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## Early Illinois Forest Resources



The first settlers arriving in Illinois found a land of both forests and prairie. Forests accounted for approximately 39 percent of the state and dominated the southern third. The uplands in the southern Ozark region, extending over the bluffs of the Mississippi, Ohio, and Wabash Rivers, were quite diverse with a mixture of hardwood species. While the prairie accounted for the majority of land area in the remainder of the state, forests were present along the northern and western parts of the state, as well as along stream valleys throughout the prairie region. The upland forests in these areas were predominantly composed of oaks and hickories. The bottomlands and the streamside forests along major and secondary streams were characterized by a diverse mixture of hardwood species. There was significant regional variation in the forests of Illinois, with a general increase in diversity for both upland and bottomland forests in the southern portion of the state.

Anderson (1970) used the original land survey records of Illinois to create a detailed map showing the original land cover in the early 1800s, when the state was settled. The Illinois Geographic Information System software was used to digitize this map (Figure 2) and calculate acreages of forest, prairie, and water for individual counties (Table 1). The state totals show that prairie covered the largest area, with 21.6 million acres. Forests accounted for 13.8 million acres, and water for 0.2 million acres. The original forests of Illinois had an estimated volume of 16.3 billion cubic feet. Using the map and information generated from it, estimates for the regions and the counties can be made to show the general distribution of the forests in Illinois prior to settlement.

The Northern Region was split, with approximately 60 percent prairie and 40 percent forest (Table 1). Three counties having more forest than prairie were Jo Daviess County, with the highest percentage of forest at 78.8 percent, Lake County with 63.2 percent, and Carroll County with 51.7 percent. The remaining counties had more prairie than forest. Figure 2 shows the distribution of forest being dominant in these counties, with another large area of for-

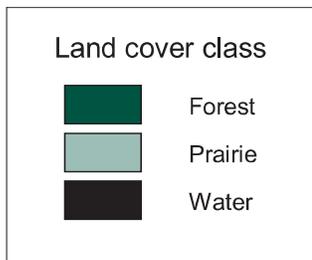
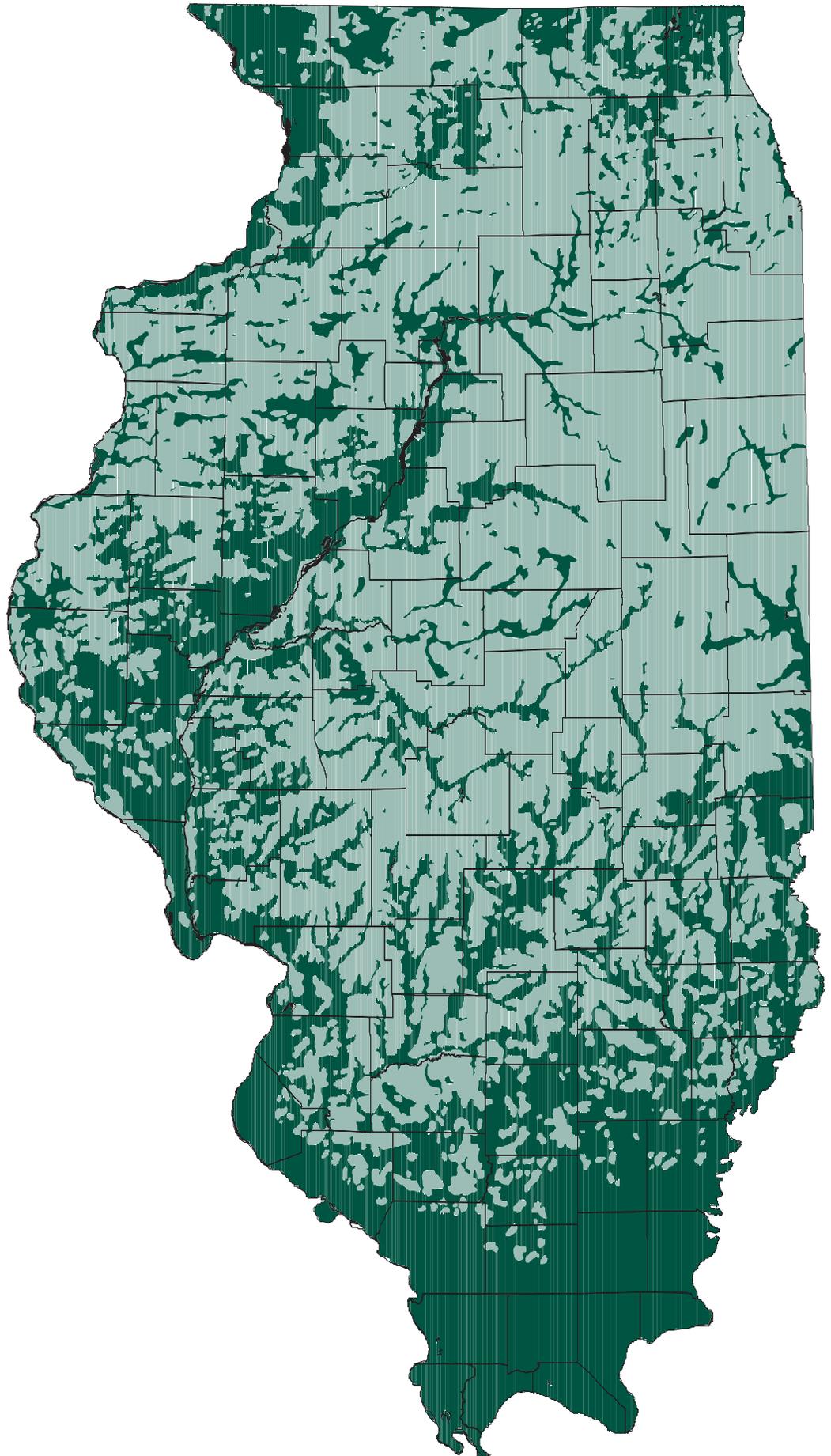
est occurring primarily in Ogle County. Along with mixed hardwood bottomland and upland forests, white pine stands, tamarack swamps, and jack pine stands around Lake Michigan could be found in this region (Telford, 1926).

The Grand Prairie Region was dominated, not surprisingly, by prairie. Forests accounted for only 15.7 percent of the original land cover (Table 1). Putnam County was the most forest-dominated county at 38.6 percent, with Ford County being the least forest dominated in the state at 3.6 percent. Tazewell County had the largest actual acreage of forest, with 129,400 acres, followed by Sangamon County, with 124,400 acres. The forests in this region were generally restricted to the stream valleys and were often grove-like as they thinned out at the borders of the prairie (Telford, 1926). Figure 2 clearly shows the dominance of the prairie in this region and the forest occurring in belts along the streams.

The Western Region of the state was 44.0 percent forested (Table 1). Figure 2 shows that a majority of this forest was located around the Illinois River and its tributaries. Calhoun County was 85.6 percent forested, being located in the extensive bottomlands where the Mississippi and Illinois Rivers join. Brown County at 80.3 percent and Schuyler County at 71.7 percent were also heavily dominated by forests. Pike County had the largest actual amount of forest, with 364,200 acres, closely followed by Fulton County, with 353,200 acres. Counties farther away from the Illinois River had a larger percentage of prairie than forest.

In the South Central Region of Illinois, forest acreage slightly exceeded prairie acreage, with 56.8 percent of the land in forest cover (Table 1). The counties in the northern part of this region had a higher percentage of prairie, as this area formed the transition zone between the prairie in the northern part of the state and the forest in the southern part. Forests in this area still occupied regions along streams. Along the eastern and southern parts of this region, the forest became the dominant land class (Figure 2).

**Figure 2.**  
Land cover of Illinois, about 1820.  
Adapted from: Anderson, 1970



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Saline and Gallatin Counties were covered exclusively by forest at 100 percent. Hamilton, Jackson, White, and Williamson Counties were almost entirely made up of forests. Jackson County had the largest acreage of forest, with 360,900 acres. The forests in this region were generally of poorer quality and had fewer tree species. Open park-like savannas often merged with both the forest and the prairie. Post oak forests were found on the most unproductive sites, with black oak and hickories on the better soils (Telford, 1926).

The Southern Unglaciaded Region was heavily dominated by forests, with more than 98 percent coverage. All counties in this region were greater than 90 percent forest covered, with Johnson County 100 percent forested. Union County had the largest amount of forest, with 263,400 acres. In the Southern Unglaciaded Region, bottomland forests dominated by baldcypress and mixed hardwoods delineated the southern border of Illinois, forming a band along the Wabash, Ohio, and Mississippi Rivers. In certain areas, such as along the Cache River, the baldcypress extended away from the main streams into other bottomland areas. Where baldcypress dropped out, the mixed hardwoods took over composition of these forests. The upland forests in this region were composed of a variety of oaks, hickories, and a mix of other upland tree species, with shortleaf pine occurring in isolated locations on bluffs (Telford, 1926).

The first people to arrive in Illinois were primarily hunters who were well adapted to life in the woods. They chose to inhabit the southern forested portion of Illinois and stay clear of the great unknown prairie (Anderson, 1970). Between 1800 and 1830 there was a rapid clearing of secondary stream bottoms in this area. As the settlers proceeded north, they chose to do so along the wooded streams. Around this time the means to till the prairie soil was discovered, along with the realization of the production potential of this valuable resource. Between 1820 and 1870 the population of Illinois grew 46 times, and settlers moved in to clear the prairie and convert it to agricultural lands. The demand for the timber resources of Illinois also grew during the beginning of this period because the

demand for wood had to be met primarily through local forests. Forested land was often more valuable than prairie because of the need for wood in building and heating homes.

With the advent of the railroad, timber and coal from other regions of the country could be more easily shipped to Illinois. This dropped the value of timber in the state, and land previously forested was often considered a nuisance and was cleared for agriculture. In the 1860s the railroad again changed the demand on Illinois forests. A market for timber from Illinois was established, and extensive cutting began. Illinois became an important wood-producing state, and timber from other states was imported for processing at Illinois mills. By 1870 manufacturing involving wood products accounted for 20 percent of the value for all manufacturing in the state. By about 1920 the forests of Illinois were almost completely cut over. Only around 22,000 acres of virgin forest remained, and these were located primarily in the floodplains of large rivers (Telford, 1926).

It was at this time in the history of Illinois forests that Telford (1926) completed his survey. The changes in Illinois forests since settlement began were dramatic. Total area of Illinois forests had been reduced from the original estimate of 13.8 million acres to 3.0 million acres (Table 2). This reduction was prominent in all regions, with the South Central losing the most—from 5.5 million acres to 1.2 million acres. Of the total forest land remaining in Illinois, only 12.3 percent was well stocked with sawtimber-size trees, and the total volume for sawtimber was only 5.4 percent of the original sawtimber volume. Telford estimated the original bottomland forests to have a total volume of 6,431.4 million cubic feet on 2,898 thousand acres. In 1926 the bottomland forests of Illinois were estimated to have only 257.5 million cubic feet on 739 thousand acres, with the majority of forests being understocked.

The baldcypress and mixed hardwood bottomland forests of southern Illinois had been reduced from 251.4 thousand acres to 21.1 thousand acres. Much of this forest type was lost to land being cleared for agricultural produc-

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tion. The mixed hardwood forests along the main streams totaled an estimated 718.3 thousand acres from an original 2,283.7 thousand acres. The majority of the volume loss in bottomland forests occurred along the major streams. Upland mixed hardwood forests totaled 594.4 thousand acres, and oak-hickory forests had 1,209.7 thousand acres, but the majority of these forests were understocked. The average annual growth in the mixed upland hardwoods was more than twice as much as in the post oak forests found on the poor soils of the south central portion of the state. Thus, there was an indication of improving conditions of Illinois forests.

Shortly before Telford's report, R. B. Miller (1923) reported on the western portion of the Southern Unglaciaded Region and the southwestern portion of the South Central Region. This study included all of Jackson County and parts of Union, Alexander, Pulaski, and Randolph Counties. The area was 31 percent forested, consisting of 175,036 acres of forest land, of which 90 percent was upland and 10 percent was bottomland. The forests were poorly stocked. All merchantable timber had been removed from 8 percent of the area of the upland forests, and the more desirable species and best trees had been removed from another 75 percent. Only 2 percent of the upland forests had volumes comparable to those of the original forests, and a mere 0.01 percent were classified as exceptionally good. Seventy percent of the bottomland forest acreage had the best species and trees removed, and there was no acreage of bottomland forest comparable to original forest cover or of exceptional quality.

The first FIA sampling of Illinois forests by the U.S. Forest Service was completed in 1948 (U.S. Forest Service, 1949). Illinois forests showed an increase in area throughout the state, with only a few counties decreasing in total forested acres. This general increase in forest area was a trend that would continue to the present.