea was given impetus by the Department of the Interior under its aggressive secretary, Harold Ickes. But the wilderness idea had been under consideration for some time in Region 10. Flory's reply to Chief William B. Greeley was that there was no problem in Alaska; there was enough de facto wilderness to last indefinitely, especially above the timberline. Chiefs Stuart and Silcox also requested consideration for wilderness, the latter emphatically stating that public sentiment was for wilderness areas and that the Forest Service would have to recognize the fact. He urged each region to begin classification work.²⁶

In Alaska consideration turned to the Tracy Arm area south of Juneau and to the Walker Cove area south of Ketchikan. Heintzleman was told by the Washington Office that it favored wilderness classification. But W. A. Chipperfield, who was in charge of lands, objected on the grounds that transportation by water was necessary. After the waterways were excluded, he argued, there would not be enough land left to create both buffer zones and wilderness areas. He recommended instead that scenic areas be established, giving the same protection. He said that classification as wilderness wouldn't "get to first base with the Wilderness Society." Heintzleman agreed with this reasoning, and the two units were classified as scenic areas under Forest Service regulation U-3 9a.²⁷ The Walker Cove-Rudyard Bay Scenic Area would become part of a larger Misty Fjords National Monument in 1978.

Throughout this period the Forest Service cooperated closely with the Alaska Game Commission and with other federal agencies on matters of wildlife and fisheries. A major problem over the years had been protection of the Dolly Varden, a fish commonly thought of as a trout, though actually a char. As early as 1917, W. G. Weigle had protested the taking of Dolly Varden

by seine without permit. Fishermen defended the practice on the grounds that the Dolly Varden ate salmon eggs, but Weigle felt that there was overfishing nonetheless. On Karta Lake one fisherman took 1,600 pounds by seine. Regulations were set up permitting such fishing only on salmon streams. The question arose again two decades later when there was an increase in commercial fishing for Dolly Varden. Heintzleman reported to Delegate Anthony Dimond that the Forest Service was not responsible for fish—that was the job of the Bureau of Commercial Fisheries and the Congress of Sport Fisheries. Heintzleman believed, however, that the Dolly Varden was a game fish desirable for future recreation. He wanted to discontinue the use of fishtrap permits on the national forests, holding that cutthroat trout and steelhead, as well as Dolly Varden, were all being caught and sold. Dimond intervened in the matter, and commercial fishing for Dolly Varden was discontinued on January 19, 1940.²⁸

Fish and game matters came up in other areas, too. The bear management program on Admiralty Island was continued successfully—the Forest Service working closely with the Alaska Game Commission. Lloyd W. Swift, chief of the Forest Service's Division of Wildlife Management, worked out guidelines for pollution control in regard to projected pulp cutting and mills. W. A. Chipperfield became the Forest Service representative on the Alaska Game Commission. Its discussions involved a variety of problems: the effect of multiple-use management on wildlife habitat; disposal of pulp-mill waste to prevent damage to aquatic life; studies on predators and predator-prey relationships; management of the Afognak elk herd; and cooperative studies with the Fish and Wildlife Service on the management of the Kenai moose herd.²⁹



Rakestraw Collection

Trail to Winstanley, 1958, now part of Misty Fjords National Monument on the Tongass National Forest.

7

The Greeley, Hanson and Johnson Administrations, 1953–1970



Errata

Page 135 Chapter title, change “Howard” to “Johnson.”

The Greeley, Hanson and Howard Administrations, 1953-1970

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way.

Charles Dickens, *A Tale of Two Cities*

The Politics of Conservation, 1953-1968

The historian who tackles the recent history of the Forest Service—that is, the history of the period during the last twenty years—finds himself in strange terrain, where the bearings are confusing, the topography rough, and the lay of the land hard to determine. It was a period of transition from extensive to intensive management, with both a larger amount of money spent and a greater productivity; science and technology were reaching new levels in their application to the management of natural resources. It was a period of brilliant legislative achievements, such as the Wilderness Act and the Multiple Use-Sustained Yield Act—both efforts to formalize the goals and achieve the aims of the new era. It was also a period of bitter political and administrative infighting in which the integrity of the Forest Service, and even its very existence, was threatened by small-minded politicians, administrators, and powerful pressure groups.

New forces on the American scene made themselves known. The “grab-and-get” element, desiring removal or reduction of controls so that they might achieve unchecked exploitation of the public land, lobbied in Congress and placed national and regional officers under great pressure. On the other side, recreational groups also harassed the resource managers. Mass recreation came of age after 1952, and the land under control of the resource agencies was placed under increased pressure by the users of the land. During the previous era, the CCC had done a great deal of work providing campgrounds, roads, and other recreational facilities. These served well during the war years, when travel and use of the national forests and parks was light, and during the period immediately after the war when these had little use. With the 1950s,

however, outdoor recreation vastly increased, and pressure on aging facilities became intense. In addition, the new generation of recreationists had grown up during the Depression and the war; it had little acquaintance with the outdoors and outdoor etiquette. Vandalism increased, and there was increased need for interpreting the outdoors to the public.

Another force was the wilderness elite. Concerned with the preservation of wilderness areas in pristine condition, the advocates formally separated themselves from the general run of recreationists and sportsmen. Learning that noneconomic groups flourish in times of crisis, they managed to establish an almost continual crisis atmosphere. There was a tendency toward polarization among the groups themselves: the mass recreationists demanded increased facilities, and the wilderness elite opposed them. There were the old type of recreational groups, such as the Mazamas and the Mountaineers, who had worked with the Forest Service as advisory groups, and the newer and more militant bodies, such as the Sierra Club and Friends of the Earth, who rejected the advisory group approach and sought remedy through legislation and the courts. The emotional geology of the era would show a complex combination of factors: the slow sedimentations that represent continuity with the past, and the violent eruptions that change the structure of the landscape and leave behind them craggy outlines persisting even after the immediate disturbance has passed.

Dwight Eisenhower's election in 1952 marked the end of a long period of Democratic domination. Eisenhower came to office pledged to economy in government and governmental reorganization. He utilized a



Richard E. McArdle, a Ph.D. forester, headed the Forest Service from 1952 to 1962. Immensely popular, he charted new directions dictated by postwar circumstances—notably more intensive forestry and better relations with the forest industries.

staff system and delegated authority to a greater extent than any president before him. His cabinet members in the area of resource management reflected the conservative views and the businessman's attitude of the new regime.

The secretary of the interior was Douglas MacKay, chosen largely because he came from a western state (Oregon) and was a staunch and conservative Republican. Eisenhower's secretary of agriculture was Ezra Benson, an honest, narrow conservative whose main effort was trying to find an alternative to the farm price support policies that would be both economically respectable and politically acceptable to the farming community.

To many conservationists, the new regime seemed determined to turn the clock back. "Conservation: Down and on its Way out" was the title of an article by Bernard De Voto in *Harpers*, and his summary indicated his thesis. The Tidelands Act had given millions of acres of oil land to the states; the Soil Conservation

Service had been reorganized and weakened; and many career men had been put on "Schedule C," which weakened their tenure under civil service. Plans were made to alter the wilderness areas and national parks by dam building. Stockmen continued their pressure on the Forest Service and the Bureau of Land Management (BLM). Governmental reorganization was discussed, with recommendations to take some of the research functions from the Forest Service and to remodel and transfer the agents to the Interior Department.

The Forest Service was fortunate in having the right man in the office of chief in the person of Dr. Richard E. McArdle. A professional forester of great experience, equable in disposition, with both firm adherence to principle and a great bargaining ability, he was precisely the right man for the time. He dropped his predecessors' plan for federal regulation of private cutting, a plan that tended to antagonize the lumber interests, thus ending a controversial issue that had been before the forest interests for thirty years. He fought

successfully the efforts to reorganize the Service and transfer it, enlisting the aid of senators and representatives in this task. He increased the number of wilderness areas in the national forests and encouraged regional foresters to extend their recreational activities, especially in new directions such as winter sports. A Research Advisory Committee was set up, research activities were enlarged, and control over research on forest insects was transferred from other agencies of the Department of Agriculture to the Forest Service. The Timber Resource Review, a national study started in Watts's administration, completed its findings in 1958 with publication of the monumental *Timber Resources for America's Future*. McArdle wrote, "The report should convince the reader that the United States is not faced with an acute timber shortage. There is no 'timber famine' in the offing, although shortages of varying kinds and degrees may be expected."

As sustained yield had been a major emblem of the Watts administration, so multiple use became that of McArdle. Articles and memoranda on multiple use as a solution to the national forests' response to increased pressure of man on resources became a major concern of the Forest Service administration. The culmination was the Multiple Use-Sustained Yield Act of June 12, 1960; signed by Eisenhower, it became Public Law 86-517.¹

As chief, McArdle was aware of the increased use of the national forests during the 1950s. Timber sales increased as private land was cut over. Mining claims were pegged out in many of the national forests, endangering timber as well as water flow. That water for domestic use and irrigation was needed in greater quantities was a matter of growing concern to the Forest Service; more than half of the water in the western states originates in the national forests. There was also growing pressure among user groups, including those who wanted priority or exclusive use for one group. These included wilderness lovers, recreationists, town fathers interested in city watersheds, stockmen, and lumber interests. There was also pressure to overuse the resources. Some overgrazing and overcutting had taken place during the war years, and there had been many questionable mining claims that went unchallenged. Other pressures in regard to Forest Service administration came from outside. McArdle sought advice from both outside and within the agency, and eventually he decided on legislative action.²

Edward C. Crafts has told in fascinating detail the story of the Multiple Use Act. There was difficulty with the timber interests because the act failed to give priority to timber and water. The Sierra Club fought the bill vigorously because it failed to give wilderness an equal status with recreation. Several senators, notably William Proxmire, Hubert Humphrey, and Philip Hart

played important parts in getting the bill passed. Howard Zahniser of the Wilderness Society, Ira Gabrielson, former head of the Fish and Wildlife Service, and Bernard L. Orell of the Weyerhaeuser Company played large parts in helping the bill through Congress.

The act is a legislative directive to the Forest Service to give equal concern to all the resources mentioned—recreation, timber, watershed, range, and wildlife—in planning for use of the forests. Mining was deliberately omitted. It does not forbid single or dominant use but simply asks that in planning the Forest Service give equal consideration to all these resources in combinations that will best serve the people. McArdle's interpretation, expressed at the Fifth World Forestry Congress in Seattle in the fall of 1960, stressed giving equal weight to each of these uses and to planning and coordinated activity.³

As Eisenhower's term of office continued, the pressures on the Forest Service lessened. MacKay left Interior in 1956 to run for Wayne Morse's senate seat; he failed to be elected and left public life. He was replaced by Fred Seaton of Nebraska, a man with a fair conservation record. The Republican dominance in Congress continued for only two years. Several senators and representatives who were markedly friendly toward forestry and conservation came into office.

A bill of almost equal importance, ultimately the Wilderness Act of 1964, was also begun during this period. Concern for wilderness had grown up with the movement for forest conservation. Groups like the Mazamas, Oregon Alpine Club, Appalachian Club, and Sierra Club had played a large part in the creation of the early forest reserves. Gifford Pinchot, in his rhetoric of conversation, had deemphasized the wilderness and recreational element, probably to get the support of economic groups for the forestry program. Like Alexander Hamilton, he needed to attract the "rich, the able, and the well-born" to the program. However, despite his rhetoric, he also supported Langille's suggestion for creation of wilderness areas in the national forest system. His successor, Henry S. Graves, stressed such recreational uses. Men like Arthur Ringland, Robert Marshall, and Aldo Leopold demanded wilderness areas, free from roads and development, and a number of them were established in the national forests during the 1920s. Robert Marshall persuaded the Bureau of Indian Affairs to establish recreational areas and helped to formalize regulations on their creation and use. There was, of course, pressure on both the national forests and the national parks from developers and recreationists over the extent and use of such areas. The Park Service and the Forest Service both attempted to hold a middle-of-the-road view between the extremes in each group.

Serious agitation for a national wilderness preservation system began in 1956. It was dramatized by a bill to let the Reclamation Service build a dam in Echo Canyon in the Dinosaur National Monument of Utah and Colorado. The bill met organized opposition from wilderness lovers and was defeated in Congress. The success of the opposition encouraged wilderness advocates to develop a legislative approach to the problem, analogous to the Multiple Use bill, making the Forest Service and National Park Service legally responsible for preserving wilderness areas under their jurisdiction. Howard Zahniser of the Wilderness Society, Senator Hubert Humphrey of Minnesota, and Representative John P. Saylor of Pennsylvania played a large part in drafting such a bill in 1954. It provided for continuous preservation of existing wilderness areas, the inclusion of others by act of Congress, and that a council be set up to keep records and make recommendations. The bill had a long legislative history. The council was eliminated and some areas were excluded, but the bill was finally passed in 1964.⁴

Both acts were of value to the agencies involved and to the public. The Multiple Use Act formally put into operation what the Forest Service had practiced for years. It was no new innovation but rather a formal statement, updating the principles of previous laws and practice. However, it did speed up and sharpen planning and inventories. Each region and each ranger district drew up multiple-use atlases and plans for coordinated development of each area. It was well designed to aid in the shift from extensive to intensive management. The Wilderness Act, on the other hand, focused attention on the need to preserve some remaining scenic and primitive areas. It dramatized the issues and spurred on Congress and the public to work out plans balancing development, recreation, and wilderness preservation.

Neither of the bills was a panacea; both were subject to misinterpretation and both gave rise to unexpected problems. By statute and by McArdle's statements, multiple use was clearly defined. But the phrase became a rationale for proposed raids by mining and lumber interests on land dedicated to recreation. On the other hand, the Sierra Club carefully misinterpreted the act to be favorable to lumber interests, as opposed to wilderness recreation; it claimed that the training of foresters made them inadequate to make good judgments in the field.

The Wilderness Act also created new problems. Resource managers generally were dedicated to the wilderness concept but wondered about the effect of the designation on particular areas. The Huron Islands, for example, had a fragile environment, were accessible by powerboat, and were apt to attract hordes of people who might destroy the very values the bill was intended to protect. Wilderness hearings indi-

cated a growing gap between local interest groups and recreational clubs, which used an area on a continuing basis, and occasional visitors, who were often associated with large and powerful national organizations. Accustomed as it was to working with local advisory groups, but under increased pressure from national groups, the Forest Service was caught in the middle. The term *de facto wilderness* became popular for areas not under the wilderness designation, and recreational organizations began to resort to litigation in an effort to achieve their ends, or to create a body of environmental law. Lumbering interests, on the other hand, became critical of the new regulations. C. M. Archbold, formerly a Forest Service officer in Alaska, wrote:

*Our timber industry is being squeezed out of business by these young foresters who devote more time to planning how to care for the increasing recreational use (from now to the year 2000) than they do to caring for an industry that provides employment to many hands when in the woods. One old time industry man has aptly described it as "we are being Forested out of existence."*⁵

With the end of the Eisenhower administration, a political climate more friendly to conservation came in. Both John F. Kennedy and Lyndon B. Johnson were activists in the area of conservation. The Peace Corps, under Kennedy, carried forestry and park-making to other lands; the Job Corps aided in community projects. In Alaska the latter's work was similar to projects carried on in the interior under Chipperfield's direction during the CCC days. New parks and recreational areas were created, and a concerted effort was made to save the nation's shoreline for the future. As heads of the departments most concerned with conservation, Kennedy chose Orville Freeman as secretary of agriculture and Stewart Udall as secretary of the interior. Both were capable in their respective fields. Udall brought to the administration of his department much of the energy that had characterized Harold Ickes, but without Ickes's irascibility.

McArdle continued as chief of the Forest Service until 1962, when he resigned. He will rank as one of the best chiefs—Arthur Greeley thought him the greatest. Secretary Freeman chose as his successor Edward P. Cliff, who had been assistant chief in charge of national forest resource management. Cliff, who had thirty-two years of service at the time he was appointed, was a native of Utah and had served in the Pacific Northwest, Colorado, and his home state before going to Washington. Some of his achievements included helping to write, pass, and implement the Multiple Use Act; aiding in Operation Outdoors, recreational planning for vastly increased use of national forests; and increasing the cut on the national forests from 4.5 to 8.5 billion feet.⁶

State of the Region, 1953

In the years 1953-1954, Alaska underwent striking changes. This brief period marked a shift from an extensive to an intensive type of management. In no region of the Forest Service did the change occur so dramatically.

In 1953 B. Frank Heintzleman resigned as regional forester to become governor of Alaska. Appointed by President Eisenhower, he was something of a compromise candidate among the several factions of Alaskan Republicans. His credentials were impeccable—he was conservative from the businessman's viewpoint, devoted to the interests of Alaska, and well known from his long Forest Service tenure in the territory. No appraisal of his work as governor has been published, but throughout his four-year term he remained a staunch friend of the Forest Service and aided the officers in their work. At about the same time, Charles Burdick, who had been Heintzleman's right-hand man, retired. W. A. Chipperfield became head of lands in the territorial government. A new team of men came into the Juneau Office in the persons of Arthur Greeley, John Emerson, and W. Howard Johnson. Assistant Chief E. W. Loveridge wrote:

They will appreciate that this office now knows about the tough tightening up, as well as forward looking job they have inherited—following the extremely poor administrations of more than 25 years of Heintzleman and Flory—without belittling Heintzleman's other accomplishments. The report cries out clearly that the region is on the verge of passing from a custodial stage to one of active management.⁷

A survey of the area, at the eve of this transition, may aid in pointing out its accomplishments. In southeastern Alaska, large-scale timber production was on the verge of getting under way. The Ketchikan Spruce Mills had enlarged its plant and production. The Ketchikan pulp sale had been completed, and the mill was under construction by fall of 1953. The Japanese plant at Sitka was in the planning stage, and there was talk of setting up a mill at Wrangell to ship hemlock cants to Japan. In addition, there were other sawmill and pulp interests looking over the Juneau area as a site of operation. Debate had begun over how many pulp mills could be established in southeastern Alaska. Ray Taylor claimed that the territory could not support five pulp mills, as Heintzleman had originally estimated.

Much attention was given the question of side effects from the pulp mill operations. Heintzleman had worked closely with research agencies and the Alaska Water Pollution Board to get satisfactory conditions of water purity. The problem was not so great in Alaskan

waters—with twelve to twenty-four-foot tides—as it was in lakes or estuaries of the states.⁸

Raymond Taylor, meanwhile, also worked on research at Hollis. By 1953 he had located on a wanigan, built on a scow. He busied himself on a variety of projects, but silviculture and the effects of logging on salmon runs had the highest priority. Criticisms had been made that the large pulp sales, with clearcut logging, would injure the salmon runs. So Taylor and his crew set out to find the answers, working in cooperation with the University of Washington and the Bureau of Fisheries. They found that logging had no discernible effect on the spawning of salmon. Barriers formed by debris were easily bypassed. Since the streams came from the snowy heights, the water temperature was not raised materially by clearcutting, and viscosity remained low. The studies had been started in 1949; by 1953 Taylor had a body of information on which the Forest Service could act. Regrettably, the results of his studies were not widely circulated, and questions continued to be raised as to the damage done by clearcuts.⁹

Amenity values had not been neglected. Tentative cutting arrangements had been made to protect views along steamer lanes. The work of the CCC had been largely in recreational development, and the existing facilities were ample to satisfy existing needs. W. A. Chipperfield, as head of recreational planning, had developed several other areas, particularly around the cities—Totem Bight at Ketchikan, picnic areas at Wrangell and Petersburg, and Auke Village at Juneau. Studies had been made of lands to be reserved as scenic and primitive areas.

In the Chugach National Forest a number of small mills were in operation. These included a small mill at Seward, using timber from the national forest, and one at Whittier, an army base, using timber floated in from Prince William Sound. The Valley Lumber Company had a small operation on Afognak Island and shipped the lumber to Kodiak. This operation was unique in that the Forest Service did not get to Afognak more than once a year by boat; it accepted the mill records as scale. The sale, however, was carefully laid out and cruised.

In the Kenai, new highways from Anchorage to Seward and to Homer had opened up the peninsula. Though the roads were rough, people could use them for access to recreational areas. There were as yet few Forest Service facilities aside from a few picnic grounds. There were numerous five-acre plots taken up under the Small Tracts Act, and there was a townsite elimination at Moose Pass. There were also numerous mining claims that were actually used for summer

homes. Chipperfield had laid out some good, well-designed summer home locations on Quartz Creek, with large lots and plenty of elbowroom, as well as concern for aesthetic values. Fire was the main problem. In 1947, 400,000 acres on the edge of the national forest in the Moose Range had burned; the fires were set by road construction crews. In the forest itself the main offender was the Alaska Railroad, which had nothing but disdain for fire protection measures. Coal-burning locomotives were the main problem.

In the Cordova area use centered around the numerous shanties or hunting camps in the Copper River flats, one of the greatest wildfowl nesting and feeding grounds in the nation. The camps were on national forest land, and many users had only squatters' rights. The military airport in Cordova had been put to civilian use, and a road was pushed out to the airport and beyond, built on the old roadbed of the C.R.&N.W. Railway. Travel was a major factor. Clyde Maycock,

supervisor for the Prince William Sound Division, not only had to cover his own area but scale at the Whittier mill and make periodic trips to Afognak Island as well. The Chugach, an old but reliable wooden boat, was used for travel from Cordova to the outlying areas. It was the most isolated and least used of the districts.¹⁰

In a letter to Chief McArdle, written just before he resigned to become governor, Heintzleman mentioned some of the main problems of Alaska. Stands in the past had been highgraded, he said, and the pulp mills would aid in the increased utilization of hemlock. Cutting rules along steamer lanes had been established. A major need in administration was finance—more venture capital must be attracted into the area. Indian claims on the Tongass and mining claims in the Kenai remained problems. In a separate set of recommendations on the Cordova area, Heintzleman advised that scattered claims be consolidated into a few localities.¹¹

Administration

There are many paradoxes in the history of the Forest Service as seen from a regional basis. In the Service as a whole, the period from 1953 to 1956 was one of trial. In Region 10, on the other hand, these were years of fulfillment in which the dreams of past foresters were realized and to which the problems of modern times had not yet come.

With Heintzleman's resignation, a new administrative team came to the Juneau Office. Arthur W. Greeley was appointed regional forester. Forty-one years of age at that time, he had been born in Washington, D.C., the son of former Chief W. B. Greeley. In physical appearance he resembled his father very much. He had served as ranger, timber sale assistant, assistant supervisor, and as forest supervisor in Montana, Idaho, and California. With him as assistant regional forester in charge of administrative management and engineering came John L. Emerson. He had been a supervisor on the St. Joe National Forest in Idaho and had served as an assistant to the Department of Agriculture representative on the Columbia Basin Commission. William H. Johnson, formerly supervisor of the Snoqualmie National Forest in Washington, became assistant regional forester for forest resources. Not one of these men had ever served in a regional office. In addition, a new fiscal agent came with them, Theodore Rollins.

The Greeley administration was marked by major administrative changes. The Alaska Region had been undermanned, having, in 1953, a smaller staff than that of the Snoqualmie National Forest. The men were hired to meet the shortage. The old divisional system of

administration, set up years before by E. W. Loveridge, was changed in 1956 to a standard Forest Region organization. In the north, Malcolm E. Hardy, who had been a ranger at Petersburg, was made supervisor of the Chugach National Forest, with headquarters at Anchorage. He rented office space over the Malemute Saloon. Because of the light work load in the Chugach, he did a great deal of field as well as office work. Cordova and Seward were made ranger districts, and Afognak Island was attached to the Anchorage office for administrative purposes instead of to Cordova. Boat transportation was found to be inefficient, so charter planes were used to transport men.¹²

In the south, two supervisor divisions were established in the Tongass, the North Tongass and the South Tongass. The northern area was under Clare M. Armstrong at Juneau, the southern under C. M. Archbold at Ketchikan. Greeley found costs higher for plane travel than for boats; therefore, new boats were bought for the southern district to take care of pulp sales. The *W. A. Langille* and *W. E. Weigle* were purchased in 1954; they were thirty-eight-foot vessels, sleeping four. Another vessel, the *Almeta* was bought; the *Maybeso*, a forty-two-foot diesel boat, replaced the *Ranger 6*. The *Ranger 9* was given an overhaul.¹³

Ray Taylor had helped to compile figures for the Timber Resource Review, but the estimates in Alaska had been made on the basis of incomplete data. A more complete timber inventory was needed, both to determine the number of pulp mills the region could use and for management purposes. In 1948 the Navy had completed an aerial survey of southeastern Alaska, and the



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A. W. Greeley, 1953-1956

photographs were used to develop a timber inventory. Road building had been delayed since Congress had not given the territory its full share of federal funds since 1931. Now Congress appropriated special funds to make up the deficit and road planning continued.¹⁴

Greeley described the region in 1956 as being in transition. Timber sales had gone up from 60 million feet in 1952 to 200 million in 1956, and would go up to 600 million in the near future. He spoke of the continuing forest inventory, carried on with the cooperation of the Ketchikan Pulp Company; the growing use of the Kenai for recreation; and the need for further recreational planning.¹⁵ Greeley's stay in Alaska was brief, but his record was exceptional. He had a keen sense of history and the vision needed for planning far ahead. He was well liked in the region; his competence and integrity earned him the respect of the lumbermen. Greeley moved to Milwaukee to be regional forester of the North Central Region. Eventually he retired from the Forest Service and began a new career in the ministry.

Percy D. Hanson succeeded Greeley in 1956. He had been regional forester in Missouri. Under Hanson the process of moving from forest protection to management was continued. During his term of administration, new mills were established and timber production went up. Money was made available for buildings, and a large number of standard units were razed. New facilities—ranger stations, warehouses, and the like—were built. Forest highways, planned under Greeley's administration, were finally built: the Portage Glacier Highway; the Hope Road relocation; the Sitka-Henry

Cove Road; the Mitkof Highway out of Petersburg; and roads in Yakutat. Game-management planning was important, and there was a large development of hunting during Hanson's term of office, especially of elk on Afognak and moose in the Yakutat area. Cabins and trails were built for the convenience of hunters. Research progressed at the Hollis station. Recreational planning made great strides under Hanson's administration. The Visitor Information Center at Mendenhall Glacier was built. And with Alaskan statehood in 1959, state-federal cooperation came to be of great importance. Greeley and Hanson had played major roles as planners; Johnson carried their plans to fruition.



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P.D. Hanson, 1956-1963

When Hanson retired in 1963, he was replaced by W. Howard Johnson. Johnson already had a long and interesting career in the Forest Service, serving under each chief from Bill Greeley to Edward Cliff. His experience had included recreational and wilderness management in the Olympic National Forest, CCC educational work, experience with timber sales in the Columbia, Olympic, and Snoqualmie national forests, further work as ranger and supervisor in the state of Washington, and service in the Washington Office. Like Langille, he was so varied a man as to defy easy analysis. A practical forester of the George Drake type, a wilderness lover, concerned with civic affairs, and with a strong sense of justice, he was a worthy successor to the previous regional foresters.

Johnson's term was one of both achievement and controversy. It marked the fruition of the planning and devoted work of men of the past. New sales were started, and Heintzleman's dream of a pulp-producing empire became a reality. Forest research by this time had

Timber Sales



W.H. Johnson, 1964-1971

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secured the data that justified cutting on a continuous basis and the replacement of old decadent forests by new ones. Wilderness planning and recreational development came of age during his term, and the interpretive program of the Forest Service flourished with new and imaginative ideas.

There were problems, however; some falling off in cooperation with the state conservation agencies occurred because of the increased incursion of politics into state management. State land selection rights provided that 400,000 acres from the national forests would go to the state. A new Admiralty Island controversy arose, and a suit by the Sierra Club threatened the latest pulp sale. Johnson's administration resembled Weigle's, being marked by both accomplishments and controversy.

A host of new Forest Service officers came to Alaska during this period and many of the old-timers retired. It brought about greater efficiency in the work of the Service, but some of the old-timers noted the changes with regret. In the past, wrote C. M. Archbold, one of the old-timers now working for industry, there had been a small group of career employees with many years of experience in Alaska. Now there was a greatly expanded force of less experienced men. The change-over, he felt, was too rapid; the men were spending more time in group training sessions than in serving logging operations. In the judgment of some, this made for less intimate relations between the Forest Service and industry.¹⁶

Timber sales flourished during this period, going from 219 million board feet in 1955 to 405 million in 1965. There was a diversity of activities and new cutting and milling techniques. There were the large mills, such as the Ketchikan Pulp Company mill, and other new mills—the mill at Wrangell—and smaller, established operations like the Ketchikan Spruce Mills.

Harvesting followed the clearcut pattern. The first camp of the Ketchikan Pulp Company was established at Hollis, and Ray Taylor was able to use its logging as the basis for silvicultural experiments. Timber cuttings were large, often covering entire watersheds, as Taylor had found that the light seeds of the hemlock and spruce provided 95 percent natural regeneration within a period of three to five years. Some of the cutting was done by employees of the company, but gypo operations were frequent. When completed, the timber inventory indicated that there was more timber than had at first been estimated. The initial sale to Ketchikan Pulp had been on a cubic-foot basis. This proved unsatisfactory and was changed to the board-foot basis.

The Ketchikan Spruce Mills had some difficulties with the Forest Service. This was the old Ketchikan Power Company that had reincorporated in 1923 as the Ketchikan Spruce Mills. It had flourished during World War II, cutting spruce and hemlock for defense purposes. Its problems were complex and not all related to the Forest Service. The difficulties included high taxes, high stumpage, high shipping costs, and lessened profits. Basic protests against the Forest Service included poor scaling because of poor measurements and failure to allow for defects. This complaint was probably justified. There was some fear that the Wrangell sale might take timber that would properly lie within the Ketchikan Spruce Mills area. The major protests, however, came from the West Tuxekan sale. It involved alleged overestimation of grades and volume of logs, poor road location, faulty engineering, and "too rigid standards" set for road building by the Forest Service. Strong language was bandied about by Milton Daly, manager of the Ketchikan Spruce Mills, and P. D. Hanson, C. M. Archbold, and C. T. Brown of the Forest Service. Eventually the sale was cancelled. There were similar protests against scaling and grading at the Whittier mill, against Clyde Maycock's scale. Once again, strong language was used. The majority of these complaints disappeared, however, when Ray Taylor prepared volume tables for scaling logs in long lengths and Howard Johnson established a school for scalers.¹⁷

Elsewhere, a new large sale was negotiated at Wrangell. During World War II there was a call for more lumber by the Army Corps of Engineers, and a



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Aerial view of experimental block-cutting near the Hollis camp of the Ketchikan Pulp and Paper Company, 1958.



Tongass Historical Society

Plant of the Ketchikan Spruce Mills, Ketchikan, Alaska.



U.S. Forest Service

Sitka, 1958

firm called the Wagner Lumber Company was established. The engineers were persuaded to put money into the Wrangell sawmill, now in need of repairs and new machinery. The money was provided with the agreement that the mill would sell lumber to the corps at a fixed price. The mill, however, ran for only a short time; Wagner left the country and the Army Corps of Engineers reacquired the property through default. It sold the mill to an American Japanese named C. T. Takahashi. He operated it for a time and eventually sold it to the Japanese group planning to build a mill in Sitka. The Japanese formed a corporation, the Wrangell Lumber Company, as a subsidiary of the Alaska Lumber and Pulp Company.

Meanwhile, another mill was built at Wrangell. The Forest Service offered for bid 3 billion feet of timber in the area with a provision that a 100-ton pulp mill be built in connection with the sawmill within three years. The sale was made to the Pacific Northern Timber Company. This company had been formed by a son of Oregon lumberman C. D. Johnson. Later, an Oregon attorney, C. Girard Davidson (formerly an assistant secretary of the interior in the Truman administration),

reorganized the company, set up a mill, and got the operation going. In 1968, however, it was sold to the Wrangell Lumber Company. The pulp mill was never built because of economic reasons, and the sale reverted from a fifty-year tenure involving 3 billion board feet to a fifteen-year sale of 790 million feet.¹⁸

The Japanese interests, formed as the Alaska Lumber and Pulp Company, began preparing their Sitka site. It was the first major foreign investment made by Japan after World War II. In 1957 the company started work on the camp site at Silver Bay. The land was acquired under the Tongass Timber Act of 1947, which contained provisions for such acquisitions. Blue Lake was planned as a source of process water, and here the city of Sitka entered into partnership with the company. The city helped construct the dam for hydroelectric power as well as for storage. The road was financed by the Alaska Road Commission, the city of Sitka, and the Forest Service. Construction of the plant was completed early in 1959. A pleasing aspect of the situation was the good feeling evident between the Americans and the Japanese, all the more amazing since the war had not been over long.

Another aspect of the Japanese development was concern about water pollution. It had received priority before, but the sensitivity of the Forest Service and others was more acute because of the foreign ownership. Agencies of the state and federal governments studied the effects of the plant. The University of Washington Oceanographic Laboratory made studies, gathering data on both high and low water conditions during the year. These studies were the basis of subsequent approval of the Alaska Water Pollution Board. They were the most comprehensive studies of receiving waters made up to that time.¹⁹

In August 1955 the Georgia-Pacific Corporation made a successful bid for 7.5 billion feet for pulp manufacture, most of the timber being on Admiralty Island. The sale, however, was not completed. The company failed to comply with regard to the full obligation, asked for delays, and finally dropped the project, forfeiting a \$100,000 deposit made in 1961. There were a number of factors involved, including its decision to build another mill at Toledo, Oregon.²⁰

Small mills continued operations during this time. One-eighth of the timber cut on the Ketchikan Pulp Company sale was cedar. There was no local market for cedar, so a small mill was set up at Ketchikan to manufacture lumber for export to the states. The small mill at Yakutat continued its operations, based on railroad logging. In the birch timber district near Anchorage, where John Ballaine had once entertained dreams, a small mill was finally established.

In September 1965 the Forest Service advertised 8.75 billion feet of timber for sale, with provisions that a pulp mill be constructed by July 1971. For the first time, a number of large paper producers were interested in the area, including the Weyerhaeuser Company, St. Regis Paper Company, MacMillan Bloedel, the Canadian giant, and other firms. St. Regis, which bid \$5.60 per thousand with plans to cut 175 million feet per

year, was the winner. St. Regis spent 1966 examining the area and layout of tentative road locations. It examined various plant sites and selected one near Sitka.

The St. Regis sale fell through, however, for a variety of reasons. These included the costs of labor, transportation, and building the plant. The company forfeited its bond and gave up the sale. In 1968 the sale was offered to the second bidder, U.S. Plywood-Champion Papers, Inc., and was accepted on the same terms. This sale was noteworthy for the fact that the company hired an advisory commission of eminent scientists to give it advice on avoiding damage to the environment. It was the first time industry had appointed such a committee to advise it on ecological matters. The company picked out a plant site at Katlian Bay, near Sitka, but the site was rejected on ecological grounds. Then construction of a plant at Echo Cove, north of Juneau, was delayed by the Sierra Club suit, a subject that will be considered later.²¹

Logging techniques in Alaska had progressed from primitive handlogging to sophisticated tractor and cable methods. In the late 1960s experimentation was begun on balloon logging, using techniques developed in British Columbia and in Oregon by Bohemia Lumber Company. During the summer of 1968, Regional Forester Johnson spent eight days by boat and plane examining balloon logging shows in the South Tongass. In November 1970 the fieldwork was completed, and it was determined that balloon logging was a feasible technique for Alaska. It allows the logger to reach back 4,000 feet to previously inaccessible stands on high slopes. In addition to making more timber available, it reduces the impact of logging on the soil. Study was also made during this period of converting plant residues to chips for sale to pulp plants. Another technique studied was moving chips from the field to the mill or onto barges using pipelines and water pressure.²²

Research and Cooperation

Raymond Taylor continued to push studies at the Alaska Forest Research Center in Juneau. He established field headquarters on a wanigan at Hollis, logging camp of the Ketchikan Pulp Company. After two years he was able to secure transportation in the *Maybeso*, a forty-two-foot boat with galley and shower, sleeping four and making a top speed of nine knots. It was ideal for his purposes. Harold E. Andersen, formerly of the Prince William Sound Division, and Richard M. Goodman, formerly from the Northeastern Forest Experiment Station, were hired as assistants, with Elizabeth A. Corey as secretary.

Taylor's early work related to pulp mill operations. He developed accurate long-log volume tables for scaling at the mill. Since the first cuttings of the Ketchi-

kan Pulp Company were at Hollis, he was able to have silvicultural and mensuration studies conducted on the spot. He carried on yearly studies of the effect of logging on the salmon runs. In some of this work he had the cooperation of the Fisheries Research Institute of Seattle, the Geological Survey, and the Fish and Wildlife Service. He worked with the Forest Survey in the 1950s, studying old plats and aiding in interpretation of the photographs on which the Forest Service based its estimates. He carried on research in entomology and pathology. During the years 1948-1955, there was damage done by the blackheaded budworm and the hemlock sawfly, causing a loss of 268 million feet. He also studied the occurrence of spruce bark beetle on Kosciusko Island.²³



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(above) Fish wheel in the Yukon River at an Indian village east of Eagle, Alaska. Note the timber on the far shore, which is near the Canadian boundary.
(below) Mixed farm and forest land near Fairbanks, 1958.



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In 1957 the studies were extended into the interior. Taylor traveled to Anchorage to meet Roger Robinson, the Alaskan head of the Bureau of Land Management. Robinson had gone to Alaska from the Forest Service when the BLM absorbed the General Land Office and the Alaska Fire Control Service. Robinson faced a discouraging task. Although, on Heintzleman's advice, the Department of the Interior had set up a fire control office in Alaska in 1939, the appropriations were pitifully small. From 1939 to 1942, CCC labor had aided in combating fire, but the war put an end to the CCC. In 1947 Congress failed completely to appropriate funds for fire control on the BLM lands in Alaska. That year was marked by a disastrous 400,000-acre fire on the Kenai Moose Range that swept up to the border of the Chugach National Forest. In 1957 fires destroyed timber worth \$15 million and many acres of wildlife and wildfowl habitat.

Robinson was curious about the effects of fire on the ecology because of its destruction of trees, reindeer moss, swamp vegetation, and game habitat. He traveled with Taylor around Alaska, and both became interested in the ways in which fire affected the ecological succession of plants and the subsequent effects on animal life. Robinson felt that knowledge of this kind would be a good selling point to people in his campaign for fire prevention. He felt that a study conducted from outside the Bureau of Land Management would be particularly valuable. Taylor suggested Harold Lutz of Yale as the best man. Lutz had previously conducted studies of plant succession in New Jersey, and he had worked in Alaska. Funds were raised and Lutz took summer leave from Yale to make a series of studies. He traveled about the country in a truck, sometimes with Taylor and sometimes alone. It was an enjoyable time for both men. Lutz was the best of camp companions and was fascinated with the work, so much so that, even though they were working in bear country, he would frequently become preoccupied, lean the rifle against a tree, and only hours later remember to go back and recover it. Taylor had ample opportunity to gratify his keen interest in nature and in human nature.²⁴

Since the 1920s, there had been periodic shipments of seed from Alaska to Iceland. Conditions of climate and soil were such that the Icelandic government felt that plantings of birch, spruce, and hemlock from Alaska might be used in afforestation projects. After World War II, the forestry branch of the Food and Agriculture Organization became interested in the project. Taylor was invited to go to Iceland under FAO sponsorship; he made the trip, examined plantations, and later gave a paper in Rome on the project.

In 1959 Taylor retired from the research center management. He was another of those men who contributed much to the course of Alaskan forestry in the

area of research. An able, humorous, talented, and occasionally sardonic realist, he helped bridge the gap between the old and new eras in Alaska.

After an interim appointment, Taylor was succeeded by Richard M. Hurd, who served from 1961 to 1970. The center became the Northern Forest Experiment Station between 1961 and 1967. Hurd's major achievement was establishing a branch of the experiment station for the study of the interior forests. The major decision involved was whether to establish it on the administrative site of the BLM or on the campus of the University of Alaska. He finally decided on the University of Alaska in order that researchers might be a part of the academic community. In the southeast there was continued study of regeneration of clearcuts, soil erosion on logged areas, and the like.

Under Hurd's management there was increasing research on fisheries. A fisheries biologist was added to the staff of the station in cooperation with the Alaska Department of Fish and Game, and the habitat of fish streams was improved. One of Hanson's achievements as regional forester was the development of a gravel-cleaning machine (riffle sifter), a device that travels up the streambed to clear sediment from the gravel, thus improving the fish spawning grounds. Road locations were carefully planned to minimize the washing of sediment into salmon spawning streams.²⁵

Cooperation among government agencies was an old story in Alaska, and it continued during this period. It involved Forest Service cooperation with the BLM in fire control on the public domain, particularly in the Kenai. It also involved cooperative work with the Bureau of Public Roads and Fish and Wildlife Service. The National Park Service and the Forest Service continued their cooperation, particularly in regard to Glacier Bay National Monument, and the planning of recreational or wilderness areas. New dimensions of cooperation were entered into, however, when Alaska became a state.

Statehood involved both conflict and cooperation. Alaska state government got into the business of forest management and recreational use. The story of the state government's forest and recreational policy from 1959 to the present would make a book in itself. However, the part played by the Forest Service in aiding the development of this policy should be mentioned.

The Alaska State Constitution provided for the use and maintenance of renewable natural resources "on the sustained yield principle, subject to preference among beneficial uses." It involved the Forest Service principles, therefore, of sustained yield and multiple use. A Department of Natural Resources was set up in 1959. Under it was established a Division of Lands, which in turn supervised the state forester and the state parks and recreation officer.²⁶

The state had the right to select 102.5 million acres under the General Statehood Act, 1 million acres under the Mental Health Grant, 400,000 acres from national forests for community expansion and recreational use, 400,000 acres from the public domain for these purposes, 100,000 acres for the benefit of the University of Alaska, and about 108,000 acres for school land from surveyed areas. This area was to be selected within twenty-five years, which meant an area about the size of Rhode Island every two months.²⁷

Cooperation with the Forest Service came under three headings. First was the technical advice, which involved a wide variety of activities. Clarke-McNary aid and fire control were given to Alaska for fire protection as early as 1961. For its fire prevention and suppression program, the state relied heavily on an agreement with the BLM, which had a protective organization, paying it an assessment per acre for suppression, detection, and presuppression costs. The Forest Service set up the Forestry Sciences Laboratory at the University of Alaska to study forest conditions in the interior on a continuing basis. It aided in making the state's forest inventory in the Susitna Valley, the lower Tanana Valley, the Haines area, and on islands near Kodiak. Forest Service personnel conducted classes in log grading in the Susitna Valley. The Bonanza Creek Experimental Forest of 8,000 acres was set up under Forest Service direction near Fairbanks.²⁸ The state also obtained aid from the Forest Products Laboratory for hardwood grading and mill efficiency at Wasilla, for use of small logs for veneer, and the seasoning of paper birch to avoid checking.

Recognizing the need for coordinated planning for recreation, State Forester Earl Plourde took the initiative in organizing the Alaska Outdoor Recreation Council. Its membership consisted of the state departments dealing with natural resources, including the Departments of Natural Resources, Economic Development and Planning, and Fish and Game, the University of Alaska, and representatives of the various boroughs; along with federal agencies involved: the Forest Service; National Park Service; Bureau of Indian Affairs; Bureau of Reclamation; Bureau of Land Management; and Bureau of Outdoor Recreation. Beginning in 1964 the council had periodic meetings to discuss matters of common interest: the Wilderness Act; efforts of the BLM and the Forest Service to classify their lands; and the development of a state park system. The Alaska Outdoor Recreation Council was essentially a planning and a coordinating group for all federal and state agencies concerned with outdoor recreation, and it acted to lessen friction among the participating bodies.²⁹ Its reports are of great value for sketching progress toward a coordinated recreational development of the area.

Other aspects of state and governmental agency relations have been less harmonious. To some extent this had included the drive for development. Discovery of oil in the Kenai National Moose Range led to suggestions by Senator Ernest Gruening that the moose range and the Chugach National Forest be returned to the public domain. The more recent claim of the state to 400,000 acres of national forest land has led to difficulties.

State selection lands were for the purpose of community development and recreation. However, the state and the Forest Service did not see eye to eye on justification of the areas, and the Forest Service made its own recommendations and analyses. The procedure followed for transfer of land to the state was by recommendation of areas, survey by the BLM, and transfer of title to the state for use or disposal. The state continued its selection of lands largely on the public domain until 1968, when Secretary of the Interior Stewart Udall put a freeze on further selections pending settlement of Native claims.

Native claims, a burning issue on the national forests since the 1930s, came closer to settlement. In January 1968 Governor Walter Hickel established a Native Land Claim Task Force with representatives of all ethnic subgroups. They met with members of the Forest Service and BLM and developed a legislative proposal to meet native needs. About the same time, a Federal Field Committee for Development Planning for Alaska studied the matter, and in *Alaska Natives and the Lands* produced a comprehensive socio-economic report. Bills on Native claims were introduced in Congress in 1969 and again in 1970. Senate Bill 1830 was passed in midsummer 1970; it provided for a payment of \$500 million and 10.5 million acres of land to settle Native Claims. Action was not taken in the House. Applied to the national forests, the formula was one township to each Native village. There were nine such villages in the Tongass and one in the Chugach, though one was too small to qualify. Ironically, in 1968 the Court of Claims had made a settlement of the Haida-Tlingit claim on the Tongass; it created a curious legal problem as to whether the court judgment or the proposed congressional legislation were valid.³⁰

Totem Poles, Amenities, Recreation, and Wilderness

Interest in preserving Indian antiquities in the Alaska region has had a long history. As early as 1888, Ensign Albert Parker Niblack of the U.S. Navy had recommended preservation of the Indian antiquities. Governor John Green Brady had been interested in setting up a park for their preservation, and W. A. Langille had succeeded under the Antiquities Act of 1906 in getting preservation of one village, Old Kasaan, as a national monument and in giving the totem pole park in Sitka protection under the same act. During the CCC days, Heintzleman, Flory, Linn Forrest, Viola Garfield, A. W. Blackerby, and others had succeeded in restoring and creating replicas of a larger number of poles.³¹

Totem pole work had been a function of the CCC, largely using Native labor. The CCC was phased out during the war, however, and activity in regard to the totems ceased. The Park Service had no boat to police Old Kasaan or to carry on maintenance, so it was phased out as a national monument in 1954. Regional Forester Greeley felt that some protection should be given to the site, so in 1964 he proclaimed it a historic site, under Forest Service protection. In other areas, however, existing poles were left to the elements. The poles were private property with ownership resting in the individual or the village; the Forest Service had no jurisdiction over them nor funds to take on the task of totem pole preservation or restoration.³²

In 1946 an art historian and writer, Katherine Kuh, made a confidential report on the totems for the Bureau of Indian Affairs. The report was both critical and ill-informed. Kuh was highly critical of the CCC for carving new poles; because of the "native conviction that copies can replace originals," she wrote, "much of the greatest Indian art of Southeastern Alaska has been totally destroyed or lost." She reported inaccurately that the Forest Service had no archaeologist or trained museum technicians to advise and direct the preparation of totems for rehabilitation and restoration. The Forest Service, she declared, had been guilty of scandalous neglect at Mud Bight, where poles had been left to the mercy of the elements. Meanwhile, the CCC work had not been continued, and at Hoonah a fire had destroyed a house and its contents. She recommended that the National Park Service control the totem parks and that archaeological aid be used in restoration work.³³

During a twenty-year period, little new work was done. Carl W. Heinmiller of the Alaska Indian Arts Council kept up an interest in totem restoration work. Linn Forrest continued his interest in Indian legends. There were some attempts to purchase poles from individuals in the states, but the Forest Service itself had

no authority to deal with such requests and referred the questions to the Alaska Native Sisterhood (ANS) and the Alaska Native Brotherhood (ANB). The Coast Guard, denied permission to buy a pole, stole one for its establishment. In 1960 the poles located in villages were classified in the National Forest Recreation Survey as historical or archaeological sites.³⁴

In 1966, Katherine Kuh wrote an article in the *Saturday Review*, a national magazine of literature and the arts. Like her 1946 report, it was sensational and inaccurate. She dealt with the neglect and loss of Native art in Alaska. Destruction, she said, came from the climate, from fire, and from governmental neglect. All governmental agencies were attacked. She described the abandonment of Old Kasaan as a national monument and reported that no one in the National Park Service in Juneau could explain, or indeed, had ever heard of Old Kasaan. As for the Forest Service:

*Some twenty-odd years ago, the Forest Service, without benefit of archeological or anthropological advice, instituted a program in which the local Civilian Conservation Corps undertook to rehabilitate—but, alas, more often to dismember or copy—old poles in Ketchikan, Wrangell, Sitka, Kasaan, Klawock and Hydaburg.*³⁵

No official reply was made to the *Saturday Review*, though Regional Forester Johnson explained the situation in a letter to the chief forester.³⁶

Despite its inaccuracies, the article brought action. The wife of Secretary of the Interior Udall read the article and called it to her husband's attention. George Hall of the National Park Service was brought into the picture. In Alaska the state legislature had passed an act dealing with artifacts and archaeological sites, essentially extending the same protection to such sites on state lands that the Antiquities Act of 1906 extended to antiquities located on federal land.³⁷ The result of all this was a Conference of Southeast Alaska Artifacts and Monuments held in Juneau on July 13-14, 1967. The meeting included representatives from the Universities of Alaska, California, and British Columbia, the National Park Service, the Alaska State Museum, the Alaska Native Brotherhood, Alaska Indian Arts, and the U.S. Forest Service. C. T. Brown of the regional forester's staff and Jack C. Culbreath of Information & Education represented the Forest Service. Their councils were somewhat divided. As Carl Heinmiller wrote to Brown, the arts and craft group wanted restoration as a minimum, the Bureau of Indian Affairs was not for anything unless it could do it, and the archaeologists were not for restoration on the site or for reproduction. The Forest Service explained the terms

of the Antiquities Act, giving the Department of Agriculture responsibility for protection of the poles and site. Another factor was that the poles were considered by the Forest Service to be private property, not to be removed or reconstructed without consent of the owners.³⁸

A series of meetings was held, with Jane Wallen

of the Alaska State Museum and Erna Gunther of the University of Alaska as moving spirits. An inventory of the remaining poles was taken by the Forest Service and the Alaska State Museum, and in 1970 a project was funded for removal of the better poles from isolated villages or sites and for their preservation.³⁹

Amenity Values—Steamship Lanes

A major problem, growing more difficult as time progressed, was that of preserving scenic or aesthetic values and reconciling them with economic use. Since the controversy is a continuing one, some background on Forest Service policy may be useful.

Forest Service regulation of cutting near roads for aesthetic purposes began in 1906 when George Cecil adopted such practices on Forest Service roads near Yellowstone Park. Under Henry S. Graves and William Greeley formal regulations were adopted, applicable to all regions, to preserve the recreational and scenic values along roads. These included leaving a scenic strip of timber along the roads to keep unsightly structures or disturbances such as borrow pits from the sight of travelers, and having permittees build their houses or garages back from the road behind a tree screen. On the forest highways under their jurisdiction, the Forest Service enforced such regulations.⁴⁰

The steamer lanes created a new problem. Clearcutting is silviculturally the best method of harvesting timber on the Tongass. But the relief of the Alexander Archipelago is rugged, and cutting areas are visible for long distances. The cuttings met with adverse comment from travelers. (At the same time, clearcuts in the states also met with increasingly adverse criticism because of increased recreational travel off the beaten path, and logging shows at higher elevations were often visible from the lowlands.)⁴¹ Heintzleman set up cutting regulations for the steamer lanes; these called for no clearcuts along lanes 1,000 yards or less wide and for special treatment for those lanes more than 1,000 yards but less than two and one-half miles wide. Heintzleman's recommendations were refined by Greeley in 1954 and by Hanson in 1958.⁴²

The policy, however, did not do all that it was intended. As tourism increased, clearcutting areas met increased criticism from the travelers. Part of it came from mistaking large blowdowns, such as the one in 1968, for destructive logging. Part stemmed from ignorance; people who know nothing of logging practices tend to equate clearcutting with strip-mining. There were also many sensational and usually inaccurate articles and letters to the editor in such diverse publications as *Field and Stream*, *Sierra Club Bulletin*, and *American Forests*.⁴³

A major factor here, as in other national forests, was the failure of the Forest Service to adopt an interpretive program appropriate to the changing American society—urbanized, with leisure time for recreation, and conditioned to the “hard sell.” In an earlier age the Forest Service had displayed great skill in working with local and regional advisory groups, both recreational and economic. Gifford Pinchot, for example, was an able public relations man; the CCC work of the 1930s had a good press; and publicists like Bernard De Voto, Richard Neuberger, and Arthur Carhart kept the accomplishments of the Service in the public eye during the early 1950s. As time went on, however, the Forest Service failed to publicize its aims or best accomplishments, such as the silvicultural benefits of clearcutting or Taylor's studies of logging and fish culture in Alaska. Not until 1961 did the agency adopt an interpretive service similar to that of the National Park Service. The delay was unfortunate.

By 1968 the Forest Service in Alaska took corrective action. Under D. Robert Hakala, a Forest Service naturalist who had had experience with the National Park Service, plans were made to introduce an interpretive program on the Alaskan ferries similar to that used by the National Park Service in its aquatic parks. The program was worked out in cooperation with the state of Alaska and the Alaska Ferry System. Forest Service information desks were set up in the forward lounges of the vessels; seasonal employees, fresh from training sessions, give descriptive lectures and slide shows, interpreting the changing scenes to the visitors. The program has been highly successful and should do much to interpret the forest to the visitor.⁴⁴

There were other ventures in interpretation and visitor amenities. Under Percy Hanson, a well-designed visitor center was established at Mendenhall Glacier. Nature trails were built and interpretive talks given. Assistant Regional Forester Johnson, on his first trip to the Chugach, was impressed by the possibilities of a similar program at Portage Glacier. A road was punched in to the area and an interpretive center was later set up. Both sites were highly popular with the public.⁴⁵

Since 1957 a large amount of money has been spent in planning and building recreational facilities.



U.S. Forest Service

Mendenhall Glacier near Juneau has been a popular tourist stop for decades. In 1958 a Forest Service engineering crew surveyed the right of way for a new road to an overlook point.



U.S. Forest Service

Auke Lake and Mendenhall Glacier through the picture window behind the altar of the Chapel by the Lake, 1958.

Two major study programs—Operation Outdoors, designed to restore facilities that had deteriorated from age or overuse, and the National Forest Recreational Fund, based on studies and estimates made to the year 2000—were both carried on in Alaska. In the Kenai new campgrounds were built and old ones restored. Some facilities damaged by the 1964 earthquake were restored. Under Forest Service permit, lodges were built in the forest and some ski tows were constructed.

On the Tongass National Forest, campgrounds were built near the cities; the campground near Mendenhall Glacier was especially outstanding. Because of the inclement weather in the area, however, cabins were built on inland lakes and near harbors. There was some experimentation with three-sided Adirondack shelters, but there were not suitable and were replaced by four-sided cabins or A-frame shelters. With increased demand, reservations for the use of the cabins was required and a small fee charged. Access to the cabins was by boat or plane; trails were still relatively few.

Road building involved a number of factors, some unique to Alaska. Forest Service standards in forest highways were maintained. The Forest Service was aware, however, of the increased popularity of motor camping and the desire of campers to be able to go from place to place for sight-seeing, sports, and recreation. The lack of roads near the communities made opportunities limited. During Hanson's administration studies were made regarding the building of a series of integrated forest roads in southeastern Alaska to connect with state highways and ferry routes. They would involve roads used initially for timber access but would later link communities and be part of the highway system. Over the years, Hanson, C. T. Brown, G. W. Van Gilst, R. O. Rehfeld, and Vince Olson worked over the plans.

The plan as finally developed involved upgrading timber access roads to meet higher standards than were customary. It involved planned timber harvest, roadside protection, connection with towns and Native villages, and docks from which ferries could carry tourists from island to island. It also involved the construction of trails to recreational areas and the planning of campgrounds. The road system would extend north from Ketchikan along the west side of Prince of Wales Island, through Kupreanof Island, along the west coast of Admiralty Island, and on the west side of the Lynn Canal to Haines.⁴⁶

Recreation is related to game management, which came to be of increased importance in the region. Before statehood the Forest Service cooperated with the Alaska Game Commission, the Biological Survey, and its successor, the Fish and Wildlife Service. With statehood the Forest Service became increasingly involved

with state officials in game management and its relation to timber harvest. Agreements were made for joint cooperation of the Forest Service, the Fish and Wildlife Service, and the state of Alaska in the management of the great wildfowl breeding grounds on the Copper River Flats and the delta of the Stikine River. The elk herd of Afognak, planted there in 1929, came to be of increasing interest to sportsmen. The Forest Service built trails and cabins in the area for the convenience of hunters. Moose were transplanted into the Copper River country, and the herd flourished. Here, transportation was largely by air, using the commercial airfield. In the Yakutat area, P. D. Hanson became intensely interested in the management of the moose herd. He conducted a study, using planes and helicopters, and found that the moose harvest should be increased because of overgrazing. The Forest Service built a number of small landing strips for the convenience of charter planes carrying hunters, as well as some cabins and trails.⁴⁷

During Heintzleman's administration there was considerable discussion over natural areas and wilderness areas. With the administrations of Greeley, Hanson, and Johnson came concern for multiple-use management. Before going out of office, Heintzleman received suggestions from Ray Taylor and Charles Forward on potential natural areas, including central Prince of Wales Island, Whipple Creek, Limestone Inlet, Hilda Creek, and several areas on the public domain. Limestone Inlet, Old Tom Creek, and Rock Creek were established in 1951, under regulation U-4, through Taylor's recommendation. By 1957 a series of other areas had been created or were under consideration, including Excursion Islet, Esther Island, Bell Island, Manzanita Bay, Telegraph Creek, Lake Shelokom, Taku River, and the Juneau Ice Field. Between 1964 and 1970 a large number of these areas were reserved under the multiple-use district plans.⁴⁸

Consideration also grew for reservation of wilderness areas. As has already been noted, Heintzleman's administration gave protection to the Tracy Arm and Fords Terror area. There was also consideration of the College Fiord area on the Chugach. During the administration of Greeley, there was continued correspondence on these as well as the Walker Cove-Rudyerd Bay area near Ketchikan.⁴⁹

With the passage of the Wilderness Act of 1964, there were renewed efforts to set up wilderness study areas.⁵⁰ Johnson had discussions with interested local groups, including the Alaska Conservation Society, the Sierra Club, and the Wilderness Society. A wilderness workshop was held at Juneau in February 1969, in which the objectives of the Forest Service were explained and the areas discussed. Plans were made to prepare complete studies of the major wilderness areas before the end of June 1970. Johnson also made a

speech to the Sierra Club in San Francisco on March 14, 1969, stating the objectives of the Forest Service in Alaska. There he announced that the chief had approved consideration of the Nellie Juan area—700,000 acres on the west side of the Kenai Peninsula. The proposal was received by the Sierra Club—by this time somewhat at odds with the Forest Service—with a notable lack of enthusiasm. Other area proposals included the Tracy Arm-Fords Terror area south of Juneau, the Walker Cove-Chickamin River area, and Russell Fiord, near Yakutat. Another area was under consideration at the end of the year. Vince Olson, supervisor of the North Tongass, and R. O. Rehfeld, of the Ketchikan office, played a large part in preparing the plans. The areas under consideration were far larger in extent than the areas considered at an earlier date by Heintzleman. They would total well over 2 million acres in areas presenting a unique relationship of water and land beauty. They would present special problems in management. Completion of the work would depend on thorough field examinations of the areas concerned, including examination by the Geological Survey as well as a search for minerals by the Bureau of Mines.³¹

The chief also had under consideration a plan to create a national recreation area in the Kenai Peninsula. The area considered has little value for timber harvest, but is preeminently suited for recreation. Management proposals for the area were drawn up. Another consideration was that if Congress passed a Scenic Highway Act, the Sterling and Seward-Anchorage highways would come under immediate study; in the national forest portions of these highways, there would be special management to preserve aesthetic qualities.³²

Other matters have been more controversial. Conservationists in Sitka proposed that the Chichagof-Yakobi islands area be made a wilderness. Records show that a great deal of handlogging and mining activity had taken place there around the turn of the century, but, with the passage of time, the area had been deserted. The idea was supported by articles in *National Parks Magazine* and the *Sierra Club Bulletin*. The chief of the Forest Service, however, rejected the plea on the grounds that the entire proposed wilderness was included in the sale area of the Alaska Lumber and Pulp Company and that there were other conflicting uses. Also, near Petersburg, a local group protested plans of the Forest Service to build a timber access road up Petersburg Creek to connect Petersburg with Portage Bay on Kupreanof Island.³³

Admiralty Island has been the source of almost perpetual controversy. The controversy begun by John Holzworth flared up during the 1950s; in 1964 the Forest Service developed a thorough and far-reaching

plan for the island. It involved protection of the 800 to 1,000 brown bear through sanctuaries at Pack Creek and Thayer Mountain, making population studies, and controlling the harvest. It also involved the protection of Sitka deer. Timber harvest was planned on the basis of a past record of seventy to eighty years of cutting 0.5 percent of commercial timberland per year and modifying previously studied clearcut areas to conform with recreational use; the continued building of cabins was planned for the lake area.³⁴

Despite these plans, attacks on Forest Service policy on Admiralty were revived. Ralph Young, a Petersburg guide, wrote a sensational article for *Field and Stream* titled "Last Chance for Admiralty." Another article dealing with the area had as its theme the "rape" of the land, in particular mistreatment of land around Whitewater Bay. The articles were sensational in tone and were not hampered by rigid adherence to the facts. They stirred up national interest. The Forest Service answered hundreds of letters on the subject and printed many brochures, but the stories were, and still are, widely believed.³⁵

People writing conservation history in the future will find much to write about Sierra Club activity during the 1960s and 1970s. With a growing militancy in the leadership of the club, it fought to make itself the dominant environmental organization in the country. There was an internal struggle for leadership, and the more militant wing split off into a separate organization called Friends of the Earth. One aspect of their new approach has been litigation. A series of challenges to the multiple-use philosophy in national forests has occurred in separate cases from California to Michigan. These have presented new problems to the Forest Service, accustomed since 1905 to dealing with local and regional groups as well as local communities. One result of the litigation has been the development of a body of environmental laws.

Sierra Club activity was not noticeable in Alaska until the late 1960s. The *Sierra Club Bulletin* had published an article by Stewart Edward White on the bear situation on Admiralty during the 1930s, but the club took no active part in either the movement to create Glacier Bay National Monument or to create a national monument on Admiralty. Its interest in Alaska, therefore, has been a recent development.

In February 1970 the Sierra Club brought suit against the Forest Service, declaring the Juneau sale to U.S. Plywood-Champion Papers illegal. Its charge was that the sale violated administrative procedures and the National Environmental Policy Act of 1969. The Sierra Club was joined by local conservationists—the Forest Service by U.S. Plywood-Champion and the state of Alaska.

Sierra Club v. Hardin had the effect of stopping action for both the Forest Service and the company. The Forest Service was stalled on perfecting its detailed multiple-use plans for the west side of Admiralty,

while the loss to the company was enormous. The trial was originally set for August 17, 1970; the Sierra Club asked for a postponement, and it was finally set for November fourth.⁵⁶



U.S. Forest Service

Tracy Arm on the Tongass National Forest is part of the Tracy Arm—Fords Terror Scenic Area.

8

Epilogue: 1970–1979



Errata

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J. A. Sandor picture caption, change “present” to “1984.”

Epilogue: 1971-1979

The application of the conservation principle necessarily moved in different directions as one or another problem became important.

—Gifford Pinchot, "How Conservation Began in the United States," *Agricultural History* 11 (October 1937): 264.

Perhaps the biggest organizational change during my present assignment in Alaska has been the emphasis on bringing fisheries, wildlife, and other specialists into the organization. Early in my assignment, I met with Governor Hammond and other state officials to propose a special fisheries-wildlife program emphasis under the provisions of the Sikes Act and other authorities. The governor and his key staff and the congressional delegation enthusiastically supported this program. Forest Service Chief John McGuire and Assistant Secretary of Agriculture M. Rupert Cutler also strongly supported this emphasis, and we were able to obtain additional funding and manpower ceilings to get this program emphasis underway. Thirty fishery and wildlife biologists have been added to our planning and program staffs during the past three years, compared to four on board in 1975. This emphasis has also had substantial public support.

—John A. Sandor, letter to the author, December 12, 1979

Introduction

The history of the Forest Service in Alaska during the 1970s is one of dramatic change and heated controversy. A series of problems, accumulating over the years, came to culmination during this period. Alaska, a peripheral area in land management over most of its history, now became the center of national interest. The historian finds himself confronted with masses of contradictory and confusing data, but four themes may be stated.

First, it was a period of strong and sometimes enlightened leadership on the part of both Congress and the presidents. The legislative record of the successive Congresses ranges from correcting deficiencies in the Organic Act of 1897 to establishing new agencies. Presidential leadership, following in the paths of John Kennedy and Lyndon Johnson, was also strong, and sometimes drastic. State leadership was strong, culminating in good legislation that furthered state-federal cooperation in game management and timber management.

Second, Alaska became the proving ground for environmental law. Just as the Roosevelt-Pinchot policies

met a series of legal tests in the administrations of Roosevelt and Wilson, so the legislation of the Kennedy, Johnson, and Nixon eras underwent legal tests during this era. *Sierra Club v. Hardin* was but the opening gun of a series of cases and controversies, ranging from business monopoly and environmental concern to the interpretations of the president's power under the Antiquities Act.

Third, attitudes toward federal policy and state land policy and use reflected the growing socio-economic changes and power structure within the state. "Environmental" groups had in the previous eras been small in number and moderate in approach. In the period from 1968 to 1979, they burgeoned and proliferated. Like those in the Lower 48, they were noisy, often ill-informed, litigious, and hell-bent on confrontation. Their tactics and sense of responsibility varied from group to group, and they deserve intensive analysis. They reflect the growing economic diversification within the state and an increasing willingness to engage in participatory democracy. A second power

group were the Alaska Natives. The Alaska Native Claims Settlement Act of 1971 gave Native groups both money and land, and with this increased power, rather than operating on a tribal basis, they organized into corporations, which became a base for political and economic power.

Fourth, there was some loss of power in the Forest Service as an administrative agency, both on the national and regional levels. Under Chiefs Edward Cliff and John McGuire, the Service had to brace itself against numerous attacks from pressure groups like the Sierra Club, face lawsuits attacking its basic methods of operation, and ward off interagency fights by empire builders and ambitious politicians. In addition, legislation stressed accountability and congressional oversight at the expense of administrative discretion. These struggles were carried on within the region as well, as Charles Yates and John Sandor fought to adjust local goals to national objectives.

Within the region there were fundamental administrative changes. Multiple use, an article of faith in the Forest Service since its inception, gave way in many areas to single use or dominant use. The pattern of ownership in the Alaska national forests became diversified with the great land rush of the 1970s. In the post-Civil War period in the western states and territories, there was a land rush by corporations and settlers to take full advantage of a generous policy of disposal of the public domain. A similar rush is now taking place in Alaska. But the similarity is imperfect, since the early rush was by absentee capitalists, largely from the East, carpetbaggers bent on getting rich and making money. The present corporations are resident capitalists with varying views. There is some irony in the fact that the Bering River coalfields, first filed on by absentee capitalists under the pernicious Alaska Power-of-Attorney Law,

are now sought by Chugach Natives. The net result of this, and of continued state selections, will be a diversified pattern of forest ownership such as has existed in the states since the Forest Service was established. The new diversified ownership is both a challenge and an opportunity. The Pacific Northwest might serve as a model for Alaska. In the beginning the Forest Service found the diversified ownership a source of conflict, but District Forester E. T. Allen formed a "Triple Alliance" of private, state, and federal timberland ownership in the Pacific Northwest to work on common problems and establish a model of cooperative federalism. Alaska may well follow the same pattern; both the state and Native groups seem at this writing to be moving in that direction.

Those who have followed the history of the Forest Service through the years will perceive a variety of ironies in the course of Alaskan forestry. Afognak Island, reserved primarily as a fish and forest preserve, became a multiple-use area after World War II. Now much of it may go into private ownership. The mudbanks of Controller Bay, once the scene of another controversy that removed it from the national forest, are now reserved as a refuge for the trumpeter swan. Admiralty Island, conceived by the Forest Service as a multiple-use area, and the scene of some of the bitterest controversies, is now a national monument. Misty Fiords National Monument, the first addition to the southeastern Alaska national forest system, was originally proposed by Will Langille as a source of timber. The process of scientific investigation has become steadily institutionalized, from the early recommendations of Will Langille, applying such scientific principles to the forest as he had learned from John Gill Lemmon and Wilfred Osgood, through the gifted Harold Lutz and the many-sided Raymond Taylor, to team research and interdisciplinary investigation.

Personnel and Planning

Howard Johnson was succeeded as regional forester by Charles A. Yates. Yates was a Californian who had spent much of his professional career in his home state. He began as a CCC employee (1934-1936) in the Trinity National Forest. He attended junior college from 1937 to 1938, then worked for the Forest Service in the Shasta National Forest until 1941. His work was interrupted by the war; he entered as a private in the 82nd Airborne Division, served as a paratrooper officer in the United States, England, France, Belgium, Holland, and Germany, and then ended the war as a captain in 1946. He then continued his education, graduating from Oregon State University in 1948.

From 1947 to 1971, Yates worked on a variety of jobs in California—fire control assistant on the Plumas, assistant ranger on the Cleveland, ranger on the Six Rivers, fire control officer on the San Bernardino, and forest supervisor on the Klamath. In 1962 he shifted his sphere of responsibilities briefly to the Rocky Mountain Region as assistant regional forester. He returned to California as deputy regional forester in 1966 and came to Alaska in February 1971.¹

Yates came at a time of change and turmoil. He endured trial 1 and 2 of *Sierra v. Hardin* and other environmental suits, and he answered a series of magazine articles attacking the Forest Service. He stopped

the Alaska Lumber and Pulp Company from logging until a thorough study of the West Chichagof-Yakobi area was completed. Ranger districts were ended during his term. He carried out a reorganization plan initiated by his predecessor, moving headquarters of the North Tongass from Juneau to Sitka and creating headquarters for the Stikine Area in Petersburg. He created the Alaska Planning Team and carried on a host of other activities. His administration was one of change and controversy.



C.A. Yates, 1971-1976

Yates was succeeded by John A. Sandor in 1976. Sandor, a native of the state of Washington, served in World War II, then attended Washington State University to receive a bachelor's degree in forestry and range management in 1950. Later on, he took educational leave from the Forest Service and did graduate work at Montana State University and at Harvard. He had a conservation fellowship at Harvard and earned a master's degree in public administration there in 1959.

Sandor worked for the Pacific Northwest Forest and Range Experiment in various capacities in Oregon, Washington, and Alaska. He came to Alaska when Arthur Greeley was regional forester and stayed for some years. He served in personnel management for the Southern Region in Atlanta from 1965 to 1968; assistant to the chief in Washington, 1968-1971; and deputy regional forester, Eastern Region, in Milwaukee, 1971-1976. Active in the Society of American Foresters, he helped form the Alaskan chapter and section. He also was national chairman of the Natural Resources and Environmental Administration Section, American Society for Public Administration, and serves on the section's Board of Directors.²



J.A. Sandor, 1976-present

Sandor brought organizational changes to Alaska. Robert H. Tracy was appointed as deputy regional forester. Tracy was a 1951 graduate of the School of Forest Management at Colorado State University. He served from 1951 to 1967 in the Pacific Northwest—on the Rogue River National Forest in timber management, on the Gifford Pinchot National Forest in timber management, on the Malheur as district ranger, and on the Mount Hood in the supervisor's office. From 1967 to 1969 he was in California on the Shasta-Trinity National Forest as deputy forest supervisor. In Region 4 he served from 1969 to 1973 as a supervisor. He came to Alaska in 1973, serving first as assistant regional forester for resources, then from 1977 on as deputy regional forester.

Substantial administrative changes were made in the Alaska Region, and more are pending. Three supervisor districts were established on the Tongass. These are the Ketchikan Area (Ketchikan), the Stikine Area (Petersburg), and Chatham Area (Sitka). However, the ranger districts, dropped in 1973, were to be reestablished in 1980-81, ten to twelve in number.³

Both Yates and Sandor gave much energy to land-use planning. The statutory and administrative bases of each of these should be briefly stated, since they constitute a series of interrelated directives.

1. The Wilderness Act of 1964 called for classification of all roadless areas of more than 5,000 acres for wilderness study, with wilderness status to be determined by act of Congress rather than by administrative decision of the Forest Service.

2. The Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) called for intensive planning and direction. This was modified and clarified with the National Forest Management Act of 1976 (NFMA), made necessary because the Monongahela decision invalidated part of the Organic Act of 1897. It revises that act, focusing on land-management planning, timber management, research, public participation in decision making, and state and local forestry. It makes no break with the past acts, such as the Act of 1897 or the Multiple Use-Sustained Yield Act of 1960, but stresses intensive work and review, legislative oversight on the conduct of management, and the following of policy guidelines. Management should involve interdisciplinary teams to provide integrated land-management plans and revisions to overall plans every fifteen years. In timber management, "even flow" policy was affirmed by law. In silviculture it involved emphasizing production of sawtimber size and quality rather than pulp, scheduling final harvests in stands that had reached the culmination of growth, preservation of a diversity of plant communities and tree species, and preservation of wildlife habitat. Clearcutting was permitted if it was the optimum silvicultural method and consistent with other objectives of the act.
3. The National Environmental Policy Act of 1969 (NEPA) established the Council on Environmental Quality and provided for interdisciplinary examination and review of any action that might effect the natural environment. Broadly worded and far reaching, it has served as the basis for much litigation.
4. The Alaska Native Claims Settlement Act of 1971 (ANCSA) provided for the classification of federal lands in interior Alaska into national interest lands, and it settled Native claims by giving them money and land, some of it on national forests.
5. Two acts were important in cooperation between state and the Forest Service. One state act provided for increased cooperation between state and Forest Service in forest management and protection. The Sikes Act of 1974 provided broad authority for the states to plan and carry out fish and wildlife management programs on national forest lands, and to control off-road vehicle use on these lands.⁴

Land-management planning, under the RPA and the NFMA, required work on four different planning levels, each of which deals with different aspects of the decision-making process. First was the directional

planning level—defining Forest Service responsibilities, legislative mandates, and other binding mandates. On this level, a Southeast Alaska Guide was distributed, including sections on land management, planning direction, land-management policies, and the RPA. Second was the land allocation level, complying with directional decisions to define where combinations of land use would be made available. Six interagency task forces amassed information to determine how each of about 800 watersheds on the Tongass should be managed. Four categories of designations were applied. This, as the first step, involved public participation and cooperation with the University of Alaska. A tentative plan was developed for the Chugach in 1974 and for the Tongass by December 1978. Closely associated with this was the RARE II examination, identifying which areas were to be recommended for instant wilderness, wilderness study, special management, and multiple uses. A third level was the prescriptive level, determining how management activities were to be coordinated and controlled. This involved training of interdisciplinary teams and a socio-economic study to be carried out with the University of Alaska. A fourth was the implementation level, involving project plans, contract permits, and the like.

The planning process was long and complicated, both because of the complexity of the task and because of the turbulent political context—state and national—during which the task was carried out. Categories of land were divided into four land-use designations—LUD I, II, III, and IV. LUD I was wilderness, excluding mining exploration (after 1983), timber harvest, water projects, and roads, but permitting boat and air access. LUD II was wildlands, to be managed in a roadless state, but permitting wildlife and fisheries-habitat improvement and recreational facilities. LUD III would involve multiple-use management, including commercial production; and LUD IV emphasized production of commodity and market resources.⁵

Several distinct pressure groups can be identified in relation to the land-management plans and the RARE II program. The Alaska Loggers Association favored multiple use of forests, with limited wilderness. Two other groups supported them: the Citizens for Management of Alaska Lands (CMAL) and the Organization for Management of Alaska Resources (OMAR). CMAL was made up mostly of resource users and businessmen; OMAR had more of the chamber-of-commerce development type. Both supported limited wilderness and submitted alternative plans. On the side of wilderness and nondevelopment, a variety of "environmental" and "conservation" groups were active. *Environmental* and *conservation* have become shorthand for those favoring reservation of land for noneconomic use. The terminology turns on its head Pinchot's definition of

conservation as wise use.) A group in the Panhandle formed the Southeastern Alaska Conservation Coalition (SEACC), with strong support in Juneau, Sitka, Petersburg, and Ketchikan. SEACC submitted an alternative plan. Other conservation groups focused their attention on the interior and the Prince William Sound—Cook Inlet area.⁶

The administration in Washington, through the secretary of agriculture, also submitted its own alternatives in regard to the Alaska lands, stressing the wilderness viewpoint. In addition, the state of Alaska

worked closely in the planning process through the Department of Natural Resources and the Department of Fish and Game. In this, as in other resource matters, Governor Jay Hammond took a deep personal interest.

The RARE and RPA studies, however, represented only one aspect of the land-use controversy in Alaska. It was only one ring of a four-ring circus. Another was the allocation of land to Alaskan Natives, still another the national interest lands, and still another the state interests. As time went on, Congress increasingly played the role of ringmaster, and at times, some thought, the clown.

Alaska Native Claims Settlement Act

The Wilderness Act and the RPA related to identification of wilderness and overall management. A second act related to land transfer to two owners—first, Alaskan Natives, and second, national agencies. The story is long and complicated.

The Alaska Native Claims Settlement Act (ANCSA) was passed on December 18, 1971. It has been subjected to several amendments, and more are proposed in 1979 (at this writing). It dealt with an overall settlement of land claims of Alaskan Natives, and also with classification and allocation of the public lands of Alaska. In regard to the Alaskan Natives, the act gave them a cash payment of \$962 million and some 44 million acres of land, including 2 million acres for cemetery and historic sites. Native corporations were set up to manage the assets. In regard to other lands, it authorized the secretary of the interior to withdraw public lands (mostly BLM lands) to ensure that the public interest be protected, and in section 17 (d) 2, withdrawal not to exceed 80 million acres as units of Forest Service, National Park Service, Fish and Wildlife Service lands, or units of wild or scenic rivers. The act provided for the formation of a Joint Federal-State Land-Use-Planning Commission, with broad powers to recommend on land-use planning and allocation. A series of old acts was repealed, including the Native Alaskan Act of 1906, giving Natives allotments on the ground of past occupancy (like the early squatters' rights or Preemption Act). Applications pending at the time ANCSA was passed would be approved, but the Natives concerned would lose their rights to land otherwise available under section 14/h.5 of the act. In 1974, 7,500 claims were pending, and at this writing 230 are outstanding on national forest land.

To some in the Forest Service, the "highgrading" of land by Native corporations was a cause for alarm.

They believed that it was obviously the intent of Congress to minimize, to the extent possibly consistent with achieving the intent of ANCSA, the impact of the act on wildlife refuges and national forests. Such intent was implicit in section 12 (2), which limited selection on the Chugach to 69,120 acres per village and on the Tongass to 23,040 acres per village, with no regional corporation selections on either forest except for historic sites and cemeteries. This would have limited selections on the two forests to 577,760 acres, plus cemeteries and historic site selections. However, amendments had increased national forest selections on the Tongass from 253,440 to 546,480 acres, which increased total national forest selections to 880,000 acres. At present, proposed amendments would triple the acreage to 1,600,000, three times that arrived at in 1971. The stated objectives of the involved Native corporations, "to consolidate ownership and to obtain land of like kind and character to land traditionally used," may be very persuasive. However, since the 605 individuals enrolled to Chugach National Forest are already receiving the equivalent of 343 acres of land of "like kind and character traditionally used," it would appear reasonable to believe that corporate economic interests rather than traditional interests are the motivating force behind these proposals. This is supported by the fact that of the 2,106 individuals enrolled to the Chugach region, only 871 or 41 percent reside in the region and would have occasion to use "traditional" lands.⁷

Management of the land would be by two levels of corporations: regional, based on the geographical region; and village, based on the settlement. Selection of village lands would be contiguous to the village, in a compact tract. In regard to cities, urban corporations were formed, with a larger area in the hinterland to select from, dependent on historical associations. Regional corporations had a larger area to choose from.

In the Tongass the regional corporation Sealaska was created, with headquarters in Juneau. Nine village corporations were formed and two urban corporations, Shee Atika in Sitka and Goldbelt in Juneau. Sealaska was entitled to select 270,000 acres, mainly from national forest lands; each of the village and urban corporations were allowed 23,040 acres (one township). This was in addition to a grant by the Court of Claims of 23,040 acres, affecting nine villages.

The allocations were subjected to some changes, and the following chart may indicate the major ones. Acreages, as regarded by the national forests, were as follows (provided by ANCSA and later amendments):

11 Southeastern Villages	
(includes Sitka and Juneau)	253,400 acres
3 Chugach Villages	207,360 acres
4 Koniag Villages	
(includes Kodiak)	<u>116,280 acres</u>
	577,040 acres

PL 94-204 and 94-156 amended ANCSA and increased national forest selections as follows:

12 Southeastern Villages	276,480 acres
Sealaska 14(h)(8)	270,000 acres
3 Chugach Villages	207,360 acres
4 Koniag Villages	<u>116,280 acres</u>
	870,120 acres

Proposed increased in 1979 legislation included:

12 Southeastern Villages	276,480 acres
Sealaska Region	279,000 acres
3 Chugach Villages 12(a) + 12 (b)	264,000 acres
Chugach 14 (a) 8	30,000 acres
Chugach 12(c) study, up to	350,000 acres
4 Koniag Villages	116,280 acres
Koniag Exchange	<u>340,000 acres</u>
	1,655,760 acres

This does not include the involved regions' share of the 2 million acres for cemeteries and historic sites.⁹

A series of questions developed, particularly in regard to the selections of regional and urban corporations. Much controversy centered around Admiralty Island. Angoon, the only Native village on the island, had adopted a way of life based on fishing and traditional means of livelihood. On the other hand, Goldbelt, Juneau's Native corporation, also had historical claims to Admiralty, as did Shee Atika, the Sitka Native corporation. Both desired timber production. Kootznoowoo, Angoon's Native corporation, feared that timber harvesting would disturb the traditional way of life. After a long negotiation, Goldbelt agreed to off-Admiralty lands. It was conceded a value-for-value exchange, with a premium to Goldbelt for the public interest involved. Negotiations with Shee Atika are proceeding. The recent creation of the national monument, however, makes it likely that their selections will be off Admiralty. In addition, Kootznoowoo has proposed that it

be given off-Admiralty cutting rights, in order to preserve natural habitat on the monument. This matter is still under negotiation.

There were other problems. Sealaska had purposely overselected its 14/h.5 estimated acreage. To protect itself from loss of selection opportunity, the corporation overselected by about 100,000 acres. This acreage will be returned to full national forest status. In addition, part of Sealaska's priority selection lay close to the Yak-Tat-Kwaan selection near Yakutat. The act grants Sealaska selection rights near Yakutat only after concurrence by the governor of Alaska. The area chosen is in a tract that the governor feels should be in public ownership, and he has agreed to the Sealaska selection only if the corporation and Forest Service agree to exchange these lands for others within the Tongass. There was also some attempt by Chugach Natives, Inc., to select lands on the Tongass to compensate for other land selections that might be included in the proposed Wrangell Mountains National Park. The Forest Service objected to this, and the matter has been dropped.⁹

Selection in the Chugach underwent the same process. Two regional corporations, Koniag and Chugach Natives, were formed in the region. The corporations had, by 1978, identified about 15 percent of the Chugach National Forest for selection. Village selections accounted for 638,150 acres, mainly on Afognak Island and Prince William Sound. An additional 70,000 acres was sought on Prince William Sound. Native historical and cultural sites totalled 38,365 acres, with yet another 30,000 acres susceptible to selection. In addition, Chugach Natives sought to exchange land on the Bremner River for economically valuable land on the shore, including the Bering River coalfields, Icy Bay shoreline, and Montague, Knight, and Latouche islands. This would, in effect, exchange an area of mainly scenic value for one of great economic value.

The net effect of the selections in the Chugach have been loss of most of its economic base in regard to timber and recreation. Afognak, once reserved as a forest and fish culture reserve and then used as a multiple-use area by the Forest Service, seemed likely to revert to Native ownership. In addition, some of the other areas were specialized management areas, and others were subject to state selection.

In regard to state selection, in 1977 the state had applied for 104,907 acres in the Chugach National Forest. They were mostly scattered throughout the Prince William Sound area and concentrated near population centers of Cordova, Whittier, Seward, Moose Pass, and Cooper Landing. On the Tongass, 142,700 acres were selected, mostly near population centers of Juneau, Ketchikan, Sitka, Petersburg, and Wrangell. The total amount the state can select from the national forests is 400,000 acres.¹⁰

(d) 2 Lands

The (d) 2 land question, which still is unsettled, is also complex. Briefly, the question of Native lands and state claims raised conflicts about who got what. In 1966 Secretary Stewart Udall put a "freeze" on all transfers of title to public land in Alaska in order to get a breathing spell for legislative settlement. In addition to the Native settlement land, it laid out a planning procedure for public easements and transportation corridors and continued the land freeze for ninety days, during which time the secretary would determine which of the public lands would be temporarily withdrawn in the public interest, i.e., (d) 1 lands. Section 17(d)2 allowed the secretary to select up to 80 million acres deemed suitable for national parks, national forests, wildlife refuges, or wild and scenic rivers systems in Alaska. Congress would decide to which system each area of the (d) 2 lands would belong by the end of 1978.

In March 1972 Secretary of the Interior Rogers Morton designated 80 million acres as (d) 2 lands and withdrew 47 million acres as (d) 1 lands for future study. He asked that a clear distinction be made between the public interest lands [(d) 1] and the national conservation system lands [(d) 2]. He asked that plans be recommended to him by September 1972.

The Forest Service set up the Alaska Planning Team, headed by Bernard A. Coster and including Verner W. Clapp, John A. Leasure, Carol B. Hutcheson, and Hatch Graham. They prepared a series of recommendations for new national forests in the interior. Eight new national forests were proposed in September 1972—Wrangell Mountains, Fortymile, Porcupine, Sitsna, Lake Clark, Kuskokwim, Yukon, Koyukuk, as well as extensions of the Tongass and Chugach national forests.¹¹

Study teams also were created for the National Park Service, Fish and Wildlife Service, and Bureau of Outdoor Recreation. The NPS efforts were directed toward areas of outstanding scenic, recreational, or scientific interest; the Fish and Wildlife Service, toward waterfowl and seabird nesting and staging areas and big game range; the Bureau of Outdoor Recreation, toward the rivers for wild or scenic value. All worked closely with the Institute of Northern Forestry at Fairbanks in the collection of data, and all presented volumes of elaborate studies. In addition, the Soil Conservation Service identified 20 million acres of agricultural land, plus more than 18 million acres of grazing lands. The Bureau of Mines and Geological Survey made reports on mineral resources.¹²

In December 1973 Secretary of the Interior Morton announced his decisions and sent to Congress proposed recommendations for the four federal systems in Alaska. The recommendations included creation of

three new national forests, plus additions to the Chugach. These were the 5.5 million-acre Porcupine National Forest, including the Yukon Flats and some substantial forestland; the Yukon-Kuskokwim National Forest, 7.3 million acres in area with about 2.8 billion board feet of commercial timber; and the 5.5-million-acre Wrangell Mountains National Forest, in two units flanking the proposed Wrangell-St. Elias National Park. Two areas were proposed as additions to the Chugach, both of them glaciated areas—185,760-acre College Fjord and the 395,400-acre Nellie Juan region. These would be managed primarily for recreation.

With these recommendations made, the Forest Service planning team made detailed studies of the proposed areas. The planning team, over the years, had a mixed membership, as some were transferred and others came on. Barney Coster was transferred to Washington. Those working on the team over the years included Marcus W. Petty, Gerald J. Coutant, John Galea, Hatch Graham, Carol B. Hutcheson, Adela G. Johnson, Michelle M. Michaud, E. Jane Mullings, Sigurd T. Olson, Ray T. Steiger, and Pamela D. Wilson. Elaborate area guides were prepared for each of the national forest areas considered. Other agencies had similar planning groups and made studies of proposed national parks, wildlife refuges, and wild and scenic rivers. There was obvious competition among the agencies as to, first, how the area was to be used, and second, boundaries between different agency lands.¹³

From the clear fresh air of the taiga and forest, we may shift to the toxic atmosphere of Washington. Between 1974 and 1978 a large series of bills was introduced annually. Their sponsors included Senator Henry Jackson of Washington, who generally favored balance of multiple-use and park lands; Representative Morris Udall of Arizona, the spokesman for the preservationists in Alaska; and Representative John Dingell of Michigan, whose chief interest was in wildlife refuges. Both the state of Alaska and the Joint Federal-State Land-Use-Planning Commission favored setting up a new system of lands, under joint federal-state study and classification for primary use. Representative Don Young and Senator Ted Stevens of Alaska also introduced bills, strongly stressing multiple-use areas and also favoring some areas under joint federal-state management. They also recognized the need for transportation corridors.

After 1977 there occurred important shifts in the alignment. One was the fact that an Alaskan Coalition, made up of groups such as the Sierra Club, Defenders of Wildlife, Environmental Defense Fund, Friends of the Earth, Western Federation of Outdoor Clubs, Wilderness Society, and National Parks and Conservation



Office of Congressman Young

Secretary of Agriculture, Earl Butz, discussing D-2 with Congressman Don Young.



Office of Congressman Young

Congressman Young gives testimony on leg hold traps before the Interior and Insular Affairs Committee.

Association, formed a strong and well financed lobby to push for the maximum acreage in single-use rather than multiple-use units. Those favoring multiple use could not get a countervailing force. The Society of American Foresters and the American Forestry Association came out for a balanced bill, but it failed. The second shift was in administration, with the accession of President Jimmy Carter. Rogers Morton, as secretary of the interior, had been a suave and skillful politician, adept at reaching compromises; and Secretary of Agriculture Earl Butz had strongly defended his department. Cecil Andrus, the new interior secretary, had what one Forest Service officer called a "bulldozer approach" to matters and was therefore harder to bargain with. Secretary of Agriculture Bob Bergland seemed to lack the decisiveness of Butz, and Assistant Secretary Rupert Cutler was also weak in protecting the aims of the Forest Service in the area.

With 1977 came hearings on the alternatives. Udall had succeeded in introducing to the House a bill strongly weighted in favor of the parks. Hearings were held in Alaska on the proposed bills by the Subcommittee on General Oversight and Alaska Lands of the Committee on Interior and Insular Affairs. The hearings showed a deep division among Alaskans as to the uses of the lands and their administration. Admiralty Island status; subsistence hunting and fishing; transportation corridors; the amount of timber harvest necessary to the economic well-being of the southeast, and the interior as well; snowmobiles, airplanes, and powerboats in wilderness areas; "rape" of the land, "tying up" of resources, mining activities versus scenic beauty; development of previously undeveloped areas; the role of local people, and of the state, in management; relationships of Indian lands to park enclaves—all these issues were discussed in mass meetings in Fairbanks, Sitka, Juneau, and Anchorage, and in town meetings in the interior and on the coast, such as at Fort Yukon, Bethel, Dillingham, and Kotzebue.

The Alaska Coalition united on HR 39, representing the strongest support of the National Park Service

and Fish and Wildlife Service. Skillfully presented in the House by Representatives Udall and John Seiberling, it was brought to a vote in 1978 and passed the House by a large margin. In the Senate, also, it gained ground, despite opposition by Senators Mike Gravel and Ted Stevens. However, the deadline for a decision on the (d) 2 lands was approaching; the Alaska senators apparently had difficulty in agreeing on tactics and strategy, and increasing support grew for the Senate version of the House bill. Debate on the bill ended, however, when Senator Gravel threatened a filibuster, and the session ended without any decision.¹⁴

Failure to act led to presidential action. One hundred and forty-six members of the House urged presidential action; both Bergland and Cutler supported action, also. Consequently, On December 1, 1978, President Carter used his power under the Antiquities Act of 1906 to set up seventeen national monuments, totaling 55,975,000 acres. An additional 38,930,000 acres were designated as national wildlife refuges. It was a clear triumph of single-use designation over multiple use, and it was a victory of the Alaskan Coalition.

Two proclamations in the Tongass effected the Forest Service. Both Admiralty Island and Misty Fiords were designated as national monuments, to be administered by the Forest Service. This represented a break with tradition, since the Transfer Act of 1933 had given the National Park Service sole jurisdiction over national monuments. It ended a forty-year controversy over the status of Admiralty. Misty Fiords represents one of the ironies of history, since this was the first addition to the Alexander Archipelago National Forest and the first unit of the Forest Service in Alaska to be designated "Tongass." Its original creation was not because of its scenic beauty, but as a timber reservoir for the Ketchikan lumber industry and to curb Canadian log theft across the Portland Canal. So far as the Chugach is concerned, some of the additions are adjacent to the forest. They are of recreational and wildlife value and will represent a new area of cooperation between the Forest Service and the Park Service.¹⁵

Legal Struggles

The administrations of Yates and Sandor were marked by an unending series of legal cases and controversies. A large number of issues involving the Forest Service and other resource agencies continued during this decade. Many pressure groups evolved in Alaska.

Several things account for this phenomenon. One was the vast amount of legislation passed during this term. Some acts, such as the Multiple Use-Sustained

Yield Act, were complex and, hence, controversial. The National Environmental Policy Act lent itself to litigation and was as deadly, and occasionally as random, in its operation as was the Allen Pepperbox in the hands of the frontiersman. Old statutes, such as the Organic Act of 1897, came under attack. The Alaska Native Claims Settlement Act of 1971 lent itself to land-grabbing and pressure-group action.

A second factor was changes in the composition of the courts. Court decisions have gone through cycles,

and courts have played important parts in shaping federal conservation policy. The courts in the 1970s became as important in the development of environmental law as was the Taft-Wilson court in interpreting Pinchot-Roosevelt conservation policies. Traditionally, the court had recognized "standing" as primarily economic standing; in other words, individuals would have to show direct personal injury before being allowed to sue. The present courts give standing to noneconomic groups and individuals, and hence broaden the base of those who can litigate. Second, the court has taken the bare meaning of words, rather than congressional intent or administrative discretion, in interpreting statutes. Third, the court has leaned in favor of participatory democracy rather than expert opinion.¹⁶

A third factor contributing to legal disputes and controversies has been changes in the nature and tactics of pressure groups. The Sierra Club, as noted earlier, had begun as a California organization. It began its expansion about 1940 when it took over the Western Association of Outdoor Clubs and made that organization a sounding board for its own policies. By 1960 it had begun a program of national expansion. Carefully misunderstanding the term *multiple use*, it alone, of all major outdoor organizations, opposed the Multiple Use-Sustained Yield Act of 1960. Aided by grants from the Ford Foundation, the club began a series of litigations against the Forest Service, beginning in California and by 1968 moving to Alaska. Noisy, unscrupulous, and adept in using the big lie and the glittering generality as publicity gimmicks, the Sierra Club epitomized the idea that the ends justify the means.¹⁷

The club's establishment of an Alaska chapter spawned a large number of other organizations. Some were apparently affiliated with the Sierra Club and followed its lines fervently; some remained independent. At least nine organizations formed chapters of the Alaska Conservation Society, claiming as its objectives wise use of renewable resources, preservation of the scenic, scientific, recreational, wildlife, and wilderness values of Alaska. The Sitka branch, established in 1968 and apparently the one with closest ties to the Sierra Club, succeeded in obtaining a five-year moratorium on logging in the West Chichagof-Yakobi Island areas. The Kodiak-Aleutian branch sought court action against a timber sale on Afognak Island. A coalition of clubs in southeastern Alaska kept up a constant barrage of criticism of Forest Service policies.¹⁸

The major cases and their dispositions may be summarized as follows:

Sierra Club v. Hardin. As noted in the previous chapter, the Sierra Club challenged a Forest Service timber sale on environmental and other grounds. It was tried in federal district court in Alaska, and

the Forest Service won its case. Although the court said that the Sierra Club had "standing" in the case, the court felt that the Forest Service had shown compliance with the Multiple Use-Sustained Yield Act. Laches—unreasonable delay—in bringing legal action was one factor in the decision.

Then came a long series of delays and appeals. The Sierra Club waged a war of attrition, using all of law's delays to postpone action, with the aim of putting the involved company to continued expense in the matter. An appeal was held in federal circuit court in California. However, new evidence was presented. A. Starker Leopold and Richard Barrett, in a study on the effect of clearcutting on wildlife, argued that large clearcuts destroy the habitat of the Sitka deer and that cutting would endanger bald eagles. The case remanded to the district court. Revision of clearcut areas would lessen the timber base for the sale. The Forest Service and Champion Plywood agreed to a bilateral cancellation of the sale in 1976.¹⁹

Izaak Walton League v. Butz

Zieske v. Butz. Over the years there had developed some criticism of clearcutting practices. These attacks were not new; C.J. Buck, regional forester in the Pacific Northwest during the 1930s, had been opposed to clearcutting. However, determined attacks on the Forest Service clearcutting policy came after studies by foresters at the University of Montana and a propaganda campaign by the Sierra Club. The matter came to a head in the case of **Izaak Walton League v. Butz**. A loophole was found in the Organic Act of 1897, in which the secretary was authorized to sell dead or mature timber, marked. In 1973 the court took the literal words, rather than the meaning and practice used by foresters, and held clearcutting illegal on the Monongahela National Forest of West Virginia, and by implication elsewhere. The Sierra Club immediately added this to **Sierra Club v. Hardin**. Meanwhile, in **Zieske v. Butz**, a suit brought by the Sitka branch of the Alaska Conservation Society and residents of Point Baker, the court ruled that only mature trees on Prince of Wales Island could be cut under a contract by Ketchikan Pulp Company, holding that the actual legality of clearcutting was a matter for Congress to decide. However, the court rejected charges by Point Baker residents that the company violated four other federal laws, including the National Environmental Policy Act. The prohibition of clearcutting applied only on the island.²⁰

Alaska Conservation Society, Kodiak-Aleutian Chapter v. Forest Service. This controversy related to the Perenosa sale on Afognak Island. A sale there was made in 1968 for 525 million board feet. No activity took place on the sale for five years. With the agreement of the purchaser, the Forest Service made an environmental modification that reduced the volume to 332 million board feet. The modification reduced clearcut sizes, protected streams and wildlife values, and in general was more sensitive to resource values. The modification was accepted by the purchaser in 1974. In the same year, however, the Kodiak-Aleutian chapter of the Alaska Conservation Society brought suit in federal court at Anchorage, alleging that the sale was a violation of the National Environmental Protection Act, that the existing environmental impact statement (EIS) was inadequate, and that the sale would violate the Federal Water Pollution Control Act. Meanwhile, however, Alaska Natives in the claims settlement obtained title to about one-third of the island, and the suit was dropped.²¹

Not directly related to the national forests was the controversy over the Copper River Highway. This involved a highway connection to Cordova from the interior. As mentioned before, there was a road built on the old railroad bed that before 1938 carried copper ore out from the Kennecott mines. The 1964 earthquake, however, knocked out the bridges, and Cordova still sought a road connection with the interior. With the revival of a proposal to create a national monument in the valley of the Chitina River, the state made studies of a projected road and selected a route. A clause in the Transportation Act of 1968, however, called for studies of alternative routes over potential park lands. The state made its own study and filed a 4 (f) statement and a state EIS. The Alaska Conservation Society and the Sierra Club claimed that alternative routes by ferry and by air had not been fully considered and that the state EIS was not adequate to satisfy federal standards. They sought an injunction in March 1973. The projected road also went through proposed (d) 2 lands. The issue at this writing remains unsettled.²²

U.S. Borax and Chemical Corporation and Pacific Coast Molybdenum Company v. Bob Bergland and M. Rupert Cutler. This case was filed on May 17, 1979, and is described in some detail since it is apt to set important precedents.

In 1974 U.S. Borax made some molybdenum discoveries at Quartz Hill, forty-two miles from Ketchikan. A number of claims were established, and some were transferred to Pacific Coast Molybdenum. The companies asked for an access road

eleven miles in length to take out ore for analysis. The forest supervisor in Ketchikan sent a team of specialists to examine the proposed road site. They were aided by a state task force, appointed by Governor Hammond. The completed EIS was submitted to the Council on Environmental Quality on July 18, 1977, and the permit was issued on November 4, 1977.

A group headed by the Sierra Club and including the National Audubon Society, Wilderness Society, Alaska Conservation Society, Tongass Conservation Council, and representatives from several fishermen's societies and the Ketchikan Native corporation made an administrative appeal. Regional Forester Sandor held public hearings on the matter in Ketchikan on February 1, 1978. On March 31, 1978, he supported the supervisor's decision and issued a road permit. The Sierra Club and its supporters appealed to Chief John McGuire in written and oral statements, but on October 4, 1978, he supported the regional forester's decision. However, Assistant Secretary of Agriculture Cutler reversed the decision, holding that helicopters could be used for getting ore out for bulk sampling. Meanwhile, the area was withdrawn within the Misty Fjords National Monument. U.S. Borax and Pacific Coast Molybdenum brought suit, alleging that helicopter access was not feasible.²³

Finally, with Carter's creation of national monuments in the closing days of 1978, the state of Alaska brought suit against the federal government. Summarized, the suit had the following points:

1. The established national monuments conflicted with state land selections.
2. The National Environmental Policy Act requires environmental impact statements and disclosures of the effects of the action. This was not done.
3. Creation of national monuments by proclamation violates separation of powers.
4. Withdrawal should not stop the state from filing on its land selections and getting state patent.
5. Failure of government to act on state selections violated the Statehood Act.
6. Failure to promptly convey Native lands impedes the state's rights to select land.
7. Rejecting state land selections exceeded governmental authority.

The outlook for the future is full employment for the legal profession in cases involving Alaskan lands. The cases will involve several areas—land selection, land fraud, and land use.

It was obviously the intention of Congress to minimize, consistent with terms of the act, the impact of the Alaska Native claims settlement on national forests and wildlife refuges. However, much more land will come from the national forests than was originally intended. Also, the land has been "highgraded"; the areas most suitable for timber production, recreation, trade, and the like have been taken. This creates a series of problems for the Forest Service in regard to access to isolated areas, management of cohesive economic or recreational units, and so on. It will place many areas best suited for public interest lands in the hands of private corporations.²⁴

Many cases will involve fraud. Land legislation in the United States, no matter how well intended, has been used by the greedy or unscrupulous for private gain, and laws passed for the highest of motives may be perverted. Such was the case with the Alaska Power-of-Attorney Law for locating copper, oil, and coal mining claims, or the Forest Lieu Section in the Forest Reserve Act of 1897 (Organic Act). The ANCSA was no exception. Villages entitled to land, based on a population of at least twenty-five by the 1970 census, quickly increased in number as it became apparent that living there would be financially advantageous. Frauds have

allegedly occurred on the North Slope, where abandoned settlement sites would suddenly blossom out with mobile homes and snowmobiles, helicopter-lifted into the area. Other areas, with few or no people, suddenly became populated. It is alleged that photos of Army personnel at a rest camp on Afognak Island were presented as evidence of Native population; and Chenega, wiped out in the 1964 earthquake, became the basis for land claims. There are allegations of BIA complicity, and congressional acquiescence, in these frauds. These phenomena will undoubtedly receive congressional and legal investigation.²⁵

A third area, already touched on, will be controversies over whether areas are reserved for use and from use. The U.S. Borax case will probably be followed by others. The legality of Secretary Bob Bergland's action in closing wilderness areas in Alaska to mining, five years in advance of the statutory date under the Wilderness Act, will come under scrutiny. A fourth serious challenge will arise under the NEPA in regard to hydroelectric development, mining, lumbering, and road building. For the next decade, Alaska will be a key area in the testing and development of environmental law.²⁶

Research

These controversies consumed much time and energy, but the routine work of the Forest Service went on. The 1960s and 1970s saw new directions and new points of view in research. The Pacific Northwest Forest and Range Experiment Station, the parent unit of the Alaska establishments after 1967, shifted in the direction of environmental concern. With the passage of the words *ecology* and *environment* from their customary use in the biosciences and forestry into the national vocabulary, the reconciling of environmental quality with industrial and economic considerations began in earnest. This battle, as we have seen, was fought out in the political and managerial areas. It became a matter of concern for the research arm of the Forest Service as well. This involved new studies on alternative means of logging, such as helicopter and balloon logging; questioning of the clearcutting method of handling Douglas-fir and hemlock forests, and experiments with shelterwood or other types of management; studies of the residual effects of pesticides and studies of silvicultural or biological ways to control insects; use of computer programming to give different perspectives to the landscape and to show the visual impact of timber cutting; use of fertilizer to increase growth; and retooling of research projects into interdisciplinary teams. As an elite corps, with a fair degree

of independence, research scientists provided factual information on which managerial judgments could be based.

Much of the basic research in Alaska was like a new edition of earlier projects carried out in Washington and Oregon. These included surveys of timber stands. In the southeast it meant refining earlier figures arrived at by first observers like Weigle, Heintzleman, and Flory, as well as later scientists. In the interior it meant a cooperative study with the state over a period of years. Soil classification in Alaska had lagged, as well as study of the relation of soil to timber growth. Erosion was a particular problem. It was found in the interior, for example, that firelines used to control forest fires in areas of permafrost grew into ruts.

The research covered two separate regions, the coastal and the interior, with work coordinated by the Pacific Northwest Forest and Range Experiment Station in Portland. The areas may be studied separately.²⁷

The Interior

During earlier years forest research in Alaska's interior was carried on by scientists based in Juneau. The work of Raymond Taylor and Harold Lutz, for example, has already been treated. Others who traveled from Juneau to study interior forests included Austin E. Helmers and Robert A. Gregory. Gregory moved up to

Fairbanks about 1960 to head up a silviculture research project. In 1962 Von J. Johnson came to lead a fire research project. Personnel in Fairbanks at this time comprised a field unit of the newly independent Northern Forest Experiment Station, with headquarters in Juneau. After several years in temporary offices, the personnel moved out to a new building on the campus of the University of Alaska. Initially this building was called the Forestry Sciences Laboratory; it was dedicated, along with the Bonanza Creek Experimental Forest, in the summer of 1963. (To confuse historians the Forest Service downgraded the Northern Forest Experiment Station in 1967, returning Alaskan operations to the jurisdiction of the Pacific Northwest Forest and Range Experiment Station. For several years after that, both Alaska project locations were known as the Institute of Northern Forestry. In 1970 this designation was used only for the Fairbanks unit, and the Juneau unit was termed the Forestry Sciences Laboratory. There were several further changes in terminology in the 1970s, but it need not distract us from the actual research carried on.)

In 1966 Richard J. Barney replaced Von Johnson as fire research project leader, and LeRoy C. Beckwith came as project leader for forest insects in interior Alaska. Gregory left in 1970 and Leslie A. Viereck took over as leader of the silviculture project, now called "Ecology of Subarctic Trees and Forests." In 1971 the decision was made to combine all three projects in Fairbanks into a single, multifunctional, research work unit titled "Ecology and Management of Taiga and Associated Environmental Systems in Interior Alaska." Charles T. Cushwa was the program leader until 1974, when C. Theodore Dyrness, the present program leader, took over.²⁸

The work of the Fairbanks unit was multi-faceted. A major part of its work was in regard to wildfire, and here it worked closely with the BLM and the state of Alaska. Staff took part in a number of professional meetings and symposiums on the fire question.²⁹ Second in importance to fire was the inventory of timber resources in the interior. Of the 220 million acres inventoried in interior Alaska, the station found 105.8 million acres of forestland, with 22.5 million acres of forest of potential value in stands of white spruce, paper birch, quaking aspen, and balsam poplar. The potential of the stands compared favorably with that of the Lake States; stands in Minnesota average 574 cubic feet per acre as compared with 634 cubic feet per acre in interior Alaska.³⁰ The Institute of Northern Forestry also furnished much of the scientific data for the Forest Service and other agencies investigating and making recommendations on (d) 2 lands in the interior. It hosted a study team of forest researchers from Norway, Sweden, and Finland, who provided the state of Alaska

and the Forest Service with an analysis of interior Alaskan forestlands, as compared with those of Fennoscandia.³¹

The general approach to research in Fairbanks is to study entire ecosystems and their environments, utilizing skills of scientists from many fields of expertise. Since management activities affect the entire forest ecosystem, research is aimed at determining management impacts on the system as a whole. Therefore, the scientists form multidisciplinary teams to study all aspects of the forest environment, forest protection, and timber management on the taiga and tundra.³²

Coastal Alaska

In 1972 the Forestry Sciences Laboratory in Juneau came under the leadership of Donald C. Schmiede, who was transferred up from Berkeley. Schmiede, who had obtained his doctorate in entomology, fisheries, and wildlife at the University of Minnesota, had also done extensive work with the Wisconsin Conservation Department in the area of forest insects and diseases. Indeed, Schmiede had first come to Alaska in 1962 to do research on insects. Now, as program leader in the 1970s, Schmiede coordinated the multifunctional projects of fisheries, insects, and silviculture in a project titled "Ecology of Southeastern Alaska Forests." Some of the main tasks were (and are) to provide management with means of predicting growth and yield of even-aged stands of Sitka spruce and western hemlock in order to meet various objectives; to provide guidelines for avoiding windthrow in old-growth stands of these two species when harvested, so as to protect all researches; to provide a system for predicting damage by defoliating insects to all tree species; to provide technology for determining the role of small streams in producing juvenile anadromous fish, and the means of improving habitats for anadromous fish through stream channel structures.

The Juneau unit is also the center for the Forest Survey of Alaska, part of a national effort set up under the McNary-McSweeney Act of 1928. This involves a continuous timber inventory, study of how it is increased through growth and diminished through both use and natural causes. The survey, headed in Alaska by O. Keith Hutchison, also determines consumption of forest products and uses these data in helping formulate public and private forest policies. The survey project is responsible for implementing the above on all land in Alaska, except for federal and state parks.

The Juneau laboratory has a professional staff of thirteen. They work closely with other Forest Service personnel in the managerial areas, particularly wildlife and timber management, and with biologists of the Alaska Department of Fish and Game (ADF&G). They also supervise a larger series of research grants to universities on various specialized projects. There

were fourteen such grants, 1977-1979, involving the universities of Washington, Minnesota, and California, as well as Oregon State, Montana State, and Case Western Reserve universities. Current studies include six separate programs in fisheries, varying from evaluation of debris removal in small-stream ecosystems to spawning criteria for coho salmon. There are seven in pathology, several dealing with control of dwarf mistletoe, three in insect research, six in forest-wildlife habitat, and eleven active silvicultural studies.³³

The studies have had immediate effects on management criteria. The record has been most satisfac-

tory, probably, in regard to fisheries and management.³⁴ Both the ADF&G and the Forest Service found through research that logging can be conducted without having any great impact on fish runs. The commissioner of the ADF&G corrected erroneous statements on this subject during hearings on HR 39.³⁵ On the other hand, wildlife researchers found need to study modification of existing timber-harvest methods in order to protect the deer habitat in old-growth timber. There is no total agreement on this point at present; the effects of changes in timber-harvest practices will require continued study.³⁶

Recreation

Recreation management during the 1970s reflected the trends of the times. Planning was modified by statutory changes, particularly RPA recommendations on dispersed recreation. Planning was also modified by conflicting views on land use, as expressed in actions by pressure groups and in public meetings.

Over the years there had come a variety of socio-economic changes that had their effect on recreational preferences. Both the environmental movement and the rise of the larger leisure class increased pressures for preservation of large areas in their natural state. A countervailing force was the desire for organized mass recreation, such as picnics, skiing, snowmobiling, and conducted tours. Boating has always been popular, but there has developed a new interest in sailing and kayaking. New interest grew in the heritage of the Alaskan Natives, as well as in the history and natural history background of the state. Communities underwent changes. Tenakee Hot Springs has been pictured in these pages as a sink of iniquity, inhabited by whores, pimps, and bootleggers, where the major recreation was of the bedroom variety. It has now become a retirement village with well-to-do seniors superimposed on the local population.³⁷

In the Forest Service, the Visitors Information Service was shifted from the Division of Information and Education to Recreation. The Visitors Information Service continued its interpretive work on vessels of the Alaska State Ferry System, and it plans to extend services to cruise ships of other lines. It remains one of the most praised and valuable programs. Visitors centers also remain popular, and plans are made to build one at Portage Glacier.

The network of trails within both national forests was expanded, partly with aid from the Youth Conservation Corps (YCC) and Young Adult Conservation Corps (YACC). Trail shelters built during the 1930s by

the Civilian Conservation Corps were found to be suitable after forty years, though some needed repair. YACC trail work included building a canoe trail across Admiralty Island, connecting lakes with portage trails, a program begun by the CCC. Campgrounds were also improved. Cabins in isolated areas, accessible only by trail, boat, or plane, continued to be popular; their number increased to 187 by 1977. Despite rampant inflation, rent on these Forest Service cabins remained at \$5 per day. Sixteen campgrounds, twenty-seven picnic areas, and seven private lodges on Forest Service land also helped meet the needs of recreationists.

As noted previously, one of the major miscalculations of the Forest Service was to underestimate the visual impact of clearcuts and other disturbances on visitors. Under both Yates and Sandor, efforts were made to alleviate disturbances by dispersal and size, blending impacts with natural contours of the land and requiring prompt cleanup of debris left by economic operations. Starting about 1973, the Forest Service began using landscape architects to work with management, helping to inventory, evaluate, and set visual quality objectives for all areas of the forests. In cooperation with the University of Alaska's Institute of Social and Economic Research, detailed studies have been made to determine recreational preferences of visitors.

Two projects developed under previous administrations were delayed. Plans for the Seward Recreation Area, developed under Howard Johnson's administration, were postponed because of the land question. The proposal is not dead and is included in one of the current bills on Alaska lands (S. 9). Also, plans for a road and ferry system, connecting the islands from Ketchikan to Haines, were postponed—again because of the unsettled land question.

The Forest Service acquired its first archaeologist in 1974 and now has one on each national forest. They



U.S. Forest Service

One of the many National Forest cabins built for recreational use.

work closely with the Alaska Division of Parks in evaluating historic areas and buildings for the National Register of Historic Places. In the field they work in areas destined for timber harvest, identifying areas of archaeological significance. Their work is primarily confined to identifying sites to prevent their destruction. Archaeological excavations are rare, though the agency has carried on some on Prince of Wales and Baranof islands.³⁸

A problem that will continue to grow is that of foraging and collecting on historic sites. Special targets are World War II airfields and wrecked planes. Many planes were flown across the interior to Russia during World War II, and several wrecks have been salvaged illegally. Another enthusiastic collector took out an abandoned plane from Afognak Island. Areas accessible by water are hard to protect, and this problem will likely increase.

The two new national monuments proclaimed by President Carter—Admiralty Island and Misty Fiords—remain under Forest Service management and under guidelines established in June 1979. The management plans are based both on the president's proclamation and on the wilderness character of the areas. The Alaska Department of Fish and Game continues to manage fisheries and game on the monuments, but under the overall supervision of the Forest Service.

Admiralty has one Native village, Angoon, which has been dependent on the island for subsistence hunting and fishing, firewood, water, gravel, and the like.

Land adjacent to the village, selected under the ANCSA, would suffice for some of their needs. During the interim period, the monument management plan would disrupt their lives as little as possible, but, as mentioned before, the problem of Native lands in the area remains unsettled.

Admiralty continues to be accessible by air and powerboat. Mineral land entry is forbidden under the Federal Land Management Act, and the island has been withdrawn from entry under mining laws for a period of two years. Existing mining claims, however, can be developed according to an approved operating plan. On the Noranda claim, the problem of access threatens to become a matter of controversy. No commercial cutting of timber is permitted, but residents have free-use permits.

Publicity and educational material on Admiralty Island National Monument are being developed under manager K.D. Metcalf. These include illustrated brochures, studies of visitations made during the 1979 season, and plans for an interpretive conference in 1979. The YCC, YACC and CETA programs will be used for interpretive purposes as well as for constructing camps. The area will become a scientific laboratory for research in natural history. The Forestry Sciences Laboratory in Juneau already has two projects under way, one to study the brown bear population and a second to study migratory patterns of deer with the aid of radio transmitters.

Misty Fiords, a larger and more rugged national monument, occupies about the same area that Langille recommended as the first addition to the Tongass National Forest in 1907. Included in the monument are several special areas already established by the Forest Service—the Walker Cove-Rudyerd Bay Scenic Area, the Granite Fiords Wilderness Study Area, and the New Eddystone Rock Geological Area. General regulations regarding hunting, trapping, and mining are about the same as for Admiralty, except that there is no Native village in Misty Fiords National Monument. The manager, James C. Kirschenman, has begun setting up an information service. Other plans include trail building and maintenance; care for the safety of visitors, especially boaters; use of "Volunteers in the National Forests" to aid in taking an inventory in natural history; and resolution of land-use conflicts.³⁹

The proposal for preservation of totem poles, started under Howard Johnson, was brought to a successful conclusion in the 1970s. With Forest Service help and under Alaska State Museum supervision, the

poles were collected and brought to Ketchikan. The preservation project there was delayed, in large part because of a complete change in museum personnel, but it was finally created. Joe W. Clark of the Forest Products Laboratory in Madison, Wisconsin played a key part in aiding the Forest Service, Alaska State Museum, and Sitka National Monument (renamed Sitka National Historical Park) to develop techniques for arresting decay and fungi growth in the totem poles, which were finally housed in the Totem Heritage Center operated by the City of Ketchikan.⁴⁰

As noted earlier, the Forest Service cooperated closely with the Alaska Division of Parks, particularly in the location of historic sites and in plans for their interpretive and preservation programs. The historic sites included the route of the Copper River and Northwestern Railway, areas associated with the mineral rush to Katalla, the gold rush history of Juneau, and old trails and buildings in the Kenai. Forest Service archaeologists collaborate in this work.⁴¹



U.S. Forest Service

Hiking in the Herbert Glacier Area on the Tongass.

Wildlife and Fisheries

Wildlife management has always been an important aspect of national forest management in Alaska. It has evolved over the years from W. A. Langille's recommendations for game refuges in 1905, through the work of the agency with the Alaska Game Commission, the work of L. C. Pratt with sportsmen's clubs in the Cordova area, bear management on Admiralty Island, elk management on Afognak Island, transplanting of deer on Hinchinbrook Island, and continuous study of the relationship of logging to fisheries. A series of trends marked the era of the 1970s. One was statutory. The Sikes Act of 1974 directed the secretary of agriculture to develop comprehensive fish and wildlife habitat studies in cooperation with state management agencies. This led to closer cooperation between the Forest Service and the Alaska Department of Fish and Game (ADF&G). A five-year program was developed, with twenty-three cooperative projects involving fish habitat, eleven big game, eleven small game, six nongame (rodents, seabirds, and other bird communities), three threatened or endangered species, and two aquaculture. Second, the National Forest Management Act and the RPA reenforced the Multiple Use Act with respect to wildlife management. Third, the YCC and YACC offered a source of labor to carry out the projects.

The Forest Service had previously established a specialized management area at Pack Creek on Admiralty Island. New ones were now established, including the Stikine Management Unit on the Tongass, meant for waterfowl primarily but including other species, such as moose. Seymour Canal on Admiralty Island was set aside as a bald eagle management unit. The Copper River Delta was set aside as a waterfowl management unit. The Bering River-Controller Bay area, scene of the famous Controller Bay sensation in 1911, now became a special area for trumpeter swan. The portion of Chickaloon Flats in the Chugach National Forest was also recognized as a waterfowl management unit. Caribou were also given special attention on the Chugach, having spread to Resurrection Creek after being reintroduced to the Kenai Peninsula by the state. The Portage Wildlife Habitat Management Area was established in 1976 under cooperative management of the Forest Service, BLM, Alaska Department of Highways, and the Alaska Railroad. In a number of these areas, YCC and YACC help was used extensively—for example, in prescribed burning to improve moose habitat.

In regard to fisheries, the habitat improvement project instituted in 1962 under Regional Forester Hanson has already been mentioned. It was continued,

and through 1975 more than 200 separate projects were completed on the Chugach and Tongass national forests. Costs of these projects were split between the Forest Service and the ADF&G. At the present time a complete inventory of fish habitat is being carried on in cooperation with the ADF&G. Also, the National Marine Fisheries Service is completing a survey of deactivated log transfer sites to determine persistence of bark accumulation and its effects on estuarian life.

A long list of separate projects, some with very high cost-benefit ratios, were planned. These included fishways on Irish, Navy, Dean, and Thetis creeks to open up spawning and rearing areas for chum and pink salmon, enlarging such areas many times over. Projects also include removal of natural barriers and logging obstructions in the streams of the Chugach, clearing of stream channels and conversion of borrow pits for road construction into coho breeding grounds, and cooperative studies of potential aquaculture sites.

The relationships of logging to commercial fishing and to wildlife habitat was long a matter of concern to the Forest Service. In regard to fishing, this involved the decision to retain a vegetative canopy over the streams to protect them against extreme temperature changes; construction of culverts and bridges that would not impede movement of fish; removal of logging debris or other obstructions in the streams; and study of the relationship of clearcutting to increase of nutrients added to the streams.

Although relationships of timber harvest to fisheries had been a matter of concern from the earliest days, that of logging to wildlife had not. Early wildlife management had focused on game refuges, closed seasons, and predator control. A shift in emphasis came during the 1930s through the influence of such men as Aldo Leopold, P. S. Lovejoy, and Durward Allen, who stressed preservation of habitat as a management tool and developed sophisticated studies of predator-prey relationships. Coastal Alaska lagged in development of game management, largely because the basic research had not been done on the relationships of old-growth forests to game habitat. Very few studies on the effect of logging on wildlife resources other than fisheries had been carried on.

A case in point is the winter range of Sitka deer. Research in the coastal forest in the south—Washington and Oregon—had indicated that the clearcut areas, because of rapid growth of brush and other browse, made good deer habitat. This assumption was held by earlier managers. Studies in the 1970s indicated that this was possibly not the case in southeast

Alaska, where old-growth forests were superior to cut-over areas or new forests for winter range, partly because the canopy prevented heavy snow from penetrating the forest and partly because of the abundance of browse in the understory of old-growth forests. Tentative conclusions were that deer fare better in old-growth forests (over 200 years old) than in new ones. Studies also were made on the need of cover for mountain goats during the winter and on the effects of harvest of old-growth timber on birds and small mammals.

Wildlife management will continue to be of increasing importance in Alaska. This will be particularly true with the establishment of large wilderness areas on the Tongass and with the increasing orientation of the Chugach toward recreation. It will involve the Forest Service in closer relationships and possibly conflicts with the "subsistence hunting" rights of Indians, as more and more land comes into the hands of Native corporations.⁴²

Human Resources

Forest Service work in human resources has intensified during the 1970s. This work is comparable to that of the CCC during the 1930s. Under Public Law 93-408, the Youth Conservation Corps (YCC) and the Young Adult Conservation Corps (YACC) made much the same kind of contribution.

The YCC was designed to give work to youths fifteen to eighteen years old, providing employment and at the same time giving the enrollees conservation education. A pilot project was established in 1970 with 48 enrollees. By 1978 the number increased to 153. These young people built recreation cabins and trails, engaged in fish-habitat improvement activities, worked in the Kenai to improve moose habitat by prescribed burning, and improved campgrounds. Highly motivated and energetic, they made it possible for the Forest Service to carry on activities that otherwise would have been too costly.

The YACC furnished jobs for 16-24 year olds, giving them gainful employment for a year in conservation work and training in general work skills. They have been active in heavier work, such as building a canoe trail across Admiralty Island. In planning this work, the Forest Service cooperates closely with the Native corporations, the governor's office, and private corporations. The plan is to offer more than 450 man-hours per year over a five-year period.

YCC and YACC enrollees were stationed in camps, some of them restored CCC camps. These were of three types—residential, nonresidential, and spike. Residential camps were seven-day-per-week, live-in camps. In nonresidential camps, the enrollees lived at home and reported to work on a five-day-per-week schedule. Spike camps were those out in the remote country; they were temporary, largely tent camps where enrollees

resided for ten-day work periods, followed by four-day periods at home. In 1977 there were seven residential camps with total enrollment of 473, fifteen nonresidential camps with 230 enrolled, and nine spike camps with 179 enrolled. Camps were managed by directors, and work crews were led by young persons chosen from the enrollees.

Human resources involved two other groups. Under Title III of the Comprehensive Employment Training Act (CETA), people are given on-the-job training. CETA will pay an important part in the development of interpretive programs on Admiralty Island. Another group is called Volunteers in the National Forest. Under this program individuals are furnished room, board, and transportation by the Forest Service in return for aid in evaluation and inventory of resources. This program has to date involved fifty-one separate projects, thirty-one carried out by men and twenty by women. A typical study was one by John L. George titled "Some Observations on Forest Service Management Practices in Region 10, Alaska" (June 1979). Others have involved inventories of birds, mammals, and natural features.

The Human Rights Program is headed by Manuel R. Archuleta, who joined the Forest Service in 1967 as a teacher and job recreationist on a Job Corps center in Colorado. He worked in North Dakota and then in Oregon, where he was appointed the first Spanish-speaking program coordinator for the region. In 1974 he became the regional safety and training officer for the Alaska Region, and, in 1976, director of the Civil Rights and Human Resources Program, a new unit established that year. The value of the program is such that it now brings in more than it costs. It is a worthy successor to the CCC program.⁴³



Rakestraw Collection

The Young Adult Conservation Corps (YACC) gives young men and women gainful employment in conservation work, much the same as the CCC did in the 1930s. Above, two members of a crew reconstruct a trail bridge on Wrangell Island, Tongass National Forest.



Rakestraw Collection

A YACC crew gets a refresher course on chainsaw safety while working on a roadside cleaning operation near Wrangell.



YACC crews helped construct a Forest Service tree nursery near Petersburg on the Tongass.

Timber Management

Timber management and timber sales during the 1970s underwent a series of shocks and readjustments, which affected both the Forest Service and the industry. First, there was a series of legal cases and controversies dealing with types of sales and methods of operation in Alaska. Closely related were new laws and regulations, both state and federal, relating logging to environmental values. Third, there came a shifting in public and political attitudes. From the time of Pinchot to 1968, the emphasis in Alaska had been on large sales and long-term contracts to provide for a stable economy and the orderly replacement of old forests with new. After 1970, there were some shifts in thinking, including opposition to long-term sales and a concern with the perpetuation, rather than harvest, of old-growth forests. Fourth, the amount of land available for timber harvest in the national forests was sharply reduced, both because of designation of special management units and reduction in the size of national forests through state and Alaskan Native claims. Fifth, there was some economic dislocation within the timber industry.

As noted earlier, the Champion-Plywood sale prospect came to an end, but other long-term sales remained—Alaska Lumber and Pulp Company, and Pacific

Northern Timber Company. The ALPC sale was to terminate in 2004, the KPC in 2011, and PNTC in 1981. The volume of timber needed for these long-term sales would amount to about 370 million board feet per year. Other sales on the Tongass would raise the total. Wilderness designation and wilderness study areas would result in removing some areas from timber production and force more intensive timber harvest in areas open to logging. Local preferences also played a part. The Tenakee community strongly objected to ALPC activities in their area, Indian Creek, and the Forest Service had to find other timber to meet commitments.⁴⁴

The regulations regarding timber sales were modified and tightened, in accord with statutory regulations. Under Yates, archeological examination was made of all sites before logging. Interdisciplinary teams of biologists, wildlife specialists, landscape architects, and others worked to lay out the sale. Provisions were made to prevent logging camps from attracting bear and for immediate clearing-up of logging debris and evidence of camps. The result of additional regulations was that the sales took longer to make. In the old days, Harold Smith or George Peterson could go out with a boat, a compass, an axe, and a good eye for estimating timber and lay out a sale in half a day. Now sales take six to twelve months to plan.

Timber harvest regulations were also modified. Clearcuts were reduced to a maximum of 160 acres, and then to 100 acres. Shelter strips were left to provide access of game to the beaches, and 200-foot boundaries were established along salmon streams. Culverts and roads were carefully engineered to prevent erosion or stream pollution. There were sometimes conflicts with other regulations; loggers wanted wide roads to remove "danger trees" (which might get windthrown), but the Forest Service had to reconcile this desire with visual impact.

Small logging operations declined in number during this period for a variety of reasons. To encourage competition, the Forest Service and the Small Business Administration agreed to an annual set-aside program of about 80 million board feet for small firms, in addition to the volume in long-term sales. Salvage sales were advertised to clean up blowdowns. The balloon-logging operation near Kake continued for several years. The Pacific Northwest Forest and Range Experiment Station recommended experiments in helicopter logging, and Haines lumberman John Schnabel made some, but no truly successful operation has been carried out. In addition, regulations were changed to permit export of chips from sawlogs made on all sales, rather than just the fifty-year pulp sales.⁴⁵

For the timber industry itself, it was a time of troubles. It is not the intention of this work to analyze the economics of lumber production in Alaska during this period, though such a study would be highly desirable. However, business papers, such as *Alaska Construction and Oil*, magazines of general regional interest, such as *Alaska*, and newspapers show a series of discontents. With environmental statements mandatory, sales were harder to come by. There were thirty sales on national forests in 1969, but the number dropped to zero in 1973. When Regional Forester Yates raised the price of stumpage in 1975, a howl of protest was heard. Loggers charged that scenery regulations, requiring narrow roadways, meant that danger trees might fall and cause injury or block roads. They favored falling timber for a tree's length back from the road. Logging camps were more closely policed; one ALPC camp was closed because of inadequate sanitation. There was some falling off of foreign markets and fear that Japan—the main customer for cants and pulp—might seek wood from other sources. KPC had difficulty in meeting environmental standards in its mill operation.

There was dissension within the logging community itself. Two Ketchikan firms filed suit against the Ketchikan Pulp Company and Alaska Lumber and Pulp Company. John and Jenifer Allen of Southeastern Alaska Cedar Products, a small mill near Ketchikan, charged ALPC and KPC with conspiracy to drive independent loggers out of business. Alex and Mary Reid of

Reid Logging Company, a small-firm at Petersburg, alleged that the two companies conspired to drive out of business independent logging and milling firms in the southeast. The two large firms, they asserted, had 93 percent of the timber sales awarded by the Forest Service in the past five years. Independents were being driven out of business, they said, by "wrongful terminating of timber contracts, unlawful foreclosure of security arrangements, unlawful withholding of funds, exclusion of loggers' traditional sources of finances, improper scaling and payments."⁴⁶ At this writing the suits have not been completed.

There remained some speculation as to the effect of logging on Native lands. Though some efforts have been made toward adopting an overall timber harvest policy among the Native villages, it has not yet come about. A further consideration is the fact that on Region 10 Forest Service sales, under law, the primary processing must be done in Alaska (with the exception of Alaska-cedar and some western redcedar). The Native corporations are free to export round logs. The marketing and economic potentialities of this double standard remain to be seen. The Alaska Timber Company was founded in Klawock to utilize timber from Indian lands. It established a mill in 1972 and after some shaky starts worked out a marketing arrangement with Georgia-Pacific. It produces mostly hemlock cants and redcedar.⁴⁷

On the Chugach, where timber sales were less important, the Perenosa sale on Afognak Island became a matter of controversy. The sale, approved in 1968, called for a long-term contract with the intention of harvesting 525 million board feet of Sitka spruce. It was plagued by environmental suits instituted by the Sierra Club and others. The Forest Service ultimately agreed to an EIS on roadless areas and a five-year redefinition of the sales. However, the ANCSA has placed much of Afognak into Native management. As on the Tongass, Sandor worked with the Small Business Administration to have "set aside" sales in the area, this time of 5 million board feet per year.⁴⁸

One aspect of the past decade has been increased cooperation in state and private forestry. It was enhanced during this period by RPA requirements and also by a bill passed by the state legislature in 1978 on forest resources. This act established a Division of Forest, Land, and Water Management within the Department of Natural Resources. It was headed by the state forester, who was appointed from professionally trained land managers. Moreover, a Board of Forestry was established, made up of one nominee each from the Society of American Foresters, Native corporations, an Alaska environmental group, Alaska Coastal Management Council, Alaska Loggers Association, a union of forest products workers, United Fishermen of Alaska, Alaska Miners' Association, and one from the public at large.

Strong administrative directives were drafted for the state forester, stating principles of scientific management, sustained yield, multiple use, and concern for the economic life of the community.

On the part of the Forest Service, state and private activity included work with the state forester in developing a state tree nursery, technical assistance to industry and landowners, development of a forest inventory on Native corporation lands, sawmill-improvement training and forestry workshops for industry and landowners, identification and training of resource managers for Native lands, work in job opportunities programs, and cooperation in insect control. The state works closely with the research stations. David R. Schumann took the lead in establishing clinics for sawmill training in Native villages on the Kenai Peninsula and near Fairbanks. The program involved 30,000 acres of privately owned and 42,000 acres of state land. He edited the *Forest Products Newsletter*, an information bulletin, in cooperation with the State Extension Service and the state forester's office. Cooperation extended to fire protection as well.⁴⁹

Sales increased on state lands, though here again there was economic dislocation. The Schnabel Lumber Company of Haines, a producer of cants and chips, prospered for a while, particularly during construction of the Alaska Pipeline. The company fell on hard times, however, and eventually ceased operations for a time. The state made large sales on Cook Inlet of beetle-killed spruce. Many of the forest products were exported to Japan in the form of cants and chips, but there has been increased production of dimension stock as well. A search for domestic as well as foreign markets continues.⁵⁰

In summary, forest management and the timber industry is in a period of transition. The trend of the future can be most clearly seen in regard to federal-state cooperation in management. The net effect of Native land ownership is hard to determine at the present time, on either the Tongass or the Chugach. The economic effect of an increased emphasis on wildland management rather than timber production must also be left to the future.

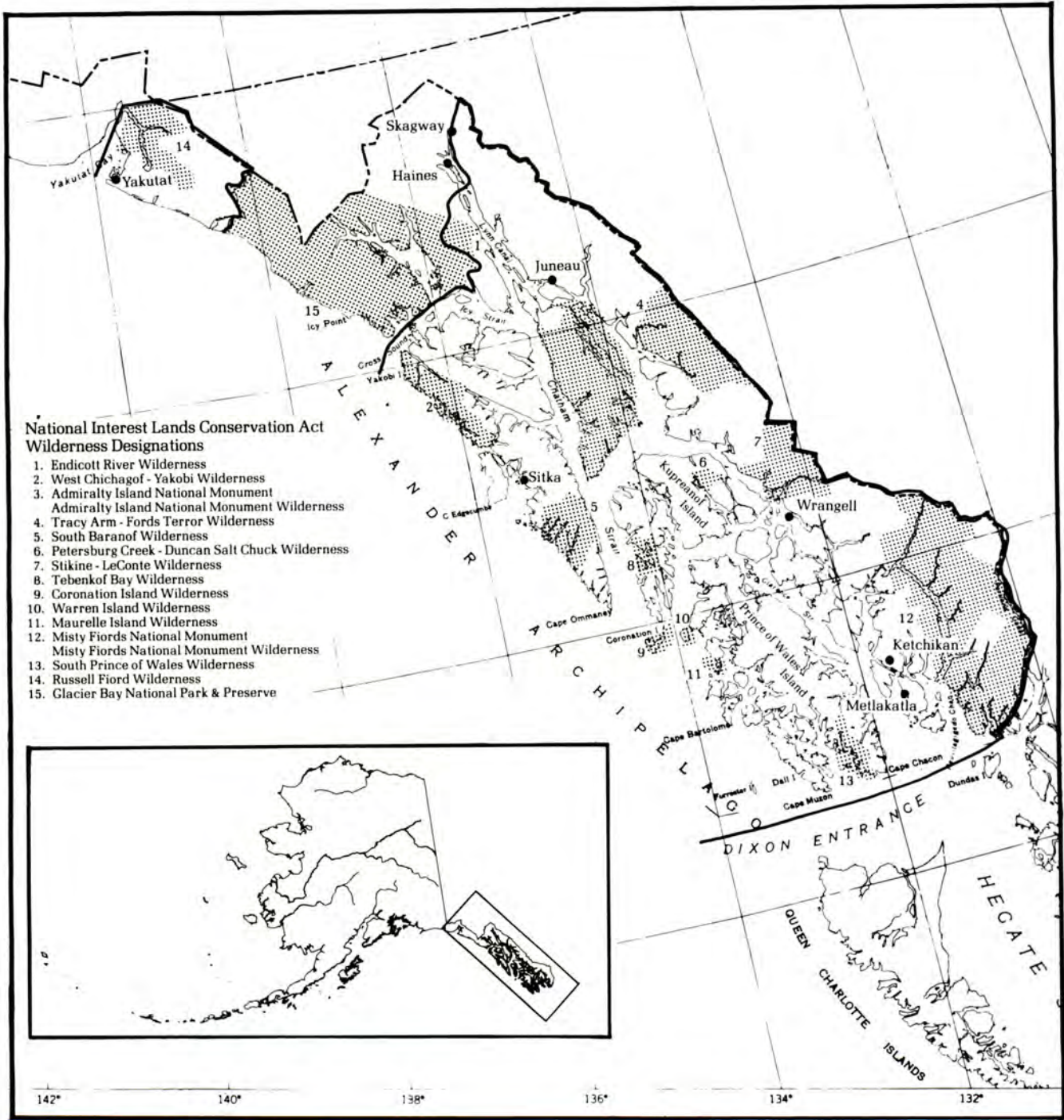
Conclusion

The history of the Alaska Region is necessarily an unfinished story, and this account of it comes to an end at a moment of high drama. Will the Forest Service and the forest industries be able to withstand the legal talent of the Sierra Club and other environmental groups? How long will legal cases be delayed through appeals to higher courts? Will the Information and Education arm of the Forest Service be able to generate momentum enough in its efforts to interpret forest use to outweigh misleading stories from other media? What effects will Native claims and state selections have on the management of the region? The 1980s may hold answers to these questions.

A major theme in the history of the Forest Service in Alaska is continuity of purpose. There has been more continuity than change—probably more than in any other Forest Service region. Pulp mills were forecast by Fernow and Langille; Weigle, Flory, and Heintzleman actively worked for them. They were finally realized under Greeley, Hanson, and Johnson. Langille's first recommendations on the Kenai stressed wilderness, recreational, and wildlife values; these are now the dominant factors in its management. Langille also recommended the establishment of a demonstration forest to study the ecology of the interior forests; this was realized a half century later. Management of game by the Forest Service dates back to 1905; regulation of cutting to protect fish runs began in 1909. In on-

ly one aspect, that of the large Japanese investment and trade, has there been a new departure. The major success of the Forest Service has been the constancy and drive it put behind realizing these goals. This achievement is a tribute both to the leadership in the Washington Office and to the regional officers in Alaska.

Perhaps the greatest deficiency of the Forest Service has been its failure to publicize its real achievements and to meet its critics promptly and forthrightly. This failure has been nationwide, not limited to the region. The causes of it are complex and hard to define, but it is a matter that the Service should try to analyze and correct. With the benefit of hindsight, it would seem that the Service erred, for example, in not publicizing the studies of Ray Taylor on the relationship of logging to salmon runs, or on the silvicultural benefits of clearcutting. Such action might have nullified the criticisms levied in the first and second Admiralty Island crises, or in the pretrial publicity by the Sierra Club on the alleged sins of the Forest Service. It is also evident that early foresters, including Greeley and Hanson, underestimated the influence of "visual impact" in regard to logging operations along the waterways. We live in an era in which people expect things to be "merchandised"; the Forest Service has quietly appealed to reason rather than relying on rhetoric.



VI. Tongass National Forest boundaries in 1980

Sources and Footnotes



Errata

- Page 191 Note 40, change “Beal” to “Beach.”
- Page 202 Note 12, change “1919” to “1959.” Add: “A copy of this is in the records of the Tongass Historical Society, Ketchikan, Alaska.”

Sources

Primary Sources: Written

This book was written largely from manuscript sources. The papers and other materials used included official and unofficial records of the Forest Service, National Park Service, and other governmental agencies; Alaska state records; personal papers; interviews (some transcribed); and photographic records.

Forest Service records (RG 95) at the National Archives in Washington, D.C., were rich in material relevant to Alaska and to the national scene. Of particular value were the Research Compilation File on Alaska; records of the Ballinger-Pinchot Affair, which cast new light on that controversy in its regional focus and geographical setting; inspection correspondence; material on Civilian Conservation Corps activity; and boundary records. National Park Service records (RG 79) were of particular value for the Admiralty Island and Glacier Bay controversies and on Sitka National Monument (now Sitka National Historical Park). The Federal Records Center in Seattle also provided a wealth of material. Of special interest were inspection reports, legal records, boat logs, records of cooperation with the Alaska Game Commission, and records relating to logging and milling operations.

One type of source that deserves special mention, both in the National Archives and in the Federal Records Center, is ranger diaries. These have probably been undervalued in the past as sources for historical work. However, as interests shift from political and administrative history to ecological concern, Native American claims, and historic preservation, these diaries are sources of information that cannot be found elsewhere. There is need for a national program of screening ranger diaries, evaluating and preserving the worthy and discarding the worthless, and compiling bibliographies. The Forest History Society or the Forest Service's History Office could well take the lead in promoting such work.

Forest Service records in Alaska have had a mixed and checkered history. Some sources have been lost. The Navy took over the marine station used by the Forest Service in Ketchikan during World War II, dumping a great deal of material. The log of the Forest Service vessel, the *Tahn*, was saved. More recently, a ranger at Sitka hauled the historical material in his office to the dump to make room for his files, despite objections from the local historical society. The loss was particularly grievous because the records allegedly contained land-use information on Baranof and Chichagof islands, areas of present land-use controversy.

Two other factors should be noted that called forth the ability of the historian as detective. One was that the search period 1969-1972 coincided with two unusual activities in Alaska—the legal case of *Sierra Club v. Hardin*, and the cooperative work of the Forest Service with the Alaska State Museum to recover and rehabilitate totem poles. The consequence was that many files ordinarily housed in the Federal Records Center in Seattle had been shipped to Alaska. It took a great deal of search to locate the various documents and to borrow, copy, and return them to the Forest Service officer or lawyer who had them.

Second was the fact that numerous files and miscellaneous papers had not been shipped to Seattle but remained in Alaska—squirreled away in various filing cabinets, cupboards, nooks, and crannies. These unexpected windfalls added much to the excitement of the search. Will Langille's letterbooks, for example, were preserved in Juneau, though badly deteriorated. A

secretary has transcribed the legible portions. His timber sales record book for 1905 also has survived. In the Chatham Warehouse, a wooden building apart from the main office, a room is filled with old file cabinets loaded with such materials as Langille's reports on reconnaissances in the Kenai, boat logs, blueprints from engineering projects, maps of mining claims, fox island records, records on Indian possessory rights, CCC materials, and timber sale records. Files in the regional office at Juneau included valuable papers on the totem pole project and archeological explorations, the Alaska Spruce Log Program (with a magnificent set of pictures), a taped interview with B. Frank Heintzleman, and more timber sale records. Henry Graves's photographic album of his Alaska trip is located in the library, as is Raymond F. Taylor's manuscript history of the region.

The Ketchikan office had some particularly valuable material on lands, as well as much information on totem poles. The Anchorage office had a number of ranger diaries and a guide to them prepared by a seasonal employee. It also had good material on boundary revisions (1913-1924) and on oil placer claims in the Katalla area. The Cordova ranger station had a very good album of clippings. The office of the Kenai Moose Range had some material of limited value.

A critical bibliography on totem poles and related antiquities is to be found in my manuscript, "A History of the Forest Service Role in Totem Pole Restoration and Preservation" (1972), copies of which are available at the Alaska State Library, the regional office of the Forest Service in Juneau, and the Forest History Society in Santa Cruz, California.

The Sterling Memorial Library at Yale University, New Haven, Connecticut, holds an abundance of material in the papers of Henry S. Graves and B. Frank Heintzleman. At Grey Towers in Milford, Pennsylvania, I examined the Gifford Pinchot diaries on microfilm. I utilized the resources of the Forest History Society at Santa Cruz; its Forest Service clipping files were particularly valuable to my research. The Special Collections at the University of Oregon Library in Eugene include the papers of Fred Ames, Melvin Merritt, Asher Ireland, and Will Langille. The papers of John E. Ballaine were utilized at the Manuscripts Section of the University of Washington Library in Seattle, as were the papers of Anthony Dimond at the University of Alaska. The Alaska State Museum in Juneau made its records on the totem pole project available to me. In Ketchikan the Tongass Historical Society provided lumber company records and some miscellaneous material on old-timers. Angela Burke of St. Petersburg, Florida, provided me with her personal record of the Alaska Spruce Log Program.

Primary Sources: Interviews

A considerable part of this book is based on interviews with people who were too busy making history to write it. Some were taped, some not. Taped interviews are designated with an asterisk (*) and those of particular value with two (**).

Two of Will Langille's daughters, Mrs. Webb Trimble of Seattle and Mrs. Ivan Langley of Portland, gave me material on family history and on Langille's own life that I could not have obtained elsewhere. Among the old-timers, Harold Lutz, Hugh Brady, Lyle Blodgett, George Drake*, Roy Barto*, and John Smith shared their experiences with me. For the middle period of Forest Service history, Raymond F. Taylor**, Linn Forrest**, Claribel Rakestraw, C. M. Archbold, Pearl Peterson, and W. A. Chipperfield** were interviewed. To these should be added Viola Garfield*, who assisted Forrest on the totem pole project. For the later period, P. D. Hanson*, W. H. Johnson**, John Sandor, John Emerson, Barney Coster, Sig Olson, Lee Kester, D. Robert Hakala, and a host of others were interviewed. Conversations with these people saved me from making a host of mistakes and provided me with much good material.

Primary Sources: Photographs

Official Forest Service photographs are located in the Audio-Visual Section of the National Archives. They are indexed and machine retrievable. There are also scattered photographs in the various files of the Forest Service's Washington Office. Both the Ames and Langille collections at the University of Oregon contain good photographs. The Forest Service offices at Ketchikan and Juneau have excellent collections. I located some fine photos of logging practices in the interior at the University of Alaska. The Alaska State Library has a miscellaneous collection, including 125 taken by Langille. The Tongass Historical Society holds several collections of photos showing Ketchikan as it was in the old days.

There are also a great number of private collections. Lyle Blodgett, for example, showed me a magnificent collection of boat pictures. Angie Burke made available her pictures of the Alaska Spruce Log Program, and Linn Forrest, Viola Garfield, and Jane Wallen provided a host of photographs dealing with totem poles. Some private collections, as well as prints from those of public agencies, have found their way to the Forest History Society, where I was able to view them and make some selections.

Field Investigation

Natural resource history requires investigation in the field as well as in archives. I was able to get a firsthand idea of forest conditions, logging practices, and fire ecology of interior Alaska by driving through the country. We traveled in a 1967 three-quarter-ton pickup with a camper body. It had ample space for beds, cooking facilities, archival storage, and a typewriter; it was our home much of the time for three years. We traveled over the Alaska Highway to Fairbanks in 1968 and over portions of the highway on later trips. We also drove through the Kenai Moose Range and over substantial areas in the interior at various times from 1969 to 1972. Once we traveled by train from Fairbanks to Anchorage.

We also covered coastal Alaska by ferry six times between 1969 and 1972. By checking old timber sale records (dating back to 1906) with the modern appearance of sale sites from the ferry, I was able to make judgments on regeneration. We flew over much of the southeastern area by commercial and charter plane, and we went by Forest Service boat up to the Tracy Arm area. In the Cordova area, Ranger Wally Watts took us on a "show me" trip up the route of the railroad. Field investigation of this sort added dimension to conventional archival research.

Footnotes

Chapter 1

1 B. Frank Heintzleman, "The Forests of Alaska," in *Trees: Yearbook of Agriculture*, 1949 (Washington, 1949), pp. 361-71, summarizes admirably the nature of the Alaskan forests. The interpretation of the stages of public land policy is that used by Marion Clawson and Burnell Held, *The Federal Lands: Their Use and Management* (Lincoln, 1965), pp. 15-35.

2 Philip Drucker, *Indians of the Northwest Coast* (New York, 1955), offers a concise and scholarly summary of the Indians' use of wood.

3 Harold J. Lutz, *Aboriginal Man and White Man as Historical Causes of Fires in the Boreal Forest, with Particular Reference to Alaska*, Yale School of Forestry, Bulletin No. 65 (New Haven, 1959), pp. 2-16, 18-20. The bibliography is particularly valuable.

4 W. A. Langille, "Report on the Proposed Norton Bay Forest Reserve, Alaska, 1904," p. 18. manuscript, Juneau Office, U.S. Forest Service.

5 Hubert Howe Bancroft, *The History of Alaska* (San Francisco, 1886), pp. 688-93, is still the best account of economic use of timber during the Russian occupation. There was apparently some export of Alaskan timber to Macao, Canton, Chile, and California. See Robert De Armond, "Early Alaskan Sawmills," *The Pathfinder* [Ketchikan, Alaska], February 9, 1946.

6 Lutz, *Fires*, p. 24; Lutz, *Early Forest Conditions in the Alaska Interior: A Historical Account with Original Sources* (Juneau: U.S. Forest Service, Northern Forest Experiment Station, 1963), is a comprehensive account of Russian and American forest explorations and reports of forest conditions. Langille, "The Proposed Forest Reserve in the Kenai Peninsula, Alaska, 1904," deals with the effects of Russian cutting. This report is in the Records of the Forest Service, Chugach file, Record Group 95 (hereinafter cited as RG 95), National Archives, Washington, D.C. Melvin L. Merritt, "Recollections," manuscript in Merritt Papers, Special Collections, University of Oregon, Eugene, contains some interesting data on Russian use of wood.

7 Lutz, *History of the Sitka Spruce Forest Planted in 1805 on Unalaska Island* (Juneau: U.S. Forest Service, Northern Forest Experiment Station, 1964), is a comprehensive account.

8 Samuel Trask Dana, *Forest and Range Policy* (New York, 1956), pp. 46-72; Clawson and Held, *Federal Lands*, pp. 22-27; Stewart Holbrook, *The American Lumberjack* (1938; reprint, New York, 1962), pp. 26-162.

9 The literature on the early conservation movement is voluminous. Some of the better publications include W. N. Sparhawk, "History of Forestry in America," in *Trees: Yearbook of Agriculture*, 1949, pp. 707-12; Bernhard E. Fernow, *A Brief History of Forestry in Europe, the United States, and Other Countries* (Toronto, 1907), pp. 456-506; Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge, 1959), pp. 1-4, 27-48, 261-76; A. Hunter Dupree, *Science in the Federal Government: A History of Policies and Activities to 1940* (Cambridge, 1964), pp. 232-64; Gordon B. Dodds, "The Historiography of American Conservation: Past and Prospects," *Pacific Northwest Quarterly* 56 (April 1965): 75-81; Roderick Nash, *Wilderness and the American Mind* (New Haven, 1967), pp. 96-107; Lawrence Rakestraw, *A History of Forest Conservation in the Pacific Northwest, 1891-1913*, (New York, 1979), pp. 1-22.

10 Andrew Denny Rodgers III, *Bernhard Eduard Fernow: A Study of North American Forestry* (Princeton, 1951), is a beautifully written, accurate, and comprehensive biography.

11 Rodgers, *Fernow*, pp. 154-56, is probably the most accurate account of the passage of the bill, known collectively as the General Revision Act of 1891.

12 Rakestraw, "Urban Influences on Forest Conservation," *Pacific Northwest Quarterly* 46 (October 1955): 108-13.

13 William H. Dall, *Alaska and Its Resources* (Boston, 1870), pp. 439-41, 452-56. In addition to Dall's study, mention should be made of a series of articles on the timber resources of Alaska by John Muir, published in 1879 in the *San Francisco Bulletin* and reprinted under the title "Timber Resources of Alaska" in *West Shore* 5 (November 18, 1879): 338.

14 Ivan Petroff, *Alaska: Its Industry and Resources*, Miscellaneous Document 42, pt. 8, 47th Cong., 2d sess. (Washington, 1884); Bancroft, *Alaska*, pp. 688-93.

15 William G. Morris, *Report on the Customs District, Public Service, and Resources of Alaska Territory*, Senate Executive Document 59, 45th Cong., 3d sess. (Washington, 1879), pp. 106-10; Bancroft, *Alaska*, p. 693, n. 54; Morgan Sherwood, *Exploration of Alaska, 1865-1900* (New Haven, 1965), pp. 57-69, deals with Petroff's background.

16 Pertinent reports of the governors are contained in *U.S. Department of the Interior, Report, 1889* (Washington, 1889), III: 224-26; *USDA Report, 1891*, III: 491-92; *USDI Report, 1902*, III: 37-39.

17 The best accounts of the work of the Fish Commission are to be found in its annual reports. Secondary works include Dupree, *Science in the Federal Government*, pp. 236-38; David Starr Jordan, "Spencer Fullerton Baird and the United States Fish Commission," *Scientific Monthly* 17 (August 1923): 97-107; and Rakestraw, *Commercial Fishing on Isle Royale* (Hancock, Michigan, 1968), pp. 5-6. Henry Clepper, "A Century of Fish Conservation," *American Forests* 76 (November 1970): 16-19, 54-56, is a good survey.

18 Dodds, ed., *A Pygmy Monopolist: The Life and Doings of R. D. Hume, Written by Himself and Dedicated to His Neighbors* (Madison, 1961); *Annual Report of the United States Commission of Fish and Fisheries, 1872 and 1874* (Washington, 1874), Appendix, pp. 89-384. Tarleton H. Bean, "Bibliography of the Salmonidae of Alaska and Adjacent Regions," *Bulletin of the U.S. Fish Commission, 1892*, Miscellaneous Document 122, 53d Cong., 2d sess. (Washington 1894), pp. 39-49, lists 120 publications on the salmon between 1870 and 1892. Dodds, "Artificial Propagation of Salmon in Oregon, 1875-1910," *Pacific Northwest Quarterly* 50 (October 1959): 125-33, is a valuable regional study.

19 *Bulletin of the U.S. Fish Commission, 1892*, pp. 1-11; Ernest Gruening, *The State of Alaska* (New York, 1968), pp. 244-47, 587-88.

20 *Bulletin of the U.S. Fish Commission, 1890*, Miscellaneous Document 131, 51st Cong., 2d sess. (Washington, 1891), pp. 165-206.

21 *U.S. Fish Commission, 1892*, pp. 7-8. Related scholarship may be found in Henry Clepper, "A Century of Fish Conservation." John F. Reiger, *American Sportsmen and the Origins of Conservation* (New York, 1975), p. 262, n. 23, summarized the effort to create the Afognak reserve from the viewpoint of Forest and Stream. Reiger holds the view that the true "inventor" of the wilderness preservation idea was George Bird Grinnell, with Livingstone Stone, rather than Aldo Leopold, Arthur Carhart, or Frederick V. Coville. The relative claims of each is an attractive bypath that this winter will not explore at this time.

22 *U.S. Fish Commission, 1892*, p. 14.

23 *Ibid.*, pp. 14-19.

24 *Report of the Commissioner of the General Land Office, 1892* (Washington, 1892), pp. 169-72.

25 *Compiled Laws of Alaska* (Washington, 1913), pp. 174-75. The proclamation reads:

Whereas, it is provided by section twenty-four, of the act of Congress, approved March third, eighteen hundred and ninety-one, entitled, 'An Act to repeal timber-culture laws, and for other purposes'; that 'The President of the United States may from time to time set apart and reserve in any State or Territory having

public lands bearing forests, in any part of the public lands wholly, or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations; and the President shall, by public proclamation, declare the establishment of such reservation, and the limits thereof.'

And whereas, it is provided by section fourteen, of said above mentioned act, that the public lands in the Territory of Alaska, reserved for public purposes, shall not be subject to occupation and sale.

And whereas, the public lands in the Territory of Alaska, known as Afognak Island, are in part covered with timber, and are required for public purposes, in order that salmon fisheries in the waters of the island, and salmon and other fish and sea animals, and other animals and birds, and the timber, undergrowth, grass, moss, and other growth in, on, and about said island may be protected and preserved unimpaired, and it appears that the public good would be promoted by setting apart and reserving said lands as a public reservation.

And whereas, the United States Commissioner of Fish and Fisheries has selected Afognak Bay, River and Lake, with their tributary streams, and the sources thereof, and the lands including the same on said Afognak Island, and within one mile from the shores thereof, as a reserve for the purpose of establishing fish culture stations, and the use of the United States Commission of Fish and Fisheries, the boundary lines of which include the head springs of the tributaries above mentioned, and the lands, the drainage of which is into the same.

Now, therefore, I, Benjamin Harrison, President of the United States, by virtue of the power in me vested by sections twenty-four and fourteen, of the aforesaid act of Congress, and by other laws of the United States, do reserve and do hereby make known and proclaim that there is hereby reserved from occupation and sale, and set apart as a public reservation, including use for fish culture stations, said Afognak Island, Alaska, and its adjacent bays and rocks and territorial waters, including among others the Sea Lion Rocks and Sea Otter Island: Provided, That this proclamation shall not be so construed as to deprive any bona fide inhabitant of said island of any valid right he may possess under the treaty for the cession of the Russian possessions in North America to the United States, concluded at Washington, on the thirtieth day of March, eighteen hundred and sixty-seven.

Warning is hereby expressly given to all persons not to enter upon, or to occupy, the tract or tracts of land or waters reserved by this proclamation, or to fish in, or use any of the waters herein described or mentioned, and that all persons or corporations now occupying said island, or any of said premises, except under said treaty, shall depart therefrom.

In witness whereof, I have hereunto set my hand, and caused the seal of the United States to be affixed.

Done at the city of Washington this twenty-fourth day of December, in the year of our Lord one thousand eight hundred and ninety-two, and of the independence of the United States the one hundred (Seal) and sixteenth.

By the President:

Benj. Harrison.

John W. Foster, Secretary of State.

Chapter 2

- 1 John Ise, *The United States Forest Policy* (New Haven, 1920), pp. 120-28.
- 2 Gifford Pinchot, *Breaking New Ground* (New York, 1947), pp. 86-93. Fernow felt that the trip was unnecessary. Rodgers, Fernow, pp. 220-21.
- 3 No overall scholarly evaluation of the commission's work exists. It apparently did a relatively good job in Montana and a poorer one in Oregon and Washington. See Harold D. Langille, "Mostly Division 'R' Days," *Oregon Historical Quarterly* 57 (December 1956): 301-14, and Rakestraw, "Sheep Grazing in the

Cascade Range: John Minto vs. John Muir," *Pacific Historical Review* 27 (November 1958): 371-82. Both deal with some aspects of the commission's work.

4 Pinchot, *Breaking New Ground*, pp. 104-22; Samuel Trask Dana, *Forest and Range Policy* (New York, 1956), pp. 107-08.

5 Dana, *Forest and Range Policy*, pp. 111-13.

6 Pinchot tells his own story admirably in *Breaking New Ground*. Martin Nelson McGeary, *Gifford Pinchot, Forester-Politician* (Princeton, 1960) is more informative on Pinchot as a politician than as a forester. For the latter, see Harold T. Pinkett, *Gifford Pinchot: Private and Public Forester* (Urbana, Illinois, 1970).

7 Roosevelt's own writings and letters offer the best approach to his career as a conservationist. An excellent brief evaluation is Hays, *Conservation and the Gospel of Efficiency*, pp. 266-71.

8 An excellent assessment is found in Jenks Cameron, *The Development of Governmental Forest Control in the United States* (Baltimore, 1928).

9 On Allen, see Rakestraw, *Forest Conservation in the Pacific Northwest*, pp. 215-55.

10 It is to Pinchot's credit that he gave full credit to these men who aided him. See *Breaking New Ground*, pp. 64-65, 296.

11 Rakestraw, *Forest Conservation in the Pacific Northwest*, pp. 229-36; Paul Roberts, *Hoof Prints on Forest Ranges: The Early Years of National Forest Range Administration* (San Antonio, 1963), pp. 35-38; Walter A. Donaldson, "Reminiscences," in *Early Days in the Forest Service* (Missoula: USFS, Northern Region, 1962), Volume 3, page 38; interview with Thornton T. Munger, 1954.

12 Rakestraw, *Forest Conservation in the Pacific Northwest*, pp. 214-45.

13 *Ibid.*, pp. 287-314

14 *Alaska Governor's Report, 1902*, pp. 37-39.

15 Ted C. Hinckley, "The Inside Passage: A Popular Gilded Age Tour," *Pacific Northwest Quarterly* 56 (April 1965): 67-74.

16 Pierre Berton writes well of the miners' contributions to geographical knowledge in *The Klondike Fever* (New York, 1959).

17 *Alaska: Harriman Expedition* (New York, 1902); Sherwood, *Exploration of Alaska*, pp. 182-85.

18 *Alaska: Harriman Expedition, Volume 2*, pp. 235-56.

19 *Ibid.*, pp. 273, 276-77; Rodgers, *Fernow*, pp. 281-82, deals with the differences that arose between Fernow and Gannett.

20 Sherwood, *Exploration of Alaska*, pp. 82-195.

21 Polly and Leon Gordon Miller, *Lost Heritage of Alaska* (New York, 1967), pp. 74, 81, 196, 243-50, 275, is a good account of Emmons's career. See also David E. Conrad, "Creating the Nation's Largest Forest Reserve: Roosevelt, Emmons, and the Tongass National Forest," *Pacific Historical Review* 46 (February 1977): 65-83.

22 G. T. Emmons, "The Woodlands of Alaska," 1902, in *Records of the Secretary of the Interior, Record Group 48, Letters Received, 1881-1906, File 3841*, National Archives, Washington, D.C.

23 Roosevelt to Secretary of the Interior, April 15, 1902, and William Loeb to Secretary of the Interior, August 9, 1902, *ibid.*

24 Rep. J. T. McCleary to Commissioner, August 16, 1902; Secretary of the Interior to McCleary, September 13, 1902; James O. Rountree to President (n.d.); Harry P. Corser to Secretary of the Interior, September 1, 1902; Secretary of the Interior to Corser, September 13, 1902; all *ibid.*

25 Fred H. McNeil, *Wy'East, The Mountain* (Portland, 1937), pp. 63-99; H. D. Langille, "Division 'R' Days"; William A. Langille Papers, Special Collections, University of Oregon, Eugene.

26 Langille's Klondike and Nome letters are in his papers.

27 Langille's activities may be followed in these sources: his letterbooks, Juneau Office, U.S. Forest Service; his reports to Division of Forestry and Forest Service, RG 95 (National Archives and Federal Records Center [FRC] in Seattle); Langille Papers (University of Oregon); "Alaska Diary of Fred Ames," 1906, Fred E. Ames Papers, Special Collections, University of Oregon, Eugene; and Raymond F. Taylor, "History of Region 10," manuscript, Juneau Office, U.S. Forest Service. See also Chapter 3.

28 Ames diary; Langille letterbooks and reports; F. E. Olmsted, "Alexander Archipelago Forest Reserve," 1906, RG 95, National Archives; Melvin L. Merritt, "History of the Forest Service," manuscript, Merritt Papers; Langille Papers; and interviews with Mrs. Webb Trimble and Mrs. Ivan Langley (Langille's daughters), 1969-1972.

29 Langille to Chief of Records, July 6 and 7, 1905, and Langille to the Forester, July 6, 1905, Langille Letterbook #2.

30 Taylor, "History of Region 10" (no pagination); Langille to Pinchot, July 27, 1905, Langille Letterbook #2; Lyle Blodgett, "Story of the Tongass Navy," *Sourdough Notes* [Region 10 news publication], October 27, 1967, pp. 8-9; Blodgett to the author, August 16, 1969.

31 Taylor, "History of Region 10"; Fred Ames, "Inspection Report, 1909," Box 21588, RG 95, FRC, Seattle.

32 Langille, "A Report on the Alexander Archipelago Forest Reserve, 1906," and "Forest Conditions in Southeast Alaska, 1906," Research Compilation File, RG 95, National Archives.

33 *Ibid.*

34 In addition to Olmsted report on the Alexander Archipelago, the F. E. Olmsted Inspection Correspondence, Dr. 38, RG 95, National Archives, contains seventeen letters on Alaskan affairs involving Pinchot, George Woodruff, Coert duBois, Langille, and U. S. Rush.

35 Olmsted, "Alexander Archipelago—Organization," pp. 9-13.

36 Langille to Pinchot, March 5, 1903, Tongass file, Records of the Bureau of Land Management, Record Group 49 (hereinafter cited as RG 49), National Archives; Pinchot to Langille, December 17, 1904, enclosed in Taylor, "History of Region 10."

37 Olmsted, "Alexander Archipelago—Organization," pp. 4-14.

38 The law read:

That the Secretary of the Interior, under such rules and regulations as he may prescribe, may cause to be appraised the timber or any part thereof upon public lands in the District of Alaska, and may from time to time sell so much thereof, in such quantities to each purchaser as he shall prescribe, to be used in the District of Alaska, but not for export therefrom.

And such sales shall at all times be limited to actual necessities for consumption in the District from year to year, and payments for such timber shall be made to the receiver of public moneys for the local land office of the land district in which said timber may be sold, under such rules and regulations as the Secretary of the Interior may prescribe, and the moneys arising therefrom shall be accounted for by the receiver of such office to the Commissioner of the General Land Office, in a separate account, and shall be covered into the Treasury.

The Secretary of the Interior may permit, under regulations to be prescribed by him, the use of timber found upon the public lands in said District of Alaska by actual settlers, residents, individual miners, and notices or otherwise. Timber is not to be sold for less than the appraised value. The Commissioner of the General Land Office must approve all sales, and he may make allotment of quantity to any bidder or bidders if he deems proper. The right is also reserved to reject any or all bids. A reasonable cash deposit, to accompany each bid, will be required.

Olmsted, "Alexander Archipelago—Organization," pp. 31-34, felt that the regulations were unapplicable to Alaskan conditions. He wrote, "The information called for in the petitions of those who wish to

purchase timber could be obtained only at such an expenditure of time and money as to make the practical application of this law simply out of the question. After all this the timber must be examined and appraised, by which time the mill would probably be out of business."

39 *Ibid.*, pp. 34-38.

40 F. S. Herbert, clerk, Division "1" memorandum, February 15, 1909, Tongass file, RG 49, National Archives.

41 Langille to The Forester, *ibid.*

42 Overton Price to George Woodruff, July 23, 1907; Fred Dennett to R. A. Ballinger, July 30, 1907; Ballinger to James Garfield, August 5, 1907, *ibid.* Ballinger's letter reiterates a previous argument against further national forests in the Chugach area, made April 14, 1907.

43 Langille, "Report on the Forest Conditions and Resources of Western Alaska from Dry Bay to Prince William Sound, 1904," Box 21588, RG 95, FRC, Seattle; Langille to Pinchot, July 16, 1904, Langille Letterbook #1; Langille to the Forester, August 19, 1908, LP-Boundaries-General, Tongass, Executive Orders and Proclamations Affecting Tongass National Forest, Box 2028, RG 95, FRC, Seattle.

44 *Stat. at Large*, xxxv, pt. 2 (Washington, 1909), pp. 2226-28.

45 Rakestraw, *Forest Conservation in the Pacific Northwest*, pp. 249-53.

46 Ledger of Use and Occupancy, Juneau Office, U.S. Forest Service, contains records of sales, trespasses, and occupancy permits from 1905 to November 1907; Langille Letterbook #3 contains pertinent letters of Pinchot of July 6, July 25, and August 10, 1905.

47 Ledger; Langille, "Alexander Archipelago."

48 Langille, "Alexander Archipelago"; Langille to District Forester, June 16, 1909, U-Supervision-Special Use Rates, Box 21591, RG 95, FRC, Seattle.

49 Olmsted, "Alexander Archipelago"; Ames, "Inspection Report, 1909"; Walter Clark to F. S. Wilson, July 10, 1910, Tongass file, RG 49, National Archives; George Cecil, "Inspection Report, 1910," Alaska, Box 70824, RG 95, FRC, Seattle.

50 Langille, "Alexander Archipelago."

51 Pinchot, *Breaking New Ground*, pp. 370-72.

52 Ledger.

53 Olmsted, "Alexander Archipelago—Organization," pp. 15-16.

54 *Ibid.*, "Claims," pp. 2-5; Ledger.

55 Olmsted, "Alexander Archipelago—Claims," pp. 2-5; Langille to The Forester, July 25 and 26, 1906, Letterbook #3.

56 U. S. Rush to Commissioner of General Land Office, August 30, 1902; L. A. Babcock to Commissioner of General Land Office, March 14, 1903, Tongass file, RG 49, National Archives; Affidavit of Officers of Brown-Alaska Company, February 1907; Langille to Pinchot, February 21, 1907; Langille to F. E. Olmsted, March 16, 1907; Overton Price to M. C. Brown, March 22, 1907; M. C. Brown to Pinchot, March 27, 1907; Brown to Pinchot, April 3, 1907; Brown to Pinchot, May 23 and June 24, 1907, Acc 664465, Box 9, Cr. 21588, RG 95, FRC, Seattle.

57 J. M. Wyckoff memorandum, July 28, 1924, *ibid.*

58 Olmsted, "Alexander Archipelago—Grazing."

59 Langille to The Forester, July 6, 1905, Letterbook #3.

60 John Ise, *Our National Park Policy: A Critical History* (Baltimore, 1961), pp. 143-53, offers some good background to the act. Harold K. Steen, *The U.S. Forest Service: A History* (Seattle, 1976), pp. 113, deals with Pinchot's directive.

61 Olmsted, "Alexander Archipelago—Organization," p. 45.

62 *Ibid.*, pp. 45-56; James Wilson to Secretary of the Interior, October 25, 1906, Letters Accompanying Olmsted Report.

63 John H. Brillhart, memo for the files on request of B. F. Heintzleman for facts surrounding creation of the Sitka National Monument; E. Otis Smith, recorder, Arctic Brotherhood, Post 6, to Langille, November 16, 1908; Langille to District Forester, December 23, 1908, January 15, February 9, and February 15, 1910; Secretary Wilson to Secretary of the Interior, March 5, 1910, LD-Boundaries-Tongass (A), Sitka National Monument, Box 21583, RG 95, FRC, Seattle.

64 A convenient brief biography of Olmsted by Woolbridge Metcalf is found in Henry Clepper, ed., *Leaders of American Conservation* (New York, 1971), p. 242.

65 Olmsted's 1906 report, "Alexander Archipelago Forest Reserve," is divided into five sections: "Organization," 49 pages; "Forest Management," 21 pages; "Claims and Privileges," 10 pages; "Grazing, Products, Use of Timber on Public Domain, and Fiscal Agent," 4 pages; and "Accompanying Letters," 10 pages.

66 George Rogers, *The Future of Alaska* (Baltimore, 1962), pp. 54-59.

67 Olmsted, "Alexander Archipelago—Organization," pp. 14-19, and Pinchot to Langille, November 23, 1906, in *ibid.*, "Accompanying Letters."

68 Olmsted, "Alexander Archipelago—Organization," pp. 19-27, and James B. Adams to Langille, October 26, 1906, in *ibid.*, "Accompanying Letters."

69 *Ibid.*, "Claims," pp. 5-10.

70 *Ibid.*, "Forest Management," pp. 1-21.

71 Scattered evaluations of Ames are found in Rakestraw, *Forest Conservation in the Pacific Northwest*, pp. 251-52; Dorothy O. Johansen and Charles M. Gates, *Empire of the Columbia: A History of the Pacific Northwest* (2d ed., New York, 1967), p. 546; Thorton T. Munger, *Forest Research in the Northwest*, interview by Amelia Fry (Berkeley, 1967), pp. 65, 73, 80, 84, 87. The Ames Papers at the University of Oregon contain information on relationships between lumbermen and the Forest Service.

72 "Alaska Diary of Fred Ames." One interesting feature of Ames's diaries are the comments on church services. It was his practice to attend a different church each Sunday in Portland, and his comments were seldom favorable. The Sitka church comes off well.

73 Ames, "Inspection Report, 1909."

74 Royal S. Kellogg, *The Forests of Alaska*, U.S. Forest Service, Bulletin No. 81 (Washington, 1910).

Chapter 3

1 A copy of the letter is enclosed in Taylor, "History of Region 10." "Sushitna" should be "Susitna."

2 Langille to The Forester, June 10, July 15, 16, and 20, 1904, Letterbook #1; Langille, "Report on the Proposed Norton Bay Forest Reserve, Alaska, 1904," Juneau Office, U.S. Forest Service.

3 Langille to The Forester, September 10, 1904, Letterbook #1. A personal account of the trip is Langille, "Rough Times at Norton Bay," Rakestraw, ed., *Alaska Journal* 2 (Autumn 1972): 53-56.

4 Langille to The Forester, September 7, 1904, Letterbook #1.

5 L. O. Boundaries, "General Notes on Interior Alaska, 1909," Box 9, Group 21588, RG 95, FRC, Seattle.

- 6 Langille, "Norton Bay Forest Reserve," p. 16.
- 7 *Ibid.*
- 8 Langille to The Forester, October 7 and November 28, 1904; Langille to Chief of Section on Reserve Boundaries, January 23, 1905, Letterbook #1; Langille, "The Proposed Forest Reserve on the Kenai Peninsula, Alaska, Oct.-Dec. 1904," Chugach file, RG 95, National Archives.
- 9 Langille, "Kenai Peninsula," pp. 6-20.
- 10 *Ibid.*, pp. 23-28; Langille to The Forester, January 10, 1905, Letterbook #.
- 11 Langille, "Kenai Peninsula," pp. 30-32.
- 12 Langille to C. Hart Merriam, Chief, U.S. Biological Survey, July 23, 1905, Letterbook #1; Langille, "Kenai Peninsula," pp. 38-40.
- 13 Langille, "Kenai Peninsula," p. 41.
- 14 *Ibid.*, pp. 41-43; Langille to Merriam, January 23, 1905, Letterbook #1.
- 15 Langille to The Forester, November 28, 1904, Letterbook #1.
- 16 Langille to The Forester, January 10, 1905, *ibid.*
- 17 Langille to The Forester, October 7 and November 30, 1904; Langille to Chief, Division of Reserve Boundaries, December 30, 1904, and January 12, 1905; Langille to Chief, Division of Records, January 12, 1905, *ibid.*
- 18 Langille to Chief, Division of Reserve Boundaries, January 13, February 8, March 29, April 14 and 15, 1905, *ibid.*; autobiographical note, Langille Papers.
- 19 Langille, "The Turnagain Arm, Knik Arm and Matanuska River Region, 1905," Juneau Office, U.S. Forest Service.
- 20 Langille to Chief, Section on Reserve Boundaries, March 29, 1905, Letterbook #1; Langille, "A Report on a Forest Reconnaissance from Cook Inlet to Circle City, Alaska, 1905," Group 21588, RG 95, FRC, Seattle.
- 21 Langille to The Forester, June 10, 1905, Letterbook #2.
- 22 Olmsted, "Alexander Archipelago—Organization," pp. 40-49.
- 23 E. C. Barnard, "Fortymile Quadrangle," in Harry Gannett and others, *Twenty-first Annual Report of the U.S. Geological Survey, Pt. 5, Forest Reserves* (Washington, 1900), p. 597.
- 24 Kellogg, *The Forests of Alaska*, pp. 17-24.
- 25 Langille to The Forester, January 10, 1905, Letterbook #1.
- 26 Langille to The Forester, January 23, 1905, *ibid.*
- 27 Olmsted, "Alexander Archipelago—Organization," pp. 44-45.
- 28 *Investigation of the Department of the Interior of the Bureau of Forestry* (Washington, 1911), Volume IV, pp. 1333. While under cross-examination, Pinchot stated that Ballinger's objections referred only to the Chugach; other evidence shows that he objected to creation of both the Tongass and the Chugach.
- 29 *Ibid.*, pp. 1157-59.
- 30 *Stat. at Large*, xxxv, pt. 2 (Washington, 1909), pp. 2148-49.
- 31 Langille, "Report on the Chugach National Forest, Alaska, 1907," Research Compilation File, RG 95, National Archives.
- 32 Ledger, Juneau Office, U.S. Forest Service.
- 33 Langille, "Report on the Chugach." See also Rakestraw, ed., "Boom Times at Valdez, 1907," *Alaska Journal* 7 (Spring 1977): 95-102, on Langille's report.

34 *Stat. at Large*, xxxv, pt. 2 (Washington, 1909), pp. 2153-54.

35 Langille, "Report on the Proposed Addition to the Knik National Forest, Alaska, 1908," Juneau Office, U.S. Forest Service.

36 *Stat. at Large*, xxxv, pt. 2 (Washington, 1909), p. 2231.

37 Langille, "Report on the Proposed Talkeetna National Forest, Alaska, 1908," Juneau Office, U.S. Forest Service.

38 Taylor, "History of Region 10"; Ames, "Inspection Report, 1909." Diaries of Conrad and Wernstedt are in the Anchorage Office, U.S. Forest Service.

39 Langille to The Forester, July 16, 1904, Letterbook #1.

40 The valiant struggle is told dramatically by Rex Beal in his novel, *The Iron Trail* (New York, 1913).

41 Lage Wernstedt, "Report on Copper River to Yakataga, 1909," Group 21588, RG 95, FRC, Seattle.

42 E. T. Allen to The Forester, February 2, 1908, attached to Langille, "Talkeetna National Forest"; Wernstedt, "Copper River to Yakataga."

43 The scholarship has been voluminous. In one of the earliest scholarly accounts of the affair, John T. Gano, "Some Constitutional and Political Aspects of the Ballinger-Pinchot Controversy," *Pacific Historical Review* 3 (September 1934): 323-33, suggested that the major issue was the truth or falsehood of the charges by Glavis, rather than the charges and countercharges of Pinchot and Ballinger. Henry F. Pringle, in his *The Life and Times of William Howard Taft: A Biography*, 2 vols. (New York, 1939), tried to present a balanced account on the basis of personalities, but he did not go into the resource management aspect of the controversy to any great extent. Harold L. Ickes, writing without fear or research in the *Saturday Evening Post* of May 25, 1940, exonerated Ballinger and claimed he was guilty of no wrongdoing. Alpheus T. Mason, using material supplied by Pinchot, published *Bureaucracy Convicts Itself: The Ballinger-Pinchot Controversy of 1910* (New York, 1941), a highly pro-Pinchot account. In his autobiography, *Breaking New Ground*, Pinchot wrote his own account and justification; it is, however, an honest handling of the sources. M. Nelson McGeary, *Gifford Pinchot: Forester-Politician* (Princeton, 1960), utilized Pinchot's personal papers shrewdly. Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge, 1959), and Elmo R. Richardson, *The Politics of Conservation: Crusades and Controversies, 1897-1913* (Berkeley, 1962), attempted to understand the character of Ballinger and the place of the controversy in the setting of western attitudes and the whole conservation movement. James L. Penick, Jr., *Progressive Politics and Conservation: The Ballinger-Pinchot Affair* (Chicago, 1968), leaned over backward to whitewash Ballinger. S. A. D. Puter and Horace Stevens, *Looters of the Public Domain* (Portland, 1908) were highly critical of Ballinger as commissioner of the General Land Office.

44 McGeary, *Gifford Pinchot: Forester-Politician*, pp. 113-17.

45 Rakestraw, *Forest Conservation in the Pacific Northwest*, pp. 288-90, 298-99; Richardson, *Politics of Conservation*, pp. 48-49.

46 Penick, *Progressive Politics*, pp. 31-33.

47 Hays, *Conservation and the Gospel of Efficiency*, pp. 149-65; McGeary, *Pinchot*, pp. 119-25; Pinchot, *Breaking New Ground*, pp. 408-17.

48 Andrew Scofield, et al., *Decisions of the Department of the Interior and the General Land Office in Cases Relating to Public Lands* (Washington, 1911), Vol. 46, pp. 175 ff., summarizes the facts.

49 McGeary, *Pinchot*, pp. 132-42, provides the clearest narrative on this phase.

50 36 I.D. (1908), 66.

51 E. T. Allen to The Forester, April 28, 1908; Langille to Allen, n. d., 1908, Cunningham Claims, correspondence file, April 1909 and January 1910, RG 95, National Archives.

52 *Investigation of the Department of the Interior of the Bureau of Forestry* (1911), Vol. 3, pp. 665-72.

53 *The Department of the Interior—L. R. Glavis: Original Statement of Charges Made by the President to L. R. Glavis* (Washington, 1910), p. 78.

54 E. T. Allen to The Forester, September 4, 1909; Allen to Overton Price, September 4, 1909; Allen to The Forester, September 13, 1909; B. P. Cunningham Claims: Pierce correspondence file, Mar.-Dec. 1909, Box 81, RG 95, National Archives.

55 McGeary, Pinchot, p. 143.

56 Penick, *Progressive Politics*, pp. 102-03, 192-93.

57 *Investigation*, Vol. 12, pp. 1043-44. Wingate was hired by Allen, probably at the suggestion of Glavis. Well stricken in years, Wingate was also recommended for the job by a number of Portland banking and mercantile firms as a practical coal man. Glavis gave him instructions to see if the improvements were made with the aim of working the claims individually, or as a whole. Glavis to Wingate, July 31, 1909, Cunningham Coal Case, Shaw correspondence file, Apr.-Dec. 1909, Box 82; Edmund Cookingham to Charles R. Pierce, October 11, 1909; M. S. Ladd to Pierce, October 13, 1909; Taylor and Young Co. to Pierce, September 28, 1909, Cunningham Coal Case, Pierce correspondence file, Mar.-Dec. 1909, RG 95, National Archives.

58 Ames Diary, August 7-September 6, 1909; *Investigation*, Vol. 10, pp. 81-116.

59 "Estimates of Timber on Most of the Cunningham Claims," Ames Papers.

60 Langille, "Autobiographical Notes" (manuscript in possession of Ivan Langley family, Portland, and used with permission).

61 41 I.D. (1911), 197-98, 219.

62 Langille, "A Statement of Conditions in the Chugach National Forest, Past and Present," February 21, 1911, Juneau Office, U.S. Forest Service.

63 Langille went to Brazil in 1911 and 1912 and evaluated timber resources in the Mato Grosso area. He later returned to Oregon and played a role in setting up the state park system.

Chapter 4

1 Henry Graves to F. E. Olmsted, March 4, 1911, Graves Correspondence, RG 95, National Archives; Steen, *The U.S. Forest Service*, pp. 103-04.

2 Ralph S. Hosmer, "Henry Solon Graves, 1871-1951," *Journal of Forestry* 49 (May 1951): 325; Henry Clepper, "The Forest Service Backlashed," *Forest History* 11 (January 1968): 6-15; editorial, *American Forests* 57 (April 1951): 48; Samuel T. Dana, *The Development of Forestry in Government and Education*, interview by Amelia Fry (Berkeley, 1967), pp. 64-68.

3 Clepper, "Forest Service Backlashed"; Dana, *Forest and Range Policy*, pp. 178-81; Ise, *United States Forest Policy*, pp. 254-98; Rakestraw, *Forest Conservation in the Pacific Northwest*, pp. 310-14.

4 Dana, *Forest and Range Policy*, pp. 178-97; E. A. Sherman, "The Supreme Court of the United States and Conservation Policies," *Journal of Forestry* 19 (December 1921): 928-30.

5 Clepper, "Forest Service Backlashed"; Timber Fraud Claims, Drawer 40, and Lands, Homestead Claims, Drawer 37, RG 95, National Archives.

6 Jenks Cameron, *The Development of Governmental Forest Control in the United States*, gives the Broad Arrow viewpoint in historical perspective. Ernest Gruening, *The State of Alaska* (New York, 1968), interprets Alaska from a Broad Arrow point of view.

7 Graves to H. H. Chapman, February 20, 1915; Chapman to W. G. Weigle, March 9, 1915; Weigle to Chapman, March 19, 1915; Melvin Merritt to Chapman, June 23, 1932, all Herman Haupt Chapman Papers, Yale University, New Haven; *Alaska Governor's Reports—1913*, pp. 12-13; 1914, pp. 12-13; 1916, p. 29; 1918, pp. 38-39; Ise, *United States Forest Policy*, pp. 205-06; Division R, National Forests—Choctaw-Chugach, Box 26, RG 49, National Archives; Franklin K. Lane, "The Nation's Undeveloped Resources," *National Geographic Magazine* 25 (February 1914): 183-205.

8 Pertinent papers are in Chugach, 1907-1936, Classified Files, RG 95, National Archives; McGeary, Pinchot, pp. 207-10, has a good account.

9 McGeary, Pinchot, pp. 208-09; Pinchot diaries for September-October 1911, microfilm copies, Pinchot Conservation Center, Milford, Pennsylvania.

10 Henry S. Graves, "Alaska Trip, 1915," Box 3, Graves Papers, Yale University, New Haven; Graves, "The Forests of Alaska," *American Forestry* 22 (January 1916): 24-37.

11 William H. Wilson, "The Alaskan Engineering Commission and a New Agricultural Frontier," *Agricultural History* 43 (October 1968): 339-50, contains a brief biographical sketch of Christensen.

12 C. W. Ritchie to A. Christensen, August 19 and 29, 1915; Christensen to Clay Tallman, October 18 and 19, 1915; Franklin Lane to David Houston, October 30, 1915; Houston to Lane, November 26, 1915; Tallman to Christensen, December 31, 1915; Christensen to Tallman, May 1, 1916; "Statement of Facts Relating to the Chugach National Forest," Division F, General Land Office, RG 95, National Archives; Weigle to District Forester, May 16, 1916, LP-Boundaries-Chugach, Box 2028, RG 95, FRC, Seattle.

13 Christensen, "Statement of Facts," Historical file, Juneau Office, U.S. Forest Service.

14 Arthur C. Ringland, "Report on the Suggestion of Mr. Christensen to Abolish the Chugach National Forest," February 28, 1917, LP-Boundaries-Chugach, Box 2028, RG 95, FRC, Seattle.

15 Wilson, "Engineering Commission."

16 Weigle, "William G. Weigle: Early Experiences," *Timber Lines* [Portland Office, U.S. Forest Service], n.d.; "William G. Weigle Reminisces," *Early Days in the Forest Service*, Volume 2 (Missoula: U.S. Forest Service, 1955), p. 83; Weigle, "The National Forests of Alaska," *Yale Forest School News* 2 (January 1914): 4-5; Graves, "Alaska Trip, 1915"; interview with George Drake and Roy Barto, March 8, 1970; Drake, *A Forester's Log: Fifty Years in the Pacific Northwest*, an interview by Elwood R. Maunder (Santa Cruz: Forest History Society, 1975).

17 Drake-Barto interview; Taylor "History of Region 10"; Blodgett, "Story of the Tongass Navy"; Weigle, "National Forests of Alaska"; interview with Lyle Blodgett, October 8, 1969; logs of Tahn, Restless, Ranger 1, and Ranger 3, Historical file, Juneau Office, U.S. Forest Service; Asher Ireland, "Field Diary, 1914-1920," Special Collections, University of Oregon, Eugene. Kan Smith's real name was Robert. He disliked the name and adopted Kan as an abbreviation for Kansas, his native state. A capable field man, he was notoriously tight in ordering supplies for the field parties. Drake usually doubled his orders. On one such occasion, Kan sent a memo to Drake asking that he send only the food ordered, and he signed it "Kan of Ketchikan." Drake's reply was signed "Bull of Bullivia." Drake-Barto interview.

18 Wallace I. Hutchinson, "We Present: George H. Cecil," *Journal of Forestry* 46 (May 1948): 382-83.

19 Blodgett and Drake-Barto interviews; Taylor, "History of Region 10"; Harold Smith, "An Old Timer Reminisces," *Sourdough Notes* (March 1956 and November 1956).

20 E. A. Sherman, "Report to the Forester on the Tongass and Chugach National Forests," in "Memorandum on Alaska for the Forester," September 17, 1921, Box 43115, RG 95, FRC, Seattle.

21 Ray Taylor, "Sea Going Forest Rangers," *New York Times*, April 16 and June 8, 1930; Six Twenty-Six (October 1919 and April 1921).

22 Taylor, "D. B. H. on the Tongass," *Forest Club Quarterly* [University of Washington] 5 (February 1928): 21.

23 Drake interview, Forest History Society; Drake-Barto interview; George Peterson diary, Box 2026, RG 95, FRC, Seattle; Drake in *Sourdough Notes*, October 27, 1967.

24 George Cecil to The Forester, January 9, 1917; Charles H. Flory, "Strictly Confidential," memorandum for the District Forester, January 6, 1917; Cecil to The Forester, February 17, 1917; plat of Anchorage red-light district, Juneau Office, U.S. Forest Service.

25 Dana, *Forest and Range Policy*, p. 391.

26 Graves to Senator Walsh, November 19, 1913; Graves to District Forester, May 14, 1913; George Cecil to Graves, May 27, 1913, Box 13, Graves Papers; "Nelson's Bay," Box 21584, RG 95, FRC, Seattle.

- 27 Langille, "Memorandum for District Forester," 1911, Juneau Office, U.S. Forest Service.
- 28 District Forester to Graves, May 27, 1913, LP-Boundaries-Chugach, Box 2028, RG 95, FRC, Seattle.
- 29 Report of J. B. Adams, 1913; E. H. Clapp, "Inspection Report, 1913," LP-Boundaries-Chugach, Box 21588, RG 95, FRC, Seattle.
- 30 Hugh H. Bennett and Thomas D. Rice, "Soil Reconnaissance in Alaska with an Estimate of Agricultural Possibilities," in Milton Whitney, ed., *Field Work of the Bureau of Soils, Sixteenth Report* (Washington, 1919), pp. 43-237; Bennett, "Report on a Reconnaissance of the Soils, Agriculture and Other Resources of the Kenai Peninsula of Alaska," in Whitney, ed., *Field Report of the Bureau of Soils, 1916* (Washington, 1921), pp. 39-174.
- 32 H. W. Fish to Weigle, April 28, 1913, LP-Boundaries-Chugach, Box 21588, RG 95, FRC, Seattle.
- 32 Asher Ireland, "Boundary Addition to the Chugach National Forest," March 15, 1918, Anchorage Office, U.S. Forest Service (also in FRC, Seattle).
- 33 Ireland and T. M. Hunt, "Land Classification Report on the Ship Creek Project, 1916"; Cecil to Weigle, December 21, 1916, U-Classification-Ship Creek Project, Box 21584, RG 95, FRC, Seattle.
- 34 Flory to District Forester, February 1, 1917, *ibid.*
- 35 Weigle to Cecil, January 18, 1917, *ibid.*
- 36 Ireland, "Matanuska and Knik Arm," February 9, 1918, Anchorage Office, U.S. Forest Service.
- 37 Lage Wernstedt and H. Nilsson, "Kachemak Bay Project—Chugach," Box 21584, RG 95, FRC, Seattle.
- 38 Cecil to The Forester, December 20, 1916, *ibid.*
- 39 Weigle to Cecil, May 7, 1920, LP-Boundaries-Chugach, Box 2028, *ibid.*
- 40 Memorandum for Mr. Cecil, May 7, 1920, LP-Boundaries-Chugach, *ibid.*; *Stat. at Large*, xxxix, pt. 2 (Washington, 1917), pp. 1740-43; *Stat. at Large*, xli, pt. 2 (Washington, 1921), pp. 1745-47.
- 41 W. A. Chipperfield to District Forester, 1949, LP-Boundaries-Tongass, Box 2028, RG 95, FRC, Seattle.
- 42 Ireland, "Boundary Report on the Icy Straits Project," May 25, 1918, Division R, Tongass, RG 49, National Archives.
- 43 Charles Flory, "Statement Regarding the Anchorage Ranger District," February 9, 1930, Juneau Office, U.S. Forest Service.
- 44 Kan Smith, "Logging Chances on the West Coast of Prince of Wales Island," 1918, USFS Timber Sales, Box 94, RG 95, National Archives.
- 45 Harold Lutz interview, January 22, 1970; Drake-Barto interview; T. M. Hunt diary, 1912, Anchorage Office, U.S. Forest Service.
- 46 E. Ness diary, June 29, 1910, Box 2026, RG 95, FRC, Seattle.
- 47 Timber sales contracts, Chatham Ranger Station, Juneau, give interesting reports on sales standards. The *Six Twenty-Six* also has good data.
- 48 Christensen, "Statement of Facts"; B. F. Hoffman, "Alaskan Woods, Their Present and Prospective Uses," *Forestry Quarterly* 11 (1913): 194-200; Kan Smith, "Logging Chances on the West Coast of Prince of Wales Island" and "Report of Timber Survey," 1917, USFS Timber Surveys, 1908-1930, Box 94, RG 95, National Archives.
- 49 File is contained in Alaska Region-Tongass-Lituya Bay Withdrawal, Box 21591, RG 95, FRC, Seattle.
- 50 There is an extensive file on the sale in Sales-Tongass-Craig Lumber Company, January 21, 1918, Chatham Ranger Station, Juneau. The *Six Twenty-Six* (February 1918 and June 1918) also contains material.
- 51 *Six Twenty-Six* (February 1920).
- 52 In doing his waterpower work, Drake also named some of the lakes. On one occasion, with a crew, he surveyed a lake near Bell Island. He and his crew spent the next night at the nearby resort and during the evening danced with three girls named Nellei, Bess, and Rowena. The next day the crew returned,

worked the watershed, and discovered three small lakes draining into a large lake. They named the three small lakes after the girls they had danced with, and the larger one was named Lake Maud, after a pretty waitress in Ketchikan.

Drake returned to Ketchikan and made a map, placing on it these names. About the time he finished, Weigle came in to approve it. He didn't mind Lake Maud—he was a bachelor at the time and somewhat sweet on the waitress himself—but he objected to Rowena, Bess, and Nellei—the regional office, he said, wouldn't stand for that. Drake told Weigle that he had spent three weeks preparing the map and couldn't possibly redo the work by the time the map was due; actually he could have scraped the offending names off with a razor blade in five minutes, but Weigle, who was no engineer, didn't know this, so he let the names stand. These lakes, except for Lake Nellei, are listed under the names Drake gave them in *Alaska Geographic Place Names*. Drake-Barto interview.

53 The reports are in USFS Timber Surveys, 1908-1930, Box 94, RG 95, National Archives. See also *Six Twenty-Six* (January 1919) and Clinton G. Smith, *Regional Development of Pulpwood Resources of the Tongass National Forest*, U.S. Department of Agriculture, Bulletin No. 950 (Washington, 1921).

54 A. W. Greeley, "Alaska's Acres at Work at Last," *American Forests* 60 (October 1954): 8-11, 52; Mason Bruce, "National Forests in Alaska," *Journal of Forestry* 58 (June 1960): 437-41; T. W. Norcross, "Report on Alaska," Box 43511, RG 95, FRC, Seattle; T. M. Hunt diary, June 21, 1914, Anchorage Office, U.S. Forest Service; *Six Twenty-Six* (February 1920); L. A. Stockley, Fish Creek Sale, January 1, 1913, Chatham Ranger Station, Juneau, has a large file on the proposed sale of 1913.

55 Lage Wernstedt, "Chugach Trespass" (n.d.), I-References-Historical, Box 2028, RG 95, FRC, Seattle. Diaries of T. M. Hunt, Lage Wernstedt, George Johnson, and H. W. Conrad, Anchorage Office, U.S. Forest Service, are instructive.

56 Edwin M. Fitch, *The Alaska Railroad* (New York, 1971), pp. 38-53; John E. Ballaine Papers, Manuscripts Section, University of Washington, Seattle; Report of the *Alaska Engineering Commission*, House Document 39, 64th Cong., 1st sess. (Washington 1916).

57 Hunt to Weigle, May 13, 1915; K. McCullagh to F. Mears, July 31, 1915; Weigle to District Forester, September 17, 1915; F. Ames to Weigle, October 15, 1915; Drake to Weigle, October 15, 1915, and July 19, 1916, Free Use—Alaska Railroad, Box 44699, RG 95, FRC, Seattle.

58 Weigle to District Forester, September 16, 1916, and May 7, 1917; Hunt to Weigle, March 31, 1917; Cecil to *The Forester*, April 13, 1917; Graves to William Edes, May 3, 1917; Edes to Graves, July 2, 1917; Weigle to District Forester, November 7, 1917; Hunt to Weigle, October 2, 1917, *ibid.* *Alaska Railroad Record* (Anchorage), May 8, 1917, p. 207, and June 12, 1917, p. 246; Hunt diary, July 24, 1916, and Clyde Nettleton diary, July 13-17, 1917, Anchorage Office, U.S. Forest Service.

59 Ranger diaries in the Anchorage Office, especially those of McCullagh, Hunt, Norgren, Nettleton, and Brown, help reconstruct fire and suppression history. E. E. Carter, "Inspection Report," August 19, 1924, Box 43115, RG 95, FRC, Seattle, has some good comments.

60 Weigle, Memorandum, May 2, 1913, LP-Boundaries-Tongass, Box 2028, RG 95, FRC, Seattle.

61 George Cecil to Graves, May 27, 1913, *ibid.*

62 Graves, "Alaska Trip, 1915," entries for August 29 and September 1.

63 Langille, "Autobiographical Memoir." Langille's maps and blueprints are at the Chatham Ranger Station, Juneau, as are legal briefs. *United States v. Munday* involved fraud under the Alaska Power of Attorney Law, after it was decided on December 4, 1912. Merritt's observation is contained in his Alaska notes in the Merritt Papers.

63a Langille to The Forester, July 16, 1904, Letterbook #1; Lage Wernstedt, "Copper River to Yakataga, 1908," Box 21588, RG, FRC, Seattle, deals with early claims. A summary of the placer law related to oil is found in Robert W. Swenson, "Legal Aspects of Mineral Resources Exploitation," in Paul W. Gates, *History of Public Land Law Development* (Washington 1968), pp. 730-732. The Oil Claim File at the Anchorage Office, U.S. Forest Service, has a comprehensive list of documents. Of the numerous letters, H. Stanley Hindricks to A. Christensen, September 25, 1913, best summarizes the situation. Other records of importance include: H. W. Fiske to T. M. Hunt, August 11, 1912; Hunt to Weigle, March 18, 1913; Weigle to

Cecil, April 7, 1913; Weigle to Christensen, April 12, 1913; and Cecil to Christensen, October 7, 1913, all Anchorage Office. The field diaries of Fiske and Hunt are also of value.

64 "Memo for Mr. Cecil," May 7, 1920, LP-Boundaries-Chugach, Box 2026, RG 95, FRC, Seattle.

65 *Ibid.*; Drake-Barto interview; E. H. Clapp, "Administrative and Service Policies," 1918, Reference File-Historical, Box 2028, RG 95, FRC, Seattle.

66 Fox Island File, Chatham Warehouse, Juneau; L. C. Pratt, "Uncle Sam's Most Northern Woodlot," *American Forestry* 27 (June 1921): 371-75.

67 U-Withdrawal-Alaska-Hot Springs Resolution, Box 21591, RG 95, RRC, Seattle.

68 In addition to reference in note 66, see Asher Ireland diary, June-July 1918, and Dana, *Forest and Range Policy*, p. 397.

69 W. A. Chipperfield interview, April 25, 1970.

70 Cecil to The Forester, August 27, 1913, LP-Boundaries-Chugach, Box 2028, RG 95, FRC, Seattle.

71 Ringland to McCracken, March 19, 1917; McCracken to Ringland, March 22, 1917, Wildlife-USFS Wildlife Management, General Correspondence, Acc 1328, RG 95, National Archives; A. Christensen to Clay Tallman, September 22, 1916, Chugach file, Box 27, RG 49, National Archives; T. M. Hunt diary, September 2, 8, 11, 14, 16, 1916, Anchorage Office, U.S. Forest Service.

72 F. S. Johnson diary, October 8 and 28, 1916, Anchorage Office, U.S. Forest Service.

73 "Reconnaissance Report of Central Part of Kenai Peninsula"; Ringland to Hunt, July 1, 1912, Box 21588, RG 95, FRC, Seattle.

74 James Wilson to Secretary of the Interior, October 26, 1906, in Olmsted, "Alexander Archipelago"; H. W. Krieger, "Archaeological and Ethnological Studies in Southeast Alaska," *Exploration and Field Work of the Smithsonian Institution in 1926*, Smithsonian Misc. Collections, vol. 78, no. 7 (Washington, 1927), p. 174.

75 Alaska Cruise Club resolution, June 30, 1913, Old Kasaan Historical File, Juneau Office, U.S. Forest Service.

76 Cecil to Weigle, December 1, 1914; Weigle to Cecil, December 8, 1914, and February 12, 1915; Christensen to Commissioner of GLO, February 2, 1916; Gary Tallman to Secretary of the Interior, March 29, 1916; B. L. Wheeler, Regional Forest Examiner, memo, April 3, 1916; Secretary of Agriculture Houston to Secretary of the Interior, April 8, 1919; Graves to James Wickersham, April 8 and 15, 1916; Wickersham to Graves, April 12, 1916; Secretary of Agriculture to Secretary of the Interior, September 20, 1916; Secretary of the Interior to the President, September 30, 1916, *ibid.*

77 James B. Adams to District Forester, December 7, 1916; J. M. Wyckoff to Weigle, March 17, 1917; Cecil to The Forester, August 22, 1917; A. E. Potter to Cecil, August 29, 1917; E. A. Sherman to Cecil, November 10, 1917, *ibid.*

78 Charles Flory to The Forester, January 27, 1921, *ibid.*

79 Krieger, "Archaeological Studies"; J. R. Swanson to Dr. Fewks, Director of the Smithsonian Institution, February 15, 1921; Fewks to L. F. Kneipp, February 17, 1921; Stephen Mather to E. A. Sherman, March 29, 1921; W. B. Greeley to Director of the National Park Service, June 8, 1921, *ibid.*

Chapter 5

1 The literature on Harding and Fall is extensive. Russell Lord, *The Wallaces of Iowa* (New York, 1947), pp. 242-49, gives a good general account. Interestingly enough, although Lord gives Wallace credit for

writing Harding's pro-forestry speech, John Ballaine, the Seattle capitalist, also claims credit (clipping from *Seward Daily Gateway*, May 23, 1927, in Ballaine Papers). Pinchot's correspondence with Ballaine, especially Pinchot to Ballaine, November 24, 1922, and January 15, 1923, Box 2, Ballaine Papers, is instructive. The Chapman Papers at Yale have a great deal of material on Fall and Harding. The view of the American Forestry Association may be seen in "The Fight for Alaska's Forests," *American Forestry* 28 (April 1922): 200-07.

2 Dana, *Forest and Range Policy*, pp. 208-47, offers the best summary. See also Donald C. Swain, *Federal Conservation Policy, 1921-1933* (Berkeley, 1962).

3 Henry Clepper, "Chiefs of the Forest Service," *Journal of Forestry* 59 (November 1961): 795-803, contains good sketches of Stuart, Greeley, and Silcox. William B. Greeley, *Forests and Men* (New York, 1951), offers many insights from personal experience. *American Forests* and *Journal of Forestry* contain continuing evaluations during this period.

4 Greeley wrote on the need for decentralization in "What's Wrong with Alaska," *American Forestry* 27 (April 1921): 198-207.

5 Evaluations of Flory's character come primarily from interviews with Forest Service personnel, especially Pearl Peterson, Ray Taylor, and Linn Forrest, and from his official correspondence.

6 Merritt's diaries and papers are at the University of Oregon. Here again, interviews with W. H. Johnson, Ray Taylor, and W. A. Chipperfield have supplemented written material.

7 Heintzleman's papers are at Yale University. Quotations from them are used with the permission of that institution. Interviews with Claribel Rakestraw, W. H. Johnson, Pearl Peterson, and Linn Forrest have supplemented documentary sources.

8 *Hearings before Committee on the Territories on H. R. 5694*, 67th Cong., 1st sess. (Washington, 1921), pp. 477-79; D-Supervision, Interdepartmental Alaska Council, Box 43116, RG 95, FRC, Seattle.

9 E. A. Sherman Memo, November 20, 1920; Charles Flory to William B. Greeley, December 4, 1920; Greeley to Assistant Secretary Meredith, January 17, 1921; Sherman to The Forester, December 17, 1921. D-Supervision-Alaska Development Board, *ibid*.

10 E. W. Loveridge, 1930, Job Analysis, Region 8, September 16, 1930, *ibid*.

11 Minutes of Alaska Game Commission, Box 25184, RG 95, FRC, Seattle.

12 Edgar Nixon, comp. and ed., *Franklin D. Roosevelt & Conservation, 1911-1945*, 2 vols. (Hyde Park, New York, 1957), has the best evaluation of Roosevelt's contribution.

13 Sherman to Flory, August 4, 1921; Heintzleman to Sherman, November 23, 1921, LP-Boundaries-Chugach, Box 2028, RG 95, FRC, Seattle.

14 Greeley to Flory, August 17, 1923; Kneipp to Flory, November 1, 1923, *ibid*.

15 Merritt to The Forester, August 26, 1924; Flory to The Forester, October 18, 1923; Flory to McDonald, January 24, 1923; McDonald to Flory, February 29, 1923; C. N. Squire to Flory, September 10, 1924; Secretary of Agriculture Jardine to Flory, August 13, 1925; George Parks to Commissioner of GLO, September 28, 1924, *ibid*.; Merritt, "Wooded Islets Memo," August 25, 1924, Division R, Chugach pt. 1, Box 27, RG 49, National Archives.

16 Flory, "Statement Regarding the Anchorage Ranger District," February 19, 1930, Juneau Office, U.S. Forest Service.

17 Box 15, Ballaine Papers.

18 Heintzleman to The Forester, August 23, 1938, LP-Boundaries-Chugach, Box 2028, RG 95, FRC, Seattle.

19 Asher Ireland, "Report of Ice Straits Project," May 25, 1918; William Spry to George Parks, September 1923, Division R, Chugach pt. 1, Box 27, RG 49, National Archives.

20 Flory, "Boundary Report of Ice Straits and Proposed Addition to the Tongass National Forest," 1924; George Parks to Commissioner of GLO, September 26, 1923; Secretary of Agriculture to Secretary of the Interior, March 21, 1925; E. C. Finney to Secretary of Agriculture, March 28, 1925, *ibid*.

21 Taylor, "History of Region 10"; taped interview with W. A. Chipperfield and Harold Smith.

22 E. E. Carter, "Inspection Report," August 19, 1924; and "Inspection of the Tongass National Forest, District 8," September 6, 1923, Box 43115, RG 95, FRC, Seattle.

23 Taylor, "History of Region 10."

24 Carter, "Inspection," September 11, 1925; C. H. Squire, "Inspection," September 11, 1925; R. H. Headley, "Inspection," July 23, 1925; E. W. Loveridge, "Inspection Report," September 16, 1930, with accompanying memos from Archbold and others; C. M. Granger, "Inspection," August 21, 1936, General Integrating Inspections for Region 10, RG 95, National Archives; Archbold interview.

25 Frank Russell and others, "Reports of Examination of Region 10, Forest Service, Juneau, Alaska, July 1, 1930—June 30, 1936"; memo, n.d., B. F. Heintzleman; F. A. Silcox comments, March 29, 1937; B. F. Heintzleman, "General Comments," October 1, 1937, Box 43115, RG 95, FRC, Seattle. The Ickes diaries show that Interior had a fit of "investigitis" at that time. Like Heintzleman, Ickes resented the unfairness of the procedure.

26 Harold Lutz diary, Anchorage Office, U.S. Forest Service; interviews with W. A. Chipperfield, Harold Smith, and Lyle Blodgett; Memorandum, March 12, 1921, District Forester to Forester, I-Reference-Historical, Box 2028, RG 95, FRC, Seattle; *Six Twenty-Six* (April 1921 and December 1920).

27 As quoted in Taylor, "History of Region 10."

28 Blodgett, "History of the Tongass Navy"; Taylor, "History of Region 10"; L. C. Pratt, "Rangers of the North," *American Forests and Forest Life* 30 (January 1924): 20-23, 53.

29 Pratt, "Rangers of the North."

30 Chipperfield interview.

31 Ranger diaries are good on community relations. Also valuable are C. M. Granger, "Inspection Report," 1936, and F. A. Silcox, "Inspection Report," 1939, General Integrating Inspections for Region 10, RG 95, National Archives. John D. Guthrie, "The Glacier Highway in Alaska," *American Forestry* 27 (November 1921): 706-08, describes the liberating effect of road building in the Juneau area.

32 R. F. Taylor, *Pocket Guide to Alaska Trees*, USDA Agricultural Handbook No. 5 (Washington, 1950).

33 Taylor, "Available Nitrogen as a Factor Influencing the Occurrence of Sitka Spruce and Western Hemlock Seedlings in the Forests of Southeastern Alaska," *Ecology* 16 (1935): 580-603.

34 Taylor, *Yield of Second Growth Western Hemlock—Sitka Spruce Stands in Southeastern Alaska*, USFS Technical Bulletin No. 412 (Washington, 1934). In addition to Taylor's work, Melvin Merritt carried on studies of plant succession near the Mendenhall Glacier; Merritt, "Note on the Western and Northern Distribution of Tree Growth in Alaska," and "Mendenhall Notes," Merritt Papers. Carter, in his 1925 inspection report, recommended establishment of a forest experiment station in Alaska.

35 Dana, *Forest and Range Policy*, pp. 248-56; Swain, *Federal Conservation Policy*, pp. 25-26; John A. Salmond, *The Civilian Conservation Corps, 1933, 1942: A New Deal Case Study* (Durham, 1967).

36 Merritt, "Reminiscences," Merritt Papers.

37 *Ibid.*, I-Reference-CCC, Box 2028, RG 95, FRC, Seattle.

38 Merritt, "Reminiscences"; Chipperfield interview; I-Reference-Historical-CCC, Box 2028, RG 95, FRC, Seattle.

39 Heintzleman to Bureau of Indian Affairs, June 29, 1937; Heintzleman to Chief Forester, September 30, 1937, CCC-Work-R 10-Control-Improvement, Box 371, RG 95, National Archives.

40 Logan Varnell to Harold Wern, January 14, 1938, and April 2, 1938; "Report on Alaska CCC, Fiscal Year 1938," I-Reference-Historical, Box 2028, RG 95, FRC, Seattle.

41 "Report to W. J. McDonald on CCC Work, Interior of Alaska"; Elizabeth Burrows to Regional Forester, November 4, 1939; James G. Gordon to Regional Forester, October 7, 1939; R. N. David to Regional Forester, August 7, 1939; "Report on Alaska CCC, Fiscal Year 1938," RG 95, National Archives.

42 *Ibid.*: Chipperfield interview.

43 The story of the Forest Service role in the preservation and restoration of totem poles has been greatly abbreviated in this study. A fuller account, titled "A History of the Forest Service Role in Totem Pole Restoration and Preservation," exists in manuscript form at the Juneau Office of the U.S. Forest Service. See also "An Index of Sources for United States Forest Service Work in Reference to Totem Poles" at the same location. Both manuscripts were completed in 1972.

44 T. T. Waterman, "Observations among the Ancient Indian Monuments of Southeast Alaska," *Smithsonian Miscellaneous Collections*, vol. 74, no. 5 (Washington, 1932), pp. 115-34, and H. M. Krieger, "Anthropological and Ethnological Studies in Southeast Alaska," *ibid.*, vol. 28, no. 7, were used. Forest Service documentation was found in the Juneau Office Historical File, Box 48458, RG 95, FRC, Seattle. This box also has Frederica DeLaguna files. An account of the Sitka excavation was found in the historical files at the Juneau Office; the relics are on display at Sitka National Monument. Information on interagency cooperation is in Records of the National Park Service, General Classified File, 1933-1937 National Monuments, Sitka-Scotts Bluff, RG 79, National Archives. Interviews with William S. Paul, Sr., and W. A. Chipperfield were useful.

45 Sitka National Monument has a good set of historical files on the totem pole project. These may be supplemented with Park Service records noted above and Records of CCC Work, 1933-1942, Region 10, Boxes 371 and 372, RG 95, National Archives. Taped interviews with Viola Garfield and W. A. Chipperfield were also useful.

46 Edward Keithahn, *Monuments in Cedar* (Seattle, 1963), has a good general account of CCC activity. Viola E. Garfield and Linn Forrest, *The Wolf and the Raven* (Seattle, 1948) has good photographs and histories of individual poles. Articles include C. M. Archbold, "Restoration," *Alaska Sportsman* 5 (March 1939): 16-17, a workmanlike account of the project; Viola Garfield, "Restoration Program, Alaska Totems," *Alaska Sportsman* 7 (1941): 14-15 ff., deals with her collaboration with the Forest Service. Heintzleman, "Restoring Alaska's Indian Totems," *American Forests* 48 (November 1942), is an article by the man in charge of the project. The historical files at both Juneau and Ketchikan offices of the Forest Service were valuable for this work, as were the records of CCC work in Alaska previously cited. I have relied heavily on interviews with Linn Forrest and Viola Garfield. Finally, there is useful material in *The Totem*, the CCC paper in Alaska; there are files at the Juneau Public Library.

47 Fred Morrell to Regional Forester, July 25, August 31, and November 15, 1940; Fred Agee to Morrell, November 15, 1940; Fred Miner to Morrell, February 6, 1941, CCC Work, Region 10, Improvement-Supervision, Box 372, RG 95, National Archives.

48 Charles Forward, Memo for District Forester, October 6, 1939, Kenai Division, Inspection, Chugach, Box 43115, RG 95, FRC, Seattle.

49 In addition to files mentioned above, CCC-Personnel-Training-Region 10, Box 125, RG 95, National Archives, and files of *The Totem*, Juneau Public Library.

50 Taylor, "History of Region 10"; Chipperfield interview; Carter, "Inspection Report," September 6, 1923; and C. H. Squire, "Inspection Report," September 1, 1925, Box 43115, RG 95, FRC, Seattle.

51 H. A. Smith, "Regional Development of Pulpwood Resources of the Tongass National Forest," Pinchot Records, Miscellaneous Correspondence, RG 95, National Archives; "Port Snettisham and Glass Peninsula, 1920"; Kan Smith, "The West Admiralty Pulp Unit, Thane, September 25, 1920"; USFS Timber Surveys, 1908-1920, Region 10, Box 94, RG 95, National Archives; *Six Twenty-Six* (November 5, 1920, and May 1931).

52 T. W. Montross, "Report on Alaska, 1924," and Carter, "Inspection Report, 1923," Box 43115, RG 95, FRC, Seattle; W. B. Greeley, "Forestry in Alaska," *Annual Report of Forester, 1922* (Washington, 1922), pp. 5-7. Robert K. Buchanan, "The History, Growth, Use and Future Development of the Timber Industry in Southeastern Alaska," 1969, manuscript, Ketchikan Public Library.

53 Ballaine Scrapbook, Box 15, Ballaine Papers.

54 John Nelson to Ballaine, January 13, 1926; Ballaine to George Parks, December 13, 1926; Ballaine to Dollar Steamship Line, December 14, 1924; George Parks to Commissioner of GLO, December 21, 1924; George B. Sudworth to Ballaine, November 17, 1925; Secretary of the Interior to Parks, August 11, 1924; Parks to Secretary of the Interior, August 11, 1924; Contract, January 29, 1925, Box 13, Ballaine Papers.

55 Ossian Anderson to Ballaine, September 21, 1928; Anderson to Secretary of the Interior, December 12, 1928; Sales contract to APPH, May 29, 1929; J. Mark Price to Ballaine, September 25, 1929; R. W. Gordon to Secretary of the Interior, December 12, 1929; Ballaine to Parks, September 28, 1930, *ibid.*; *Pulpwood Supply in Alaska*, Sen. Document No. 120, 71st Cong., 2d sess. (Washington, 1930), vol. 2, pp. 12-24.

56 Holbrook diary, July 10, 1925, Box 2067, RG 95, FRC, Seattle.

57 *Report of the Forester*, 1927.

58 J. T. Jones, "Possessory Rights, Swan Lake," Box 4581, RG 95, FRC, Seattle.

59 *Report of the Forester*, 1927, p. 3; Heintzleman, "Date for Alaska Plan," August 1, 1937, D-Supervision-Data for National Research Committee, Box 43115, RG 95, FRC, Seattle; *Pulpwood Supply in Alaska* has a good summary of the pulpwood situation.

60 Harold Lutz diary, Anchorage Office, U.S. Forest Service.

61 Carter, "Inspection Report, 1923"; C. H. Headley, "Inspection Report, 1925"; F. A. Silcox, "Inspection Report, 1939," General Integrating Inspections for Region 10, RG 95, National Archives.

62 Pertinent records are found in Kenai Division, Inspection, Chugach, Box 43115, RG 95, FRC, Seattle.

63 Chipperfield interview; W. J. McDonald, "Fire under the Midnight Sun," *American Forests* 45 (April 1939): 168-69, 231; "Fire Protection in Alaska," *American Forests* 45 (July 1939): 413.

64 Lutz diaries; Ray Taylor interview.

65 J. P. Williams, Retirement Note, Box 2027, RG 95, FRC, Seattle.

66 Pertinent material includes W. B. Greeley to Flory, December 30, 1926; Flory to Greeley, January 18, 1927; R. A. Stuart to all Regional Foresters, June 30, 1939; Flory to H. W. Terhune, Alaska Game Commission, April 10, 1931; U-Classification-Wilderness-General, Box 25184, RG 95, FRC, Seattle; Flory to George Cecil, October 25, 1919, April 16, 1924; Heintzleman to Chief Forester, October 6, 1928, Tongass-Glacier Bay National Monument, Box 21588, RG 95, FRC, Seattle.

67 Flory to H. W. Terhune, April 10, 1931; H. Schantz to Regional Forester, April 21, 1939, U-Classification-Wildlife Refuges-General, Box 21884, RG 95, FRC, Seattle; Guthrie, "Glacier Highway."

68 Ecological Society of America, resolution, December 28, 1923; New York Tree and Bird Club, resolution, December 19, 1923; Pinchot to Raphael Zon, December 18, 1923; E. C. Finney to Charles C. Adams, December 18, 1923, Monuments, Glacier Bay 1923-1932, Box 587, RG 79, National Archives; George Parks to Commissioner of GLO, "Report on Proposed National Monument," August 7, 1924, 0-32-Proposed National Parks, Glacier Bay, RG 79, National Archives. Flory's concern was with hostile local opinion to the monument; both he and other Forest Service officials thought that the monument might well be created within the bounds of the national forest. See clippings envelope, Flory to The Forester, January 12, 1924, LP-Boundaries-Tongass, Glacier Bay National Monument Temporary Withdrawal, Box 21588, RG 95, FRC, Seattle.

69 Heintzleman diary, June 14-17, 1923, Heintzleman Papers.

70 *Ibid.*, September 6, 1932; Conrad Wirth to Director, NPS, February 18, 1932; Heintzleman, "Notes on the Proposed Glacier Bay National Monument," n.d. [1932]; Harry Brown to Secretary of Agriculture, December 20, 1938, Monuments, Glacier Bay 1923-1932, Box 587, RG 79, National Archives; Joseph Dixon, "Note on Glacier Bay," September 9, 1932; Wildlife Research Group, Berkeley, California, "Report on Game Conditions in Mt. McKinley National Park and in Glacier Bay National Monument," 0-32-Proposed National Parks, Box 625, RG 79, National Archives. A. E. Demaray to Director, NPS, October 22, 1924, August 21, 1935; W. S. Cooper to Robert Sterling Yard, September 22, 1936; Cooper to H. C. Bryant,

February 25, 1937; Cooper to Cammerer, March 16, 1937; J. D. Coffin to Wirth, September 14, 1938, National Parks, Gild-Glacier Bay, Box 2226, RG 79, National Archives. Charles Flory, Memo, March 17, 1933; Flory to Forester, February 18, 1935; Secretary of Agriculture to Secretary of the Interior, "Memo-Data Regarding Admiralty Island and Glacier Bay areas for Game Refuges, Game Management, National Park Purposes," July 24, 1937; Heintzleman to Forester, October 6, 1938; J. P. Williams, "Information on Proposed Glacier Bay N. M., October 8, 1938"; Joint Recommendation, Secretary of Agriculture and Secretary of the Interior, March 9, 1939, LP-Boundaries-Tongass-Glacier Bay National Monument, Box 21588, RG 95, FRC, Seattle.

71 Nixon, *FDR and Conservation*, contains the pertinent Roosevelt-Beach correspondence. The Anthony Dimond Papers, Special Collections, University of Alaska, Fairbanks, have a large file on Beach's views on Alaskan affairs. Also pertinent are the aforementioned files on Glacier Bay. By 1937 Beach had completed six chapters of his book for *Cosmopolitan*, in which the Park Service plays the part of the villain. Unfortunately, no part of the book was ever published. There are scattered references to Beach in the diaries of the Chugach rangers in Anchorage, especially in the diary of John Schurr, July 12, 17, and 21, October 16, 1911.

72 George Shiras III, *Hunting Wildlife with Camera and Flashlight* (Washington, 1935), vol. 2, pp. 419-42, gives an informative picture of the island and of Hasselborg.

73 Weigle, "National Forest Administration in Alaska," *Yale Forest School News* 44 (October 1953): 60.

74 John M. Holworth, *The Wild Grizzlies of Alaska* (New York, 1930).

75 The pertinent documents and letters are in W-Management-Region 10, Box 7, RG 95, National Archives.

76 Stewart Edward White, "Sanctuary for the Alaskan Bear," *Sierra Club Bulletin* 17 (February 1932): 59-66.

77 Nixon, *FDR and Conservation*, pp. 284, 289, 295. Communications to the Forest Service are in Wildlife Management, RS-10-WO, Acc. 1328, RG 95, National Archives.

78 Nixon, *FDR and Conservation*, pp. 11, 46, 80; Acting Director of NPS to Secretary of the Interior, May 3, 1937; Harry Slattery to Fairfield Osborn, June 11, 1937, General Classification File, Proposed National Parks, 0-32, Admiralty Island, RG 79, National Archives.

79 Draft of Proclamation, n.d.; A. E. Demaray to Ben Thompson, March 10, 1939, Acting Chief of Wildlife to Thompson, March 11, 1939, *ibid*.

80 Ickes to FDR, January 26, 1939; Irving Brant to Ickes, January 24, 1939, in Nixon, *FDR and Conservation*, vol. 2, pp. 295-96.

81 Nixon, *FDR and Conservation*, vol. 2, pp. 302-04; Anthony Dimond to FDR, April 11, 1939; Ickes to Early, April 20, 1939, General Classified File, Proposed National Parks, 0-32, Admiralty Island, RG 79, National Archives.

82 Joseph Dixon to Charles Kendeigh, April 28, 1939; Victor Cahalane to Dixon, May 3, 1939; A. E. Demaray to Thompson, March 3, 1939, *ibid*.

83 John Collier to Ickes, June 23, 1939; Ickes to Collier, July 13, 1939, *ibid*.

84 Frank T. Been, "Field Notes on Inspection of Glacier Bay, Sitka National Monument and Admiralty Island"; Victor H. Cahalane, "Report of an Investigation of Admiralty Island," July 31, 1942, *ibid*.

85 Harold L. Ickes, *Secret Diary of Harold Ickes* (New York, 1956), vol. 3, p. 654.

Chapter 6

1 Clepper, "Chiefs of the Forest Service," is the best guide to the Forest Service leadership during this period. See also Steen, *The U.S. Forest Service*, chapter 10. Bernard De Voto, *The Easy Chair* (Boston, 1955), pp. 329-47, is written with a refreshing lack of modesty in regard to his own role in the controversies of the Truman years.

2 A taped interview with Heintzleman (Juneau Office, U.S. Forest Service) gives not only a resume of his career but also transmits something of the character and world outlook of the man. Interviews with Ray Taylor, Pearl Peterson, W. A. Chipperfield, and others were helpful. *Sourdough Notes* has a great deal of material on him, as does the Angie Burke collection (privately held). Heintzleman's diaries at Yale University were also useful, as were the General Integrating Inspection Reports. The one quoted is found in RG 95, National Archives.

3 Heintzleman to Ickes, May 13, 1939, D-Supervision, Coordination of Alaska Activities, RG 95, National Archives; C. M. Granger to Silcox, August 8, 1939, General Integrating Inspections, Region 10, C-Inspection, *ibid*.

4 Historical file, Cordova Office, U.S. Forest Service, has good material on the Afognak operation.

5 Material in this section came almost entirely from the Angela Janszen Burke collection, which is composed of letters, journals, newspaper clippings, photographs, and the like concerning the operation. The Juneau Office of the Forest Service has a good collection of photographs.

6 I have followed Ernest Gruening, *The State of Alaska*, pp. 357-61, in this narrative and for much of this chapter.

7 R. A. Ballinger, "Regulations Governing Indian Land Allotments in National Forests," March 4, 1911; "Circular to Registers and Receivers, Alaska," May 17, 1909; Weigle to District Forester, February 3, 1915; Office of Solicitor, Memo, February 13, 1915; Charles Maciffee, Solicitor, to Secretary of the Interior, February 13, 1917; E. A. Sherman, Memo, September 12, 1922; L. S. Kneipp to District Forester, November 4, 1922; Indian Title of Occupancy, Juneau Office, U.S. Forest Service; interview with Arthur Greeley, January 1970.

8 A. W. Blackerby, Memo, December 29, 1953, Juneau Office; Marion Clawson, Chief, BLM, to Lyle Watts, October 1, 1951; Watts to Clawson, November 20, 1951; Memo for District Forester, Alaska, LP-Boundaries-Alaska Native Reservations, Box 2028, RG 95, FRC, Seattle.

9 Fox Farming File, Juneau Office, U.S. Forest Service.

10 Gruening, *Alaska*, pp. 365-72. The Anthony Dimond Papers, University of Alaska, contain much additional material. Editorial, "Indian Rights and the Future of Alaska," *Journal of Forestry* 43 (June 1945): 391-92, is a good summary from the foresters' point of view.

11 *Yale Forest School News* 32 (January 1945): 10-11. Heintzleman's letter to Lutz was private, but Lutz showed it to his colleague, H. H. Chapman, who published it without permission of Lutz or Heintzleman. This disclosure was embarrassing to the Forest Service. Lutz interview, January 1970.

12 Robert K. Buchanan, "The History, Growth, Use, and Future Development of the Timber Industry in Southeastern Alaska," 1919, gives a lively account of the bill's origin and passage.

13 Archbold interview, March 17, 1970; Heintzleman taped interview, Juneau Office; H. D. Crawford, "Alaska Can Ease Our Newsprint Shortage," *American Forests* 57 (November 1951): 6-9, 46, 48; Buchanan, "History of the Timber Industry"; Heintzleman to National Production Authority, April 10, 1951, C-Defense-Tax Amortization-Ketchikan Pulp Co., Box 43116, RG 95, FRC, Seattle.

14 Heintzleman to Charles Burdick, February 19, 1949; Minutes, Alaska Water Pollution Board, March 27, 1949; Heintzleman to C. C. Anderson, Chairman, Alaska Water Pollution Board, February 9, 1951; Edward G. Locke and Gardner H. Chidester, "Pulp Waste Disposal in Alaska," 1952, S-Sales-Pulpwood-Waste Pollution, Box 48448, RG 95, FRC, Seattle; C. M. Granger to Heintzleman, December 13, 1951; Samuel Ordway to Heintzleman, January 2, 1952, C-Cooperation, Box 43116, *ibid*.

15 Mason Bruce, "National Forests in Alaska," *Journal of Forestry* 58 June 1960): 437-42; "Japan's Alaska Plan: Alaska Pulp Development Organized," *Pulp and Paper* 27 (September 1953): 36-37, 88; "The State Department's View of Alaska: The Japanese Plan," *Pulp and Paper* 27 (October 1953): 54-56; Donald C. Warner, Chief, Forest Products Branch, Agricultural Production Staff, to Mr. Benecke, March 13, 1953; Ketchikan, *Alaska Chronicle*, January 6, February 3, 1953; *Seattle Post-Intelligencer*, March 3 and 4, 1953; *Alaska Daily Empire*, January 22 and 31, 1953; Heintzleman to Burdick, February 9, 1953, Reference File-Historical, Box 2028, RG 95, FRC, Seattle.

16 Sources regarding research include interviews with Ray Taylor, Harold Lutz, and John A. Sandor, and reports of the Alaska Forest Research Center.

17 Burdick to Chief, Forest Service, May 10, 1946, I-Reference-Historical, Box 2028, RG 95, FRC, Seattle.

18 Taylor, "History of Region 10"; Erle Kaufmann, "Timber Homestead in Alaska," *American Forests* 53 (November 1947): 488-91, 527.

19 There is scattered historical material at the headquarters of the Kenai Moose Range at Kenai.

20 Heintzleman to Chief Forester, March 30, 1953; "Joint Statement of Field Trip to Region 10, July 20-31, 1952," by Edward C. Crafts and H. D. Cochran, General Integrating Inspections, Region 10, RG 95, National Archives.

21 Sourdough Notes (July 1952).

22 NPS, Proposed National Parks, Absaroka-Admiralty, Acc. 2922, RG 79, National Archives; Wallace G. Schwan to Newton Drury, November 23, 1943; Drury to Schwan, December 1, 1943; Schwan to Drury, December 5, 1943, Wirth to Regional Director, Region 4, December 7, 1943; Wirth to Schwan, December 10, 1943; Secretary of the Interior to Willard Van Name, January 8, 1947, *ibid*.

23 Crafts and Cochran, "Joint Statement," Box 43118, RG 95, FRC, Seattle; LP-Boundaries-Tongass-Skagway Boundary, June 10, 1925, Box 21584, *ibid*.

24 Heintzleman to Chief Forester, March 30, 1953; Crafts and Cochran, "Joint Statement."

25 *Journal of Forestry* 47 (February 1949), 137-47.

26 Greeley to Flory, December 30, 1926; Flory to Greeley, January 18, 1927; Stuart to all Regional Foresters, October 26, 1932; Silcox memo, June 30, 1934, U-Classification-Wilderness-General, Box 21584, RG 95, FRC, Seattle.

27 *Ibid*.

28 Sherman to District Forester, September 17, 1917; Weigle to District Forester, August 24, 1917; District Forester to The Forester, July 24, 1917; Wildlife Management, General Correspondence, R 5-10 WO, Acc. 1328, RG 95, National Archives; Heintzleman to Dimond, January 19, 1939; *Daily Alaska Empire*, January 19, 1940; Division of Wildlife Management, W-Cooperation, R 8 WO, Box 1771, RG 95, National Archives.

29 W. A. Chipperfield, "Report to U.S.F.S. on Annual Meeting of the Alaska Game Commission and Fish and Wildlife Service," February 19, 1948, Division of Wildlife Management, W-Cooperation, R3 to R10, Box 1766, RG 95, National Archives.

Chapter 7

1 Clepper, "Chiefs of the Forest Service," *Journal of Forestry* 59 (November 1961): 795-803, has a brief evaluation of McArdle. See also *Dr. Richard E. McArdle: An Interview with the Former Chief, U.S. Forest Service, 1952-1962*, an interview by Elwood R. Maunder (Santa Cruz: Forest History Society, 1975).

2 McArdle, "An Introduction: Why We Needed the Multiple Use Bill," *American Forests* 76 (June 1970): 10-11, 59.

3 Crafts, "The Saga of a Law," *American Forests* 76 (June 1970): 12-19, 52-54; 76 (July 1970): 28-35. Also see Crafts, *Forest Service Researcher and Congressional Liaison: An Eye to Multiple Use*, an interview by Susan R. Schrepfer (Santa Cruz: Forest History Society, 1972).

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- 27 Cooley, *Alaska*, pp. 33-37.
- 28 Plourde interview; annual reports, Alaska State Division of Lands, 1961-1964.
- 29 Plourde interview; minutes of meetings of Alaska Outdoor Recreational Council, Juneau, March 4-5, 1964, and January 27-28, 1965, and Anchorage, July 22, 1964; Earl Plourde, "State Forestry in Alaska: Present and Future," paper at Eleventh Alaskan Science Conference, Anchorage, August 30-September 2, 1960.
- 30 Johnson interview.
- 31 C. M. Archbold, "Totem Pole Restoration in SE Alaska," 1940, manuscript, Totem Pole File, Juneau Office, U.S. Forest Service.
- 32 Sourdough Notes (1955)
- 33 A copy of the report is in the Totem Pole File, Juneau Office.
- 34 Johnson to Chief Forester, November 9, 1967, *ibid*.
- 35 Katherine Kuh, "Alaska's Vanishing Art," *Saturday Review* 49 (October 22, 1966): 25-39.
- 36 Johnson to Chief Forester, April 11, 1967, Totem Pole File, Juneau Office.
- 37 Conference on Southeast Alaska Artifacts and Monuments (1967), *ibid*.
- 38 Carl Heinmiller to C. T. Brown, July 28, 1967, *ibid*.
- 39 D. Robert Hakala interview, 1970.
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- 44 Hakala interview.
- 45 Johnson interview; U.S. Forest Service, 1965 in *Perspective* (Juneau, 1965).
- 46 R. O. Rehfeld interview, September 1970; Johnson interview; Multiple-Use Atlas, Ketchikan Office, U.S. Forest Service.
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- 48 Heintzelman memos, April 1, 1950, and September 15, 1950; Johnson to William Drake, Nature Conservancy, June 27, 1957, U-Classification-Natural Areas, Box 21599, RG 95, FRC, Seattle; Greeley to George L. Collins, May 19, 1954, Box 21584, *ibid*.
- 49 Greeley to Chief, January 21, 1954, D-Inspection-General-Cochran-Crafts, Box 43118, *ibid*.; Sourdough Notes (May 1956).
- 50 On background of the Wilderness Act, in addition to citations already given, see Michael Frome, "The Wilderness Act: Saving a Birthright," *Living Wilderness* 38 (Summer 1974): 9-14; Frome, *Battle for the Wilderness* (New York, 1974); and Michael McCloskey, "The Wilderness Act of 1964: Its Background and Meaning," *Oregon Law Review* 45 (June 1966): 288-321.

51 Johnson interview; Rehfeld interview; Multiple-Use Atlases, Juneau and Ketchikan offices, U.S. Forest Service.

52 Johnson interview.

53 Timber sale records and mining claims records in the Chatham Warehouse in Juneau give a good account of economic activity.

54 "Admiralty Island, Alaska, 1964," mimeo, Box 89, KSM Papers.

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Chapter 8

1 The Juneau Office of the Forest Service provided biographical information on Charles A. Yates.

2 The Juneau Office furnished biographical data on John A. Sandor. This was supplemented by interviews with Sandor in 1978 and 1979.

3 Mr. Tracy provided biographical data on himself. John A. Sandor to the author, December 1, 1979, deals with future organization. Sourdough Notes and the Forest Service Directory are useful in keeping track of changing personnel.

4 Glen O. Robinson, *The Forest Service: A Study in Public Land Management* (Baltimore, 1975), is valuable in tracing the evolution of different land laws. *Highlights in the History of Forest Conservation* (Washington: U.S. Forest Service, 1976) is a handy compendium. Back files of *American Forests* and *Journal of Forestry* provide legislative histories of the various bills. Gerald Ogden, comp., *The United States Forest Service: A Historical Bibliography* (Davis, California: Agricultural History Center, University of California, Davis, 1976), is useful for finding pertinent articles. Steen, *The U.S. Forest Service*, pp. 308-23, offers a perceptive analysis of the background to this period in lawmaking. John A. Sandor, "Clearcutting: The Controversy and the Challenge," in Ralph D. Nyland, ed., *A Perspective on Clearcutting in a Changing World*, AFRI Misc. Report No. 4 (Syracuse, 1972), pp. 89-102, places the clearcutting issue in perspective. *Resources Planning Act: Summary for Alaska and Pacific Northwest Forest and Range Experiment Station* (Juneau: U.S. Forest Service, 1976), is valuable for its application to the region of the RPA and the National Forest Management Act.

5 *The Forest Service in Alaska* (Washington: U.S. Forest Service, 1977), pp. 8-11, sums up the program. More detail is found in *Tongass Land Management Plan (TLMP): Draft Environmental Statement* (Juneau: U.S. Forest Service, 1978), pp. 1-8; *Southeast Alaska Area Guide* (Juneau: U.S. Forest Service, 1977), pp. 5-7; and *Tongass Update* (Planning Team, Tongass National Forest, 1977), pp. 1-7.

6 I am indebted to Eric A. Bourdo for his clipping file on CMAL. Maps of SEACC and CMAL alternatives are presented in the *TLMP Draft Environmental Statement*. Betty Cornelius, "A Brief History—The Alaska Conservation Society," *Alaska Conservation Review* 14 (Spring 1973): 405, gives some background on the Alaska conservation groups, as does Stan Seaner, "RARE II—Challenge in the Chugach," *Alaska Conservation Review* 19 (Spring 1978): 37-39.

7 Robert D. Arnold, *Alaska Native Land Claims* (Anchorage: Alaska Native Foundation, 1976), is a comprehensive study of the legislation. The Joint Federal-State Land-Use-Planning Commission has published a handy edition of the law. Statistics on lands are from "Lands and Mineral Situation—Current Situation," 1979 memorandum, Lands Office, U.S. Forest Service, Alaska. I am indebted to James Calvin of the Land Department for further information.

8 *TLMP*, pp. 33-34, 200, 210; Sam Demmert, President of Sealaska, to John Sandor, July 20, 1978, Juneau Office, U.S. Forest Service.

9 "RARE Alaska," supplement of *Draft Environmental Statement Roadless Area Review and Evaluation* (Juneau: U.S. Forest Service, 1978); maps of proposed exchange areas. Anchorage Office, U.S. Forest Service; interviews with James Calvin; "Summary of Draft Environmental Statement of Land Ownership Adjustment Proposal from Chugach Natives, Inc. and Koniag, Inc. to Chugach National Forest," July 1978.

10 "Lands and Mineral Situation" memo.

11 *New National Forests for Alaska*, prepared by the Alaska Planning Team (Washington: U.S. Forest Service, 1972), is a comprehensive review of the team's work.

12 The literature on activities by other agencies is voluminous. A summary of the objectives of the various agencies can be found in *New National Forests for Alaska*, pp. 4-5. Don Young, *The Alaskans: Special D-2 Lands Issue* (Washington: House of Representatives, 1976), summarizes state views. *Recommendations for a (d) 2 Decision* (Anchorage: Joint Federal-State Land-Use-Planning Commission, 1977) is instructive.

13 *Copper River-Wrangell Area Guide, Preliminary; Central Interior Area Guide, Preliminary; Yukon-Porcupine Area Guide, Preliminary* (Washington, 1977).

14 This presents a very abbreviated account of the Alaska lands legislative program in Congress. The full story is worthy of a book. Material consulted included *Inclusions of Alaska Lands in National Park, Forest, Wildlife Refuge, and Wild and Scenic River Systems: Hearings before the Subcommittee on General Oversight and Alaska Lands* (Washington, 1977); newspaper clipping files of the Juneau Office of the U.S. Forest Service and of CMAL; files of the *Sierra Club Bulletin*, *American Forests*, *Alaska*, *Journal of Forestry*, and *Alaska Construction and Oil Report*. Of Alaskan newspapers, the *Anchorage Daily Times* has been the most informative. *Sourdough Notes* has been of value on Forest Service participation in regional meetings. Ron Arnold, "Alaska Lands Face Lockup," special supplement, *Western Conservation Journal* 35 (June-July 1978), gives an excellent account of the tactics and interests of pressure groups.

15 Cecil D. Andrus and Bob Bergland to "Member of Congress," December 1, 1978 (mimeo), contains both the text of the president's proclamation and an explanation for it. "Remarks of Rupert Cutler at White House Briefing, Friday December 1, 1978," contains a justification for creation of Admiralty Island and Misty Fjords national monuments. "RECORD OF DECISION: Withdrawal of proposed Special Classification Areas on National Forest and Adjacent Lands," by Bob Bergland, November 28, 1978 (mimeo), deals in some detail with the areas withdrawn for wilderness study. The Juneau Office of the Forest Service furnished me these documents.

16 Rakestraw, "Forest History in Alaska: Four Approaches to Two Forest Ecosystems," *Journal of Forest History* 23 (April 1979): 60-71.

17 One attorney wrote: "The abusive conduct of the Sierra Club includes a distasteful lack of respect for facts, and for opinions other than those of the Sierra Club. I have never seen such flagrantly misleading and deficient affidavits as those submitted by the Sierra Club. The Club has all too often embraced the principle that the end justifies the means." George Sean, "Timber Industry Attorney Reviews Forest Litigation," *Alaska Construction and Oil Report* 14 (April 1973): 13, 16, 18. Lawrence Rakestraw, "Conservation Historiography: An Assessment," *Pacific Historical Review* 41 (August 1972): 271-88, comments on the club's tactics. In Alaska, it included the preposterous assertion that Sierra Club activity antedated that of the Forest Service, since it began with John Muir's trip to Alaska in 1879. The Sierra Club was not established until 1892. Two articles by Susan R. Schrepfer explore the club's changing philosophy and tactics in relation to California issues: "Perspectives on Conservation: Sierra Club Strategies in Mineral King," *Journal of Forest History* 20 (October 1976): 176-90, and "Conflict in Preservation: The Sierra Club, Save-the-Redwoods League, and Redwood National Park," *Journal of Forest History* 24 (April 1980): 60-77.

18 Cornelius, "A Brief History," and Arnold, "Alaska Lands Face Lockup," discuss local groups—their founding, purposes, interests, and tactics.

19 There is an extensive file on *Sierra Club v. Hardin* in the Forestry Sciences Library in Juneau. The bias issues are described in previous citations. A copy of the Leopold-Barrett report is also in the Forestry Sciences Library. *Anchorage Daily News*, March 13, 1976, deals with cancellation of the sale.

20 *Western Conservation Journal* 33 (January 1976): 17-25, deals in some detail with *Zieske v. Butz*. *Anchorage Daily News*, April 13, 1976, carries a full account. Stephen Spurr, "Use of Professional Competency by the Judiciary," *Journal of Forestry* 75 (April 1977): 198-200, gives an excellent analysis. Robert W. Haines, "Monongahela and the National Forest Management Act of 1976," *Environmental Law* 7 (Winter 1977): 346-462, is also valuable.

21 Joel Bennett and Gordon Robinson, "Afognak—Unique and Threatened," *Sierra Club Bulletin* 59 (November-December 1974): 27-30.

22 Llewelyn Johnson, "Background on a Confrontation," *Alaska Construction and Oil Report* 14 (June 1973): 50, 52-55, gives a thorough account.

23 Interviews with James Calvin, July 3 and 6, 1979. Copies of the briefs are in the Juneau Office of the Forest Service.

24 The state suit is summarized well in *Anchorage Times*, February 1, 1979. Sandor and Calvin interviews; Arnold, "Alaska Lands Fact Lockup"; CMAL clipping file.

25 Jack Anderson, "Alaska Land Grab Charged," *Seattle Post-Intelligencer*, February 23, 1979; Anderson, "Land Grab Scheme Charged in Alaska," *Washington Post*, February 21, 1979; Anderson, "Those Phantom Villages," *Washington Post*, February 22, 1979; Sandor and Calvin interviews.

26 The standpoint of the mining industry is eloquently expressed in C. C. Howley, "Is Alaska Mining an Endangered Industry?" *Alaska Journal* 9 (Summer 1979): 14-23. "Lands and Mineral Management" memo (1979) is revealing.

27 Ivan Doig, *A History of the Pacific Northwest Experiment Station, 1925-1975* (Portland: U.S. Forest Service, 1976): 22-29; Robert W. Cowlin, "Federal Forest Research in the Pacific Northwest," 1973, manuscript, Pacific Northwest Forest and Range Experiment Station; *Forest Research Directory for Alaska* (1975).

28 Ted Dyrness, "Brief Historical Sketch of Institute of Northern Forestry," in letter to the author, July 18, 1978; Dyrness interview, 1978.

29 R. J. Barney, "Wildfire in Alaska: Some Historical and Projected Effects and Aspects," in *Fire in the Northern Environment: A Symposium* (Portland: Pacific Northwest Forest and Range Experiment Station, 1971), pp. 51-59; I. A. Viereck, "Wildfire in the Taiga of Alaska," *Quaternary Research* 3 (1973): 465-95; Viereck, "Ecological Effects of Flooding and Forest Fires on the Permafrost," in *Permafrost: The North American Contribution to the Second International Conference* (Washington: National Academy of Sciences, 1973); pp. 60-67.

30 O. Keith Hutchison and David R. Schwann, "Timber Resources and Utilization: Alaska's Interior Forests," *Journal of Forestry* 74 (June 1976): 338-41.

31 Peder Braathe, Hilmar Homen, and Aarne Hyyssonen, "Forestry Potential in Interior Alaska: Report to the Sponsors and Cooperators of the Symposium on North American Forest Lands," August 1977, manuscript, Institute of Northern Forestry.

32 *Forestry Research Directory*; "Ecology and Management of Taiga and Associated Environmental Systems in Interior Alaska," 1978, manuscript.

33 *Forestry Research Directory*; interviews with John Schmiede, 1968 and 1969. "Research Grants, MFRWU-1652" and "Current Studies, Fisheries," give listings of projects; both are found in the Forestry Sciences Library, Juneau.

34 *Ibid.*; interviews with Sandor and Kenneth Wright.

35 Ronald O. Skoog, Commissioner, ADF&G, to Morris Udall, House Subcommittee on General Oversight and Alaska Lands, July 18, 1978.

36 John W. Schoen and Olaf C. Wallen, "Deer and Logging in Southeastern Alaska," *Alaska Fish and Game Trails* 11 (no. 2, 1978): 2-3, 10. These studies tended to contradict long-held theories that forest regrowth was good habitat for deer. The matter is one of ongoing study, but it has become controversial. One man in timber management told me that the deer harvest from second-growth forest was larger than

from old growth. On the other hand, the Alaska Chapter of the Wildlife Society, in a bitterly worded and somewhat misinformed "position paper," castigated the Forest Service for its management policies. *Southeast Alaska Empire*, June 1, 1979.

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38 *The Forest Service in Alaska*, pp. 12-14; interviews with Manuel Archuleta, archaeologists John L. Mattson and Gerald Clark, and Michael Kennedy and William S. Hanable, Alaska Division of Parks.

39 Interview with Kay Metcalfe, Admiralty Island National Monument manager. Management directives for both national monuments, issued in June 1979, were made available to me from the Juneau Office. Interpretive brochures appeared soon after.

40 Rakestraw, "An Index of Sources for United States Forest Service Work with Reference to Totem Poles," manuscript, Juneau Office, 1972, has many references to Clark's work.

41 *Outdoor Recreation and Historic Preservation in Alaska* (Alaska Division of Parks, 1973); interviews with Hanable, Kennedy, and Mattson, 1978.

42 *National Forests in Alaska*, pp. 15-19, gives a good summary. *Fish and Wildlife Habitat Program on the National Forests of Alaska* (Juneau: U.S. Forest Service, 1979), gives a comprehensive account of state-federal cooperation under the Sikes Act. Interviews in 1979 with Sigurd Olson, Robert Schmiede, and Manuel Archuleta were very useful.

43 *The Forest Service in Alaska*, pp. 33-37; interviews with Archuleta, Olson, and Metcalfe, July 1979.

44 TLMP, pp. 22-30; *The Forest Service in Alaska*, pp. 22-24.

45 Charles A. Yates, "Main Paths and Byways," *Alaska* 38 (March 1972): 1-7, 78-80, 90-92; 38 (September 1972): 9-10; Yates, "Problems, Promises Face Lumber Industry," *Alaska Construction and Oil Report* 16 (January 1975): 66-67, 70; John A. Sandor, "The Forest Service Challenge in Alaska," *ibid.* 19 (January 1978): 30-38, are a few of the articles dealing with changes in timber management. *Tongass Timber Management* (U.S. Forest Service, Alaska Region, 1969) and *The Forest Service in Alaska*, pp. 6-17, 20-26, are valuable. Sandor, "Land Management Planning Involving the Forest of Alaska," paper presented at the Eighth World Forestry Congress, Jakarta, October 26, 1978, places Alaskan forest management in world perspective.

46 The legal controversy is covered in *Southeast Alaska Empire*, April 1975; *Ketchikan Daily News*, March 1, 1975; and *Alaska Forest Products Newsletter*, Summer 1976. These accounts have been supplemented by interviews with Sandor and Calvin. Environmental problems of the Ketchikan Pulp Company are noted in *Ketchikan Daily News*, July 23, 1976. The conflict over danger trees is treated in *Fairbanks Daily News-Miner*, July 20, 1974.

47 *Southeast Alaska Empire*, January 1, 1975; *Ketchikan Daily News*, November 7 and December 9, 1974; Statement of Frank Peratrovich of Klawock, *Hearings on Alaskan Lands*, vol. 9, pp. 228-29.

48 See citations on Afognak under "Legal Struggles" in this chapter.

49 "A Bill Relating to Forest Resources and Practices" (copy furnished by Juneau Office). See also *Sourdough Notes* (April 1974). *Alaska Forest Products Industry* (Anchorage: State Forester and U.S. Forest Service, State and Private Forestry, 1976) is excellent on cooperation. *The Forest Service in Alaska*, pp. 6-8, is particularly informative regarding cooperation with Native corporations. Sandor, "The Forest Service's Challenge in Alaska," is valuable.

50 State activity can best be followed in *Alaska Construction and Oil Report* and in the *Alaska Forest Products Newsletter*.

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(Compiled by Ruth Jean Shaw)

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