

Transition in the Woods: Log Drivers, Raftsmen, and the Emergence of Modern Lumbering in Pennsylvania

IN 1850 a group of entrepreneurs put a log boom into operation on the West Branch of the Susquehanna River near Williamsport. The boom heralded a major transformation in the utilization of Pennsylvania's forests, a transformation that within two decades was to make Williamsport the leading center of lumber production in the world.¹ However, the change did not take place without friction. The Susquehanna Boom and operations associated with it threatened pre-existing patterns of forest exploitation and those who depended on them. Tension mounted, finally erupting in open battle in the spring of 1857. In the end, the champions of the modern industry made possible by the boom won out. With their victory the pre-industrial phase of lumbering came to an effective end in Pennsylvania.

The mid-nineteenth century was a pivotal period in the history of the American lumber industry. Previously, lumber and other forest products had been turned out primarily by small-scale, localized operations with limited capital and relatively simple technology. Often forest operations were mere adjuncts of agriculture. To be

¹ James Elliott Defebaugh, *History of the Lumber Industry of America* (Chicago, 1906-1907), II, 591-607; George S. Banger, *History of the Susquehanna Boom Co. from 1846 to 1876* (Williamsport, 1876), 1-2; James C. Humes, "The Susquehanna Boom: A History of Logging and Rafting on the West Branch of the Susquehanna River," *Now and Then*, XIV (1962), 4-14; John F. Meginness, *Otzinachson: A History of the West Branch Valley . . .* (Philadelphia, 1857), 438-451. The boom was a temporary one on which construction had begun the previous year. A permanent boom went into operation in 1851. These facts account for the varying dates given by different authors for the beginning of the boom.

sure, the first half of the century had seen the emergence of a nascent industry that marketed logs, lumber, and other wood products far from the point of production, as well as the opening up of frontier areas that were primarily of value for their trees; but still the tapping of forests in the United States remained largely pre-industrial as the mid-century point approached.²

Then, abruptly, the situation changed. New methods of forest exploitation and lumber manufacturing led to mass-production enterprises suited not to the demands of an agrarian, commercial-mercantile order, but to those of a rapidly industrializing, modernizing nation.³ The shift would have been impressive under any circumstances; when the old and the new systems collided on the West Branch of the Susquehanna, an element of drama was added that served to underscore the tensions and problems that a shift from pre-industrial to industrial conditions seems invariably to generate. By providing a point of focus, the events set in motion by the building of the Susquehanna Boom help to make clearer the nature of changes underway not only in Pennsylvania's forest enterprises but in America's as a whole.

From the beginning, European settlers drew upon the rich forest stands of North America. As coastal settlements grew, demand for building materials, firewood, charcoal, and wood potash, to say nothing of land clearing by farmers, made severe inroads into forests along the seaboard. By 1775 "however plentiful it may be in the remoter parts of Pennsylvania . . . wood is almost as dear at Philadelphia as it is in some parts of Britain."⁴ To meet demand, ever more distant stands had to be tapped. A system of forest exploitation based on rafting developed as a result. It appeared first along the

² There is no adequate overall history of lumbering in America, although numerous specialized and regional studies exist. For Pennsylvania, the best account remains Defebaugh, *History of the Lumber Industry* (see, especially, II, 556-655).

³ For descriptions of this shift in the economic order, see: Glenn Porter and Harold C. Livesay, *Merchants and Manufacturers: Studies in the Changing Structure of Nineteenth Century Marketing* (Baltimore, 1971); Thomas C. Cochran, "Early Industrialization in the Delaware and Susquehanna River Areas: A Regional Analysis," *Social Science History*, I (1977), 283-306. Changes in lumbering on the West Branch and reactions are covered in fragmented form in often-fugitive local histories. No one has placed these events in a national or industry-wide context.

⁴ Anonymous, *American Husbandry*, ed. by Harry J. Carman (New York, 1939), 112-113.

upper reaches of the Delaware and the North Branch of the Susquehanna but by the 1830s was well established on the West Branch as well.⁵

Once the harvests were in, residents of the interior commenced felling trees. They skidded logs to streamside over winter snows and floated them out to markets in rafts on the spring floods. Usually rafts were made up of square-hewn timbers, but sometimes they were constructed of lumber cut at small water-powered mills and occasionally of logs or long sticks for masts that were left in the round. The work involved was both highly skilled and physically demanding. Its result was not only construction materials for city and farm, but spars, planks, and timbers for the economically vital shipbuilding industry at Baltimore, Philadelphia, New York and elsewhere.⁶

Woods operations provided a source of employment during agricultural slack seasons, an inexpensive means of transporting farm products to market, an encouragement for the clearing of more

⁵ Defebaugh, *History of the Lumber Industry*, I, 473-474; II, 315; William Heidt, Jr., *History of Rafting on the Delaware* (Port Jervis, N. Y., 1922); Leslie C. Wood, *Rafting on the Delaware River* (Livingston Manor, N. Y., 1935); C. Lee Berry, "Lumbering in Pennsylvania" (typescript on microfilm, Pennsylvania State Archives, Harrisburg, MG-262, location of original unknown, pagination supplied), 47-50; Thaddeus S. Kenderdine, "Lumbering Days on the Delaware River," *Bucks County Historical Society Papers*, IV (1917), 247-248; "Lumbering on the Delaware," *New Jersey Historical Society Proceedings*, LXXI (1953), 212-214; Terry A. McNealy, "Rafting on the Delaware: New Light from Old Documents," *Bucks County Historical Society Journal*, II (1977), 27-29; D. F. Magee, "Rafting on the Susquehanna," *Lancaster County Historical Society Papers and Addresses*, XXIV (1920), 193-202; S. B. Row, "Clearfield County: Or, Reminiscences of the Past" (published serially in *Clearfield Raftsmen's Journal*), Sept. 14, 21, 1859.

⁶ Accounts are numerous and varied, see: Berry, "Lumbering in Pennsylvania," 49-55; Kenderdine, "Lumbering Days," 239-252; Thomas W. Lloyd, "When Lumber Was King" (typescript, James V. Brown Library, Williamsport), 30-35; *Hazard's Register*, III, 384-400; XI, 376; Olive Aucker Glaze, "Rafting on the Susquehanna River," *Snyder County Historical Society Bulletin*, II (1943), 3-12; B. F. Fackenthal, Jr., "Improving Navigation on the Delaware River . . .," *Bucks County Historical Society Papers*, VI (1932), 110-114, 182; Joshua Pine, III, "A Rafting Story of the Delaware River," *ibid.*, 467-524; Eli Bowen, *The Pictorial Sketch Book of Pennsylvania* . . . (Philadelphia, 1852), 161-167; John C. French, *et al.*, *Rafting Days in Pennsylvania*, ed. by J. Herbert Walker (Altoona, 1922), 29-40, 53-57, 63-70; Pennsylvania Writers Project, WPA, *Pennsylvania Cavalcade* (Philadelphia, 1942), 365-384; Thomas W. Lloyd, *History of Lycoming County, Pennsylvania* (Topeka, 1929), I 508-512; Joseph Riesenman, Jr., *History of Northwestern Pennsylvania* (New York, 1943), I, 343, 349-350, 355-356.

farmland, and a way of earning money to buy goods from the more developed areas on which the hinterlands depended. Logging and farming existed in a symbiotic relationship: farms supplied much of the labor force in the woods and on the rivers, while downstream sales of timber and lumber generated funds to keep the farms viable. Earnings from the woods were sufficient to extend agriculture into areas where it would otherwise have been economically submarginal at the time.⁷

The Allegheny Plateau became a stronghold of farmer-raftsmen. Valuable white pines were abundant in Clearfield, Elk, Cameron and Centre counties, but the soil tended to be poor and the growing season short. The results were predictable. Small sawmills grew up in the area; two contemporary observers estimated that some 400 were in operation in the region by 1850.⁸ Rafts filled the streams each spring (and sometimes during fall freshets as well). One raftsman later recalled that in the heyday of rafting, while going down the West Branch one "was touching oars with other rafts every five minutes. . . ."⁹ Another estimated that "easily" 30,000 men rafted on the West Branch each year.¹⁰ Individual raftsmen often made several trips in a season, and there do not appear to have been enough rafts on the river to employ so many. Still, large numbers were engaged. The *Clinton Republican* reported that in 1857 there were 500 rafts tied up at Lock Haven at one time, to say nothing of those elsewhere on the river.¹¹ Each raft normally carried a six-man crew; some carried more. If one includes men who worked in the woods

⁷ The best explication of this relationship is in Phillip L. White, *Beekmantown, New York: Forest Frontier to Farm Community* (Austin, 1979), 29-70, 355-362. See, also, David Maldwyn Ellis, *Landlords and Farmers in the Hudson-Mohawk Region, 1790-1850* (Ithaca, 1946), 14, 75, 112-113, 209-211; *Raftsmen's Journal*, July 2, 1856; June 17, Sept. 23, Dec. 9, 1857; *Hazard's Register*, III, 367; Row, "Clearfield County," Sept. 14, 21, 1859; Lloyd, "When Lumber Was King," 65-66.

⁸ *Raftsmen's Journal*, Sept. 23, 1857; William H. Egle, *An Illustrated History of the Commonwealth of Pennsylvania* . . . (2nd ed., Philadelphia, 1880), 561. The estimate in Egle was by William Bigler, a leading lumberman of Clearfield county and one-time governor of the state.

⁹ Quoted in Thomas Lincoln Wall, *Clearfield County, Pennsylvania, Present and Past* (n.p., 1925), 189.

¹⁰ James Mitchell, *Lumbering and Rafting in Clearfield County, Pennsylvania, on the West Branch of the Susquehanna River* (Clearfield, c. 1922), 41. Cf. D. S. Maynard, *Historical View of Clinton County from Its Earliest Settlement to the Present Time* (Lock Haven, 1875), 20; Glaze, "Rafting on the Susquehanna," 5.

¹¹ Lock Haven *Clinton Republican*, Apr. 12, 1905.

getting out logs as well as those who handled them on the river and downstream, surely more than 30,000 were involved.¹²

The Susquehanna Boom introduced a rival system to the West Branch, a system based on free-floating log drives that had been perfected in Maine.¹³ It was a more labor-efficient means of getting out logs than was rafting and yielded them in numbers that raftsmen could never hope to match.¹⁴ The boom itself, repeatedly enlarged, came to have a capacity of 300 million feet of logs. Clearly, it made large steam sawmills practical in Williamsport and vicinity. Existing data are insufficient to pinpoint the savings involved, but lumbermen quickly came to recognize that, as the *Clinton Democrat* put it, log drives and booms were "the cheapest way in which mills can be stocked."¹⁵ It was a key development, for the technology for high-speed sawing already existed and canals and, soon after, railroads were present to haul the cut to market. Once a large, inexpensive source of logs was at hand, mass production could soon follow—and follow it did, for 1843 to 1854 was a period of prosperity in which businessmen eagerly seized such opportunities.¹⁶

¹² Glaze, "Rafting on the Susquehanna," 6; Magee, "Rafting on the Susquehanna," 198–199; Franklin B. Hough, *Report on Forestry* (Washington, D. C., 1878), 464.

¹³ The origins of free-floating log drives is obscure. It has frequently been credited to Alanson and Norman Fox, who drove logs down New York's Schroon River in 1813, but the system was perfected in Maine before it was in New York. See Defebaugh, *History of the Lumber Industry*, II, 52–55, 314, 316; William F. Fox, *History of the Lumber Industry in the State of New York*, USDA, Bureau of Forestry, Bulletin no. 34 (Washington, D. C., 1902), 22; William G. Gove, "Glens Falls—The Queen City Built by the Lumber Industry," *Northern Logger and Timber Processor*, XXIV (April 1976), 8–9 *et seq.*; Alfred Geer Hempstead, "The Penobscot Boom and the Development of the West Branch of the Penobscot River for Log Driving," *Maine Bulletin*, XXXIII (May 1931), 15; Richard G. Wood, "A History of Lumbering in Maine," *ibid.*, XXXVII (January 1935), 96–139. Stewart Holbrook's suggestion that drives were in use in Maine as early as 1801 seems to be based on a misreading of his source. See Holbrook, *Holy Old Mackinaw: A Natural History of the American Lumberjack* (New York, 1938), 41.

¹⁴ Hough, *Report Upon Forestry*, 438–439; Defebaugh, *History of the Lumber Industry*, II, 44–47 and *passim*. Descriptions of log drives are legion. For a detailed account, see Samuel A. King, "A Log Drive to Williamsport in 1868," *Pennsylvania History*, XXIX (1962), 151–174.

¹⁵ Lock Haven *Clinton Democrat*, June 24, 1851. Cf. Mitchell, *Lumbering and Rafting*, 43.

¹⁶ Mill technology repeatedly ran ahead of that in the woods. As Holbrook noted: "The first speed-up in lumber-production technique did not reach Maine until 1821, and then it came from the sawmill end of the industry, just as more and greater speed-ups would come in time. Loggers changed their methods very slowly, looking askance at every new element. . . ." Holbrook, *Holy Old Machinaw*, 38–39.

More than just the economic efficiencies of the new system threatened raftsmen. Drives filled the streams with a churning mass of logs that made rafting more difficult and dangerous than ever and occasionally, when jams developed, barred the passage of rafts altogether. In addition, with their large fixed investments in booms, steam sawmills, and other facilities, down-stream operators soon began buying up extensive tracts of timberland as a means of protecting their interests. In so doing, they barred farmer-raftsmen from access to some of the finest of the stands on which their livelihoods depended. Conflict between the two groups could have been readily predicted.¹⁷

The first steps toward building the Susquehanna Boom came in 1836 when John Leighton came from Maine to investigate the West Branch's potential for lumbering. He recognized that the miles-long stretch of deep, quiet water just above Williamsport was ideal for a massive boom. Such a structure could collect logs from the vast area of the Allegheny Plateau drained by the upper West Branch and thus do for Williamsport what the Penobscot boom had done for Bangor, Maine. At first Leighton could not interest financial backers in the project; but in 1844 he persuaded James H. Perkins, then living in Lincoln, Maine, to visit Williamsport. Convinced by what he saw, Perkins took over as the main force behind efforts to get a boom constructed there. In 1846, Perkins and Leighton joined with John Dubois and other lumbermen of the Williamsport area to charter the Susquehanna Boom Company. Even then there were doubts; no actual construction took place until almost the end of 1849.¹⁸

¹⁷ *Clearfield Republican*, Jan. 1, Mar. 11, Apr. 21, 28, June 3, Sept. 22, Nov. 10, 1852; *Raftsmen's Journal*, Mar. 11, Sept. 23, 30, 1857; Lock Haven *Clinton Republican*, Apr. 12, 1905; Row, "Clearfield County," Oct. 12, 1859; Egle, *Illustrated History of Pennsylvania*, 462, 561; Lewis E. Theis, "Muncy Dam and the Days of the Lumber Industry, *Now and Then*, IX (1951), 275; R. Dudley Tonkin, *My Partner, The River: The White Pine Story on the Susquehanna* (Pittsburgh, 1958), 24; Mitchell, *Lumbering and Rafting*, 41; George William Huntley, Jr., *Sinnemahone: A Story of Great Trees and Powerful Men* (Boston, 1945), 343-344.

¹⁸ *Clinton Democrat*, Apr. 29, June 24, 1851; Egle, *Illustrated History of Pennsylvania*, 465-467; Berry, "Lumbering in Pennsylvania," 87-124; Defebaugh, *History of the Lumber Industry*, II, 593, 596-598, 600-601; Banger, *History of the Susquehanna Boom*, 2. Some sources credit Perkins, instead of Leighton, with originating the idea of a boom at Williamsport. This seems unjustified, although Perkins did play a major role in the development of the Susquehanna Boom. See: Banger, *History of the Susquehanna Boom*, 1-2; Lloyd, "When

Drives soon followed. The first apparently took place in May 1850.¹⁹ A violent storm four years before had blown down a large stand of timber along Moshannon Creek, a tributary of the West Branch. The downed trees were too broken to furnish the long logs needed for successful rafting, so the owners of the timber (the Portland Lumber Company of Maine) arranged for an experienced log driver from Maine, J. B. Wing, to cut the timber into the short, sixteen-foot sawlogs that were best for driving and to float them out on the spring floods. After some delay, Wing and a large force of men went to work and in the spring of 1850 drove more than two million feet of logs down the Moshannon and the West Branch to the temporary boom at Williamsport.²⁰ A local newspaperman described the drive as it passed Lock Haven on May 19 as "a rare, a proud, a beautiful sight."²¹

If raftsmen expected what they called "log floating" to cease once the salvage operations on Moshannon Creek were complete, they were soon to learn their error. Wing's successful drive demonstrated that the West Branch was not, as previously thought, ill suited for driving; and the temporary boom at Williamsport proved clearly superior to the boatmen who had previously been used on the river to gather loose logs floating downstream. The Susquehanna Boom Company moved quickly to construct a permanent boom. At the heart of the new structure was a series of large, stone-filled cribs down the middle of the river. Connecting these cribs were long logs

Lumber Was King," 17-21; James Myers, "Recollections of the Susquehanna Boom," *Journal of the Lycoming County Historical Society*, VIII (1972), 14; Lewis Edwin Theis, "Lumbering and Rafting on the West Branch," *Northumberland County Historical Society Proceedings*, XXI (1957), 101-102.

¹⁹ There is some question as to the exact date of Wing's drive or whether it was, in fact, first. Rumberger, who gives the question the fullest coverage, sets the date as 1852, but both the *Clinton Democrat* and Rumberger's own internal evidence indicate 1850, which seems the most reasonable date. See: John B. Rumberger, "The 'Loggers' Against 'Rafters,'" *Lock Haven Express* (reprinted from *Philadelphia North American*), June 17, 1915; *Clinton Democrat*, May 28, 1850; *Commemorative Biographical Record of Central Pennsylvania . . .* (Chicago, 1898), I, 565.

²⁰ Rumberger, "'Loggers' Against 'Rafters'"; John A. Dale, *et al.*, *History of Clearfield County, Pa.* (published serially in *Clearfield Spirit*, 1897, scrapbook, Brown Library, Williamsport); John Quigley, paper on lumbering (Ross Library, Lock Haven, pamphlet file); John Blair Linn, *History of Centre and Clinton Counties, Pennsylvania* (Philadelphia, 1883), 533.

²¹ *Clinton Democrat*, May 28, 1850.

(boom sticks) attached by heavy chain couplings. At the upstream end a sheer boom was added which could be extended across the river to divert logs into the enclosed area and then withdrawn once the drive was over so that other traffic could pass. At the downstream end, there was a sorting works where logs were separated according to owner's brands and made into temporary rafts for transit to the appropriate nearby sawmills. Others followed the Susquehanna Boom Company's lead. By 1851 permanent booms were in operation, not only at Williamsport but at Lock Haven and near the mouth of Pine Creek as well.²² Additional booms appeared in subsequent years, and drives to fill them became familiar sights on the river.

Friction between raftsmen and log drivers developed almost at once. The type of individuals involved in the initial drives was a contributing factor. As one observer put it, they "were irresponsible men, and for the damages occasioned [by their drives] no redress could be obtained."²³ In addition, some drivers seem not to have been too particular about what they took. The *Clearfield Republican* complained that they "cleaned the beach," adding to their drives squared timber and logs belonging to raftsmen.²⁴ Wing himself tried to assuage local concerns by running explanations of his operations in the local press and offering to cooperate with woodsmen along the river, but his efforts were to no avail. Protests against log driving mounted.²⁵

Some raftsmen went beyond complaining; they turned to sabotage in an effort to discourage further drives. Their most common technique was to "iron" logs, driving old spikes, horseshoes, or other scrap metal into logs until it was hidden by the bark. The metal had

²² *Ibid.*, June 24, Aug. 12, Sept. 2, 1851, Jan. 6, 1852; Myers, "Recollections," 15. Rumberger, "Loggers' Against 'Rafters,'" suggests that at least some raftsmen did not anticipate that there would be subsequent drives. For descriptions of the boom, see: Thomas T. Taber, III, *Sunset Along Susquehanna Waters* (Williamsport, 1972), 404-405; Banger, *History of the Susquehanna Boom*, 2-9. Changes and additions were made over the years. An excellent scale model of the boom during its heyday is on display at the Lycoming County Historical Society Museum, Williamsport.

²³ Row, "Clearfield County," Oct. 12, 1850.

²⁴ *Clearfield Republican*, May 6, 1853.

²⁵ Wing and Getchell, statements in *Clinton Democrat*, Aug. 12, Sept. 2, 1851, Jan. 6, 1852. See, also: *Raftsmen's Journal*, Sept. 23, 1859; Linn, *History of Centre and Clinton Counties*, 93; King, "Log Drive to Williamsport," 155-156.

a most destructive effect when unwittingly struck during high-speed sawing in the mills. In time the state legislature outlawed the ironing of logs, but drivers and mill operators found an even better way of discouraging the practice. They peeled their logs. This had a number of advantages beyond simply revealing hidden metal. Peeled logs were easier to handle in woods and mills because of reduced friction; they slid past obstructions and one another more readily, thus reducing the likelihood of jams; and they were less susceptible to blue stain fungi and certain wood-boring insects than were unpeeled logs. Clearly, more than ironing would be needed if log drivers were to be driven from the area.²⁶

Toward this end, early in 1852 legislation banning log drives from the Susquehanna and its tributaries was proposed in the Pennsylvania legislature. Citizens forwarded petitions from various quarters in support of the bill; others countered with remonstrances against it. After passing the House, the bill failed by a single vote in the Senate.²⁷ William F. Packer, a key figure in the defeat of the bill and in subsequent events, explained a few months later why he had opposed the legislation.

I thought the bill . . . wrong in every point. [It would have been] wrong, if no expenditures had been made in the erection of booms in the river . . . but [it was] especially so, in view of the large investments of capital which have been made at Williamsport, Lock-Haven and elsewhere in the construction of booms, the erection of steam saw mills &c., dependent upon that business, as then fully recognized and established by law.²⁸

Similar legislation, introduced at the next two sessions of the legislature, met the same fate in spite of additional petitions in favor of it

²⁶ Row, "Clearfield County," Oct. 12, 1859; French, *et al.*, *Rafting Days*, 24; Tonkin, *My Partner, The River*, 25-26; Maynard, *Historical View of Clinton County*, 55. However, not everyone in the rafting country reacted negatively to the coming of log drives. See *Clearfield Republican*, Jan. 1, 14, Feb. 18, 1853. As to proposals to ban log drives, the *Clearfield Republican* commented on Jan. 14, 1855: "we have no faith in the soundness of any man's Democracy who advocates the enactment of special laws for the benefit of particular interests."

²⁷ Pennsylvania, *Legislative Journal, House*, 1852, I, 195, 224, 283; *ibid.*, *Senate*, 1852, I 186, 195, 203, 213, 221, 228, 237, 297.

²⁸ *Clearfield Republican*, Feb. 4, 1853. See also, Jan. 14, 1853. As published, Packer was replying to a resolution thanking him for "defending" the ban on log drives. This was a typographical error; from the context it is clear that "defeating" was meant.

and several meetings held in Clearfield and other rafting centers to protest log drives. Even a bill that would have banned drives only on Clearfield and Moshannon creeks failed of passage.²⁹

The nation's economy was slowing, however, and this—coupled with a panic on the New York Stock Exchange in the fall of 1854—led to a slackened demand for lumber. Streams became less crowded, and tensions between loggers and raftsmen eased.³⁰ Still, opponents of log driving were not entirely silent. In 1855 they tried a new tack. Instead of again attempting to outlaw drives, they introduced a bill to require that log drivers obtain a license for a specific number of logs prior to each drive, that no logs be put into streams until there was sufficient water to run them, and that log drivers put up bond against any damages that their drives might do. Since many loggers floated their logs in common drives, those so doing were to be held jointly and severally liable for damages, that is, individuals suffering injury to themselves or their property as a result of a drive could collect compensation without first proving which particular log or logs had done the damage or establishing the ownership thereof. Although the bill was less restrictive than its predecessors, interest in the issue had waned and it too failed to pass.³¹

Here matters might have rested if log driving had appeared destined to continue at the established level. For some five seasons log drivers and raftsmen had shared the upper West Branch: although drives and booms caused problems for raftsmen, their presence had not forced rafts from the river. But circumstances promised soon to change. New booms were under construction and others planned; the number of free-floating logs on the river was sure to increase markedly when they went into operation. S. B. Row, editor of one of Clearfield's two newspapers, was concerned. He urged unified action on the populace of the area:

²⁹ Pennsylvania, *Legislative Journal, House*, 1853, I, 138, 157, 233, 435, 627, 679-680; *ibid.*, 1854, 84, 168, 174, 204, 232, 274, 304, 401; *ibid.*, *Senate*, 1854, 217, 244, 345; *Clinton Democrat*, Feb. 15, Mar. 1, 8, 15, Apr. 19, 1853; Mar. 7, 1854.

³⁰ *Clearfield Republican*, Nov. 29, 1854; *Raftsmen's Journal*, May 2, 9, Nov. 21, 1855; Feb. 13, May 14, 1856.

³¹ *Raftsmen's Journal*, Feb. 21, 1855. Although the *Raftsmen's Journal* reported that this bill "will in all probability pass" the *Legislative Journals* show it was never even considered. The bill took an approach suggested earlier by the *Clearfield Republican*, Mar. 4, 1853, and echoed by the *Clinton Democrat*, Mar. 15, 1853: regulation, rather than an outright ban.

The erection of these booms is a matter in which the citizens of this county are directly interested, and should engage their immediate attention. Some action should be taken without delay . . . and the most direct way would be to lay the matter before the Legislature in such a form as will fully enlighten all the members of that body, a portion of whom, residing where the timber business is not followed, are not expected to be fully aware of the great injury that may be inflicted upon the business interests of a large and hardworking class of community by legislation authorizing the construction of these booms.³²

This call had the desired effect. On March 17, 1856, a large group met in Clearfield to organize for the fight. Those present adopted a resolution declaring that:

the erection of booms in the Susquehanna river impedes the navigation thereof, causes detention and loss to our citizens, and . . . must eventually destroy the timber and board business of Clearfield county, render valueless our forests and deprive our citizens of their means of support . . . we are opposed to any further obstructions being placed in the river, and therefore to the incorporation of more boom companies, as no boom can be constructed without injuring the descending navigation.

The gathering named a committee to draw up a memorial to the legislature and agreed to meet again on July 4.³³

Spring floods began a few days later, temporarily turning the attention of raftsmen to the river. However, in late June calls for the second meeting began to appear. A notice published in Row's newspaper made it clear that the meeting was to go beyond attempting to prevent construction of new booms; after all, the major culprit, the Susquehanna Boom near Williamsport, was already in place and was being steadily enlarged under its existing charter. The meeting was called "for the purpose of adopting measures to prevent the floating of loose logs on the Susquehanna river." In other words, it was to be one step in a renewed effort to obtain the sort of ban on log drives that had failed of passage in 1852, 1853, and 1854.³⁴

A "large and respectable" crowd, including raftsmen, lumbermen,

³² *Raftsmen's Journal*, Feb. 27, 1856. See also, *Clinton Democrat*, Mar. 7, 1854.

³³ *Raftsmen's Journal*, Mar. 19, 1856. Tonkin, *My Partner, The River*, 24, incorrectly states that this meeting was on Mar. 17, 1855.

³⁴ *Raftsmen's Journal*, June 25, 1856.

and community leaders from Clearfield and neighboring counties, assembled at the Clearfield County Courthouse at the appointed time. The group named Ellis Irwin, a sawmill operator and businessman, president of the body.³⁵ Judge G. R. Barrett addressed the crowd, calling for "united action . . . to the end that the rights of our lumbermen may be protected . . . without any injury to the rights" of others. But impatience was growing. The body adopted a resolution staking out a more militant position than what Judge Barrett seems to have desired. The preamble declared:

The floating of loose saw logs . . . and running of rafts in the usual way, cannot be carried on at the same time. One or the other must cease, and it becomes a question only, of whether the free and uninterrupted navigation of these valuable highways shall continue open for the enjoyment of the mass of the people, or be monopolized by a few. . . . The lumbermen [of this area] ask no monopoly—no protection of any kind that they do not award to others. They are compelled to raft their lumber, place pilots and men upon each raft and so navigate the streams as to allow others to do the same with a common degree of safety. All they ask in return is that those who choose to navigate it with round logs, be compelled to raft them together, and navigate the stream in the same way. There is no hardship in this, and by pursuing that course the interests of all parties will be protected equally.

Having established its basic position, the group went on to urge the state legislature to authorize no further booms and to pass laws requiring "the owners of saw logs, before navigating the stream with them, to raft them together in the usual way of rafting timber." The resolution concluded:

We will use all peaceable and lawful means first, to obtain our rights in the navigation of our public highways, in the hope of obtaining legislative action to that end, but . . . peaceably or forcibly, the nuisance must be abated. If the Legislature, to whom we have a right to appeal, turn a deaf ear to us, we must take other means to redress our wrongs. We cannot allow our mills to rot down, and our property to be rendered worthless, until we have made this last effort to save ourselves.³⁶

³⁵ *Ibid.*; Tonkin, *My Partner, The River*, 24–25. On Irwin, see: Dale, *et al.*, *History of Clearfield County*, 116–117; *Commemorative Biographical Record*, I, 587–588.

³⁶ *Raftsmen's Journal*, July 9, 1956. Cf. "Remarks of [Seth A.] Backus Relative to Log Floating," *Pennsylvania Daily Legislative Record*, 1857, no. 80, pp. 3–4.

The ominous tone of the resolution may have been dismissed by many as empty rhetoric, for words at least as strong had been heard in 1853 and nothing had come of them. This time, however, there would be no timely slackening of traffic on the river to defuse the issue.³⁷

Other meetings followed. At that of August 18, a committee of ten was appointed to take legal action against log driving by instituting legal "prosecutions against all and every person who shall hereafter put loose logs in the stream for the purposes of floating in sufficient numbers to create a nuisance."³⁸ Announcements of this intent appeared in the local press under the heading "LOG-FLOATERS TAKE NOTICE." The public warning was even more strongly worded than that adopted on August 18. It read: "proceedings shall be instituted and prosecuted to conviction against all and every person, whether owner, contractor or laborer, engaged in putting loose logs into the river or any of its tributaries in the counties of Clearfield, Elk and Centre." Heading the list of signatories was the name of John M. Chase, a prominent local lumberman.³⁹

Matters were rapidly coming to a head. Local opposition had discouraged log drivers from operating on Chest Creek and on the West Branch proper above the town of Clearfield.⁴⁰ They had floated additional logs down the Moshannon since the first drive by Wing, but that stream was so tortuous that it was difficult to navigate with rafts and, in any case, ran through a sparsely settled area with resultingly weak local opposition.⁴¹ By the winter of 1856, however, logging contractors were at work in the woods along Clearfield and Sinnemahoning creeks, preparing to drive logs down them on the spring floods. Both were important rafting streams located near the area's population centers.

³⁷ *Clearfield Republican*, June 3, Sept. 22, Nov. 10, 1853; *Clinton Democrat*, Sept. 27, 1853; Linn, *History of Centre and Clinton Counties*, 93-94. The crash of 1857 did not come until October, six months after events had reached a climax in Clearfield County.

³⁸ *Raftsmen's Journal*, Aug. 27, 1856. See also, Oct. 29, Nov. 16, 1856; Feb. 11, Mar. 11, 1857.

³⁹ Among other places, the notice appeared in *ibid.*, Feb. 18, 1857. Cf. King, "Log Drive to Williamsport," 155.

⁴⁰ Row, "Clearfield County," Oct. 12, 1859.

⁴¹ Dale, *et al.*, *History of Clearfield County*, 131; Rumberger, "'Loggers' Against 'Rafters'"; Quigley, paper.

Warily, the two sides eyed one another. Opponents of log drives sent spies to ascertain what their rivals were doing. Uncertain as to just how seriously to take the repeated warnings of their adversaries, the loggers continued to fell trees and prepare them for driving while cautiously keeping informed of what the raftsmen and their supporters were doing and saying.⁴²

Editor Row was among those who sensed that matters were approaching a climax. Near the end of March, he wrote:

Log Floating is regarded in this county in the light of a nuisance, and many efforts have been made to have it restricted by law . . . but the Legislature has been so tardy in acting upon the bill before it that our raftsmen have been subjected to this annoyance another season. Heretofore they have borne it as meekly as they could, but it seems with some "forebearance has ceased to be a virtue," and they have determined to apply a corrective themselves. Accordingly, on Clearfield creek, we understand, the logs with which the stream is literally filled, are being cut up in such a manner as to render them worthless, whilst on other streams they are driven full of spikes, pieces of pot metal, &c., and it is not at all improbable that still more extreme measures may be adopted, as many of our people are in a state of high exasperation.

Before his words were off the press, Row's prediction had become reality.⁴³

On April 30, 1857, word arrived in Clearfield that the loggers were about to commence their drive. A group quickly met, formed itself into a vigilance committee, selected officers, and formed into companies. The following day one company armed itself with clubs, axes, and firearms and marched up Clearfield Creek to confront the log drivers. A second company followed not far behind. When the vigilantes arrived at the scene of operations, they ordered the drivers from the woods. The drivers refused to go, so the vigilantes attacked. For a time the battle teetered in the balance, but when the second company of vigilantes arrived the drivers were driven from the field. Victorious raftsmen and their allies proceeded to destroy equipment,

⁴² Rumberger, " 'Loggers' Against 'Rafters.' " This is the fullest extant description of the confrontation. Although unfootnoted, it seems solidly based on contemporary newspapers, court testimony, and the recollections of participants.

⁴³ *Raftsmen's Journal*, May 6, 1857. Row's statement was apparently written on Apr. 29 or 30 or May 1. By Saturday, May 2, he had received news of the clash on Clearfield Creek, which he ran immediately below his original piece.

boats, cabin, and supplies belonging to the loggers and threw what they could not destroy into the creek. No one was killed in the battle, but three loggers were injured by rifle fire.⁴⁴

The clash had a sobering effect. Row, who from the first had supported the raftsmen, turned pacificatory.⁴⁵ Other community leaders appear to have done the same. For their part the aggrieved loggers came to Clearfield and swore out complaints against the forty-seven who participated in the attack. Warrants for their arrest were promptly issued. Raftsmen countered by filing complaints against drivers when the latter's logs jammed, blocking Clearfield and Sinnemahoning creeks.⁴⁶ Attention promptly shifted from the woods and streams to the courts.

The cases came to trial in August. By then charges of riot against all but ten of the vigilantes and of creating a public nuisance against all but five of the loggers had been dropped. In the end, all of the fifteen brought to trial were found guilty. Punishments were light—considerably less severe than that handed down earlier in the year to a logger who, apparently angered by sabotage, set adrift the raft of one of his tormenters. John M. Chase and Joseph Fiscus, the leaders of the vigilantes, were fined \$25 each; their followers were fined \$10 apiece. Among the log drivers, Abraham Byers and J. Harris Green were fined \$15 apiece; George W. Miller and George Chandler, \$5; and James F. Parsons, \$1. No jail sentences were imposed. Charges against John Tyler and others for creating a nuisance when their logs blocked Sinnemahoning Creek were dismissed because “a settlement had been effected between the parties interested in rafting and floating on the Sinnemahoning.” Clearly, presiding judge James Burnside was attempting to handle the case so as to lessen tensions.⁴⁷

⁴⁴ Key portions of the subsequent court testimony were published in the *Raftsman's Journal*, Aug. 26, 1857; this, plus reminiscences by participants preserved by Tonkin, Rumberger, and others, are the source of our knowledge of events.

⁴⁵ For example, on May 20, Row refused to print a letter he had received relative to the battle, because it would serve only to “embitter the parties against each other.” See *Raftsman's Journal*, May 20, 1857.

⁴⁶ *Ibid.*, May 6, 1857. The Grand Jury promptly returned true bills and bound the defendants over for trial. *Ibid.*, May 20, 1857.

⁴⁷ *Ibid.*, Aug. 26, 1857. For cutting loose the raft, James Curley had been fined \$10 plus costs and sentenced to nine months in jail. *Ibid.*, Aug. 27, 1856. On Burnside, see D. S. Maynard, *Industries and Institutions of Centre County . . .* (Bellefonte, Pa. 1877), 260.

The battle on Clearfield Creek and the subsequent trials solved nothing. No truce resulted between the two sides, but continuing friction was less severe. A number of factors contributed to this development, not the least of which was probably fear of further court action—perhaps before a less lenient judge.⁴⁸ Other forces were also at work. In the fall of 1857, William F. Packer won the governorship. Packer's position on log floating was clear; he had blocked a ban while in the legislature and could be expected to veto any ban passed while he was chief executive. Raftsmen would simply have to forget about legislative relief for the duration of Packer's administration.⁴⁹ In addition, depression struck in 1857, lowering prices and demand with the result that the Susquehanna and its tributaries became less crowded with forest products en route to market.⁵⁰ Subsequently, population—and thus demand for lumber—grew on the Allegheny Plateau; increasing quantities of the lumber once floated downstream could be sold near the point of production. The fear that log drives would force the numerous small mills of Clearfield and neighboring counties to “rot down” was proving exaggerated.⁵¹

Further incidents occurred in the years that followed. Occasionally, an ironed log would appear in a mill in Williamsport or Lock Haven to wreak havoc with the saws of the unlucky recipient.⁵² More frequently, raftsmen would be detained by booms, log jams, or the splash dams that numerous operators built on smaller streams for sluicing out logs when there was not sufficient flow to move a drive without artificial augmentation. But it was not necessary to respond

⁴⁸ Row, “Clearfield County,” Oct. 12, 1859; Tonkin, *My Partner, The River*, 26–27; Mitchell, *Lumbering and Rafting*, 41.

⁴⁹ *Clearfield Republican*, Feb. 4, 1853; May 21, 1858; *Raftsmen's Journal*, Sept. 23, 30, Oct. 7, 1857. An observer reported from the state capital, “I see, at the present, no agitation on the subject of the loose log question. . . . There was quite a stir about a week ago on this subject, caused by the warlike manifestations on Clearfield Creek.” The issue quickly dropped from sight. *Raftsmen's Journal*, May 13, 1857. See also: Pennsylvania, *Legislative Journal, House*, 1857, 1098–1099; *ibid.*, *Senate*, 1857, 1066, 1085.

⁵⁰ *Raftsmen's Journal*, Nov. 11, 1857; Mar. 10, June 23, 1858; *Clearfield Republican*, Mar. 16, 1859.

⁵¹ Tonkin, *My Partner, The River*, 10–22; *Raftsmen's Journal*, July 9, 1856. Although some did close, at least temporarily, this would appear to have been more the result of the depression than of log drives. See *ibid.*, Jan. 12, 1859.

⁵² For example, see *New York World*, July 1860 (letters from correspondent, dated at Lock Haven, July 11, 12, 14, 1860, Ross Library, pamphlet file).

to such detentions with violence; raftsmen knew they had legal recourse for recovering damages. Mill and splash dam owners (often one and the same) generally preferred to settle out of court, either paying compensation or simply buying the rafts involved. When disputes arose, they were more often over the price to be paid for detained rafts than over the right to use streams or the legality of obstructing them.⁵³ Fights between raftsmen and loggers still erupted, especially after raftsmen had consumed considerable liquor during stops at downstream mill towns, but nothing like the battle on Clearfield Creek in 1857 was seen again.⁵⁴

The number and size of downstream mills grew steadily in the years that followed. So did the capacity of the booms serving them. As noted earlier, by the 1870s Williamsport had become the world's largest lumber-producing center. To supply its enormous demand, logging operations were expanded. More and more splash dams appeared, more and more streams had drives. Chest Creek and the West Branch proper above Clearfield, from which log drivers had once been barred by local opposition, now became regular suppliers of floated logs for downstream sawmills. Nor were they alone. Nearly every tributary entering the Susquehanna from the Loyalsock to the head of the West Branch, over 150 miles away, had its drives.⁵⁵

Some raftsmen continued to operate. They were able to do so not

⁵³ Lewis Cass Aldrich, *History of Clearfield County, Pennsylvania* (Syracuse, 1887), 97; Lloyd, "When Lumber Was King," 12-15; Samuel Caldwell, *et al.*, petition to Senate and House, n.d., and Brown Allen & Co., *et al.*, statement to Senate and House, Mar. 18, 1872 (copies in Lycoming County Historical Society Museum, Williamsport, manuscript file); Tonkin, *My Partner, The River*, 36. For examples, see: David Baird to V. Tonkin, Sept. 4, 1883; Fred J. Dyer to Tonkin, July 24, 1891, and Mar. 5, 1892 (Tonkin Manuscripts, Pennsylvania State Archives, Harrisburg, MG-127, business correspondence).

⁵⁴ As one writer put it, "The rafting business . . . kept half the people of Clearfield drunk down the river several of the best months of the year." Linn, *History of Centre and Clinton Counties*, 91. Cf. *Raftsmen's Journal*, May 27, 1857.

⁵⁵ *Raftsmen's Journal*, Jan. 12, 1859; Row, "Clearfield County," Oct. 12, 1859; Dale, *et al.*, *History of Clearfield County*, 131; Egle, *Illustrated History of Pennsylvania*, 462, 467; *New York World*, July 1860 (Ross Library, pamphlet file); Wall, *Clearfield County*, 193; Lloyd, "When Lumber Was King," 12-14, 65-66; Fred M. Rogers, "Rafting Days on the Loyalsock," *Journal of the Lycoming County Historical Society*, XIII (1977), 6; Mitchell, *Lumbering and Rafting*, 43. Aldrich, *History of Clearfield County*, 95, suggests that no further drives were made on Clearfield Creek after the clash of 1857; Defebaugh, *History of the Lumber Industry*, II, 605, follows him. Other sources suggest this was not the case.

because they could compete with the large industrial operations of Clinton and Lycoming counties, but because they catered to specialized markets. They floated rafts of long timbers and spars to Marietta in Lancaster County and beyond to Port Deposit in Maryland, to fill the needs of ship and bridge builders and others who needed large timbers. These were markets that sawmills depending upon the sixteen-foot logs that made up drives could not supply. But many abandoned rafting for other pursuits; a number, having acquired skills they had formerly lacked, even joined the log drivers. Those who still sawed lumber in Clearfield and vicinity served local demand.⁵⁶ Not until the coming of railroads later in the century brought an end to dependence on water transportation did large mills, capable of competing with those of Williamsport in distant markets, become possible on the Allegheny Plateau.⁵⁷ For the time being, the mills around Clearfield, like the remaining raftsmen, represented an anachronistic survival from earlier days. They were apart from the main currents of the burgeoning lumber industry and of the national economy as a whole.

What developed at Williamsport was new. Bangor, Maine, had preceded it as a great lumber-producing center, and—like Williamsport—Bangor had depended on booms, drives, and steam sawmills; but Bangor had been a maritime center whose size was the result of the many diverse markets it serviced, markets located in the West Indies and Europe as well as along the Atlantic seaboard of the United States. Bangor was a grand flowering of the old commercial-mercantile order; Williamsport was the first great lumber producing center of the new, presaging Saginaw, Michigan, and others that were yet to come.

The Susquehanna Boom and the log drives and huge steam sawmills that it made possible brought an end to the domination of

⁵⁶ Linn, *History of Centre and Clinton Counties*, 146–147; Maynard, *Historical View of Clinton County*, 55; Egle, *Illustrated History of Pennsylvania*, 561. According to Rumberger, “‘Loggers’ Against ‘Rafters,’” John M. Chase was among those who refused to give up rafting, running the river to the end of his career.

⁵⁷ Egle, *Illustrated History of Pennsylvania*, 561; Mitchell, *Lumbering and Rafting*, 7–8, 51–52. The thirteen-volume series by Walter C. Casler, Benjamin F. G. Kline, Jr., and Thomas T. Taber, III, *Logging Railroad Era of Lumbering in Pennsylvania* (Williamsport, 1970–1977), provides a useful overview of this new order.

lumbering in Pennsylvania by farmer-raftsmen and the operators of seasonal, water-powered mills, men whose greatest investment in getting wood from forest to market was their labor and who were often as dependent upon agriculture as the forests for their livelihood. Lumber production in Williamsport was now big business.⁵⁸ Tied firmly into the burgeoning economy of the United States in the late nineteenth century, its lumbermen prospered. Only the finite nature of the stands on which they drew and rumblings in the ranks of labor cast shadows over their economic prospects. For the immediate future, at least, they were secure.

When Williamsport's lumbermen finally did have to face their next major challenge, it came not from the farmer-raftsmen and their allies who had bedeviled them in the 1850s, but from industrial workers seeking shorter hours through collective action. The first major strike in the history of the American lumber industry came, appropriately enough, at Williamsport, where the industry itself had taken modern form.⁵⁹

In sum, the Susquehanna Boom had ushered the industrial order into Penn's woods. The farmer-raftsmen of the Allegheny Plateau

⁵⁸ It did not yet display all the characteristics attributed to big business by Alfred D. Chandler, Jr., or Glenn Porter. Proprietorships, rather than corporate ownership remained the norm, and as a result ownership and control were slow in separating. In other ways, too, lumbering lagged in adopting the forms of modern big business in spite of being intimately tied to the rising industrial order. See: Chandler, "The Beginnings of 'Big Business' in American History," *Business History Review*, XXXIII (1959), 1-31; Glenn Porter, *The Rise of Big Business, 1860-1910* (New York, 1973), 7-24. No thorough study of the structure of the lumber industry, either in Williamsport or nationally, exists. However, see United States Department of Commerce, Bureau of Corporations, *The Lumber Industry* (Washington, D. C., 1914), especially Part IV, 1-70, 490-644.

⁵⁹ Between 1857 and the advent of unions in the mills in the 1870s, conflict with log rustlers known as "Algerines"—named after the Algerian pirates—came to absorb more of the attention of lumbermen in Williamsport and Lock Haven than did continuing friction with raftsmen. *Raftsmen's Journal*, Mar. 16, 1856; Pennsylvania Writers Project, *Pennsylvania Cavalcade*, 381; W. J. McKnight, *A Pioneer Outline History of Northwestern Pennsylvania . . .* (Philadelphia, 1905), 355-357; *American Digest* (St. Paul, 1897-1904), XXXIII, 1594, paragraphs 48 g-1; 1575, paragraphs 49 c-h. On the strike of 1872, see: Lloyd, *History of Lycoming County*, 291-292; Berry, "Lumbering in Pennsylvania," 167-179; Lloyd, "When Lumber Was King," 43-46; Defebaugh, *History of the Lumber Industry*, II, 601-602; D. S. Maynard, *Biographical Sketches of Prominent Citizens and Successful Business Men of Clinton County, Pa.* (Lock Haven, 1877), 22-26; Frederic A. Godcharles, *Daily Stories of Pennsylvania* (Milton, Pa., 1924), 472-474.

may not have welcomed the change, but it was beyond their power to prevent it. In the socioeconomic climate of the times, changes promising increased production and economic growth were well-nigh irresistible.⁶⁰ As the advantages of the new system became manifest, all else had to conform to it or simply abandon the contest.

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⁶⁰ Cf. James Willard Hurst, *Law and Economic Growth: The Legal History of the Lumber Industry in Wisconsin, 1836-1915* (Cambridge, Mass., 1964), 571 and *passim*.