



Mark Rouw stands next to Iowa's co-champion red oak in Burlington's Dankwardt Park. It's 17 feet around at chest height, reaches 92.5 feet tall and its average canopy spread is 95.5 feet. The other co-champ is in West Liberty at Wapsi Park.

A champion tree is the largest known living specimen of its species. Trees are scored based on measurements for height, trunk circumference and average canopy spread. Each state has a big tree list of champions and contenders. The top scoring tree of all states by species becomes national champion.

A MAN AMONG GIANTS

Since 1972, Mark Rouw's Passion for Finding Iowa's Largest Trees Remains Rooted

STORY BY *BRIAN BUTTON* PHOTOS COURTESY *MARK ROUW*

No person in the history of Iowa knows more about big trees statewide than Mark Rouw, 68, of Des Moines. No one ever—living or dead—neither native, French explorer, pioneer or professor. What's more? Likely no one ever will. This is not overstated.

"I call him the 'Rain Man' of trees," University of Iowa arborist Andy Dahl says of Rouw's near-perfect memory of big trees statewide. "It's just amazing what he does."

For decades, volunteer Rouw has maintained Iowa's Big Tree Register, a list of the greatest living trees scored by standardized points. For decades, he's steadfastly crisscrossed Iowa in search of bigger trees.

For Rouw, perhaps data conveys the magnificence of big trees where words and art fail. His measurements—painstakingly, methodically acquired—are the best way to leave record for others to seek and find out the secretive rest he experiences upon sight of these arboreal wonders. When you see them, something happens deep in your gut—a reactive mix of thoughts and feelings: heavenly, magical and reverential that leaves one dumbfounded. It's something. Something big.

He recalls exact heights, trunk circumferences and canopy

spreads for oodles of trees, sometimes to the half-inch. For soft-spoken Rouw, it flows from within, stemming from his deep affection and connection to big trees. If he can't recall exactness, he'll look it up to safeguard sacred correctness. Accuracy is paramount. He's a stickler.

There are 140 species on the official list. Each often lists the top three-sized trees—arboreal gold, silver and bronze medalists so to speak. A precious few have become national champs—the grandest and largest known in the Union.

But Rouw's personal master list is even larger with 1,487 trees in sum. Here he keeps tabs on contenders—the top 44 black walnuts, largest 100 white pines, etc. Together, they'd make a small forest of titans. Instead they are scattered—hiding in valleys, campuses, cemeteries, parks, yards, groves, pastures and roadsides statewide.

FOLLOWING THE SLOW GAME

Sports fans follow teams in seasonal quests, but this patient tree watcher has followed this slow game a long time. He measured a tree last year that's now Iowa's second tallest persimmon. He started it from seed around 1978 and planted it in his boyhood yard. "I never imagined I'd measure a tree

I planted for the Big Tree Register,” says Rouw. This tree is somehow taller than its parent tree where he got the seed.

For many trees, he’s just caught the last seconds of their fourth quarter—former champs that gave to wind, disease, lightning or chainsaw. He can tell you where they were and detail their surroundings. Like a talent scout, he’s scoured statewide in search of those ever larger. He is relentless.

He is, by any account, obsessed by big trees.

He’s been this way a long time. At age 8, he walked past a big silver maple. Its trunk seemed huge. It impressed him. “That’s the first time I remember noticing a tree for size.”

Curious, he yearned to identify trees. A neighbor had a farm by Elkhart. “In summertime, I’d go up several times a week. I was free labor.” Riding along, “I’d point out a tree and ask what it was. That’s how I learned trees from a distance, not by examining leaves, twigs or buds, but subtle difference in texture, form and bark. That was kind of my thing.”

In sixth grade, he and a buddy explored nearby woods after school. One cottonwood caught his eye. Rouw looked up, amazed at its immensity. “It was kind of a big moment in my life—inspirational. It got me excited about big trees.”

A few years later, he stumbled across a copy of *American Forests* magazine. It listed America’s biggest trees. Rouw, mesmerized, felt validated. Here was proof that others, adults even, liked big trees, too.

In fact, the National Register of Champion Trees began in 1940, after exasperated forester Joseph Stearns wrote an article pleading people to find and recognize America’s largest trees. It ran a photo of Stearns adjacent the scorched hulk of the world’s largest tulip poplar—killed when hunters seeking winter refuge inside its hollow trunk lit a fire for warmth.

Ironically, Iowa’s champion sycamore—a grand giant in Geode State Park, also hollow, was damaged internally by fire last year by carelessness or arson. So far, its trunk, 23-foot, 6-inches around and 107-foot height has survived. Its canopy spreads 82 feet. Once it spread 102 feet, but time has claimed limbs. Eight people or more can fit inside its cavernous trunk. Despite mammoth size, this behemoth isn’t Iowa’s tallest or girthiest tree. Not does it have the most massive canopy.

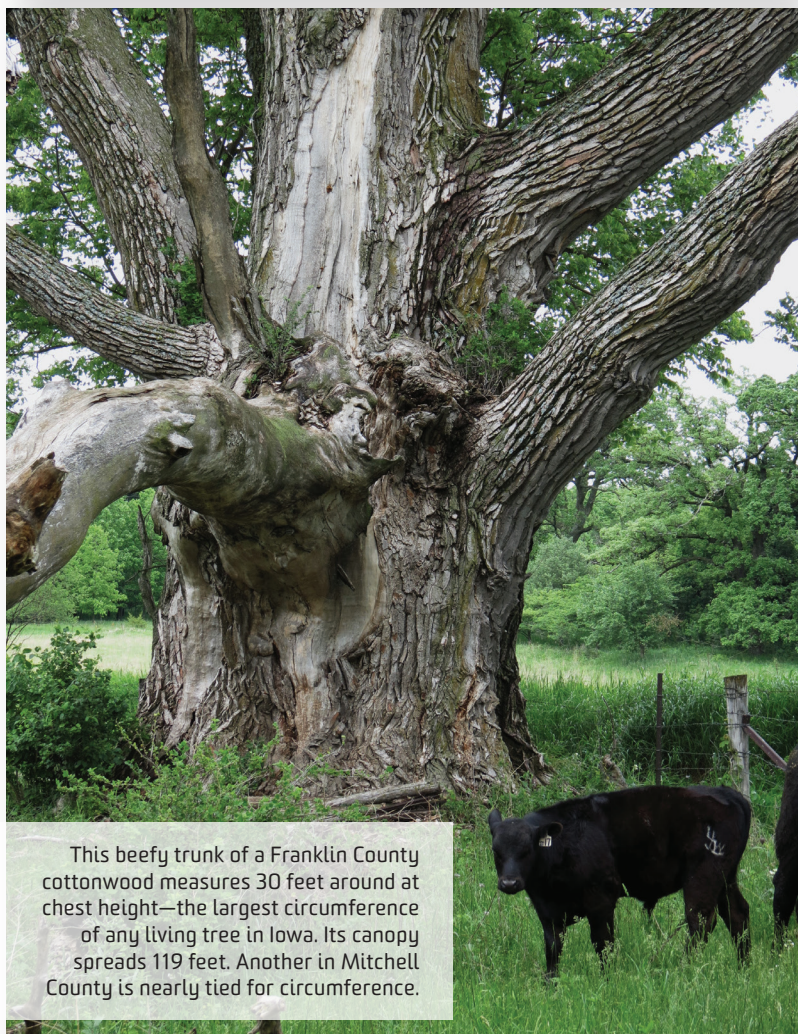
Today, Rouw gently voices details from memory, checked for accuracy against the list when he needs. A Franklin County cottonwood holds the current circumference record, its trunk nearly 30 feet around. (Circumference, or girth, is always measured at chest height—4.5 feet—not lower, where trunks are even more massive.)

Iowa’s height champ? An eastern white pine in Fayette County towers 151 feet, five inches—topping a 10-story building. It would easily rise above the beautiful Old Capitol at the University of Iowa and is one and a half times higher the campus campaniles at Iowa State and Northern Iowa. Given time and 38 more feet, it could top the world’s largest cereal mill—the Quaker Oats plant in Cedar Rapids.

A Lee County sycamore has maximum canopy, spreading a mind-boggling 155 feet. In some neighborhoods, its branches would span five houses.



Circumference is measured at 4.5 height. During the pandemic, Mark Rouw measures Iowa’s second largest Norway spruce in Glendale Cemetery in Des Moines. It is 16.33 feet around.



This beefy trunk of a Franklin County cottonwood measures 30 feet around at chest height—the largest circumference of any living tree in Iowa. Its canopy spreads 119 feet. Another in Mitchell County is nearly tied for circumference.




This Dallas County silver maple in 1992 measured 28.5 feet around, 73 feet tall and its canopy spread 84 feet. Impressive, but it’s three trunks fused together and ineligible for the champion list.



This former Iowa champion pin oak no longer stands, but its trunk once measured 19.5 feet around at chest height. It stretched skyward 87 feet and its canopy spread 123 feet. “It was in that category that when you first saw it, you knew it would be Iowa’s biggest,” says Rouw. “We may never see another this large.”

GET EXPERT ADVICE AND CARE: For tree care, advice or pruning, seek certified arborists. Get a tree consultation to learn of any wounding, root issues, defects or pruning needs or learn if removal is actually necessary.

Certified arborists pass exams that cover 14 subjects and maintain credentials with continuing education at seminars and workshops. They must show certification cards on request. Find arborists at: iowaarboristassociation.org



First measured by Mark Rouw in 1979, this American elm was 12.3 feet around, 72 feet tall and spread 80 feet. He remeasured in 2021. Now more than 17 feet around at chest height, the canopy spreads 104 feet. Its height remains unchanged, suggesting this tree at this site has reached its maximum height potential.

Trees on Iowa's Big Tree Register are documented and recorded for posterity and to advance understanding about tree size, but receive no legal protection by being on the list. People are often curious, excited and receptive to having their big trees measured.

Before making decisions on tree removal or pruning, first obtain advice from certified arborists. Poor pruning can harm trees or pruning may not even be necessary. Certified arborists have extensive training and knowledge. Find them at iowaarboristassociation.org. They must show their certification card upon request.

By his sophomore year of high school, Rouw's dad made him a staff topped with a 45-degree angle level and a sight tube. By sighting to the top twig and measuring distance to the trunk from his measuring spot, Rouw could calculate height.

At North High in Des Moines, a class window offered a view toward the river. "I was always looking outside." He spied a tree crown, "bigger than anything else." By 1978, Rouw's measurement skills were proficient. He began nominating trees to Iowa's newly formed champion tree list. He ventured to the river for that big cottonwood. It was more than 18 feet around, 100-plus feet high with an equal spread. For 47 years, he's kept tabs on it. Today, its trunk is 26 feet around. It is still growing.

Perfecting measuring took time. "Like most, I assumed the highest point was above the trunk." But leaving each tree, from afar Rouw would take a last view to absorb their splendor. "I'd look back to discover I hadn't measured the highest point. I learned early that the highest point can be quite a way from directly above the trunk." So he began measuring height from 100 feet away for a truer view. Nearer, an observer is optically tricked that branches sticking out are highest. Branches can also obscure the highest twig tip.

Last spring, Rouw measured another cottonwood near those he explored as a kid. It topped 124 feet—"Iowa's tallest cottonwood that we know. You always clarify 'that we know' because there could be one out there taller," he says. "I think there are taller cottonwoods—they just haven't been found."

He is a perfectionist. And a perfectionist is never satisfied. *All we know is what we've been able to record.* A few trees he's confident are biggest or tallest, but for many species, "There's likely something bigger." It motivates him to keep searching.

Search he does. He's recorded well over a thousand big trees, a few national champions, too—a scotch pine in Story County, a white poplar in Onawa, a European alder in Davenport and a black ash—each largest in the United States. He's found three national champs out west, including one in Arizona, a Fremont cottonwood, that reached 42 feet around—once the largest deciduous tree in the nation. That tree fell. Later, someone found an even bigger one—46 feet around.

Graduating from Drake University, he ventured farther. "I always made interesting new discoveries." He made his first trip to White Pine Hollow State Preserve—a dream forest of bigness a dozen miles north of the Field of Dreams. "It's still amazing to this day—by far my favorite wild area to explore." He's searched all of its 800 rugged acres. On returns, he remeasures trees he first viewed four decades ago.

Finding a Big Lemon

In 1985, "just to go out and look for big trees," he made a winter trip to eastern Iowa. He still prefers winter as leafless, exposed tips and unobstructed trunks yield more accurate data. With Rouw, it's always about the tree. Accuracy is paramount.

"I got to the Mississippi. It was getting late." By sheer bad luck, the next morning was opening day for deer hunting. Motels were booked. Neon "No Vacancy" signs aglow, "I ended

up spending the night in Bellevue, sleeping in the car. In those days I had a Volkswagen Dasher hatchback, light yellow.”

Its color was fitting; “the car was a lemon,” he says.

Not intending a winter bivouac, with seats folded down, he lay catty-corner in back, covered as best he could. At sunrise, he pushed hard against the hatchback—heavy from a half-foot of wet snow. Emerging, he surprised a guy walking a dog.

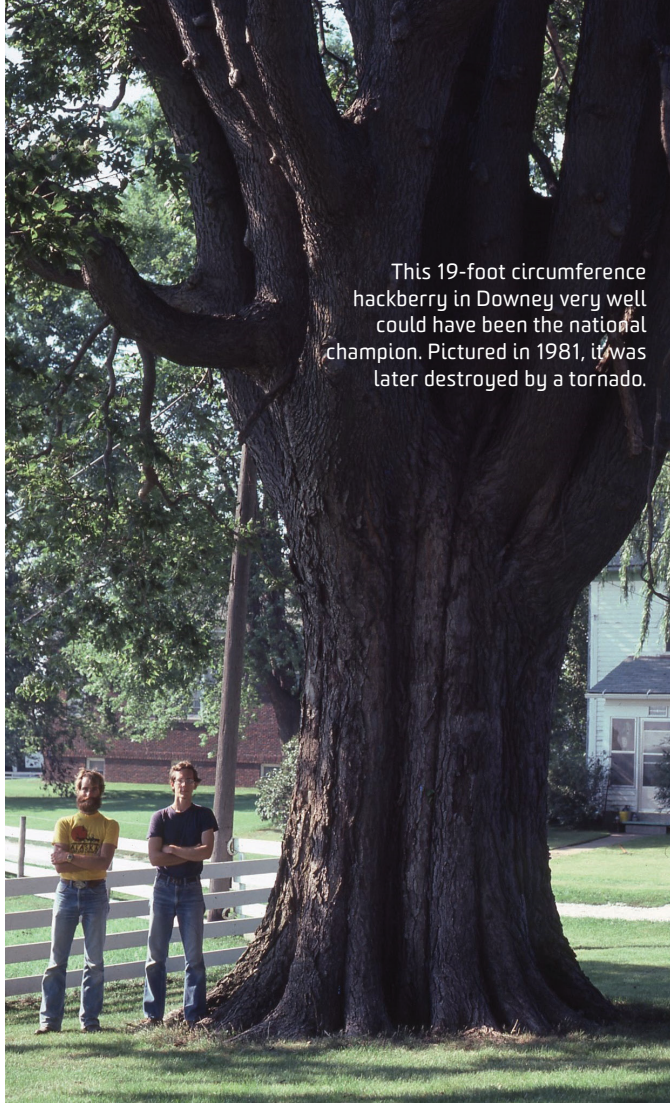
“Often I’d head out and the car would break down. I guess that’s all part of the experience. But at the time it was very frustrating.” Over the years, it broke down in Iowa City, Fort Madison and Burlington. Another breakdown, he spent the night along Highway 6 east of Amana.

It had problems in Decorah. “I was advised not to turn the car off,” he says. “I couldn’t lock the car, so I couldn’t get too far from it. It was actually a cool trip. I found the then state champ Norway spruce—measured with the car running.” For Rouw, no matter what, it’s always about the tree.

On another trip, the radiator cracked.

Once Rouw and another tree aficionado roamed eastern Iowa where greater rainfall and tree diversity yield big trees. In a hamlet they found a vast hackberry, 18 feet around. He still has the photo. “We were both skinny, so that helps make the tree look bigger.” It’s always about the tree.

Later, that tree bested 19 feet in girth, but a tornado destroyed it. Back then, the national champ hackberry was in Michigan where a guy nominated many national records. “The only problem was his measurements weren’t accurate. I suspect the hackberry in Downey, Iowa was probably bigger.”



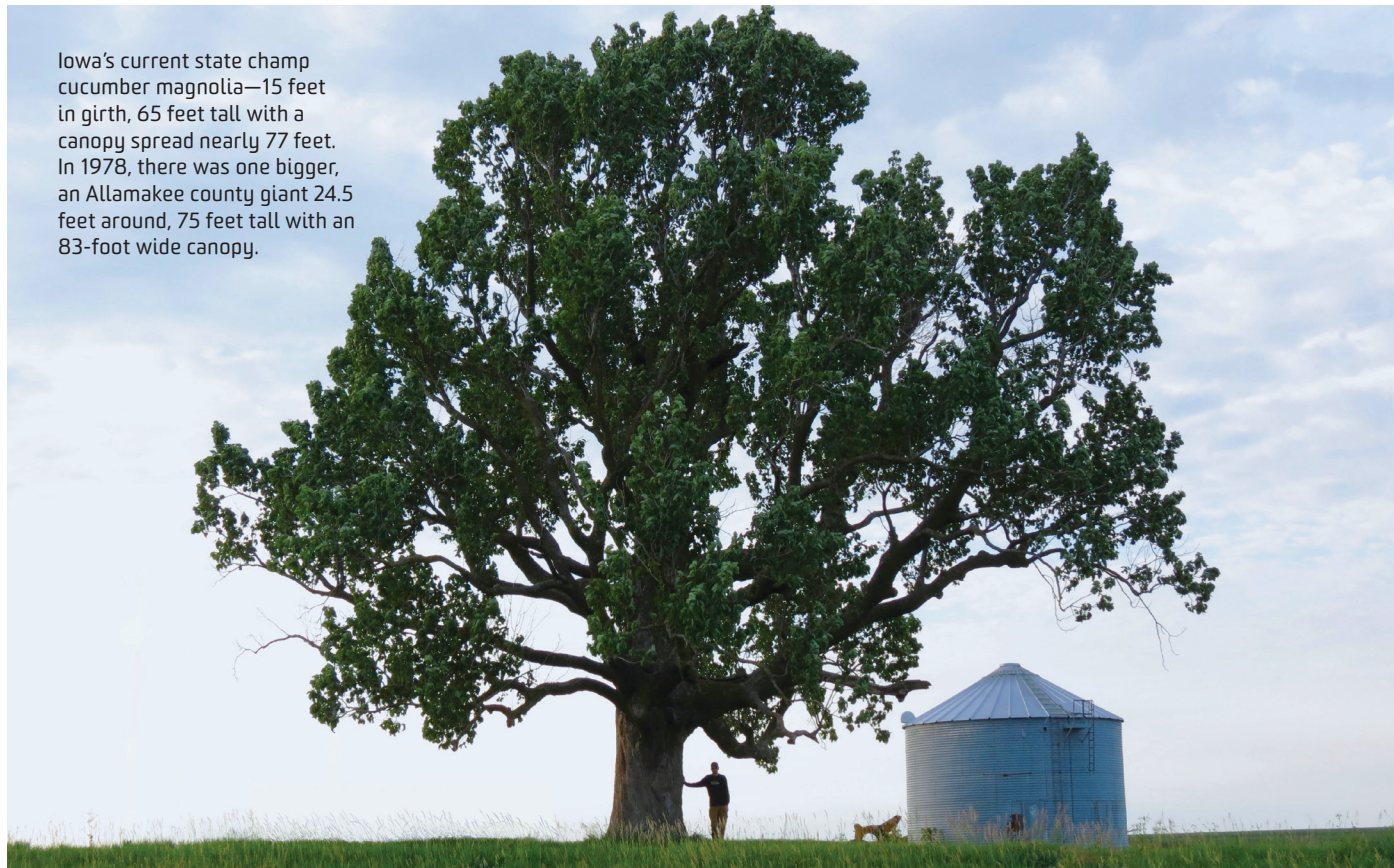
This 19-foot circumference hackberry in Downey very well could have been the national champion. Pictured in 1981, it was later destroyed by a tornado.



Its base too girthy for a chainsaw, this high trunk section was recently cut from Iowa’s former state champion basswood after derecho damage. The still-standing trunk base is 19 feet around at chest height. The tree once soared eight stories tall.



Iowa’s current state champ cucumber magnolia—15 feet in girth, 65 feet tall with a canopy spread nearly 77 feet. In 1978, there was one bigger, an Allamakee county giant 24.5 feet around, 75 feet tall with an 83-foot wide canopy.



Rouw has not only discovered big trees, but seen many perish. “It’s like losing a friend. I have such a close connection to them.” Once, a big pin oak grew in Beaverville. It wasn’t a champ, but still big. He told his wife, “I am going to be a mess if something happens to that tree.”

Eventually it got pruned—poorly so. Something disastrous happened. Eventually it got removed.

“It didn’t need to come down yet. Sadly, that happens with bigger, older trees. I wouldn’t say it’s unwarranted necessarily, but people sometimes are afraid when a big tree is near their house. Bigness almost becomes a negative factor against them.” Poor pruning opens trees to disease and hastens their demise. “They become hazards. They would have been fine unpruned. I see it all the time.”

Rouw mutters the same words when hearing the loss of a massive tree—“That’s disappointing.”

Upon finding out this writer was headed out canoeing last autumn, he asked me to check a couple of trees. One was Iowa’s champion basswood near Webster City.

I found it. A gargantuan, titan trunk stood like a leg from a giant—an amputated giant. The rest of the giant was gone. Due to its tank-like girth, it was cut way up high. Two massive trunk sections from the high cuts lay near. The colossal circumference of the still-standing trunk measures 19 feet at chest height—a 6-foot diameter. It once soared 87 feet high—similar to the tallest building in nearby Fort Dodge at eight stories. In a last gasp, it sent up some green suckers, growing up from the lopped off trunk. Hit by the derecho and undergoing decay, its time had come.

“That’s very disappointing,” Rouw said at the news. Lately, he’s uttered that often. Derechos, tornadoes and lightning are hard on big trees. Nature gives and takes. The derecho took Iowa’s tallest ponderosa pine in Cedar Rapids, the champ swamp white oak in Story County and our largest butternut.

Some losses are harder than others. Particularly, some magnificent white pines that once stood in Clermont in Fayette County. The eastern white pine is Iowa’s only native pine, originally just found in northeast and far eastern Iowa.



Mark Rouw stands next to a massive northern catalpa in bloom at Woodland Cemetery in Des Moines. Despite its size, five others in Iowa are larger. With time, this contender could become a champ.

Clermont was once home to Iowa's twelfth governor, William Larrabee, who lived at Montauk, the hilltop mansion he built in 1874 that overlooks the Turkey River Valley and town below. The grounds are forest, as Larrabee planted more than 100,000 white pines. Powerful and popular, he served two terms as governor after 17 years as a state senator. A world traveler, Larrabee filled his elegant 14-room mansion with souvenirs. He died in 1912, but his daughter lived there all her life, maintaining it much as it had been. She died there in 1965 at age 96. Montauk was donated to the state in 1976.

Today, it's run by the State Historical Society and open for tours. One of the Larrabee pines is now Iowa's tallest tree at 151 feet, 5 inches as last measured in 2022. With drought, it's maybe only added another foot since. Despite its height, it's skinny in girth and canopy versus other big white pines. And there are—or were—other truly big pines around. Down in the town once stood white pines growing in a perfect line.

Rouw first saw them in the 1980s, towering and coated in fresh white snow.

"I don't think I've experienced something like that since. It

was one of those moments that was almost spiritual. They were so massive, beautiful and wonderful. For some reason white pine in that area thrive. One was very big and became state champ by 1986. It grew rapidly from 11 feet, 5 inches around and close to 100 feet tall to its last measurement of 13 feet, 5 inches around and a height of 118 feet. It was vigorous."

Then they all vanished.

"My worst fears were realized. Very upsetting." White pines are Rouw's favorite. "It had so much potential. It was probably 120 feet when it was cut. That one hurt a lot." Fascinated by height, he's measured hundreds of Iowa's tallest white pines over decades. Some in wind-protected areas at White Pine Hollow, exceed 130-, 140- and 150-foot heights.

Just up the hill at Montauk, today's record tall tree has benefited from four decades of extra growth to reach today's height. Who knows how tall and girthy that 1986 former champ pine would be if it wasn't cut. Perhaps the 160-foot-plus range?

About four years ago, Rouw and a buddy stumbled across a white pine at Logan Park Cemetery in Sioux City. It measured 118 feet. Now it is 120 feet, almost identical to the one cut down in Clermont. It's Iowa's champion white pine—girthier and wider branched than Iowa's tallest tree, the skinny white pine at Montauk or other close contenders in White Pine Hollow.

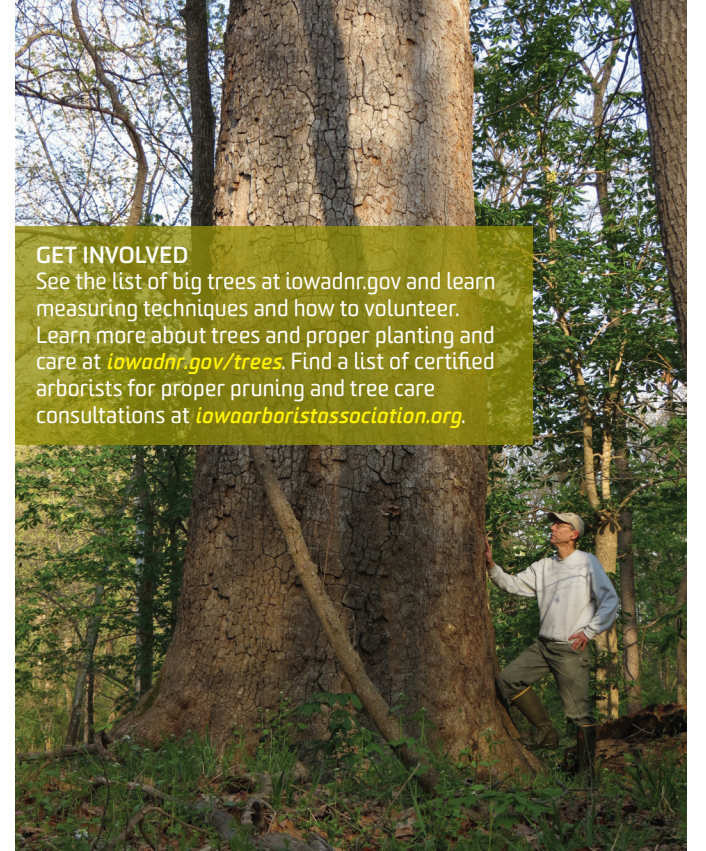
Having a big white pine in western Iowa is an anomaly, which makes it extra special. Logan Park Cemetery also has Iowa's tallest blue spruce and several big cherry trees.

Cemeteries and Campuses—Big Tree Havens

Cemeteries often harbor big trees. Several are extra noteworthy. Burlington's historic Aspen Grove Cemetery is also a certified arboretum. It has a 108-foot-tall Norway spruce, state champion flowering dogwood and Iowa's second largest bald cypress and hemlock. Linwood Cemetery in Dubuque has the co-champ European larch, magnificent Norway spruce, sycamores and big pitch pines and white pines. Woodland Cemetery in Des Moines has a big northern catalpa 18 feet around. One limb is so massive that if it were its own tree, most would marvel at it. Catalpas flower in spring and their plate-sized leaves are second in size only to the bigleaf magnolia, which has the largest leaf in North America.

Universities also harbor big trees. Planted long ago, large campuses allow trees to prosper versus residential areas where one homeowner may value a large tree, but a later owner may have it cut. The sciences and arts are also on campus, so perhaps trees also get better care and appreciation. The state champ black walnut is in front of Macbride Hall at the University of Iowa. This 93-footer is 17 feet, 10 inches around. Struck by lightning, a protection system was added—a large braided cable with smaller gauge wire on limbs to safely discharge future strikes below ground. Iowa's second largest dawn redwood and second place American elm are also on campus, the latter over 88 feet high and 16-plus feet around. Its canopy nearly equals its height.

The University of Northern Iowa once had the champ white fir. Iowa State once had the champion Shumard oak and



GET INVOLVED
See the list of big trees at iowadnr.gov and learn measuring techniques and how to volunteer. Learn more about trees and proper planting and care at iowadnr.gov/trees. Find a list of certified arborists for proper pruning and tree care consultations at iowaarboristassociation.org.

scarlet oak. "Scarlet oaks are very pretty, grow well in Iowa and provide great fall color," he says. "Homeowners should plant them." ISU also has the third largest American beech and eastern wahoo, and champion black birch, paperbark maple, yellowwood and lace bark pine.

Grinnell College has the champ red maple and yellow buckeye. Cornell College in Mt. Vernon once had a champ red maple, but it is now gone. They do have Iowa's largest known ginkgo. Clarke College in Dubuque has Iowa's largest known Washington hawthorn, after the former champ at Cornell died.

Growth, Loss and Sprouts of Hope

Trees sprout, grow, die and decay. With trees come constant hope—always a seed, nut or acorn ready to grow. "Even the biggest champions started out as seedlings," Rouw says.

Few, if any, champs on Iowa's original list from 1978 carry that title today. Perhaps bigger trees were found or, most often, champs gave to wind, disease or saw.

Despite future storms, "I am still motivated to search for the largest trees, simply to answer: 'What are the maximum dimensions of Iowa's trees,'" says Rouw. Little is known about size prior to statehood. Accurate data aids scientific publications and field guides.

Iowa's Big Tree Program has lofty goals to foster greater appreciation for trees. Their educational and inspirational value can't be measured. If owners learn the significance of their big tree will they cherish, care and safeguard it? Will they seek certified arborists for advice and opinions before pruning or removing? Or maybe people will water their young trees.

Few can match Rouw's decades of volunteer devotion. An army of tree-lovers will be needed to fill his shoes when he hangs up his measuring tape. Whether you learn to measure trees, volunteer, donate or join replanting efforts is up to you. Hopefully the seed is planted.