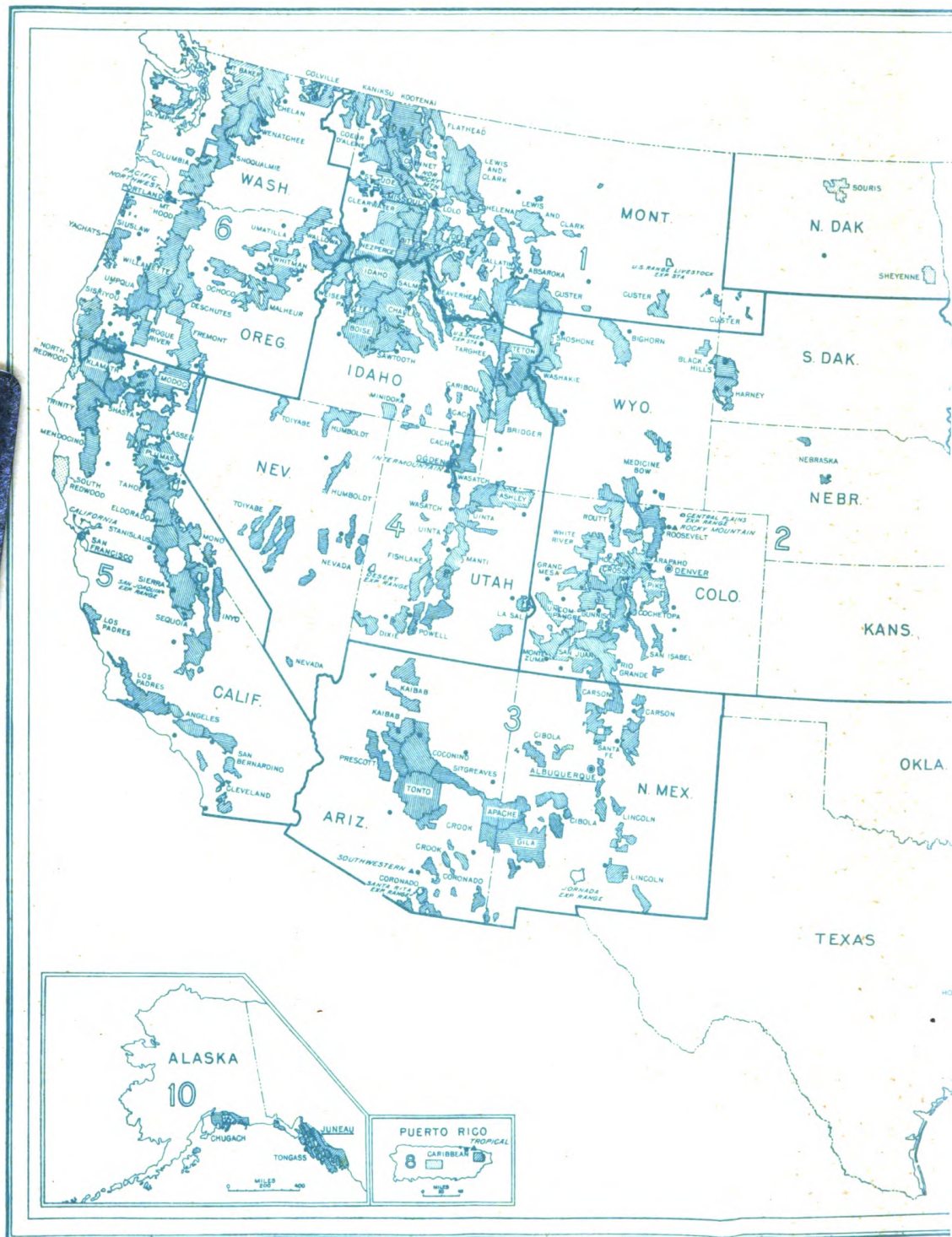




*San Juan*  
*National Forest*

U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE



# SAN JUAN

## *NATIONAL FOREST*

*Colorado*

UNITED STATES DEPARTMENT OF AGRICULTURE

U. S. FOREST SERVICE *Rocky Mountain Region*



ROCKY MOUNTAIN REGION

DENVER, COLORADO

Cover Page.—Chimney Rock, San Juan National Forest

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*San Juan National Forest boundary entrance portal, west of Silverton, Colo.*

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# San Juan National Forest

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SAN JUAN NATIONAL FOREST is located in the southwestern part of Colorado, south and west of the Continental Divide, and extends from the headwaters of the Navajo River westward to the La Plata Mountains. It is named after the San Juan River, the principal river drainage in this section of the State, which, with its tributaries in Colorado, drains the entire area within the forest. It contains a gross area of 1,444,953 acres, of which 1,255,977 are Government land under Forest Service administration, and 188,976 are State and privately owned. The forest was created by proclamation of President Theodore Roosevelt on June 3, 1905.

## RICH IN HISTORY

The San Juan country records the march of time from prehistoric man through the days of early explorers and the exploits of modern pioneers, each group of which has left its mark upon the land. The earliest signs of habitation by man were left by the cliff and mound dwellers. Currently with or following this period the inhabitants were the ancestors of the present tribes of Indians, the Navajos and the Utes. After the middle of the eighteenth century the early Spanish explorers and traders made their advent into this section of the new world in increasing numbers.

The earliest definitely recorded expedition by white men into this country was made by Capt. Juan Marie de Rivera in 1765, and the second, by Padre Francisco Escalante in 1776. Both of the expeditions followed the same route from Santa Fe, skirting the southern boundary of what is now the San Juan National Forest, thence westward to the Mancos River; northward to the present town of Placerville, on the San Miguel River; and by way of the Dallas Divide to the Uncompahgre and Gunnison River valleys. De Rivera's route beyond that locality is uncertain. Escalante, however, is known to have continued westward through Colorado and Utah, returning to Santa Fe by way of Arizona and New Mexico. During this expedition Father Escalante is credited with giving Spanish names to the larger streams of this region—the Rio San Juan (St. John River), Rio de las Piedras (Stony River), Rio de los Pinos (Pine River), Rio Florida (River of Flowers), and Rio de las Animas Perdidas (River of Lost Souls). Modern usage has shortened these names to San Juan, Piedra, Pine, Florida, and Animas.

Other expeditions include one led by "Commodore" William G. Walton in 1831; General Freeman in 1848; R. E. Stewart, U. S. cavalryman, in 1860; and Charles Baker in 1860-61.

The Baker expedition was the forerunner of and largely responsible for the influx of prospectors and settlers shortly thereafter, largely because of the publicity it received. The expedition, which included 200 men under the leadership of Charles Baker, entered the San Juan Basin from the San Luis Valley via Stony Pass and established camp in Bakers Park, the present site of Silverton. From this location the members of the party thoroughly explored the region. Here it was that in 1861 the members suffered privation and starvation. Many of the men perished, and Baker himself narrowly escaped death at the hands of his mutinous band.

A treaty with the United States Government in 1868 established the Southern Ute Indian Reservation. This was superseded by the treaty of 1874, which released the greater part of the original reservation for settlement and mineral development, and was followed by an influx of pioneers who established the towns and the farming and mining communities throughout the San Juan Basin.

## MINING

Prospectors who entered the San Juan country 10 years after Charles Baker's unsuccessful trip found gold ore in Arrastra Gulch, near Bakers Park. In 1873, these mines began to produce and soon other strikes were made throughout the San Juan Basin, causing several "booms" in that region. According to the Bureau of Mines, the output of ores from San Juan Country for the years 1873-1940 was \$109,609,229. Of this amount, 29 percent was gold, 24 percent silver, 23 percent lead, 14 percent zinc, and 10 percent copper. La Plata County, a part of which is also in the San Juan National Forest, has produced during the same period \$5,975,822 in the 5 principal ores. Mining continues to be a thriving industry in the Silverton region.

## A RUGGED MOUNTAIN COUNTRY

The more mountainous sections of the forest are particularly rugged and formidable, with scenery that is seldom equaled. They include the La Plata, Silverton, Needle, Grenadier Range, and San Juan Mountain groups, with peaks rising more than 13,000 feet above sea level

Perhaps the outstanding topographic feature is the Needle Mountain group, which lies between the Animas and Vallecito drainages, some 25 miles north and east of Durango. The United States Geological Survey

describes this group as "a range of extremely rugged mountains of granite and schist from which rise sharp peaks, the summits of 4 of which are over 14,000 feet in elevation, while 6,000 feet below the Animas River rushes through a canyon which separates the West Needles from the main group. From Needle Creek on the south to Elk Creek on the north, and from the Vallecito to the Animas, they form a group of peaks almost unequaled in this country in altitude and in boldness of their forms."

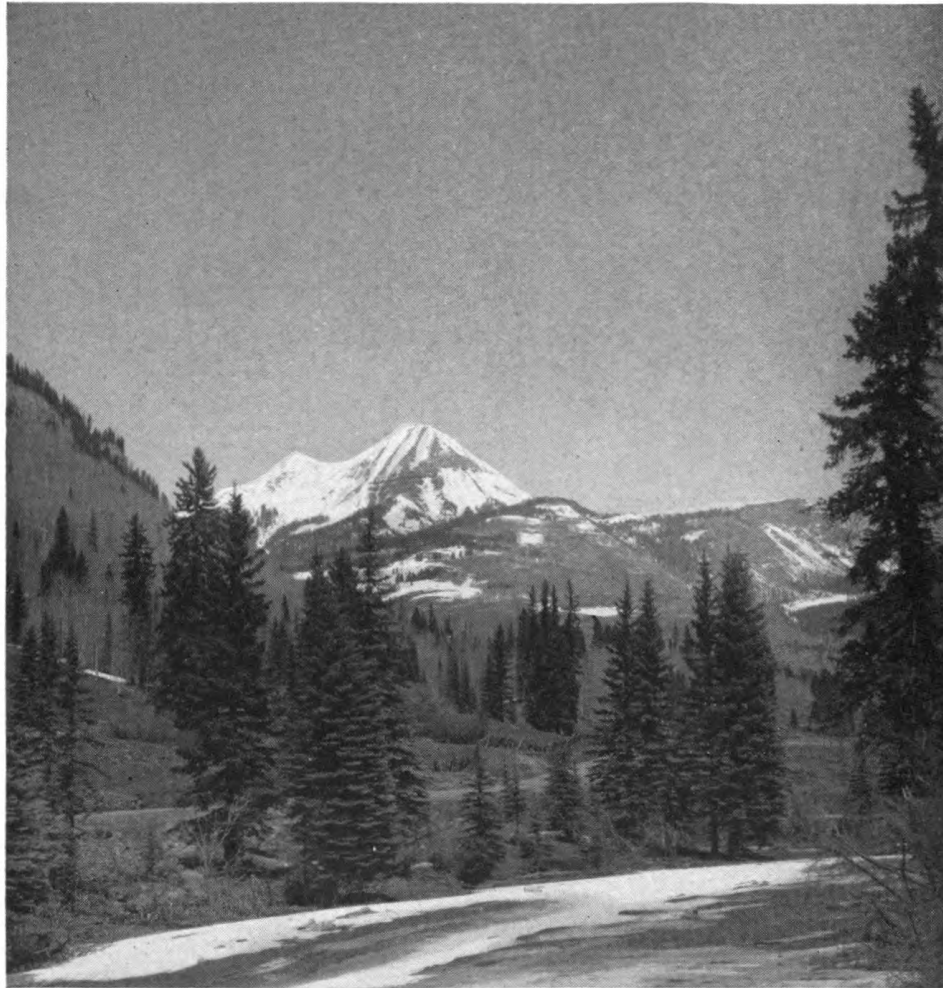
Through this group the Animas River follows an irregular course "in a gorge nearly 15 miles long and from 3,000 to 4,000 feet deep. At a few places the river flows between rock walls and on a rock bottom, and at such points the roadbed of the railroad (Durango-Silverton branch of the Denver and Rio Grande Western) has been blasted from the solid rock. The canyon itself is an almost impassible barrier between the East and West Needles. A few trails extend up into the mountains to the east, following the larger streams, but the western wall is almost without a break and can be surmounted only on foot after long and arduous climbing."

Almost equally spectacular and standing aloof from other neighboring mountains is the La Plata Mountain group, located in the extreme southwest corner of the forest. Bold in outline, the several peaks may be distinguished by the wayfarer on the New Mexico desert scores of miles to the south and serve to guide his travels to the locality. The La Plata River through an indeterminable period of years has cut a gash through this mountain of rocks, and formed the La Plata Canyon, an area of singular beauty.

Other mountain groups within the San Juan National Forest worthy of mention are the Silverton Mountains, surrounding the town of Silverton; the Grenadiers, extending from the Animas to the headwaters of the Vallecito; the San Juan Mountains, north of Pagosa Springs; and the Continental Divide Range extending north and south from Wolf Creek Pass.

## HIGHWAYS AND RAILROADS

Towns and points of interest within or adjacent to the San Juan National Forest may be reached over improved automobile highways or by railroad. U S 160, crossing the Continental Divide at Wolf Creek Pass from the east, passes through the center of the San Juan Basin via Pagosa Springs, Bayfield, and Durango, and thence extends westward via Mancos and Cortez to Salt Lake City and the west coast. U S 550, long known as the Million Dollar Highway, extends southward from Montrose to Ouray, across Red Mountain Pass, through Silverton and to Durango, thence to Aztec,



F-393444

*Engineer Mountain seen from the Million Dollar Highway between Durango and Silverton.*

N. Mex., where it joins other highways leading to Albuquerque, or to Gallup, via Farmington and Shiprock.

Another highway leading from the San Juan Basin begins at Pagosa Springs and extends southeastward to Chama, N. Mex., thence to Santa Fe or via the Cumbres Pass Highway to the San Luis Valley. A number of branch roads connect these main highways with various points in the interior of the forest.

The narrow-gauge lines of the Denver and Rio Grande Western and Rio Grande Southern Railroads, leading to Durango from the east and west, respectively, closely parallel the southern boundary of the forest.



The more inaccessible parts of the forest can be reached only by foot and horse trails, built and maintained by the Forest Service. These trails, totaling 1,213 miles, provide satisfactory routes of travel for those who wish to take advantage of horseback or hiking trips.

## WHY NATIONAL FORESTS

There are 160 national forests within the United States, located in 36 States, Alaska, and Puerto Rico. They contain approximately 176,000,000 acres of public land and are administered by the Forest Service, of the United States Department of Agriculture.

The national forests were established and are administered for the purpose of making the many resources which they contain of largest service to the local communities, the State, and the Nation. Forest administration includes the growing and conservative use of successive crops of timber and forage; the prevention and suppression of forest fires; the preservation of an adequate forest cover to regulate the flow of streams, retard excessive runoff, and prevent erosion; and the use of all forest resources in the ways which will make them of greatest good to the greatest number of citizens throughout the years.

## TIMBER RESOURCES AND MANAGEMENT

The San Juan National Forest contains a total volume of merchantable sawtimber estimated at 4,530,000,000 feet, board measure, the largest for any national forest in Colorado. Ponderosa pine, Engelmann spruce, and Douglas fir are the most important species of trees found on this forest and make up about 93 percent of the total volume of the merchantable stand. Other species containing merchantable sawtimber are alpine, corkbark and white fir, blue spruce, and limber pine. Lumber and railroad ties are the principal forest products manufactured at the present time; however, the Engelmann spruce stands constitute a valuable potential supply of pulpwood.

Mature timber may be purchased from national forests. All timber sold is cut in accordance with approved forestry practices, which provide for the removal of defective, diseased, mature, and overcrowded trees from the stand. Such selective cutting removes from 50 to 75 percent of the volume of the stand and leaves the thrifty younger trees, ranging from saplings to those which will mature in the next cutting cycle. Properly spaced trees in a thinned forest respond to the influence of additional light, food, and soil moisture with increased growth, and produce seed to reforest the



*Ponderosa pine logs cut in a Forest Service timber sale.*

F-412137

open spaces. A forest unit, such as a working circle, may include all the timber on a certain watershed and is managed so that the timber removed each year does not exceed the amount added through annual growth. With good management, including protection from fires and insect infestations, such forest units will produce a constant volume of timber for all time.

## TREES OF THE SAN JUAN NATIONAL FOREST

### *Conifers*

**PINES.**—Five species. The pines have their needles gathered together at the base in bundles of from two to five. The cones are woody and pendent.

**LIMBER PINE** (*Pinus flexilis*).—Needles are fine, almost silky, dark green, 1½ to 3 inches long, always in bundles of five. Cones are 3 to 5 inches long,

with seeds about  $\frac{1}{3}$  inch long; scales smooth; bark light gray or silvery white except on old trunks which are blackish brown and furrowed.

**BRISTLECONE PINE** (*Pinus aristata*).—Needles grow five in a bundle, about 1 to  $1\frac{1}{2}$  inches long, almost always covered with tiny specks of pitch. Cones have long, slender, sharp bristles on the tips of the scales, which give the tree its name.

**PONDEROSA PINE** (*Pinus ponderosa*).—This tree was formerly known as western yellow pine. Needles are 3 to 7 inches long, deep green, usually three in a cluster but often only two, in tufts at the ends of the branches. Cones are 3 to 6 inches long, oval shaped; scales are armed with spines. When young the bark is dark and the tree is often called "black jack," or "bull" pine. When older the bark is yellowish and occurs in thick, scaly ridges.

**PINON OR PINON PINE** (*Pinus edulis*).—Pinon is a short scrubby tree, often growing in mixture with juniper, and is confined to the foothills. Needles grow in bundles of two, rarely three,  $\frac{7}{8}$  to  $1\frac{3}{4}$  inches long. Cones are  $1\frac{1}{2}$  to 2 inches long and almost as broad and contain large seeds which are the pinon nuts of trade.

**LODGEPOLE PINE** (*Pinus contorta*).—This tree is not native to this locality, but is being planted with success on the Lime Creek burn. A few young trees may be found growing along the Durango-Silverton highway on Lime Creek, as the result of some experimental seed broadcasting in the summer of 1911. Needles are yellow-green, 2 or 3 inches long, and grow in bundles of two. Bark is thin; cones are one-sided,  $1\frac{1}{2}$  to 2 inches long, and cling to the branches for years without opening or dropping their seeds. Cone scales are armed with short spines.

**SPRUCES**.—Two species. Needles are scattered over the twigs singly; sharp-pointed, four-sided, leaving twigs rough like a grater when they fall off. Cones are pendent, with parchmentlike scales, falling off the tree whole.

**ENGELMANN SPRUCE** (*Picea engelmannii*).—The new-growth twigs are covered with soft, short hair. Needles are less rigid and less sharply pointed than those of spruce, green, dark blue, or pale steel blue. Cones are 1 to 2 inches long; bark is dark reddish brown and separates in the form of small rounded scales. The main trunk, in contrast to blue spruce, is smooth and clean.

**BLUE SPRUCE** (*Picea pungens*).—The new-growth twigs are always smooth. Needles are stiff, with sharp points, varying in color from silvery blue to green. Cones are from  $2\frac{1}{2}$  to 5 inches long, averaging twice the length of Engelmann spruce cones. Bark of mature trunks is gray and deeply fur-

rowed. The main trunk always has numerous short twigs pushing out between branches.

**FIRS.**—Three species. Needles are blunt, flat, and soft to the touch, without any stem where they join the branches. They leave flat, round scars when they fall off, in contrast to short stubs left on twigs by spruce needles. Cones, unlike those of other species, stand erect. In the fall, the cones fall to pieces and leave only spikes on the branch. Buds are blunt and pitchy. Blisters containing liquid pitch or balsam are scattered over the smooth bark.

**ALPINE FIR** (*Abies lasiocarpa*).—Needles are flat, about 1 to 1¼ inches long, without any stem where they join the branches. Cones are 2¼ to 4 inches long, dark purple; bark is smooth and grayish white except on older parts of the trunk, where it is broken into ridges. Tree has a sharp, spirelike crown. Grows at high altitudes, usually with Engelmann spruce.

**CORKBARK FIR** (*Abies arizonica*).—The trunk, crown, cones, and leaves of the corkbark and alpine fir are so alike in general appearance that the two cannot be readily distinguished by these features. The cone scales of the corkbark fir are of a different form than those of the alpine and the bracts borne on the backs of the scales also differ materially in form. The ashy-gray, soft, corky trunk-bark of corkbark fir alone readily distinguishes this tree from alpine fir.

**WHITE FIR** (*Abies concolor*).—Needles are longer and coarser than those of alpine fir, often 2 inches or more long. Cones are usually dark purple, sometimes grayish green. Bark becomes quite thick on old trunks near the ground, deeply divided into broad, rounded ridges broken on the surface into irregular shaped platelike scales. Grows only at lower altitudes, often with ponderosa pine and Douglas fir.

**DOUGLAS FIR** (*Pseudotsuga taxifolia*).—Though similar in name, this species has no direct relationship to the true fir. Needles are flat, ¾ to 1½ inches long, with short stems that join them in the branches. Cones are pendent, with three-pronged bracts protruding between the cone scales. They are persistent and fall off the tree whole. Buds are smooth, red brown, shiny, and sharp-pointed.

**JUNIPERS.**—Three species—two small trees and a shrub. The fruit is berrylike, bluish in color. The needles are merely small green scales attached closely to the twigs, though sometimes spreading, and about ½ inch long, making the twigs very prickly to the touch.

**ROCKY MOUNTAIN JUNIPER** (*Juniperus scopulorum*).—Berries are about the size of small peas, bluish or black, usually with two seeds, maturing in 2 years.



The bark is scaly, the twigs slender and graceful. The heartwood is red.

**ONE-SEED JUNIPER** (*Juniperus monosperma*).—The berries are small, mostly less than  $\frac{1}{4}$  inch in diameter and usually contain only one seed. They are covered with a bluish bloom which may be rubbed off, exposing the true reddish or coppery color. They mature in 1 year. The twigs are stiff and stout. The heartwood is brown.

**DWARF JUNIPER** (*Juniperus communis*).—Always a shrub, 1 to 3 feet high; leaves in groups of three, separate on the branches, sharp-pointed. Branches not stiff.

### Broadleaf Trees

**ASPEN** (*Populus tremuloides*).—Flat, nearly heart-shaped leaves about 2 inches across, that quiver characteristically in a breeze; bark is whitish or very pale green, smooth, with black scars where branches have dropped off. Trees rarely more than 60 feet high.

**NARROWLEAF COTTONWOOD** (*Populus angustifolia*).—Usually a tall tree, 40 to 60 feet in height. Bark is dark gray, heavily ridged half or two-thirds of the way up the tree, above that, smooth, pale green. Leaves are  $\frac{1}{4}$  to 1 inch wide and 2 to 3 inches long, very similar to willow leaves. Usually found along streams at lower elevations.

**THINLEAF ALDER** (*Alnus tenuifolia*).—Found along and overhanging streams, usually in clumps, several trees growing from the same root; frequently 4 to 6 inches in diameter, and 15 to 25 feet high. The leaves are large and sharply double-toothed. The mature seed-bearing fruit is noticeable in winter.

**BOXELDER** (*Acer negundo*).—Leaves are compound, 3 to 5 on a single stalk; tree low and freely branched, 25 to 40 feet in height and up to 12 inches in diameter; has drooping clusters of greenish flowers; seed paired and winged.

**ROCKY MOUNTAIN MAPLE** (*Acer glabrum*).—Usually a shrub but may attain a height of 20 to 30 feet. Paired opposite buds, sharply lobed leaves, light gray bark, and paired, winged seed. Leaves 1 to 2 inches long, opposite each other.

**WILLOWS** (*Salix sp.*).—This is the common shrub of creek bottoms. Its leaves are usually narrow and sharp-pointed. Some willows attain a diameter of 4 inches and a height of 15 to 25 feet. Buds are covered by a single scale.

**WESTERN CHOKECHERRY** (*Prunus demissa*).—Clustered flowers and fruit; alternate leaves sharply pointed. Bark, leaves, and seed bitter; fruit black. Tree, or more often a shrub, 3 to 15 feet high.

SCRUB OAK (*Quercus sp.*).—Usually a shrub, rarely over 15 feet high; alternate leaves, smaller at the base than at the ends, with deep lobes, frequently drying on the tree and remaining over winter. Fruit a short, pointed acorn. Forms dense thickets at lower elevations. Often valuable for fence posts.

## WATERSHED VALUES

Water for municipal and irrigation use in the towns of Durango, Silverton, Bayfield, and Pagosa Springs, in Colorado, and Aztec and Farmington, in New Mexico, and adjacent farming communities, is obtained from the rivers and streams of the San Juan National Forest. The welfare and maintenance of these communities are dependent on proper management of the several watersheds within the boundary of the forest.

The Navajo, Blanco, San Juan, Piedra, Pine, Florida, Animas, and La Plata Rivers, with their numerous tributaries, combine to make up the San Juan River, the main drainage system of the San Juan Basin, and one of the principal tributaries of the Colorado River, on which the Boulder Dam is located. Also, on Pine River and within the forest boundary is located the Vallecito Reservoir, recently constructed by the United States Reclamation Service for the irrigation of farming lands in the general vicinity of Bayfield. This reservoir will impound irrigation water to provide a supplemental supply for 36,400 acres now under constructed canals, and 30,600 acres which can later be brought under irrigation.

According to the Bureau of Reclamation, the dam is 143 feet high and 4,000 feet long. The storage capacity is 126,000 acre feet and the surface area of the impounded waters is 2,723 acres. The Southern Ute Indians own approximately 18,000 acres within the project, of which 6,000 acres are now irrigated.

It is recognized that forest and other vegetative cover exerts a marked regulatory influence on the flow of streams, and that an adequate forest cover is essential for the protection of a watershed, to insure a constant and uniform flow of water, to safeguard against floods, and to prevent erosion. The forest is managed and the use of its resources is regulated to prevent damage to its watersheds.

## FORAGE VALUES

The livestock industry is one of the important industries of the San Juan Basin. The herds and flocks of cattle and sheep are owned by farmers and



*Vallecito Dam, where water is impounded for the irrigation of farming lands.*

F-412166

ranchers who are largely dependent on the forest ranges for summer pastures. The forage crop of the forest will support approximately 11,600 cattle and 100,000 sheep annually. In 1940, this privilege was used by 300 stockmen. The permanent ranch owner is given preference in the use of the forest range, which contributes to community welfare and tends to give stability to the industry.

The proper management of livestock on forest ranges necessitates a definite plan of use, designed to prevent damage to the forest cover and perpetuate the forage resource. Forest officers, working in cooperation with stockmen, constantly strive to improve the management of the forest ranges by conservatively utilizing the forage crop which otherwise would be wasted. Harvesting the crop by grazing also prevents accumulation of dry grass and weeds which would add enormously to the forest-fire hazard.

The average annual revenue derived by the United States for grazing of livestock on the San Juan National Forest is approximately \$26,000.



F-406921

*Farmers and ranchers are largely dependent on San Juan Forest ranges for summer feed.*

## GAME ANIMALS AND FISH

Big game animals are abundant in most parts of the San Juan National Forest. Estimates made by forest officers at the close of 1940 indicated that there were approximately 4,200 deer, 2,700 elk, 920 bear, and 160 mountain sheep on the forest. The elk, deer, and bear are showing substantial annual increases, and the State law provides for the removal of surplus animals by hunters. Mountain sheep are showing no increase and are protected from hunting.

Small game animals and birds include rabbits, squirrels, band-tailed pigeons, ducks, grouse, and ptarmigan; and the largest group of wild turkeys in the State is found in and adjacent to the forest. Fur-bearing animals on the forest are beaver, fox, martin, mink, badger, ermine, muskrat, and skunk. Among the predatory animals are mountain lion, coyote, lynx, and wildcat.

The forest contains a total of 475 miles of streams and 1,300 acres of lakes stocked with trout which provide fishing in season for those interested in this sport. These waters are stocked with young trout—native, rainbow, eastern brook, and Lochleven, grown in State and Federal hatcheries and distributed in cooperation with the Forest Service, game and fish clubs, and individuals.



## RECREATION

The forest contains many areas of high recreational value which are used by an ever increasing number of local residents and tourists, who come from more distant points, for picknicking, camping, fishing, hunting, and other related sports. Improved camp and picnic grounds, equipped with fireplaces, tables, and sanitary facilities, have been developed by the Forest Service at many points throughout the forest for the convenience and use of the public. The use of established campgrounds by the public is encouraged as it tends to lessen the danger of forest fires and the contamination of springs and streams. The cooperation of the public in controlling these menaces to the forest is solicited and is the only price of admission to the enjoyment of the recreational attractions of the forest.

Hotels, resorts, and cabin camps are conveniently located in towns and communities within or adjacent to the forest for the accommodation of visitors who do not wish to establish a camp. Saddle and pack stock for 1-day or camping trips into the more inaccessible and remote parts of the forest may be obtained at resorts or nearby ranches.

## CAMP AND PICNIC GROUNDS

Forest visitors are invited to use any of the following camp sites for reasonable lengths of time. There is no charge for such use, but campers should take care of the improvements and keep the premises clean.



*A young bull elk photographed from 50 feet.*

F-341479



*Two successful hunters.*

F-414622

*Piedra.*—Located on Piedra Park road, 20 miles northwest of Pagosa Springs in Piedra Park, near the Piedra Ranger Station and Piedra River. Fishing in nearby streams; saddle horses and pack outfits available at ranches  $1\frac{1}{2}$  miles north.

*Williams Creek.*—Twenty-seven miles northwest of Pagosa Springs, on the Piedra Park road, on Williams Creek, a tributary of the Piedra River. Fishing; saddle horses and pack outfits available at ranches 2 miles from the campground, on Weminuche Creek.

*Wolf Creek.*—On U S 160, 16 miles northeast of Pagosa Springs. Boating, fishing, and transportation facilities at Born's Lake, 3 miles northeast of campground. Fishing in west fork of San Juan River and tributaries.

*Lime Creek.*—On U S 550, 36 miles north of Durango and 17 miles southwest of Silverton. Fishing and mountain climbing in the Needles Mountains.

*South Mineral.*—On county road 7 miles west of Silverton. Good fishing in South Mineral Creek, Ice Lake, and Clear Lake. Mountain climbing in some of the highest and roughest scenic country in Colorado.

*Columbine.*—On U S 550, 27 miles north of Durango and 28 miles south of Silverton. Adjacent to the Hermosa elk country. Saddle horses procurable for 1-day rides or pack trips, at ranch 1 mile below the campground.

*Lower Piedra.*—Twenty-two miles west of Pagosa Springs, 1 mile north of U S 160, on the Piedra River. Fishing in the Lower Piedra; saddle horses for 1-day rides available at nearby ranches.

*West Fork.*—Seventeen miles north of Pagosa Springs on the West Fork of the San Juan River, 1½ miles from U S 160; at the foot of Wolf Creek Pass. Fishing in west fork of San Juan River. Boating and fishing at Born's Lake resort, 2 miles from campground; horses available for 1-day and pack trips, 1 mile from campground.

*East Fork.*—Located 11 miles north of Pagosa Spring, ½-mile off U S 160, on the East Fork of the San Juan River. Good fishing in the East Fork, San Juan River, and Sand Creek.

*Pine River.*—Twenty-one miles north of Bayfield, on Pine River, at end of road passable to automobiles. Fishing in the Pine River; saddle horses procurable for trips of any duration from resort 1 mile south, from a ranch 3 miles south, and from a ranch 9 miles south on road leading to campgrounds.

*Emerald Lake.*—Thirty miles north of Bayfield, at Emerald Lake, on Emerald Lake trail. This is a pack or horse trip from the Pine River campgrounds, 9 miles by trail. Fishing in Emerald Lake and Lake Fork Creek; saddle and pack horses procurable from resort 1 mile south and ranch 3 miles south, also ranch 9 miles south on road leading to Pine River campgrounds.

*Waterfall, Blue Spruce, Lower Willow Park, Upper Willow Park.*—A series of camping and picnic grounds located 28 to 30 miles from Bayfield, on Pine River, reached by automobile to Pine River campgrounds, thence by saddle horse and pack from there. Saddle and pack stock can be procured from nearby ranches with or without a guide.

*Flint Lakes and the Head of Pine River.*—These two fishing waters can best be reached from Ludwig ranch on Weminuche Creek or Rio Grande Reservoir, on the Rio Grande River. Saddle and pack stock procurable from the dude ranch at Rio Grande Reservoir.

## SAN JUAN WILDERNESS AREA

The San Juan Wilderness Area includes approximately 250,000 acres of scenic alpine territory extending along the Continental Divide from the East Needle Mountains to the headwaters of the West Fork of the San Juan River. Within this rugged region, there are several mountain ranges in which peaks tower in excess of 13,000 feet. The crags, spires, and pinnacles of the Needle Mountains within this area have been described as "terribly beautiful." Three of the highest are: Windom Peak, 14,091; Mount Eolus, 14,086; and Sunlight Peak, 14,060 feet. These three, surrounded by a score of peaks of but slightly lower elevation, make this area a mecca for the mountain climber and the outdoor enthusiast seeking primitive conditions. Banks of perpetual snow, from which flow streams that drop

over rock ledges forming inspiring waterfalls, canyons carved through granite beds, colorful mountain meadows, and spruce-covered slopes all combine to make an unusually attractive region, unsurpassed in the rough upheavals of the Colorado Rockies.

This is essentially a wilderness, as it contains no man-made improvements, except the few trails required for administration of the area and for its protection from forest fires. Its only practicable means of access is by trail with saddle horse and pack outfit. Its purpose is to preserve the natural environment for the enjoyment of this and future generations, unmarred by roads, summer homes, resorts, and similar improvements.

### PREHISTORIC RUINS

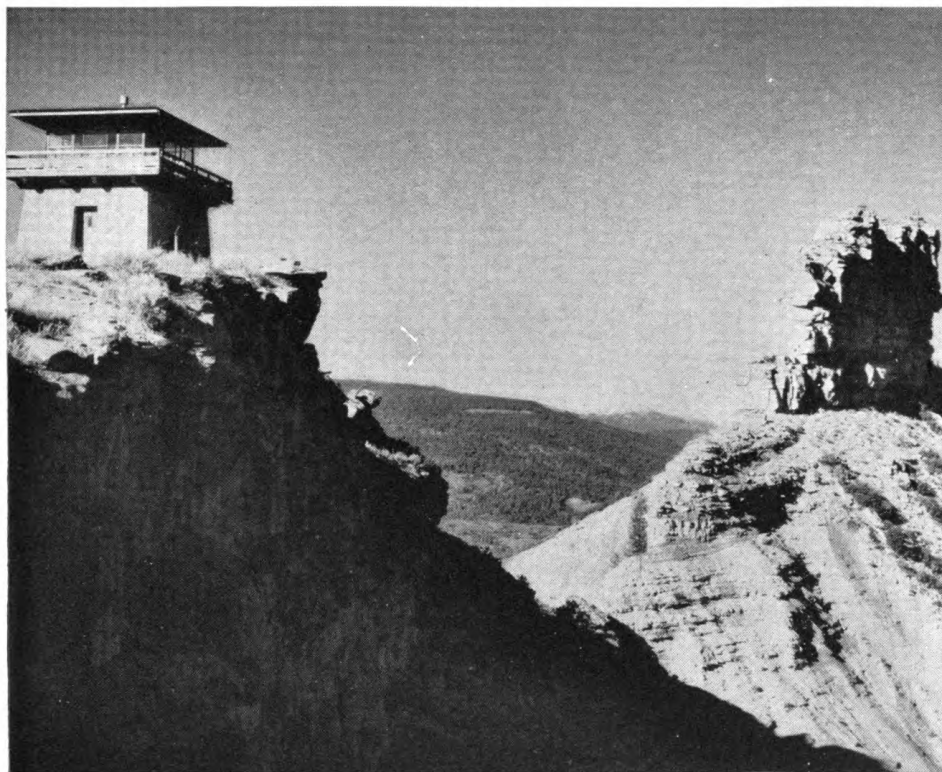
Within and adjacent to the forest are many interesting archaeological ruins. These have been traced back to the period of the post-basket-makers' culture, or approximately the beginning of the Christian Era. The most extensive ruins within the forest are located on Chimney Rock Mesa, 22 miles west of Pagosa Springs, which may be reached by a walk of  $1\frac{1}{2}$  miles over a trail leading from U S 160. The community occupied an area approximately a mile square. In 1925, the ruins were partially excavated by the Colorado State Historical Society, which uncovered one chamber 209 feet long by 80 feet wide. Excavation of prehistoric ruins is allowed only under permit granted to scientific and educational institutions or their authorized agents.

### FOREST FIRES

Many areas throughout the forest show scars of destructive forest fires that occurred before the forest was established. The most extensive of these old fires is the Lime Creek burn, the effects of which may be seen from U S 550, a few miles south of Silverton. The fire was so severe and of such size that the area is largely devoid of trees after the passage of more than 60 years. As funds become available it is being planted to restore the forest cover. The Colorado Federation of Women's Clubs contributed funds to plant 80 acres. The plantation, called the Colorado Federation Memorial Forest, was dedicated in August 1941.

Since the establishment of the San Juan National Forest, the area burned represents less than 1 percent of the total. This good record has been made possible through the prompt action of forest officers and cooperating fire wardens, and an enlightened citizenry which has responded to the Forest Service call for more care with fire in the woods.



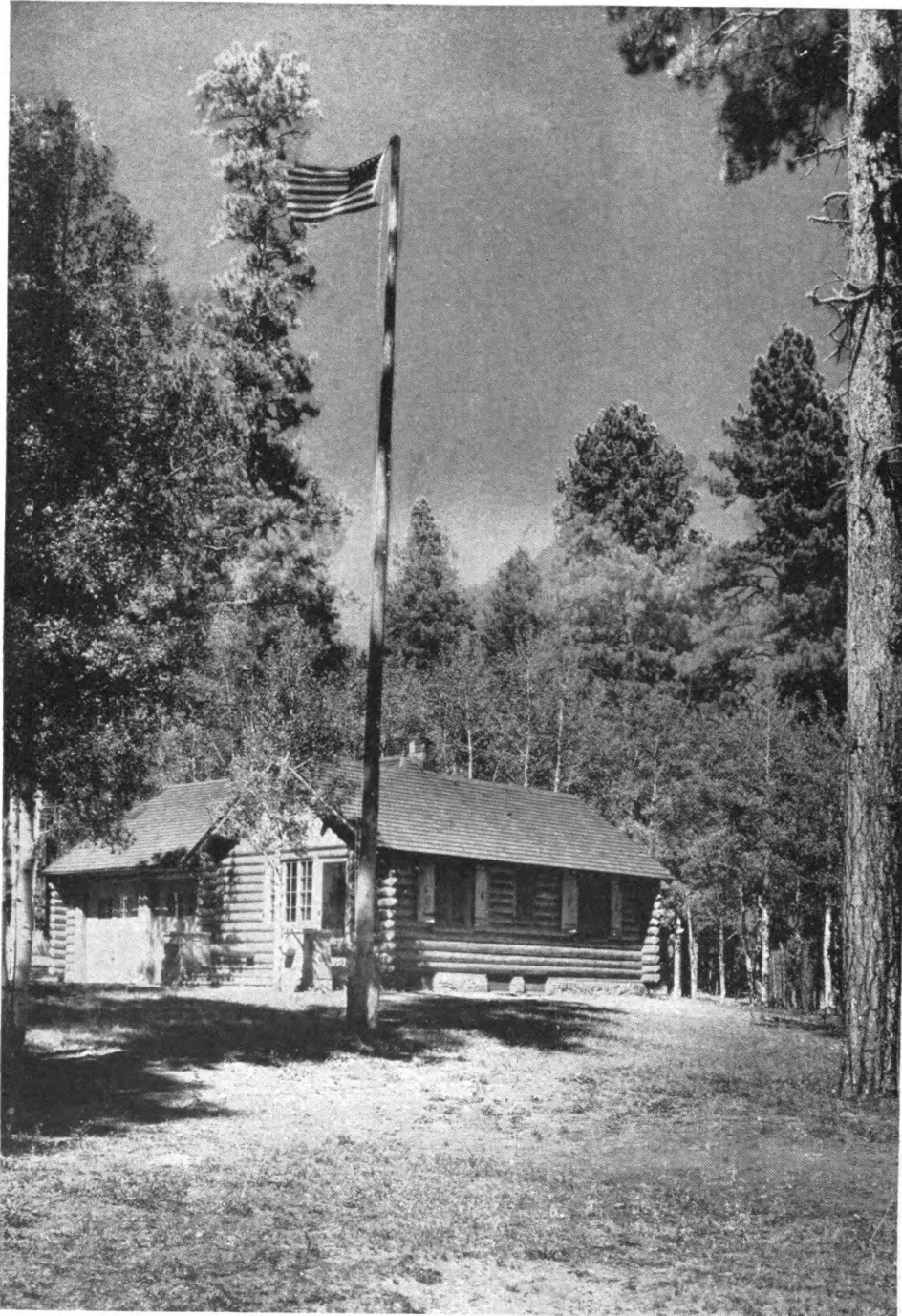


*Chimney Rock fire lookout tower: Chimney Rock on extreme right.*

F-412160

For better fire detection on the forest a new lookout station has been built near the historic Chimney Rock. Other lookout stations are planned for future construction at Baldy Mountain and Eight-Mile Mesa.

Since 1909 records have been kept on the forest, and during that 33-year period, 1,010 fires have burned over 6,286 acres of national-forest land. Improved methods of fire detection and suppression are shown in the record for the last 10 years, which shows that 322 fires burned 1,214 acres. The season of 1941 was exceptional, with a total of only 6 small fires and no measurable area burned. During the 10-year period, 102 fires were man-caused. Man-caused fires are in most cases caused by carelessness. A lighted match, cigarette, or cigar carelessly tossed aside, or a campfire left burning may result in a disastrous fire and the destruction of a forest of great value to the community and the Nation. People who use the national forests for business or recreation are urged to exercise the greatest care with fire, and observe the Fire Prevention Rules.



*Vallecito guard station*

F-412164

## FIRE PREVENTION RULES

1. *Matches*.—Be sure your match is out. Break it in two before you throw it away.

2. *Smoking*.—Be sure that pipe ashes and cigar or cigarette stubs are dead before throwing them away. Never throw them into brush, leaves, or needles. When in the woods, smoke only in places of habitation, at improved campgrounds, or at carefully selected rest and camp sites—never while traveling.

3. *Making camp*.—Use fire grates at improved campgrounds and observe the rules for building and extinguishing fires. Before building a campfire at places where no grates are available, scrape away all inflammable material from a place about 4 feet in diameter. Keep your fires small. Never build it against trees or logs or near brush.

4. *Breaking camp*.—Never break camp until your fire is out, dead out. Stir the coals while soaking them with water, turn burned sticks and drench both sides. Wet the ground around the fire and be sure the last spark is dead.

5. *Bonfires*.—Never build bonfires or burn slash or brush in windy weather or while there is the slightest danger that the fire will get away.

## ADMINISTRATION OF THE FOREST

San Juan National Forest is divided into 6 ranger districts, each with a forest ranger in charge, working under the direction of the forest supervisor. These men are responsible for the administration necessary for the development of the forest and the protection and utilization of its resources.



*Effects of the Sand Creek burn.*

F-178895



*Forest ranger inspecting a fire-tool cache at Treasure Guard Station.*

F-414617

During the summer months they live in Government ranger stations situated in the forest near the towns listed below. Because of their numerous activities they are constantly moving about the district, and business engagements should be prearranged. All of them are glad to give the forest visitor any information needed about roads, camp sites, and other recreational matters.



The rangers' duties include the prevention and suppression of forest fires; the supervision of sale and free-use areas from which timber is being cut; the administration of ranges on which cattle and sheep are grazed; the construction and maintenance of administrative and recreation improvements, including ranger stations, roads, trails, and campgrounds; and other related activities.

Inquiries concerning the resources of the forest, places of interest, recreational attractions, or other information, should be directed as follows:

Forest Supervisor, San Juan National Forest, Durango, Colo.

Forest Ranger, Animas District, Durango, Colo.

Forest Ranger, Engineer District, Durango, Colo.

Forest Ranger, Pine District, Bayfield, Colo.

Forest Ranger, Piedra District, Pagosa Springs, Colo.

Forest Ranger, Treasure District, Pagosa Springs, Colo.

Forest Ranger, Blanco District, Pagosa Springs, Colo.

### *What to do When Lost*

The Forest Service suggests the following simple and common-sense rules to be remembered when lost in the woods:

1. Stop. Sit down and try to figure out where you are. Use your head and not your legs.
2. If caught by night, fog, or storm, stop at once and make camp in a sheltered place. Build a fire in a safe spot. Gather plenty of dry fuel as soon as possible after selecting a camping place.
3. Do not wander about. Travel only downhill.
4. If you are injured, choose a clear spot, on a promontory or hill if possible, and build a signal smoke.
5. Do not yell; do not run; do not worry; and above all do not quit.
6. The S O S call of the wilderness is three signals of any kind, either audible or visible—three whistles, three flashes from a light, etc. The answer to a distress signal is two audible or visible signals.

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### *Forest Health Rules*

1. *Purification.*—Mountain streams will not purify themselves in a few hundred feet. Boil or chlorinate all suspected water.

2. *Garbage.*—Burn all paper, old clothing, or rubbish. Bury or place in pits or receptacles provided, all garbage, tin cans, bottles, and other refuse.

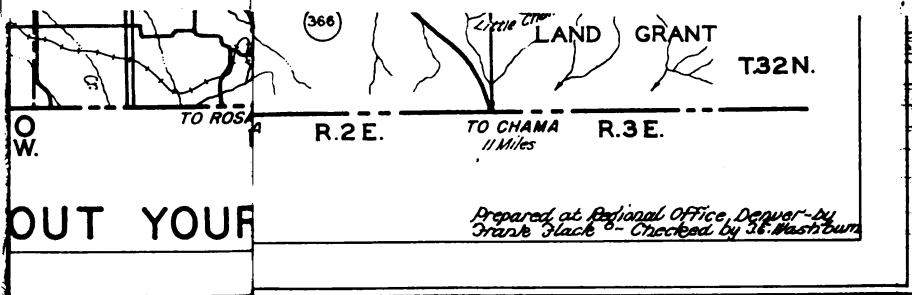
3. *Washing.*—Do not wash soiled clothing or utensils or bathe in springs, streams, or lakes. Use a container and throw dirty water where it cannot get into the water supply without first filtering through the ground.

4. *Sanitary precautions.*—Use public toilets if they are available. Where not provided, bury 1 foot deep all human excrement, at least 200 feet from water.

5. *Obey laws.*—Observe the rules of sanitation and protect yourself and others. Report all insanitary conditions to the nearest health or forest officer.

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