

PRIVATE PROPERTY TO PUBLIC PROPERTY: THE BEGINNINGS OF THE NATIONAL FORESTS IN THE SOUTH

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March 29, 2003

The federal government has been actively involved with forests in the South since 1799 with the establishment of several live oak reservations for naval purposes. However, large land allocations for national forests would have to wait for 120 years. The national forest system began on March 3, 1891, with passage of a bill—referred to as the Creative Act by the Forest Service—that was designed to eliminate problems with previous homestead laws (26 Stat. 1095). Attached to the bill was a one sentence amendment 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 the passage of the act, President Harrison had proclaimed forest reserves on some 15 million acres of land. By the end of President Cleveland's second term, a total of 40 million acres of forest reserves had been proclaimed, some very controversial. President McKinley was faced with a huge problem of trying to overcome 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 now known as the Organic Act of 1897.

However, as the forest reserves in the West grew in leaps and bounds, there was no federal protection for timber areas in the East. In addition, the timber covered mountains in the North east and South were quickly being converted to stumps. There were huge problems with land erosion and timber companies leaving the now cut-over 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. Within a few years, many acres of land were purchased from willing owners and willing counties and states. These lands, after many purchases of often very small pieces of land, were converted to national forests by Congress—the first was the Pisgah National Forest in 1916 in the state of North Carolina. Today, there are approximately 25 million acres of national forests in the East—12 million acres of these in the South). The unique challenges and obstacles that had to be overcome to establish these national forests in the South, as well as the management problems (including that of the "light burning" controversy) after the national forests were established, are the issues to be described below. In addition, each southern state is discussed briefly in relation to the establishment of national forests within the boundaries.

This paper was prepared for the American Society for Environmental History meeting held in Providence, RI, on March 26-30, 2003.

LIVE OAK RESERVATIONS

The Federal Timber Purchasers Act of February 25, 1799 (1 Stat. 622) appropriated \$200,000 to buy timber and timberland for naval purposes. Live oak trees were highly valued for lumber used in the planking and large wood pieces used by the wooden fleets of the time. Blackbeard's and Grover's Islands off the Georgia were purchased—these were the first federal purchases of timbered land for government use. The Act of March 1, 1817 (3 Stat. 347), renewed the 1799 act, directed the president to reserve live oak or cedar timbered public lands that may have use for the U.S. Navy. Under this act, 19,000 acres were reserved on Commissioners, Cypress, and Six Islands in Louisiana. The live oak lands were administered by the Navy Department. The Federal Timber Reservation Act of March 3, 1827 (4 Stat. 242) established the Santa Rosa live oak timber reserve near Pensacola, Florida, for the exclusive use by the Navy. This was the first federal timberland reservation that is used for forestry purposes. About 30,000 acres of the Santa Rosa peninsula (that extends into the Bay of Pensacola) was intended to be the first forest experiment station with planting live oaks, clearing brush, creating fire breaks, and keeping trespassers out, but the idea becomes a political issue and is dropped.

The Naval Appropriations Act of 1828 approved spending not more than \$100,000 to purchase land necessary for the continuous supply of live oak and other timber, especially cedar, for the Navy. This appropriation was spent on the Santa Rosa naval timber reserve and experiment station near Pensacola, Florida. Henry M. Brackenridge, supervisor of the reserve, wrote a letter to Secretary Southard of the Navy Department where he discussed innovative the culturing of live oak. This was one of the first American papers on silviculture.

The Timber Trespass Act of March 2, 1831 (4 Stat. 472), relating to the live oak and other timber reservations, became the basis for present-day law for the prevention of timber trespass on federal land. Fines for timber trespass were to be not less than three times the value of the timber cut. By the 1830s, trespass cutting on the reserves was flagrant. Congress requested in early 1832 that the Secretary of the Navy report on the reserves, which he did on December 18, 1832. In conclusion, the report as recorded by Kephart (1983: 471), stated that there should be no “further purchases on private lands on which this [live oak] tree grows, or to carry the artificial cultivation of it, on any of the public lands, beyond what had already been attempted.”

For a 30-year period from 1830 to 1860, 14 presidential orders set aside approximately 200,000 acres of live oak reserves from public lands (Kephart 1983). Congress passed an act in 1871 that authorizing the expenditure of \$5,000 for the “protection of timberlands.” This was intended to be used for protection of the naval timber (live oak) reservations. This was the first appropriation for the protection of publically owned timber. The next year, the amount was doubled and applied to all public lands. Reservations of live oak lands in Louisiana were opened for settlement in 1843. The disposal of live oak reservations continued until 1923 when the last of the reservations was sold.

THE SOUTH AND TIMBER

Settlement in many parts of the South began in the middle-1700s, displacing the native American Indians. By the middle 1800s, millions of acres of land in the southern state 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 from the forests. A typical mountain-type or “hardscrabble” farm was described as having:

both bottomland and steep hillsides. About a quarter was in crops, a fifth in cleared pasture, and the remainder, over half, was in forest. Springs and a nearby creek provided plentiful water. About half the land under cultivation was devoted to corn, which provided a household staple and basis for whiskey [one of the few cash “crops”], as well as grain for horses and hogs. Secondary crops were oats, wheat, hay, sorghum, rye, potatoes, and buckwheat. An orchard of apple and other fruit trees was planted. Many farmers had their own bee hives, and every farm had a large vegetable garden—where green beans, pumpkins, melons, and squash were commonly grown. Contour farming was still unknown

here. Crops and gardens often stretched vertically up the side of a hill, hastening erosion, runoff, and siltation of mountain streams...

Usually 8 to 12 people—parents, children, and occasionally grandparents or other relatives—live on the farm...Homes were usually built in sheltered spots with good water readily accessible and within easy walking distance—but not sight—of neighbors. The traditional mountain homestead was a handhewn cabin, usually one room with a loft, front porch, and possibly a lean-to at the back...Eventually two- to four-room box houses and larger frame houses became more common (Mastran and Lowerre 1983: xx).

Gifford Pinchot, who started his forestry experience in 1892 on the forest lands of the George Vanderbilt (Biltmore) estate near Asheville, North Carolina, described the people that he came in contact with during management of the forest lands and purchase of additional lands in the state:

people knew nothing of game preserves and but little of property rights. On the contrary, they regarded this country as their country, their common. And that was not surprising, for they needed everything usable in it—pasture, fish, and game—to supplement the very meager living they were able to scratch from the soil of their little clearings, which often were no clearings at all, but mere “deadenings,” filled with the whitening skeletons of trees killed by girdling...

The lives of these mountain people were literally as cribbed, cabined, and confined as the country in which they had their being was spacious, rich, and beautiful. They dwelt and slept mostly in one-room cabins, and they lived very far from high. An open fireplace was cookstove and furnace, with a kettle hanging from a crane [a wrought iron, swinging arm device that held pots over the fire for cooking]. Glass was rare, and windows were closed by solid board shutters. Homespun [cloth] was the common wear. There was, of course, nothing approaching sanitation, shoes were little worn around home, and hookworm was everywhere. So were typhoid fever and tuberculosis. Queer diseases, it seemed, for mountain people who lived mostly in the open air. They had no newspapers and few books except the Bible...The distance and the difficulties of the country kept them strictly to themselves for generations. In ancestry they were purebred English...A bag was still a poke, a comical person was an antic, a sweetheart was a donna, and when a man gave notice of a meeting by word of mouth he norated. Their virtues and their vices, to, had the robustness of Shakespeare (Pinchot, 1947: 62-62).

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 (Mastran and Lowerre 1983). 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:

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...the state's fire record was the worst in the nation. Cattlemen, turpentiners, and farmers burned the woods regularly, and their fires frequently escaped onto adjacent land (Bethea 1983: 186-187).

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 left-over 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 across all 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. In 1892, Charles Sargent suggested that the federal government should set aside land in the southern Appalachians for “recreational needs (Steen 1976: 123).” Gifford Pinchot, in his autobiography *Breaking New Ground*, gives credit to the idea of forest reserves in the Appalachians to Joseph A. Holmes, state geologist of North Carolina. Pinchot described the eventful beginnings:

He [Holmes] and I were holding a session on things in general and Forestry in particular around the fire at the Brick House one night in the winter of '92 or '93, I'm not sure which. In the course of it he suggested that the Federal Government ought to buy a big tract of timberland in the Southern Appalachians and practice Forestry on it. It was a great plan, and neither he nor I ever let it drop. Nearly twenty years later the Weeks law was passed, Holmes's dream came true... (Pinchot 1947: 56).

The importance of forests in watershed protection, for example, was an early subject of concern among those who argued for forest reserves (Allison 1909, Dawson 1906, Defebaugh 1908, Depew 1902, Elliott 1902, *Forestry and Irrigation* 1905 and 1907, Mastran and Lowerre 1983, Pinchot 1906, Pritchard 1902, Roosevelt 1902, *Sandow's Magazine* 1903, Start 1909, Steen 1976, Will 1906a, 1906b, and 1908, and Wilson 1901). 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 Forest Management (Organic) Act of 1897.

It may have been the memory of the disastrous Johnstown (PA) flood in 1889 that helped dramatize the consequences of watershed deforestation to people in the East. 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.

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 (Steen 1976). 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 study mentioned above. The formal report was titled as *The Southern Appalachian Forests*, USGS Professional Paper No. 37 (1905). An earlier version was printed in the Secretary James Wilson's report in 1901. Roosevelt used portions of the study in the above cited speech to Congress in 1901 (Shands 1991 and Shands and Healy 1977). Wilson, in the letter of transmittal to President McKinley, wrote that:

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 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 (Steen 1976).

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 forester's view of the need for wildfire control of forested lands. The 1910 fires—called the "Big Blowup"—in Idaho and Montana burned over 3 million acres, another 2 million acres in other parts of the West, and killed over 80 firefighters. Combating these fires cost the Forest Service more than 1 million dollars. Spurred by the costly fires, Chief Henry S. Graves initiated a program of scientific research on fire control.

The Weeks Act of March 1, 1911 (Public Law 435—see attachment) was passed with the leadership of Massachusetts Representative John W. Weeks (USDA Forest Service 1961a). The act 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 land 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. It also provided cooperation with, and federal matching funds for, State forest fire protection agencies.

The act in section 4 specified that 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 (Steen 1976). 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

All of the states in the South (and East) 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, that 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, then only one new purchase unit in 1941. After the NFRC picked land within a purchase unit, the survey work being conducted by the Forest Service, then negotiations would commence between the owner and the federal government. Only after the owners and affected counties/parishes and the states agreed could the land pass into federal ownership then wait for designation as a national forest.

The NFRC was busiest for the two years after the Weeks Act was passed. Historian Harold Steen reported on the situation:

Commission responsibilities were so grave and growing pains so extreme that many questioned congressional wisdom for enacting the law at all. Sums of money for acquisition had to be dispensed within fiscal years, and procedures were ill-defined. Some landowners saw the confusion as an opportunity to ask exorbitant prices. Two years following enactment, however, William Hall, who had been assigned the job of overseeing Forest Service participation, could report an improved situation. Despite the problems of the first two years, over seven hundred thousand acres had been added to the national forest system in the East, costing less than five dollars per acre (Steen 1976: 128).

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 (Hawley 1925). 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 was not agreeing to a purchase price. In Alabama, the Tombigbee Purchase Unit, set up by the NFRC on January 21, 1935, was eventually abandoned. For a while, there were serious efforts to purchase some 121,600 acres of land from the Scotch Lumber Company, but company could not agree on a price. "When these negotiations failed the Forest Service stopped all work in the area...and as a result of this abandonment, the Forest Service lost one of the most attractive properties ever considered under the Weeks Law (Paxton 1950: 13)." A similar situation arose in North Carolina. As described by Percy Paxton, "in 1934 and 1935 a strong effort was made to purchase some 50,000 acres [of uncut forest] then owned by the Elk Creek Lumber Company, but the price offered [by the government] was inadequate and the land passed into other ownership and has since been severely cut over (Paxton 1950: 43)."

The people living 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 (Bass 1981, Mastran and Lowerre 1983). Opposition to the establishment of the national forests was sometimes outspoken, as Sharon Bass explained:

When Roosevelt added 600,000 acres to the Ozark National Forest, in February 1901, his action was less popularly received than the original proclamation [in 1908]. Homesteaders had become aggravated by forest officers who came to check the legitimacy of [homestead] claims, or by those who examined boundaries, or those who prosecuted timber trespassers, or by those who used bloodhounds to track down woodburners...Abolition of the forest became a part of every political candidate's platform, no matter what the public office (Bass 1981: 41).

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 in the South 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 once forested land recommended and purchased through the Commission recommendations topped out at 22 million acres. In 1976, the NFRC duties were transferred to the Secretary of Agriculture.

PROBLEMS AROSE AND WERE SETTLED QUICKLY

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, on the Alabama Purchase Unit that 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, that 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 have sold the mineral and sometimes timber rights on their property years ago. Current owners may not even know who owns 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 Chattahoochee 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 authorize acceptance subject to rights owned by others. Consequently, upon the advice of Attorney General Wickersham given 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. During the middle 1920s, there were many purchases of land for national forests in "the coastal plain in North and South Carolina, Florida, Mississippi and Louisiana and the mountains of Oklahoma. Southern Alabama and Texas followed in 1934 and 1935 (Paxton 1950: 3)." Fire and taxes were the primary components of the act—allowing the Federal, State, and private interests to work together. Many States formed fire protection associations 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. The new act also greatly expanded the Forest Service research capacity. Two centers for Forest Service research were established in the South: The Southern Forest Experiment Station—that was the first in the East in 1924—in Asheville, North Carolina, and the Southeastern Forest Experiment Station in Athens, Georgia (*American Forests* 1924, Josephson 1989, USDA Forest Service 1993, Verrall 1982). In Puerto Rico, the Tropical Forest Experiment Station (now the International Institute of Tropical Forestry) was established in 1939 to study issues in Puerto Rico and other forest areas in Latin America.

FIRE AS A MANAGEMENT PROBLEM IN THE SOUTH

The Forest Service had a national priority to stop fires. Lightning caused fires were common in the mountain West, but uncommon in the South. Fires started by people was, and remains, the single most important factor in protecting ecosystems from fire. This was especially the case in the South where settlers deliberately burned forest areas, both before and after logging/clearing, as well as to burn off brush and grasses from around the trees (USDA Forest Service 1929). This low level "firing" or "light burning" helped to maintain fire-dependent ecosystems, much as the American Indians had burned for thousands of years. For a while in the early literature on the subject, the light burning idea was derided as "Paiute

forestry” (Graves 1920a and 1920b, Greeley 1920, Rakestraw 1957). A pamphlet published by the U.S. Department of Agriculture, by prepared by the Forest Service, with the title “Woods Burning in the South” put the official position of the agency into the perspective of the times:

The South needs productive forest and range lands to maintain its prosperity but it can not have them while woods-burning continues. Yearly burnings in the South cover about 20,000,000 acres of forest and cut-over land, or about four-fifths of the total forest area burned in the United States...The woods burner, like the boll weevil, the malaria germ, and the cattle tick, drags down business and undermines the general welfare...The South...has the power to eliminate its forest fires; for they are man-caused and can be prevented by curbing the careless fire user and dealing firmly with the malicious fire setter...The irresponsible burner must ne banished from the woods, and the well-intentioned burner must squarely face the responsibility incurred when he starts fire on his own land...The woods burner, who is gnawing at the vitals of southern prosperity, is permitted largely to evade responsibility for his acts (USDA 1929: 2-3).

Any purposeful use of fire for protection of forests was not what the Forest Service wanted to hear, and certainly not what the agency wanted to condone. Fire researcher Steve Pyne described the fire situation in the South in his book *Fire in America* he noted that “there is in southern history a curious nonchalance about large fires. The most notorious illustration may be the 1898 fire in North Carolina, which...passed over 3 million cares and barely made it into the back page of the Raleigh newspapers (Pyne 1982: 155).” The author discussed the role or the useful aspects of fire in most parts of the South:

Early settlers on the coastal plains learned broadcast burning from local tribes. As they moved inland...pioneers carried their fire habits with them. The northern region woods might be cleared and settled without fire, but not the southern rough. Skill in broadcast fire was essential to southern frontier survival; nearly all dimensions of southern agrarian economy relied on it—for landclearing, for hunting and habitat maintenance, and for range improvement...Fire practices were incorporated into the fabric of frontier existence. What made the South special, however, was the confluence of economic, social, and historical events that worked to sustain this pattern...long after it disappeared elsewhere... (Pyne 1982: 146).

District Ranger Guy Cox was one of the first federal forest rangers in Arkansas. Cox, beginning in 1916, spent during his 35 years working on the Ouachita, Ozark and Kisatchie National Forests. Three years later he described the continuing issue of handling fires:

I did not have much trouble and they [the Forest Service officials] just left me to work out my own problems and I made a mess of the job before it was over. I had 13 miles of telephone lines, one [forest fire] guard the first fire season about three months; one tower, a few trails and the area, as I remember it, was about 110,000 acres. We had a lot of fires in 1921, 1922 and the spring of 1923...

We continued to have fires through 1924 and 1925. We always had to build a fire line along the State line to keep Oklahoma fires out...We would always have 300 or more hours per month. I have a copy of my diary for June 4 and 5, 1925. On the fourth, I worked 17 hours, next day I worked 20 hours...Fire was the big problem. A ranger spent approximately sixty percent of his time on fire problems and what time he had left for [timber and shake] sales and other activities...

I was transferred to the Sylamore Ranger District [on the Ozark-St. Francis in 1927] with headquarters...near Hedges, Arkansas. Here I ran into a job–fire problem. The people were setting fires for jobs and we had a tough group to content with...I organized a fire crew outside the forest with the help of our Road Crew. We did not have to hire any of these woods burners...There was a group of woods-burners who sent the Congressman a petition to get a large area...set aside for homestead purposes. Here again the better

people got in and helped us out. We used blood hounds and any other thing we could think of to stop these fires (Cox 1997: 3).

As noted by the ranger, there were the people who burned the forests as a way to get work to put the fires out and others who just enjoyed setting forest fires. Dogs were used extensively, with only limited success, to find the arsonists (Mastran and Lowerre 1983, Paddock 1940). However, fire, which is usually the bane of forest officials across the country, was an accepted form of management on the Florida National Forest in the early 1900s. Eldredge described the system of fire use:

On a day mutually chosen by the operator and the ranger the tract [of turpentine trees] is burnt over under the supervision of the district ranger, the operator furnishing a foreman and a crew of 5 to 10 men, who start at the outside boundaries of each section and burn towards the center...at all times keeping the fire under perfect control. The fire consumes the ground cover and loose litter and destroys most of the blackjack oak, leaving the forest floor clear and the stand free of underbrush, so that it is easy to get around from tree to tree...The main feature, however, in the burning and that one appeals most strongly, is the fact that absolute protection from fire results for at least one year after the burning. Protection [from wildfire]...is highly essential, for if an uncontrolled fire were to run through the timber...a great deal of damage would result to the [naval stores/turpentine] timber (Eldredge 1914: 315).

Yet by 1929, the agency position on fire use in the turpentine areas was almost total elimination. The Forest Service began a public education program of fire prevention in the 1920s (USDA Forest Service 1929). The program was aimed at members of the community, a number of whom set fires regularly in the woods (Sarvis 1993b). On the Ozark-St. Francis National Forest in Arkansas, the fire prevention program began in July 1925 with forest ranger James Maurice Wait who traveled throughout the state conducting programs with fire prevention talks, glass (magic) lantern slides, and moving pictures. The audiences ranged from a dozen or more to more than 500 people at a showing. "The movies which Wait took to the Ozarks were, in many instances, the first moving pictures seen by the mountain people (Bass 1981: 59)." He also photographed the forest areas, small communities and farms, as well as documented many normal activities of the residents. These images, in part converted to lantern slides, were shown in the fire prevention program, making the talk even more convincing. Wait took the fire prevention job seriously.

Wait travelled in a specially rigged van. In the first year on the road, the rig proved too heavy for the truck frame. Maximum speed on a good road—and in Arkansas there were not many—was 15 miles an hour. He camped along the way, sometimes taking his wife Mollie and foster child with him. On some days in the field Wait spent many hours slogging through mud and trying to get the van loose from the mire. He crossed creeks even though the water was high enough to run through the cab. Occasionally he had to find mules to tow him across streams...During his first full year on the road, Wait spent 288 days in the field. He travelled more than 5,000 miles, spoke at 216 engagements, and talked to more than 42,000 persons (Bass 1981: 60-61).

In the South, many causes of human started fires were studied by Forest Service researchers. The agency conducted a series of studies by psychologists and sociologists in the 1930s to study the problem (Pyne 1982). In part this was due to many reports of unemployed people intentionally setting fires so that they could in turn be hired by the Forest Service or states to put out the fires. One study, by John Shea (1939 and 1940) noted that one respondent said " Woods burnin' 's right. We allsu done it. Our pappies burned th' woods an' their pappies afore 'em. It war right fer them an' it's right fer us (as quoted in Pyne 1982: 143)." The study conducted by Shea consisted of hundreds of interviews with people in the South. One such interview was told by Steve Pyne:

“Fires do a heap of good,” one insisted. “Kill th’ bool weevil, snakes, ticks, an’ bean beetles. Greens up the grass. Keeps us healthy by killin’ fever germs.” Asked whether forests might not be more productive without fire, the informant replied: “Might hol’ [hold] the floods a mite and make a few more squirrels, but it ud [would] make living harder and we’d see more rattlesnakes” (Pyne 1982: 143).

At the end of the decade, the FS entered into a formal contractual agreement with the American Academy for the Advancement of Science (AAAS) for further social and behavioral research on people caused fires. Ironically, what was conceived of as bad management—that is light or prescribed burning—in the South has in recent years been held up as a model of efficiency and forward thinking (Twomey 1995). Forest Service and state fire fighters and managers are now often called to instruct managers from other Forest Service and states in the proper management of forest lands (Pyne 1982).

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. The Caribbean National Forest actually was the first established in the late 1800s by the King of Spain with Puerto Rico was still part of the Spanish empire. 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. Fire in the South was a major headache for the Forest Service and the states, but gradually with the implementation of various federal and state forest fire laws, the job has become easier. Yet, the old light burning/prescribed fire practices by the American Indians and continued use by settlers/farmers, miners, loggers, and arsonists are now in the forefront of “best management practices.”

NATIONAL FORESTS BY STATE

Each national forest in the South, and across the country, has a unique history. There is not enough space to incorporate the sometimes lengthy beginnings for each. Below is a brief sampling of the history of each state in the South with their national forests, how and when they were designated and the current acres of national forest land in each state. The current acres will shift a little each year, usually in the upward direction as small amounts of land are purchased, gifted, traded, exchanged, or transferred. Attached to this paper is a list of every national forest established in the South by year.

National Forests in Alabama

During the 1880s, forests covered approximately 80 percent of Alabama. Long-leaf pine was the principle species that had huge economic value. Naval stores—mostly turpentine and rosin—were the first major forest industry in the state. The naval stores industry peaked in the 1870s, to be replaced by harvesting of the pine. Authors Littleton and Flynt noted that “

The farmers, who comprised a large portion of the population, viewed forests as an obstacle to be overcome while clearing fields and pastureland...Following the Civil War, commercial interests in the Alabama forests increased....During the 1880s, the lumber industry was entrenched in Alabama. The harvesting technique consisted of stripping the valuable timber from the land and then moving the entire operation to the next site. In certain cases, lumber companies provided housing for their employees in the form of [modified] boxcars so that moving was made easier. The clearcutting technique left the land ravaged and open to the destructive natural forces of water and wind (Littleton and Flynt 1983: 8-9).

The first national forest in Alabama was, appropriately, the Alabama National Forest that was established on January 15, 1918. Two additional national forests were established in 1936—the Talladega and Conecuh (USDA Forest Service 1952). The Alabama forest was renamed as the Black Warrior in 1936, then renamed again in 1942 as the William B. Bankhead National Forest (Elliott 1943). Percy Paxton (1950) noted that there were a number of major land purchases in the state: Horshoe Lumber Co. (24,885 acres), Alabama Mineral Co. (82,665 acres), Purt Estate (39,283 acres), J.M. Stevenson (15,750 acres), E.E. Jackson Vo. (16,287 acres), Ellison (11,152 acres), Kaul Lumber Co. (46,895 acres), and the Busclow Lumber Co. (56,613 acres). The last national forest created in Alabama was the Tuskegee in 1959 from lands that were submarginal farm lands acquired under the auspices of the Bankhead-Jones Act (Warren and Zabawa 1998). In 2000, the acres of national forest land in Alabama was 665,941 acres, with an additional 40 acres in the Pea River Land Utilization Project.

National Forests in Arkansas

Most of the state of Arkansas was originally in a forest condition. The first sawmill was reported in the state to have been built in 1826 at Helena. “Ozark farmers cleared tracts of land for agriculture and supplemented meager livings by cutting and selling white oak for barrel staves and red oak for wagon stock. The rich pineries of the southern part of the state were not extensively exploited until the 1870s and 1880... (Curry 1983: 29).” By the late 1800s, many of the pine lands in the state were brought under the ownership of large corporations. Much of the state had been cutover by the 1920s, with barely 2 million acres remaining of the 32 million forest acres.

Federal national forests began with the establishment of the Arkansas (now Ouachita) National Forest in 1907 in the western part of the state (Allen 1929, Bronson 1910, Strausberg and Hough 1997). One year later, the Ozark (now Ozark-St. Francis) National Forest was established. Much later the St. Francis was created in 1960 from reclaimed farmland (Bass 1981). In 2000, the acres of national forest land in Arkansas was 2,581,916 acres, with an additional 1,442 acres in the Ouachita Purchase Unit and 7,115 acres in the Ozark Purchase Unit.

National Forests in Florida

Naval stores, based on the use of pine woods, mostly in the South, for their resins. It is one of the oldest industries in North America, as the resins were used by the Spanish and English settlers and navies hundreds of years ago before the beginnings of the United States. Naval stores, especially tar and pitch derived from the resins, was used extensively for the wooden ships of the era. Naval stores also involved pine trees for masts and spars. In the South, the industry depended upon the longleaf pine for the resins. The pines were located in a wide swath, some 100-150 miles wide, stretching from Virginia to Texas. Early efforts to capitalize on the trade were centered in the Carolinas during the colonial period, Georgia, Florida, and Alabama after the Civil War. Florida became the leading state in the production of naval stores by 1909 (Perry 1983). Forest-covered land in Florida at one time covered about 80 percent of the land in the state.

The Ocala National Forest was established from remaining public domain land on November 24, 1908, by presidential proclamation (35 Stat. 2206). It was combined with the Choctawhatchee National Forest and renamed as the Florida National Forest on April 11, 1911 (37 Stat. 1678). The Florida National Forest was used primarily for naval stores production. When the forest was established in the counties of Walton and Santa Rosa, it was land in the shape of a large rectangle some 60 miles long and 20 miles wide. The trees on the Florida National Forest were mostly long-leaf pines, which are highly valued for turpentine and other naval stores (Wyman 1927). Inman Eldredge described the forest and how the main resource (naval stores) was used:

The Forest is situated in the midst of the naval-stores belt, within 25 miles by water of the second largest naval-stores export port in the world...As is well known, particularly and ruefully so to turpentine men, the supply of unworked turpentine timber, or round timber, as it is known, is almost exhausted in the present naval-stores belt. Where a few years ago the supply of round timber seemed almost inexhaustible, now large tracts of uncupped timber are so scarce throughout the South Atlantic and Gulf States that their location is as well known as are the location of virgin white-pine forests in New England...

In this discussion the Ocala district of the Forest [currently the Ocala National Forest] which is located in east Florida is not considered, since it has practically no value as a naval-stores proposition. The western division of the Forest is divided into four ranger districts, each in charge of a district ranger, with headquarters located in regard of the convenience of looking after turpentine permits....The supervisory force consists of a supervisor and a forest assistant, with one clerk in the office. The Forest headquarters are located for eight months out of the year in the heart of the Forest, and is connected by telephone with not only the ranger stations, but with all of the turpentine operators and other users (Eldredge 1914: 311-312).

The Florida National Forest was renamed in 1927 as the Choctawhatchee National Forest and the eastern portion of the Florida was made into the Ocala National Forest (*American Forests and Forest Life* 1930b). The Choctawhatchee was transferred to the War Department in 1940 to become a military base. A small part of the original forest was reactivated in 1980 when jurisdiction was returned to the Forest Service. The Osceola National Forest was established in 1931, while the new Apalachicola was established in 1936. Both of these national forests were Weeks Act purchased forests. Percy Paxton (1950) noted that the major land purchases came from the Columbia Farms Corp. (93,800 acres), Ocean Pond Land Co. (29,410 acres), and E.A. McColskey & J.C. Marsh (145,783 acres). In 2000, the acres of national forest land in Florida was 1,108,534 acres, with 223 acres in the Nekoosa Purchase Unit, 40,062 acres in the Pinhook Purchase Unit, and 4,053 acres in the Tates Hell-New River Purchase Unit.

National Forests in Georgia

Forests covered most of the state of Georgia except for the Okefenokee swamp area. Yet even in many of the swampy areas the huge cypress trees grew in great abundance. In the southern part of the state, there were extensive stands of long-leaf and slash pine forests. Fire was used by Indians and settlers to maintain these pine forests. Sawmills began operating in the middle 1700s and lumber production increased through the turn of the 20th century, then fell dramatically. From the 1790s to the 1840s, expanding needs for land dedicated to cotton production pushed the forests back to the mountain areas. What remained of the forests were greatly sought after for naval stores production.

Small live oak reservations were established in 1799 on Grover's Island and the following year on Blackbeard's Island. These were the first federal timber reservations in the state. Land purchases under the Weeks Act of 1911 led to the establishment of the Cherokee and Nantahala (now the Chattahoochee in Georgia) National Forests in 1920. Percy Paxton (1950) noted that there were a number of major land purchases in the state: Oaky Mountain Lumber Co. (19,705 acres), Morse Brothers and Blood Mountain Lumber Co. (172,338 acres), and the Conasauga River Lumber Co. (355,335 acres). Then in 1959, the Oconee National Forest was established from abandoned farmland acquired under the Bankhead-Jones Act. The Oconee is managed with the Chattahoochee National Forest today. In 2000, the acres of national forest land in Florida was 861,897 acres, along with 195 acres in the Chattahoochee, 250 acres in the Ocmulgee, and 46 acres in the Yonah Purchase Units.

National Forests in Kentucky

Forests were believed to have covered close to 96 percent of the state of Kentucky. Settlers, for farming and grazing needs, cleared much of the central portion of the state by the 1880s. Trees were used for a variety of products, including forts, cabin, log houses, fence posts and rails, flatboats, steamboats, barrels for whiskey, farm implements, wagons and buggies, furniture, and cabinets. Lumbering operations, which began in earnest after the Civil War, peaked in the first decade of the 20th century (Clark 1983).

Weeks Act purchases in Kentucky resulted in the establishment of the Cumberland (now Daniel Boone) National Forest was created in 1937 (Collins 1975). A small part (961 acres) of the George Washington-Jefferson National Forest is located in the state. In 2000, the acres of national forest land in Kentucky was 552,884 acres, with an additional 145,198 acres in the Redbird Purchase Unit and 106,458 acres in the Land Between the Lakes. The latter unit was transferred to the Forest Service from the Tennessee Valley Authority.

National Forests in Louisiana

Somewhere around 85 percent of Louisiana's land area was covered by forests and most of that in various species of pine. Cypress was logged by the French in the late 1700s, while the logging industry was active at a small scale through the 1870s then the large timber companies came into the state. They were able to cutover much of the forest lands by 1930. "Logging left vast areas of the state as blackened stump-wastes. Especially in the longleaf pine section of western Louisiana, residents customarily burned the woods to improve pasturage, preventing timber regrowth and diminishing wildlife (Burns 1983: 363)."

The federal government became actively involved in Louisiana's forest lands after passage of the Weeks Act. "After 1928 when, due largely to the urging of Caroline Dorman, it [the federal government] established three purchase units in the pinelands of central Louisiana under the Clarke-McNary Act. With additional lands, these units became the basis of the Kisatchie National Forest established in 1930 (Burns 1983: 364)." The Kisatchie remains the only national forest in the state (Burns and Couch 1994, Caldwell 1991, Crittenden 1980). In 2000, the acres of national forest land in Louisiana was 603,276 acres with an additional 980 acres in the Bayou Beouf Purchase Unit.

National Forests in Mississippi

Originally, the entire state of Mississippi was covered with forests. Several species of pines grow in the state, as well as a hardwoods in the delta and along portions of the gulf plain. Naval stores and ship timber were important early industries. After the Civil War, industrial timber companies moved into the state, buying up land and logging everything standing. They “left the state with millions of acres of cutover lands that most lumbermen considered either worthless or suitable primarily for agriculture (Fickle 1983: 436).”

The State of Mississippi passed the Mississippi Enabling Act on March 2, 1926, that authorized the federal government to purchase land in the state for protection. National forests got their start with four purchase units in 1936—the Bienville, Holly Springs, De Soto, and Homochitto National Forests (Albert 1949, USDA Forest Service 1973). Percy Paxton (1950) noted that there were a number of major land purchases in the state: Homochitto Lumber Co. (63,000 acres), Newman Lumber Co. (95,000 acres), Dantzier Lumber Co. (90,500 acres), Kalmia Realty and Insurance Co. (20,217 acres), Robinson Land and Lumber Co. (22,345 acres), John W. Blodgett, et al. (44,355 acres), Bentley and Pope (11,431 acres), Adams-Edger Lumber Co. (51,568 acres), Bienville Lumber Co. (25,954 acres), Eastmen-Gardiner & Co. (19,111 acres), and the Marathon Lumber Co. (16,091 acres). Two more national forests were established in 1959 (Tombigbee) and 1961 (Delta). The Tombigbee National Forest was land from the Bankhead-Jones Act, while the Delta National Forest derived from purchases in the Delta Purchase Unit. In 2000, the acres of national forest land in Mississippi was 1,168,877 acres, with an additional 240 acres in the De Soto and 67 acres in the Homochitto Purchase Units.

National Forests in North Carolina

About 65 percent of the State of North Carolina was covered by trees—pines along the coastal plain and hardwoods in the inland piedmont areas, especially American chestnut with some mixed pines. Until the 1870s, the state was the world’s leading producer of naval stores. Because of this significant industry, the state is nicknamed the “Tar Heel State.” The coastal plain area was the first to be heavily cutover, then after the Civil War, large capital intensive companies exploited the remaining timber. There were growing tannery, pulpwood, and furniture industries developing by the late 1890s and early 1900s. “By the 1920s, such pressure had reduced the ‘mightie great woods’ mostly to cull stands of second- and third-growth timber (Jolley 1983: 494).”

National forests in the state came early under the Weeks Act. The first forest established was the Pisgah National Forest in 1916 after Edith Vanderbilt, George Vanderbilt’s widow, sold the 86,700-acre Pisgah or Biltmore Forest to the federal government in 1914. The area that Gifford Pinchot managed on the Vanderbilt Estate is now the Pisgah Ranger District (Laxton 1931). Three additional national forests were established in North Carolina—the Nantahala in 1920, Croatan in 1936, and the Uwharrie in 1961. Percy Paxton (1950) noted that there were a number of major land purchases in the state: Macon Lumber Co. (21,000 acres), Macon County & Land Co. (17,000 acres), Caldwell Land & Timber Co. (38,930 acres), and the Interstate Cooperation Co. (50,668 acres). A small piece (327 acres) of the Cherokee National Forest is also located in the state. All of these national forests were purchased then transferred to the Forest Service for management. Also on the Pisgah National Forest is the unique “Cradle of Forestry” where Carl A. Schenck established the first forestry school in the United States in 1896-97. Called the Biltmore Forest School, it served for a decade as the only forestry school in the U.S. (Burdette 1998, Hall 1964, Jolley 1970, Sargent 1894 and 1895). In 2000, the acres of national forest land in North Carolina was 1,246,559 acres, with an additional 737 acres in the Nantahala Purchase Unit.

National Forests in Oklahoma

The State of Oklahoma can be separated into three distinct districts—the eastern portion has a mix of shortleaf and loblolly pines and oak and hickory hardwoods, the central area has oak and oak-hickory savannahs, while the western third is mostly grasslands. After the Civil War, extensive logging of the walnut trees occurred on the Indians lands in the eastern part of the state. The peak of logging operations was in the 1910s. “By the 1920s, intensive cutting and unchecked fires had depleted the state’s best commercial forests... (Campbell 1983: 506).”

National forest land in the state is restricted to an area along the Arkansas border when in 1931 a strip of Oklahoma forest land was added to the Ouachita National Forest. In 2000, the acres of national forest land in Oklahoma was 351,324 acres, with an additional 30,710 acres in the Black Kettle and 15,576 acres in the Rita Blanca National Grasslands.

National Forests in Puerto Rico

Fifteen years before President Benjamin Harrison proclaimed the first Federal forest reserve in the United States--the Yellowstone Forest Reserve in 1891--the Spanish Crown had established reserves in Puerto Rico--then part of the Spanish Empire. In the 19th century, increased population accelerated the rapid and widespread destruction in Puerto Rico’s forest resources as trees were cleared for agricultural land--the economic base of the Nation. In 1816, the colonial wars of independence and illegal timber trade led the island’s Governor to restrict the sale of wood considered important for naval use. If military concerns led to the first consideration of forest depletion, it was the impact of farming that really led to conservation measures. In 1824, alarmed by the extent of deforestation resulting from government-sponsored farming caused, Governor Miguel De La Torre issued Puerto Rico’s first conservation law--a decree to stem harm to watersheds by planting trees.

Puerto Rico remained under the dominion of Spain, which drafted the first comprehensive forest laws (1839) and set up forestry commissions that led to the first island-wide forest inventory in 1843. These inventories were conducted by *ingenieros de montes* (forest engineers) for the *cuero de montes* (forest corps), a department directed by the minister of public works and staffed by graduates of the Spanish forestry school.

The Puerto Rican government’s protection of the forest resources eroded in the next decades as Spain’s ability to fund distant programs faded along with its economic status. Yet, in 1876 King Alfonso XII strove to ensure continued conservation of soils and water quality and flows in Puerto Rico by creating forest reserves. Because the forests were sources of roofing material, fuelwood, and sawtimber for people, extractive regulations needed to be enforced by the *servicio de monteros* (forest service).

As part of the settlement of the Spanish-American War of 1898, control of Puerto Rico passed to the United States. The Luquillo Forest Reserve was declared in 1903 and it became a national forest in 1907. (It has the distinction of being the only early forest reserve which was not established under authority of the 1891 Act. Instead, the reserve was established under a 1902 act of Congress that gave the president one year to reserve "Crown lands" ceded to the United States by Spain in the Treaty of 1898.) In 1935, additional land was purchased and the Luquillo National Forest became the Caribbean National Forest. The Caribbean National Forest is the only tropical ecosystem in the national forest system and serves as an international management model for tropical forests. In 2000, the acres of national forest land in Puerto Rico was 27,831 acres.

National Forests in South Carolina

Approximately 87 percent of the State of South Carolina was originally covered by forests. The state is geographically divided into four regions—the coastal plain, sandhills, piedmont, and mountains. The coastal plain typically has stands of several pine species and oaks, but the floodplain areas contain a wider diversity of hardwood species. The longleaf pine and blackjack oak fill the sandhills, while the piedmont areas have three species of pine, oak, hickory and poplar. The mountain areas of the state are where oak, hickory and pines grow. Naval stores was the major state forest industry from the colonial period to late in the 19th century. The lumber industry peaked production in the 1920s and pulpwood production became a major industry by the 1930s (Burnett 1983).

Two national forests were established in 1936 in South Carolina: The Francis Marion and the Sumter. These were land purchases authorized under the Weeks and Clarke-McNary Acts. In 2000, the acres of national forest land in South Carolina was 616,710 acres.

National Forests in Tennessee

Well over 90 percent of the State of Tennessee was originally covered with timber. From the late 1760s, when settlers began arriving and cutting the forests for farms and pastures, about one-quarter of the state fell under the axe. Peak lumber production was in 1909. By the 1930s, the forest area in the state had been reduced by half. As early as the 1870s there was concern in the state about abandoned cutover areas (Schnell 1983).

Only one national forest is located in the state—the Cherokee. It was established in 1920 in an area along the border with North Carolina. In 2000, the acres of national forest land in Tennessee was 635,637 acres, with an additional 325 acres in the Cherokee Purchase Unit and 63,852 acres in the Land Between the Lakes.

National Forests in Texas

About the only area in Texas that has large forests is in the eastern portion of the state. Here the commercial species are four types of pines, and a variety of hardwood trees. In central Texas, there are areas in watersheds where cedar trees grow, while in southeastern Texas there are stands of baldcypress. After the Civil War, large commercial lumber operations began in east Texas. Huge amounts of timber were cut in the state, with over 2 billion board feet a year reported before 1917 (Maxwell 1983).

Rather late in the process for acquiring national forests, Texas was approved by the NFRC to have four purchase units on March 26, 1934. Examination of potential forest lands began immediately, and purchases were approved and signed by 1936. "Eighty-five percent of all the land then or subsequently acquired in the Texas National Forests came from...eight ownerships (Paxton 1950: 56)." These owners were all timber companies – Kirby Lumber Company selling 57,025 acres; Long Bell Lumber Company with 73,748 acres; Houston County Timber Company with 94,014 acres; Trinity County Lumber Company with 61,410 acres; Pickering Lumber Company with 86,076 acres; Temple Lumber Company with 80,774 acres; Delta Land & Timber Company with 82,774 acres; and Gibbs Brothers with 23,845 acres (Paxton 1950). The four national forests, all established in 1936, resulted from these purchases, and additional forest land, were the Angelina, Davy Crockett, Sabine, and Sam Houston National Forests (Walker 1982a and 1982b). In 2000, the acres of national forest land in Texas was 637,484 acres, with 576 acres in the Black Kettle, 17,873 acres in the Caddo, 20,309 acres in the Lyndon B. Johnson, 1,449 acres in the McClellan, and 77,413 in the Rita Blanca National Grasslands.

National Forests in Virginia

Approximately 97 percent of the State of Virginia was once thought to have forests. Pine and mixed hardwoods predominated the tree species. The state is geographically divided into three regions—the coastal plain, piedmont, and mountains. Early uses of the forests were for naval stores. Millions of acres were cut by early settlers to clear land for farms and pastures. Virginia reached peak lumber production in 1909. Pulpwood production started in 1914. (Dean 1983).

Land acquired under the Weeks Act led to the establishment of the Shenandoah National Forest in 1918 and the Unaka National Forest in 1920 (Sarvis 1993a). The two forests, which are managed as one unit, are known today as the George Washington-Jefferson National Forests. In 2000, the acres of national forest land in Virginia was 1,661,073 acres, along with 27 acres in the Kimberling Creek Purchase Unit.

National Forests in West Virginia

Originally, almost the entire state of West Virginia was thought to have been covered with forests. Hardwood and pine species are found along the Allegheny Mountains. After the Civil War, large lumber industries came into the state, buying large amounts of timber land, then clearcutting the mountains. "Before World War I, West Virginia forests were exploited mercilessly. Sawlogs and crossties were rafted down numerous streams...the coal mining industry...[began] consuming timber [in great quantities]... (Rice 1983: 687)." Lumber production peaked in 1909.

Because of major floods and soil erosion along the Monongahela River caused by the massive clearcut areas in the mountains, the West Virginia legislature authorized the federal government to purchase lands in the state for conservation purposes. This predated the Weeks Act by two years. The Monongahela National Forest was established in 1920 under provisions of the Weeks Act (Holcomb 1954, McKim 1970, Viquesney 1912). In 2000, the acres of national forest land in West Virginia was 1,021,270 acres, with an additional 6,169 acres in the Dolly Sods and 5,986 acres in Monongahela Purchase Units.

WEEKS ACT OF 1911

Public Law 435

H.R. 11798

AN ACT To enable any State to cooperate with any other State or States, or with the United States, for the protection of the watersheds of navigable streams, and to appoint a commission for the acquisition of lands for the purpose of conserving the navigability of navigable rivers.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the consent of the Congress of the United States is hereby given to each of the several States of the Union to enter into any agreement or compact, not in conflict with any law of the United States, with any other State or States for the purpose of conserving the forests and the water supply of the States entering into such agreement or compact.

SEC. 2. That the sum of two hundred thousand dollars is hereby appropriated and made available until expended, out of any moneys in the National Treasury not otherwise appropriated, to enable the Secretary of Agriculture to cooperate with any State or group of States, when requested to do so, in the protection from fire of the forested watersheds of navigable streams; and the Secretary of Agriculture is hereby authorized, and on such conditions as he deems wise, to stipulate and agree with any State or group of States to cooperate in the organization and maintenance of a system of fire protection on any private of state forest lands within such State or States and situated upon the watershed of a navigable river: *Provided*, That no such stipulation or agreement shall be made with any State which has not provided by law for a system of forest-fire protection: *Provided further*, That in no case shall the amount expended in any State exceed in any fiscal year the amount appropriated by that State for the same purpose during the same fiscal year.

SEC. 3. That there is hereby appointed, for the fiscal year ending June thirtieth, nineteen hundred and ten, the sum of one million dollars, and for each fiscal year thereafter a sum not to exceed two million dollars for the use of the examination, survey, and acquirement of lands located on the headwaters of navigable streams or those which are being or which may be developed for navigable purposes: *Provided*, That the provisions of this section shall expire by limitation on the thirtieth day of June, nineteen hundred and fifteen.

SEC. 4. That a commission, to be known as the National Forest Reservation Commission, consisting of the Secretary of War, the Secretary of the Interior, and Secretary of Agriculture, and two members of the Senate, to be selected by the President of the Senate, and two members of the House of Representatives, to be selected by the Speaker, is hereby created and authorized to consider and pass upon such lands as may be recommended for purchase as provided in section six of this Act, and to fix the price or prices at which such lands may be purchased, and no purchase shall be made of any lands until such lands have been duly approved for purchase by said commission; *Provided*, That the members of the commission herein created shall serve as such only during their incumbency in their respective official positions, and any vacancy on the commission shall be filled in the manner as the original appointment.

SEC. 5. That the commission hereby appointed shall, through its president, annually report to Congress, not later than the first Monday in December, the operations and expenditures of the commission, in detail, during the preceding fiscal year.

SEC. 6. That the Secretary of Agriculture is hereby authorized and directed to examine, locate, and recommend for purchase such lands as in his judgment may be necessary to the regulation of the flow of navigable streams, and to report to the National Forest Reservation Commission the results of such examination: *Provided*, That before any lands are purchased by the National Forest Reservation Commission said lands shall be examined by the Geological Survey and a report made to the Secretary of Agriculture, showing that the control of such lands will promote or protect the navigation of streams on whose watersheds they lie.

SEC. 7. That the Secretary of Agriculture is hereby authorized to purchase, in the name of the United States, such lands as have been approved for purchase by the National Forest Reservation Commission at the price or prices fixed by said commission: *Provided*, That no deed or other instrument of conveyance shall be accepted or approved by the Secretary of Agriculture under this Act until the

legislature of the State in which the land lies shall have consented to the acquisition of such land by the United States for the purpose of preserving the navigable streams.

SEC. 8. That the Secretary of Agriculture may do all things necessary to secure the safe title in the United States to the lands to be acquired under this Act, but no payment shall be made for any such lands until the title shall be satisfactory to the Attorney-General and shall be vested in the United States.

SEC. 9. That such acquisitions may in any case be conditioned upon the exception and reservation to the owner from whom title passes to the United States of the minerals and of the merchantable timber, or either or any part of them, within or upon such lands at the date of the conveyance, but in every case such exception and reservation and the time within such timber shall be removed and the rules and regulations under which the cutting and removal of such timber and the mining and removal of such minerals shall be done shall be expressed in the written instrument of conveyance, and thereafter the mining, cutting, and removal of the minerals and timber so excepted and reserved shall be done only under and in obedience to the rules and regulations so expressed.

SEC. 10. That inasmuch as small areas of land chiefly valuable for agriculture may of necessity or by inadvertence be included in tracts acquired under this Act, the Secretary of Agriculture may, in his discretion, and is hereby authorized, upon application or otherwise, to examine and ascertain the location and extent of such areas as in his opinion may be occupied for agricultural purposes without injury to the forests or to stream flow and which are not needed for public purposes, and may list and describe the same by metes and bounds, or otherwise, and offer them for sale as homesteads at their true value, to be fixed by him, to actual settlers, in tracts not exceeding eighty acres in area, under such joint rules and regulations as the Secretary of Agriculture and the Secretary of the Interior may prescribe; and in case of such sale the jurisdiction over the lands sold shall, ipso facto, revert to the State in which the lands sold lie. And no right, title, interest, or claim in or to any lands acquired under this Act, or the waters thereon, or the products, resources, or use thereof after such lands shall have been so acquired, shall be initiated or perfected, except as in this section provided.

SEC. 11. That, subject to the provisions of the last preceding section, the lands acquired under this Act shall be permanently reserved, held, and administered as national forest lands under the provisions of section twenty-four of the Act of March third, eighteen hundred and ninety-one (volume twenty-six, Statutes at Large, page eleven hundred and three), and Acts supplemental to and amendatory thereof. 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.

SEC. 12. That the jurisdiction, both civil and criminal, over persons upon the lands acquired under this act shall not be affected or changed by their permanent reservation and administration as national forest lands, except so far as the punishment of offenses against the United States is concerned, the intent and meaning of this section being that the State wherein such land is situated shall not, by reason of such reservation and administration, lose its jurisdiction nor the inhabitants thereof their rights and privileges as citizens or be absolved from their duties as citizens of the State.

SEC. 13. That five per centum of all moneys received during any fiscal year from each national forest into which the lands acquired under this act may from time to time be divided shall be paid, at the end of such year, by the Secretary of the Treasury to the State in which such national forest is situated, to be expended as the state legislature may prescribe for the benefit of the public schools and public roads of the county or counties in which such national forest is situated: *Provided*, That when any national forest is in more than one State of county the distributive share to each from the proceeds of such forest shall be proportional to its areas therein: *Provided further*, That there shall not be paid to any State for any county an amount equal to more than forty per centum of the total income of such county from all other sources.

Sec. 14. That a sum sufficient to pay the necessary expenses of the commission and its members, not to exceed an annual expenditure of twenty-five thousand dollars, is hereby appropriated out of any money in the Treasury not otherwise appropriated. Said appropriation shall be immediately available, and shall be paid out on the audit and order of the president of the said commission, which audit and order shall be conclusive and binding upon all departments as to the correctness of the accounts of said commission.

Approved, March 1, 1911.

ESTABLISHMENT OF NATIONAL FORESTS IN THE SOUTH

1901	OK	Wichita (abolished in 1936)
1903	PR	Luquillo - now Caribbean NF
1907	AR/OK	Arkansas - now Ouachita NF
1908	AR	Ozark
	FL	Ocala
	FL	Choctawhatchee
1911	FL	Florida (combined the Ocala and Choctawhatchee NFs)
1916	NC	Pisgah
1918	VA/WV	Shenandoah - now George Washington NF
	VA	Natural Bridge - now George Washington NF
	AL	Alabama - now William B. Bankhead NF
1920	NC	Boone - now the Pisgah NF
	GA/NC/SC	Nantahala
	TN	Cherokee
	NC/TN/VA	Unaka - now Cherokee, Pisgah, and Jefferson NFs
1924	AL	McClellan (part of the Camp McClellan Military Reservation) - rescinded in 1928
	SC	Jackson (part of the Ft. Jackson Military Reservation) - rescinded in 1928
	GA	Benning (part of the Ft. Benning Military Reservation) - rescinded in 1927
1925	VA	Lee (part of the Ft. Lee Military Reservation) - rescinded in 1928
	VA	Eustis (part of the Ft. Eustis Military Reservation) - rescinded in 1927
	VA	Humphreys (part of the Humphreys Military Reservation) - rescinded in 1928
1927	FL	Ocala (reestablished)
	FL	Choctawhatchee (reestablished) - transferred to War Department in 1940
1925	KY	Knox (part of the Ft. Knox Military Reservation) - rescinded in 1928
1928	WV	Monongahela
1930	LA	Kisatchie Purchase Unit - established in 1936
1931	FL	Osceola
1936	FL	Apalachicola
	MS	Bienville
	MS	Holly Springs
	MS	De Soto
	GA	Chattahoochee
	SC	Francis Marion
	SC	Sumter
	AL	Conecuh
	AL	Talladega
	MS	Homochitto
	NC	Croatan
	TX	Angelina
	TX	Davy Crockett
	TX	Sabine
	TX	Sam Houston
1937	KY	Cumberland - now the Daniel Boone NF
1959	GA	Oconee (formerly Bankhead-Jones land)
	MS	Tombigbee (formerly Bankhead-Jones land)
	AL	Tuskegee (formerly Bankhead-Jones land)
1960	AR	St. Francis (formerly Bankhead-Jones land)
1961	MS	Delta (formerly part of Delta Purchase Unit)
	NC	Uwharrie (formerly part of Uwharrie Purchase Unit)

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**PRIVATE PROPERTY TO PUBLIC PROPERTY:
THE BEGINNINGS OF THE NATIONAL FORESTS IN THE SOUTH**

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ABSTRACT

The national forest system began in the spring of 1891 with passage of a bill designed to eliminate problems with previous homestead laws. Attached to the bill was a one sentence amendment 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. As the forest reserves grew in leaps and bounds, there was no federal protection for timber areas in the East. In addition, 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 cut-over 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 the situation. Called the Weeks Act, it allowed the federal government to purchase lands that once had trees/forests. Within a few years, many acres of land were purchased from willing owners and willing counties and states. These lands, after many purchases of often very small pieces of land from hardscrabble farmers and larger units mainly from remaining timber company lands, were converted to national forests by Congress—the first was the Pisgah National Forest in 1916 in the state of North Carolina. Today, there are approximately 25 million acres of national forests in the East (13 million in the South). The unique challenges and obstacles that had to be overcome to establish these national forests in the South, as well as the management problems (including that of the “light burning” controversy) after the national forests were established, are the substance of this paper.