THE BEGINNINGS OF THE NATIONAL FORESTS IN THE SOUTH: PROTECTION OF WATERSHEDS

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The federal government has been actively involved with forests in the South for more than 200 years. The Live Oak Reservations—public domain timberland used for ship building purposes—were first authorized in 1799. The small federal reservations did not, however, have a significant influence on the southeast. They did not serve as examples of forestry; rather, they were simply held in public ownership until the timbers were needed by the Navy. Forestry on federal land started nearly a century later in the West.

The national forest system began on March 3, 1891, with President Benjamin Harrison signing the Creative or Forest Reserve Act (26 Stat. 1095). This act was designed to eliminate land fraud problems with older homestead laws by repealing or fixing portions of the previous acts. Attached to the bill was a one sentence amendment—Section 24—that allowed the president to proclaim forest reserves (later called national forests) from the timber covered public domain. The only problem was that the public domain (unclaimed public land) was almost all in the West.

Within days of passing the act, President Harrison proclaimed forest reserves on some 15 million acres of public land. By the spring of 1897, a total of 40 million acres of forest reserves had been proclaimed. The so-called "Washington's birthday reserves" of February 22, 1897, coming at the end of President Grover Cleveland's second term in office, proved to be very controversial. The western states and congressional delegations were especially outraged over the setting aside of 21 million additional acres. President McKinley, who succeeded Cleveland in March 1897, was faced with a huge problem of trying to overcome congressional and state opposition to the new reserves and still fund the daily operations of the government, since abolishment of the reserves was tied to the annual sundry appropriations bill. Finally, the Congress passed and the president signed a bill known by the Forest Service as the Organic Act of 1897. This act, which suspended the new reserves for nine months, also allowed the first management of the forest reserves under the leadership of the USDI General Land Office and the USDI Geological Survey. The 1897 act also specified that:

No public forest reservation shall be established, except to improve and protect the forest within the reservation, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States; but it is not the purpose or intent of these provisions, or of the act providing for such reservations, to authorize the inclusion therein of lands more valuable for the mineral therein, or for agricultural purposes, than for forest purposes.

Protection of water flows, usually meaning holding back floods or reducing their severity, was driving the early laws. Various acts of Congress, such as the Creative Act of 1891 (as amended in 1908), the Act of January 21, 1895, the Act of February 15, 1901, and the Transfer Act of March 3, 1905, specified uses and additional protections for these watersheds, especially from fire and trespass from illegal users. Also several court cases, including *Dastervignes, et al., v. U.S.* (1903), affirmed the right of the federal government to protect watersheds in the national forests.

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As the forest reserves in the West grew in leaps and bounds, there was no federal protection for timber areas in the East. The timber-covered mountains in the Northeast and South were quickly being converted to stumps. There were huge problems with land erosion and timber companies leaving the now cutover land behind—taxes were often not paid and the lands became the property of the counties and states.

In 1911, an act was passed that was intended to resolve at least part of the situation. Called the Weeks Act, it allowed the federal government to purchase lands that once had trees/forests. Yet the states had to approve the federal government to purchase the forest or previously forested lands. Within a few years, many acres of land were purchased from willing owners/sellers and approved by the counties and states. These lands, after many purchases of some very large as well as many small pieces of forest and farm land, were converted to national forests by Congress—the first was the Pisgah National Forest in 1916 in the State of North Carolina.

THE CUTOVER LANDS

European settlement in many parts of the South began in the mid-1700s and displaced the American Indians. By the middle of the 1800s, millions of acres of land in the southern states were extensively cleared for farms and plantations. As the better lowlands were taken and used for cotton and tobacco production, many new settlers moved to the often inaccessible mountain areas where farms were often scratched out among the forests.

Small-scale timber harvesting was widespread across the South, but the trees and lumber were generally used near the site. There were some larger scale operations. These sawmills were often located near rivers where the logs could be transported easily to mills. After the Civil War, because of outside investors buying huge parcels of timber land and new railroads, extensive and intensive timber harvesting became common. Areas that were once inaccessible, such as steep mountainous terrain, began to be harvested. Logging camps, with all their squalid conditions, quickly arose for a few years then disappeared, taking with them the loggers.

Many people moved out of the hills to live and work in the growing towns and cities. The clearcut harvesting practices, common in the late 1800s and early 1900s, left millions of acres of cutover and denuded land. John Bethea described the situation in Florida, which was repeated elsewhere:

By 1930, destructive cut-out-and-get-out practices and rampant wildfires had reduced Florida's once bountiful forests to just 6 million acres of virgin stands. With the passing of the prime timber, the big mills closed one by one. During the 1930s, local property taxes became delinquent on as many as 12 million acres, a reflection not only of the depths of the [Great] Depression but also of the declining value of the denuded land (Bethea 1983: 186).

The forest land situation in the late 1800s and early 1900s commonly went through a predictable cycle: Purchase by large timber companies, massive timber operations, huge clear cuts with boom towns, timber running out with bust towns, fire prone leftover land, denuded land, and abandoned land relinquished to the state government for non-payment of taxes were common. The logging boom busted by around 1910, later in some locations. This situation was repeated all across the South during the 1910s, 1920s, and 1930s. These rather dire circumstances faced both the states and federal government in their efforts to protect remaining timbered areas, reduce the chances for additional land erosion, and stop destructive forest fires.

WEEKS ACT OF 1911

Floods, fires, and Forest Service foresters all contributed to the passage of the Weeks Act of 1911, which marked the shift from public land disposal to expansion of the public land base by purchase. It was the origin of the eastern and most southern national forests. The role played by floods, wildfires, and foresters goes back to the beginnings of the conservation movement and professional forestry in the United States.

As early as 1892, Charles Sargent suggested that the federal government should set aside land in the southern Appalachians for "recreational needs."

The importance of forests in watershed protection, for example, was an early subject of concern among those who argued for forest reserves. The place of forests in moderating stream flow was unclear in the early stages of the forest conservation movement, but gained enough credence that "securing favorable conditions of water flows" was defined as a primary function of the newly formed federal forest reserves in the Organic Act of 1897.

It may have been the memory of the disastrous Johnstown (Pennsylvania) flood on May 31, 1889, where more than 2,000 people died, that helped dramatize the consequences of watershed deforestation to people in the East. Two decades later, foresters, largely based in the USDA Forest Service, recognized the importance of forests in flood protection—the U.S. Army Corps of Engineers did not. The Corps' idea of flood control was dams and levees. Forest Service Chief Gifford Pinchot felt that the Corps of Engineers' position undermined one of the key arguments for creating additional forest reserves. Most of the over 150 million acres of forest reserves were in the West. The issue of flood control became important to gain political support for purchase of lands for national forests in the East. Because of major floods and soil erosion along the Monongahela and Ohio Rivers in 1907 caused by the massive clearcut areas in the mountains, the West Virginia legislature authorized the government to purchase lands in the state for conservation purposes. This predated the Weeks Act by two years.

Rain was also important to irrigators in the arid West, and urban residents wanted pure drinking water, so these two groups supported watershed protection through creation of forest reserves. It was recreationists in the East, however, who sought creation of additional federal forests—they were supporters of the proposed White Mountain reserve of New England (Maine and New Hampshire, now the White Mountain National Forest established in 1918). In the South, the Appalachian National Park Association was formed in 1899 to petition Congress for a large park in the southern Appalachians. Support in Congress was, however, only lukewarm. Historian Pete Steen described the scene:

Both the House and Senate saw bills introduced in support of eastern reservations. In 1900 Congress appropriated \$5,000 for a study, which the Division of Forestry and the Geological Survey made jointly. President Roosevelt told Congress [in 1901 that] the investigation showed "unmistakably" that a forest reserve was needed in the South. The president justified the purchase on ground of bolstering the southern economy and improving flood control. The following years, the Appalachian National Park Association mailed over one million pieces of literature to gather support. Then in 1903 the group changed its name to the Appalachian National Forest Reserve Association to reflect changing sentiment away from an Appalachian park to a forest reserve. Supporters became demoralized when their efforts north and south seemed to be of little avail; but persistence would pay off (Steen 1976: 124).

Horace B. Ayres and William W. Ashe produced the 1905 study mentioned above. The formal report was titled as *The Southern Appalachian Forests*, USGS Professional Paper No. 37. An earlier version was printed in the Agriculture Secretary James Wilson's report in 1901. Roosevelt used portions of the study in his address to Congress in 1901. Wilson, in the report's letter of transmittal, wrote:

The rapid consumption of our timber supplies, the exhaustive destruction of four forests by fire, and the resulting increase in the irregularity of the flow of water in important streams have served to develop among the people of this country an interest in forest problems which is one of the marked features of the close of the [19th] century. In response to this growing interest the government set aside in the western forest reserves an area of more than 70,000 square miles. There is not a single forest reserve in the East (Wilson 1901:168).

In 1905, the American Forestry Association endorsed the proposal to establish eastern national forests through federal purchase, and Congress's defeat of the bill led them and other advocates of forest

reserves to shift their argument from nature preservation to utilitarian concerns over flood protection. Enlisted in the effort was Congressman John W. Weeks (of Massachusetts), who, in 1906, made a motion in Congress to authorize federal purchase of private lands for the purpose of forest reserves. The notion of spending public money on recreation sites did not appeal to the powerful Speaker of the House, Joe Cannon, who declared "not one cent for scenery" in the debate against the proposal. There were other obstacles to be overcome, including the issue as to whether it was constitutionally legal for the federal government to purchase lands. That issue was put to rest early in the debate.

In the meantime, a need for fire control offered a second reason for the shift of ownership of forest lands to the federal government. The lack of fire protection efforts on the part of the private sector and even states made it a national program for the new Forest Service, the reason being that when scientific forestry began in North America its practitioners regarded fire protection to be a fundamental mission of the forestry profession. With the massive western fires of 1910 accelerating the trend, public opinion gradually moved toward the agency's view of the need for wildfire control of forested lands.

Congress was finally convinced of the necessity of forest cover in the South by demonstration. As the Weeks bill was slowly grinding through Congress, Gifford Pinchot, chief of the Forest Service, came up with a novel idea to demonstrate the principle of trees, soil, and water. In one of the hearings, Pinchot:

showed the legislators a photograph of a denuded area, held it at an angle, [then] poured water on the inclined illustration. The lawmakers could see how quickly the water ran off. Pinchot then would pour water on a sloping [ink] blotter, calling attention to how the water was absorbed and how little ran off the bottom of the sheet. The analogy, he insisted, was appropriate to forested and deforested areas. Forests prevented floods (Steen 1976: 126).

After years of debate, the Weeks Act of March 1, 1911, allowed the government to purchase important private watershed land on the headwaters of navigable streams for the purpose of "conserving the navigability of navigable rivers." Many of these lands had been cut over, burned over, or farmed out. As a result, this act directly supported the creation, through land purchases, of new national forests in the eastern United States, where there was little public domain land left. As noted, the lands were to be *purchased*, not taken by condemnation of the land (or the right of eminent domain).

The act in section 4 specified the creation of a National Forest Reservation Commission (NFRC), consisting of the Secretary of War, the Secretary of the Interior, and Secretary of Agriculture, and two members of the Senate, and two members of the House of Representatives. The NFRC was authorized to "consider and pass upon such lands as may be recommended for purchase...and to fix the price or prices at which such lands may be purchased." The first chair of the NFRC was Secretary of War Henry L. Stimson, who was elected on March 7, 1911, the first meeting of the commission. For the next 65 years, until the commission was eliminated through the National Forest Management Act of 1976, the commission was chaired by various secretaries of war and later the army.

In section 11, the act required that the acquired lands "shall be permanently reserved, held, and administered as national forest lands...And the Secretary of Agriculture may from time to time divide the lands acquired under this Act into such specific national forests and so designate the same as he may deem best for administrative purposes." Millions of acres of land in the South and Northeast would eventually pass from private ownership into public ownership as national forests.

IMPLEMENTATION OF THE WEEKS ACT

Under the Weeks Act states had to pass some type of enabling legislation that would allow the federal government to purchase lands in the state for national forest purposes. Several of the southern states, e.g. North and South Carolina, Tennessee, Georgia, Alabama, and West Virginia, passed enabling legislation before the Weeks Act of 1911. One form of inducement or appeasement to the states, which would lose the taxation of private land once it was transferred to the federal government, was to return part of any revenues that would be generated by timber sales on the new national forests. Congress

tacked section 13 to the Weeks Act where five percent (later increased to 25 percent) "of all moneys received during any fiscal year from each national forest...shall be paid...to the State in which such national forest is situated...for the benefit of the public schools and public roads." This was similar to what other states enjoyed in the West for national forests in their states.

During the first year of operation, the NFRC approved seven purchase units—that is, lands identified as having areas within a specified boundary worthy of purchase—in the southern states. Four more were approved in fiscal year 1912, another in 1914, and two more in 1918. In the 1920s, ten more were approved, while during the 1930s, another 32 units were approved, with only one new purchase unit in 1941. After the NFRC picked land within a purchase unit and the survey work was conducted by the Geological Survey, negotiations would then commence between the owner and the federal government. Only after the owners and affected counties and the states agreed could the land pass into federal ownership and then wait for designation as a national forest.

The NFRC was busiest for the two years after the Weeks Act was passed. Prices paid for the land varied considerably. Some lands that had extensive standing old-growth timber were much more valuable than cutover or burned areas. Many of the areas were purchased from timber companies, as they had previously purchased the forest areas in the late 1880s:

During the first five years of the program...lands approved were of high quality, 28 percent of all such lands being virgin timber. This high quality is clearly reflected in the prices paid, which averaged \$5.65 per acre for the first five years. Individual large tracts at from \$8.00 to \$12.00 per acre were not uncommon...At the end of 1924 when the field of purchase was about to be extended to lands outside the mountain watersheds, lands in the Appalachian units were still bringing nearly \$6.00 per acre as compared with \$4.70 in Alabama and \$3.45 in Arkansas (Paxton 1950: 3).

There were lands that were greatly desired by the NFRC, but were eventually not purchased for a variety of reasons, the most common of which was not agreeing to a purchase price. The people living in the mountains of the South were very suspicious of the federal government, having been often "taken" by the industrial buyers who bought cheap timber land and made millions of dollars. Yet, for the most part, the Forest Service was welcome. The Pisgah National Forest, the first national forest made up almost entirely of purchased private land, was established on October 17, 1916. The new forest's core portion came from the privately-owned Biltmore Forest—once managed by Gifford Pinchot. Land purchases for the Pisgah began in 1911, soon after the passage of the Weeks Act. The work involved in establishing national forests was far from over. Forest Service Chief Henry S. Graves commented in 1919:

The very magnitude of the national forest enterprise has created in the minds of many people the impression that the problem in this country is already on the way to definite solution. In point of fact, only certain initial steps have been taken....It is my hope that we may secure sufficient public support to enable us to accelerate the acquisition by the Government of the important remaining areas [in the East] before it is too late....Forests on critical watersheds should be owned by the public for their protective value. Public forests serve, also, as centers of co-operation with private owners and as demonstration areas for the practice of forestry as well as furnishing their direct benefits in producing wood materials, as recreation grounds, etc. (Graves 1919: 113–114, 120).

By 1920, around 2 million acres had been added to the national forest system, mostly in the South, through purchases under the authority of the Weeks Act. The total amount of land recommended and purchased through commission recommendations topped out at 22 million acres. In 1976, the NFRC duties were transferred to the Secretary of Agriculture through the National Forest Management Act of 1976.

Problems arose almost immediately with land purchases under the Weeks Act. "At this time no definite procedure for handling purchase cases had been worked out and consequently each step in the process

had to be decided currently (Paxton 1950: 29)." In one case, the Alabama Purchase Unit—which was approved in fiscal year 1914—decisions about procedures for purchase had to be resolved quickly:

Purchases in this area got under way slowly. It is related that one or two individuals, armed with inside information, proceeded immediately after the establishment [of the purchase unit] to take options on a large number of tracts, expecting to sell them to the United States at an advance in price. When this was reported, the National Forest Reservation Commission adopted the policy, [which] has lasted to the present, of refusing to deal with agents or optioners and insisting upon buying only from the actual owners of the lands (Paxton 1950: 11).

Another problem was that of the mineral rights. Many owners in the East and South had sold the mineral and sometimes timber rights on their property years ago. Current owners might not even know who owned these rights until such time as a company decides to exploit their right to mine or log. This issue raised its head early in the NFRC workings on the Chattachoochee Purchase Unit in Georgia and was resolved by the Attorney General:

The chief obstacle to consummation lay in the fact that certain of the offered lots were subject to outstanding mineral rights, and while the Weeks Law authorized reservation by the vendors, it did not the authorize acceptance subject to rights owned by others. Consequently, upon the advice of Attorney General Wickersham citing the Act of August 1, 1888, as authority, the tract was made into the registry of the court on December 23, 1912, about 12 months after Commission approval. This is especially noteworthy since under the simplified and streamlined procedures subsequently devised, there is no telling how long a period might have been to complete the case [purchases] (Paxton 1950: 29).

The Clarke-McNary Act of June 7, 1924 (43 Stat. 653), greatly expanded the Weeks Act. The new act eliminated the provision that national forest lands could only be purchased in the headwaters of watersheds on navigable streams for watershed purposes and for the production of timber, and emphasized the need for cooperation and incentives to improve private forest land conditions. Fire and taxes were the primary components of the act—allowing the federal, state, and private interests to work together. Most states formed fire protection associations and state forestry departments that are still active today. The McNary-Woodruff Act of April 30, 1928 (45 Stat. 468), authorized the expenditure of an additional 8 million dollars to purchase land under the Weeks Act.

RESTORING THE FORESTS

Massive efforts began in the 1920s to restore and replant the new national forests. Nurseries were built and millions of trees planted. The Civilian Conservation Corps (1933–1942) was the biggest boon to the effort. Not only did the CCC plant seedlings, they often assisted with erosion control. They planted huge quantities of one plant from Japan that was a wonder in stopping soil erosion—kudzu. It was only years later that kudzu became a major problem. The CCC provided thousands of men to stop forest fires on the national forests. The CCC was also involved with state projects during the 1930s. They built and improved hundreds of state parks and campgrounds, many of which are still around today.

Tree planting in the South on national forests has grown like a weed. The program has been steadily helped by pioneering forestry research at the Southern and Appalachian/Southeastern Forest Experiment Stations. In 1925, approximately 2,000 acres were planted or seeded; by 1930 less than 1,000 acres were planted or seeded. The planting greatly increased during the CCC days, with around 400,000 acres planted from 1934–1941. During the war, fewer than 29,000 acres were planted, then slowly rising after the war to around 16,000 acres by 1950, 57,000 acres by 1960, 80,000 acres by 1970, and 103,000 acres by 1980—which was the highest level of planting and seeding. The highest point in tree replanting came in 1987 when 2.7 million seedlings were planted. Currently, more trees are planted in the South than in any other region of the U.S. The replanting of the forests from the mostly denuded national forest lands in the 1920s and 1930s to healthy, tree-covered slopes and mountains has been remarkable, with

around 2,900,000 acres planted and seeded from 1925 to 1985. It is a stunning testament to the tenacity of the Forest Service to restore and protect the forest lands in the South.

CONCLUSION

The national forests in the South, which now contain over 13 million acres, were almost all established under the auspices of the Weeks Act of 1911. Several national forests in Arkansas and Florida were proclaimed before the Weeks Act, but all the rest were purchased or gifts from private citizens, timber companies, or government agencies. There were some problems with the initial efforts of the National Forest Reserve Commission, but they were quickly overcome. Purchases of national forest land under the Weeks Act of 1911 was expanded by Clarke-McNary Act of June 7, 1924, which allowed purchases for timber production and watershed protection, not just at the headwaters of navigable streams. The initial purchases of timber or cutover lands were for flood control and protection of the water supplies. Only later would the effort focus on clean water with the Clean Water Act of 1948 and the Clean Water Act amendments in 1972.

REFERENCES

Allison, John. 1909. "The Immediate Necessity for Acquiring the Appalachian Forest Reserve." *Conference of Governors, Proceedings 1908*: 376–383.

Ayres, Horace B. and William W. Ashe. 1905. *The Southern Appalachian Forests*. USGS Professional Paper No. 37, Series H, Forestry 12. Washington, DC: U.S.G.P.O.

Ayres, Philip W. 1914. "The New Forest Reserves in the Eastern Mountains." *American Review of Reviews*, Vol. 50 (July): 46–52.

Ayres, Philip W. 1930. "Our Eastern National Forests: Record Steady Progress in Acquisition...." *American Forests & Forest Life*, Vol. 36, #7 (July): 438–439, 483.

Bascom, L. R. 1915. "Uncle Sam in the Appalachia." Outlook, Vol. 111: 483-489.

Battle, R. H. 1902. "The National Appalachian Forest Reserve." *Tennessee Forestry Association, Proceedings*, Vol. 2: 34–47.

Butler, Ovid McQuat. 1924. "Need of Increasing National Forests in the East." *National Parks Bulletin*, Vol. 42: 8.

Cleveland Jr., Treadwell. 1906. "National Forest Work and the South: Valuable Aid of Forest Service Recognized by Practical Lumbermen." *Southern Lumberman*, Vol. 603 (Dec. 25): 52–54.

Cone, Moses H. 1908. "The Proposed Appalachian National Forest." *Southern Woodlands*, Vol. 1, #6 (Feb): 11–15.

Dean, George W. 1983. "Virginia Forests." Pp. 671–673 in Richard C. Davis (ed.) *Encyclopedia of American Forest and Conservation History*. Vol. 2. New York, NY: Macmillian and Free Press.

Defebaugh, James E. 1908. "The Appalachian Forest Reserves: A Consideration of Some of the Features of the Forest Reserve Policy of the United States." *American Lumberman*, Vol. 1713 (Mar. 21): 36–37.

Depew, Chauncy M. 1902. "National Appalachian Forest Reserve: Speech in the Senate of the United States Saturday, June 7, 1902." Washington, DC: U.S.G.P.O.

Du Puy, William A. 1911. "National Forests for the East." *Technical World Magazine*, Vol. 16, #1: 31-41.

Elliott, S. B. 1917. "What of the Future of the Eastern Forests of the United States." *Journal of Forestry*, Vol. 15, #1 (Jan): 65–67.

Elliott, William. 1902. "The Southern Appalachian Forest Reserve; Speech in the House of Representatives May 14, 1902." 15 pages. Washington, DC: U.S.G.P.O.

Forbes, Reginald D. 1930. "The National Forest Reservation Commission and Forest Research Reserves." *Science (NS)*, Vol. 71 (May 16): 505–506.

Forestry and Irrigation. 1905. "President Roosevelt Urges Southern Appalachian Reserve: Strong Plea Made in Raleigh [NC] Address for Conservative Handling of Southern Forests." *Forestry and Irrigation*, Vol. 11, #10 (Oct): 445–446.

Forestry and Irrigation. 1907. "Why the Appalachian Reserves are Essential: Convincing Testimony." *Forestry and Irrigation*, Vol. 13, #7 (July): 367–374.

Graves, Henry Solon. 1919. "Private Forestry." Journal of Forestry, Vol. 17, #2 (Feb): 113-121.

Hall, William L. 1919. "Influence of the National Forests in the Southern Appalachians." *Journal of Forestry*, Vol. 17, #4 (April): 402–407.

Hawley, Willis C. 1925. "Buying National Forests: A Personal Account of the Work of the National Forest Reservation Commission." *American Forests & Forest Life*, Vol. 31, #5 (May): 293–295, 304.

Kneipp, Leon F. 1936. "Uncle Sam Buys Some Forests: How the Weeks Law of Twenty-five Years Ago is Building Up a Great System of National Forests in the East." *American Forests*, Vol. 42, #10 (Oct): 442–446, 483.

Lull, Howard W. and Kenneth G. Reinhart. 1972. *Forests and Floods in the Eastern United States*. NE-226. Upper Darby, PA: USDA Northeastern Forest Experiment Station.

Marquis, David A. 1975. *The Allegheny Hardwood Forests of Pennsylvania [Their Bounty of Timber and Deers are the Results of Events that Occurred Many Years Ago]*. GTR-NE-15. Upper Darby, PA: USDA Northeastern Forest Experiment Station.

Mastran, Shelley Smith and Nan Lowerre. 1983. *Mountaineers and Rangers: A History of Federal Forest Management in the Southern Appalachians, 1900–81*. FS-380. Washington, DC: U.S.G.P.O.

National Forest Reservation Commission. 1920. "Progress of Purchase of Eastern National Forests Under Act of March 1, 1911 [Weeks Act]." 23 pages. Washington, DC: U.S.G.P.O.

National Forest Reservation Commission. 1933. "Review of the Work of the National Forest Reservation Commission [Weeks Act of 1911]." Washington, DC: U.S.G.P.O.

Page, T. N. 1911. "The People's Possessions in the Appalachian Forests." *American Forestry*, Vol. 17: 133–144.

Paxton, Percy J. (compiler). 1950. "National Forests and Purchase Units of Region 8." Manuscript. Dated July 1, 1950. Atlanta, GA: USDA Forest Service, Southern Region. 56 pages.

Pinchot, Gifford. 1947. Breaking New Ground. New York, NY: Harcourt Brace Jovanovich, Inc.

Pritchard, J. C. 1902. "Southern Appalachian Forest Reserve; Speech...in the Senate of the United States, April 26, 1902." *Congressional Record*, Vol. 35, #5: 4710–4714.

Roosevelt, President Theodore. 1902. "The Appalachian Forest Reserve: The Subject of a Special Message to Congress by President Roosevelt." *Forestry and Irrigation*, Vol. 8, #1 (Jan): 12–14.

Sandow's Magazine. 1903. "The National Southern Appalachian Forest Reserve." *Sandow's Magazine*, Vol. 1 (Jan): 70–71.

Sarvis, Will. 1993a. "An Appalachian Forest: Creation of the Jefferson National Forest and its Effects on the Local Community." *Forest & Conservation History*, Vol. 37, #4 (Oct): 169–178.

Sarvis, Will. 1993b. "The Great Anti-Fire Campaign [on the Jefferson NF]: In the East, Fire Control was at Least Partly a Social Concern, but its Results Have Changed These Forests Too." *American Forests*, Vol. 99, #5/6 (May/June): 33–35, 58–60.

Science (NS). 1934. "Program of the National Forest Reservation Commission." *Science (NS)*, Vol. 79 (June 29): 583–584.

Shands, William E. 1991. "The Lands Nobody Wanted: The Legacy of the Eastern National Forests." Pinchot Institute Monograph. Milford, PA: Pinchot Institute for Conservation. R-8 & R-9.

Shands, William E. and Robert G. Healy. 1977. *The Lands Nobody Wanted [Policy for National Forests in the Eastern United States]*. Washington, DC: The Conservation Foundation.

Smith, Charles D. 1956. "The Movement for Eastern National Forests, 1899–1911." Ph.D. dissertation. Cambridge, MA: Harvard University.

Start, Edwin A. 1909. "The Fight for the Appalachian Forests." Conservation, Vol. 15, #5 (May): 251–261.

Steen, Harold K. 1976. The U.S. Forest Service: A History. Seattle, WA: University of Washington Press.

U.S. Congress, House Committee on Agriculture. 1902. "The National Appalachian Forest Reserve." House Report 1547, 57th Congress, 1st Session. Washington, DC: U.S.G.P.O.

U.S. Congress, House Committee on Agriculture. 1908. "Appalachian and White Mountain Forest Reserves: Hearings." 102 pages. Washington, DC: U.S.G.P.O.

U.S. Congress, House Committee on Agriculture. 1909. "Acquiring Land for the Protection of Watersheds for the Conservation of Navigable Streams." House Report 2027, 60th Congress, 2nd Session. Washington, DC: U.S.G.P.O.

U.S. Congress, House Committee on Judiciary. 1908. "Power of Federal Government to Acquire Lands for National Forest Purposes." House Report 1514, 60th Congress, 1st Session. Washington, DC: U.S.G.P.O.

USDA Forest Service. 1911. "Purchase of Land Under the Weeks Law in the Southern Appalachian and White Mountains." Pamphlet issued March 27, 1911. Washington, DC: USDA Forest Service.

USDA Forest Service. 1961a. *The John Weeks Story: A Chapter in the History of American Forestry*. Washington, DC: U.S.G.P.O.

USDA Forest Service. 1961b. The National Forest Reservation Commission: A Report on Progress in Establishing National Forests, Published on the Occasion of the 50th Anniversary of the Weeks Law, 1961. Washington, DC: U.S.G.P.O.

USDA Forest Service. 1988. *The South's Fourth Forest: Alternatives for the Future*. Forest Resource Report 24. Washington, DC: USDA Forest Service. 512 pages.

Weeks, John W. 1923. "National Forests in the Eastern States: The Work of the National Forest Reservation Commission." *International Interpreter*, Vol. 1, #50: 1578–1581 and #51: 1610–1612.

Will, Thomas E. 1906a. "New National Forest Reserves; Plea for Preservation of Important Eastern Regions by Federal Government." *Forestry and Irrigation*, Vol. 12, #12 (Dec): 544–548.

Will, Thomas E. 1906b. "The New National Forest Reserves in the Southern Appalachian and White Mountains." *American Review of Reviews*, Vol. 34, #12 (Dec): 708–711.

Will, Thomas E. 1908. "National Forests in the Appalachians." *American Review of Reviews*, Vol. 37, #4 (April): 450–455.

Wilson, James. 1901. "Letter of Transmittal" for the report *Forests, Rivers, and Mountains of the Southern Appalachian Region*. Washington, DC: U.S.G.P.O.

Wilson, James. 1903. "The Proposed Southern Appalachian Forest Reserve." *Forestry and Irrigation*, Vol. 9, #7 (July): 332–334.

Yarnell, Susan L. 1998. *The Southern Appalachians: A History of the Landscape*. GTR-SRS-18. Asheville, NC: USDA Forest Service, Southern Research Station.