

The Woodland Steward

Promoting the Wise Use of Indiana's Forest Resources

2022 Indiana Consulting Foresters Stumpage Timber Price Report

This report is provided annually and is intended to be used as a general indicator of timber stumpage prices and activity in Indiana. There are many factors that determine the price of any individual timber sale, including tree species and quality, average tree volume, size of sale, ease of operability, access and yarding issues, proximity to markets, region of the state, availability of other timber in the area, number of bidders interested in the sale, season it can be logged, economic forecasts and many more. For this reason, the reported prices should not be considered as a guarantee of the value for any given sale. However, this report can be used as a general trend of timber sale prices and where the range would be for most sales meeting the same criteria. To best market your timber, it is recommended you contact a consultant forester that can gauge your timber value in your area and markets.

To create the report a survey was made of all known professional consulting foresters in Indiana. Sales were reported from all areas of the state. Prices were reported from sealed bid timber sales (not negotiated sales) between a motivated seller and a licensed Indiana timber buyer. The data represents sales from January 1 to December 31, 2022. This survey has been conducted annually since 2001.

Timber Sale Price Survey

Timber sale categories: As in the past, sales were reported in three categories based on quality. A high-quality sale has more than 50 percent of the volume in #2 or better red oak, white oak, sugar maple, black cherry, black walnut or soft maple. A low-quality sale has more than 70 percent of the volume in #3 grade (low or pallet grade) or is cottonwood, beech, elm, sycamore, hackberry, pin oak, aspen, black gum, black locust, honeylocust, catalpa, sweetgum or pine. An average sale is a sale that is neither a high- or low-quality sale.

Survey responses: There were 15 consultants that reported prices this year. This is a decrease from the 20 that reported last year but in the range of the 15 to 20 that have reported each year since 2015. Prices were reported from 172 sales which is a decline from the 270 sales reported last year and the annual average since 2014 of 280. Reported sale volumes also declined steeply from 25,049,006 board feet in 2021 to 14,261,907 board feet. The average reported sale volumes have averaged 24,825,060 board feet since 2015. Total sale values, over all three categories, also decreased from last years \$20,754,187 to \$12,057,263.

High quality sales: There were a total of 71 sales reported by 11 respondents in this category. Sale volumes ranged from a low of 2,959 board feet to a high of 907,240 board feet. The average high quality sale was 89,625 board feet per sale. The median volume was 68,419 board feet. Overall, the weighted average of these sales was \$1,086/MBF (thousand board feet). This price is down from last year's historical high of \$1,164 by about 7%. It is important to note that prices for high value species such as walnut and white oak, both veneer and lumber, can cause a wide range of prices between sales depending on the volume and quality of these species in a specific sale. Therefore, the range within this group went from a low of \$492 to a high of \$7,176/MBF.

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Calendar of Events

June 21

SICIM invasive training
Gabis Arboretum, Valparaiso
<https://www.sicim.info/regional-trainings>

June 16

SICIM invasive training
Historic Forks of the Wabash, Huntington, IN
<https://www.sicim.info/regional-trainings>

June 20

Breakfast with a forester
Christo's restaurant, Plymouth

June 29

Indiana Invasive Species Conference
Hamilton County Fairgrounds
www.sicim.info

July 18

Breakfast with a forester
American Table Restaurant, Warsaw

August 10

Backyard Tree Pruning and Care
6pm, Hendricks County
brianna.ollier@in.nacdnet.net

August 15

Breakfast with a forester
Dutch Café, Peru

August 18

Forestry field day
9 am- 2 pm, Dearborn County
812-926-2406 x 3

August 25-27

Hoosier Hardwood Festival
Boone County Fairgrounds
www.hoosierhardwoodfestival.com

September 9

Invasive Plant Control Training for Landowners
Dubois County
Contact ronr@purdue.edu

September 23

IFWOA forestry field day, Whitley County
www.ifwoa.org/events

See all forestry and wildlife events for woodland owners at www.ifwoa.org/events. Upcoming local invasive species management events in your area: See <https://www.entm.purdue.edu/iisc/> for times, locations, contact info.

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The opinions expressed by the authors do not necessarily reflect those of the Woodland Steward Institute. The objectives of the newsletter are to provide general and technical natural resource information to woodland owners of Indiana, improve information distribution and build support for responsible forest resource management.

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2022 Indiana Consulting Foresters Stumpage Timber Price Report *Continued from page 1*

Table 1. Summary of reported sales from January 1 to December 31, 2022

	High • 71 sales				Medium • 87 sales				Low • 14 sales			
	BF	Value	Bids	\$/MBF	BF	Value	Bids	\$/MBF	BF	Value	Bids	\$/MBF
Total	6,363,343	\$6,912,066	376	\$1,086	7,009,702	\$4,582,962	342	\$654	888,862	\$373,349	42	\$420
Low	2,959	\$5,788	1	\$461	7,508	\$2,955	1	\$300	8,930	\$3,750	1	\$223
High	907,240	\$736,560	12	\$7176	797,548	\$727,777	12	\$1,766	188,075	\$56,631	6	\$756
Average	89,625	\$97,353	5.30	\$1,394	80,571	\$52,678	3.93	\$647	63,490	\$26,668	3.00	\$487
Median	68,419	\$64,828	5	\$1,026	60,655	\$32,471	3	\$614	46,196	\$22,334	3	\$469

Medium quality sales: Fourteen consultants reported 87 sales in this category. Sale volumes ranged from 7,508 board feet to 797,548 board feet and averaged 80,571 board feet per sale. The median sale volume was 60,655 board feet. These sales averaged \$654/MBF, which was nearly identical to last years \$652. The range of prices by sale went from a low of \$300 to a high of \$1,766/MBF.

Low quality sales: Only 7 consultants reported 14 low quality sales. Sale volumes ranged from a low of 8,930 board feet to a high of 188,075 board feet. The average sale was 63,490 board feet and the median volume was 46,196 board feet. The sale prices ranged from a low of \$223/MBF to a high of \$756 and averaged \$420, an increase from last year's \$377/MBF.

Survey Response Discussion

Volume of timber sold: Since the survey only catches a voluntary sampling of the timber sales occurring across the state, the number of reported sales cannot be definitively used to indicate an increase or decrease in the total number or volume of timber sold. However, many consultants indicated a decrease in the number of sales they had in the second half of the year due to uncertainty of the markets and an increase in other jobs, such as invasive control and TSI. The general feeling is that landowners and foresters are being more selective in the sales they are offering due to the markets.

Value of timber sold: For perspective, timber prices in 2021 were at historically high levels as demand outpaced supply for nearly all species and grades. In fact, these prices were so

out of the ordinary that some have viewed it as a “bubble” or “crazy high”. Nice while it lasted but bound to burst. When looking at the value of timber prices for all of 2022, all three quality levels continued to stay strong. For instance, the high quality sales in 2022 averaged \$1,086/MBF, compared to the 2021 average price of \$1,164/MBF. Medium quality sales in 2022 averaged \$654/MBF compared to \$652 in 2021. And the low quality sales increased to \$420/MBF from the \$377 in 2021. However, it is hard to look at 2022 as a whole and not in the context of the first 6 months and the second 6 months. For the high quality sales conducted January to the end of June, they averaged \$1,256/MBF, 8% above the 2021 prices. In comparison, the sales in July to the end of December averaged \$831/MBF, a steep decrease. This pattern is consistent with the other quality levels as the medium sales averaged \$697/MBF in the first 6 months compared to \$581 in the second 6 months and the low quality sales were \$472/MBF in the first half of the year and \$334 in the second half. But here is the perspective. Those second half numbers are

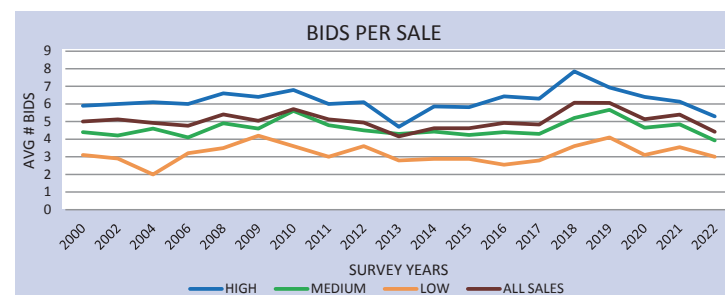


Figure 1. Average sale price by year and category in \$/1000BF.

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Private Land Conservation: Classified Forest & Wildlands Program

By Brenda Huter

The Classified Forest & Wildlands program is one of the longest running and most successful private land conservation programs in the nation. There are now just under 860,000 acres and 13,000 landowners enrolled.

Before European settlement, the 22.4 million acres now known as the state of Indiana was around 80% forested. By 1920, only 6% remained forested. The forests had been burned indiscriminately to open land for agriculture. They had been cut to provide timber for Indiana's growing cities and infrastructure. Remaining woodlots were frequently pastured with cows or hogs. There was concern that Indiana would become a treeless state. The denuded hillsides of southern Indiana eroded, causing gullies so severe (Photo 1) that they can still be seen on the landscape today. This is the environment in which the Classified Forest program began.

In spring of 1921, the state legislature passed the law that created the program. The purpose was to encourage Hoosiers to keep their existing forests and to grow more. In return for providing society with the benefits of having forest (timber, clean water, wildlife habitat), landowners received a property tax reduction. In 1921, a participant only had to have 3 acres of land instead of the current 10-acre minimum. Back then, the property didn't even have to have trees at the time of enrollment. Landowners had three years to get trees established.

In 1979, the legislature created a sister program called the Classified Wildlife Habitat program. As the name implies, the focus of the program was conserving privately owned lands (grasslands, shrublands, wetlands, small woodlots) for



Photo 1. Severe erosion gully on farm in Morgan County (circa 1930).

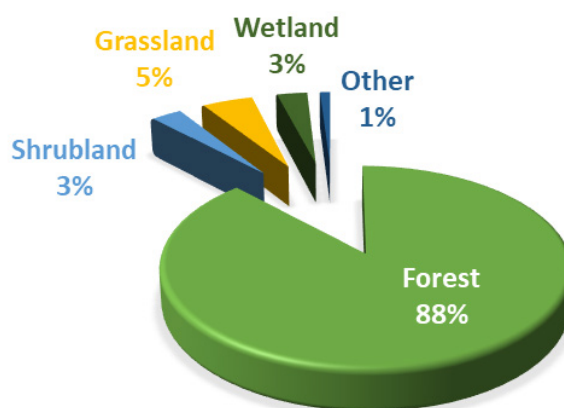
wildlife. In addition, the program also promoted protecting watersheds and preventing soil erosion. The minimum acreage requirement was 15 acres.

In 2006, as part of an effort to reduce redundancy in state government, the two programs were merged into the present-day Classified Forest & Wildlands program. The current program has a minimum acreage of 10 contiguous acres that can be made up of a variety of habitats (Figure 1).

The program benefit that initially draws most landowners to the program is still the property tax reduction. Lands in the program currently pay \$0.15 - \$0.35 per acre in property taxes. The actual tax per acre depends on specific county's tax rate. In comparison a property not enrolled in the program could have taxes \$1.50 - \$30+ per acre depending on if the land is considered agricultural land or excess residential land.

There are additional benefits of being enrolled in the program. Enrolled landowners receive a free property management plan

and access to their district forester, a state employed professional forester who works with private landowners, on a regular basis. District foresters meet with landowners one-on-one a minimum of once every seven years, walk the property, provide management suggestions based on the landowner's and the program's objectives, and provide information about sources of funding to accomplish those activities. The district forester



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then writes the information into a management plan which the landowner can refer to as needed.

The Division of Forestry is always looking for ways to expand program benefits. In 2010, forest certification for enrolled forests was added. Companies and consumers around the world want to know that their wood products are coming from well managed forests. Forest certification is a way to prove that the forest is managed in a way that provides forest products while also protecting for water, soil, plant, wildlife, and special features. There are companies that look to buy timber from certified forests. This benefit opens the certified timber markets to classified landowners at no cost. More than half of classified landowners (446,000 acres of forest) have taken advantage of forest certification.

In return for the benefits of the program, the landowner agrees to several things. They must follow their management plan. However, the management plan is a living document. As conditions on the property or landowner goals change, the plan can be updated. The landowner also agrees to a return a survey every year updating the Division of Forestry on what was accomplished on the property the previous year. The landowner must also post Classified Forest & Wildland signs (Figure 2).

There are limitations on what activities can occur on a classified property, but landowners are often pleasantly surprised by what is allowed and even encouraged. Classified land cannot be used to grow crops including hay, graze animals, or have buildings. Classified land can be use for wildlife food plots, hunting, timber, camping, and trails provided the activity is in line with the management plan and precautions are taken to minimize impacts.

Entering the program or purchasing classified land should not be taken lightly. When classified land transfers ownership, the classified status remains with the property. Land remains



Figure 2. The current Classified Forest & Wildlands property sign celebrating the program's centennial.

classified until a landowner voluntarily removes it or the Division of Forestry removes it for noncompliance. There are fees for withdrawing land from the program - up to ten years of back taxes with 10 percent interest for all tracts plus \$100 flat fee and \$50 per acre for tracts enrolled after June 2006. Whoever is the owner at the time of the withdrawal is responsible for the fees. Even if the landowner only owns the property for one day when they decide to withdraw, they are responsible for all the withdrawal fees. The fees serve as a disincentive for new owners to remove land from the program.

Classified landowners are doing resource management across the state. Based on the 2021 landowner report, 24% of classified tracts had a least one management activity completed on it during that year. The top three most frequently reported management activities were timber stand improvement (TSI), invasive species control, and brush pile construction for wildlife. Figure 3 provides list of management activities and reported impact. Impact in the table understates the accomplishments as some landowners do not include amount of work accomplished on their annual report.

Figure 3. Top resource management activities reported on 2021 Classified Forest & Wildlands Annual Report

2021 Management Activities	Number of Tracts	Impact
Timber Stand Improvement (all types)	1,623	22,265 Acres
Invasive Species Control	1,584	21,771 Acres
Brush Pile Construction	1,000	4,280 Piles
Trail/Road Work	933	263 Miles
Wildlife Food Plots	789	1,861 Acres
Strip Disking/Strip Mowing	459	2,665 Acres
Timber Harvest	269	9,594 Acres

The Classified Forest & Wildland program has been Indiana's most important private land conservation program for over a century. The program was successful in its earliest purpose of returning forests to the Indiana landscape. The mission for the next hundred years is to keep and expand well managed forests and wildlife habitats for the future generations of Hoosiers.

Brenda Huter is a stewardship coordinator with the IDNR Division of Forestry. Brenda's career with the Division of Forestry began at Yellowwood State Forest where she served as a GIS Intern and later became a Resource Specialist. She assumed her current duties in 2004. She also serves as a meeting facilitator and is trained in wildland firefighting.

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The Birders' Dozen Profile 6: Wood Thrush

Dr. Jessica Outcalt, consulting bird biologist

Welcome to the Birders' Dozen! We've reached the halfway mark of the series, and in this and the next six issues we are going to continue introducing the bird species from Forestry for the Birds. The Birders' Dozen are forest birds that can benefit from targeted management practices, as most are declining due to habitat loss. We've curated this list to cover a wide range of habitat types, from young to mature forest, open to closed canopy, or dense to non-existent shrub layers. Our goal is to engage landowners and foresters in the process of managing forests for wildlife, or "forests for the birds."

Susceptible to habitat fragmentation and loss across both its breeding and wintering grounds, the Wood Thrush is a secretive migratory species with a big voice, and has become a poster child for forest management tools. The Wood Thrush is an interior forest resident, particularly of diverse habitats with a shady, open forest floor and decaying leaf litter for invertebrate foraging. Mature forest landscapes, rather than small isolated fragments, provide optimal protection from edge-specializing nest parasites such as Brown-headed Cowbirds. For landowners who don't have large woods, improvement of small stands and edge-dominant habitats can also benefit Wood Thrush, especially during the migratory period.

Natural History

Wood Thrushes are mature forest specialists. More specifically, mature forests with moist floors and understory cover are consistently used by Wood Thrushes, as well as areas with large trees like beeches and maples for singing perches and production of leaf litter for foraging microhabitat. Thrushes eat primarily insects and fruits, so habitats that provide resources for insects and fruit-bearing shrubs are important. Nesting success is often determined by protection from predators, and larger forest areas (250 acres or more) have lower risk from predators like snakes, raccoons, and domestic cats.



Wood Thrush. Photo courtesy Matt Williams Nature Photography.

Wood Thrushes nest in shrubs or young trees, usually in areas with denser shrubs than the surrounding forest. These small, brown birds are generally monogamous during the breeding season, though males and females often engage in mating outside their pair. Females are the primary nest-builder, though males can help. Nests are built in small trees or shrubs in clumps of vegetation to provide camouflage from predators. Thrushes will lay 3-4 small turquoise-green eggs, which the female incubates around 12-13 days before they hatch. Both parents feed invertebrates or fruit to the young, which fledge around two weeks after hatching.

Peak fall migration for Wood Thrushes in Indiana is generally around late August, while peak spring migration is generally mid-May. During migration, thrushes increase their consumption of high-fat fruits, since fat is the main energy source used to make the long flights necessary to reach wintering habitats. Like many birds in the Birders' Dozen, the Wood Thrush spends the winter in Central America after flying non-stop across the Gulf of Mexico. These trans-Gulf flights are taxing on birds, requiring them to significantly increase their body mass through eating fatty fruits like spicebush and elderberry fruits.

Habitat Management

Despite dependence on large, mature forest patches, Wood Thrushes also use edge habitats during migration seasons, where high-fat fruit such as dogwood and elderberry are more abundant. Smaller patches that may be used less in the breeding season may still be used in other seasons or as overflow habitat from larger patches, and their management can still benefit Wood Thrush. In addition, habitat loss in wintering habitats in Central America has been identified as a possible reason for declining numbers of Wood Thrushes; support of conservation in Central America and agroforestry systems such as shade-grown coffee can further benefit both birds and people.



Wood Thrushes, like mentioned before, are mature forest specialists. They are best able to thrive in large areas of forest, and breeding in smaller patches is more difficult and less successful. One reason for this difficulty in reproduction is a bird we met last issue, the Brown-headed Cowbird. When Wood Thrushes are forced to breed in smaller patches and areas with more edge habitats, especially adjacent to lawns and pastures, they are more susceptible to cowbird parasitism. Cowbirds lay their eggs in a thrush's nest and force the thrush to raise cowbird young as their own. Management strategies that encourage growth of large areas of mature forest can mitigate this problem to some degree.

Another aspect of management that can greatly benefit the Wood Thrush is a targeted invasive species removal plan. As mentioned earlier, Wood Thrushes need high-fat fruits, particularly during migration. Though invasive plants like bush honeysuckle produce fruits, these fruits are high in sugars and low in fats, making their nutritional value very low. Management plans that incorporate invasive species removal and encourage growth of native shrub patches can provide better sources of fuel for Wood Thrushes and many other migratory species, as well as providing areas for shelter and nesting.

Agroforestry—the intersection of crop production and forestry—can also provide a useful framework for Wood Thrush conservation. In the breeding range, bird-friendly maple syrup production can benefit Wood Thrushes, and shade-grown coffee crops in the wintering range, which leave the tropical forest canopy intact, can provide habitat as well. Audubon Vermont, the original inspiration for Forestry for the Birds, has produced a series of resources for bird-friendly maple forest management (cited under References), and Purdue Extension is also producing resources to help landowners improve their maple syrup production. In addition, consumers may be able to choose bird-friendly or shade-grown coffee, which encourages habitat for migratory birds as well as sustainable livelihoods for farmers.

Conclusion

This beautiful and vocal bird, adding its wood flute song to the forest symphony, is a favorite for many, and mature


forest management can greatly benefit their declining populations. Encouraging growth of native shrubs in large forest tracts, leaving the forest canopy intact, and allowing a well-developed leaf litter layer to thrive can all encourage Wood Thrush breeding areas. In addition, some agroforestry techniques like shade-grown coffee in Central America and maple syrup production in the Midwest can also provide habitat for these charismatic birds, helping both birds and people to thrive.

Special thanks to the Alcoa Foundation, the Indiana Forestry Educational Foundation, and The Nature Conservancy for their support and leadership of Forestry for the Birds.

Jessica Outcalt was an independent consulting biologist who worked with The Nature Conservancy to develop the "Birders' Dozen Profiles." She is now an Agriculture and Natural Resources educator with Purdue Extension in Grant County. She completed her BS in biology at Taylor University, her PhD in wildlife ecology at Purdue University, and is passionate about birds and getting people involved in conservation and scientific processes.

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Early Years of Indiana's Forestry Movement - John P. Brown and The First Indiana Forestry Association (Part 2)

By Bill Hoover and Robert Mayer

Indiana Forestry Association

Brown established IFA on March 17, 1899 in a meeting he called at Indianapolis Commercial Club. The officers elected were John P. Brown, Connersville, President; William H. Drapier, Indianapolis, First Vice President (VP); Amos W. Butler, Indianapolis, Second VP; John Holliday, Indianapolis, Third VP; Albert Lieber, Fourth VP; Joseph W. Bates, Broad Ripple, Fifth VP; William Watson Woollen, Indianapolis, Secretary, and Lewis Hoover, Indianapolis, Treasurer. Forest and park committees were formed. A congratulatory letter from Prof. C. A. Schenck, Biltmore School of Forestry, was read at the meeting. Membership was expected to be 300 to 500.

The first annual meeting was held in Indianapolis on January 13, 1900 with 30 members present. Its purpose was to encourage management of forests. Brown held that a significant cause of land clearing for crops was the taxation of both at the same rate. This argument was first made in 1874 by M. B. Kerr in the "Indiana Agricultural Report." An example of the support behind this effort was the detailed resolution adopted by the Indiana Horticultural Society following Brown's presentation in 1898.

An Act for the Encouragement of Forestry (S.L. Ch 256, p. 570) was enacted in 1899. It was repealed February 27, 1905 (S.L. Ch 49, sec 3, p. 64). Its provisions were too cumbersome to be effective and reflected a poor understanding of silviculture. It was, however, the first law in the nation providing tax relief for timberland owners. It authorized \$1 per acre assessed value for qualified forest land. This was the precursor of Indiana's Classified Forest Act of 1921.

At the second meeting on January 19, 1901 meeting of the Indianapolis's Commercial Club, Brown reported a gratifying increase in interest regarding protection of forests. He presented the outline of a bill to be presented to the Legislature for the creation of a State Department of Forestry with a permanent forester in charge.

IFA's first annual meeting was held on January 13, 1900 at the Commercial Club Building. The members agreed to focus their efforts on the establishment of forests on the states' waste land. Brown read a paper followed by a discussion of the issue raised. Brown declined to stay as president. Albert Lieber, founder of Indiana's first state park, assumed the position. General John Colburn became vice-president, and Brown secretary and treasurer. A requirement for frequent meetings was removed from the articles of formation because the large distance between Indianapolis and members' homes made it necessary to rely on correspondence. Lacking staff, Brown and a few members handled this work. Annual membership fee was \$1.00.

A special IFA meeting was held on September 20, 1900. Brown reported on the work over the last 6 months. It was decided to publish the report for distribution, and petition the Legislature to provide support for its work. IFA had 250 members, residing in 28 states, Mexico and Australia. Brown reported on his trip to the Pacific Coast to inspect forests. Presidents of most Western railroads supported his trip. He left in May 1900, traveled through 10 states, covered 10,850 miles by rail and stage. He gave addresses at many meetings, and got information from railway officials that they intend to plant trees and take care of forests under their control. He encouraged Indiana farmers to plant quick-growing trees as a patriotic duty, as well as a profitable investment. On his trip he was asked to investigate the cause of pine trees dying in the Black Hills of South Dakota. He identified the cause as bark beetles and recommended burning bark and leaves. He reported that the redwood forests were nearly exterminated by corporations, and recommended government protection of the remaining groves. Brown was a seer.

Editors of the Boonville, Indiana newspaper published in 1901 a lengthy article on the various "branches" of forestry. It focused exclusively on the status of Indiana's forest land. Brown first cited statistics on forest area and timber volumes

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for the eastern U. S. and then for Indiana. Brown was cynical regarding what he considered overestimates of timber availability.

Indiana was formerly one of the best wooded regions in America. Thirty thousand square miles was our inheritance. The greater part has disappeared several years since. Thirty years ago Indianapolis was the center of the hardwood trade of the United States. We now import almost our entire consumption of timber. We see from the car window a skirting of trees which would indicate a distant body of woodland, but if we should leave the car and go to any of these apparent groves it would be to find but a few worthless beech, left because of the labor in working them up said Hon. John P. Brown in a recent address, but just beyond would appear another grove, the same character of the first. Here and there have been left a tree, occasionally a bit of wood, but except for a few localities there are no forests. At some stations on the railways there are standing on the side track one or two flat cars, partially loaded with logs. "They are the last of the Mohicans,"

Gathered up from long distances, one here, another there, from some bluff or water course to be shipped to the city sawmills and veneer works. Our walnut, cherry, poplar, maple, ash and many other valuable trees are practically gone, while even our village streets have given up their venues of native trees, our people having gone wild over the most worthless tree ever introduced into a city – the cottonwood—as the only worthy of an Indiana street.

Brown reported on IFA's accomplishments. Through its efforts 1.5 million trees were planted. Fifty railway companies had become interested in the cause; several having planted 65,000 to 100,000 each for cross ties. Five thousand packages of seeds for timber trees were distributed to several states, Australia and New Zealand. Two forestry related laws were enacted. He collected existing publications on forestry, mostly from US Bureau of Forestry. Thirty-eight thousand booklets and circulars on forestry were printed and distributed. Brown stated that "The literature sent out by the association has changed public opinion very materially in Indiana and other

states. It is hoped that this good work may go on in the greatly increased proportion with the new organization."

The Bedford newspaper published the part of the report dealing with the economic impact of forests and timber processing.

Fifty thousand citizens of Indiana are employed in wood industries and receive annually \$15,000,000 in wages. The product of this labor brings \$50,000,000 each year to Indiana manufacturers. This was the statement of John P Brown, Secretary of the Indiana Forestry Association in a recent address. He believes that the first century of Indiana's history will measure the end of Indiana's forests. When Indiana was organized as a state there were in her boundaries 28,000 square miles of valuable woods. There are now only 48,900 square miles in all the prairie states; 44,970 square miles in the lake states, and 80,000 square miles in the central or manufacturing states. Mr. Brown declared that the greatest part of Indiana forests has disappeared; that the state now imports almost all its entire consumption of timber; that walnut, cherry, poplar, maple, ash and other valuable trees are practically gone. He estimates that if the 6,500,000 acres of rough lands and swamps not suited for agriculture in Indiana could be afforested it would add to the State's material wealth \$500,000,000. It would double the value of Indiana's land assessment; whereas if the rough lands are to remain as at present no income can be hoped for.

IFA ceased operations on May 25, 1901 by a vote of its members to accommodate formation of a new enlarged organization, the International Society of Arboriculture. It had 300 charter members, residing in thirty states and several foreign countries.

International Society of Arboriculture

Brown established the International Society of Arboriculture (ISA) to capture a broader audience. Arboriculture is now associated with urban forestry, but in the early 20th Century it referred to forest conservation in general. The articles of incorporation provided that "The purpose of the Association

Continued on page 13

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2022 Indiana Consulting Foresters Stumpage Timber Price Report *Continued from page 3*

still strong historically. The high quality second half prices are higher than any prices in the history of this report prior to 2018. The medium quality second half prices were the highest ever before 2021. And the second half low quality prices were higher than any prices reported for that category before 2019. See Figure 1 for the annual prices.

Median values: In contrast to averages, which can be skewed by extremely low or high values, median values are often a better indicator of timber value trends. The median values also indicate strong prices from a historical perspective. For high quality sales the 2022 median price of \$1,026/MBF was less than the average price of \$1,086. It was less than the 2021 median price of \$1,180/MBF but far exceeded the previous high of \$865 set in 2020. The medium quality sales in 2022 had a median of \$614/MBF which was an increase of nearly 3% from the previous high of \$598 set in 2021. The low quality sales median in 2022 was \$469/MBF as compared to the average of \$420. The median far exceeded the previous high of \$432 set in 2021. See Figure 2 for median prices.

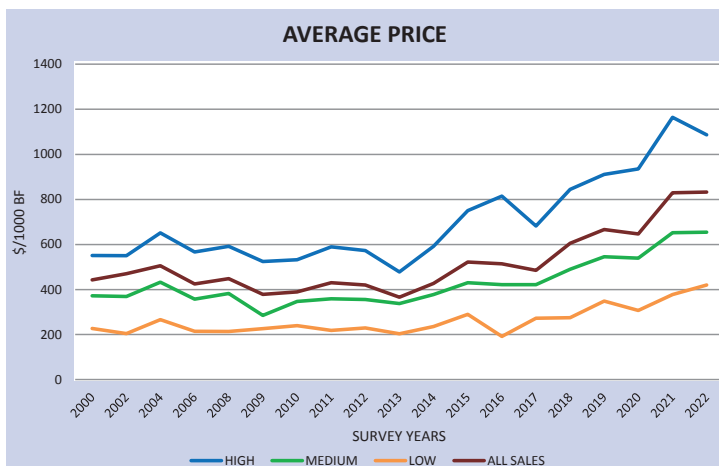


Figure 2. Median sale price by year and category in \$/1000BF.

Sale bids: Across all of the sale categories there were a total of 760 bids received for the 172 timber sales. This is an average of 4.42 bids per sale. This is the lowest overall average since 2013. For high quality sales the average number of bidders was 5.30. This is a steep decline from the average last year of 6.13 and the historical average of 6.24. The 5.30 bidders is the

lowest average for high quality sales since 4.70 in 2013. For medium quality sales this year's average was 3.93 bids/sale. This was also a significant decline from the record high 4.84 from last year and is in fact, the lowest since the survey began in 2000, falling short of the previous low 4.1 in 2006. The average bids for medium quality sales since 2000 is 4.61 bids/sale. Finally, for the low quality sales the average number of bidders in 2022 was 3.00. This is lower than the 3.55 from last year and the lowest since the 2.80 in 2017. The average since 2000 for low quality sales is 3.18 bids/sale. See Figure 3 for bids per sale.

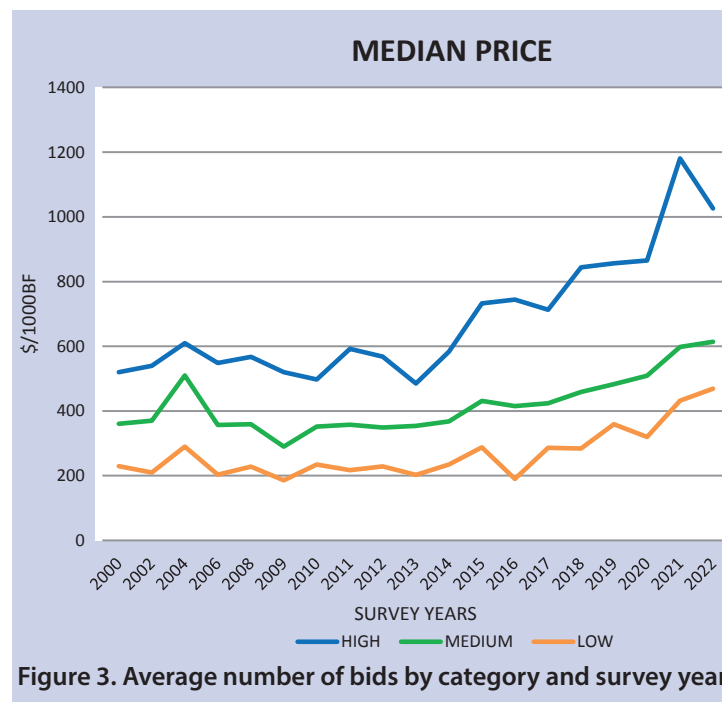


Figure 3. Average number of bids by category and survey year.

Conclusions: The number of surveys received for the year 2022 was a decrease from last year, both in number of respondents and the number of sales reported. This may or may not indicate a reduction in timber sales across the state but comments made indicate it is a reduction of sales administered by some consultant foresters. There are a number of reasons, including workload in other types of work conducted by consultants, but the cooling of timber prices did seem to slow down sales in the second half of the

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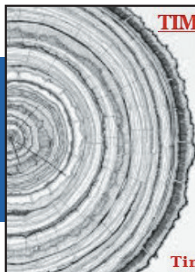
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year. However, the survey shows that timber prices continued to surge in the first half of the year, surpassing even the record 2021 year across all qualities of sale. When prices did cool off in the second half of the year, they continued to be strong from a historical perspective.

Consultant Comments and Other Thoughts

Note: These comments are the opinions of individuals from different parts of the State and with different markets. They may or may not be relevant to your situation. You should always discuss timber marking and marketing with your consultant to get the best information relating to your timber management.

- It appears the extremely high timber prices of 2021 and into 2022 have passed and expectations going forward should be tempered somewhat. Doesn't mean the markets are bad, they just aren't breaking records anymore.
- Markets were especially high in the first half of the year with some of the best white oak and black walnut prices we have ever seen. Second half the markets have cooled but still good prices. Good timber is still in demand but some of the marginal timber might receive a bit less interest.
- Prices and interest seemed to slow down throughout most of the year except for white oak. Even walnut interest declined with fewer bids from the normal walnut buyers who said they were struggling to get orders for green walnut lumber. Most have said that the veneer prices were still good however.
- Pallet mills have a good supply at the end of the year so they are not as aggressive as earlier in the year.
- I had one white oak sale in November that went very well and they cut it right away for fear the markets might start dropping for white oak. The sale had 12 bidders which is much more than normal. We normally average 3-5 bids on decent sales.
- A buyer mentioned that they are not carrying much standing inventory because of the fear of prices dropping even further.
- We put up fewer sales this fall than normal because of the dropping prices and less interest from buyers.
- It was one of our lowest selling years for timber. Our tree planting and brush control has grown to over half our business now. These two services have pushed down our TSI and timber sale numbers. With projected numbers for future Farm Bill work I don't see that changing without an increase in staffing.
- The interest rate hikes coordinate almost perfectly with the downward spiral in the lumber market spot prices in the second half of the year. On the stump, this meant a lot of uncertainty but fairly resilient pricing yet. I always find it fascinating that stumpage prices are very slow to drop on

forester sales, but in private sales I am sure they dropped more.

- I held back on some sales in the fall, unsure if I should proceed. We had some sales in December that went well enough that I'm inclined to keep selling timber. What I am considering is cutting back on how many trees I sell of certain species that have taken the biggest price hits, like red oak. This may mean slightly lighter harvests until the markets stabilize.
- The lumber industry seems to have made its corrections fairly quickly, so I think we will hit equilibrium again in the first quarter of 2023 on the supply/demand side.
- Of all the markets, the typically strong northern Indiana pallet grade market was the most resilient, but that domino is likely to fall soon too. If yards fill up and people buy enough timber contracts, we'll more likely to see fewer or no bids, rather than lower prices on the stump.
- If the Fed is going to keep raising interest rates and cause an actual recession...all bets are off but it won't be as bad as 2008-12 for sure. So far, I think stumpage pricing is staying fairly firm at a slightly lower level with potential to creep back up a bit, but the crazy high price days are over. I think the housing market has yet to see its full correction, but that is probably around the corner so there are still headwinds to navigate.
- The white oak market continues to be driven by the stave market (whiskey barrels). Large white oak especially brings higher values even if they are not high-quality trees.
- In southern Indiana large quantities of pine are being sold as there are several different markets available.
- Good stuff almost always sells well but it doesn't mean you should sell it.
- Access and contract terms are important to timber value. Financing flexibility and ease of operations can add thousands of dollars to your sale value.
- Sealed bid sales on marked and tallied timber offered to a wide range of buyers is the only way to make sure you get the best price for your timber on any given day.
- Good or bad timber prices should not be used as an excuse for poor forest management. Planning, waiting for trees to be ready, controlling invasive species and timber stand improvement is still important for the long-term health and productivity of forests and will pay off in the long term.

Some timber buyer comments:

- It seems that consultants aren't putting much timber out there which is causing good interest in current sales and even though the lumber markets are contracting, bidders are putting good money on available material at current pricing guidelines.
- We have to run our mill in good times and bad. Loggers



need to work no matter what the market conditions warrant.

- I am concerned we will lose more loggers available to harvest timber through these turbulent times.
- The hardest thing to endure is unstable markets. The market took a moon shot into historical pricing and now collapsing back into something normal. I think the pricing might dip down below normal and hopefully levitate and settle down into stability. It is so difficult to create a business plan even 6 months down the road not knowing where the market will be at the time of harvest.
- I have never seen such market volatility in my 40+ years in this industry and I've never seen the market declines this long and at this time of year. Generally, you see market stability in early fall through winter. Not this year.

- With the Fed increasing interest rates along with this runaway inflation causing the housing markets to cool, I think it will continue to create problems for our industry. Too many unknowns that have to play out.

Professional Consulting Foresters responding to this survey in alphabetical order: Arbor Terra (Mike Warner and Jennifer Boyle Warner), Bear Forestry (Abraham Bear), Cox Forestry Consultants, LLC (David Cox), Creation Conservation, LLC (Brian Gandy), Chris Egolf, Ernst Forestry (Dan Ernst), Gregg Forest Services (Mike Gregg), Habitat Solutions (Dan McGuckin), Haubry Forestry Consulting, Inc. (Rob Haubry), Meisberger Forestry, LLC (Matt Meisberger), Multi-Resource Management, Inc. (Doug Brown and Anthony Mercer), Rooted In Forestry, LLC (Mike Denham and Andrew Suseland), Stambaugh Forestry (John Stambaugh), Steinkraus Forest Management (Jeff Steinkraus) and Woodland Works (Nate Kachnavage).

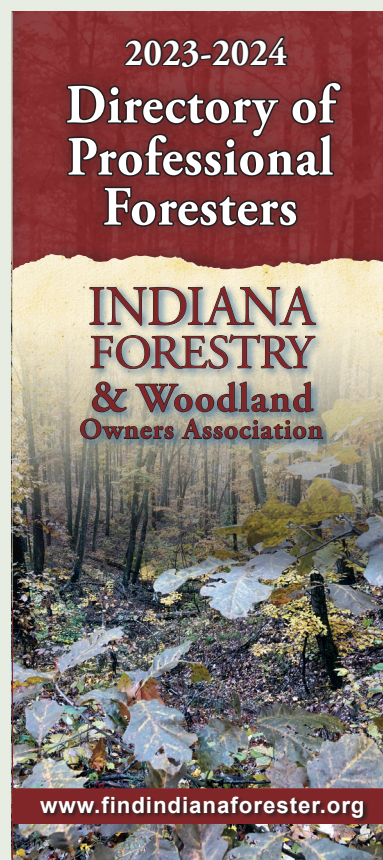
New Foresters Directory Available

A new Directory of Professional Foresters, listing Indiana foresters who provide private woodland services and advice, has been published. Foresters are located throughout the state and provide assistance such as management plans, timber sales, tree planting, invasive species control, and many other services.

The Directory is available via interactive map at www.findindianaforester.org to find foresters by county or address or to download the brochure. Printed copies of the booklet are available at county Extension offices and county Soil & Water Conservation District (SWCD) offices or from a state Division of Forestry district forester.

"Finding the resources to help you meet your woodland management objectives is important and key to successful stewardship of private woodlands," says Lenny Farlee, Purdue Extension Forester. "Professional foresters can provide expert advice and assistance to meet your property management goals."

Indiana Forestry & Woodland Owners Association (IFWOA) is dedicated to conservation and sustainable management of woodlands in Indiana. IFWOA advocates for scientific best practices for management to achieve objectives of clean water, wildlife habitat, soil protection, native species diversity, timber production, recreation, carbon sequestration and many others. More information about IFWOA and how it is Working for Indiana Woodlands is available at www.ifwoa.org or call 765-496-5013.



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Early Years of Indiana's Forestry Movement *Continued from page 9*

is to introduce judicious methods in dealing with forests and woodlands; to advance and advocate a public interest in the subject; to promote the afforestation of unproductive lands; to encourage the planting and care of shade trees in parks, public and private grounds, and along streets and highways; to inspire an interest in our remaining native forests, and groves of ancient trees, and to seek their preservation; to supply information to railway of officials in regard to timber culture for railway uses, and incite railway and other corporation to plant trees for economic purposes.”

The articles of incorporation defined arboriculture as “a science that teaches how great are the influences which forests or trees exert upon a community; not only from the economic uses for which wood is adapted for man’s benefit, but in their far-reaching effect upon climate and thus on the welfare and permanence of nations and peoples. ‘Arboriculture’ is full of interest and is of vast importance to mankind. Forestry, as usually understood, pertains to the management of forests. Arboriculture comprises forestry and also includes every subject relating to the growth of trees and their influences.”

Brown’s decision to transition from a state to an international association may have been a significant factor in the reduction of Brown’s reputation in the state. Albert Lieber, president at the time of the transition made his opinion public in a newspaper article based on an interview by a newspaper writer.

“I see,” said Albert Lieber, “that John P. Brown of Connersville, has held a meeting at that place and organized what he calls “the International Society of Arboriculture.” Mr. Brown does not tell us how many persons were present at this meeting to assist him in launching this society with the ponderous name. Mr. Brown was secretary of the Indiana Forestry Association, of which I was president. He was instrumental in having the forestry bill passed, and expected as his reward therefore to be made secretary of the forestry board, with a salary of \$1,200 a year and \$200 additional for expenses.

“He is very bitter now, as the Governor has seen fit to give that place to another. He wrote to me about disbanding the Indiana Forestry Association. I replied that there was no

hurry; that we could keep the association together until we should see whether the State Forestry Board would replace it. I do not think there is much need of an international association, such as Mr. Brown alleges that he formed at Connersville. The State forestry law properly enforced will probably cover the ground.”

Mr. Brown who was here last night on his way to Michigan City, says he was authorized by a majority of the members of the State association to disband it. He says J. Sterling Morton, of Nebraska, was elected president of the international society. Mr. Brown was made secretary. He says the new society has 300 charter members, representing twenty states.

As with IFA, Brown recruited men of wealth and influence as officers. J. Sterling Morton, founder of the Arbor Day movement was president of the ISA on the date of his death, April 25, 1902. William J. Palmer, Colorado Springs, Colorado, succeeded him as president. James H. Bowditch, Boston, Massachusetts, was vice president, and Brown, Chicago, Illinois, was secretary-treasurer. ISA received verbal support from the Secretary of the Interior, General Noble, and the U. S. president at the time, Benjamin Harrison. Four thousand copies of the first edition of the “Arboriculture” magazine were printed to fill subscriptions. This magazine was somewhat unique in the large number of illustrations included in each issue. They were primarily photographs from which electrotypes were produced for printing.

ISA received hundreds of letters per week requesting information. Brown wanted responses to be based on “much thought and practical knowledge.” He responded to many inquiries, especially those of general interest, with articles in “Arboriculture.”

A special notice from Brown addressed to ISA members appeared in July-August 1905 “Arboriculture.” (p. 155) In it he clarified that he was the sole owner and publisher of “Arboriculture” and he alone was responsible for all its “utterances.” Also, that no officer or member of the ISA was morally or financially responsible for anything appearing in the magazine. The notice was apparently generated by readers objecting to the focus on catalpa.

Continued on page 15

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Pignut Hickory

By Lenny Farlee and Dan Cassens

Indiana is home to many hickory species including pignut hickory. Pignut hickory, like all of our hickories, has alternate leaf arrangement, compound leaves, typically with five leaflets but sometimes with seven. The twigs tend to be smooth and dark brown in color and the end buds (terminal buds) oftentimes have an ice cream cone shape and will be covered with light tan to brown scales (Figure 1). Pignut hickory is typically found on upland sites with good soil moisture drainage. Oftentimes, pignuts will be associated with other species such as mockernut hickory, shagbark hickory and several of our upland oak species.

As we mentioned, typical leaves are five leaflet compound leaves, although occasionally we will find seven and sometimes they can be mixed on the same tree between five and seven. This is one of the good characteristics to help us with identification of pignut hickory compared to red hickory, which looks very similar in many instances. Red hickory typically has seven leaflets, but unfortunately sometimes five so that characteristic is not completely reliable. We're oftentimes looking at the average leaflet count across the tree with pignut, typically five, and red, typically seven.

The bark on pignut hickory actually varies quite a bit in pattern. Typically, the bark will have long running ridges that are medium to dark gray in color (Figure 2). And sometimes we'll see a little bit of plating and exfoliation on those ridges as well, suggesting to some extent shagbark hickory, but the plates typically aren't nearly as broad or smooth and don't exfoliate nearly as much as what we typically see on shagbark or shellbark for that matter.

Another good identification characteristic for almost any of the hickories is looking at the shape of the nuts and the hull itself. A pignut hickory nut is very rounded with a very smooth actual hull on the outside edge of that nut. The husk on the nuts of pignut hickory can also be helpful to us. Think about pignut meaning partial, that is, the sutures on that husk itself only split part way down the sides of the nuts (Figure 3). This helps separate it from red hickory nuts that have sutures on that hull typically split all the way down to the base of the nut. So pignut hickory, one of our common upland hickory species easily confused with red and some other species, but take a look at that leaf count number on the compound leaves and the husk on the nut and that'll help you with identification.

Wood characteristics vary greatly in hickory. The wood is nearly semi-ring porous, so the growth rings are usually somewhat subdued like walnut.



Figure 1

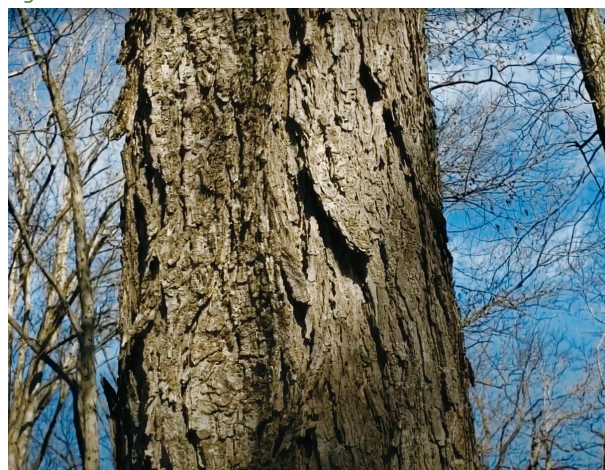


Figure 2



Figure 3

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Northern trees are usually very slow growth, and the rings are very tight. Southern trees may be somewhat faster growth. In true hickories the change from large to smaller pores is abrupt so these woods appear grainier as compared to the pecan hickories where the change is more gradual.

Hickory has a wide variety of uses. It is popular in the kitchen cabinet industry where it may be selected for all clear wood or with many of the small character marks left in the cuttings. It can also be selected for color as there is substantial contrast between the white sapwood and the brown heartwood. It is also used in flooring and furniture. Products made from hickory are often marketed as pecan regardless of the hickory species used. Because of the hardness, strength, toughness, and resiliency, hickory has had and continues to have many

traditional uses. One traditional use is tool handles, such as sledge hammers, axes, picks, and hammers. Hickory is able to withstand the impact that occurs with these tools. It is prized for smoking meats, making skewers, and for using as fuel wood due to its high density.

Lenny Farlee is an extension forester with the Hardwood Tree Improvement and Regeneration Center at Purdue University. Prior to the HTIRC, Lenny worked with private landowners as a district forester for the Indiana Division of Forestry for more than 15 years. Dan Cassens is a professor emeritus of wood products at Purdue University. Dan and his wife Vicki own and operate Cassens Trees Christmas tree farm in West Lafayette, Indiana. More information about tree identification and hardwood lumber can be found online at <https://www.purdue.edu/fnr/extension/>.

Early Years of Indiana's Forestry Movement *Continued from page 13*

ISA's outreach was primarily through its magazine "Arboriculture." Brown was the editor, primary author of articles, and photographer. It was published from September 1902 until October 1909. It was initially published in Chicago, IL, but later moved to Connersville, IN. Brown's work with the railroad industry was obvious for the first several years of publication. Railroad companies were the primary advertisers. They promoted leisure travel to the west and hotels in major cities. Banks and industrial firms in Indiana also bought ads. In the later years the ads were from a broad range of companies, even ladies' magazines. Farming equipment manufacturers advertised, as well as tree nurseries, including one in Connersville, IN run by Brown's brother. The ads and donations from major supporters were not sufficient.

Conclusion

It is overtly apparent John Pickney Brown was unique. Mr. Brown possessed inimitable, mostly selfless interests pertaining to not only trees and forests, but also encompassing the myriad amenities they provide. He could see the utility of the forest. He recognized its potential benefits, simultaneously noting the costs of real and potential abuse. Mr. Brown was equally a forestry pacesetter and a seer. He recognized the ecological, hydrological, economic and climatic benefits forests provide to society at large. Indeed, Mr. Brown was a rare person possessing intellect, curiosity, compassion, and above all, stamina. Via his forum, The International Society of Arboriculture, millions of trees were planted, tens of thousands of educational booklets found their way to numerous states and foreign countries, and recognition of the importance, nay necessity, of trees became a popular topic. Mr. Brown truly was unique.

Perhaps Johann Wolfgang von Goethe envisioned John Brown when he forecast "Knowing is not enough; we must apply. Willing is not enough; we must do". Our overview is a tribute to a forestry pioneer. John Pickney Brown's contributions remain very significant. Regardless of the species' utility, his choice in selecting catalpa as a savior species remains valuable. Based simply upon Mr. Brown's overt interests and scope of personal activities, he should rank equally or greater than peers, many of whom were excellent facilitators, but lacked material participation. One should not view any single person's forestry accomplishments as symbolic points gained for infamy; all should be acknowledged and highlighted for their collaborative and cumulative contributions.

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¹ The Indianapolis News, March 17, 1899, p. 7.

² Boonville Standard, Boonville, IN. March 31, 1899, p. 3.

³ American Forester. 1900, 6(1):41. American Forestry Association.

⁴ Indiana Agricultural Report. 1874, p. 281.

⁵ The Indianapolis Journal, Indianapolis, IN. January 20, 1901, p. 3.

⁶ The Indianapolis News, Indianapolis, IN. January 13, 1900, p. 13.

⁷ The Indianapolis Journal, Indianapolis, IN. September 21, 1900, p. 3.

⁸ Boonville Standard, Boonville, Indiana. March 1, 1901, p. 2.

⁹ The Bedford Weekly Mail, Bedford, Indiana, 22 March, 1901, p. 4.

¹⁰ Bristol Banner, Bristol, Indiana, "Connersville special." May 31, 1901, p. 3.

¹¹ *ibid*??

¹² The officers disagree over the breaking up of the Indiana Forestry Association. The Indianapolis News, Indianapolis, Indiana, May 28, 1901, p. 8.

¹³ "Arboriculture." 1904. 3(11):699.

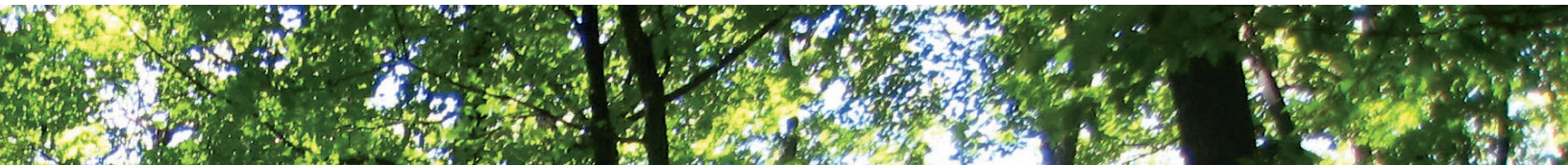
¹⁴ "Arboriculture." 1909. 8(1):25.

¹⁵ "Arboriculture." 1904. 3(11): 759

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Days Gone By



Left: Soft maple stacked on end for quick drying at Farrell's Mill, Decker, Indiana (undated). Right: Holding a scale on a clear maple log, Redmon Basket Company, Peru, Indiana (circa 1933). Photo credit—Roy C. Brundage.

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