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The Lumber Industry

Logging in the nineteenth century meant eastern white pine. Called Wisconsin's "Empire in Pine," this magnificent tree ranged from Vilas County, where it was the predominate forest species, south to isolated stands in Dane County. It has been estimated that the original stands in the Wisconsin River valley totaled about thirty billion board feet, nearly a quarter of that in the entire state. The three hundred- to four hundred year-old trees ranged up to 200 feet tall, although most averaged 120-160 feet, and their diameter at the butt ran from 4 to 7 feet. Usually, five to six clear logs could be cut from each tree. No other species was so highly prized. It was strong, sawed and worked easily and unlike most other northern species, its logs floated. Only after most of the pine had been cut and railroad transport established were hemlock, sugar maple, basswood and oaks taken.

In 1852, a Wisconsin representative describing the Pinery to Congress said, "there are indeterminate forests of pine, sufficient to supply all the wants of the citizens for all time to come." But a scant fifty years later, almost all of it was gone and large-scale logging had virtually disappeared from the Wisconsin's basin. The end came almost before anyone realized it. Wisconsin went from being the number one lumber producer in the country at the turn of the century to number eight within the decade. By 1929 there were only six operating sawmills in the whole state.

Development of lumbering along the river started slowly. Even so, its watershed provided almost a quarter of the state's cut prior to the Civil War. Afterward, when the great westward movement opened up a vast market for Wisconsin's lumber in the timberless flatlands of mid-America, the central portion of the river's valley was among the first to be exploited because of its wealth of pine, readily harnessed rapids and proximity to market towns. Production expanded rapidly. Nevertheless, the river's prominence was soon surpassed because of its dangerous rapids, countless meanders and sandbars, great length, and poor supply access.

The first of what we could call logging on the river was done in 1828 by troops building Fort Winnebago when they cut tamarack on Pine Island for their temporary barracks. The following spring a work party was sent upriver to harvest pine for the permanent buildings.

Daniel Whitney built the first commercial sawmill on the Wisconsin in 1831-32 at Whitney Rapids, just across from Nekoosa. It provided lumber for the first house in Madison and his shot tower operation at Helena, among other structures. Whitney had obtained a permit to build this sawmill from the War Department since at that time all the land above the Fox-Wisconsin portage belonged to the Indians. Amable Grignon II, a fur trader doing business on the river in what is now Adams County, obtained a similar permit. He and Sam Merrill started constructing a second mill about 1837 about six miles

north of Whitney's at what came to be called Grignon's Rapids. In later years this site became Port Edwards.

No more mills were built until the Menominee's title to the land from Pointe Basse (Nekoosa) to Big Bull Falls (Wausau) was extinguished by the "three-mile strip" treaty that Joshua Hathaway surveyed in 1839. Once this occurred, the desirable sites were rapidly developed: Frenchtown (Port Edwards) by Henry Clinton and John Edwards Sr. in 1840; Grand Rapids (Wisconsin Rapids) by Nelson Strong and Robert Bloomer in 1838; Centralia (Wisconsin Rapids) by George Kline Sr. in 1839-40; Biron's Rapids (Biron) by George Fay, John Kingston and Joshua Draper in 1838; McGreer's Rapids on the Big Plover just upstream from its mouth by Hugh McGreer and James Harper in 1837; the west bank of Conant's Rapids (Stevens Point) by Gilbert Conant and Daniel Campbell in 1838-39; Little Bull Falls (Mosinee) by John Moore in 1839 and Big Bull Falls by George Stevens in 1839. Mill Creek and other major tributaries were also occupied during this time. Thus, when the land was finally offered for sale in 1840 at Mineral Point, there was already a fringe of mills along the entire cession.

That year the mills produced 6.25 million board feet of lumber. Most of these were short-lived however because their operators lacked technical skills, couldn't hire competent crews, and were undercapitalized (often there was a one- to two-year waiting period between sawing and payment). Plus, supplies were expensive and difficult to get up the river and into the Pinery. Nonetheless, by 1857 the district's production was estimated to have risen twentyfold.

By 1847 there were twenty-four mills on the river running forty-five "saws," just six years later this number had increased to over one hundred. Rapid growth continued, except for the years between the Panic of 1857 and the end of the Civil War. By 1872 the annual output of the river's Pinery had risen to over two hundred million board feet-its high point in terms of production. Still, lumbering provided the Badger State with economic good fortune into the turn of the century before the South and Pacific Northwest became preeminent. While much of the production went for buildings, significant amounts also were used for firewood, poles, and mine and railroad construction. Indeed, it has been estimated that the railroads alone consumed a quarter of the entire country's output between 1870 and 1900.

Logging operations began by cutting the more accessible timber along the river and its tributaries. The sixteen-foot logs were stacked along the shores in "rollways" up to forty feet high, or piled on the ice so they could be quickly started downriver when the spring freshet came. Log jams, especially on the tributaries and certain stretches of the upper river, were frequent. They were broken up by moving critical logs by hand with peaveys or even teams of horses or oxen, judicious use of black powder, or, if they could, by using flooding dams to rapidly raise the water level and sluice the logs downstream.

The greater part of cutting went on during the winter months until the advent of railroads, after which it became feasible to cut timber year-round. Above Merrill, the river had a number of sharp bends, shallow stretches, and rapids that made log-driving very difficult. Accordingly, most of the timber above Grandfather Falls was cut after the

railroads came to the region. The advent of railroads also meant that the mills could then produce finished lumber and the wood products, both of which gave them much higher returns than had rough lumber.

At first, logs were cut using a singleblade, up-and-down or "muley" saw; later, multiple or "gang" blades were employed. Large rotary blades, which saved time and labor, began to be used in the mid-1850s. They, in turn, were supplanted by band saws after 1880. Water moving past a mill wheel provided the motive power for the first mills. But by the 1850s, water turbines had taken over the job and not long afterward steam engines fed by waste wood began to be used.

Many of the small mills depended upon farmers for their logs, which were brought in by sleigh during the winter. Others bought from log jobbers. Before the 1860s farmers also were the main suppliers of shingles. They would cut shingle-length blocks from the best trees and, during the winter, split them with an old fashioned froe. But within that decade machines, which could produce over six thousand shingles an hour took over the job, and Wisconsin became the largest shingle-making state in the country. Shingles were commonly used for barter; one settler even went so far as to exchange his acre of riverfront property in Grand Rapids for them.

Lumbering was responsible for the development of other allied operations, notably log driving. At first there was little coordination among the lumbermen as to when water would be released from the flooding dams to sluice logs downstream. However, starting in the late 1800s a succession of associations were formed to organize log drives on the river. Probably the first of these driving associations was the Wisconsin River Exchange & Log Driving Association, formed in 1875. The next association was organized at Wausau in 1882. It generally conducted two main drives: one starting from the foot of Otter Rapids and the other above the mouth of Eagle River. Apparently, this association was not completely successful either, for two years later many of the companies operating along the river formed the Wisconsin and Tomahawk Log Driving Association. It charged 46.5 cents per thousand feet from Eagle River to Wausau and an additional 25 cents to Stevens Point. In 1886 their log drivers struck for higher wages; they first asked for \$2.50 a day, but when this was agreed to, they immediately demanded \$3, which was rejected. In the end they settled for \$2.50. The last major driving company, the Wisconsin River Driving Association, was incorporated in 1893 for "driving logs and timber on the waters of the Wisconsin River between Point Bass and the head waters of the Wisconsin River." In 1896, its rate for driving logs from Eagle River to Wausau was 48 cents.

The terms of driving companies' charters varied widely. Some comprised cooperative efforts undertaken by the mill owners themselves while others were independent, for-profit organizations, although oftentimes these companies were also partially owned by the mill owners. Log driving companies also sprang up that hired out to individual mills on a set-fee or piece-work basis. Related to these operations were "protection" companies, which were formed to see that the logs got to the right mills and that none were stolen, or as the lumbermen called it, "jayhawked."

Log drives routinely employed over a hundred men. Some, like those conducted by the Wisconsin River Driving Association, were 250-man drives. The crews consisted of two groups: those with peavey poles who were responsible for keeping the logs moving along the river, and those with pike poles, or in some cases teams of horses, who retrieved logs that had become stranded along the shore or in sloughs. This operation was called "sacking the rear."

Teams of two or more men in bateaux (large, specially built rowboats) moved about, carrying the peavey men to places where a log jam threatened to develop. Jams were a matter of some importance, not only because they slowed down the delivery of sorely needed logs to the mills, but they also could lead to significant yield losses since fresh logs were very susceptible to wood-boring insects.

After loggers had finished in an area, companies such as the Lake and River Logging Company would buy the right to recover and sell sunken and abandoned logs (for instance, in 1886 lumbermen estimated 25 million feet of logs had hung up along the upper river).

Lumbermen from Jenny (Merrill), Wausau, and Stevens Point formed the Wisconsin River Improvement Company in 1853, but it failed because of funding problems. It was resurrected in the mid-1860s. Tolls levied on logs, boats and lumber (ten cents a thousand at Wausau and Mosinee, seven and one-half cents at Grand Rapids) were used to finance construction of wing dams and piers from Eagle River to Pointe Basse.

In a series of acts starting in 1857, the legislature authorized the company to operate as far north as Lac Vieux Desert, erect snubbing posts for rafts, remove obstructions along the river and its tributaries, clear and straighten channels, close sloughs and inspect dams. Dam owners were notified of any problems and if they didn't repair them, the company had the right to remove the dam. The company generally spent three to six thousand dollars a year building wing dams and removing obstructions. It expended \$35,000 at Big Bull Falls in the 1860s but still couldn't end the destruction there, and in 1854 seven thousand dollars was spent at Grand Rapids alone to remove obstructions. By 1887, the company had spent \$150,000 on improving the river. In spite of all this activity, it was generally conceded that its improvement efforts were to a large extent a failure. However, the series of flooding dams on the Wisconsin and its tributaries that it built under an 1880 amendment to its charter were quite successful. Other separately chartered boom companies also operated on the river, but none was as far reaching as the Wisconsin River Improvement Company.

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