THE MICHIGAN BIG TREE PROGRAM

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ABSTRACT

The Michigan Botanical Society (MBS) hosts and maintains a state register of the largest trees occurring in the State under the Society's Michigan Big Tree Program. Initiated in 1956 by Paul Thompson, who was also its first coordinator, the continued tracking of our big trees has been carried out by MBS botanists through the volunteer efforts of subsequent Big Tree Program coordinators Elwood Ehrle, Andrew Sawyer, and Ted Reuschel, as well as numerous more certifiers over the years and more than 40 current volunteer certifiers. The Big Tree register displays 639 trees as currently active. Field checking of species during 2022 by certifiers yielded 19 new or reconfirmed state champions. Five specimens submitted to the American Forests' National Registry of Big Trees during 2021 are still national champions. Information is presented regarding development of the Society's Big Tree register along with instructions for accessing it online, both by computer and by smart phone.

KEYWORDS: big trees, state and national champion trees, Michigan Botanical Society, Michigan Big Tree Program.

INTRODUCTION

Trees, especially very big trees, have always held a special fascination for people. Not only can they enormously outsize any other living thing, but they also may outlive us by several generations. Recognizing this, it is perhaps only natural that records would begin to be kept and friendly competition arise to see where the very biggest trees reside. Thus most, if not all, states now maintain such a register—finding, measuring and registering the largest individual of each species. Each state has an agency or organization that has stepped up to sponsor the program in their state. In Michigan it has been the Michigan Botanical Society (previously known as the Michigan Botanical Club).

Aside from general public interest, why is it important to maintain such records? As stated on the Society's website for the Michigan Big Tree Program:

> First, it is a vital record of a precious natural resource. These trees are typically the oldest of their type, and therefore their genetic material is also the oldest and may play a critical role in species preservation. These trees are also growing at the physiological limit for their species, and if global climate change is coming these trees will likely be the first to be affected. The register is also important because humans have always enjoyed a close relationship with trees. Many of us had a favorite tree from our childhood, a tree that provided shade, adventure, inspiration, or recreation. Trees have also been central to our history and our faith. Consider the metaphors of the "Tree of Life," "Our Family Tree," or "Our Roots," or the role that council trees and trail marker trees have played in our history. The register stands as a record of grand examples of these historically, spiritually, and personally important trees.

HISTORY

In September 1875, "in response to rapid and wasteful postwar development and intense wildfires," concerned citizens founded the American Forestry Association, later renamed American Forests (American Forests 2023a). Over ensuing decades their conservation pursuits focused on such conservation efforts as promoting the need for a national forest system (U.S. Forest Service), collaborating with President Franklin D. Roosevelt in the establishment of the Civilian Conservation Corps, pioneering tree planting as a social responsibility on a national scale, and providing a platform for legendary conservationists such as Gifford Pinchot, Aldo Leopold, and Ansel Adams. As a natural outgrowth of its efforts to advocate for wise management and conservation of forests for future generations, American Forests established the National Champion Trees Program in 1940 to engage the public in forestry activities by way of a national search to discover and document the largest living tree of each species in the United States.

American Forests has published its National Registry of Big Trees ever since with the initial support of the Davey Tree Expert Company and, on an ongoing basis, in collaboration with state coordinators. These standings were eventually published every two years, and the Official Register of Champion Trees is now posted on the Internet (American Forests 2023c).

Michigan was among the first states to follow the lead of American Forests and began searching for its own state (and possibly national) champions. The Michigan Botanical Society (MBS) was organized in 1941 (albeit under a different name than it currently has) and initiated its own Big Tree Program soon afterward. Paul Thompson, a research associate at the Cranbrook Institute of Science in Bloomfield Hills, Michigan, became MBS's first Michigan Big Tree Program Coordinator and began the accumulation of an official record of the state's largest trees of each species. Early records were of course maintained manually and printed by typewriter. Paul Thompson also published status accounts of Michigan's big trees in *The Michigan Botanist* that were especially focused on champion trees, including 17 national champion trees (Thompson 1975, 1986), as well as a popular article that appeared in the magazine of the Michigan DNR (Thompson 1983).

Paul Thompson served as Michigan's State Coordinator for over 40 years until his death in 1994 (Fitzstephens et al. 1994). At that time the position was transferred to Dr. Elwood B. ("Woody") Ehrle, a botanist who was then the President of the Michigan Botanical Club and who had served as Professor of Biological Sciences and Provost at Western Michigan University (WMU) (WMU News 2009). Program efforts and records were centered there for 15 years, during which Ehrle published numerous papers on Michigan's champion trees and shrubs in *The Michigan Botanist* (e.g., Ehrle 1997, 2003, 2006; Ehrle and Thompson 1992).

During the early decades of the program, the list of trees on the Michigan Big Trees register grew dramatically, at one point reaching over 1100 active specimens. Contributing to this growth were the concerted efforts being made by sev-

FIGURE 1. Register # 1305. Black walnut, *Juglans nigra*, Kalamazoo County. With Deb Hoeksema. Photo by Roger Hoeksema.

eral tree specialists with access to a great variety of species in a concentrated setting. Notable among them were:

Jeff Boddy of the Leila Arboretum in Battle Creek. The Arboretum dates to 1922 when the land was donated to the city of Battle Creek. Soon afterwards, a number of trees were planted that make up some of the largest specimens today. It was then largely idle until 1981, when a group of citizens established the Leila Arboretum Society. There are now more than 2,500 marked trees and plants. (Brett Myers, pers. comm.) Thanks to Jeff Boddy, a number of them are now on the state register of big trees.

Stuart Bassett of the W. K. Kellogg Biological Station. The station was once the summer residence of cereal magnate W. K. Kellogg. Beginning in the late 1920s, he not only cared for the surrounding natural forest, but also planted a wide variety of other trees and species. Upon his death, the lands and properties were gifted to Michigan State University. As groundskeeper, Stuart Bassett began caring for the trees in 1980 and set out to conduct an inventory of the

FIGURE 2. Register # 1256. Bur oak, *Quercus macrocarpa*, Berrien County. With Greg Carra. Photo by Don Carra.

species growing there. In 1983, having seen an article in the local media about a "Big Tree Contest" and noting that even the planted specimens were over 50 years old and of considerable size, he entered a number of them in the contest. Several turned out to be state champions. Contest entries continued to be made in ensuing years and also made their way into the Michigan Big Tree Register. Mr. Bassett retired in 2022. (Stuart Bassett, pers. comm.)

Robert Bloye. During the late 1980s, Robert Bloye enrolled at the University of Michigan to pursue graduate work in Forestry. There several professors, including Burton V. Barnes and Warren H. Wagner, Jr., who had collaborated on publishing *Michigan Trees* (Barnes & Wagner 1981; revised edition 2004), the preeminent guide to the trees of the Great Lakes region, persuaded him to join the Huron Valley Chapter of the Michigan Botanical Club (now MBS). That connection led to meeting big tree enthusiast and Michigan Big Tree Coordinator Paul Thompson, whom he subsequently accompanied on a number of big tree searches. Bloye later accompanied Woody Ehrle, then the Michigan Big Tree Coordinator, on many additional big tree jaunts. During the 1990s he and Woody developed a primitive register to document their discoveries. While at the University of Michigan, Bloye measured and recorded most of the trees on campus and in the University of Michigan Arboretum. He later enrolled at Michigan State University (MSU) in 1996 to pursue additional work in Forestry, specializing in dendrochronology. While teaching on the MSU campus and preparing for an overseas trip, he received a vaccine injection which left him quite ill and ma-

FIGURE 3. Register # 2286. Trembling aspen, *Populus tremuloides*. Chippewa County. With Casey Cloeter. Photo by Casey Cloeter.

rooned on campus. To make the best of it, he undertook to measure most of the trees and shrubs on campus. (Robert Bloye, pers. comm.). In time some of them found their way onto the state register of big trees.

Woody Ehrle continued to oversee the program from WMU, including the beginning of a computerized listing of specimens. Also, beginning in 1992, he was the first author of many papers in a new series about Michigan's champion trees published in *The Michigan Botanist* (Rabeler 1992). Initially with Paul Thompson and later with other authors, Ehrle published many short, individual accounts of each species. He also authored the most recent in-depth articles about the Michigan Big Tree Program, listing all of the champion trees and shrubs on record for the State (Ehrle 1997, 2003, 2006). In addition to a more elaborate

FIGURE 4. Register # 1958. Black ash, *Fraxinus nigra*. Gogebic County. With Joseph Youngman. Photo by Justin Miller.

history of the early program years, an overview of the techniques for measuring big trees was included, and a hope that interested individuals would continue to correct, update, and expand the big tree listings. Ehrle's (2003) article included a complete listing of all of the individual trees for which reliable data was available at that time. During the period between 1992 to 2005, numerous articles by various authors, many of them by Ehrle, appeared in the pages of *The Michigan Botanist* focused on individual discussions of 49 species of trees common to Michigan.

Upon the death of Dr. Ehrle in 2008, he was succeeded as Michigan Big Tree Coordinator by Andrew ("Andy") Sawyer. A member of the Southwestern Chapter of the MBS who also served as the organization's webmaster, Sawyer devel-

FIGURE 5. Register # 2259. Ironwood, *Ostrya virginiana*. Washtenaw County. With Tim Eiseman. Photo by Irene Eiseman.

FIGURE 6. Register # 1208. Red pine, *Pinus resinosa*. Gogebic County. With Justin Miller. Photo by Justin Miller.

oped an updated digital register and used the improved version that he and Ehrle developed to track the ever-growing and ever-changing list of entries. Its 2012 version was titled the "Michigan Big Tree Register Species List." Not long afterward, however, the computer program became inoperative and could not be restored. This was a serious problem, and a variety of options for outside assistance were considered. With no likelihood of success in restoration in sight, in 2018 the new webmaster of the MBS, Sheila Bourgoin, was able to capture an earlier record of some 800 trees and transform it into a new computer program and register, which remains in use today (Michigan Botanical Society 2023a).

When Andy Sawyer retired from his position as State Coordinator late in 2017, he was succeeded in January of 2018 by Ted Reuschel, a retired forester from the Michigan Department of Natural Resources. About 150 new trees had accumulated which had been manually maintained by Mr. Reuschel during the period while the MBS Michigan Big Tree computer program was inoperative; and they were then added to the new register.

Ted Reuschel then began a review of the various records of big trees to assure that all past records were accounted for in the new MBS register and were also up-to-date. The new register, constructed from available data in 2018, was compared with that recorded in the prior MBS program. Additionally, MBS member Jim Charvat was able to obtain a printed copy of the 1999 record kept at WMU. This was also compared. In both cases, discrepancies and missing trees were evaluated, and to the extent reasonable, brought into agreement, updated, or dismissed from consideration for various reasons.

As suggested by the early titles of the various listings, which included the terms "inventory" and "shrubs," these lists grew to include a very large number of trees and shrubs. The result was a record of some 1500 specimens! It was found that these records included a vast number of species, including non-natives (often cultivated in private yards or public places), hybrids and varieties, and small shrubs, many of which were very difficult to identify by anyone but an expert botanist. Frequently, there was only one representative of a species on the entire register, which was thereby automatically considered a champion. The records also included many species that would never reach typical tree size or form. Furthermore, per national and state standards, each of these would also require a 10-year re-measurement in order to remain active. During this same time, field re-visits and data updates for previously registered trees had been relatively limited, so that a large inventory of outdated information was accumulating.

This presented a big task for the State Coordinator and the field certifiers. Consequently, the MBS Michigan Big Tree Committee agreed to pare down the list of species that Michigan would track, including elimination of most species in the "shrubs" category. This was completed in 2019 and endorsed by the MBS Board of Directors. Over time, therefore, the focus of the program has shifted from a broad and open scientific inventory of large specimens to a publicly appealing register limited to Michigan's bigger trees.

TABLE 1. Michigan Big Tree Program volunteer certifiers active between 2017 and 2022. SLP = Southern Lower Peninsula, NLP= Northern Lower Peninsula, EUP = Eastern Upper Peninsula, WUP = Western Upper Peninsula.

Banda, Nik, SLP	Gordon, Meghan, SLP	Reuschel, Ted, SLP
Becker, Nia, NLP	Graeff, Alex, WUP	Reuschel, Tedd, SLP
Bielecki, Jim, NLP	Grieshop, Winona, WUP	Sailor, Byron, WUP
Botti, Bill, SLP	Grieve, Jerry, NLP	Sillings, Darrell, SLP
Brandon, Eric, NLP	Hagan, Donna, NLP	Sinnaeve, Kelly, NLP
Brondyke, Bill, WUP	Hallfrisch, Patrick, EUP	Skean, Dan, SLP
Brooks, Matt, WUP	Hansen, Bill, SLP	Smith, Kelley, SLP
Buchanan, Zach, EUP	Hoeksema, Rog and Deb, NLP	Solomon, Zachary Hough, NLP
Burhop, Carl, SLP	Hunter, Ben, WUP	Spiedel, John, SLP
Carra, Don, SLP	Kaiser, Joe and Jodi, EUP	Stemple, Matt, SLP
Caveney, Ned, NLP	Koops, Lance, SLP	Theiner, Bob, NLP
Collins, Anne, EUP	Koski, Marie and Mark, SLP	Thiel, Susan, NLP
Darling, Jason, SLP	Kraft, Adam, SLP	True, Marion, WUP
Denning, Rod, SLP	Lindberg, Linda, WUP	Veneberg, Brad, EUP
DeVet, Carly, WUP	Lucas, Rick A., NLP	Wallace, Alicia, SLP
Dickinson, Hunter, NLP	Miller, Justin, et al, WUP	Wendling, Dave, SLP
Edwards, Bob, WUP	Mohlman, Jerry, WUP	Willis, Gary, WUP
Eiseman, Irene and Tim, SLP	Mueller, Lee, SLP	Woodrich, John and Andy, SLP
Gatesy, Greg, and DeBoer, Cal, SLP	Parker, Dylan, EUP	Young, Joe, SLP
	Pilon, Jack, NLP	

BIG TREE CERTIFIERS

A program of this magnitude would be impossible to carry out without a team of enthusiastic and dedicated volunteer certifiers around the state who conduct inspections in the field. There are currently more than 40 volunteer certifiers working statewide to keep the Michigan Register up-to-date and to assure that new trees are carefully reviewed in a timely manner. During each year a few certifiers retire, but others are gained. Additional certifiers are needed in some areas. Table 1 lists certifiers active in the program since 2017.

Anyone can become recognized as an MBS Big Tree certifier. All it takes is (i) a willingness to travel around a county or two, (ii) an ability to confirm the identity of tree species or to identify the species using a key, and (iii) an ability to take and record accurate measurements using a measuring tape, a forestry tape, or a smart phone with a height and diameter app and GPS capability). Certifiers take photos of the trees they are evaluating, which are also needed for documentation. Each certifier is provided with Michigan Botanical Society/Big Tree Program business cards that help to establish legitimacy when they knock at the door of folks with potential big trees. The card, which has the certifier's phone number and email address, can be left with a short note on the back when an owner is not home. Certifiers can also purchase safety green T-shirts or sweatshirts to provide improved visibility when working in the woods or along busy roadways and help identify bonafide certifiers with the MBS Big Tree program.

GENERAL PROGRAM OBJECTIVES

Each year the Michigan Big Tree program receives new nominations or referrals and measures and certifies new trees in the field. Like the National Register of Champion Trees, which requires re-verification of national champions every 10 years, the Michigan program also updates the measurements for the top ten trees of each species that have not been revisited within the previous ten years. It is also necessary to delete any trees from the register that have died, have been cut down, or have been severely damaged.

Standards and Procedures

The Michigan Big Tree Program, like that in most other states, directly follows the standards and procedures developed by American Forests, and described in its Measuring Guidelines Handbook (American Forests 2023c), instituted in about 2019. Following these procedures builds on and relies upon the experience and expertise of a team of experts at the national level and provides consistency for comparisons among states across the country. Information on how to measure a Big Tree is posted on the MBS website (Michigan Botanical Society 2023b).

INSTRUCTIONS AND PROCEDURES FOR CERTIFICATION

Basic guidelines for Michigan certifiers, which are to be followed in gathering all of the pertinent data on each tree, are summarized in the MBS document *Procedures for Certifiers: Basic Steps*. This is available from the Michigan Big Tree Coordinator upon request. Certification and other special program instructions and procedures are on file in the archives of the MBS in the documents that are listed below. In general, for most trees, the procedures are simple and consistent, and require obtaining a total point score for a candidate tree based on (i) girth in inches, measured at 4.5 feet above the ground, plus (ii) height in feet, plus (iii) one quarter of the average crown spread in feet. There are of course exceptions to the norm in nature that require modifications to these procedures. For example, branching or abnormalities may occasionally occur at the 4.5 foot girth height, or the tallest limb may not be situated over the base of the tree or might extend over a slope or depression or mound, or the crown spread may be highly irregular or may reach partly across a neighbor's fence or a river or pond. Procedures for dealing with these exceptional circumstances are also covered in a number of the documents listed below.

In the interest of insuring the program continues into the future and that its details are carried out consistently and accurately, several documents have been prepared that detail what and how to perform the responsibilities of the State Coordinator and the field certifiers. These documents are based on the national standards of American Forests and are on file in the MBS archives, or they can be requested from the Coordinator. They are:

Responsibilities and Procedures for the State Coordinator
Procedures for Certifiers: Basic Steps
List of Big Tree Certifiers
Guidelines for Listing of Trees on the Big Tree Register
List of Species Not Tracked on the Michigan Big Tree Register
How To Verify Trees Nominated for National Champion Status: Guide for State Coordinator
Michigan Big Tree Record Form

STATUS OF MICHIGAN BIG TREES IN 2022

The focus, variety, and level of activity undertaken by big tree certifiers in a typical program year are illustrated by the following summary of the 2022 calendar year.

The Michigan Big Tree website includes a nomination form for individuals who believe they may have an exceptionally large specimen (Michigan Botanical Society 2023c). Completed nomination forms are automatically forwarded to the state coordinator for initial evaluation. During 2022, 74 nominations were submitted through the MBS website—a rate of about six per month. An additional 86 nominations did not use the MBS website, and instead came directly to the state coordinator or were reported through certifiers by outside observers. The 160 nominations submitted represented 41 of Michigan's 83 counties. Of these new nominations, 31 trees were determined to be too small to warrant an on-site inspection by volunteer certifiers. Another 10 were disqualified without visit due to obvious multi-stem origin. Two were of a species not tracked in Michigan, and three were trees already on the register. Of the remaining 114 nominations, 97 trees were visited, and 17 trees remained to be checked at the end of the calendar year.

During 2022, certifiers also continued to evaluate the status of the roughly 260 trees which had been found listed on an older unpublished register, titled *Michigan Big Tree and Shrub Inventory—1999*. This register had been maintained by Woody Ehrle while he served as Coordinator, and some of its entries dated back to 1958. From this list one more tree was able to be evaluated in 2022, leaving just six trees remaining to be checked in subsequent years.

In accordance with national and state standards, certifiers also performed the 10-year updates for trees already on the Michigan Big Tree Register. They were able to complete 24 re-visits of these, either through field inspection or other determination. About 13 trees still remained to be re-inspected at year's end.

The National Registry of Champion Trees, sponsored by American Forests (American Forests 2023b), has its own set of national champion nominations, submitted directly to it by individuals, bypassing the state big tree programs, although its register does list all state big tree programs and their coordinator contact information. There were around 72 of these that came to the program's attention in 2021. A systematic review of these at that time had found that 23 were already smaller than the current national champion and therefore not contenders

and not warranting further attention. Some 39 others were found to be multi-stem, dead or lost, or of a species not tracked by Michigan. For the 10 or so that still had potential, those field inspections were all completed by the end of 2021.

The net result of all of these efforts was that the 2022 program ended with 639 trees listed as active on the register. Of these, our certifiers had measured 19 trees which either became brand new state champions or were confirmed as continuing state champions after their 10-year re-inspections.

2021 NATIONAL CHAMPION TREES

American Forests maintains the register of the largest trees of each species in the nation. At one time, several decades ago, Michigan had 53 national champions on the register. Over time, other states stepped up their searches and found larger trees. Also over time, since national champions require 10-year updates, some of those in Michigan fell off the list for lack of attention. Only one remained a national champion. However, during 2021, eight new specimens were submitted to the National Registry of Big Trees for national champion consideration. Five of them were declared new national champions. A sixth, a red pine, is pending further review. They are listed in Table 2, with photos on the preceding pages.

It should be noted that in 2022 the American Forests organization determined that it was no longer able to oversee the national champion tree program and was seeking a new sponsor.

ACCESSING THE BIG TREE REGISTER

The data resulting from field activities of certifiers is entered by the state co-

TABLE 2. Michigan's official national champion trees as of 2021 (beginning in 2022, American Forests temporarily suspended its national big tree program).

Big Tree ID number	Common Name (*Latin name*)	County	Score	Girth (inches)	Height (feet)	Crown Spread (feet)
1305	Black walnut (*Juglans nigra*)	Kalamazoo	376	242.2	102.4	124.8
1256	Bur oak (*Quercus macrocarpa)*	Berrien	448	325	91.3	127
2286	Trembling aspen (*Populus tremuloides*)	Chippewa	247	117.5	119	42
1958	Black ash (*Fraxinus nigra*)	Gogebic	274	142.6	114.7	66.5
2259	Ironwood (*Ostrya virginiana*)	Washtenaw	199	112.3	70.3	67
1208	Red pine (pending) (*Pinus resinosa*)	Gogebic	248	119	118.6	41

ordinator into the register of trees that is viewable on the MBS website. Readers who wish to access the MBS Big Tree register to search for information about a particular species or individual Big Trees may refer to Appendix 1 for detailed instructions for doing so.

SPECIAL CONSIDERATIONS AND FREQUENTLY ASKED QUESTIONS (FAQS)

The Michigan Botanical Society recognizes that there are other interests by big tree enthusiasts and that many people have reasons to be fascinated by big trees other than their huge size alone. It should be noted that there are Facebook pages and other websites that are potentially filling the void between scoring big tree size and just enjoying other features of big trees. Such sites are welcome, and independent specialty programs are preferable to making sweeping compromises to modifying the current MBS Michigan Big Trees program in order to accommodate all potential interests.

Occasionally there are other questions and suggestions regarding the MBS Big Tree Program's philosophies, policies, and procedures**.** Appendix 2 addresses a number of these frequently asked questions (FAQs). If needed, the MBS Big Tree Program coordinator can be contacted for additional information.

ACKNOWLEDGMENTS

This project could not have been carried out without all the wonderful volunteer Michigan Big Tree certifiers over the many years of the program, and special thanks is extended to all those mentioned in Table 1. Appreciation is expressed to members of the MBS Michigan Big Tree Committee, Sheila Bourgoin, Garrett Crow, and Dan Skean, for their service and input. The MBS is especially grateful to Sheila Bourgoin not only for serving as the Society's webmaster, but also for all the hard work she does to maintain and improve the Michigan Big Tree Register.

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APPENDIX 1. ACCESSING THE MICHIGAN BIG TREE REGISTER.

Accessing the Register from a Home Computer

To view the current register of all active big tree records:

From the MBS website (http://michiganbotanicalsociety.org), click on *Michigan Big Tree Program* in the left-hand column,
On the next screen, click on the words *through this page*
On the next screen, click on the words *View the Big Tree Database on Google Docs*

The Big Tree register data will then be displayed. The records will be in numerical order by Big Tree ID number. Any column can be re-ordered alphabetically or numerically by hovering the cursor just to the right of the letter at the top of that column and clicking on the arrow that appears and on the choice of ordering.

To search for a specific tree, including an inactive one, or if more detail about a specific tree is desired than is displayed on the register, or if some column data is partially hidden:

Go to https://c4cmr419.caspio.com/dp/74645000e1389520deb149ddac90
Enter the user name: Guest
Enter the password: Bigtreeguest
Click on "login"
Enter the tree ID number or other parameter and click on "search."

For further information, scroll to the far right, and click on "view details."

As an example, you might remember that a huge black maple (*Acer nigrum*) in Alpine Township, Kent County, had been declared a state champion in the past, but on the current Big Tree register you find it listed as *Acer saccharum*. When accessing further information, you will find the following under Historical Notes: "Previous record in 2008. However, was misidentified as black maple. 2018 inspection by Don Carra and Garrett Crow determined it is a sugar maple [*Acer saccharum*]. Species was corrected, and updated measurements applied. 2008 measurements were 320-."

There may be times when different arrangements of the Big Tree register may be of use or interest to certifiers or the public. When the Big Tree register is accessed, the trees are readily ordered by species or another category by clicking on the heading of a column, as noted above. However, this method cannot produce an ordering of a species by *total point score*, the factor many are looking for as they evaluate new trees. To view a species sorted according to total point score:

Log into the register as described above
Select the species you are searching for

Click on "search"

Note that there may be gaps between some listings due to photo insertions, so be sure to scroll down in order to view all entries. To re-order by total points score, click on the word "Points" at the head of the column. The entries will re-order by total point score, beginning with the largest.

Accessing Sorted Register Data in the field

It is often desirable when scoring a new tree in the field to immediately compare it to those of the same species already on the register. And it's helpful to be able to tell the owner on-site how their tree compares with other big trees. Fortunately, the Michigan Big Tree Register can be pulled up on a smart phone from just about any field location, although you may not be able to sort that data to group them by species (as can readily be done on a home computer). Here are several options for accessing sorted register data in the field:

Option 1.

Download the Michigan Big Tree register (which is an Excel file) on your home computer.
Edit the spreadsheet in Excel exactly as you want to view it on your phone.
Save the new file as a pdf.
Connect your phone to your computer with a plug-in cable.
Transfer the pdf data to your SD card or other data location.
Find your file location on your smartphone and open the pdf.
It is important to save the dataset in the format and order desired, because it cannot be edited or sorted on the phone, although it will be easy to scroll through.

Option 2.

Proceed as in Option 1 through saving the file as a pdf. Send the pdf file as an attachment to an email sent to yourself.
Open the email on your smart phone and click on the pdf attachment and scroll or enlarge as desired.
Note that you will need to leave the email active on your phone in order to have it remain available.
You can also readily obtain information for saving information to iPhones or Androids by searching on the phrase "transferring pdf files from computer to iPhone or Android" in your browser.

APPENDIX 2. FREQUENTLY ASKED QUESTIONS (FAQS) ABOUT THE MICHIGAN BIG TREE PROGRAM.

FAQ 1. What is the basis for the standards and procedures that the MBS has adopted?

In general, MBS has settled on these standards because:

1. They follow national standards that were developed carefully and applied by a team of national experts over many years. We are respectful and confident of their collective expertise and experience.
2. Most, if not all, of the states follow the national standards. Comparisons across the country would be complicated if there were substantial differences.
3. Several states have suspended or paused their programs for lack of leaders or field certifiers. If the program gets too demanding or complicated, this could be the fate of the program in other states.
4. The primary philosophy of both the national and Michigan Big Tree programs is to find and register only a limited number of the very largest trees of each species rather than all the trees that might be considered big. The national program recognizes only the single biggest specimen of each species. Michigan includes up to about 10.
5. Internal discussions within the MBS leadership, in particular the three-person "Big Tree Committee," over the years have settled on these standards as the most reasonable.

FAQ 2. Why is the number of registered trees in the database kept to a minimum and not simply left to accumulate thousands of big trees?

1. The overriding objective of the MBS is to list the several very biggest trees of each species for the interest and enjoyment of the general public. The register size becomes more unwieldy, more intimidating, and less user friendly for the average citizen as the number of tree listings increases.
2. Most big tree owners seem to be considerably less impressed by being number 11–25 on the list than by being able to say "top ten." Hence, the decision was made to list as active only the top ten trees of a given species, realizing that more is generally superfluous to the interests of the casual public.
3. Since tree status (i.e., still living vs. dead or diminished) changes over time, national and state standards mandate that each tree on the register be revisited every ten years. This is only fair to the runners-up who would potentially move to a higher position in the ranking. But that of course entails that an average of 10% of the total registry needs to be re-visited and updated each year. Certifiers already are pressed to keep up with these updates with just the current 600 or so trees on the register. In addition to these updates, we receive many new nominations each year that must be considered—in 2022, for example, 160 new nominations were received.
4. In order to have adequate back-ups when some of the top 10 trees die or are cut, it should be noted that MBS does in fact have more than 10 trees recorded for many of the more common and popular species. As the list grows, the state coordinator periodically moves trees scoring lower than the top ten to inactive status. They remain in the register but are not viewable by the public and therefore do not take up a lot of space on the visible register. If necessary, some of those can be reactivated if the number on the active register drops below 10 or so. But in general, the list of new trees is still growing faster than registered trees are dying.
5. As noted above, it is still a struggle to visit every tree that is newly nominated; it requires a lot of time and travel. So in the interest of not stressing the volunteer certifiers, new nominees of species that are already well-represented by apparently larger-sized individuals are not even referred for field inspection.
6. There is an ongoing search for more certifiers to ease some of the program's time restraints, and a few areas of the state could still use additional volunteers. In general, a couple are gained, and a couple are lost each year.
7. County-level competition has not been promoted simply because there would then be pressure to list 10 trees *per county*, thereby greatly increasing the size of the register.
8. At some point, the size of the database becomes larger than permitted by the google-docs program that we utilize. Photos that generally accompany each big tree entry particularly impact the database size, and are therefore reduced in size to less than one megabyte each.

FAQ 3. Why are only certain species tracked on the Michigan Register and others excluded?

1. This keeps the register size manageable, maintains maximum interest by casual citizens, and enables certifiers not necessarily experts in botany or dendrology to identify most species on the list. With this in mind, the MBS has determined that it will continue to list:

    a. All species native to Michigan that typically reach tree form and size, including those commonly considered understory species, such as *Hamamelis virginiana* (witch-hazel).
    b. Those non-native species that are popular and commonly planted in Michigan, are rather easily identifiable, do well, and typically grow to relatively large size
    c. All individual trees of a tracked species in the register that fall within the top ten in points for their species.

2. NOT included on the register are the following, unless their situation is outweighed by the criteria in 1) above:
    a. Most woody species that do not typically reach tree form and size
    b. Most woody species not native to the United States.
    c. Most horticulturally developed cultivars, ornamentals, and varieties of woody plants, and most natural varieties of woody plants.
    d. Most domesticated fruit and ornamental species.

e. Species with only one or two representative specimens for their species (due to their likely appearance only in arboretums, nurseries, university botanical gardens, or the like).
f. Trees that have been on the register but no longer fall within the top 10 in points for their species, and new nominations which would not fall within the top 10.

FAQ 4. Why are some species, even though not fitting the criteria for non-inclusion not represented by any entries in the register?

Individuals of eligible species with no representative may simply not yet have been nominated.

FAQ 5. Why are trees of multiple stem origin excluded from the register?

A 2019 nationally-instituted rule disqualifies trees of multi-stem origin. Michigan has accepted the conclusion of the National Register to make this distinction. In fairness to nominators and owners, girth measurements need to be on a comparable basis. Obviously, if two seedlings came up a few feet apart as distinctly two separate trees and over time pushed together and essentially fused, there would be no question that we were really measuring *two* expanding trees rather than one. This would be unfair to a tree which came up singly! Similarly, if two sprouts came up from the same stump, or one sprout immediately branched at ground level, and then both grew and fused as they continued to press together, we would again really be measuring *two* sprouts or *two* branches rather than one trunk. Again, this would be unfair to compare to a single trunk or branch. Admittedly, this can be a very difficult distinction to make.

FAQ 6. What criteria aid in distinguishing trees of multi-stem origin from those of single-stem origin?

1. On every field inspection the number of originating stems is always the first and often most difficult determination to be made. On both state and national registers, multi-stem specimens are not eligible. Following are some distinguishing details:
2. Technically, if a tree is of single stem origin, cutting it off at ground level would reveal just a single central pith (tree center). A tree of multi-stem origin would reveal more than one central pith. Therefore, by observation a certifier should determine the probable pith lines of each stem or branch between 4.5 feet and the ground. Every stem or branch whose individual pith line seems to extend all the way down to ground level must be considered a separate tree.
    a. However, if the pith line of any stem or branch appears to join the main stem above ground level, it should be assumed that the main stem originated first, and the others were branches developing later and higher, on and from the main stem. This is then properly considered of single-tree origin, and classified as a qualifying single tree.
3. While the supposed pith line is the key factor in classification, it is not always definitive enough. In such cases, other factors may aid in determination.
4. Perhaps the simplest indicator is when the two stems have not yet progressed very far in their merger, and an oval or figure eight cross section is still evident. Trunk outline and intact bark still curve inward where they meet. A single stem will be more likely to have a nearly round cross section.
5. It is more difficult when the merger has progressed farther. There is often a vertical crease or fissure where the two stems have eventually pressed together. Sometimes it is flush with the rest of the trunk. Other times it may still be slightly incurved, and still other times the pressure from growth is so great that the crease bulges outward. A caution here, however: lightning strikes may create similar features.
6. Study the entire circumference to look for complimentary indications on opposite sides. With merged stems, a crease or irregularity on one side of the tree will often (but not always) be evident on the other side. When it is not present on the other side, the determination leans somewhat more closely to a single stem possibility.
7. Since a typical tree tapers from its greatest girth at ground level on up to its very top, another approach which can aid in the determination is to note that trees of multiple stem origin usually have their greatest girth *higher* than ground level. This is because those multiple stems or branches are immediately growing outward and reaching out and away from each other. Thus, even though the individual trunks may no longer be distinct, their presence is rather obvious by an *increasing* girth as one moves up the trunk from ground level.

8. Looking up to the point where the trunk first clearly separates into two stems or branches can often be helpful. The angle at which one meets the other can be a clue. With a merger of two individual stems, they are close to parallel, especially the closer they get to ground level. But when the second stem meets the first more abruptly, as is exaggerated in the form of the Joshua Tree cactus, its origin is more likely a single stem. The second stem is then more likely to be a very low branch which formed slightly later. Alignment of bark strips can aid in tracking these branch angles.

FAQ 7. Does MBS furnish plaques for the highest-scoring trees of each species?

Although this was done for a time in the past, the practice has been discontinued. Part of the reason is the associated costs and practicality of producing and distributing the plaques. A further significant factor, however, is that with more than 100 new nominations submitted annually, the ranking of trees is continuously changing. It would also be disappointing to owners to have their plaque removed when larger specimens are found. However, a paper certificate can be provided upon special request to the state coordinator.

FAQ 8. Where are big trees most likely to be found?

1. Contrary to what might be expected, the biggest trees are probably least likely to be found deep within a forest. In such locations, competition for sunlight, water and nutrients is too intense, and inhibit growth.
2. Instead, by far most of the trees on the register are found in residential yards, along city streets and rural roadsides, in parks and cemeteries, in university plantings and arboretums, and in fencerows, farmlands, and open fields.

FAQ 9. Why are locations of big trees made public on the register? Doesn't this make them vulnerable to vandalism, trespass, litter, wear, or other damage?

1. Most private owners by far are happy and proud to have their tree on the register. Of course their trees are usually well protected simply by being on private property and often right in their yard. In a few cases, owners have expressed concern with listing of the tree's location, and their concern has been honored by withholding location data.
2. On public property, trees may be more vulnerable. But it's hard to imagine a Big Tree program that does not provide the opportunity for enthusiasts who want to see them. It seems that not many people actually go searching. And most such observers are, by their nature, respectful and protective of such specimens. It is believed that vandalism would be an extremely rare case, and no such cases have been reported in Michigan. There is of course a very small risk, but the program would potentially suffer by providing only a stoic list of inapproachable trees. Searching out monster trees is very exciting and rewarding for some.

FAQ 10. Is there a map showing the location and distribution of all registered trees?

Yes. A map showing the location of Big Trees in Michigan is available at https://www.google.com/maps/d/u/1/edit?mid=10bhoqyhFQyeU8mwj3hLL3pe15qCMuiC5&usp=sharing. Clicking on the tag at each location will bring up data for the tree at that location.

FAQ 11. Can big tree owners have their trees re-measured in advance of the scheduled 10-year update?

Generally not. Typically, MBS doesn't do updates prior to the 10-year update unless the tree in question is reported to be either dead or diminished. It has been found that some owners like more frequent updates for their own personal reasons or simply because they think they can get a jump on the current state champion by scheduling an earlier update. MBS tries to avoid having certifiers pulled back and forth on such issues when they already have more than enough to do. Hence, for consistency MBS prefers to stick to the rigid 10-year schedule

FAQ 12. Who may be contacted for additional information?

Contact the state coordinator, Ted M. Reuschel, tbreusch@comcast.net.