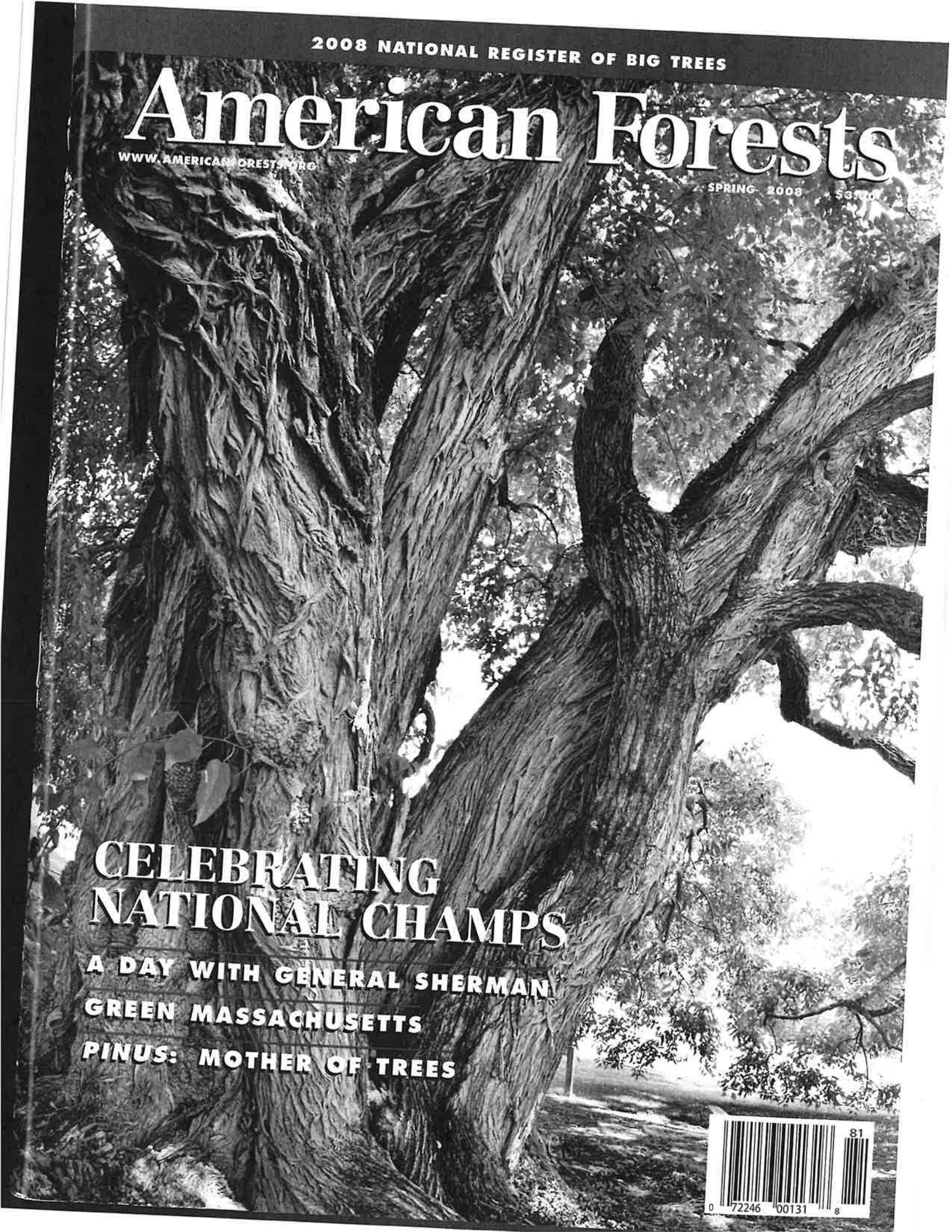
2008 NATIONAL REGISTER OF BIG TREES

# American Forests

WWW.AMERICANFORESTS.ORG

SPRING 2008 $3.50



## CELEBRATING NATIONAL CHAMPS

A DAY WITH GENERAL SHERMAN

GREEN MASSACHUSETTS

*PINUS*: MOTHER OF TREES

81

0 72246 00131 8

# American Forests

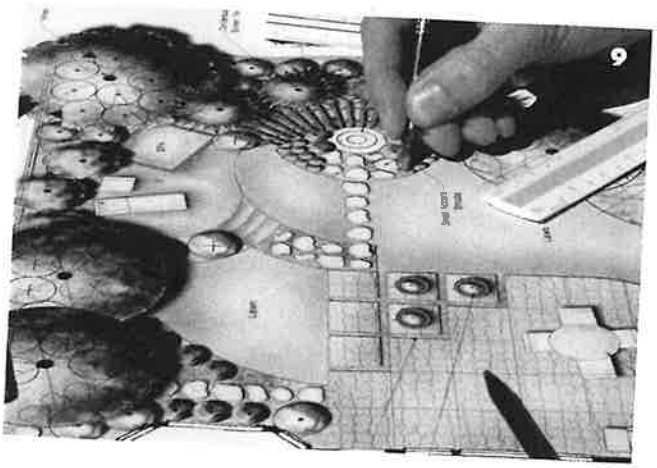
VOL. 114, NO. 1 SPRING 2008


## FEATURES




## DEPARTMENTS




*Cover: National champion osage-orange at Red Hill Shrine, Virginia. Photo by Robert Llewellyn*

## MARYLAND'S WYE OAK SUCCESSOR?

A white oak in northern Maryland once described as a "no-account tree" has a new designation—marvelous—and, experts say, is now the largest example of the species in the state.

Forestry officials have written the governor requesting it be named state tree, replacing the former titleholder, the national champion Wye Oak, which had held state tree honors from 1941 until it blew down in 2002.

The current national champion white oak is in Virginia.

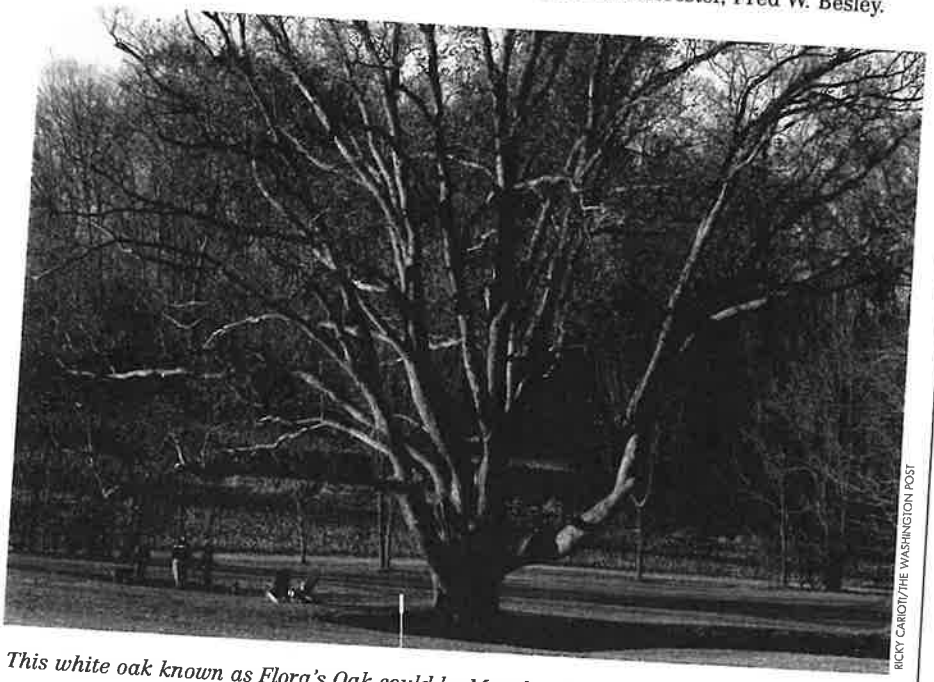
The Maryland tree stands on Victor and Linda Pepe's farm in northwest Montgomery County. They told the *Washington Post* the farm's previous owner had dismissed the tree as no-account and ready to die. Seventeen years later the tree is poised to take state champion honors from the current co-champs, white oaks in Anne Arundel and Cecil counties.

Flora's Oak, as the tree is known, is thought to be 200 to 300 years old. At 107 feet tall with a circumference of 22.3 feet and a crown spread of 115 feet, it's 11 feet taller but not as wide as the Wye Oak, which had a circumference of 31 feet and a crown spread of 119.

When the Pepes bought the property the tree was shrouded in a thicket. They named it in honor of Victor's deceased sister and cleared out trees and undergrowth to give the oak room to spread and grow. Grounding wires protect it from lightning strikes, and fertilizer and regular inspections keep it safe from pests and disease. The couple told the *Post* they quit planting row crops nearby to protect its leaves from herbicides.

Victor Pepe said the family will try to figure out how to share Flora's Oak with the public if it is honored as Maryland's state tree. "It's all God's way of saying to me, 'You did good, and you did right,' " he told the *Post*.

Maryland was the first state to catalog its largest trees, a practice begun by its first state forester, Fred W. Besley.



©ICKY CARIOT/THE WASHINGTON POST

*This white oak known as Flora's Oak could be Maryland's new state tree.*

## ANNE FRANK TREE SAVED

After intense negotiations, an agreement has been reached that will protect the historic chestnut outside the apartment where Anne Frank hid during WWII.

The tree is plagued with fungi and parts of the trunk have rotted, leading to safety concerns. But the tree will be given a supporting structure by May of this year and the crown pruned and anchored to give it at least another five to 15 years of life, according to the Anne Frank House (www.annefrank.org).

According to the website, a design has been created for a flexible structure that will hold the trunk in place if it breaks or tips over. The structure will not touch the tree, though, and so should guarantee public safety but not affect growth. The Support Anne Frank Tree Foundation has taken responsibility for implementing these measures.

In addition, a long-term plan will be drawn up to monitor the tree's condition in the years to come. News that the tree was to be cut down drew widespread opposition and an Amsterdam judge ordered all possible options had to be considered to save the tree.

Anne Frank saw the tree from the attic where her family hid from the Nazi's and mentioned it in her famous diary, marking the passage of time by the tree's seasonal changes.

The tree is considered by many to be a symbol of freedom. As the national organization of record on Historic Trees, AMERICAN FORESTS sent a letter of support to the city of Amsterdam urging that all efforts should be made to save the tree.

## GIFT CARDS CAN PLANT TREES

Have a pile of unused or partially used gift cards lying around? Use them to plant trees. You can send cards of any amount to Gift Cards For Trees; it will then exchange the cards for their cash market value and make a donation to AMERICAN FORESTS to plant trees.

Gifts Cards For Trees says it wants to make the world a more beautiful and healthier place. With the number of gift cards given every year increasing, founder Michelle Sarkany says, "Maybe we can all step back and think about what we really want. What better way to beautify our world than by using unwanted gift cards to help plant trees and make a real difference in our environment."

Visit GiftCardsForTrees.com to complete a form, print it, and then mail it in with your gift cards. Or visit its website to learn more about planting trees with AMERICAN FORESTS.

Whether you're interested in reducing your carbon footprint or just want to make the world a more beautiful and greener place, helping plant trees is a great way to start.

## SITKA REDUX

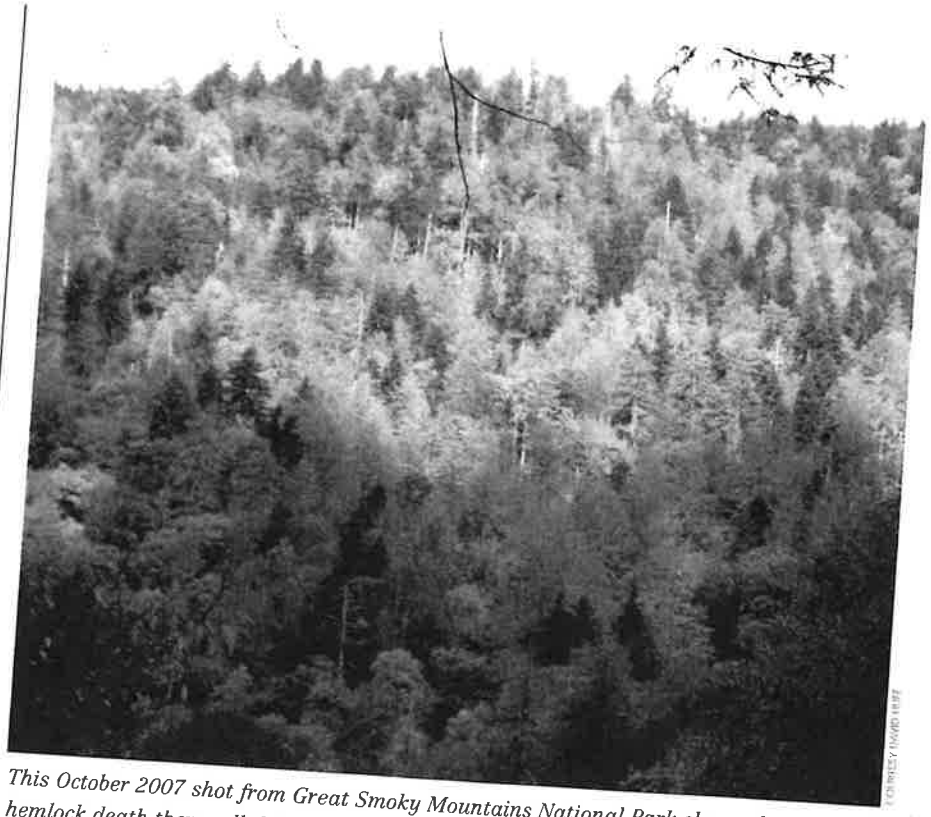
The seven trees on Rick Mock's Astoria, Oregon, dinner table are tiny but carry the hopes of a whole state of admirers. Mock rooted them from the tips of a branch of the Klootchy Creek Giant, the former national co-champion Sitka spruce—and the pride of this state—that fell in a December windstorm.

The champion spruce, near Seaside, was believed to be 700 years old and one of Oregon's oldest living things. Souvenir seekers took away pieces of wood; Mock told the *Oregonian* he pruned a small still-green branch from the trunk and once home, planted cuttings with potting soil under a fluorescent light. Plastic storage bags provide humidity and a nearby sign cautions, 'Please close the door carefully—Sleeping Giants,' " the *Oregonian* says.

Mock told the newspaper he read up on how to grow a spruce from cuttings and initially didn't think he had much chance of success. But now one of the tiny cuttings has sprouted green needles. Mock says once he's sure they'll make it he'll give the tiny trees to Clatsop County. He would like to see one of the seedlings planted near the state Capitol.

Steve Meshke, who heads Clatsop County's parks department, reminded the *Oregonian* that people shouldn't disturb what's left of the tree, which has one green limb. If Mock's efforts are successful, Meshke would like to see one of the seedlings planted near the remains of the parent tree.

KLOOTCHY CREEK GIANT IN 2006/RAY K. SAUNDERS



*This October 2007 shot from Great Smoky Mountains National Park shows the extent of hemlock death there; all the gray trees are dead hemlocks.*

## HEMLOCK UPDATE

The fight to save hemlock forests may have just taken a turn for the better with Oregon State University researchers announcing they've found two species of flies that may help fight the invasive hemlock woolly adelgid.

Writing in the journal *Environmental Entomology*, researchers say the two species of *Chamaemyiidae* flies are similar to related species that have been used to control pests in Hawaii and Chili. Scientists previously have tried to control the pests with beetles.

The adelgid is about the size of an ant but packs a powerful punch, literally sucking the juice from tree needles and eventually killing the tree.

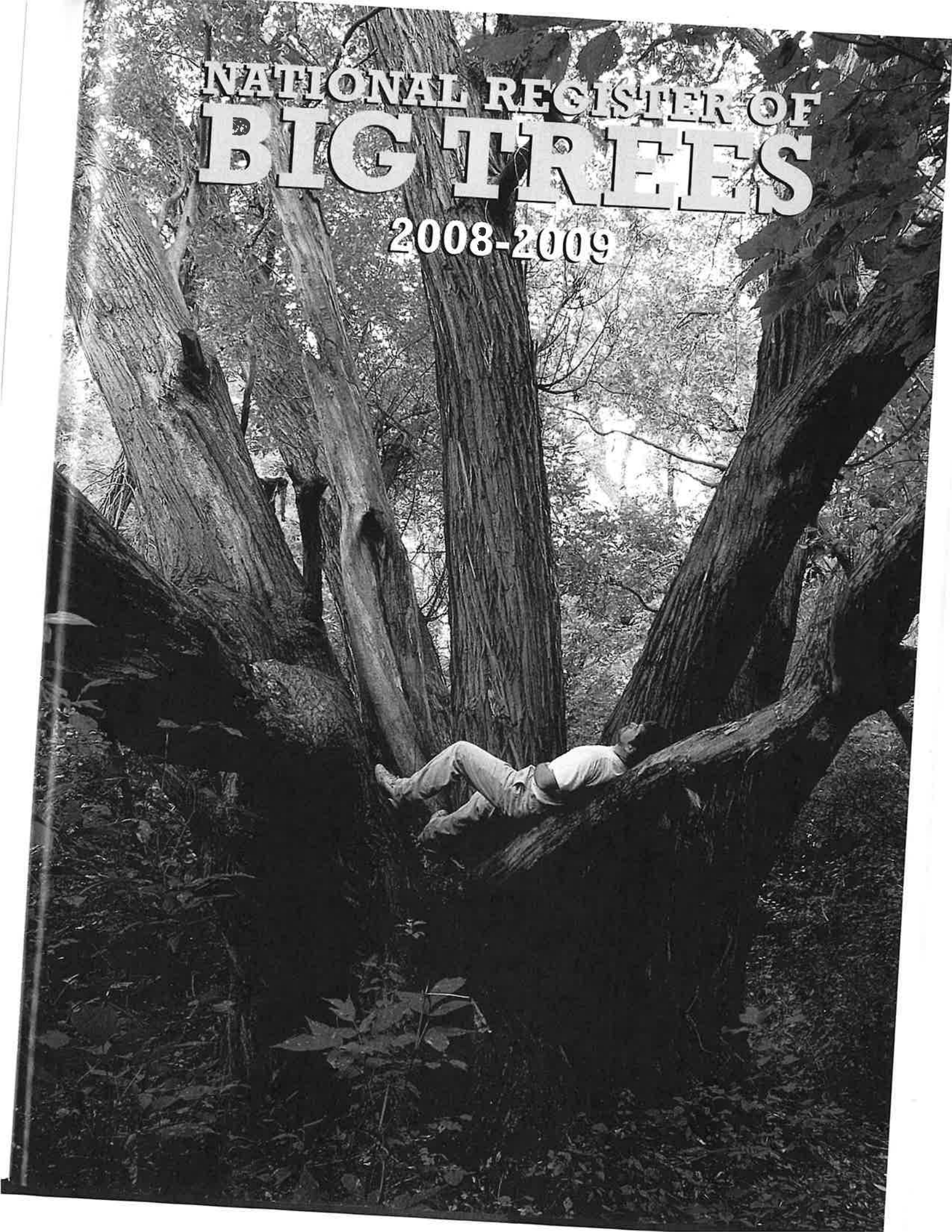
The result has been devastated hemlock forests up and down the East Coast. In the West, hemlocks appear to have more natural resistance to the pest and a wider range of predators appear to help keep it under control, scientists say.

An OSU grad student hunted through dozens of species and thousands of predators at 16 sites in Oregon and Washington to ID ones that attacked the adelgid, a native of Asia that has been in the U.S. since 1924.

Meanwhile, in North Carolina, filmmaker David Huff's upcoming documentary "The Vanishing Hemlock: A Race Against Time," will follow arborist and big tree hunter Will Blozan into the hemlock forests of the southern Appalachians where Blozan will document the loss and its impact. The film, shot in Great Smoky Mountains National Park, also interviews AMERICAN FORESTS board member and environmental consultant Tom Lannin.

The Southern Documentary Fund has endorsed Back 40 Films' film and awarded it tax-free status to allow time to raise needed funds. "We must do all that we can to save these forests, for the rich diversity of life within them, for ourselves and for our children," Huff said in a release.

You can help fund the effort to save these native old-growth eastern and Carolina hemlocks from this invasive pest. To contribute, visit the Southern Documentary Fund's project page at http://southerndocumentaryfund.org/works-in-progress/the-vanishing-hemlock.


NATIONAL REGISTER OF
BIG TREES
2008-2009

# Every Tree Has a Story.

To look at a National Champion Big Tree is to imagine its story. Who has it sheltered? What events have occurred in its shadow? How many storms have blown through its branches?

But champions are not alone in having a story; every tree adds to the richness of our lives. The message of an ordinary tree may be more subtle, but if you listen, you will hear it.

At Davey we believe that the story of every tree has a right to be heard. That's why we support American Forests' National Register of Big Trees program. We understand that by trumpeting the story of a giant, we also draw attention to its quieter neighbors. And all trees - the champion and the ordinary alike - return our attention by purifying our water and air, tempering heat and cold and contributing to a healthy environment.

Trees give the gift of a better life for us and our children. And the opportunity to live out our own stories in their shade.

**DAVEY**

**The Davey Tree Expert Company**

Proud Sponsor of American Forests' National Register of Big Trees

1-800-445-TREE • www.davey.com

# TABLE OF CONTENTS





On the cover: The national champion peachleaf willow in Greenfield Park, Wisconsin. Photo by Whit Bronaugh.

## KEY TO ABBREVIATIONS

Co-champion: †
Naturalized: △
Year listed after Latin name:
Year champ was first nominated.
County: Co.
National Conservation Area: NCA
National Forest: NF
National Monument: NM
National Park: NP
National Recreation Area: NRA
National Wildlife Refuge: NWR
State Forest: SF
State Natural Area: SNA
State Park: SP
State Recreation Area: SRA
Wilderness Area: WA
Wildlife Management Area: WMA

Circumference measurements are in inches; height & crown spread are in feet.

For a list of Champs by state, see Search the Register, Advanced Search at our website: www.americanforests.org

# PARTNERING IN SUPPORT OF BIG TREES

While Davey has been the sponsor of AMERICAN FORESTS' National Register of Big Trees since 1989, the two of us go back a lot longer than that. As early as the beginning of the last century, Davey advertised in *American Forests* magazine (what better way to reach tree lovers?). So when I saw the Davey ad in 1988 that featured the national champion live oak—the Dolby Seven Sisters in Lewisburg, Louisiana—I knew Davey's sponsorship of the National Register of Big Trees was a natural.

And it's easy to see why. Both Big Trees and Davey "stand" for large healthy trees and all the benefits they provide for the environment and for people. Bigger trees give more shade, emit more oxygen, sequester more carbon dioxide, slow more rainfall, prevent more erosion, capture more pollution, and just generally do a bigger job of helping people clean the environment.

Davey's sponsorship has brought AMERICAN FORESTS much more than just funds to support this popular program. Davey's annual calendar of Big Trees brings a bit of nature to many people's kitchen and office walls. Davey photographers have illuminated many of the national champion trees that have been hiding in our cities and woods for decades. Their photos bring these special trees to life for millions. Davey scientists and researchers share the most up-to-date information on the values of trees; their tree care workers and utility arborists take every opportunity to extend the health and life spans of our trees.

It's easy to see how AMERICAN FORESTS and Davey make the perfect team. We are both into trees in a big way!

— Deborah Gangloff, Executive Director, AMERICAN FORESTS

**The Davey Tree** Expert Company is committed to insuring that coming generations have the opportunity to enjoy the wonder that is a champion tree. Our sponsorship of the National Register of Big Trees program helps identify those giants and, more importantly, brings attention to the ecosystems in which they live and thrive.

The champion trees take one's breath away. But they don't live in isolation; they live surrounded by smaller, less magnificent specimens without whom the giants would find survival more difficult. That's the real lesson of the Big Tree program. The giants can only thrive as part of a healthy ecosystem of which we are the stewards.

We have an obligation to apply our knowledge and energy to insuring the survival of a healthy forest—one that welcomes giants and saplings alike. One tree in isolation is magnificent but irrelevant to the greater scheme. Only when trees interact with each other, with animals, soil, water, and the very air itself, does the full miracle of nature occur. Our duty is to let that miracle happen.

Davey sponsors the National Register of Big Trees because it identifies the giants, but more importantly, because it brings into focus the value of all trees. We are pleased to be part of a movement that recognizes that the maintenance of a healthy forest now insures it for tomorrow. As a tree care company, we understand our role in the care of a healthy forest. Our commitment to AMERICAN FORESTS' National Register of Big Trees is the logical extension of what we practice every day.

— Karl J. Warnke, President and CEO, The Davey Tree Expert Company

# HOW TO NOMINATE A BIG TREE

## Requirements

For each nomination AMERICAN FORESTS needs the following information:

1. Correct name of the species or variety (only U.S. native and naturalized species are eligible). If you need help with identification, call your local Parks, Forest Service, or Extension office.
2. Circumference of the tree in inches at 4 1/2 feet above the ground. If there is a fork at this point, measure the smallest circumference below the fork. If it branches below 4 1/2 feet, measure the largest single stem at 4 1/2 feet.
3. Vertical height of the tree to the nearest foot. The most reliable tools for this purpose are an Abney hand level, a hypsometer, or a transit. Lacking those, you can use a straight stick. Hold the stick at its base vertically at arm's length, making sure its length above your hand equals the distance from your hand to your eye. Walk backward away from the tree, staying approximately level with the tree's base. Stop when the stick above your hand appears to be the same length as the tree. You should be sighting over your hand to the base of the tree and, without moving anything but your eye, sighting over the top of the stick to the top of the tree. Measure how far you are from the tree, and that measurement—in feet—is the tree's height.
4. Average diameter of the crown to the nearest foot. Measure the widest spread of the crown and the narrowest, then add them together and divide by two.
5. Location.
6. Date measured and by whom.
7. Name and address of owner.
8. Clear photograph with date taken.
9. Description of the tree's physical condition.
10. Name and address of nominator.

Send to: National Register of Big Trees, AMERICAN FORESTS, P.O. Box 2000, Washington, DC 20013.

## Eligible Species

To be eligible for listing in the National Register of Big Trees, a species must be recognized as native or naturalized in the continental United States, including Alaska but not Hawaii. (Species found only in Hawaii are not included.) Hybrids and minor varieties are excluded. There are 826 eligible species and varieties: 747 native and 79 naturalized. To determine eligibility, AMERICAN FORESTS uses Elbert L. Little Jr.'s *Checklist of United States Trees (Native and Naturalized)*, published in 1979 as U.S. Department of Agriculture Agricultural Handbook 541.

## "Tree defined"

As defined in the *Checklist*, trees are woody plants having one erect perennial stem or trunk at least 9 1/2 inches in circumference (3 inches in diameter) at 4 1/2 feet above the ground (breast height), a definitely formed crown of foliage, and a height of at least 13 feet. In contrast, shrubs are small woody plants, usually with several perennial stems branching at the base.

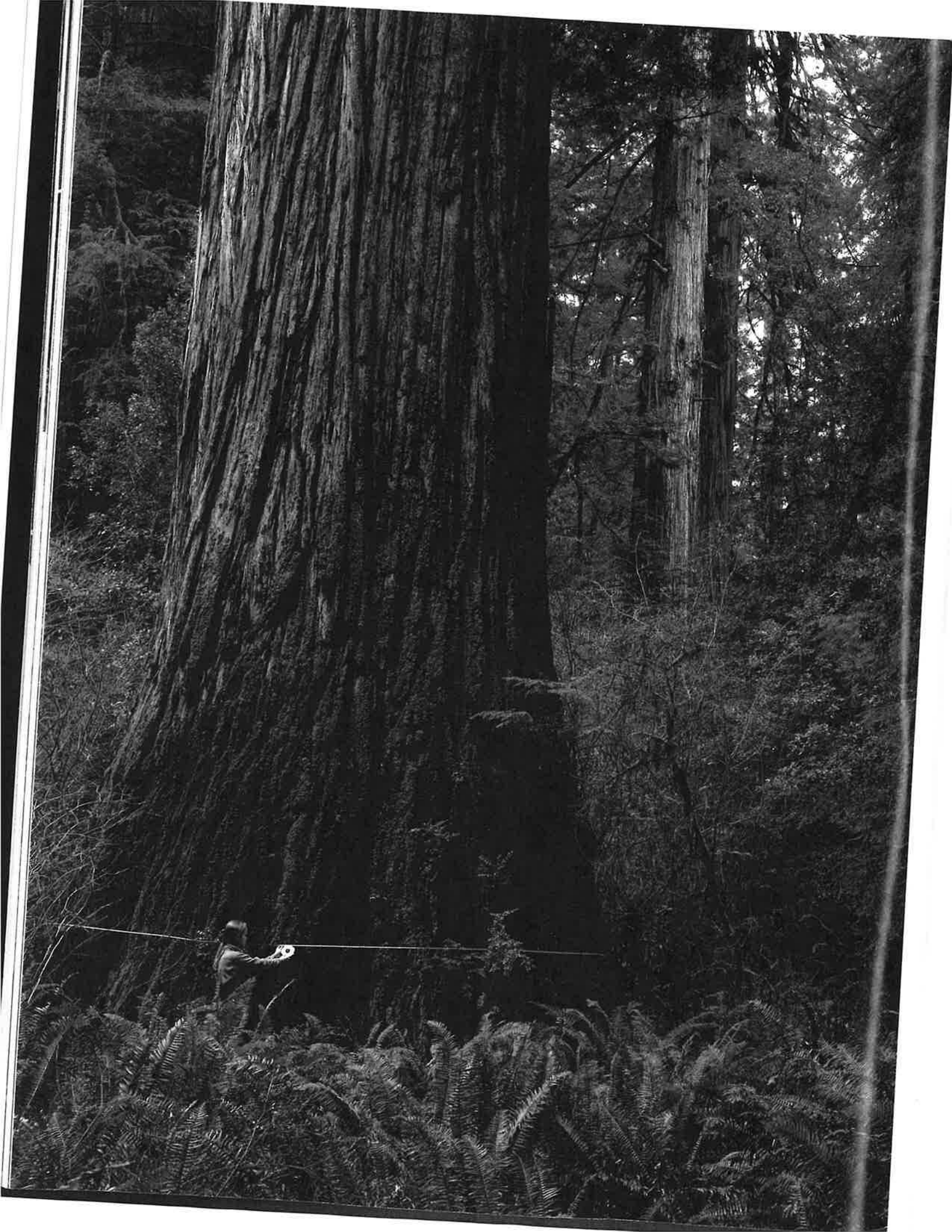
- Native tree species (also called indigenous) are wild and grew naturally or spontaneously in the undisturbed forest vegetation before the arrival of Columbus or other Europeans.
- Introduced tree species have been brought into the United States. A naturalized tree is an introduced species that has become common and established itself as though wild, reproducing naturally and spreading. Species accepted as naturalized are designated in the Register by the symbol (△).

## How Trees Are Compared

To find a tree's total points, AMERICAN FORESTS uses the following calculation: Trunk Circumference (in inches) + Height (in feet) + 1/4 of its Average Crown Spread (in feet) = Total points

- A nominee will replace a registered champion if it has more points. When two trees have scores that fall within 5 points of each other, they are listed as co-champions.

*— The Editors*



# BIG CHANGES for BIG TREES

Deaths, growth spurts, and a new list-altering rule.
It's our biennial check on the state of our nation's biggest trees.
Story and photos by Whit Bronaugh

**If you hoped** to see your name in the National Register of Big Trees again for that really big tree you measured a while back you're likely to be disappointed. A newly decreed 10-year rule states that no tree can retain its crown longer than 10 years without being remeasured.

One hundred champs this year were casualties of the new rule, all trees not remeasured since 1998. The demise of many more now-former champs became known only because nominators and state big tree coordinators were motivated by the new rule to find and remeasure them. This has resulted in the biggest set of changes ever in the 68-year history of the Big Tree program.

For example: In this Register you will not find 358 of the 873 champs and co-champs that reigned in 2006, a turnover of 41 percent.

While the 10-year rule has purged the Register of monarchs that have been resting on laurels from long ago, it has also spurred a search that resulted in 219 new monarchs, almost double the number of new champs from 2006. The net result—a total of 733 champs and co-champs representing 636 species and varieties—is a 16 percent drop.

Still, the 2008 Register honors a select group of trees of formidable dimensions. Stack them on top of one another and they soar more than 9 miles high. Add the area of their trunk cross sections and make a circular trunk 136 feet in diameter. Their combined crowns would shade 46 acres, the equivalent of 35 football fields! Line up those same crowns, leaf to leaf, and they would form a line nearly 7 miles long.

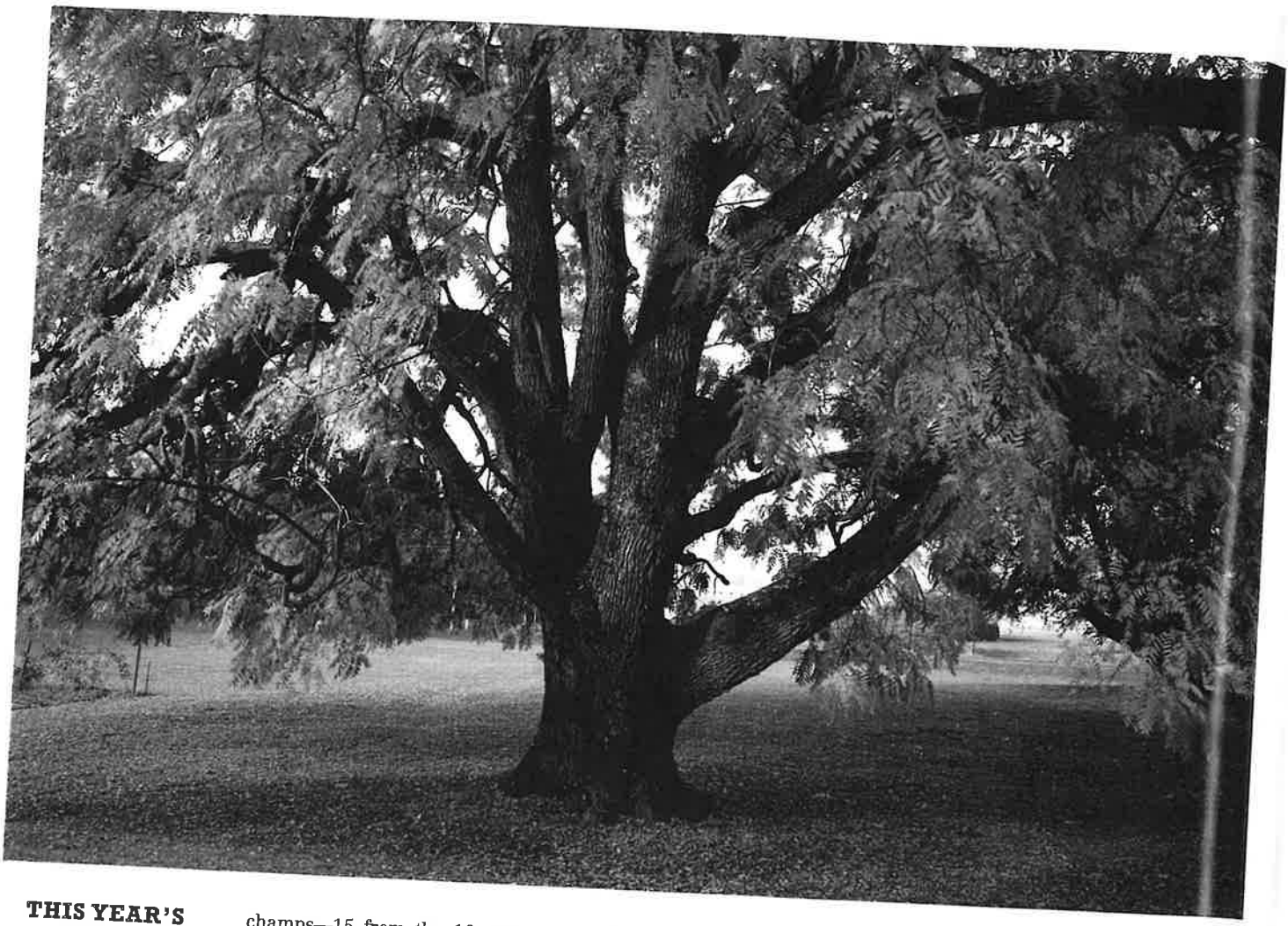
One thing not affected by the new 10-year rule: megatrees (trees scoring more than 650 points). In fact, the flurry of remeasuring caused several to improve their standings. The giant sequoia, coast redwood, western redcedar, Sitka spruce, and coast Douglas-fir all retained their positions in the top five. But a growth of 70 inches in girth for the Port-Orford-cedar moved it from eighth to sixth place overall, nudging it ahead of the common baldcypress and bluegum eucalyptus.

Otherwise, the list of megatrees stayed the same except that the newly remeasured bigleaf maple grew 116 points, allowing it to join the megatree club. Its 659 points ties it with the champion sugar pine for 11th biggest honors. The trunk of the biggest bigleaf maple, which stands by a country road near Jewel, Oregon, is nearly three feet thicker than it was in 1995.

Other remeasured champions have also shown impressive growth. In 1986, when the champion shortleaf fig of Lignumvitae Key, Florida, was last measured, it ranked as the 183rd biggest champion tree with 303 points and a diameter of 6.5 feet. This year it leapt to number 31 after a gain of 208 points, mostly from an increase in diameter of more than 5 feet. The fastest growth spurt by a big champion was made by a black walnut that has been taking advantage of the Oregon weather, far from its native range in the East. It moved up from number 62 to 16, gained 143 points, and increased its diameter from 7.3 to 11.6 feet in the last 16 years. That's an average increase in trunk thickness of 3.2 inches per year.

In the competition among states for most champs within its borders, Florida has long held a commanding lead. The Sunshine State has been bolstered by its having so many subtropical species not found in any other state. But in the last two years Florida lost 91 champs while adding only 17, thereby reducing its tally from 160 to 86. Three quarters of the losses were deaths, most of which were discovered in the attempt to remeasure them for the 10-year rule. Meanwhile, Arizona, which was number three, had the biggest net gain of 12 champs, which gave it a total of 94 and moved it ahead of Florida to first place. California had a net loss of 19

NATIONAL CO-CHAMP COAST REDWOOD, JEDEDIAH SMITH REDWOODS STATE PARK



**THIS YEAR'S CROP OF 219 NEW CHAMPIONS IS DISTRIBUTED AMONG 32 STATES. VIRGINIA HAD THE MOST WITH 37. . .**

champs—15 from the 10-year rule—and dropped from second to third place.

The 10-year rule was also the reason for 20 of the 22 titles lost in Oregon and 25 of the 39 Michigan lost. Likewise, Hawaii lost all six of its titles and Rhode Island its only one. All these states went into the nominating process with a high proportion of champions whose measurements were more than 10 years old. But longtime big tree hunters Byron Carmean and Gary Williamson showed that that was no excuse. Their 18 new champions, plus a lot of remeasuring, gave Virginia a net gain of one, in spite of the fact that 38 old titles had been threatened by the 10-year rule.

This year's crop of 219 new champions is distributed among 32 states. Virginia had the most with 37, followed by Arizona (26), Texas (21), Georgia (18), and Florida (17). Three states without a champ in 2006 returned to the Register this year. Massachusetts claimed the biggest sugar maple with a 368-point specimen in Charlemont. Not to be left behind, Arkansas now boasts the biggest common persimmon (265 points) and the biggest shortleaf pine (261 points).

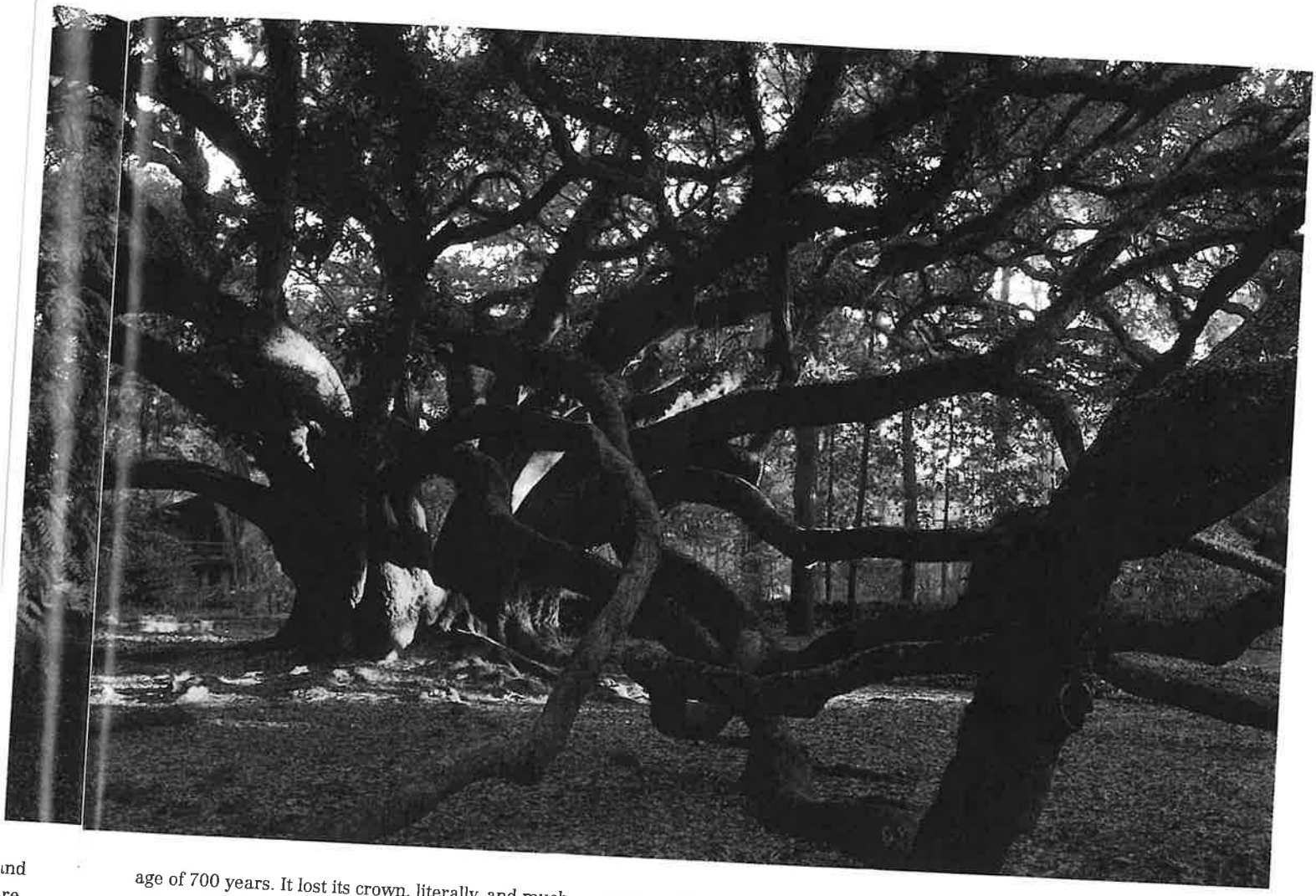
But the standout was Kansas where seven different nominators located the biggest paper birch, narrowleaf cottonwood, Washington hawthorn, dwarf chinkapin oak, western soapberry, little walnut, and two co-champion oriental arborvitae. Delaware, North Dakota, Oklahoma, and Wyoming remain champ-less, joined this year by Hawaii and Rhode Island.

This year's new champions range from the 27-point Geyer willow on the Fort Apache Indian Reservation in Arizona to the 577-point sycamore in Ashland, Ohio. Five other rookies scored in the 500-point range: a northern California walnut and ponderosa pine in California, an eastern cottonwood in Wisconsin, a water tupelo in Virginia, and a black cottonwood in Washington, which unseated an Oregon tree that had held the title since 1982.

Ohioans are mourning the loss of their state tree, the Ohio buckeye, to Illinois. The new champ (*see* **American Forests**, *Autumn 2007*) stands on the campus of McDonald's Hamburger U. Happy Meals for all!

And in an intra-state slugfest, the new northern California walnut in El Dorado County beat the Napa Valley champion, which had reigned since 1986, by a whopping 160 points.

Of the 358 dead or dethroned champs, the biggest loss was the 856-point Sitka spruce of Klootchy Creek, Oregon *(see magazine, p.18)*. With its own park, this former co-champ was considered Oegon's biggest, and possibly oldest, tree, with an estimated



age of 700 years. It lost its crown, literally, and much of its trunk, to 100-mile-an-hour winds early last December. Hurricanes and other storms, disease, and other natural causes have claimed the lives of 141 now-former champions. After the Sitka spruce, the next biggest tree to succumb was the 563-point eastern cottonwood of Seward, Nebraska, which had ranked as the 18th largest but came down in a storm.

The champ check-up revealed 10 dead title-holders in the 400-point range: cherrybark and water oak; Rocky Mountain Douglas-fir; white and weeping willow; whitebark, foxtail, and Washoe pine; and two American elm co-champions.

Some champions had been on the Register a long time when they were discovered dead by people hoping to update their measurements for the 10-year rule. Who knows when these trees actually went to that great forest in the sky? The fallen 340-point northern white-cedar of Leelanau County, Michigan, had reigned since 1953. A 285-point Atlantic white-cedar in Brewton, Alabama, was first nominated in 1961, and a 274-point loblolly-bay in Ocala National Forest, Florida, had been on AMERICAN FORESTS' record books since 1963.

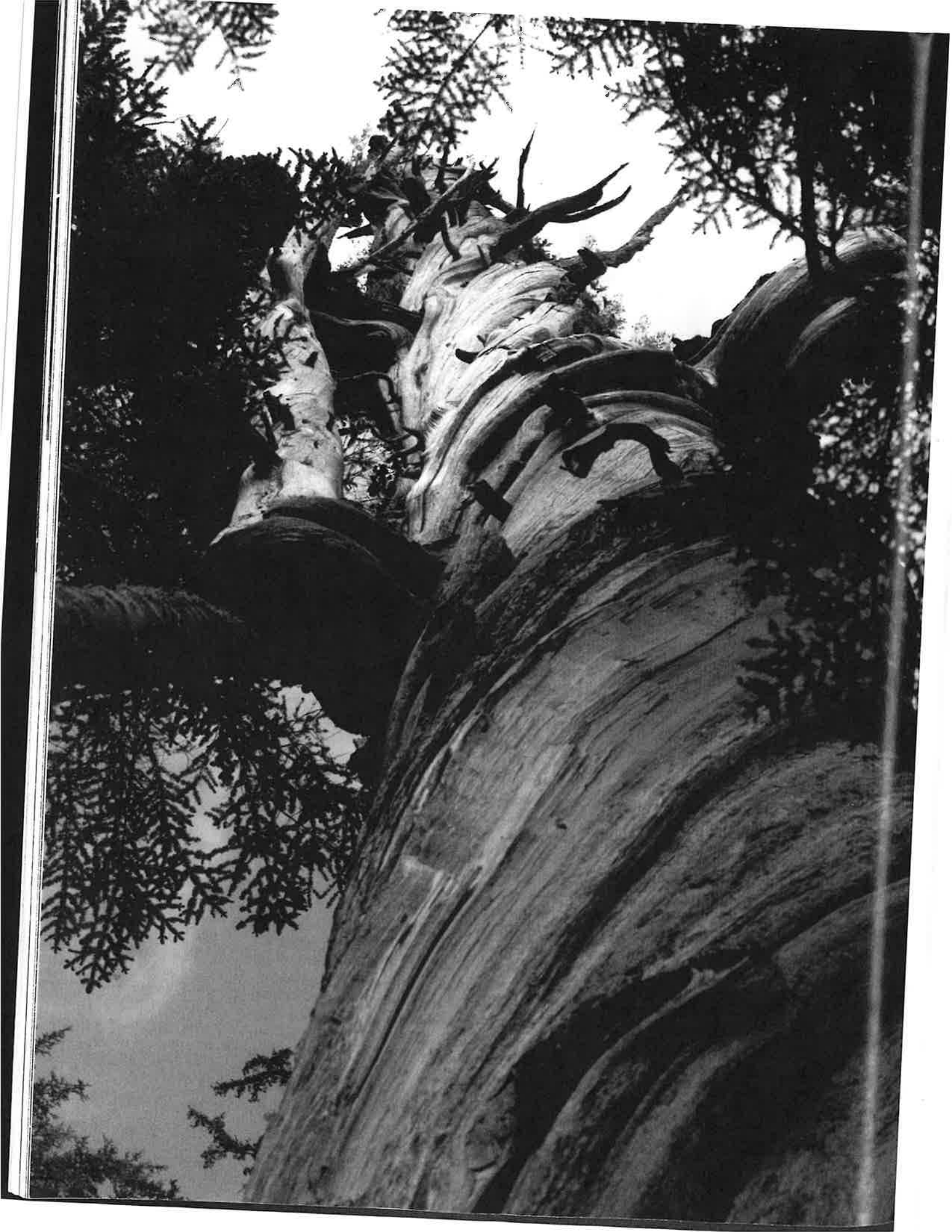
Normally, the majority of champions knocked off the elite list lose their figurative crowns only when they lose the point game. This time just 80—22 percent—of the dethroned royals were eliminated by bigger trees. There were five trees disqualified for being a shrub (less than 13 feet tall or three inches in diameter), and another 13 for not being the species the nominator thought they were. But the other 260 former champs were knocked off their thrones or found to be dead because of the 10-year rule.

Although the changes are rather dramatic this year, the new rule has greatly improved the accuracy and currency of the Register. The turnover will be lessened in future Registers because only trees last measured 10-12 years earlier will be affected, rather than the clean-up that occurred this time from 1998 all the way back to 1953.

Yes, there were a lot of losers this year, but that only creates more opportunities for winners in the 2010 Register. With 189 trees on the empty throne list, there hasn't been this many chances to get your name in the record books since 1988, the last time so many trees were without champions. So grab your field guide and measuring tape and head out to the back yard or the back of beyond. Could be that somewhere out there is a would-be monarch with your name on it. **AF**

*Whit Bronaugh nominated the three co-champ Santa Cruz cypress trees on the current Register.*

*Facing page: The national champ black walnut gained 143 points, moving it from 62nd to 16th on the list. Above, the Louisiana live oak known as the Seven Sisters. It had been the species co-champ, but a remeasuring of the other titleholder in Georgia showed that tree to be more than 5 points larger and so the Seven Sisters was dethroned.*



# ASCENDING *the* GIANTS

Two arborists team up to document
Oregon's national champions—from the top down.
By Melissa Bearns. Photos by Sean O'Connor.

**Beneath a clear** blue October sky Brian French stands next to the stump of what was once the world's largest Pacific dogwood and lets a handful of pale sawdust sift through his fingers. Turning to his climbing partner, fellow arborist Will Koomjian, he sighs and says, "We got here a couple of months too late."

Koomjian slowly scans the wreckage of the once-majestic tree and nods. "If we had gotten here this spring instead of this fall, maybe this tree would still be standing," he says.

They measure the circumference of the stump and the length of the tree now lying on the ground, then head out in search of another national champion, the bigleaf maple.

Working with the National Center for Conservation, Science and Policy (NCCSP), which oversees Oregon's Big Tree Registry, French and Koomjian are trying to find and remeasure all of Oregon's national champions. But instead of using lasers or clinometers to measure height, they use skills they've learned over the years as ISA-certified arborists. They climb the trees.

French and Koomjian have been obsessed with trees for as long as they can remember. When he was 10, French's mom grounded him for trying to create a forest in his bedroom by bringing in pots of ferns, cedars, and pines. Seven years later he met an arborist and realized he could make a living climbing trees. At 22, he became one of the youngest certified arborists in the country.

"I really identify with trees," he said. "They're living, growing organisms, and most of them are older than we are. To a certain extent, I feel like they have more wisdom and more rights than anything else on this planet."

Koomjian fell in love with the Northwest and its tree-filled landscapes on a trip out west with his family. When it was time to go to college, Koomjian left Chicago for Reed College in Portland. After a year and a half, he dropped out to pursue a career as an arborist.

He says that on a good climb, he reaches an almost meditative state. "Your body and your mind are totally focused," Koomjian explains. "You can't get that kind of mental clarity and purpose from anything other than knowing that you'll fall to your death if you don't stay focused. When I have a really great climb, I think back on it for weeks. I can feel the movement, and it feels like a dance."

*Above and left: national champ western redcedar in Washington.*

French and Koomjian work together at Collier Arbor Care in Clackamas. For months they'd been kicking around the idea of climbing big trees, spending afternoons lounging on the porch of Koomjian's house drinking beer and talking about trees.

They started researching and discovered big tree registries, lists of champion trees maintained by states and nationally by American Forests. In February 2007 they set out to climb their first champion, a western redcedar in Oregon's Mt. Hood National Forest. The sky was slate gray with temperatures hovering in the 20s.

**"I REALLY IDENTIFY WITH TREES," FRENCH SAID. "THEY'RE LIVING, GROWING ORGANISMS, AND MOST OF THEM ARE OLDER THAN WE ARE. TO A CERTAIN EXTENT, I FEEL LIKE THEY HAVE MORE WISDOM AND MORE RIGHTS THAN ANYTHING ELSE ON THIS PLANET."**

Snow covered the ground as they slogged through the forest looking for the tree.

They found the western redcedar, climbed it, and finished late in the day, bushwhacking out through the snow and ice, getting lost in the dark. Ascending the Giants, a project to find, climb, and measure the world's largest trees, was born.

### A Vertical Race Against Time

Their goal was to climb about one tree a month. By September they had climbed six state and national champions, including three national champs in Oregon. They called Cindy Deacon Williams, who heads up the big tree program at the NCCSP, hoping to pass along their measurements. What they didn't know was that Deacon Williams desperately needed the information they had gathered.

NCCSP took over the state's big tree registry from the Oregon Department of Fish and Wildlife in August 2006 because the state no longer had the funding or staff to maintain it. The program was in a state of disarray, with numerous unverified nominations and a list that was far from up to date. Many of the state and national champions hadn't been remeasured for decades.

"One of the things we didn't realize when we took over the program was that AMERICAN FORESTS had implemented a new rule that all national champions had to be reverified [or re-measured] at least once every 10 years," Deacon Williams says. "Looking back at the registry, we realized that 25 of Oregon's 36 national champions needed to be remeasured."

The deadline was Nov. 1, giving Deacon Williams just over a month to remeasure the trees, which otherwise would lose their status and be removed from the list. With Oregon the tenth largest state—416 miles east to west and 296 miles north to south—Deacon Williams had a lot of ground to cover, and the pressure was on.

French and Koomjian had already climbed and measured three of Oregon's national champions: the black walnut, the bigleaf maple, and the Port-Orford-cedar. Deacon Williams asked for their help, sending them a list of the trees that still needed to be measured.

The timing was terrible. French and Koomjian say they schedule one climbing trip a month, but after a five-day trip to Canada in September, they had cancelled their October climb. "We needed to recuperate financially," French says.

Instead, French and Koomjian kicked into high gear, scheduling two back-to-back weekend trips in October with four to six tree climbs slated for each weekend. Normally they climb one or two trees per trip."I can't afford to be doing this," French said at the time. "But keeping Oregon's national champions on the registry is really important. So I'm taking time away from my family and my job to do what I can."

### On the Hunt

On October 13 they head out on the first set of climbs for the Oregon Big Tree Registry. They gather before dawn at the home of fellow arborist Blake Thomas on Sauvie Island in Portland. Mist is rising from the river as they drag his hand-painted aluminum canoe down to the water, loading it with climbing gear.

Thomas leads the way in a kayak and they paddle about half a mile down the channel then up a creek. The passageway narrows as they maneuver between the overgrown banks of the channel, dragging the canoe around fallen logs and under bushes. After about an hour they pull up on the bank and hike through a wide-open field, headed for an Oregon white ash.

Some of the trees they're climbing, including the white ash, are extremely old and fragile. French and Koomjian climb with ropes, special knots, and ascending devices used in caving and rock climbing.

To get the ropes into the trees, they use a device called a Big Shot, which looks like a giant slingshot. With the Big Shot, they launch a throw bag, a small

lead-filled leather pouch connected to fishing line, over a branch high in the tree, then use the fishing line to pull up a slightly thicker rope, and finally the climbing ropes.

To protect the bark, they run the ropes through tubes called cambium savers. Once in the tree, they use years of experience to avoid breaking even a twig and spend almost all their climbing time on ropes, never touching the tree.

"There's no problem with climbing trees," says Deborah Gangloff, executive director of AMERICAN FORESTS. "As long as these guys are ISA-certified arborists and they're climbing on ropes, I'm not worried at all about the impact they're having on these trees. Because I know they're climbing them right."

With the rope set, French clips in and glides easily into the canopy, moving carefully around small branches. As he climbs, he calls down to Koomjian telling him what's going on.

Sometimes French or Koomjian will describe what he sees as he ascends the tree. During a climb of a nonchampion western redcedar in Washington, it took French almost four hours to get to the top and set lines for the rest of the group.

"This is by far the most beautiful tree I've ever been in," he says, radioing down to the people on the ground. "Every spot in this tree has things growing out of it. There's small grand fir about 10 feet below me, a deer fern, another cedar, and two huckleberries. The wind is blowing, and I can feel the tree moving. From where I'm sitting I can see the Olympic range; it still has snow on it. The deadwood looks like a cross between carvings and driftwood; and everything is covered with lichens and moss. It's just beautiful."

But climbs to measure trees for national champion status leave no such time for introspection. Instead, the two men focus on getting up and down as fast as possible.

After about an hour in the Oregon white ash French reaches the top of the tree and drops a piece of fishing line weighted with a throw bag to Koomjian, who holds the end of the line on the ground while French marks the spot on the line where it reaches the very top of the tree. Later they will lay the line out on the ground and measure it,

*Far left: Special tools are used to ensure that climbing and measuring do not damage branches, in this case of a state champ Douglas-fir. Above, French, Koomjian, and French's wife Rachel get a bird's-eye view from the national champ bigleaf maple.*

*The work that French (left) and Koomjian have been doing with Oregon's big tree registry provides an "excitement hook" that educates Oregonians and draws them into the project, says program head Cindy Deacon Williams.*

which will give them a height measurement that's accurate to the half-inch.

While it's possible to measure the height of a tree from the ground, dropping a line from the very top gives a much more precise measurement than using a clinometers or even a laser. To measure a tree with a laser you need a clear line of sight to the tree. But many national champions live deep in the forests.

"In the old forests that are dense growth you don't always have that," says Blake Thomas, a certified arborist for 23 years. "You get a much more accurate measurement by climbing."

The Oregon white ash is just over 93 feet tall, and after tallying up the crown spread and the circumference, French and Koomjian believe it's a new national champion.

Not every climb that weekend went as smoothly. They found the national champ Pacific dogwood lying in a field, cut down. They found the grove where the nation's largest Cascara buckthorn had once lived leveled, nothing more than stumps.

But by Nov. 1, French and Koomjian had measured four more national champions and verified that three were no longer standing. Deacon Williams and her staff had measured most of the others, and plan to resubmit the few they weren't able to get to next year.

"Will and Brian's contribution has been huge," Deacon Williams says. "There is absolutely no way, given the timing of when we found out about the remeasurement rule, that we would have even been close to getting them all remeasured."

**Measurements with Meaning**

The partnership has been positive for Ascending the Giants as well. Teaming up with the NCCSP has given French and Koomjian a focus they were missing. Over the months their goals for the project evolved from simply climbing big trees for fun to using the project as a way to educate people and raise awareness.

Before contacting the NCCSP they had discussed everything from traveling and giving talks to working with local community colleges, but still hadn't figured out how to accomplish the outreach portion of the project. The NCCSP has the educational programs and infrastructure in place already, plus the resources to build a program with French and Koomjian.

"Brian and Will have this really cool project that provides the excitement hook, which you need if you're going to do any kind of education," Deacon Williams says. "What they're doing is a really exciting thing that people are naturally drawn to."

"We've been struggling with our role within this project, what we want it to be," Koomjian says. "We want to do something to help. And this is what I can contribute as a climber and an arborist."

They have also worked as unofficial tree ambassadors, networking with various organizations and tree researchers and also contacting and educating landowners.

"They've been really good at reaching out and talking with people who are involved with trees," Deacon Williams says. "They have dramatically increased the level of interest in and awareness of the program, far beyond what we would have been able to do with our current staffing."

That contact and impact is what inspires French and Koomjian most, and it's through talking with landowners that they see direct results.

When they first approached the owner of the bigleaf maple in mid-September, he was leery of them and their proposal to remeasure his tree for the national registry. Finally he agreed to let them climb and measure it.

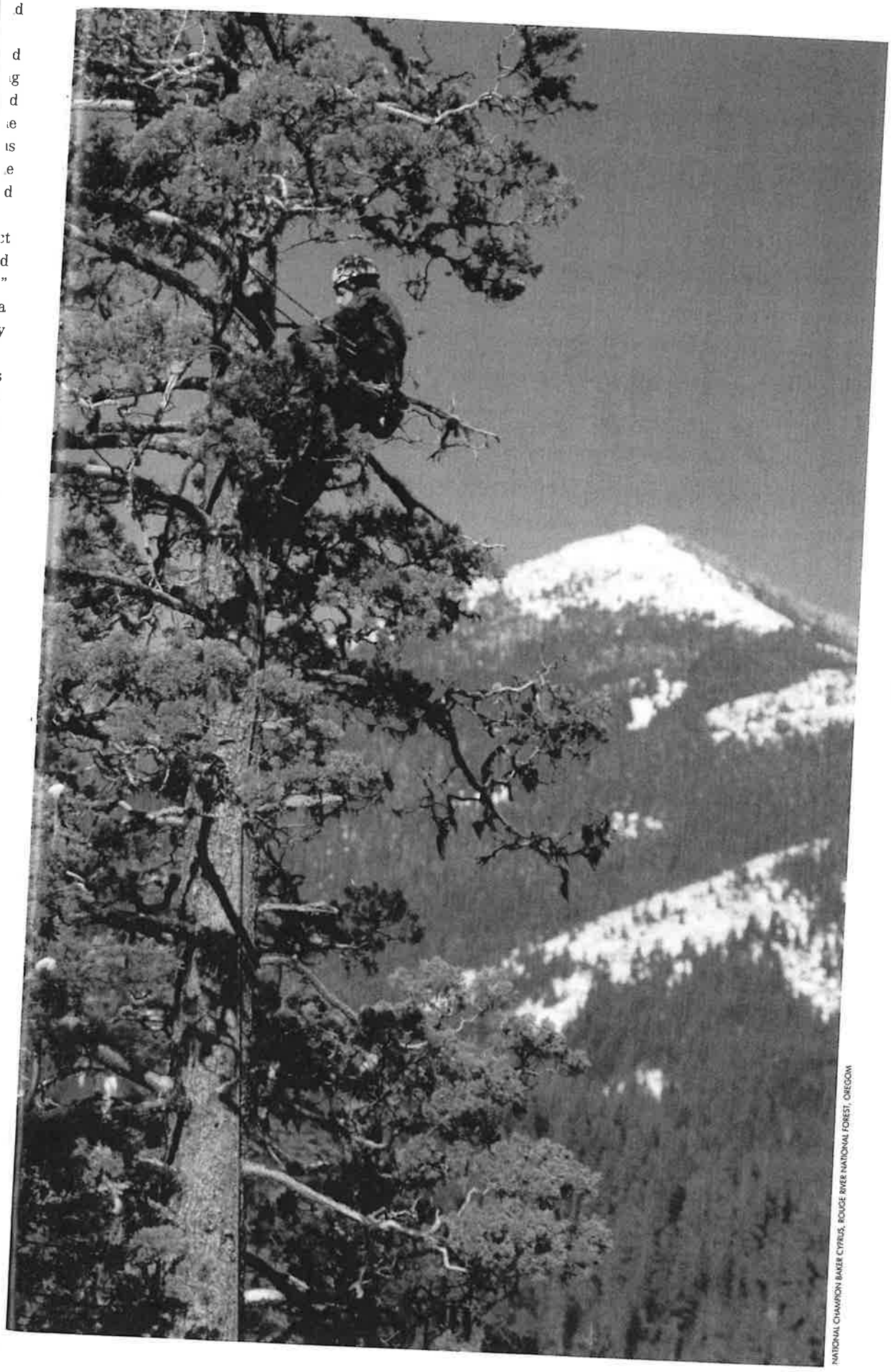
When they came back in October for a quick visit, Koomjian and French say his whole attitude had changed. He told them he'd called up the city forester to verify that it was a candidate for national champion.

"He seemed to take pride in the fact that he has a champion tree on his property," Koomjian says. "He's connected to that tree now and involved with it. He's not going to cut it down."

For a second, Koomjian paused, smiling, and French jumped in.

"That felt really good, we felt like we'd made a small difference," he says. "That was actually a pretty big moment for us. It was confirmation that what we're doing is helping." **AF**

*When not dangling from a rope or running rivers in her kayak, Portland, Oregon-based freelancer Melissa Bearns writes about outdoor adventures and environmental issues.*



NATIONAL CHAMPION BAKER CYPRUS, ROUGE RIVER NATIONAL FOREST, OREGON

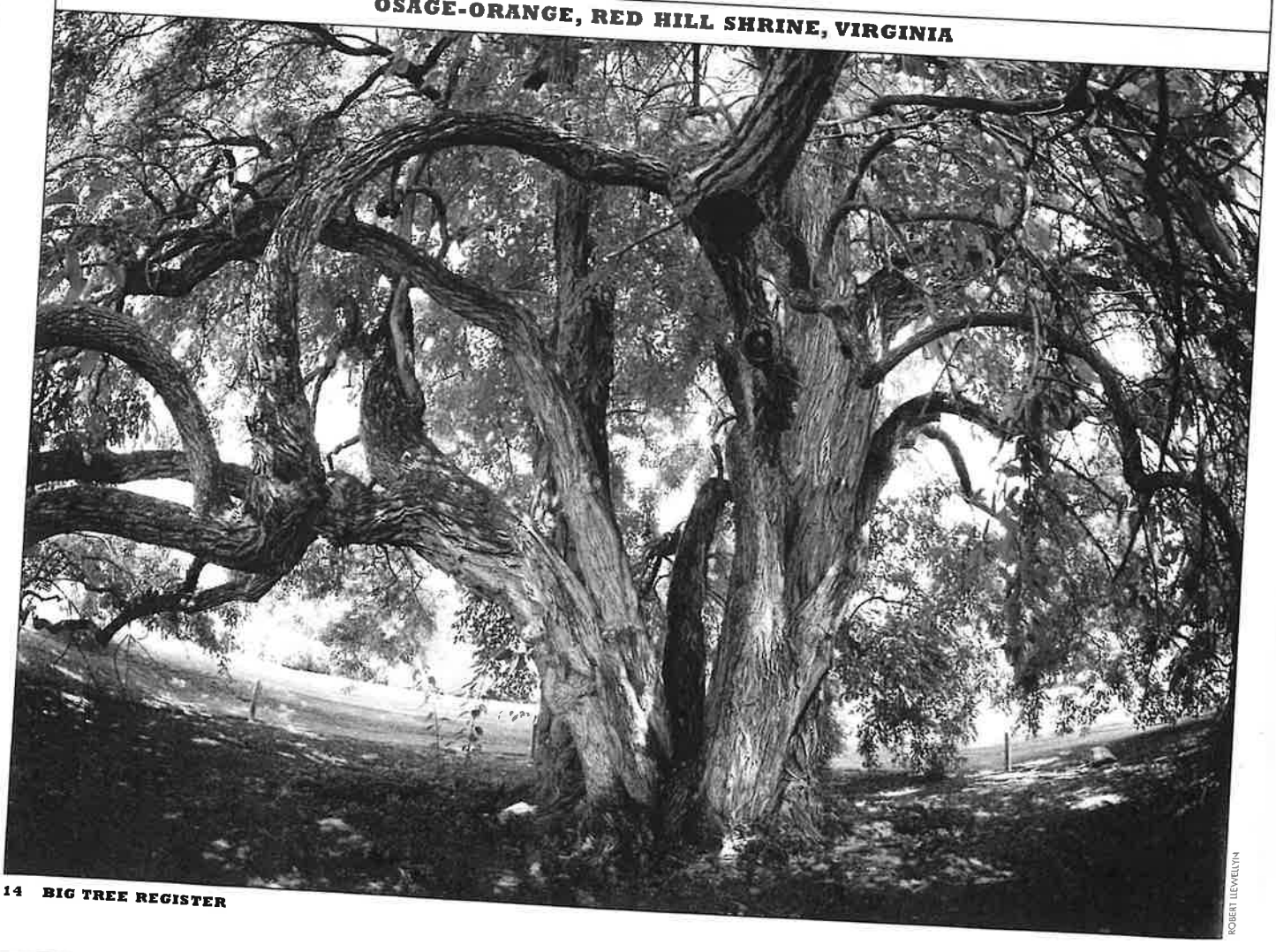
**SOME OF THE TREES THEY'RE CLIMBING . . . ARE EXTREMELY OLD AND FRAGILE. FRENCH AND KOOMJIAN CLIMB WITH ROPES, SPECIAL KNOTS, AND ASCENDING DEVICES USED IN CAVING AND ROCK CLIMBING.**

# THE NATIONAL REGISTER OF BIG TREES 2008

**The quest for champion** trees and the thrill of discovering these giants has captured many hearts since the National Register of Big Trees' inception in 1940. We hope the 2008 Register will accurately document the champions uncovered through many searches. To improve the list's accuracy, this year we incorporate a new rule: All trees must be measured within the last 10 years to retain championship status. Special thanks to all the state coordinators, big tree hunters, and volunteers who put in so many hours to remeasure many of our champion trees. We did make special allowances for a few trees that big tree coordinators were unable to re-measure in time due to extenuating circumstances, including weather. Those trees will be remeasured before the 2010 Register. This Register also includes a new rounding system. Point totals are rounded up if the measurement ends in 0.50, left as is if it is 0.49. This has affected a number of trees, but only by one point. The 2010 National Register of Big Trees will include a revised list of eligible species. Please visit our website at www.americanforests.org to view the eligible species list and to use our online nomination form. May the champions in this Register—the biggest of the big—continue to fill you with amazement and inspire you to care for all trees.

*—Margo Dawley, program director, and Janelle Phillips, program assistant*

**OSAGE-ORANGE, RED HILL SHRINE, VIRGINIA**

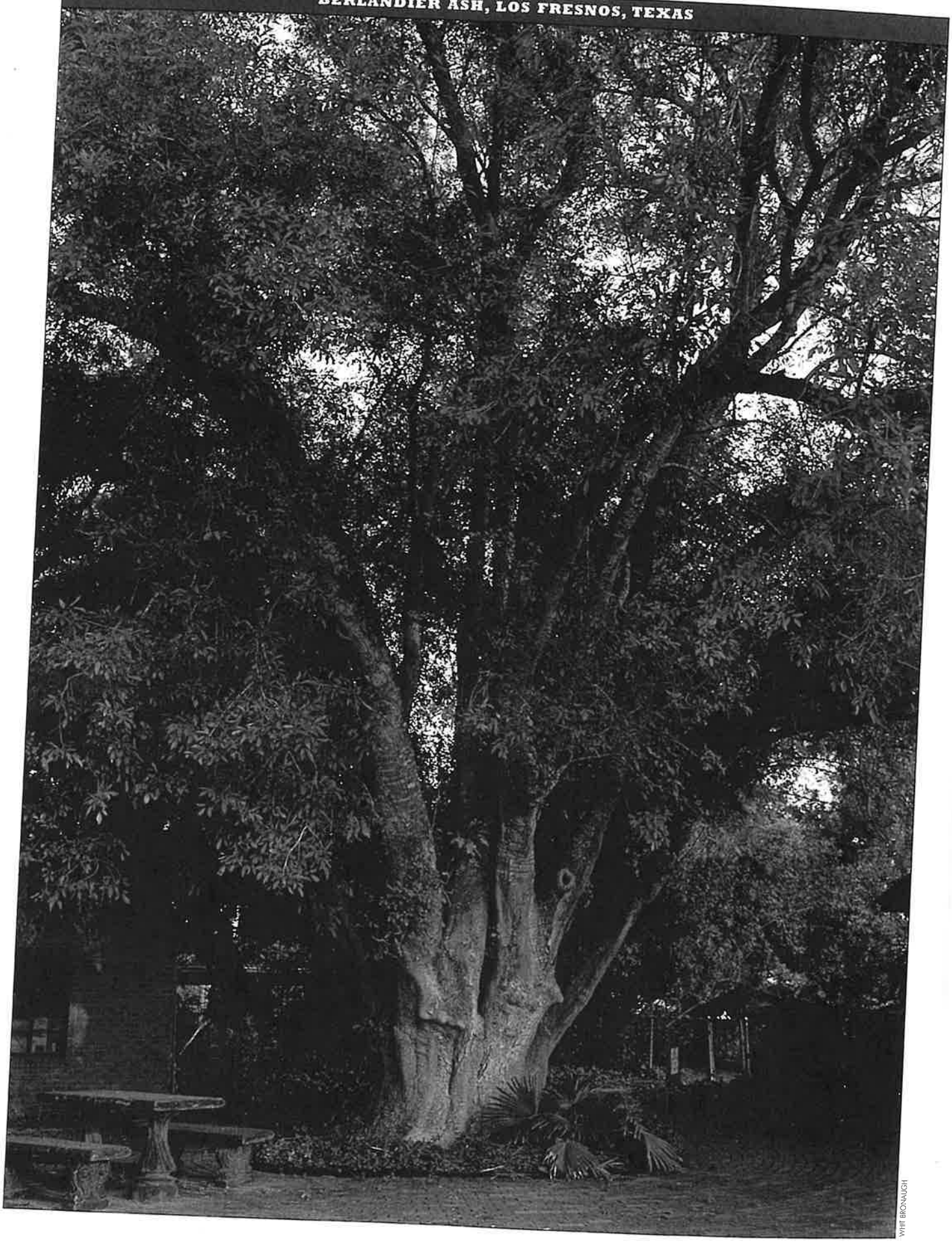


ROBERT LLEWELLYN

| SPECIES/STATUS/YEAR | | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| **ACACIA** | | | | | | | |
| Blackbrush | *Acacia rigidula* † 1999 | 16 | 26 | 29 | 49 | Central Ariz. College, Coolidge, AZ | William Kinnison |
| Blackbrush | *Acacia rigidula* † 1999 | 14 | 27 | 31 | 49 | Glendale, AZ | Ken Morrow |
| **AILANTHUS** | | | | | | | |
| Tree-of-heaven | *Ailanthus altissima* △ 2006 | 195 | 88 | 80 | 303 | Fresno, CA | Art Cowley |
| **ALASKA CEDAR** | | | | | | | |
| | *Chamaecyparis nootkatensis* 1979 | 451 | 126 | 27 | 584 | Olympic NP, WA | Robert L. Wood, John Aho |
| **ALDER** | | | | | | | |
| Arizona | *Alnus oblongifolia* 2007 | 169 | 111 | 72 | 298 | Nelson Place Spring, Prescott, AZ | A Allgood, D Thornburg, H Untiedt |
| European | *Alnus glutinosa* △ 1992 | 114 | 72 | 41 | 196 | Scott, IA | Keith Majors |
| Hazel | *Alnus serrulata* † 2005 | 46 | 60 | 28 | 113 | Huntington, NY | Daniel Karpen |
| Hazel | *Alnus serrulata* † 2005 | 49 | 60 | 30 | 117 | Huntington, NY | Daniel Karpen |
| Mountain | *Alnus tenuifolia* 1995 | 94 | 71 | 39 | 175 | Umatilla NF, WA | Slim Stillman |
| Red | *Alnus rubra* 2005 | 288 | 87 | 100 | 400 | Golden Gate NRA, CA | Eric Ettlinger |
| Sitka | *Alnus sinuata* 1993 | 34 | 30 | 34 | 73 | Maury Island, King Co., WA | Mike Lee |
| White | *Alnus rhombifolia* 1986 | 149 | 92 | 40 | 251 | Polk Co., OR | Maynard Drawson |
| **ALLTHORN** | | | | | | | |
| | *Koeberlinia spinosa* 1993 | 27 | 23 | 21 | 55 | Boyce Thompson Arbrtm, Superior, AZ | Robert & Glenda Zahner |
| **ALVARADOA** | | | | | | | |
| Mexican | *Alvaradoa amorphoides* 1983 | 53 | 35 | 30 | 96 | Dade Co., FL | John C. Cordy, Jim Eggert |
| **ANACAHUITE** | | | | | | | |
| | *Cordia boissieri* 1995 | 76 | 25 | 38 | 111 | Mercedes, TX | William MacWhorter |
| **ANACUA** | | | | | | | |
| | *Ehretia anacua* † 2007 | 146 | 42 | 59 | 203 | DeWitt, TX | Pat Dolan |
| | *Ehretia anacua* † 2007 | 141 | 55 | 46 | 208 | Hidalgo Co., TX | James Sherrill |
| **ANISE-TREE** | | | | | | | |
| Florida | *Illicium floridanum* 2007 | 36 | 29 | 26 | 72 | Perry, AL | Thomas Wilson |
| **APPLE** | | | | | | | |
| Common | *Malus sylvestris* △ 2007 | 105 | 40 | 38 | 155 | Tazewell, VA | Patrick Johnson |
| Oregon crab | *Malus fusca* † 2003 | 90 | 48 | 55 | 152 | Gifford Pinchot NF, WA | Robert Van Pelt |
| Oregon crab | *Malus fusca* † 2003 | 102 | 41 | 45 | 154 | Gifford Pinchot NF, WA | Robert Van Pelt |
| Southern crab | *Malus angustifolia* 2007 | 82 | 27 | 54 | 123 | Kent, MD | Eleanor P. Colston |
| Sweet crab | *Malus coronaria* 2006 | 98 | 39 | 31 | 145 | Orange, VT | Leigh Wright |
| **ARAUCARIA** | | | | | | | |
| Cunningham | *Araucaria cunninghamii* △ 2008 | 132 | 71 | 37 | 212 | Los Angeles, CA | Deborah Day |
| **ARBORVITAE** | | | | | | | |
| Oriental | *Thuja orientalis* †△ 2007 | 82 | 58 | 35 | 149 | Leavenworth, KS | Jack Smith |
| Oriental | *Thuja orientalis* †△ 2007 | 93 | 50 | 36 | 152 | Saline, KS | Chip Miller |
| **ASH** | | | | | | | |
| Berlandier | *Fraxinus berlandierana* 1995 | 252 | 48 | 72 | 318 | Los Fresnos, TX | Brian Sichel |
| Black | *Fraxinus nigra* † 2006 | 105 | 86 | 80 | 211 | Manistee Co., MI | Andy & Noah Sawyer |
| Black | *Fraxinus nigra* † 2006 | 106 | 94 | 55 | 214 | Manistee Co., MI | Andy & Noah Sawyer |
| Blue | *Fraxinus quadrangulata* 2005 | 155 | 120 | 132 | 308 | Mason, KY | Kevin Galloway |
| Carolina | *Fraxinus caroliniana* 2006 | 63 | 80 | 31 | 151 | Southampton, VA | Byron Carmean |
| Chihuahua | *Fraxinus papillosa* 2003 | 33 | 49 | 17 | 86 | Santa Rita Mtns, Coronado NF, AZ | David & Paul Thornburg |
| Fragrant | *Fraxinus cuspidata* 2004 | 46 | 40 | 37 | 95 | East Clear Creek, Coconino NF, AZ | David Thornburg |
| Goodding | *Fraxinus gooddingii* 1995 | 25 | 25 | 20 | 55 | Tumacacori Mnts, Coronado NF, AZ | Josh Tewksbury |
| Green | *Fraxinus pennsylvanica* 1981 | 271 | 98 | 104 | 395 | Cass Co., MI | Andy & Noah Sawyer |
| Lowell | *Fraxinus anomala* var. *lowellii* 2003 | 58 | 33 | 21 | 96 | Prescott NF, AZ | David Thornburg, Harry Untiedt |
| Oregon | *Fraxinus latifolia* 1975 | 285 | 81 | 74 | 385 | Sauvie Island, OR | Eldon Boge, Robert Heilman |
| Pumpkin | *Fraxinus profunda* 1995 | 185 | 103 | 77 | 307 | Big Oak Tree SP, MO | Bruce Palmer |
| Singleleaf | *Fraxinus anomala* var. *anomala* 1999 | 52 | 31 | 15 | 87 | Highway 14, on Dolores River, CO | Vince Urbina |
| Texas | *Fraxinus texensis* 2001 | 76 | 72 | 67 | 165 | Bandera Co., TX | Billy Walker |
| Two-petal | *Fraxinus dipetala* 1986 | 39 | 32 | 34 | 80 | Lake Co., CA | Frank T. Callahan |
| Velvet | *Fraxinus velutina* 2007 | 256 | 78 | 76 | 353 | Little Ash Creek, Prescott NF, AZ | David Thornburg, Andy Allgood |
| White | *Fraxinus americana* 2006 | 246 | 124 | 107 | 397 | Leelanau Co., MI | Andy & Noah Sawyer |

| SPECIES / STATUS / YEAR | | CIRCUM-FERENCE | HEIGHT' | SPREAD' | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| **ASPEN** | | | | | | | |
| Bigtooth | *Populus grandidentata* 2005 | 169 | 93 | 51 | 275 | Appleton, ME | Mike DeBonis |
| Quaking | *Populus tremuloides* 2007 | 152 | 130 | 36 | 291 | Pinaleno Mtns, Coronado NF, AZ | Mike & Sylvia Hallen |
| **AVOCADO** | | | | | | | |
| | *Persea americana* △ 1999 | 185 | 72 | 59 | 272 | Orange Co., CA | Art Cowley, Camille Newton |
| **BACCHARIS** | | | | | | | |
| Eastern | *Baccharis halimifolia* † 2001 | 14 | 21 | 19 | 40 | Lincoln, GA | Doug & Jess Riddle |
| Eastern | *Baccharis halimifolia* † 2007 | 25 | 14 | 20 | 44 | Chesapeake, VA | Byron Carmean, Gary Williamson |
| **BALDCYPRESS** | | | | | | | |
| Common | *Taxodium distichum* † 2005 | 660 | 82 | 65 | 758 | Holmes, MS | Norman Haigh, Barry Scott |
| Common | *Taxodium distichum* † 2001 | 647 | 96 | 74 | 762 | Cat Island, LA | Jeff Hunt, Desmond Clapp |
| Montezuma | *Taxodium mucronatum* 1995 | 301 | 68 | 99 | 394 | Cameron Co., TX | Sue Griffin |
| **BARRETA** | | | | | | | |
| | *Helietta parvifolia* 1989 | 17 | 24 | 16 | 45 | Hidalgo Co., TX | Terry Rossignol |
| **BASSWOOD** | | | | | | | |
| American | *Tilia americana* 1991 | 277 | 89 | 87 | 388 | Montgomery Co., PA | Sherman Perkins, Halfred Wertz |
| Carolina | *Tilia caroliniana* † 2001 | 155 | 75 | 57 | 244 | East Feliciana Parish, LA | Brian Chandler |
| Carolina | *Tilia caroliniana* † 2001 | 124 | 107 | 60 | 246 | Caddo Parish, LA | Ken Jeane |
| White | *Tilia heterophylla* 2007 | 144 | 110 | 66 | 271 | Union, GA | Jimmy Mock |
| **BAYBERRY** | | | | | | | |
| Northern | *Myrica pensylvanica* 1999 | 11 | 15 | 10 | 29 | Jockey's Ridge SP, Dare Co., NC | Sid Shearin |
| Odorless | *Myrica inodora* 2007 | 15 | 27 | 16 | 46 | Baldwin, AL | Harry Larsen, Fred Nation |
| Pacific | *Myrica californica* 2003 | 66 | 35 | 39 | 111 | Humboldt Co., CA | Robert Van Pelt |
| **BEECH** | | | | | | | |
| American | *Fagus grandifolia* 1995 | 290 | 112 | 103 | 428 | Anne Arundel Co., MD | Gary Heinz |
| **BIRCH** | | | | | | | |
| Alaska paper | *Betula papyrifera* var. *neoalaskana* 2005 | 99 | 63 | 47 | 174 | Trapper Creek, AK | |
| Gray | *Betula populifolia* 2007 | 92 | 49 | 59 | 156 | Middle Township, NJ | Terrence P. Cooney |
| Mountain ppr | *Betula papyrifera* var. *cordifolia* 1973 | 115 | 67 | 80 | 202 | Leelanau Co., MI | Lyman Hoffman |
| Paper | *Betula papyrifera* var. *papyrifera* 2006 | 57 | 40 | 41 | 107 | Johnson, KS | Elwood B. Ehrle |
| River | *Betula nigra* 1981 | 208 | 105 | 112 | 341 | Lawerence Co., TN | Chuck Brasher |
| Roundleaf | *Betula uber* 1978 | 34 | 49 | 15 | 87 | Jefferson NF, VA | Dan & David Shires |
| Sweet | *Betula lenta* 1961 | 165 | 82 | 76 | 266 | Hillsborough, NH | Paul Shrauder |
| Water | *Betula occidentalis* 1973 | 113 | 53 | 46 | 178 | Wallowa Co., OR | Philip Harvell, Erik & Kathleen Fey |
| Western paper | *Betula papyrifera* var. *commutata* 2003 | 172 | 70 | 77 | 261 | Bellingham, WA | Maynard Drawson |
| Yellow | *Betula alleghaniensis* 2006 | 159 | 119 | 61 | 293 | Gogebic Co., MI | Robert Van Pelt |
| **BLACK-MANGROVE** | | | | | | | Andy & Noah Sawyer |
| | *Avicennia germinans* 2003 | 85 | 58 | 43 | 154 | Monroe Co., FL | |
| **BLACKBEAD** | | | | | | | Vincent Condon, Niko Reisinger |
| Catclaw | *Pithecellobium unguis-cati* 2007 | 173 | 78 | 93 | 274 | Manatee Co., FL | |
| Ebony | *Pithecellobium flexicaule* 1991 | 171 | 50 | 64 | 237 | McAllen, Hidalgo Co., TX | Jeffrey & Trudy Williams |
| Guadeloupe | *Pithecellobium guadalupense* 1995 | 15 | 13 | 15 | 32 | Monroe Co., FL | Joe Ideker |
| **BLACKHAW** | | | | | | | T Ann Williams, Vincent P Condon |
| | *Viburnum prunifolium* † 1985 | 64 | 25 | 32 | 97 | Westmoreland, VA | |
| | *Viburnum prunifolium* † 2007 | 62 | 26 | 35 | 97 | Silver Spring, MD | Richard Salzer |
| Rusty | *Viburnum rufidulum* 1999 | 50 | 32 | 28 | 89 | Knox Co., TN | Joe Howard |
| **BLUEWOOD** | | | | | | | Jim Cortese |
| | *Condalia hookeri* 1989 | 85 | 29 | 28 | 121 | Hidalgo Co., TX | |
| **BOXELDER** | | | | | | | Joe Ideker |
| | *Acer negundo* 2003 | 230 | 120 | 84 | 371 | Monrovia, MD | |
| **BUCIDA** | | | | | | | Kevin Moore |
| | *Bucida buceras* 1997 | 152 | 69 | 73 | 239 | Dade Co., FL | |
| **BUCKEYE** | | | | | | | Alice Warren-Bradley |
| Bottlebrush | *Aesculus parviflora* 1993 | 41 | 14 | 25 | 61 | Virginia Beach, VA | |
| California | *Aesculus californica* 2001 | 176 | 46 | 60 | 237 | Santa Cruz Co., CA | Richard Salzer |
| Ohio | *Aesculus glabra* var. *glabra* 2007 | 176 | 73 | 68 | 266 | Hamburger U., DuPage, IL | Jeff Reimer, Walter Mark |
| | | | | | | | Thomas L Green |

**BERLANDIER ASH, LOS FRESNOS, TEXAS**



WHIT BRONAUGH

| SPECIES / STATUS / YEAR | | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| Painted | *Aesculus sylvatica* 2007 | 58 | 48 | 32 | 114 | Greene, GA | Justin Tyson |
| Red | *Aesculus pavia* 1994 | 81 | 46 | 38 | 137 | Roanoke, VA | William S Hubard |
| Texas | *Aesculus glabra* var. *arguta* 2006 | 59 | 39 | 35 | 107 | Gillespie, TX | Robert Edmonson |
| Yellow | *Aesculus octandra* 2007 | 296 | 94 | 69 | 407 | Alleghany, VA | Dan Miles |
| **BUCKTHORN** | | | | | | | |
| California | *Rhamnus californica* 2003 | 29 | 23 | 39 | 62 | Little Ash Creek, Prescott NF, AZ | David & Judy Thornburg |
| Carolina | *Rhamnus caroliniana* 2001 | 40 | 25 | 24 | 71 | Clarksville, TN | Phil & Claudette Brown |
| Cascara | *Rhamnus purshiana* 2006 | 104 | 39 | 62 | 159 | Curry, OR | George Miller |
| European | *Rhamnus cathartica* △ 2005 | 217 | 27 | 41 | 254 | Halifax, NC | Sid Shearin |
| Hollyleaf | *Rhamnus crocea*, 2007 | 52 | 16 | 18 | 72 | Prescott NF, AZ | D Thornburg, H Untiedt, A Allgood |
| **BUMELIA** | | | | | | | |
| Buckthorn | *Bumelia lycioides* 1999 | 48 | 31 | 29 | 86 | Shelby Park, metro Nashville, TN | Mark S. Hackney |
| Gum | *Bumelia lanuginosa* 2007 | 87 | 55 | 56 | 156 | Tarrant, TX | Matthew & Michael Blevins |
| Saffron-plum | *Bumelia celastrina* 1991 | 58 | 27 | 39 | 95 | Hidalgo Co., TX | William MacWhorter |
| Tough | *Bumelia tenax* 1987 | 30 | 37 | 20 | 72 | Nassau Co., FL | Buford Pruitt Jr. |
| **BURNINGBUSH** | | | | | | | |
| Eastern | *Euonymus atropurpureus* 2002 | 90 | 40 | 34 | 139 | Norwood Hills Country Club, MO | Lorri Grueber |
| **BUTTERNUT** | | | | | | | |
| | *Juglans cinerea* 2008 | 260 | 46 | 88 | 328 | Henry, IL | James Ream |
| **BUTTONBUSH** | | | | | | | |
| | *Cephalanthus occidentalis* 1992 | 60 | 26 | 38 | 96 | Kern Co., CA | Frank T Callahan II |
| **BYRSONIMA** | | | | | | | |
| Key | *Byrsonima lucida* 1997 | 35 | 20 | 20 | 60 | Key Deer Refuge, FL | TA Williams, V Lopez, V Condo |

**FREMONT COTTONWOOD, SANTA CRUZ COUNTY, ARIZONA**

WHIT BROUGH

| SPECIES/STATUS/YEAR | CIRCUMFERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|
| **CAESALPINIA** | | | | | | |
| Mexican *Caesalpinia mexicana* 1995 | 48 | 45 | 60 | 108 | Hidalgo Co., TX | Joe Ideker |
| **CALIFORNIA-LAUREL** | | | | | | |
| *Umbellularia californica* 1997 | 536 | 108 | 119 | 674 | Mendocino Co., CA | Dave Grabner, Leo Martin |
| **CAMPHOR-TREE** | | | | | | |
| *Cinnamomum camphora* △ 2008 | 208 | 77 | 136 | 319 | Grady, GA | Randy Kirksey |
| **CANELLA** | | | | | | |
| *Canella winterana* 1998 | 26 | 38 | 21 | 69 | Monroe Co., FL | Joseph Nemec |
| **CANOTIA** | | | | | | |
| *Canotia holacantha* 2005 | 90 | 32 | 20 | 127 | Mohave, AZ | John Carr, David Thornburg |
| **CAPER** | | | | | | |
| Jamaica *Capparis cynophallophora* 2007 | 17 | 25 | 10 | 45 | Monroe Co., FL | Bob Showler |
| **CATALPA** | | | | | | |
| Northern *Catalpa speciosa* 2003 | 293 | 82 | 90 | 397 | Vanderburgh, IN | Thomas E Westfall |
| Southern *Catalpa bignonioides* 2000 | 271 | 88 | 68 | 376 | Yalobusha Co., MS | J Ferguson, J Edwards, G Byrd |
| **CATCLAW** | | | | | | |
| Gregg *Acacia greggii* 1971 | 77 | 49 | 46 | 138 | Red Rock, NM | Samuel Lamb |
| Wright *Acacia wrightii* 2006 | 91 | 33 | 41 | 134 | Uvalde, TX | John K Berry |
| **CERCOCARPUS** | | | | | | |
| Alderleaf *Cercocarpus montanus* 1999 | 26 | 21 | 11 | 50 | Wasatch-Cache NF, UT | Tony Dietz |
| Catalina *Cercocarpus traskiae* 2003 | 30 | 18 | 25 | 54 | Catalina Island Conservancy, CA | Art Cowley |
| Curlleaf *Cercocarpus ledifolius* 2008 | 148 | 16 | 25 | 170 | Sevier, UT | B Bonebrake, C Colt, D Page |
| Hairy *Cercocarpus breviflorus* 1996 | 37 | 25 | 20 | 67 | Mt. Wrightson WA, AZ | Robert Zahner, Sid Jackson |
| **CHASTETREE** | | | | | | |
| Common *Vitex agnus-castus* △ 2003 | 111 | 26 | 37 | 146 | Johnson City, TX | Robert Edmondson |
| **CHERRY** | | | | | | |
| Alabama black *Prunus serotina* var. *alabamensis* 2006 | 31 | 49 | 28 | 87 | Floyd, GA | Richard & Teresa Ware |
| Black *Prunus serontina* var. *serotina* † 2005 | 216 | 85 | 61 | 316 | West Portsmouth, OH | Ben Hamilton |
| Black *Prunus serotina* † 1997 | 169 | 132 | 51 | 314 | Great Smoky Mtns. NP, TN | Will Blozan, Jan Stykar |
| Black *Prunus serotina* † 2003 | 187 | 112 | 78 | 319 | Perry Co., IL | Maurice O'Keefe |
| Catalina *Prunus lyonii* 1996 | 115 | 43 | 45 | 169 | Catalina Island Conservancy, CA | A Douglas Propst, Bill Hartley |
| Chokecherry, cmn *Prunus virginiana* var. *virginiana* 1999 | 193 | 55 | 93 | 271 | Baltimore Co., MD | Francis X & Wendy L Rurka |
| Escarpment *Prunus serotina* var. *eximia* † 1998 | 102 | 51 | 53 | 166 | Kerr Co., TX | Mark Duff, Robert Edmonson |
| Escarpment *Prunus serotina* var. *eximia* † 2003 | 102 | 51 | 53 | 166 | Real Co., TX | Lee Haile |
| Hollyleaf *Prunus ilicifolia* 1993 | 54 | 50 | 56 | 118 | Jolon, CA | Frank T. Callahan |
| Mahaleb *Prunus mahaleb* †△ 2005 | 84 | 36 | 38 | 130 | VanWert Co., OH | Brian P Riley, Barry L Weber |
| Mahaleb *Prunus mahaleb* †△ 1993 | 79 | 41 | 48 | 132 | Lake Stevens, WA | Ron Brightman, Robert Van Pelt |
| Mazzard *Prunus avium* △ 1989 | 290 | 96 | 73 | 404 | West Chester, PA | M Hobaugh, P & C Youngblood |
| Pin *Prunus pensylvanica* † 1999 | 58 | 75 | 42 | 144 | Great Smoky Mtns. NP, TN | Gerald Shelton |
| Pin *Prunus pensylvanica* † 2005 | 60 | 75 | 50 | 148 | Kalamazoo, MI | Emma Pitcher, Elwood B Ehrle |
| Sthwstrn black *Prunus serotina* var. *rufula* 2004 | 136 | 66 | 50 | 215 | Mingus Mountain, Prescott NF, AZ | David Thornburg, Harry Untiedt |
| West Indies *Prunus myrtifolia* 1989 | 73 | 41 | 23 | 120 | Dade Co., FL | Carol Lippincott |
| **CHESTNUT** | | | | | | |
| American *Castanea dentata* 2005 | 288 | 70 | 70 | 376 | Clarkston, WA | Wayne Bunce |
| **CHINABERRY** | | | | | | |
| *Melia azedarach* †△ 2007 | 120 | 47 | 44 | 178 | Washington, GA | Jimmy & Sandra Mock |
| *Melia azedarach* †△ 2007 | 126 | 44 | 46 | 182 | Baldwin, GA | Charles Alan Price |
| **CHINKAPIN** | | | | | | |
| Allegheny *Castanea pumila* 2007 | 64 | 65 | 51 | 142 | Perry, PA | Sally Tangeres, Scott Wade |
| Giant *Castanopsis chrysophylla* † 1996 | 153 | 122 | 37 | 284 | Mendocino Co., CA | Paul A Violett |
| Giant *Castanopsis chrysophylla* † 2008 | 160 | 116 | 37 | 285 | Mendocino Co., CA | Patrick Howland |
| Ozark *Castanea ozarkensis* 2007 | 35 | 62 | 38 | 107 | Barry, MO | Robert Barnes, Jerry Moller |
| **CHOLLA** | | | | | | |
| Jumping *Opuntia fulgida* 2001 | 32 | 21 | 15 | 57 | Pinal, AZ | Mike Hallen |
| **CLETHRA** | | | | | | |
| Cinnamon *Clethra acuminata* 1995 | 10 | 33 | 12 | 46 | Great Smoky Mtns. NP, NC | Will Blozan, Carl Blozan, Jan Stykar |

## CO-CHAMP KENTUCKY COFFETREE, LAKE, OHIO

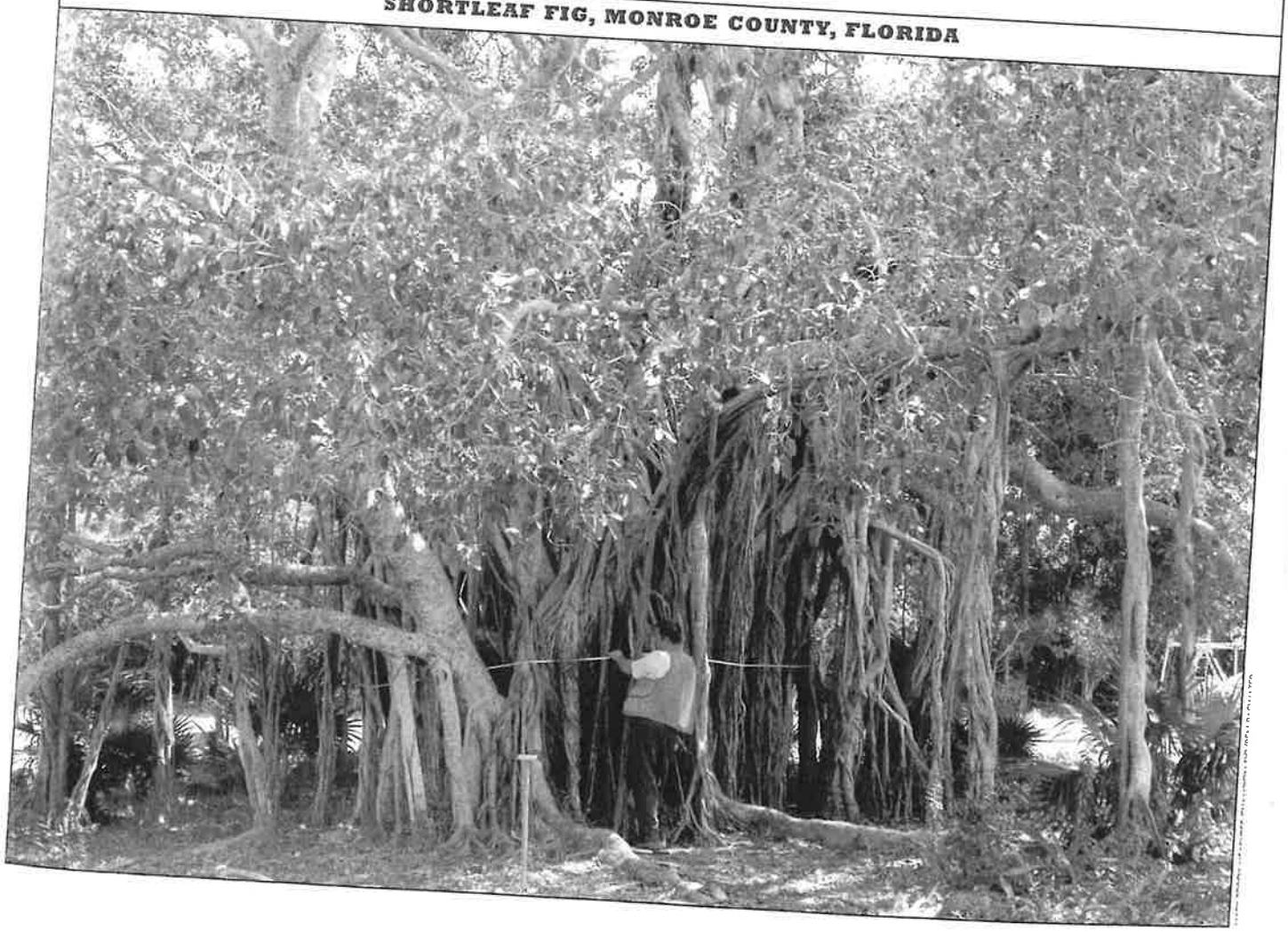
WHIT BRONAUGH

| SPECIES/STATUS/YEAR | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|
| **CLIFFROSE** | | | | | | |
| *Cowania mexicana* 2007 | 37 | 22 | 17 | 63 | Grand Canyon NP, AZ | Mike Hallen |
| **CLUSIA** | | | | | | |
| Florida *Clusia rosea* △ 1995 | 31 | 32 | 25 | 69 | Broward Co., FL | Jim Higgins |
| **COFFEETREE** | | | | | | |
| Kentucky *Gymnocladus dioicus* † 2001 | 206 | 82 | 77 | 307 | Lake, OH | Mark Ervin |
| Kentucky *Gymnocladus dioicus* † 2007 | 203 | 85 | 82 | 309 | Washington, MD | John Bennett |
| **CONDALIA** | | | | | | |
| Bitter *Condalia globosa* † 2001 | 42 | 17 | 25 | 65 | Eagletail Mtns Wilderness, AZ | Central Arizona College Hiking Club |
| Bitter *Condalia globosa* † 2003 | 44 | 18 | 16 | 66 | Little Ajo Mountains, BLM, AZ | Jim Malusa |
| **CORALBEAN** | | | | | | |
| Southeastern *Erythrina herbacea* 1995 | 12 | 22 | 22 | 40 | Lee Co., FL | Richard Workman |
| Southwestern *Erythrina flabelliformis* 1999 | 11 | 15 | 12 | 29 | Arizona-Sonora Desert Museum, AZ | George Montgomery |
| **COTTONWOOD** | | | | | | |
| Black *Populus trichocarpa* 2007 | 337 | 158 | 80 | 515 | Cowlitz, WA | Denny Fowler |
| Eastern *Populus deltoides* var. *deltoides* 2008 | 348 | 154 | 84 | 523 | Buffalo Co., WI | Fred Wicka |
| Fremont *Populus fremontii* var. *fremontii* 1996 | 504 | 92 | 108 | 623 | Sonoita Creek, Santa Cruz Co., AZ | Mark Rouw, Don Richard |
| Meseta *Populus fremontii* var. *mesetae* 1986 | 211 | 49 | 84 | 281 | Brewster Co., TX | James E Liles |
| Narrowleaf *Populus angustifolia* 2006 | 28 | 37 | 12 | 68 | Cheyenne, KS | Bonnie Zweygart |
| Plains *Populus deltoides* var. *occidentalis* 1967 | 432 | 95 | 98 | 552 | Hygiene, CO | Allegra Collister |
| Rio Grande *Populus fremontii* var. *wislizeni* 1976 | 367 | 92 | 118 | 489 | Fort Davis, TX | Steve Runnels |
| Swamp *Populus heterophylla* † 2007 | 142 | 105 | 34 | 256 | Chesapeake, VA | Byron Carmean, Gary Williamson |
| Swamp Populus heterophylla † 2000 | 151 | 93 | 50 | 257 | Yazoo NWR, MS | Lamar Dorris, David Linden |
| **CYPRESS** | | | | | | |
| Arizona *Cupressus arizonica* var. *arizonica* 1955 | 244 | 93 | 48 | 349 | Bear Canyon, Coronado NF, AZ | James Mielke |
| Arizona smooth *Cupressus arizonica* var. *glabra* 2003 | 215 | 70 | 52 | 298 | Coconino NF, AZ | David Thornburg, Harry Untiedt |
| Baker *Cupressus bakeri* 1976 | 107 | 98 | 19 | 210 | Rogue River NF, OR | Frank Callahan |
| Cuyamaca *Cupressus arizonica* v. *stephensonii* 1976 | 70 | 37 | 28 | 114 | San Diego County, CA | Frank Callahan |
| Gowen *Cupressus goveniana* var. *goveniana* 1996 | 66 | 40 | 52 | 119 | Point Lobos SP, CA | Alan R Washburn |
| MacNab *Cupressus macnabiana* 1981 | 136 | 55 | 55 | 205 | Amador, CA | Frank Callahan |
| Mendocino *Cupressus goveniana* var. *pigmaea* 1986 | 238 | 150 | 49 | 400 | Mendicino Co. CA | Frank T Callahan |
| Monterey *Cupressus macrocarpa* 1994 | 553 | 102 | 111 | 683 | Pescadero Co., CA | R Huntington & Fiesta Garden School |
| Piute *Cupressus arizonica* var. *abramsiana* 2005 | 112 | 74 | 60 | 201 | Sequoia NF, CA | Loren Ross |
| Santa Cruz *Cupressus goveniana* var. *abramsiana* † 2003 | 97 | 67 | 45 | 175 | Santa Cruz, CA | Whit Bronaugh |
| Santa Cruz *Cupressus goveniana* var. *abramsiana* † 2003 | 99 | 68 | 40 | 177 | Santa Cruz, CA | Whit Bronaugh |
| Santa Cruz *Cupressus goveniana* var. *abramsiana* † 2003 | 113 | 56 | 41 | 179 | Santa Cruz, CA | Whit Bronaugh |
| Sargent *Cupressus sargentii* 2001 | 244 | 58 | 64 | 318 | Wildcat Canyon Regional Park, CA | Rory Nichols |
| Tecate *Cupressus guadalupensis* v.*forbesii* 2001 | 93 | 71 | 48 | 176 | San Diego, CA | Art Cowley |
| **CYPRESS-PINE** | | | | | | |
| Blue *Callitris hugelii* △ 1975 | 180 | 60 | 50 | 253 | Manatee Co., FL | Steven Spezia |
| **CYRILLA** | | | | | | |
| Swamp *Cyrilla racemiflora* var. *racemiflora* 1980 | 60 | 50 | 12 | 113 | Washington, FL | Charles Reeves |
| **DAHOON** | | | | | | |
| *Ilex cassine* 2006 | 79 | 46 | 36 | 134 | Palm Beach Co., FL | Josh Marshall |
| Myrtle *Ilex myrtifolia* 1998 | 77 | 60 | 39 | 147 | Wakulla Co., FL | David Roddenberry |
| **DARLING-PLUM** | | | | | | |
| *Reynosia septentrionalis*, 1975 | 23 | 49 | 15 | 76 | Monroe Co., FL | Charlotte Niedhauk |
| **DESERT-WILLOW** | | | | | | |
| *Chilopsis linearis*, 1976 | 165 | 68 | 54 | 247 | Pinal Canyon Drive, Gila Co., AZ | Mitchell Holder |
| **DEVILS-WALKINGSTICK** | | | | | | |
| *Aralia spinosa* 2006 | 31 | 38 | 40 | 79 | Haywood, NC | Ron Lance, Ken Knox |
| **DEVILWOOD** | | | | | | |
| *Osmanthus americanus* 2003 | 88 | 39 | 42 | 138 | Clay Co., FL | John & Janet Sloane |
| **DOGWOOD** | | | | | | |
| Alternate-leaf *Cornus alternifolia* 2007 | 57 | 12 | 15 | 73 | Bedford, VA | Richard Salzer |
| Blackfruit *Cornus sessilis* 1986 | 20 | 18 | 16 | 42 | Shasta Co., CA | Frank T Callahan |

| SPECIES / STATUS / YEAR | | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| Flowering | *Cornus florida* † 2003 | 107 | 36 | 39 | 153 | Willamson Co., TN | Jerry Greenshaw |
| Flowering | *Cornus florida* † 2002 | 107 | 35 | 42 | 153 | Hampton, VA | Sabastian Velilla, Sandra Burke |
| Gray | *Cornus racemosa* 2004 | 13 | 15 | 6 | 30 | Oakland Co., MI | R Pomorski, G McPherson |
| Roughleaf | *Cornus drummondii* 2001 | 40 | 22 | 33 | 70 | Shelby Co., TN | David Smith |
| Roundleaf | *Cornus rugosa* 2006 | 23 | 29 | 26 | 59 | Leelanau Co., MI | Andy & Noah Sawyer |
| Swamp | *Cornus stricta* † 2003 | 13 | 24 | 17 | 41 | Madison, MS | Ed Brown, Jack Herring |
| Swamp | *Cornus stricta* † 2007 | 19 | 23 | 18 | 46 | Dallas, AL | Thomas H Wilson |
| Western | *Cornus occidentalis* 2003 | 32 | 25 | 35 | 66 | Polk Co., OR | Barbra Rupers |
| **DOUGLAS-FIR** | | | | | | | |
| Bigcone | *Pseudotsuga macrocarpa* 1945 | 269 | 165 | 94 | 458 | Los Angeles Co., CA | William Maxwell |
| Coast | *Pseudotsuga menziesii* v. *menziesii* † 1999 | 505 | 281 | 71 | 804 | Olympic NF, WA | Peston P Marcy |
| Coast | *Pseudotsuga menziesii* v. *menziesii* † 1999 | 512 | 301 | 65 | 829 | Jedediah Smith Redwood SP, CA | Robert Van Pelt |
| Rocky Mtn. | *Pseudotsuga menziesii* v. *glauca* 2006 | 100 | 84 | 41 | 194 | Buncombe, NC | K Knox, B Alexander, R Lance |
| **ELDER** | | | | | | | |
| Blue | *Sambucus cerulea* 2005 | 136 | 30 | 38 | 176 | Porterville, CA | Art Cowley |
| Mexican | *Sambucus mexicana* 2005 | 95 | 41 | 26 | 143 | Patagonia, AZ | Ken Morrow |
| Pacific red | *Sambucus callicarpa* 2001 | 56 | 27 | 32 | 91 | Tillamook, OR | William Schoppert |
| **ELEPHANT-TREE** | | | | | | | |
| | *Bursera microphylla* 2005 | 34 | 16 | 28 | 57 | Cabeza Prieta NWR AZ | J Cain, B Jansen, P Krausman |
| **ELLIOTTIA** | | | | | | | |
| | *Elliottia racemosa* 1989 | 36 | 47 | 20 | 88 | Tattnall, GA | Howard Stanley, Red Castleman |
| **ELM** | | | | | | | |
| American | *Ulmus americana* 2007 | 246 | 136 | 85 | 403 | Baltimore Co., MD | Charles M & Anita Stapleton |
| Cedar | *Ulmus crassifolia* 2001 | 156 | 120 | 68 | 293 | Meeman-Shelby SP, TN | David Smith |
| Florida | *Ulmus americana* var. *floridana* 2003 | 169 | 79 | 64 | 264 | Duval Co., FL | David Holley |
| Rock | *Ulmus thomasii* 1989 | 189 | 100 | 85 | 310 | Cass Co., MI | Andrew & Noah Sawyer |
| September | *Ulmus serotina* 2007 | 135 | 83 | 77 | 237 | Davidson, TN | Michael Davie, Steve Eidson |
| Siberian | *Ulmus pumila* †△ 2001 | 238 | 86 | 128 | 356 | Londonderry, OH | Brian P Riley |
| Siberian | *Ulmus pumila* †△ 1999 | 249 | 85 | 99 | 359 | Grand Junction, CO | Bob Ely |
| Slippery | *Ulmus rubra* † 2006 | 205 | 130 | 90 | 357 | Clay, KY | Ian Rison, Jared Calvert |
| Slippery | *Ulmus rubra* † 2003 | 232 | 103 | 93 | 358 | Frederick, MD | Stuart Frazier |
| Winged | *Ulmus alata* 2007 | 144 | 114 | 91 | 281 | Aiken, SC | D W Shepherd |
| **ESENBECKIA** | | | | | | | |
| Berlandier | *Esenbeckia berlandieri* 1995 | 41 | 24 | 21 | 70 | Cameron Co., TX | Guy Huddleston |
| **EUCALYPTUS** | | | | | | | |
| Bluegum | *Eucalyptus globulus* △ 2000 | 586 | 141 | 126 | 759 | Petrolia, CA | Loren Salladay, Robert Bush |
| Longbeak | *Eucalyptus camaldulensis* △ 2003 | 276 | 112 | 84 | 409 | Chandler, AZ | Mike Hallen, Sylvia Escudero |
| **FALSE-MASTIC** | | | | | | | |
| | *Mastichodendron foetidissimum* 1973 | 112 | 75 | 44 | 198 | Dade Co., FL | Albert H Hetzell, Ron Smith |
| **FIDDLEWOOD** | | | | | | | |
| Florida | *Citharexylum fruticosum* 1986 | 20 | 33 | 13 | 56 | Monroe Co., FL | Ken Roundtree, Frank L Zickar |
| **FIG** | | | | | | | |
| Florida strangler | *Ficus aurea* 1973 | 399 | 67 | 77 | 485 | Dade Co., FL | Albert Hetzell, Ron Smith |
| Shortleaf | *Ficus citrifolia* 1986 | 444 | 48 | 75 | 511 | Monroe Co., FL | David M Sinclair, Frank L Zickar |
| **FIR** | | | | | | | |
| Balsam | *Abies balsamea* 1992 | 151 | 104 | 48 | 267 | Fairfield, PA | RO Brooks, C Keeran |
| California red | *Abies magnifica* 1999 | 365 | 172 | 41 | 547 | Yosemite NP, CA | R Van Pelt, R Knight, M Rudnicki |
| California white | *Abies concolor* var. *lowiana* 1997 | 276 | 217 | 391 | 591 | Yosemite NP, CA | Robert Van Pelt |
| Corkbark | *Abies lasiocarpa* var. *arizonica* 1969 | 146 | 95 | 33 | 249 | Lincoln NF, NM | Earl Aldon |
| Fraser | *Abies fraseri* † 2007 | 105 | 83 | 44 | 199 | Muskingum, OH | David Ahlum |
| Fraser | *Abies fraseri* † 2007 | 117 | 74 | 47 | 203 | Highland, OH | Brian P Riley |
| Grand | *Abies grandis* 1997 | 245 | 257 | 36 | 511 | Redwood NP, CA | Robert Van Pelt, Dale Thornburg |
| Noble | *Abies procera* † 1964 | 359 | 227 | 41 | 596 | Gifford Pinchot NF, WA | Harold Coates, Bob Smith |
| Noble | *Abies procera* † 1989 | 313 | 272 | 49 | 597 | Mt. St. Helens NM, WA | Robert Van Pelt |
| Pacific silver | *Abies amabilis* 1999 | 260 | 218 | 37 | 487 | Olympic NP, WA | Robert Van Pelt, Steve Sillett |
| Rocky Mntn white | *Abies concolor* var. *concolor* 2005 | 180 | 156 | 41 | 346 | Cochiti, NM | Charles Wicklund |

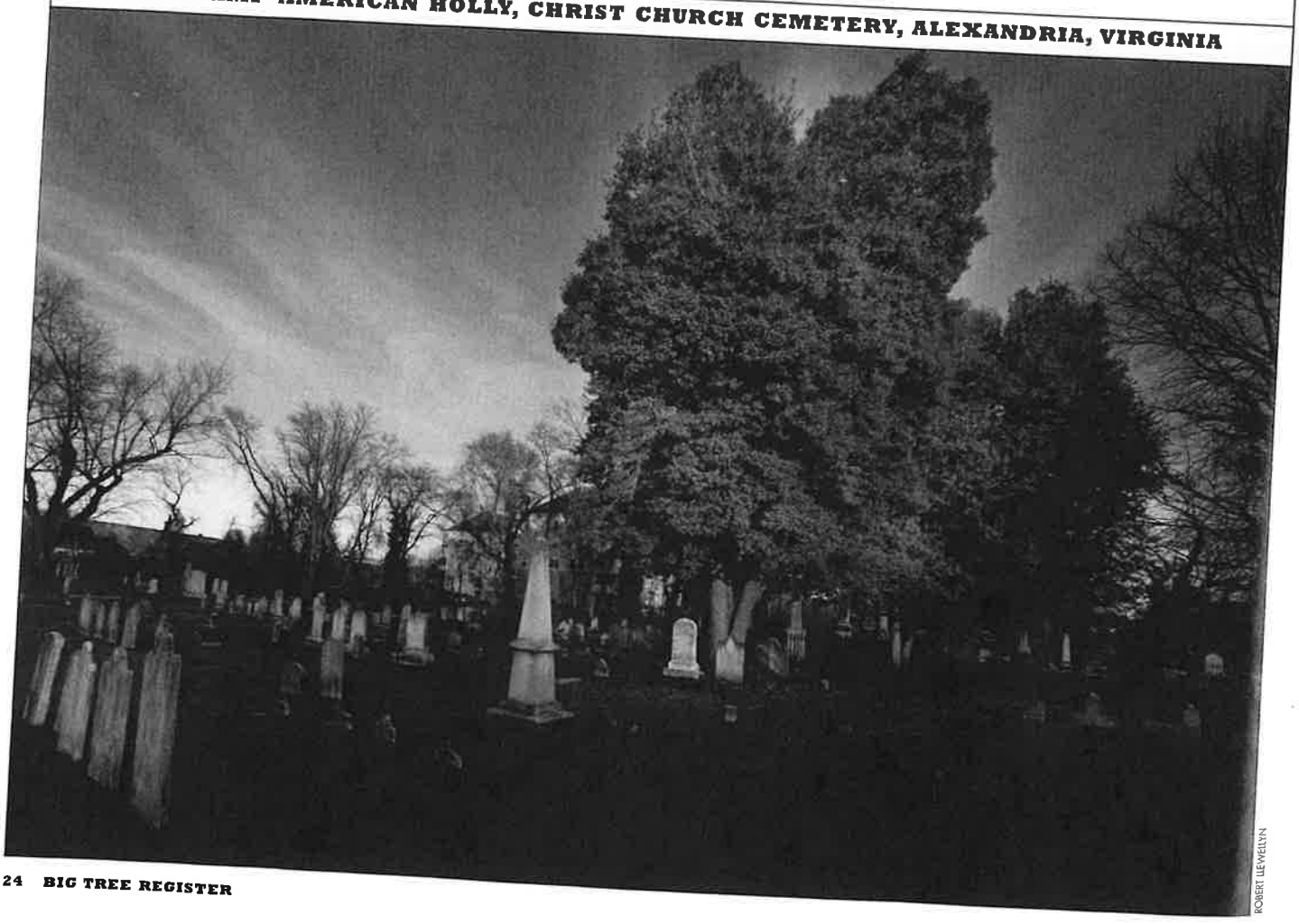
| SPECIES/STATUS/YEAR | CIRCUM-FERENCE | HEIGHT' | SPREAD' | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|
| Subalpine *Abies lasiocarpa* var. *lasiocarpa* 1965 | 252 | 130 | 26 | 389 | Olympic NP, WA | Stephen Arno, Oscar Sedergren |
| **FISHPOISON-TREE** | | | | | | |
| Florida *Piscidia piscipula* 2008 | 123 | 50 | 63 | 189 | Monroe Co., FL | David Shafer |
| **FORESTIERA** | | | | | | |
| Desert-olive *Forestiera phillyreoides* 1997 | 10 | 17 | 17 | 31 | Buenos Aires NWR, AZ | Roseann Hanson |
| **FRANKLINIA** | | | | | | |
| *Franklinia alatamaha* 1968 | 42 | 33 | 40 | 85 | Wyndmoor, PA | John Swartley |
| **FREMONTIA** | | | | | | |
| California *Freemontia california* 2003 | 54 | 25 | 28 | 86 | Sequoia NF, CA | Art Cowley |
| **FRINGETREE** | | | | | | |
| *Chionanthus virginicus* † 2003 | 64 | 20 | 20 | 89 | Elmwood Cemetery, TN | Carlyle Page |
| *Chionanthus virginicus* † 2001 | 57 | 25 | 43 | 93 | Salt Lake City, UT | Art Scott, Shirley Hawkins |
| **GALLBERRY** | | | | | | |
| Large *Ilex coriacea* 2004 | 16 | 33 | 21 | 54 | Vernon Parish, LA | Charles Allen |
| **GEIGER-TREE** | | | | | | |
| *Cordia sebestena* †△ 2007 | 39 | 19 | 22 | 64 | Palm Beach Co., FL | David Bunting |
| *Cordia sebestena* †△ 1988 | 37 | 24 | 17 | 65 | Lee Co., FL | Eric H Hoyer, Chris J Anderson |
| **GRAYTWIG** | | | | | | |
| *Schoepfia chrysophylloides* 2007 | 13 | 19 | 11 | 35 | Lee Co., FL | Michael Weston |
| **GUAJILLO** | | | | | | |
| *Acacia berlandieri* † 2007 | 17 | 17 | 21 | 39 | University of Arizona, AZ | George Ferguson |
| *Acacia berlandieri* † 2007 | 18 | 20 | 25 | 44 | Uvalde, TX | John K Berry |
| **GUMBO-LIMBO** | | | | | | |
| *Bursera simaruba* 2007 | 178 | 43 | 63 | 237 | Manatee Co., FL | Bob Showler |

**SHORTLEAF FIG, MONROE COUNTY, FLORIDA**



| SPECIES / STATUS / YEAR | | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| **HACKBERRY** | | | | | | | |
| Common | *Celtis occidentalis* 2003 | 248 | 126 | 112 | 402 | Wayland, MI | Elwood B Ehrle |
| Georgia | *Celtis tenuifolia* † 2005 | 38 | 54 | 28 | 99 | Buncombe, NC | Ron Lance, Ken Knox |
| Georgia | *Celtis tenuifolia* † 2007 | 37 | 54 | 31 | 99 | Perry, AL | Thomas H Wilson |
| Georgia | *Celtis tenuifolia* † 2007 | 51 | 43 | 28 | 101 | Lucas, OH | Brian P Riley |
| Netleaf | *Celtis reticulata* 1989 | 180 | 69 | 75 | 268 | Catron Co., NM | Ralph A Fisher Jr. |
| Spiny | *Celtis pallida* 2000 | 25 | 31 | 23 | 62 | Tanque Verde Wash, Pima Co., AZ | Bob & Rita Cote |
| **HAWTHORN** | | | | | | | |
| Biltmore | *Crataegus intricata* 1982 | 112 | 35 | 60 | 162 | Warrenton, VA | Richard Salzer |
| Blueberry | *Crataegus brachyacantha* 1993 | 95 | 42 | 35 | 146 | Nacogdoches, TX | Keith Cook |
| Broadleaf | *Crataegus dilatata* 2003 | 51 | 23 | 34 | 83 | Morton Arboretum, IL | Edith Makra |
| Cerro | *Crataegus erythropoda* 2007 | 20 | 15 | 16 | 39 | Kelly Canyon, Coconino NF, AZ | Andy Allgood, D Thornburg |
| Columbia | *Crataegus columbiana* 1992 | 39 | 25 | 15 | 68 | Nez Perce Co., ID | Ken & Brant Steigers |
| Dotted | *Crataegus punctata* 2005 | 77 | 28 | 38 | 115 | Smyth Co., VA | Richard Salzer, Richard Alan Salzer |
| Downy | *Crataegus mollis* † 2004 | 103 | 35 | 41 | 148 | Wayne Co., MI | Richard Pomorski |
| Downy | *Crataegus mollis* † 2004 | 99 | 41 | 35 | 149 | Wayne Co., MI | R Pomorski, G McPherson |
| Fanleaf | *Crataegus flabellata* 2001 | 47 | 36 | 35 | 92 | Horrison Co., WV | Dan Cooley, Michael Plevich |
| Fleshy | *Crataegus succulenta* 2003 | 54 | 32 | 35 | 95 | University of Tennessee, Knox, TN | Jim Cortese |
| Green | *Crataegus viridis* † 2008 | 65 | 44 | 41 | 119 | Southampton, VA | Byron Carmean, Gary Williamson |
| Green | *Crataegus viridis* † 2008 | 62 | 49 | 39 | 121 | Southampton, VA | Byron Carmean, Gary Williamson |
| Green | *Crataegus viridis* † 2008 | 54 | 57 | 42 | 122 | Southampton, VA | Byron Carmean, Gary Williamson |
| Kansas | *Crataegus coccinioides* 2003 | 36 | 16 | 40 | 62 | Morton Arboretum, IL | Edith Makra, Kunso Kim |
| Littlehip | *Crataegus spathulata* 1981 | 42 | 35 | 32 | 85 | Fulton, GA | Jim L Chance |
| May | *Crataegus aestivalis* † 2007 | 49 | 40 | 34 | 98 | Haralson, GA | Maxine Grace |
| May | *Crataegus aestivalis* † 2001 | 54 | 34 | 43 | 99 | Meeman-Shelby SP, TN | David Smith |

**CO-CHAMP AMERICAN HOLLY, CHRIST CHURCH CEMETERY, ALEXANDRIA, VIRGINIA**



ROBERT LLEWELLYN

| SPECIES/STATUS/YEAR | | CIRCUMFERENCE | HEIGHT' | SPREAD' | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| Oneseed | *Crataegus monogyna* †△ 1991 | 100 | 44 | 56 | 158 | Old Saybrook, CT | Donald M Swan |
| Oneseed | *Crataegus monogyna* †△ 1993 | 113 | 36 | 56 | 163 | Mount Vernon, WA | Ron Brightman |
| Parsley | *Crataegus marshallii* 1997 | 53 | 28 | 30 | 89 | Covington County, MS | Bryant E Brown, Jon Wallace |
| Riverflat | *Crataegus opaca* 2001 | 58 | 30 | 35 | 97 | Union, Parish Co., LA | Stephen Pagans |
| Scarlet | *Crataegus coccinea* 1980 | 62 | 34 | 32 | 104 | Oneida, NY | Charles McFadden |
| Texas | *Crataegus texana* 2003 | 28 | 25 | 28 | 60 | Harris Co., TX | Lynn Lowery |
| Tracy | *Crataegus tracyi* 2003 | 43 | 27 | 26 | 77 | Jeff Davis Co., TX | Thomas R Mangren |
| Washington | *Crataegus phaenopyrum* 2007 | 67 | 37 | 38 | 114 | Johnson, KS | Chuck Brasher |
| Yellow | *Crataegus flava* 2000 | 30 | 45 | 32 | 83 | Nassau County, FL | Christian S Noble |
| **HAZEL** | | | | | | | |
| Hazelnut | *Corylus americana* 1999 | 30 | 27 | 21 | 62 | Prince Frederick, MD | John Zyla |
| **HEMLOCK** | | | | | | | |
| Carolina | *Tsuga caroliniana* 2005 | 67 | 98 | 36 | 174 | Montgomery, VA | James C Clark |
| Eastern | *Tsuga canadensis* 2007 | 172 | 133 | 39 | 315 | Towns, GA | Wayne Pailloz, Warren Herman |
| Mountain | *Tsuga mertensiana* 2007 | 214 | 183 | 65 | 413 | Prince William Sound, AK | Ron Mahoney |
| Western | *Tsuga heterophylla* † 1954 | 335 | 172 | 65 | 523 | Olympic NP, WA | Preston Macy |
| Western | *Tsuga heterophylla* † 1987 | 273 | 237 | 67 | 527 | Olympic NP, WA | Robert Van Pelt |
| Western | *Tsuga heterophylla* † 1989 | 342 | 195 | 47 | 549 | Olympic NP, WA | Robert L Wood, Robert Van Pelt |
| **HERCULES-CLUB** | | | | | | | |
| | *Zanthoxylum clava-herculis* 2007 | 82 | 36 | 48 | 130 | Beaufort, SC | Bruce Lampright |
| Texas | *Zanthoxylum hirsutum* 2007 | 33 | 41 | 18 | 79 | Tarrant, TX | Geoff Sherman |
| **HIBISCUS** | | | | | | | |
| Shrub althea | *Hibiscus syriacus* †△ 2007 | 21 | 20 | 27 | 48 | Virgina Beach, VA | Byron Carmean, Gary Williamson |
| Shrub althea | *Hibiscus syriacus* †△ 2008 | 33 | 16 | 17 | 53 | Northampton, VA | Byron Carmean, Gary Williamson |
| **HICKORY** | | | | | | | |
| Bitternut | *Carya cordiformis* 1999 | 182 | 120 | 100 | 327 | LaGrange, TN | David Smith |
| Black | *Carya texana* 1980 | 118 | 127 | 70 | 263 | Sabine NF, TX | W Mahler, A Fant, D Baggett, E Fritz |
| Carolina | *Carya ovata* var. *australis* 2007 | 80 | 130 | 14 | 214 | Houston, GA | Danny Hamsley, Jimmy Mock |
| Mockernut | *Carya tomentosa* 2003 | 178 | 108 | 65 | 302 | Upper Marlboro, MD | MNCPPC |
| Nutmeg | *Carya myristiciformis* 2007 | 74 | 115 | 34 | 198 | Floyd, GA | Richard & Teresa Ware, Pat Tomlinson |
| Pignut | *Carya glabra* var. *glabra* 2007 | 171 | 148 | 142 | 355 | Allen, KY | John Jackson |
| Red | *Carya glabra* var. *odorata* 2001 | 154 | 153 | 79 | 327 | Great Smoky Mtns. NP, TN | Bill Korn |
| Sand | *Carya pallida* 2005 | 132 | 129 | 60 | 276 | Greenville Co., SC | Steven D Smith |
| Shagbark | *Carya ovata* var. *ovata* 2007 | 184 | 98 | 107 | 309 | Anne Arundel Co., MD | James & Kathleen Suite |
| Shellbark | *Carya laciniosa* 1994 | 175 | 139 | 80 | 334 | Greenup, KY | Charles Wilburn, Rick Crooks |
| Water | *Carya aquatica* 1996 | 194 | 143 | 46 | 349 | Congaree Swamp NM, SC | Robert Jones, Lee Reynaud |
| **HOLACANTHA** | | | | | | | |
| | *Holacantha emoryi* 2000 | 38 | 25 | 23 | 69 | Organ Pipe Cactus NM, AZ | Jim Malusa |
| **HOLLY** | | | | | | | |
| American | *Ilex opaca* † 2007 | 141 | 68 | 36 | 218 | Christ Church Cemetery, Alexandria, VA | Greg Zell |
| American | *Ilex opaca* † 2007 | 145 | 64 | 42 | 220 | Chelsea Historic Site, MD | Chris Garrett |
| American | *Ilex opaca* † 2007 | 154 | 57 | 48 | 223 | Arlington, VA | Greg Zell |
| **HONEYLOCUST** | | | | | | | |
| | *Gleditsia triacanthos* 1999 | 236 | 114 | 93 | 373 | Frederick Co., MD | Gary Schmidt |
| **HOPBUSH** | | | | | | | |
| | *Dodonaea viscosa* 1999 | 11 | 17 | 9 | 30 | Monroe Co., Key Largo, FL | Joseph Nemec |
| **HOPHORNBEAM** | | | | | | | |
| Chisos | *Ostrya chisosensis* 1983 | 27 | 30 | 20 | 62 | Big Bend NP, TX | James E Liles |
| Eastern | *Ostrya virginiana* 1976 | 115 | 56 | 63 | 187 | Clare Co., MI | Andy & Noah Sawyer |
| Knowlton | *Ostrya knowltonii* 2007 | 132 | 40 | 47 | 184 | Oak Creek, Coconino NF, AZ | D Thornburg, A Allgood, H Untied |
| **HORNBEAM** | | | | | | | |
| American | *Carpinus caroliniana* 2008 | 66 | 46 | 48 | 124 | Surry, NC | Brian Elam |
| **HUAJILLO** | | | | | | | |
| Huajillo | *Pithecellobium pallens* 2001 | 18 | 41 | 27 | 66 | University of Arizona, AZ | Kathryn Stiles |
| **HUISACHE** | | | | | | | |
| | *Acacia farnesiana* 1989 | 160 | 29 | 43 | 200 | Atascosa Co., TX | David Soward |

| SPECIES / STATUS / YEAR | CIRCUM-FERENCE | HEIGHT' | SPREAD' | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|
| **HUISACHILLO** | | | | | | |
| *Acacia tortuosa* 2003 | 49 | 31 | 30 | 88 | Phoenix, AZ | Ken & Kathy Morrow |
| **HYPELATE** | | | | | | |
| *Hypelate trifoliata* 1999 | 55 | 42 | 23 | 103 | Monroe Co., FL | Joseph Nemec |
| **INCENSE-CEDAR** | | | | | | |
| *Libocedrus decurrens* 1969 | 468 | 165 | 49 | 645 | Marble Mountains Wilderness, CA | J Herr, D McHardy, D Wright |
| **INDIAN-FIG** | | | | | | |
| *Opuntia ficus-indica* △ 1999 | 36 | 14 | 16 | 54 | Tucson Medical Center, AZ | Ken Porter |
| **INKWOOD** | | | | | | |
| *Exothea paniculata* 2007 | 47 | 47 | 27 | 101 | Monroe Co., FL | Bob Showler |
| **JERUSALEM-THORN** | | | | | | |
| *Parkinsonia aculeata* 2003 | 78 | 45 | 50 | 136 | Arcadia Park, Phoenix, AZ | Larry B Wright, Russell T Gates |
| **JOSHUA-TREE** | | | | | | |
| *Yucca brevifolia* 1999 | 168 | 48 | 49 | 228 | Stanford University, CA | Art Cowley |
| **JUJUBE** | | | | | | |
| Common *Ziziphus jujuba* △ 2002 | 93 | 61 | 51 | 167 | U.S. Capitol, Washington, DC | Rod Royse |
| **JUNIPER** | | | | | | |
| Alligator *Juniperus deppeana* † 2004 | 302 | 60 | 70 | 380 | Prescott NF, AZ | C Walton, D Emerson, T Wright, J Sim |
| Alligator *Juniperus deppeana* † 1998 | 311 | 53 | 77 | 383 | Prescott NF, AZ | Mickey & Richard Contreras |
| Ashe *Juniperus ashei* 1999 | 139 | 41 | 49 | 192 | New Braunfels, TX | Mark Peterson |
| California *Juniperus californica* 2007 | 157 | 25 | 42 | 193 | Yavapai, AZ | David Thornburg, John Carr |
| Drooping *Juniperus flaccida* † 1982 | 103 | 35 | 34 | 147 | Brewster Co., TX | James E Liles |
| Drooping *Juniperus flaccida* † 2006 | 110 | 28 | 36 | 147 | Brewster Co., TX | James E Liles |
| Oneseed *Juniperus monosperma* 2007 | 130 | 28 | 27 | 165 | Munds Mtn. WA, Coconino NF, AZ | David Thornburg, Andy Allgood |
| Pinchot *Juniperus pinchotii* 1977 | 138 | 28 | 33 | 174 | Alpine, TX | Frank Callahan |
| Redberry *Juniperus erythrocarpa* † 2005 | 106 | 35 | 48 | 153 | Cottonwood, AZ | David & Judy Thornburg |
| Redberry *Juniperus erythrocarpa* † 2001 | 119 | 28 | 33 | 155 | Organ Pipe Cactus NM, AZ | John Stiles |
| Rocky Mountain *Juniperus scopulorum* 1940 | 284 | 40 | 29 | 331 | Salt Lake, UT | RP McLaughlin |
| Utah *Juniperus osteosperma* 1996 | 260 | 40 | 56 | 314 | Inyo NF, CA | R Witters and K 'Witters' Fritsche |
| Western *Juniperus occidentalis* 1940 | 481 | 78 | 56 | 573 | Stanislaus NF, CA | JR Hall |
| **KIDNEYWOOD** | | | | | | |
| *Eysenhardtia polystachya* 2007 | 28 | 28 | 20 | 61 | Coyote Mtns. WA, Pima Co., AZ | Ken Morrow, Chuck LeFevre |
| Texas *Eysenhardtia texana* 2003 | 17 | 27 | 14 | 48 | Boyce Thompson Arbrtm, Superior, AZ | Ken & Kathy Morrow, Mike Hallen |
| **LARCH** | | | | | | |
| European *Larix decidua* △ 1997 | 188 | 90 | 78 | 298 | Northfield, VT | Robert Stanton |
| Subalpine *Larix lyallii* 1993 | 265 | 103 | 75 | 387 | Wenatchee NF, WA | Stephen Arno, Jeff Hart |
| Western *Larix occidentalis* 1995 | 273 | 162 | 34 | 444 | Lolo NF, MT | Helen Smith, Micha Krebs |
| **LAURELCHERRY** | | | | | | |
| Carolina *Prunus caroliniana* 1996 | 132 | 48 | 46 | 192 | Harris County, TX | Joseph Muniga, Paul Kisel |
| English Prunus laurocerasus △ 1985 | 109 | 33 | 52 | 155 | Seattle, WA | Arthur Lee Jacobson |
| **LEADWOOD** | | | | | | |
| *Krugiodendron ferreum* 1986 | 73 | 30 | 28 | 110 | Monroe County, FL | David M Sinclair, Frank L Zickar |
| **LEUCAENA** | | | | | | |
| Great *Leucaena pulverulenta* 1994 | 33 | 27 | 26 | 67 | Audubon Sabal Palm Grove Sanct, TX | Joe Ideker |
| **LIGNUMVITAE** | | | | | | |
| Roughbark *Guaiacum sanctum* 1997 | 97 | 31 | 35 | 137 | Monroe Co., Key West, FL | Vincent Condon, Mike Miller |
| Texas *Guaiacum angustifolium* 1974 | 31 | 27 | 15 | 62 | Alamo, TX | Terry Fears |
| **LIME** | | | | | | |
| *Citrus aurantifolia* △ 2003 | 14 | 21 | 15 | 39 | Phoenix, AZ | Larry B Wright, Russell T Gates |
| **LOBLOLLY-BAY** | | | | | | |
| *Gordonia lasianthus* † 1994 | 133 | 90 | 38 | 233 | Duval Co., FL | Debbie Bivins |
| *Gordonia lasianthus* † 2007 | 143 | 80 | 48 | 235 | Duval Co., FL | Meg Gaffney |
| **LOCUST** | | | | | | |
| Black *Robinia pseudoacacia* 1974 | 312 | 94 | 68 | 423 | Livingston, NY | G Weidman |
| Clammy *Robinia viscosa* 1996 | 23 | 23 | 13 | 49 | Highlands, Macon Co., NC | Bill Wykle |
| New Mexico *Robinia neomexicana* 1997 | 92 | 76 | 42 | 179 | Pinal Mtns Rec. Area, Tonto NF, AZ | Mike Hallen, George Kieren |

SHELLBARK HICKORY, GREENUP, KENTUCKY

WHIT BRONAUGH

| SPECIES / STATUS / YEAR | | CIRCUM-FERENCE | HEIGHT' | SPREAD' | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| **LOTEBUSH** | | | | | | | |
| | *Ziziphus obtusifolia* 1999 | 14 | 26 | 20 | 45 | Bingham Cienega Preserve, Pima, AZ | Tom Butler |
| **LYONIA** | | | | | | | |
| Tree | *Lyonia ferruginea* 2007 | 29 | 48 | 49 | 89 | Wakulla Springs SP, FL | George Apthorp, David Roddenberry |
| **LYONTREE** | | | | | | | |
| | *Lyonothamnus floribundus* 2003 | 34 | 46 | 16 | 84 | Catalina Island Conservancy, CA | Art Cowley |
| **LYSILOMA** | | | | | | | |
| Bahama | *Lysiloma latisiliquum* 2003 | 172 | 66 | 72 | 256 | Dade Co., FL | R Mulgrew, S Formenth, R Hammer |
| Littleleaf | *Lysiloma microphyllum* 2005 | 64 | 32 | 41 | 106 | Paradise Valley, AZ | Ken & Kathy Morrow |
| **MADRONE** | | | | | | | |
| Arizona | *Arbutus arizonica* 1997 | 176 | 42 | 46 | 230 | Coronado NF, AZ | Tom Harlan |
| Pacific | *Arbutus menziesii* 2003 | 316 | 88 | 116 | 433 | Big Sur Land Trust, CA | Alan Washburn |
| Texas | *Arbutus texana* 1999 | 175 | 26 | 50 | 214 | Lincoln NF, NM | Mark Rossacker |
| **MAGNOLIA** | | | | | | | |
| Ashe | *Magnolia ashei* 2005 | 62 | 44 | 44 | 117 | Montgomery Co., PA | Betsy Davis, Scott Wade |
| Bigleaf | *Magnolia macrophylla* 2007 | 145 | 55 | 53 | 213 | Howard Co., MD | Joe Gochar |
| Cucumbertree | *Magnolia acuminata* 2003 | 288 | 79 | 88 | 389 | North Canton, OH | Jeremy R Felland |
| Frasier | *Magnolia fraseri* 2007 | 107 | 92 | 55 | 213 | Rabun, GA | Jess Riddle |
| Pyramid | *Magnolia pyramidata* 1999 | 52 | 85 | 27 | 144 | Gadsden Co., FL | Arthur & Meredith Frassand |
| Southern | *Magnolia grandiflora* † 2008 | 206 | 83 | 115 | 318 | Clay, GA | Alan Isler |
| Southern | *Magnolia grandiflora* † 2007 | 209 | 90 | 92 | 322 | Calhoun, AL | Mary Bryant |
| Sweetbay | *Magnolia virginiana* 2002 | 174 | 65 | 70 | 257 | Camden, GA | C Ruckdeschel, CR Shoop, MN Hopkins |
| Umbrella | *Magnolia tripetala* 1969 | 139 | 59 | 50 | 211 | Bucks Co., PA | John Swartley |
| Ylw. cucmbrtree | *Magnolia acuminata* var. *subcordata* 1970 | 155 | 84 | 65 | 255 | Chester Co., PA | John Swartley, Scott Wade |

**BIGLEAF MAPLE, CLATSOP, OREGON**

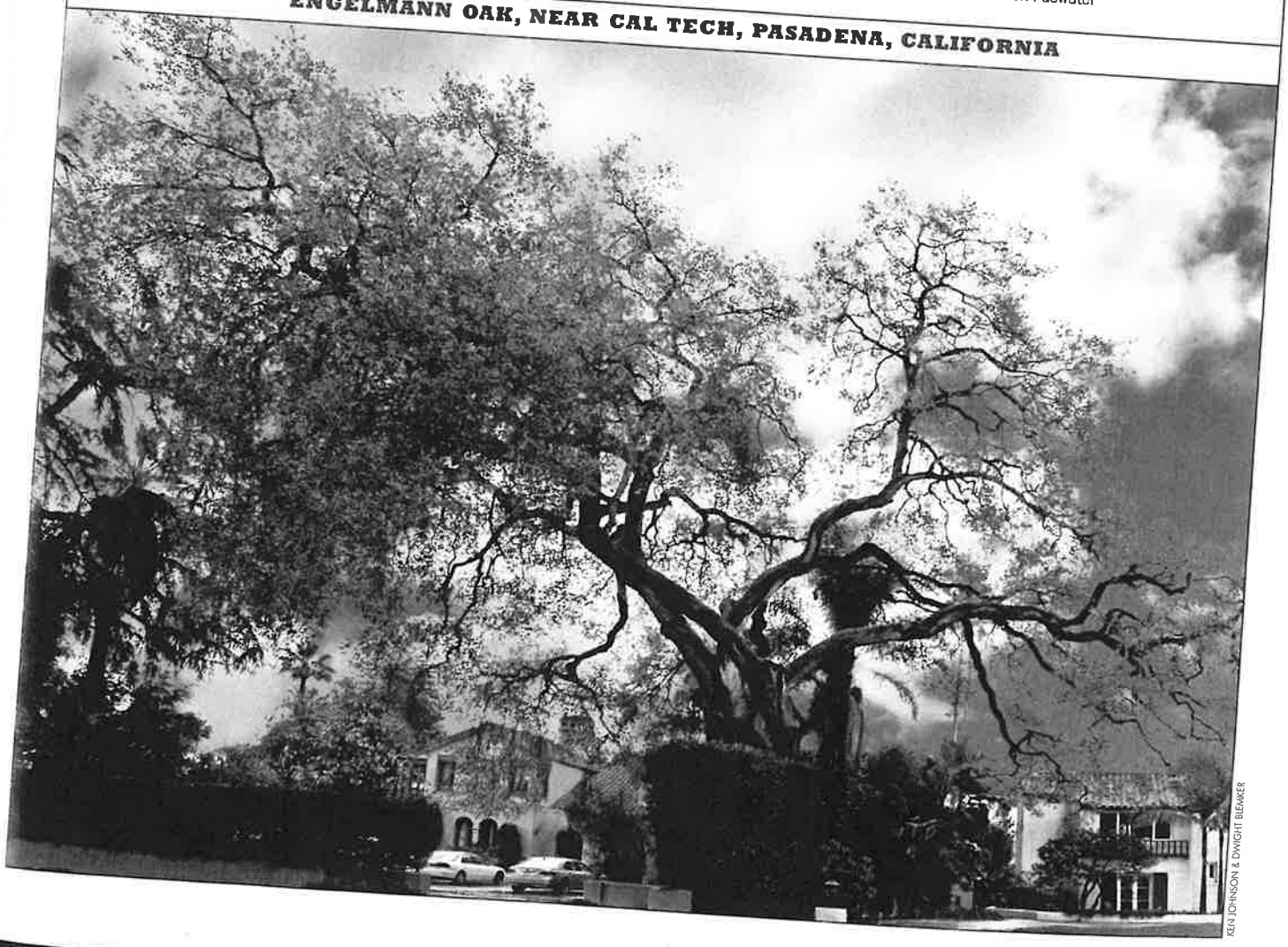
WHIT BRONAUGH

| SPECIES/STATUS/YEAR | | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| **MAHOGANY** | | | | | | | |
| West Indies | *Swietenia mahagoni* 1992 | 164 | 70 | 91 | 257 | Monroe Co., Key West, FL | William S Hubard, B Wang |
| **MANCHINEEL** | | | | | | | |
| | *Hippomane mancinella* 1976 | 57 | 25 | 13 | 85 | Monroe Co., Big Pine Key, FL | Clifford Shaw, George Avery |
| **MANZANITA** | | | | | | | |
| Big | *Arctostaphylos manzanita* 2005 | 119 | 30 | 27 | 156 | Chico, CA | Jim Brobeck |
| Bigberry | *Arctostaphylos glauca* 2005 | 79 | 32 | 27 | 118 | Alameda Co., CA | Paul Furman |
| Pringle | *Arctostaphylos pringlei* 2007 | 48 | 20 | 18 | 72 | Secret Mtn. WA, Coconino NF, AZ | A Allgood, D Thornburg, H Untiedt |
| Whiteleaf | *Arctostaphylos viscida* 2001 | 91 | 24 | 24 | 121 | Pierpoint Springs, CA | Art Cowley |
| **MAPLE** | | | | | | | |
| Bigleaf | *Acer macrophyllum* 1995 | 528 | 103 | 112 | 659 | Clatsop, OR | Maynard Drawson |
| Black | *Acer nigrum* 2006 | 182 | 122 | 123 | 335 | Allegan Co., MI | Elwood B Ehrle |
| Canyon | *Acer grandidentatum* 2007 | 190 | 72 | 50 | 275 | north of Baker Butte, Coconino, AZ | David Thornburg |
| Chalk | *Acer leucoderme* 2007 | 40 | 64 | 30 | 112 | Greene, GA | Justin Tyson |
| Florida | *Acer barbatum* † 2007 | 131 | 105 | 63 | 252 | James City, VA | B Carmean, D Ware, G Fleming |
| Florida | *Acer barbatum* † 2007 | 98 | 135 | 84 | 254 | McCormick, SC | Steven Jones |
| Florida | *Acer barbatum* † 2003 | 146 | 91 | 75 | 256 | Floyd, GA | R & T Ware, Pat Tomlinson |
| Mountain | *Acer spicatum* 2001 | 34 | 62 | 20 | 101 | White, GA | Jimmy Mock |
| Norway | *Acer platanoides* △ 2001 | 212 | 79 | 100 | 316 | Kenyon College, OH | John Aughanbaugh, Brian P Riley |
| Red | *Acer rubrum* 1994 | 276 | 141 | 88 | 439 | Great Smoky Mtns. NP, TN | Will Blozan |
| Rocky Mountain | *Acer glabrum* 1997 | 109 | 71 | 57 | 194 | Island Co., WA | Robert Van Pelt, Ron Brightman |
| Silver | *Acer saccarinium* 2003 | 347 | 115 | 61 | 477 | Newberry, MI | Charles Wade, David Mitchell |
| Striped | *Acer pensylvanicum* 1997 | 44 | 77 | 31 | 129 | Great Smoky Mtns. NP, TN | Will Blozan |
| Sugar | *Acer saccharum* 2007 | 233 | 112 | 91 | 368 | Charlemont, MA | MA Dept. of Conservation & Recreation |
| Vine | *Acer circinatum* 1989 | 38 | 64 | 37 | 111 | Olympic NP, WA | Robert Van Pelt |
| **MAYTEN** | | | | | | | |
| Florida | *Maytenus phyllanthoides* 2003 | 22 | 19 | 26 | 48 | Boyce Thompson Arbrtm, Superior, AZ | Ken & Kathy Morrow, Mike Hallen |
| **MESQUITE** | | | | | | | |
| Honey | *Prosopis glandulosa* var. *glandulosa* 1984 | 172 | 55 | 89 | 249 | Leakey, TX | Ronnie W Pendley |
| Screwbean | *Prosopis pubescens* 2007 | 43 | 24 | 31 | 75 | Hassayampa River Preserve, AZ | David Thornburg, John Carr |
| Velvet | *Prosopis velutina* 1949 | 196 | 46 | 60 | 257 | Hathaway Ranch, Santa Cruz Co., AZ | Gilbert Sykes |
| Western honey | *Prosopis glandulosa* var. *torreyana* 2001 | 106 | 34 | 82 | 161 | City of Tulare, CA | Art Cowley |
| **MEXICAN-BUCKEYE** | | | | | | | |
| | *Ungandia speciosa* 2003 | 12 | 22 | 17 | 38 | Fort Worth, TX | Steven Houser |
| **MOUNTAIN-ASH** | | | | | | | |
| American | *Sorbus americana* 2007 | 107 | 25 | 38 | 142 | Jefferson NF, VA | Jeff & Peter Kirwan |
| European | *Sorbus aucuparia* △ 2003 | 121 | 46 | 47 | 179 | Seattle, WA | Robert Van Pelt, Arthur Lee Jacobson |
| Greene | *Sorbus scopulina* 1993 | 24 | 14 | 20 | 43 | Finch Arboretum, Spokane, WA | AL Jacobson, R Brightman |
| **MOUNTAIN-LAUREL** | | | | | | | |
| | *Kalmia latifolia* † 2003 | 48 | 25 | 18 | 78 | Great Smoky Mtns. NP, TN | Will Blozan |
| | *Kalmia latifolia* † 1999 | 56 | 20 | 19 | 81 | Fannin, GA | George C Hoffman |
| **MULBERRY** | | | | | | | |
| Black | *Morus nigra* △ 1999 | 277 | 60 | 80 | 357 | Carroll Co., MD | Beth Sanders |
| Red | *Morus rubra* 1999 | 301 | 52 | 52 | 366 | Fayette Co., TN | David Smith |
| Texas | *Morus microphylla* 2007 | 135 | 32 | 33 | 175 | Grant, NM | Harvey Smith |
| White | *Morus alba* △ 2007 | 248 | 57 | 63 | 321 | Hidago, NM | David & Bonnie Dunagan |
| **MULLEIN NIGHTSHADE** | | | | | | | |
| Potato-tree | *Solanum erianthum* 2003 | 21 | 24 | 25 | 51 | Hidalgo Co., TX | William MacWhorter |
| **MYRTLE-OF-THE-RIVER** | | | | | | | |
| | *Calyptranthes zuzygium* 1999 | 10 | 28 | 7 | 40 | Monroe Co., FL | Joseph Nemec |
| **NANNYBERRY** | | | | | | | |
| | *Viburnum lentago* 2006 | 30 | 22 | 14 | 56 | Ontonagon Co., MI | Andy & Noah Sawyer |
| **NOLINA** | | | | | | | |
| Bigelow | *Nolina bigelovii* 1997 | 125 | 13 | 8 | 140 | Cabeza Prieta NWR | Tom & Anita Harlan |
| **OAK** | | | | | | | |
| Ajo | *Quercus turbinella* var. *ajoensis* 1993 | 82 | 35 | 40 | 127 | Organ Pipe Cactus NM, AZ | R & G Zahner, K Morrow |

| SPECIES / STATUS / YEAR | | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| Arizona white | *Quercus arizonica* 2003 | 210 | 42 | 65 | 268 | Canelo, Santa Cruz Co., AZ | David & Paul Thornburg |
| Arkansas | *Quercus arkansana* 1997 | 150 | 100 | 104 | 276 | Covington, MS | Bryant E Brown, Jon Wallace |
| Bear | *Quercus ilicifolia* 1985 | 49 | 41 | 34 | 99 | Shenandoah NP, VA | Richard Salzer |
| Bigelow | *Quercus durandii v. breviloba* 2007 | 121 | 45 | 72 | 184 | Travis, TX | Eric Beckers, Jim Houser |
| Black | *Quercus velutina* 1989 | 331 | 80 | 100 | 436 | East Granby, CT | Edward A Richardson |
| Blackjack | Quercus marilandica 2007 | 124 | 122 | 49 | 258 | Barbour, AL | David Pittman |
| Blue | *Quercus douglasii* 2001 | 276 | 112 | 83 | 409 | Tulare Co., CA | Art Cowley, Dan Busby |
| Bluejack | *Quercus incana* † 2003 | 87 | 61 | 45 | 159 | Mineola, TX | William Godwin |
| Bluejack | *Quercus incana* † 2003 | 83 | 68 | 45 | 162 | Mixon, TX | Gregory Dean Stockton |
| Bur | *Quercus macrocarpa* † 2007 | 287 | 90 | 130 | 410 | Boone, MO | John Sam Williamson Jr. |
| Bur | *Quercus macrocarpa* † 2007 | 287 | 104 | 93 | 414 | Woodford, KY | Kent Slusher |
| Canyon live | *Quercus chrysolepis* 2001 | 345 | 69 | 121 | 444 | Tulare Co., CA | Mike Cobb, Art Cowley |
| Chapman | *Quercus chapmanii* 1963 | 85 | 45 | 41 | 140 | Marion Co., FL | Robert Simons |
| Cherrybark | *Quercus falcata* var. *pagodifolia* 2003 | 332 | 123 | 122 | 486 | Tipton Co., TN | David Smith |
| Chestnut | *Quercus prinus* 2003 | 272 | 99 | 98 | 396 | Arnold, MD | Tom Mayer, Jeanine Ove |
| Chinkapin | *Quercus muehlenbergii* 2006 | 311 | 76 | 69 | 404 | Harrison, KY | John Cox |
| Chisos | *Quercus graciliformis* 2005 | 56 | 34 | 43 | 101 | Big Bend NP, TX | Oscar Mestas |
| Coast live | *Quercus agrifolia* 1999 | 338 | 58 | 75 | 415 | Julian, CA | Clint Powell |
| Darlington | Quercus hemisphaerica 2002 | 231 | 98 | 108 | 356 | Alachua Co., FL | Gordon Ward, Daniel Ward |
| Dunn | *Quercus dunnii* 1995 | 95 | 39 | 36 | 143 | Yavapai Co., AZ | Lora Morrow |
| Durand | *Quercus durandii* var. *durandii* 2007 | 162 | 92 | 70 | 272 | Wilcox, AL | Jason Ledbetter |
| Dwarf chinkapin | *Quercus prinoides* † 2001 | 41 | 25 | 22 | 72 | Salem, NE | G Sternberg , J Evertson, J Lo |
| Dwarf chinkapin | *Quercus prinoides* † 2007 | 42 | 28 | 24 | 76 | Brown, KS | Doug Grimm |
| Emory | *Quercus emoryi* 2001 | 222 | 81 | 72 | 321 | Catron Co., NM | M Melendrez, G Sternberg, T Buchanan |
| Engelmann | *Quercus engelmannii* † 2003 | 214 | 27 | 43 | 252 | Julian, CA | Clinton S Powell |
| Engelmann | *Quercus engelmannii* † 1951 | 144 | 84 | 106 | 255 | Cal Tech, Pasadena, CA | Woodbridge Metcalf |
| English | *Quercus robur* △ 1993 | 209 | 108 | 103 | 343 | Olympia, WA | Robert Van Pelt |
| Gambel | *Quercus gambelii* 2003 | 219 | 106 | 64 | 341 | Houston Draw, Coconino NF, AZ | S Poppenberger, H Untiedt, D Thornburg |
| Georgia | *Quercus georgiana* 1996 | 77 | 59 | 65 | 152 | Clarke, GA | Lucia Duncan-Harrison |
| Graves | *Quercus gravesii* 2007 | 62 | 39 | 43 | 112 | Brewster Co., TX | Don Sharlow |
| Gray | *Quercus grisea* 2001 | 237 | 55 | 37 | 301 | Coronado NF, NM | G Sternberg, T Buchanan, M Melendrez |
| Havard | *Quercus havardii* 1986 | 58 | 33 | 30 | 99 | Yoakum, TX | Helen Thompson |
| Interior live | *Quercus wislizeni* 1982 | 252 | 51 | 73 | 321 | Stockton, CA | Darold Mac Dannald |
| Lacey | *Quercus glaucoides* 1989 | 114 | 53 | 74 | 186 | Comal Co., TX | David Vaughn |
| Laurel | *Quercus laurifolia* 2006 | 265 | 130 | 81 | 415 | Richland, SC | J & D Riddle, W Blozan, M Houtchings |
| Live | *Quercus virginiana* 2001 | 420 | 77 | 155 | 536 | Ware, GA | Jimmy Mock |
| Mexican blue | *Quercus oblongifolia* 1999 | 120 | 65 | 69 | 202 | Hidalgo Co., NM | Samuel Lamb |
| Mohr | *Quercus mohriana* 2006 | 49 | 41 | 33 | 99 | Montgomery, PA | Scott Wade |
| Myrtle | *Quercus myrtifolia* † 2007 | 26 | 35 | 30 | 69 | Baldwin, AL | Harry S Larsen, Fred Nation |
| Myrtle | *Quercus myrtifolia* † 2005 | 29 | 37 | 16 | 70 | Camden, GA | Jimmy Mock |
| Netleaf | *Quercus rugosa* 1998 | 90 | 47 | 36 | 146 | Bear Canyon, Coronado NF, AZ | Robert Zahner & James W Smith |
| Northern pin | *Quercus ellipsoidalis* 2006 | 167 | 92 | 80 | 279 | Portage, WI | UWSP SSA |
| Northern red | *Quercus rubra* 2001 | 405 | 80 | 102 | 511 | Monroe Co., NY | Dan Dinero |
| Nuttall | *Quercus nuttallii* 1986 | 288 | 113 | 81 | 421 | Vernon, LA | William E Burns |
| Oglethorpe | *Quercus oglethorpensis* 1968 | 123 | 64 | 82 | 208 | Oglethorpe, GA | Samuel Jones |
| Oregon white | *Quercus garryana* 1970 | 276 | 93 | 65 | 385 | Douglas Co., OR | Allen Silveus |
| Overcup | *Quercus lyrata* 2007 | 313 | 109 | 102 | 448 | Southampton, VA | B Carmean, G Williamson, M Rasnake |
| Pin | Quercus palustris 2001 | 241 | 135 | 97 | 400 | Bell, KY | M Harp, L Johnson, D Carmical |
| Post | *Quercus stellata* var. *stellata* † 1996 | 245 | 83 | 102 | 354 | Jackson, GA | Jimmy Mock |
| Post | *Quercus stellata* var. *stellata* † 2006 | 227 | 105 | 95 | 356 | DeSoto, MS | Drew Stafford, George Byrd III |
| Sand live | *Quercus virginiana* var. *geminata* 1985 | 193 | 64 | 103 | 283 | Alachua Co., FL | Robert W Simons |
| Sand post | *Quercus stellata* var. *margaretta* 1997 | 162 | 86 | 97 | 272 | Jackson Co., FL | Robert T Ing, Daniel B Ward |
| Sandpaper | *Quercus pungens* var. *pungens* 2003 | 13 | 18 | 29 | 38 | near Portal, Coronado NF, AZ | Ken Morrow |
| Scarlet | *Quercus coccinea* 2007 | 252 | 119 | 120 | 401 | Oglethorpe, GA | Jimmy Mock |
| Shingle | *Quercus imbricaria* 1989 | 219 | 105 | 62 | 340 | Cincinnati, OH | AP Newman, R Bernhard |
| Shumard | *Quercus shumardii* var. *shumardii* 2002 | 332 | 96 | 96 | 452 | Anna, IL | Larry Mahan |

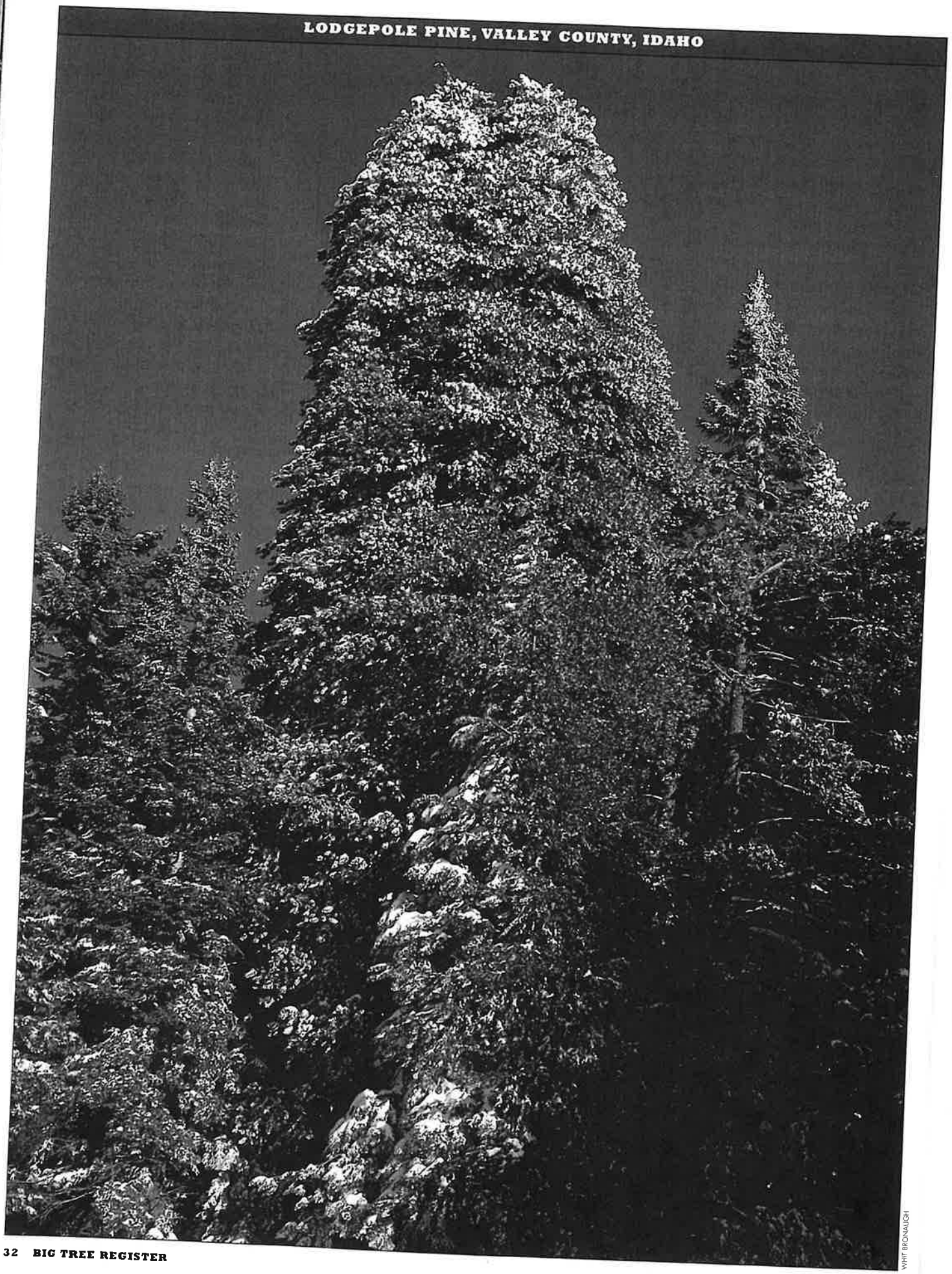
| SPECIES/STATUS/YEAR | | CIRCUMFERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| Silverleaf | *Quercus hypoleucoides* 2001 | 158 | 85 | 52 | 256 | Santa Rita Mtns, Coronado NF, AZ | Ken Porter, Mike Hallen |
| Southern red | *Quercus falcata* var. *falcata* 1996 | 332 | 123 | 152 | 493 | Upson, GA | Carol Bowie, John A Osbolt, Gary Hill |
| Swamp chestnut | *Quercus michauxii* 2003 | 266 | 140 | 115 | 435 | Big Oak Tree SP, MO | Bruce Palmer |
| Swamp white | *Quercus bicolor* 2007 | 270 | 93 | 102 | 389 | Franklin Township, NJ | Dave Johnson |
| Texas | *Quercus shumardii* var. *texana* 2003 | 198 | 70 | 82 | 289 | Fort Worth, Tarrant Co., TX | Matthew & Michael Blevins |
| Texas live | *Quercus virginiana* var. *fusiformis* 2002 | 357 | 48 | 80 | 425 | Graham, Young Co., TX | Jay Burkett |
| Toumey | *Quercus toumeyi* 2005 | 64 | 24 | 31 | 96 | Santa Cruz Co., AZ | Ken & Kathy Morrow |
| Turbinella | *Quercus turbinella* var. *turbinella* 1993 | 81 | 51 | 48 | 144 | Spring Mountain Ranch SP, NV | John Jones |
| Turkey | *Quercus laevis* † 2006 | 110 | 73 | 44 | 194 | Wayne, GA | Jimmy Mock |
| Turkey | *Quercus laevis* † 2006 | 119 | 63 | 53 | 195 | Moore, NC | JH Carter III |
| Vasey | *Quercus pungens* var. *vaseyana* 2007 | 60 | 33 | 34 | 102 | Brewster Co., TX | Pete Smith |
| Water | *Quercus nigra* 2001 | 286 | 118 | 108 | 431 | Jones Co., MS | Herman Smith |
| White | *Quercus alba* 2003 | 312 | 86 | 116 | 427 | Brunswick, VA | Frank E McKeever |
| Willow | *Quercus phellos* 2007 | 301 | 131 | 130 | 465 | Chesapeake, VA | Byron Carmean, Gary Williamson |
| **OLEANDER** | | | | | | | |
| | Nerium oleander †△ 2003 | 55 | 28 | 25 | 89 | Sun City, AZ | Larry B Wright, Russell T Gates |
| | Nerium oleander †△ 1997 | 51 | 32 | 36 | 92 | Exeter, CA | Art Cowley |
| **ORANGE** | | | | | | | |
| Orange | Citrus sinensis △ 2001 | 61 | 34 | 31 | 103 | Kern Co., CA | Art Cowley |
| Sour | Citrus aurantium △ 2004 | 44 | 28 | 24 | 78 | Tucson, AZ | Judy Nantell, Chris Maloney |
| **OSAGE-ORANGE** | | | | | | | |
| | Maclura pomifera 1969 | 326 | 60 | 64 | 402 | Red Hill Shrine, Charlotte Co., VA | Red Hill Shrine |
| **OYSTERWOOD** | | | | | | | |
| | *Gymnanthes lucida* 2007 | 17 | 30 | 13 | 50 | Monroe Co., FL | Ben Paswater |

**ENGELMANN OAK, NEAR CAL TECH, PASADENA, CALIFORNIA**



KEN JOHNSON & DWIGHT BLEAKER

LODGEPOLE PINE, VALLEY COUNTY, IDAHO



WHIT BRONAUGH

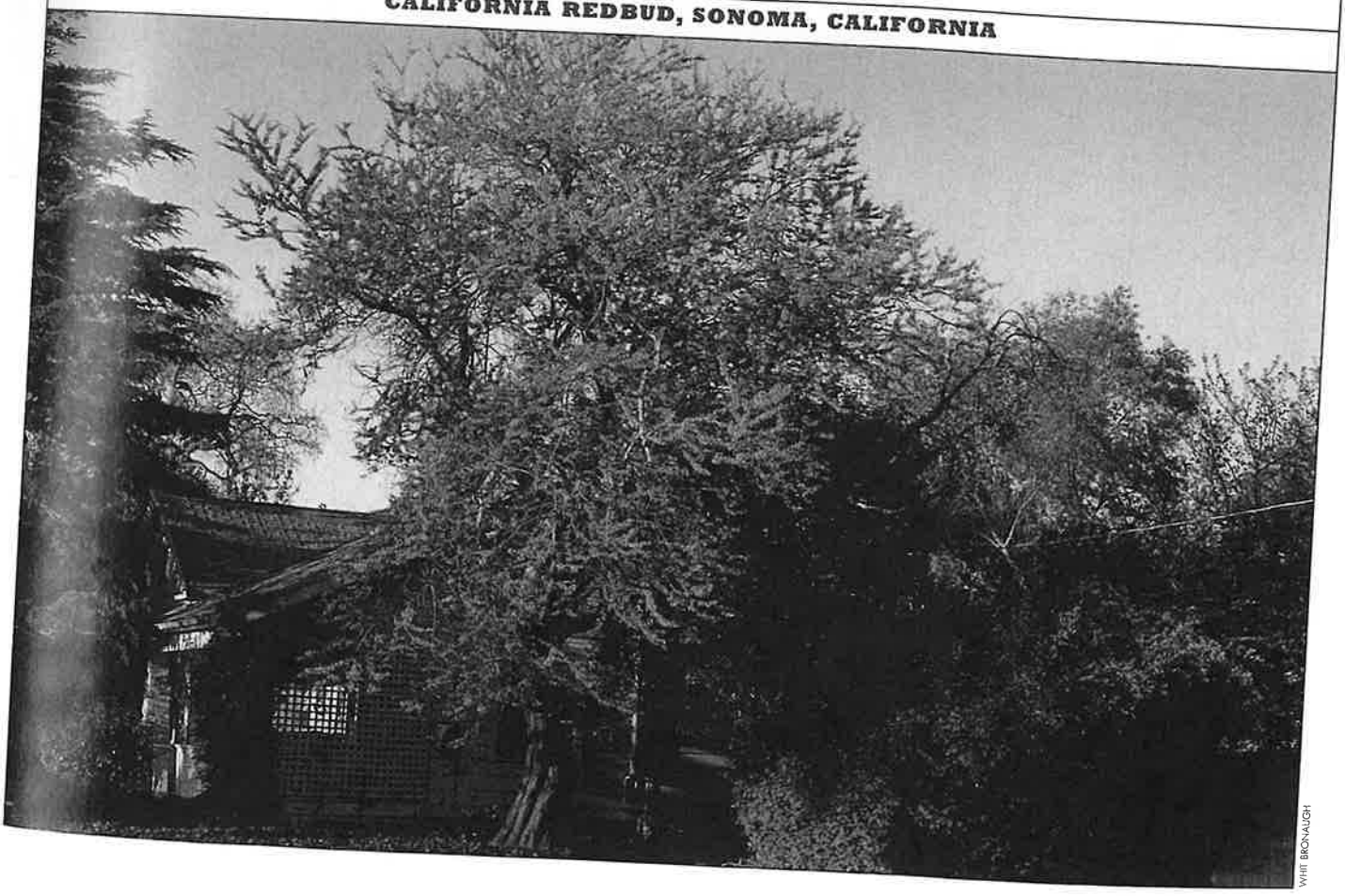
| SPECIES/STATUS/YEAR | CIRCUMFERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|
| **PALMETTO** | | | | | | |
| Cabbage *Sabal palmetto* 1999 | 69 | 60 | 14 | 133 | Lafayette Co., FL | Jerry N Livingston |
| Dwarf *Sabal minor* † 2003 | 42 | 24 | 12 | 69 | Brazoria, TX | Edward C Fritz |
| Dwarf *Sabal minor* † 2003 | 43 | 28 | 13 | 74 | Brazoria, TX | Mickey Merrit |
| Mexican *Sabal mexicana* † 1995 | 59 | 48 | 18 | 112 | Cameron Co., TX | Sue Griffin |
| Mexican *Sabal mexicana* † 1989 | 61 | 50 | 11 | 114 | Hidalgo Co., TX | Joe Ideker |
| **PALOVERDE** | | | | | | |
| Blue *Cercidium floridum* 2007 | 100 | 40 | 48 | 152 | Vulture Mine Rd, Maricopa Co., AZ | John Carr, David Thornburg |
| Yellow *Cercidium microphyllum* 2003 | 43 | 29 | 43 | 83 | Mobile, AZ | Mike Hallen |
| **PAPER-MULBERRY** | | | | | | |
| *Broussonetia papyrifera* † 2005 | 217 | 27 | 41 | 254 | Halifax, NC | Sid Shearin |
| *Broussonetia papyrifera* † 2007 | 205 | 41 | 43 | 257 | Hopewell, VA | Byron Carmean, Gary Williamson |
| **PARASOLTREE** | | | | | | |
| Chinese *Firmiana simplex* △ 1999 | 141 | 47 | 36 | 197 | San Diego Co., CA | Art Cowley |
| **PAULOWNIA** | | | | | | |
| Royal *Paulownia tomentosa* △ 1989 | 291 | 54 | 60 | 360 | Vanderburgh, IN | Scott C Wagner, Mary Ellen Jones |
| **PAUROTIS-PALM** | | | | | | |
| *Acoelorrhaphe wrightii* 1995 | 10 | 35 | 5 | 46 | Dade Co., FL | Don Evans, Daniel B Ward |
| **PAWPAW** | | | | | | |
| Common *Asimina triloba* † 2007 | 14 | 48 | 18 | 67 | Orange, VA | Marj Giuliano |
| Common *Asimina triloba* † 2007 | 37 | 27 | 21 | 69 | Williamsburg, VA | Albert Gustafson |
| **PEAR** | | | | | | |
| Common *Pyrus communis* △ 1991 | 179 | 59 | 61 | 253 | Waitsburg, WA | R Van Pelt, S Muse, M Drawson |
| **PECAN** | | | | | | |
| *Carya illinoensis* 2001 | 267 | 141 | 111 | 436 | Cocke, TN | WK Remine |
| **PEPPERTREE** | | | | | | |
| *Schinus molle* △ 1969 | 367 | 57 | 72 | 442 | San Juan Capistrano, CA | Ray Wheeler |
| **PERSIMMON** | | | | | | |
| Common *Diospyros virginiana* 2006 | 151 | 94 | 78 | 265 | Yell, AR | Lynn Warren |
| Texas *Diospyros texana* 1965 | 71 | 25 | 36 | 105 | Uvalde, TX | William Graves |
| **PINCKNEYA** | | | | | | |
| *Pinckneya pubens* 2005 | 10 | 18 | 8 | 30 | Brantley, GA | Jimmy Mock, Richard Gill |
| **PINE** | | | | | | |
| Apache *Pinus engelmannii* † 1999 | 121 | 112 | 38 | 243 | Coronado NF, AZ | Ken Morrow, Mike Hallen |
| Apache *Pinus engelmannii* † 1998 | 127 | 108 | 44 | 246 | Coronado NF, AZ | R & G Zahner, K Morrow |
| Arizona *Pinus ponderosa* var. *arizonica* 1998 | 153 | 127 | 57 | 294 | Santa Catalina Mtns, Coronado NF, AZ | R & G Zahner, Ken Porter |
| Austrian *Pinus nigra* △ 1995 | 128 | 95 | 55 | 237 | Lincoln Park, WA | Robert Van Pelt |
| Bishop *Pinus muricata* 2005 | 198 | 72 | 86 | 292 | Oakland, CA | Art Cowley |
| Border pinyon *Pinus discolor* 2005 | 61 | 46 | 28 | 114 | Chiricahua NM, AZ | John Titus |
| Chihuahua *Pinus leiophylla* var. *chihuahuana* 1998 | 121 | 87 | 34 | 217 | White Mtn. Apache Reservation, AZ | Dave Borland, Lucky Holden |
| Colo. bristlecone *Pinus aristata* var. *aristata* 2007 | 177 | 63 | 41 | 250 | Huerfano, CO | Ed Biery |
| Coulter *Pinus coulteri* 2001 | 152 | 141 | 72 | 311 | Julian, CA | Art Cowley, Clint Powell |
| Digger *Pinus sabiniana* 2005 | 200 | 126 | 86 | 348 | Kelso Creek, Kern Co., CA | Loren Ross |
| Eastern white *Pinus strobus* 2003 | 229 | 132 | 72 | 379 | Morrill, ME | Elsie Bowen |
| Fallax pinyon *Pinus edulis* var. *fallax* 2007 | 100 | 79 | 40 | 189 | Tank Canyon, Prescott NF, AZ | A Allgood, D Thornburg, H Untiedt |
| Grt basin brstlcne *Pinus aristata* var. *longaeva* 2003 | 455 | 52 | 44 | 518 | Humboldt-Toiyabe NF, NV | Robert Van Pelt |
| Jack *Pinus banksiana* 2007 | 44 | 49 | 34 | 102 | Tippecanoe, IN | Tim Detzner |
| Jeffrey *Pinus jeffreyi* 2005 | 306 | 192 | 90 | 521 | Stanislaus NF, CA | Robert Van Pelt |
| Limber *Pinus flexilis* 1968 | 275 | 62 | 47 | 349 | Uinta NF, UT | TA Walker, W Crawford, T Dietz |
| Loblolly *Pinus taeda* 2001 | 176 | 167 | 71 | 361 | Congaree Swamp NM, SC | D Riddle, J Riddle, W Blozan |
| Lodgepole *Pinus contorta* var. *latifolia* 1980 | 133 | 156 | 37 | 298 | Valley Co., ID | S Keaffer, T McManus |
| Longleaf *Pinus palustris* 2005 | 145 | 106 | 36 | 260 | Montgomery, NC | Johnny Mabe |
| Mexican pinyon *Pinus cembroides* † 2005 | 74 | 49 | 37 | 132 | Big Bend NP, TX | Robert Edmonson |
| Mexican pinyon *Pinus cembroides* † 1982 | 67 | 57 | 40 | 134 | Big Bend NP, TX | James E Liles |
| Monterey *Pinus radiata* 2003 | 334 | 167 | 106 | 528 | Carmel, CA | Alan Washburn |
| Pitch *Pinus rigida* † 1999 | 146 | 114 | 70 | 278 | White Co., GA | Kip Jackson, Phillip Todd, Jimmy Mock |

WHIT BRONAUGH

| SPECIES / STATUS / YEAR | | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| Pitch | *Pinus rigida* † 1999 | 170 | 99 | 42 | 280 | Bradford, NH | William Weiler |
| Pond | *Pinus serotina* 2001 | 119 | 132 | 52 | 264 | Pierce, GA | Jimmy & Chris Mock |
| Ponderosa | *Pinus ponderosa* var. *ponderosa* 2007 | 290 | 240 | 70 | 548 | Trinity, CA | Tim Lovitt |
| Red | *Pinus resinosa* 1968 | 141 | 122 | 54 | 277 | Gogebic Co., MI | Andy & Noah Sawyer |
| Rcky Mtn pndrsa | *Pinus ponderosa* var. *scopulorum* 1997 | 246 | 194 | 64 | 456 | Lolo NF, MT | Donald M Wood, Don Campbell |
| Sand | *Pinus clausa* 2007 | 74 | 72 | 29 | 153 | Aiken, SC | Ronald E Bonar |
| Scotch | *Pinus sylvestris* △ 2005 | 174 | 53 | 73 | 245 | Beatrice, NE | Christine Meyer |
| Shore | *Pinus contorta* var. *contorta* 1993 | 138 | 101 | 37 | 248 | Bryant, WA | Ron Brightman |
| Shortleaf | *Pinus echinata* † 2007 | 151 | 91 | 68 | 259 | Smith, TX | Larry Jones |
| Shortleaf | *Pinus echinata* † 2006 | 113 | 136 | 50 | 261 | Ashley, AR | Don C Bragg |
| Sierra lodgepole | *Pinus contorta* var. *murrayana* 1963 | 245 | 116 | 50 | 374 | San Bernardino NF, CA | Miles Gulick |
| Singleleaf pinyon | *Pinus monophylla* 2005 | 167 | 50 | 52 | 230 | Washoe Co., NV | Dian Mercier, Harley Moe |
| Slash | *Pinus elliottii* var. *elliottii* 1985 | 138 | 144 | 54 | 296 | Duval Co., FL | James R Karels |
| South Fla. slash | *Pinus elliottii* var. *densa* † 2005 | 127 | 74 | 55 | 215 | Sarasota, FL | Jono Miller, Julie Morris |
| South Fla. slash | *Pinus elliottii* var. *densa* † 2005 | 130 | 69 | 69 | 216 | Pinellas, FL | Michael Kettles |
| South Fla. slash | *Pinus elliottii* var. *densa* † 2005 | 122 | 76 | 74 | 217 | Sarasota, FL | Jono Miller |
| Southwstrn white | *Pinus strobiformis* 1974 | 185 | 111 | 62 | 312 | Lincoln NF, NM | Thomas Dix |
| Spruce | *Pinus glabra* 2003 | 146 | 156 | 70 | 320 | Bienville NF, MS | Grace & Art Bradshaw |
| Sugar | *Pinus lambertiana* 1994 | 435 | 209 | 59 | 659 | Dorrington, CA | Herbert E McLean, Gary Whitson |
| Table mountain | *Pinus pungens* 1988 | 104 | 120 | 41 | 234 | Stokes Co., NC | M Pell, S Williams, K & S Knox |
| Virginia | *Pinus virginiana* 2007 | 88 | 91 | 43 | 190 | Arlington, VA | Greg Zell |
| Washoe | *Pinus washoensis* 2006 | 207 | 150 | 75 | 376 | Modoc, CA | Edith Asrow |
| Whitebark | *Pinus albicaulis* 2007 | 268 | 65 | 27 | 340 | Custer, ID | Tyler Williams |
| **PISONIA** | | | | | | | |
| | *Pisonia rotundata* 1994 | 40 | 27 | 12 | 70 | Monroe Co., No Name Key, FL | Robert W Ehrig |
| **PISTACHE** | | | | | | | |
| Texas | *Pistacia texana* 2003 | 32 | 21 | 31 | 61 | Langtry, TX | Mark Duff |
| **PLUM** | | | | | | | |
| Allegheny | *Prunus alleghaniensis* † 1991 | 37 | 37 | 24 | 80 | Jefferson NF, VA | Richard Salzer |
| Allegheny | *Prunus alleghaniensis* † 1991 | 52 | 24 | 32 | 84 | Roanoke, VA | Richard Salzer |
| American | *Prunus americana* † 2007 | 52 | 17 | 17 | 73 | Yavapai, AZ | David Thornburg |
| American | *Prunus americana* † 1994 | 40 | 30 | 10 | 73 | Gadsden Co., FL | B Simons, J Buckner, A Gholson, R Godfrey |
| American | *Prunus americana* † 2007 | 45 | 18 | 50 | 76 | Fairfax, VA | Richard Salzer, Greg Zell |
| Chickasaw | *Prunus angustifolia* 2001 | 130 | 86 | 48 | 228 | Clatsop SF, OR | William Schoppert |
| Flatwoods | *Prunus umbellata* 2007 | 35 | 43 | 37 | 87 | Union, GA | Sheldon Henderson |
| Garden | *Prunus domestica* △ 2007 | 71 | 19 | 21 | 95 | Sky Meadows SP, VA | Richard Salzer |
| Hortulan | *Prunus hortulana* 2007 | 37 | 27 | 31 | 72 | Warren, OH | Brian P Riley |
| Mexican | *Prunus mexicana* † 2004 | 68 | 17 | 18 | 90 | Hood Co., TX | Frank L Saffarrans Jr. |
| Mexican | *Prunus mexicana* † 2006 | 65 | 21 | 31 | 94 | Harris, TX | Mickey Merritt |
| Wildgoose | *Prunus munsoniana* 2003 | 25 | 36 | 35 | 70 | Dallas Co., TX | Steve Houser |
| **POINCIANA** | | | | | | | |
| Royal | *Delonix regia* △ 1972 | 182 | 62 | 61 | 259 | Hendry Co., FL | Michael W Kenton |
| **POISON-SUMAC** | | | | | | | |
| | *Toxicodendron vernix* 2000 | 18 | 30 | 19 | 53 | Arnold, MD | Colby B Rucker |
| **POISONTREE** | | | | | | | |
| Florida | *Metopium toxiferum* 1986 | 78 | 47 | 24 | 131 | Monroe Co., FL | Ken Roundtree, David M Sinclair |
| **POND-APPLE** | | | | | | | |
| | *Annona glabra* 1989 | 65 | 39 | 33 | 112 | Dade Co., FL | Carol L Lippincott |
| **PONDCYPRESS** | | | | | | | |
| | *Taxodium distichum* var. *nuntans*, 2007 | 126 | 100 | 10 | 229 | Pierce, GA | Jimmy Mock |
| **POPLAR** | | | | | | | |
| Balsam | *Populus balsamifera* 1994 | 171 | 75 | 46 | 258 | Marquette Co., MI | Elwood B Ehrle |
| White | *Populus alba* △ 2005 | 256 | 68 | 70 | 342 | Charlevoix Co., MI | Elwood B Ehrle |
| **PORT-ORFORD-CEDAR** | | | | | | | |
| | *Chamaecyparis lawsoniana* 1968 | 522 | 242 | 35 | 773 | Siskiyou NF, OR | Donald Denniston |

| SPECIES/STATUS/YEAR | | CIRCUM-FERENCE | HEIGHT' | SPREAD' | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| **POSSUMHAW** | | | | | | | |
| | *Ilex decidua* 1981 | 37 | 44 | 49 | 93 | Richland, SC | Robert H Jones, Lee Renaud |
| **PRICKLY-ASH** | | | | | | | |
| Lime | *Zanthoxylum fagara* 1988 | 65 | 16 | 33 | 89 | Lee Co., FL | Eric H Hoyer, Norma Jean Byrd |
| **PRINCEWOOD** | | | | | | | |
| | *Exostema caribaeum* 1998 | 26 | 36 | 10 | 65 | Monroe Co., FL | Joseph Nemec |
| **PRIVET** | | | | | | | |
| California | *Ligustrum ovalifolium* △ 1999 | 96 | 30 | 38 | 136 | Roanoke, VA | Richard Salzer |
| Chinese | *Ligustrum sinense* †△ 2007 | 59 | 32 | 36 | 100 | Virginia Beach, VA | Byron Carmean, Gary Williamson |
| Chinese | *Ligustrum sinense* †△ 2007 | 62 | 29 | 39 | 101 | Gloucester, VA | Byron Carmean, Gary Williamson |
| Japanese | *Ligustrum japonicum* 2005 | 51 | 41 | 39 | 102 | Lynchburg, SC | Chisolm Beckham |
| **REDBAY** | | | | | | | |
| | *Persea borbonia* var. *borbonia* 1994 | 146 | 94 | 45 | 251 | Hamilton Co., FL | Norman Nichols |
| **REDBUD** | | | | | | | |
| California | *Cercis occidentalis* 1980 | 71 | 45 | 38 | 126 | Sonoma, CA | E Lagel |
| Eastern | *Cercis canadensis* var. *canadensis* 2007 | 132 | 39 | 40 | 181 | Jackson, MO | Country Club Tree Service |
| Texas | *Cercis canadensis* var. *texensis* 2007 | 81 | 20 | 39 | 111 | Parker, TX | Judy Ratzlaff |
| **REDCEDAR** | | | | | | | |
| Eastern | *Juniperus virginiana* 1989 | 234 | 57 | 75 | 310 | Coffee Co., GA | Richard Johnston |
| Southern | *Juniperus silicicola* 1995 | 212 | 77 | 55 | 303 | Alachua Co., FL | Robert W Simons, Bill Russell |
| Western | *Thuja plicata* 1945 | 761 | 159 | 45 | 931 | Olympic NP, WA | FW Mathias |
| **REDSHANK** | | | | | | | |
| | *Adenostoma sparsifolium* 1977 | 48 | 23 | 26 | 78 | Warner Springs, CA | Frank Callahan |
| **REDWOOD** | | | | | | | |
| Coast | *Sequoia sempervirens* † 1993 | 867 | 311 | 101 | 1203 | Prairie Creek Redwoods SP, CA | Ron Hildebrant, Michael Taylor |
| Coast | *Sequoia sempervirens* † 1998 | 895 | 307 | 83 | 1223 | Jedediah Smith Redwoods SP, CA | R Hildebrant, M Taylor, S Sillett |
| Coast | *Sequoia sempervirens*, † 1998 | 950 | 321 | 75 | 1290 | Jedediah Smith Redwoods SP, CA | R Hildebrant, M Taylor, S Sillett |

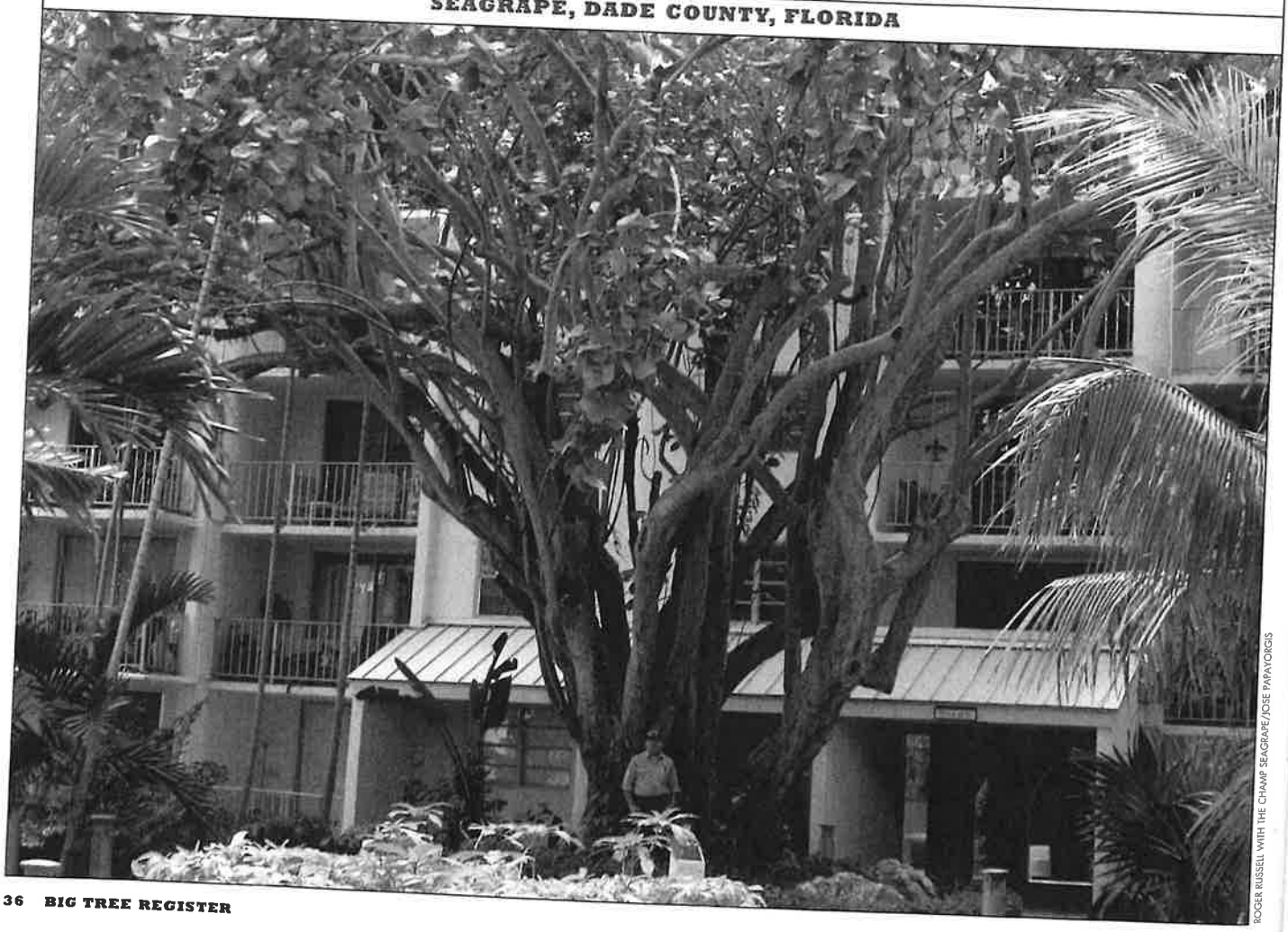
**CALIFORNIA REDBUD, SONOMA, CALIFORNIA**



WHIT BRONAUGH

| SPECIES / STATUS / YEAR | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|
| **RHODODENDRON** | | | | | | |
| Catawba *Rhododendron catawbiense* 2005 | 15 | 25 | 15 | 44 | Great Smoky Mtns. NP, NC | Jess Riddle |
| Pacific *Rhododendron macrophyllum* 2006 | 37 | 24 | 21 | 66 | Lane, OR | R Sjogren, J Grant, J Hall |
| Rosebay *Rhododendron maximum* † 2005 | 28 | 28 | 36 | 65 | Rabun, GA | Jimmy & Sandra Mock |
| Rosebay *Rhododendron maximum* † 2005 | 31 | 28 | 28 | 66 | Biltmore Estate, Buncombe Co., NC | Ken Knox, Bill Alexander, Ron Lance |
| Rosebay *Rhododendron maximum* † 1981 | 28 | 34 | 28 | 69 | Sumter NF, SC | Steve Muzal |
| **ROYALPALM** | | | | | | |
| Florida *Roystonea elata* 1995 | 55 | 93 | 13 | 151 | Collier Co., FL | Daniel B Ward |
| **RUSSIAN-OLIVE** | | | | | | |
| *Elaeagnus angustifolia* △ 1991 | 160 | 47 | 61 | 222 | Spin City, SD | Royce King |
| **SAGEBRUSH** | | | | | | |
| Big *Artemisia tridentata* 1995 | 30 | 15 | 15 | 49 | Jefferson, OR | Mark R Corbet |
| **SAGUARO** | | | | | | |
| *Cereus giganteus* † 2003 | 94 | 46 | 10 | 143 | near Horseshoe Lake, Tonto NF, AZ | J Pleggenkuhle, C Seymour, C Hock |
| *Cereus giganteus* † 2003 | 108 | 32 | 16 | 144 | Mammoth, AZ | Charley Blank |
| **SASSAFRAS** | | | | | | |
| *Sassafras albidum* 1954 | 271 | 77 | 67 | 364 | Daviess, KY | OW Rash |
| **SATINLEAF** | | | | | | |
| *Chrysophyllum oliviforme* 1976 | 72 | 45 | 45 | 128 | Dade Co., FL | Clifford Shaw, Albert Hetzell |
| **SATINWOOD** | | | | | | |
| West Indies *Zanthoxylum flavum* 2007 | 95 | 30 | 35 | 134 | Monroe Co., Key West, FL | Key West Botanical Garden Society |
| **SAW-PALMETTO** | | | | | | |
| *Serenoa repens,* † 1982 | 19 | 17 | 4 | 37 | Sumter Co., FL | Buford C Pruitt, D Fogler |
| *Serenoa repens* † 2005 | 18 | 22 | 7 | 42 | Glades Co., FL | Dale Armstrong |

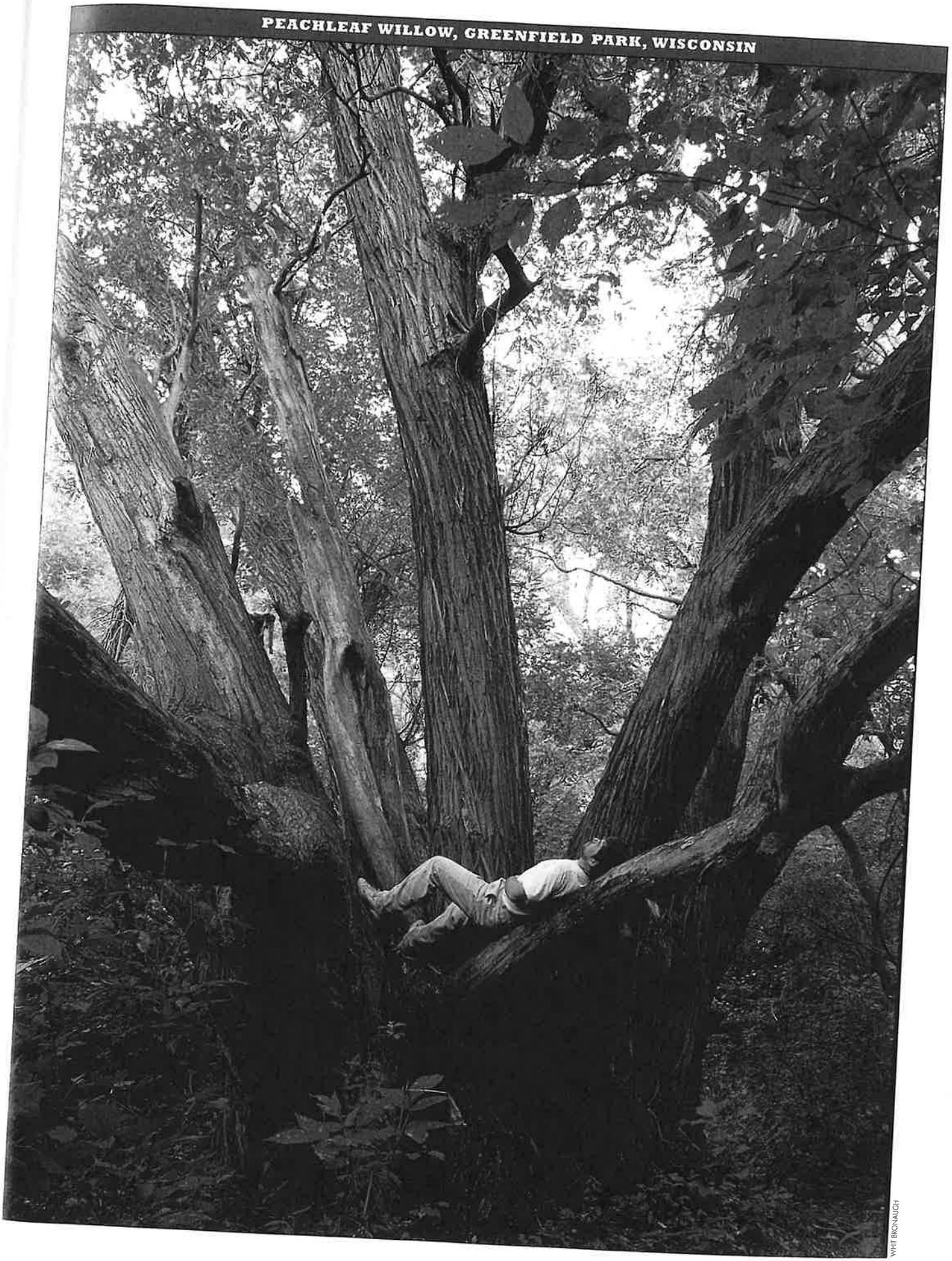
**SEAGRAPE, DADE COUNTY, FLORIDA**



ROGER RUSSELL WITH THE CHAMP SEAGRAPE/JOSE PAPAYORGIS

| SPECIES/STATUS/YEAR | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|
| **SCARLETBUSH** | | | | | | |
| *Hamelia patens* 2005 | 18 | 14 | 15 | 36 | Brevard Co., FL | Blair & Dawn Witherington |
| **SEAGRAPE** | | | | | | |
| *Coccoloba uvifera* 1971 | 288 | 80 | 80 | 388 | Dade Co., FL | D McGarthy, R Hammer, D Ward |
| **SEQUOIA** | | | | | | |
| Giant *Sequoiadendron giganteum* 1940 | 1020 | 274 | 107 | 1321 | Sequoia NP, CA | Isabelle F Story |
| **SERVICEBERRY** | | | | | | |
| Allegheny *Amelanchier laevis* · 2006 | 113 | 38 | 51 | 164 | Haywood, NC | Ken Knox |
| Downy *Amelanchier arborea* 1986 | 100 | 44 | 44 | 155 | Tazewell, VA | Louise G Hoge |
| Roundleaf *Amelanchier sanguinea* 1978 | 58 | 39 | 34 | 106 | Clarendon, VT | Dave Potter |
| Utah *Amelanchier utahensis* 2005 | 14 | 21 | 25 | 41 | Marshall Lake, Coconino NF, AZ | David & Judy Thornburg |
| Western *Amelanchier alnifolia* 1993 | 41 | 41 | 41 | 92 | Beacon Rock SP, WA | Robert Van Pelt |
| **SILKBAY** | | | | | | |
| *Persea borbonia* var. *humilis* 1991 | 66 | 41 | 39 | 117 | Marion Co., FL | Robert W Simons |
| **SILKTASSEL** | | | | | | |
| Wright *Garrya wrightii* 2007 | 38 | 17 | 19 | 59 | Yavapai, AZ | D Thornburg, H Untiedt, A Allgood |
| **SILKTREE** | | | | | | |
| Mimosa *Albizia julibrissin* △ 2006 | 103 | 64 | 80 | 187 | Polk, NC | Pacolet Area Conservancy |
| **SILVERBELL** | | | | | | |
| Carolina *Halesia carolina* 2001 | 152 | 116 | 43 | 279 | Great Smoky Mtns. NP, TN | Doug & Jess Riddle |
| Little *Halesia parvifolia* 2005 | 19 | 16 | 25 | 41 | Hamilton Co., OH | Brian P Riley |
| Two-wing *Halesia diptera* 2007 | 40 | 78 | 33 | 126 | Wilcox, AL | Tommy Lawler |
| **SILVERPALM** | | | | | | |
| Florida *Coccothrinax argentata* † 1976 | 22 | 26 | 4 | 49 | Monroe Co., Bahia Honda Key, FL | Monay Markey |
| Florida *Coccothrinax argentata* † 1979 | 19 | 33 | 4 | 53 | Monroe Co., Bahia Honda Key, FL | Monay Markey |
| **SMOKETREE** | | | | | | |
| American *Cotinus obovatus* † 2006 | 69 | 59 | 37 | 137 | Warren, TN | Nick Kuhn, Douglas Airhart |
| American *Cotinus obovatus* † 1984 | 74 | 56 | 32 | 138 | Purdue University, IN | SA Jamieson, AT Grossman |
| **SNOWBELL** | | | | | | |
| Bigleaf *Styrax grandifolius* † 2006 | 11 | 16 | 16 | 31 | Buncombe, NC | Ken Knox |
| Bigleaf *Styrax grandifolius* † 2008 | 11 | 16 | 16 | 31 | Buncombe, NC | Ken & Amy Knox |
| **SOAPBERRY** | | | | | | |
| Western *Sapindus drummondii* 2007 | 126 | 59 | 39 | 195 | Johnson, KS | Rick Spurgeon |
| **SOLDIERWOOD** | | | | | | |
| *Colubrina elliptica* 1998 | 50 | 33 | 12 | 86 | Monroe Co., FL | Joseph Nemec |
| **SOPHORA** | | | | | | |
| Mescalbean *Sophora secundiflora* † 2005 | 60 | 19 | 27 | 86 | San Antonio, TX | Ben McPherson |
| Mescalbean *Sophora secundiflora* † 2006 | 50 | 35 | 18 | 90 | Uvalde, TX | Sky Lewey |
| Texas *Sophora affinis* 2006 | 74 | 41 | 44 | 126 | Real, TX | Mike Weathers, Steven Cooke |
| **SOURWOOD** | | | | | | |
| *Oxydendrum arboreum* 1998 | 139 | 81 | 50 | 233 | Amelia Co., VA | John Anderson, Joseph Humphreys |
| **SPARKLEBERRY** | | | | | | |
| Tree *Vaccinium arboreum* † 2007 | 47 | 28 | 41 | 85 | Choctaw, AL | Earl Jenkins |
| Tree *Vaccinium arboreum* † 2007 | 62 | 18 | 31 | 88 | Houston, TX | Waymon Vest |
| **SPICEBUSH** | | | | | | |
| *Lindera benzoin* 2008 | 17 | 32 | 21 | 54 | Buncombe, NC | Will Blozan |
| **SPRUCE** | | | | | | |
| Black *Picea mariana* 1989 | 68 | 78 | 21 | 151 | Meford, WI | Nick Risch |
| Black Hills *Picea glauca* var. *densata* 2004 | 117 | 103 | 30 | 228 | Black Hills NF, SD | Mark Rouw |
| Blue *Picea pungens* 1991 | 190 | 127 | 43 | 328 | Ashley NF, UT | AJ Frandsen, Sherel Goodrich |
| Brewer *Picea brewerana* 1999 | 272 | 137 | 44 | 420 | Shasta-Trinity NF, CA | Leonard Herzstein, Neal Hadley |
| Engelmann *Picea engelmannii* 2005 | 292 | 181 | 50 | 486 | Boise, ID | Christopher Wagner, Penny Myers |
| Norway *Picea abies* △ 2005 | 186 | 110 | 64 | 312 | Oneida, NY | Charles McFadden |
| Red *Picea rubens* 2007 | 152 | 147 | 24 | 305 | Swain, NC | Jess Riddle, Josh Kelly |
| Sitka *Picea sitchensis* 1987 | 668 | 191 | 96 | 883 | Quinault Lake, Olympic NP, WA | Robert Van Pelt |

| SPECIES / STATUS / YEAR | | CIRCUMFERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| White | *Picea glauca* var. *glauca* 1975 | 126 | 130 | 30 | 264 | Koochiching, MN | Richard Stapleton |
| **STOPPER** | | | | | | | |
| Boxleaf | *Eugenia foetida* 1999 | 12 | 25 | 9 | 39 | Monroe Co., Key Largo, FL | Joseph Nemec |
| Red | *Eugenia rhombea* 1999 | 19 | 28 | 11 | 50 | Monroe Co., FL | Joseph Nemec |
| Redberry | *Eugenia confusa* 1993 | 61 | 41 | 20 | 107 | Dade Co., FL | C Lippincott |
| White | *Eugenia axillaris* 1993 | 17 | 25 | 7 | 44 | Lee Co., FL | Richard R Workman |
| **STRONGBACK** | | | | | | | |
| Bahama | *Bourreria ovata* 1999 | 37 | 33 | 17 | 74 | Monroe Co., FL | Joseph Nemec |
| **SUGARBERRY** | | | | | | | |
| | *Celtis laevigata* 2007 | 221 | 82 | 36 | 312 | Barbour, AL | Daniel Drennen |
| **SUMAC** | | | | | | | |
| Evergreen | *Rhus virens* † 2005 | 31 | 14 | 27 | 52 | Comal, TX | R & L Roeder, Wiliam Schumann |
| Evergreen | *Rhus virens* † 2006 | 37 | 15 | 16 | 56 | Uvalde, TX | Bill Graves |
| Littleleaf | *Rhus microphylla* 2007 | 13 | 14 | 20 | 32 | west of Duncan, Graham Co., AZ | Judy & David Thornburg |
| Mearns | *Rhus choriophylla* 2007 | 21 | 20 | 16 | 45 | Tumacacori Mtns, Coronado NF, AZ | K Morrow, R Zahner |
| Prairie | *Rhus lanceolata* 1994 | 72 | 26 | 45 | 109 | Kerrville, TX | Raymond C Doggett |
| Shining | *Rhus copallina* † 2007 | 29 | 35 | 24 | 70 | Bullitt, KY | Robert Bean |
| Shining | *Rhus copallina* † 2000 | 38 | 29 | 32 | 75 | Pontotoc Co., MS | Rickey Harwell, GW Poyner |
| Smooth | *Rhus glabra* 2001 | 36 | 52 | 28 | 95 | Twiggs, GA | Roger Blount |
| Staghorn | *Rhus typhina* 1985 | 50 | 57 | 41 | 117 | Tallapoosa, AL | Ted Kretschmann |
| Sugar | *Rhus ovata* 1995 | 71 | 34 | 36 | 114 | Superstition WA, Tonto NF, AZ | Ken Morrow |
| **SWAMP-PRIVET** | | | | | | | |
| | *Forestiera acuminata* 2007 | 31 | 46 | 29 | 84 | Toombs, GA | Justin Tyson, Mike Waters |
| **SWAMPBAY** | | | | | | | |
| | *Persea borbonia* var. *pubescens* 2007 | 153 | 55 | 38 | 218 | Newport News, VA | John Gray |
| **SWEETGUM** | | | | | | | |
| | *Liquidamber styraciflua* 2007 | 203 | 160 | 82 | 384 | Richland, SC | Robert H Jones, Lee Reynaud |
| **SWEETLEAF** | | | | | | | |
| | *Symplocos tinctoria* △ 1986 | 43 | 60 | 32 | 111 | Chesapeake, VA | Byron Carmean, Gary M Williamson |
| **SYCAMORE** | | | | | | | |
| | *Platanus occidentalis* 2007 | 422 | 129 | 105 | 577 | Ashland, OH | Jack Basinger, Loren Latimer |
| Arizona | *Platanus wrightii* 2005 | 373 | 71 | 73 | 462 | Camp Verde, Coconino NF, AZ | David Thornburg, Harry Untiedt |
| California | *Platanus racemosa* 1998 | 350 | 95 | 108 | 472 | San Juan Capistrano, CA | Art Cowley |
| **TALLOWWOOD** | | | | | | | |
| | *Ximenia americana* 1998 | 31 | 23 | 10 | 57 | Monroe Co., FL | Joseph Nemec |
| **TAMARACK** | | | | | | | |
| | *Larix laricina* 2005 | 143 | 92 | 31 | 243 | Wels, ME | Mike Debonis |
| **TAMARIND** | | | | | | | |
| | *Tamarindus indica* △ 1986 | 85 | 58 | 44 | 154 | Monroe Co., FL | Michael J Cullen & David M Sinclair |
| **TAMARISK** | | | | | | | |
| | *Tamarix chinensis* △ 1999 | 170 | 45 | 50 | 228 | Albuquerque, NM | Robert Squires |
| **TANOAK** | | | | | | | |
| | *Lithocarpus densiflorus* 1997 | 303 | 135 | 63 | 454 | Curry, OR | George Miller |
| **TESOTA** | | | | | | | |
| | Olneya tesota 2005 | 198 | 33 | 55 | 245 | Riverside Co., CA | Art Cowley |
| **TETRAZYGIA** | | | | | | | |
| Florida | *Tetrazygia bicolor* 2005 | 24 | 22 | 15 | 49 | Dade Co., FL | David L Lysinger |
| **THATCHPALM** | | | | | | | |
| Florida | *Thrinax radiata* 1991 | 17 | 34 | 9 | 53 | Hollywood, FL | D Spicer, Wm Harms, Wm Tesauro |
| Key | *Thrinax morrisii* 1996 | 20 | 20 | 7 | 42 | Dade Co., FL | Don Evans, Daniel B Ward |
| **TORCHWOOD** | | | | | | | |
| | *Amyris elemifera* 1986 | 21 | 25 | 17 | 50 | Monroe Co., FL | Mike Cullen, David Sinclair |
| **TORREYA** | | | | | | | |
| Florida | *Torreya taxifolia* 1972 | 124 | 53 | 40 | 187 | Norlina, Warren Co., NC | Robert Simons |
| **TOYON** | | | | | | | |
| | *Heteromeles arbutifolia* † 2005 | 54 | 28 | 39 | 92 | Orange, CA | Arthur P Cowley |

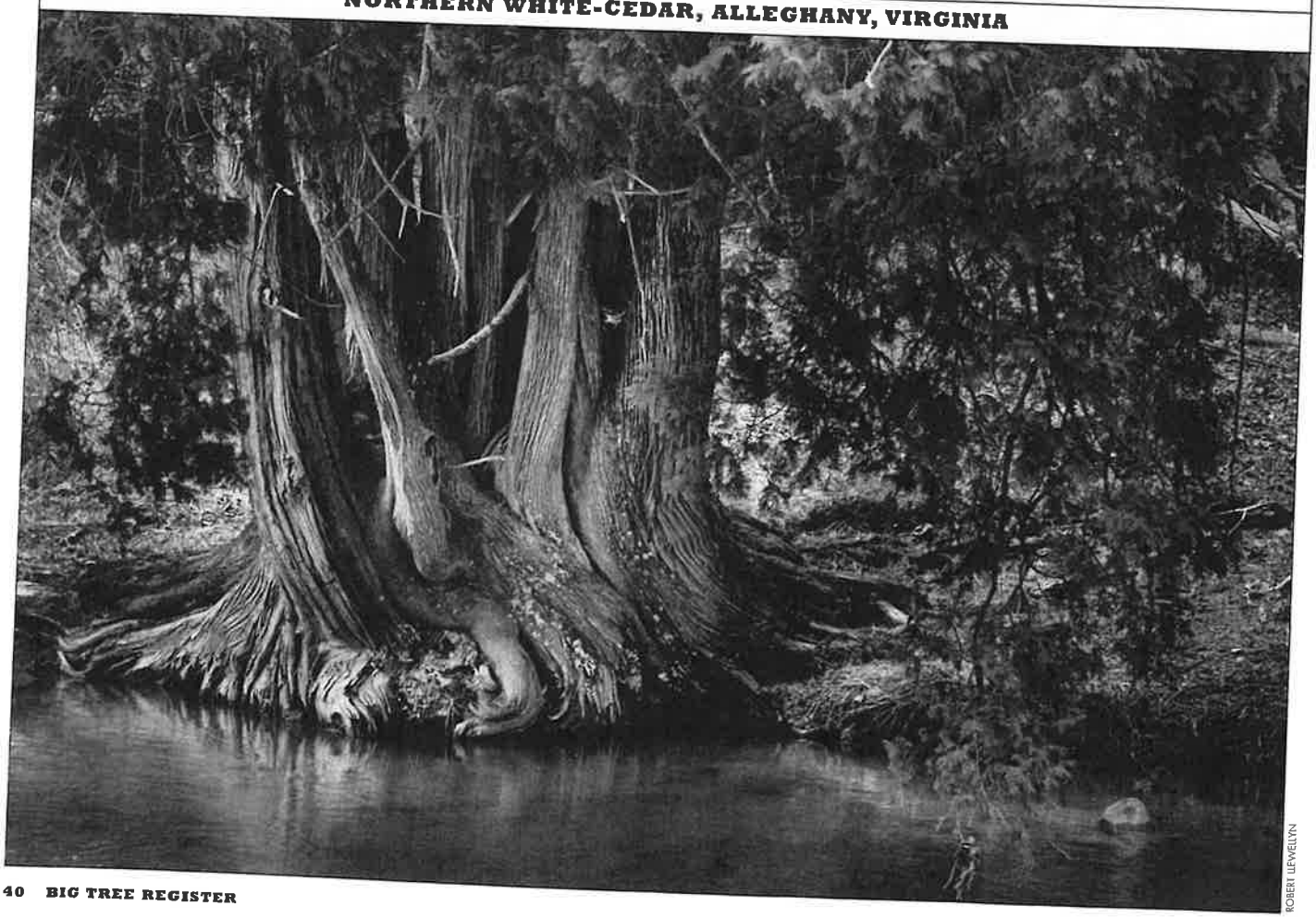


PEACHLEAF WILLOW, GREENFIELD PARK, WISCONSIN

WHIT BRONAUGH

| SPECIES / STATUS / YEAR | | CIRCUM-FERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| | *Heteromeles arbutifolia* † 2008 | 46 | 40 | 35 | 95 | Orange, CA | Mike Swingholm |
| **TREE TOBACCO** | | | | | | | |
| | *Nicotiana glauca* †△ 2007 | 18 | 20 | 16 | 42 | Gila, AZ | Andy Allgood, Marsha Allgood |
| | *Nicotiana glauca* †△ 2007 | 20 | 20 | 17 | 44 | University of Arizona, AZ | Ken Morrow |
| **TUPELO** | | | | | | | |
| Black | *Nyssa sylvatica* var. *sylvatica* 2001 | 232 | 110 | 81 | 362 | Wood Co., TX | William Godwin |
| Ogeechee | *Nyssa ogeche* 2007 | 242 | 45 | 50 | 300 | Toombs, GA | Justin Tyson, Mike Waters |
| Swamp | *Nyssa sylvatica* var. *biflora* 2007 | 188 | 162 | 135 | 384 | Congaree Swamp NP, SC | Samuel E Porth |
| Water | *Nyssa aquatica* 2007 | 406 | 95 | 60 | 516 | Isle of Wight, VA | Byron Carmean, Gary Williamson |
| **VAUQUELINIA** | | | | | | | |
| Torrey | *Vauquelinia californica* 1993 | 78 | 47 | 40 | 135 | Organ Pipe Cactus NM, AZ | Robert Zahner |
| **VELVETSEED** | | | | | | | |
| Roughleaf | *Guettarda scabra* 1998 | 13 | 30 | 12 | 46 | Monroe Co., Key Largo, FL | Joseph Nemec, Daniel Ward |
| **VIBURNUM** | | | | | | | |
| Possumhaw | *Viburnum nudum* 2003 | 17 | 33 | 20 | 55 | Oconee, GA | Larry Morris, Scott Bryant |
| **WALNUT** | | | | | | | |
| Arizona | *Juglans major* 2007 | 215 | 81 | 88 | 318 | Cedar Bench WA, Prescott NF, AZ | D Thornburg, Harry Untiedt, A Allgood |
| Black | *Juglans nigra* 1991 | 438 | 112 | 144 | 586 | Multnomah, OR | Dan Tillman |
| Little | *Juglans microcarpa* 2007 | 180 | 41 | 60 | 236 | Barber, KS | Stan Roth |
| Northern Calif. | *Juglans hindsii* 2008 | 444 | 93 | 118 | 567 | El Dorado, CA | Susan Alison Fulmer |
| Southern Calif. | *Juglans californica* 1973 | 259 | 112 | 106 | 398 | Butte, CA | Gordon R Foster |
| **WASHINGTONIA** | | | | | | | |
| California (fanpalm) | *Washingtonia filifera* † 1991 | 144 | 68 | 18 | 217 | Sacramento St. Capitol Grounds, CA | Robert Van Pelt, AL Jacobson |
| California (fanpalm) | *Washingtonia filifera* † 1991 | 121 | 86 | 21 | 212 | Sacramento St. Capitol Grounds, CA | Robert Van Pelt, AL Jacobson |
| California (fanpalm) | *Washingtonia filifera* † 1997 | 142 | 66 | 19 | 213 | Sacramento St. Capitol Grounds, CA | Art Cowley |

**NORTHERN WHITE-CEDAR, ALLEGHANY, VIRGINIA**



ROBERT LLEWELLYN

| SPECIES/STATUS/YEAR | | CIRCUMFERENCE | HEIGHT | SPREAD | TOTAL POINTS | LOCATION | NOMINATOR |
|---|---|---|---|---|---|---|---|
| **WATER-ELM** | | | | | | | |
| | *Planera aquatica* 2007 | 104 | 56 | 84 | 181 | Williamsburg, VA | William S Hubard |
| **WATERLOCUST** | | | | | | | |
| | *Gleditsia aquatica* 1993 | 121 | 74 | 63 | 211 | Wyndmoor, PA | Maurice E Hobaugh |
| **WHITE-CEDAR** | | | | | | | |
| Atlantic | *Chamaecyparis thyoides* 2007 | 127 | 93 | 36 | 229 | Bel Air, MD | Charles E Day |
| Northern | *Thuja occidentalis* 2007 | 255 | 76 | 42 | 342 | Alleghany, VA | Ward Robens |
| **WILLOW** | | | | | | | |
| Arroyo | *Salix lasiolepis* 2003 | 89 | 41 | 49 | 142 | San Juan Capistano, CA | Art Cowley |
| Bebb | *Salix bebbiana* 2007 | 111 | 21 | 18 | 137 | near CC Cabin, Apache NF, AZ | David Thornburg |
| Black | *Salix nigra* 2007 | 294 | 84 | 90 | 401 | Alleghany, VA | J Kirwan, W Robens, A Wright |
| Bonpland | *Salix bonplandiana* 1999 | 169 | 63 | 74 | 251 | Gila Box Riparian NCA, AZ | Ken Morrow, Mike Hallen |
| Coastal plains | *Salix caroliniana* 2007 | 71 | 57 | 39 | 138 | Beaufort, SC | Roland Schoenike |
| Feltleaf | *Salix alaxensis* 2001 | 41 | 36 | 24 | 83 | Fort Wainwright, AK | Mark R Corbet |
| Geyer | *Salix geyerana* 2007 | 10 | 13 | 14 | 27 | Fort Apache Indian Reservation, AZ | David Thornburg |
| Goodding | *Salix gooddingii* 1993 | 354 | 45 | 89 | 421 | Walsh Ranch, Luna Co., NM | Ralph Fisher Jr |
| Hooker | *Salix hookerana* 2001 | 65 | 50 | 39 | 125 | Tillamook Co., OR | Joe Travers |
| Mackenzie | *Salix mackenzieana* 1999 | 17 | 30 | 27 | 54 | Lake Sammamish SP, WA | R Van Pelt, A Jacobson, R Brightman |
| Pacific | *Salix lasiandra* 2001 | 171 | 54 | 84 | 246 | Kern Co., CA | Art Cowley |
| Peachleaf | *Salix amygdaloides* 1989 | 396 | 80 | 77 | 495 | Greenfield Park, WI | Eugene Zanow |
| Scouler | *Salix scoulerana* 1995 | 149 | 66 | 54 | 229 | Maury Island, WA | Robert Van Pelt, Ron Brightman |
| Sitka | *Salix sitchensis* 1999 | 32 | 35 | 37 | 76 | Gene Coulon Park, WA | R Van Pelt, A Jacobson, R Brightman |
| Weeping | *Salix babylonica* △ 2007 | 267 | 102 | 102 | 395 | Burke's Garden, VA | Louise G Hoge |
| White | *Salix alba* △ 2007 | 280 | 70 | 51 | 363 | Russell, VA | Louise G Hoge |
| Yellow | *Salix lutea* 2007 | 17 | 14 | 12 | 34 | Coconino, AZ | David Thornburg, Andy Allgood |
| Yewleaf | *Salix taxifolia* 1996 | 74 | 35 | 30 | 117 | San Rafael Valley, Santa Cruz, AZ | Robert Zahner |
| **WINTERBERRY** | | | | | | | |
| Common | *Ilex verticillata* 2007 | 17 | 17 | 19 | 39 | Orange, VA | Jess Riddle |
| Mountain | *Ilex montana* 2007 | 30 | 40 | 25 | 76 | Mountain Lake, VA | Byron Carmean, Gary Williamson |
| **WITCH-HAZEL** | | | | | | | |
| | *Hamamelis virginiana* 1984 | 92 | 32 | 32 | 132 | Bedford, VA | Richard Salzer |
| **YAUPON** | | | | | | | |
| | *Ilex vomitoria* † 2007 | 56 | 35 | 32 | 99 | Virginia Beach, VA | Byron Carmean, Gary Williamson |
| | *Ilex vomitoria* † 2007 | 68 | 26 | 31 | 102 | Norfolk, VA | Byron Carmean, Gary Williamson |
| | *Ilex vomitoria* † 2007 | 65 | 29 | 36 | 103 | Virgina Beach, VA | Byron Carmean, Gary Williamson |
| **YELLOW-ELDER** | | | | | | | |
| | *Tecoma stans* 2003 | 20 | 23 | 19 | 48 | Canyon Lake, Tonto NF, AZ | Ken Morrow |
| **YELLOW-POPLAR** | | | | | | | |
| Tuliptree | *Liriodendron tulipifera* 2007 | 359 | 115 | 83 | 495 | Chesapeake, VA | Byron Carmean, Gary Williamson |
| **YELLOWWOOD** | | | | | | | |
| | *Cladrastis kentukea* † 2007 | 221 | 62 | 71 | 301 | Morristown, NJ | Robert Essner |
| | *Cladrastis kentukea* † 2005 | 214 | 73 | 67 | 304 | Jefferson, KY | Lisa Armstrong |
| **YEW** | | | | | | | |
| Florida | *Taxus floridana* 1986 | 27 | 22 | 23 | 55 | Liberty Co., FL | Joey T Brady, Jerome Bracewell |
| Pacific | *Taxus brevifolia* 1959 | 180 | 54 | 30 | 242 | Mineral, WA | B Malcomb, L Barnhouse, A Storkman, R Levitt |
| **YUCCA** | | | | | | | |
| Aloe | *Yucca aloifolia* 2001 | 18 | 14 | 4 | 33 | Brantley, GA | Jimmy Mock |
| Beaked | *Yucca rostrata* 2006 | 57 | 19 | 11 | 79 | Dallas, TX | David Richardson |
| Faxon | *Yucca faxoniana* † 2007 | 73 | 19 | 7 | 94 | Jeff Davis, TX | Oscar Mestas |
| Faxon | *Yucca faxoniana* † 2007 | 72 | 23 | 10 | 98 | Brewster Co., TX | Oscar Mestas |
| Mojave | *Yucca schidigera* 1987 | 58 | 31 | 7 | 91 | Mojave National Preserve, CA | R Alexander, G Meckfessel, K Nosstrom |
| Moundlilly | *Yucca gloriosa* 1998 | 118 | 32 | 38 | 160 | Huntington Beach, CA | Art Cowley |
| Schott | *Yucca schottii* 2005 | 44 | 20 | 12 | 67 | Patagonia, AZ | Ken Morrow |
| Soaptree | *Yucca elata* 2007 | 43 | 23 | 5 | 67 | Luna, NM | Harvey M Smith |
| Torrey | *Yucca torreyi* 1987 | 86 | 23 | 6 | 111 | Lincoln NF, NM | John McNelly |

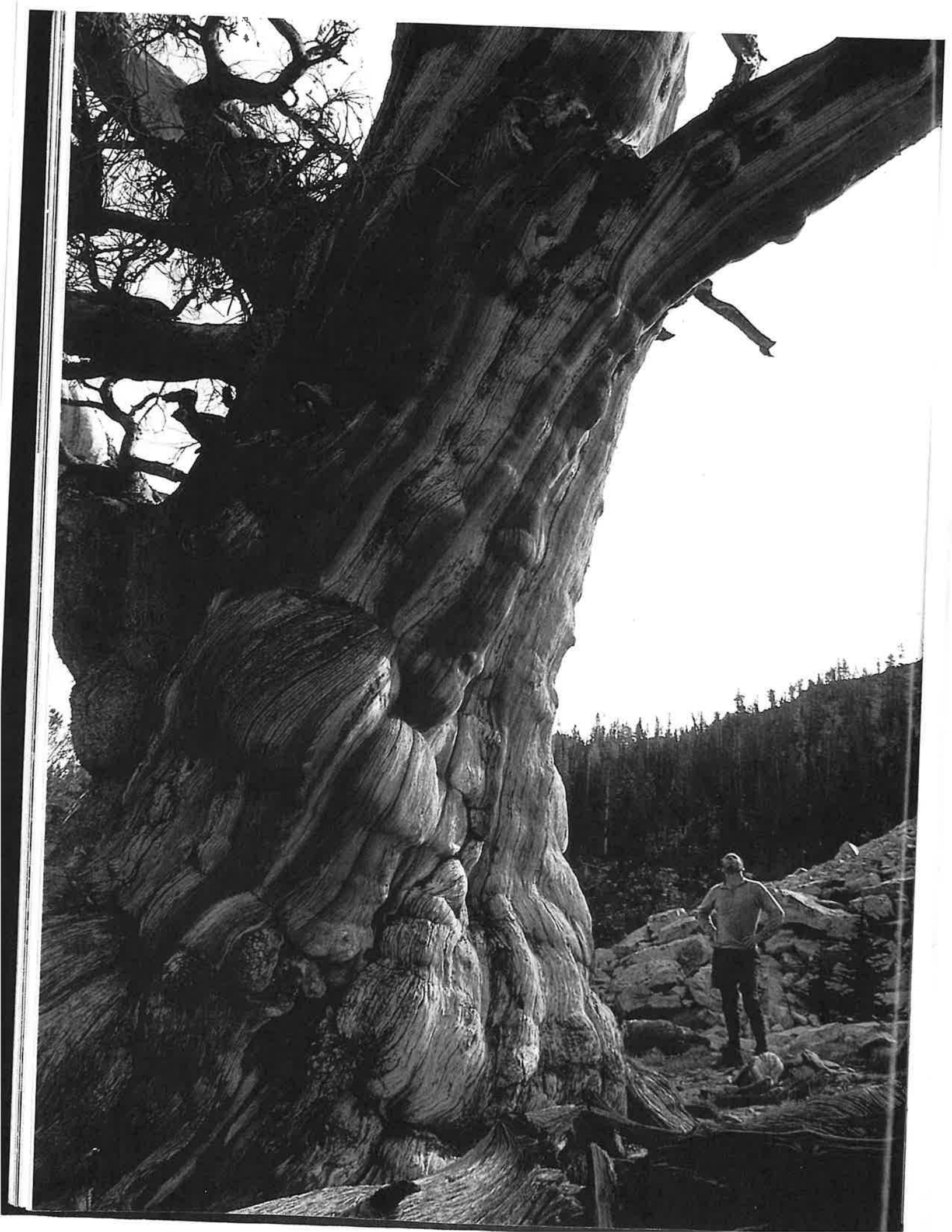
ROBERT LLEWELLYN

# SPECIES WITHOUT CHAMPS

**The new rule** that trees must be remeasured within 10 years to retain their titles has caused a lot of changes in this year's National Register of Big Trees. In fact, 100 of the 2006 champs lost their titles this year due to this new 10-year rule. Still more changes are afoot. AMERICAN FORESTS will be revising its list of eligible species for the 2009-2010 Register; those changes are not reflected in this edition of the Register. You can, however, view that revised list on our website (www.americanforests.org/resources/bigtrees) later this year. Because some of the species below may not be included on that list, you should be sure to check the online list against this one before you head out in search of Big Tree fame. Also on our website, you can download guidelines for measuring your potential champion as well as a list of what materials should be included with the nomination. You also will find contact information for your state coordinator and a link to your state's big tree register.

| Species | Common Name | Scientific Name |
|---|---|---|
| Acacia | Long-spine | *Acacia macracantha* |
| Alder | Seaside | *Alnus maritima* |
| Alder | Speckled | *Alnus rugosa* |
| Anise-tree | Yellow | *Illicium parviflorum* |
| Apple | Prairie crab | *Malus ioensis* |
| Apricot | Desert | *Prunus fremontii* |
| Ash | Gregg | *Fraxinus greggii* |
| Bayberry | Evergreen | *Myrica heterophylla* |
| Bayberry | Southern | *Myrica cerifera* |
| Baycedar | | *Suriana maritima* |
| Birch | Kenai | *Betula papyrifera* var. *kenaica* |
| Birch | Northwestern paper | *Betula papyrifera* var. *subcordata* |
| Bitterbush | | *Picramnia pentandra* |
| Bladdernut | American | *Staphylea trifolia* |
| Bladdernut | Sierra | *Staphylea bolanderi* |
| Blolly | Longleaf | *Guapira discolor* |
| Blueblossom | Blue-myrtle | *Ceanothus thyrsiflorus* |
| Buccaneer-palm | | *Pseudophoenix sargentii* |
| Buckthorn | Glossy | *Rhamnus frangula* |
| Buckwheat-tree | | *Cliftonia monophylla* |
| Buffaloberry | Silver | *Shepherdia argentea* |
| Burningbush | Western | *Euonymus occidentalis* |
| Bustic | Willow | *Dipholis salicifolia* |
| Button-mangrove | | *Conocarpus erectus* |
| Cajeput-tree | | *Melaleuca quinquenervia* |
| Caper | Limber | *Capparis flexuosa* |
| Castorbean | | *Ricinus communis* △ |
| Casuarina | Horsetail | *Casuarina equisetifolia* |
| Catclaw | Roemer | *Acacia roemeriana* |
| Ceanothus | Feltleaf | *Ceanothus arboreus* |
| Ceanothus | Greenbark | *Ceanothus spinosus* |
| Cercocarpus | Birchleaf | *Cercocarpus betuloides* |
| Cherry | Bitter | *Prunus emarginata* |
| Cherry | Chokecherry, western | *Prunus virginiana* v. *melanocarpa* |
| Cherry | Sour | *Prunus cerasus* |
| Chinkapin | Florida | *Castanea alnifolia* |
| Cinnecord | | *Acacia choriophylla* |
| Coconut | Palm | *Cocos nucifera* |
| Cocoplum | | *Chrysobalanus icaco* |
| Colubrina | Coffee | *Colubrina arborescens* |
| Colubrina | Cuba | *Colubrina cubensis* |
| Corkwood | | *Leitneria floridana* |
| Cranberrybush | American | *Viburnum trilobum* |
| Crossopetalum | Florida | *Crossopetalum rhacoma* |
| Cupania | Florida | *Cupania glabra* |
| Cypress | Cuyamaca | *Cupressus arizonica* v. *stephensonii* |
| Cyrilla | Littleleaf | *Cyrilla racemiflora* var. *parvifolia* |
| Dogwood | Pacific | *Cornus nuttallii* |
| Dogwood | Red-osier | *Cornus stolonifera* |
| Dogwood | Smooth | *Cornus glabrata* |
| Downy-myrtle | | *Rhodomyrtus tomentosa* |
| Elder | American | *Sambucus canadensis* v. *canadensis* |
| Elder | Blackbead | *Sambucus melanocarpa* |
| Elder | Florida | *Sambucus canadensis* var. *laciniata* |
| Elder | Velvet | *Sambucus velutina* |
| Falsebox | | *Gyminda latifolia* |
| Fiddlewood | Berlandier | *Citharexylum berlandieri* |
| Fir | Bristlecone | *Abies bracteata* |
| Florida-boxwood | | *Schaefferia frutescens* |
| Florida-privet | | *Forestiera segregata* |
| Flowerfence | | *Caesalpinia pulcherrima* |
| Forestiera | Texas | *Forestiera angustifolia* |
| Fremontia | Mexican | *Fremontodendron mexicanum* |
| Guava | | *Psidium guajava* |
| Guiana-plum | | *Drypetes lateriflora* |
| Hackberry | Lindheimer | *Celtis lindheimeri* |
| Hawthorn | Barberry | *Crataegus berberifolia* |
| Hawthorn | Beautiful | *Crataegus pulcherrima* |
| Hawthorn | Black | *Crataegus douglasii* |
| Hawthorn | Brainerd | *Crataegus brainerdii* |
| Hawthorn | Cockspur | *Crataegus crus-galli* |
| Hawthorn | Fireberry | *Crataegus chrysocarpa* |
| Hawthorn | Frosted | *Crataegus pruinosa* |
| Hawthorn | Gregg | *Crataegus greggiana* |
| Hawthorn | Harbison | *Crataegus harbisonii* |
| Hawthorn | Oneflower | *Crataegus uniflora* |
| Hawthorn | Pear | *Crataegus calpodendron* |
| Hawthorn | Pensicola | *Crataegus lacrimata* |
| Hawthorn | Reverchon | *Crataegus reverchonii* |
| Hawthorn | Threeflower | *Crataegus triflora* |

| Species | Common Name | Scientific Name |
|---|---|---|
| Hawthorn | Willow | *Crataegus saligna* |
| Hazel | California | *Corylus cornuta* var. *californica* |
| Hibiscus | Sea | *Hibiscus tiliaceus* |
| Hickory | Scrub | *Carya floridana* |
| Holly | Carolina | *Ilex ambigua* |
| Holly | Dune | *Ilex opaca* var. *arenicola* |
| Holly | Georgia | *Ilex longpipes* |
| Holly | Sarvis | *Ilex amelanchier* |
| Holly | Tawnberry | *Ilex krugiana* |
| Hoptree | California | *Ptelea crenulata* |
| Hoptree | Common | *Ptelea trifoliata* |
| India-almond | | *Terminalia catappa* |
| Joewood | | *Jacquinia keyensis* |
| Juniper | Common | *Juniperus communis* |
| Lebbek | | *Albizia lebbeck* |
| Leucaena | Littleleaf | *Leucaena retusa* |
| Licaria | Florida | *Licaria triandra* |
| Lidflower | Pale | *Calyptranthes pallens* |
| Locust | Kelsey | *Robinia kelseyi* |
| Maidenbrush | | *Savia bahamensis* |
| Maidenbrush | Marlberry | *Ardisia escallonioides* |
| Mango | | *Mangifera indica* |
| Mangrove | Red | *Rhizophora mangle* |
| Milkbark | | *Drypetes diversifolia* |
| Mountain-ash | Showy | *Sorbus decora* |
| Mountain-ash | Sitka | *Sorbus sitchensis* |
| Mountain-holly | | *Nemopanthus collinus* |
| Nectandra | Florida | *Nectandra coriacea* |
| Oak | California black | *Quercus kelloggii* |
| Oak | Delta Post | *Quercus stellata* var. *paludosa* |
| Oak | McDonald | *Quercus macdonaldii* |
| Oak | Valley | *Quercus lobata* |
| Paloverde | Texas | *Cercidium texanum* |
| Papaya | | *Carica papaya* |
| Paradise-tree | | *Simarouba glauca* |
| Pawpaw | Bigflower | *Asimina obovata* |
| Pawpaw | Smallflower | *Asimina parviflora* |
| Peach | | *Prunus persica* |
| Peppertree | Brazil | *Schinus terebinthifolia* |
| Pigeon-plum | | *Coccoloba diversifolia* |
| Pine | Bolander's | *Pinus contorta* var. *bolanderi* |
| Pine | Foxtail | *Pinus balfouriana* |
| Pine | Knobcone | *Pinus attenuata* |
| Pine | Parry pinyon | *Pinus quadrifolia* |
| Pine | Pinyon (two-leaf) | *Pinus edulis* |
| Pine | Torrey | *Pinus torreyana* |
| Pine | Western white | *Pinus monticola* |
| Plum | Canada | *Prunus nigra* |
| Plum | Klamath | *Prunus subcordata* |
| Portiatree | | *Thespesia populnea* |
| Prickly-ash | Biscayne | *Zanthoxylum coriaceum* |
| Prickly-ash | Common | *Zanthoxylum americanum* |
| Prickly-pear | Brazil | *Opuntia brasiliensis* |
| Rapanea | Florida | *Rapanea punctata* |
| Sapium | Jumping-bean | *Sapium biloculare* |
| Sapodilla | | *Manilkara zapota* |
| Seven-year-apple | | *Genipa clusiifolia* |
| Silktassel | Wavyleaf | *Garrya elliptica* |
| Smokethorn | | *Dalea spinosa* |
| Snowbell | American | *Styrax americanus* |
| Snowbell | Sycamore-leaf | *Styrax platanifolius* |
| Soapberry | Wingleaf | *Sapindus saponaria* |
| Stewartia | Mountain | *Stewartia ovata* |
| Stewartia | Virginia | *Stewartia malacodendron* |
| Stopper | Long-stalk | *Psidium longipes* |
| Stopper | Simpson | *Myrcianthes fragrans* v. *simpsonii* |
| Stopper | Twinberry | *Myrcianthes fragrans* v. *fragrans* |
| Strongback | Rough | *Bourreria radula* |
| Sugar-apple | | *Annona squamosa* |
| Sumac | Kearney | *Rhus kearneyi* |
| Sumac | Laurel | *Rhus laurina* |
| Sumac | Lemonade | *Rhus integrifolia* |
| Sumac | Southern | *Rhus copallina* var. *leucantha* |
| Tallowtree | | *Sapium sebiferum* |
| Tamarisk | French | *Tamarix gallica* |
| Tamarisk | Small-flower | *Tamarix paryiflora* |
| Torchwood | Balsam | *Amyris balsamifera* |
| Torreya | California | *Torreya californica* |
| Tree-cactus | Deering | *Cereus robinii* var. *deeringii* |
| Tree-cactus | Key | *Cereus robinii* var. *robinii* |
| Trema | Florida | *Trema micrantha* |
| Trema | West Indies | *Trema lamarckiana* |
| Trifoliate-orange | | *Poncirus trifoliata* |
| Vauquelinia | Fewflower | *Vauquelinia pauciflora* |
| Velvetseed | Elliptic-leaf | *Guettarda elliptica* |
| Viburnum | Walter | *Viburnum obovatum* |
| White-mangrove | | *Laguncularia racemosa* |
| Wild-dilly | | *Manikara bahamensis* |
| Willow | Autumn | *Salix serissima* |
| Willow | Balsam | *Salix pyrifolia* |
| Willow | Basket | *Salix viminalis* △ |
| Willow | Crack | *Salix fragilis* |
| Willow | Dusky | *Salix melanopsis* |
| Willow | Florida | *Salix floridana* |
| Willow | Hinds | *Salix hindsiana* |
| Willow | Littletree | *Salix arbxsusculoides* |
| Willow | Meadow | *Salix petiolaris* |
| Willow | Northwest | *Salix sessilifolia* |
| Willow | Purple-osier | *Salix purpurea* |
| Willow | Pussy | *Salix discolor* |
| Willow | River | *Salix fluviatilis* |
| Willow | Sandbar | *Salix exigua* |
| Willow | Satiny | *Salix pellita* |
| Willow | Shining | *Salix lucida* |
| Willow | Silky | *Salix sericea* |
| Winterberry | Smooth | *Ilex laevigata* |
| Willow | Tracy | *Salix tracyi* |
| Yucca | Cameros (Spanish-dagger) | *Yucca carnerosana* |
| Yucca | Trecul | *Yucca treculeana* |



# DEMISE *of a Charismatic* CHAMPION

A search for the backcountry whitebark pine titleholder reveals a stunning tree but a casualty of age and global warming.
Story and photos by Tyler Williams

**Moments after stepping** into the wind at the pass, I saw the tree. A good half-mile away by line of sight, it ruled the basin below, occupying a solitary perch above the rest of the forest. This whitebark pine left no doubt about its champion status. It was king.

Scurrying down the trail's rocky switchbacks, I approached the pine, my excitement growing with every step. Although weary from schlepping my pack six uphill miles through Idaho's Sawtooth Mountains, I glided easily to the base of the champ, mesmerized by its overwhelming presence.

The tree was not only big, it was charismatic. As I circled the ancient giant, every careful step revealed a new world of sculpted bark striations that led my eye upward along a bulging polished trunk. Its upper arms reached outward in graceful arcs. The roots gripped the earth indomitably, like an eagle's clutching talons. I uttered unintentionally, nearly dumbstruck, "whoooa." The tree was eminent, strong, and dignified, but there was one flaw. It was dead.

I suppose I had anticipated this possibility. Monitoring the old champion's health was a part of my assignment from AMERICAN FORESTS, but it was still a harsh slap of reality to find that the great tree had passed.

I guess someone has to do the dirty work. After all, much has happened since the Imogene Lake *Pinus albicaulis* was first nominated for AMERICAN FORESTS' National Register of Big Trees more than a quarter century ago. Since then, disco has given way to hip hop, telephones have gone from dial wheels to cordless to cellular, and the weather has gotten warmer and warmer still.

Not that climate change was the lone culprit in the demise of this national champion. The tree was old, perhaps in the 1,000-year range considering that some whitebarks have been dated at over 1,200 years. Nothing lives forever, I thought, not even a stoic grandfather tree like this one.

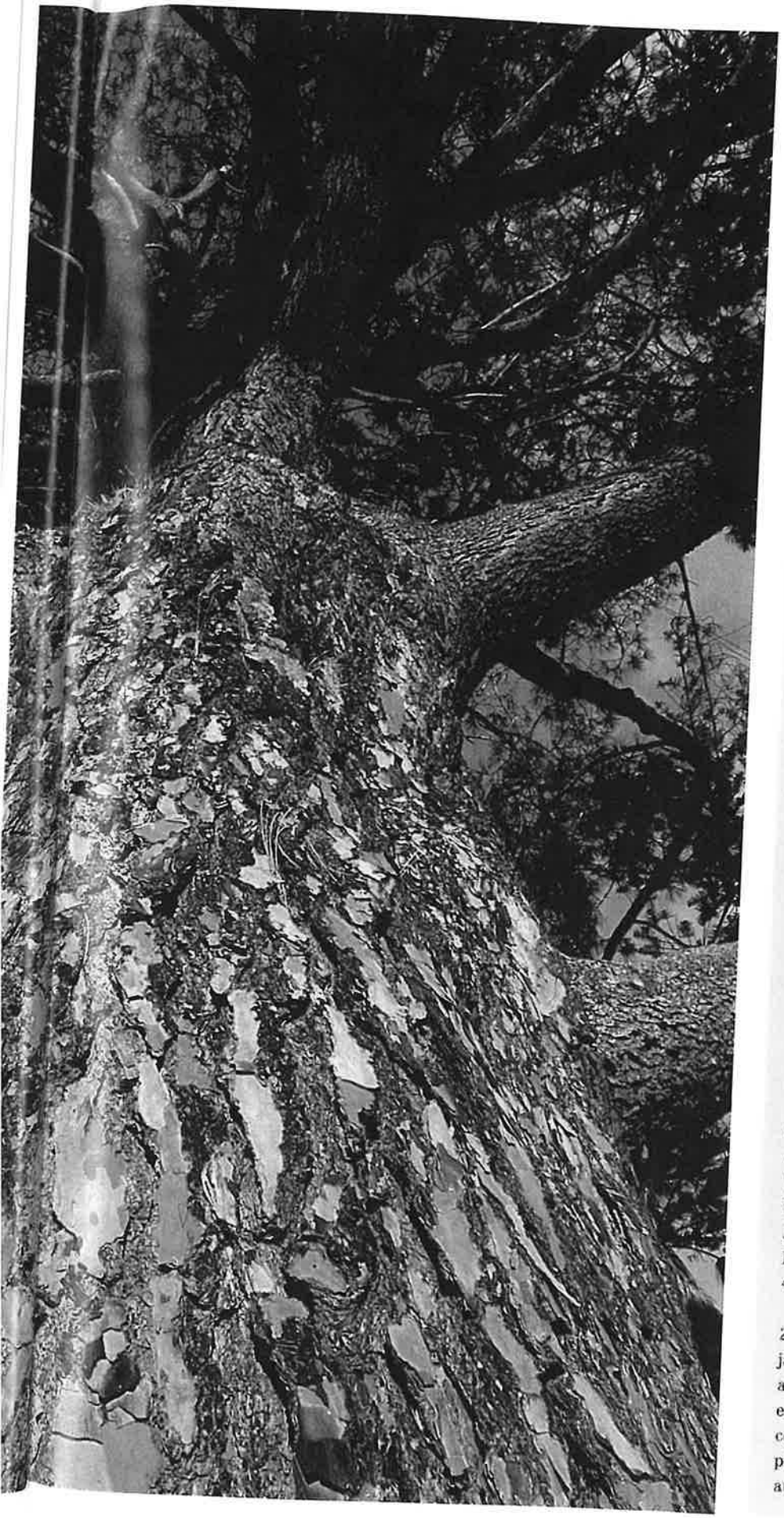
Old age coupled with a dry hot summer was apparently just enough to push the great tree over the edge. It hadn't been dead long. Rust brown needles still clung to its outstretched branches.

*Brown needles show the former national champ died recently.*

As I sat and looked at the slopes of the alpine bowl above me, my quiet acceptance of the tree's death was rattled into an alarming concern. Other whitebarks within view, both young and old, carried the same rusty badge of death as the fallen champ. The Imogene Lake whitebark, I realized, wasn't just a big tree that had finally reached the end of its life span. It was a huge, glaringly grotesque sign of the apocalypse.

Whitebark pines are dying. On the east side of Glacier National Park and in north Idaho's Selkirk Mountains, whitebarks are 90 percent dead. In southern Oregon's Umpqua National Forest, more than half the whitebark pines are dead or dying. Small isolated populations of *Pinus albicaulis* in Montana's Centennial Mountains are bordering on extinction.

FORMER NATIONAL CHAMP WHITEBARK PINE



day in 1964 it only took a matter of minutes for a grad student and U.S. Forest Service personnel to cut through them with a chainsaw in order to count them. Apparently they didn't know that Prometheus was the god of forethought.

The story of our future relationship with pines is yet to be told. In all likelihood, the Gaia-Iapetus-Prometheus line did not end with the chainsaw. It is even possible that a majority of the bristlecones within nutcracker range of Prometheus are its offspring. In Greek mythology, Prometheus had a daughter named Aidos. She was the goddess of modesty, reverence, and respect. Let's hope that our future relationship with *Pinus* is guided by the same qualities. **AF**

---

*Whit Bronaugh is a freelance photojournalist in Eugene, Oregon.*

## REGAL PINES

The 2008 National Register of Big Trees lists 46 champions and co-champions representing 40 species and varieties of pine. There are empty thrones for knobcone, foxtail, Bolander's, two-leaf pinyon, western white, Parry pinyon, and Torrey pine. Their former champs may still be living and deserving, but they fell to the new rule that says a champion must be measured within the last 10 years.

The champion pines are spread out among 22 states; not surprisingly, California, with the greatest diversity of pines, has the most champions with nine. This number should increase in the next Register because the seven with no current champion are found in California; four are found nowhere else. Also, California claimed six of the dethroned seven champs in the last Register. Arizona is second with six champions, Florida has four, Texas has three, six states have two, and 12 states have one.

With 659 points (based on a formula of height, circumference, and crown spread), the champion sugar pine in California is the biggest pine in the world. It is followed by four in the 500-point range: ponderosa, Monterey, Jeffrey, and Great Basin bristlecone. The Rocky Mountain ponderosa pine is next with 456 points.

There are 10 species in the 300s, 18 in the 200s, and six in the 100s with the 102-point jack pine being the smallest. The tallest pine is a 240-foot ponderosa in California, the thickest is the 12-foot-diameter Great Basin bristlecone in Nevada, and the champion Monterey pine in California has the widest crown spread at 106 feet.—*Whit Bronaugh*


# One (Big) Tree's Story

In Indiana, a fortuitous meeting between a red maple and an 8-year-old boy results in state recognition and some greater understanding.

By Janelle Phillips

**The tree's age is unknown, but its size indicates it has observed a changing landscape and many years of history.**

If you have ever seen a giant tree before, perhaps you have wondered about its story. How many generations has it seen pass by? Who played under its branches as children? What unique circumstances allowed it to grow so tall? Who before has pondered its greatness?

The National Register of Big Trees and big tree programs in all 50 states document many of the large trees that people see and wonder about. These registers provide information about the trees' measurements, where they are located, and the names of the nominators.

But rarely do we have the opportunity to look past those pages and into the lives of the nominators and the stories behind how the trees made it into a register in the first place. As fascinating as it would be to document all those histories and stories, this is a story about only one.

In the state of Indiana, nestled in the heart of the Midwest, a tall red maple stands on an old mill site along the Wabash River. The tree's age is unknown, but its size indicates it has observed a changing landscape and many years of history.

Did the tree bear witness to the induction of Indiana to statehood in 1816? Did it see the last of the Native Americans leave the state and pioneers build their new homes and harness the power of the natural world around them? How did it come about that this red maple was not chopped down for lumber or firewood during Indiana's early expansion? The answers are buried deep within its age rings.

Moving out to more recent age rings, in 2002 Carl Ruble and his son Mason acquired the Logansport property over which the red maple towers. Initially they didn't notice its grandeur or size.

In removing brush from the septic system they also removed debris that had built up around the red maple's trunk. That made the tree stand out more, but it wasn't until Carl noticed Mason could completely hide behind the tree while perched on a 4-wheeler that its massive size became fully apparent. Eight-year-old Mason wanted to build a tree

PAMELA TOURS/INDIANA DNR, DIVISION OF FORESTRY

*Mason Ruble at age 10 with the red maple.*

house, but instead they nominated the maple to the Indiana Register of Big Trees.

Mason frequently asked his father about the status of their nomination, and they finally were told that their red maple was indeed a state champ. It was an exciting moment for Carl and especially for Mason, who was listed as the nominator. Local media attention followed, and suddenly the Rubles and the tree were thrust into the limelight.

The experience has been especially important for Mason, who is now 13. Carl has always loved nature, but this incident has helped put nature in perspective for Mason, who now regularly pulls trash out of the river in order to care for the environment. Standing at 410 points, the red maple falls just out of national championship reach, but still retains champion status in the state of Indiana. (The current national champ, at 439 points, is in Great Smoky Mountains National Park, Tennessee.)

This is a story about Carl and Mason Ruble and their champion red maple, but there is a story waiting to be told about you and your trees. Which ones around you have stories that need to be told? Imagine what volumes of history we might write if trees could speak, but these majestic beings hold their secrets close and die with them undisclosed.

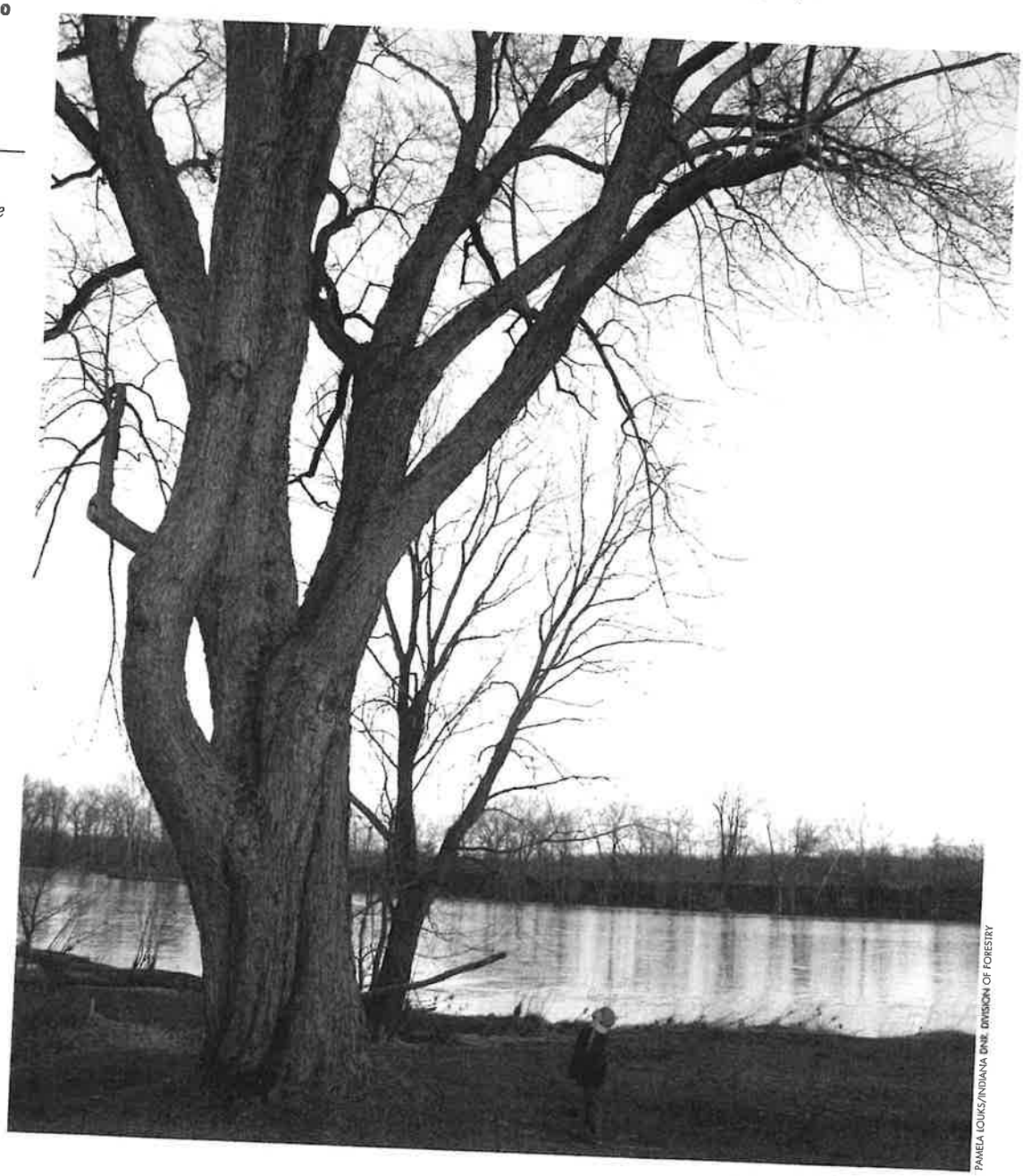
We must tell trees' stories. As we do they become more than branches, trunks, and leaves to be harvested for lumber or picnicked under and instead become witnesses to historical events, landmarks, playgrounds for children, and memorials.

Will you tell their stories?

---

*Janelle Phillips is program assistant for AMERICAN FORESTS' Global ReLeaf program.*

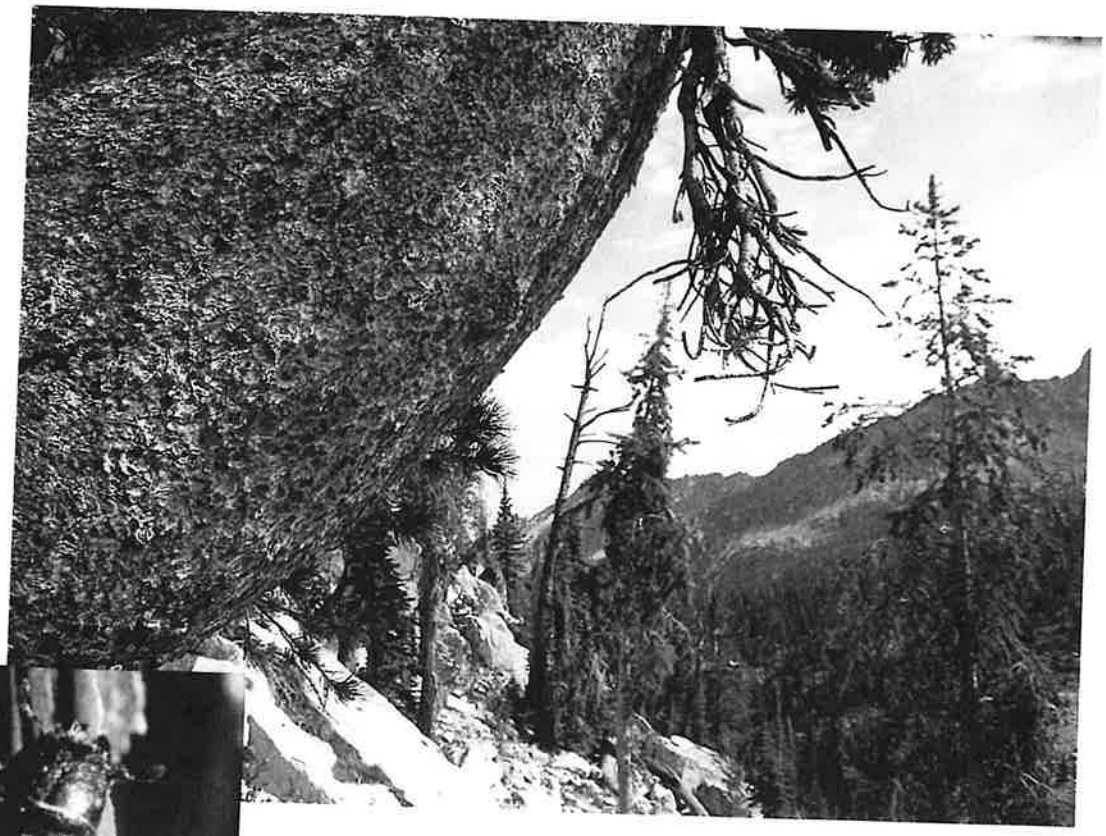
**This incident has helped put nature in perspective for Mason, who now regularly pulls trash out of the river in order to care for the environment.**



*A big "friendship": Mason with his state champ red maple.*

PAMELA LOUKS/INDIANA DNR, DIVISION OF FORESTRY

**I REALIZED, IT WASN'T JUST A BIG TREE THAT HAD FINALLY REACHED THE END OF ITS LIFE SPAN. IT WAS A HUGE, GLARINGLY GROTESQUE SIGN OF THE APOCALYPSE.**



RON LONG, SIMON FRASER UNIVERSITY/BUGWOOD.ORG

*Mountain pine beetle (above) has contributed to the demise of whitebark pine. Across North America, beetle infestations are killing drought-stressed trees.*

And it's not just the whitebarks that are dying. Just two dozen miles from the Imogene tree, on the north side of the Sawtooths, swaths of lodgepole pines are crispy brown, ready to incinerate with the next lightning strike. On Alaska's Kenai Peninsula, 4 million acres of white spruce are dead. British Columbia has more than 17 million acres of dying trees. In the American Southwest, pinyon pine, Arizona cypress, aspen, corkbark fir, Englemann spruce, and ponderosa pine are all experiencing massive die-offs. The evidence is clear: Forests in western North America as we know them are becoming a thing of the past.

Each affected tree species has its own specific set of causes for its mortality, and it usually involves a small bark-boring insect. Arizona's pinyon pines are suffering from drought and an infestation of *Ips confusus*, the pinyon bark beetle. Alaska's white spruce have succumbed to *Dendroctonus rufipennis*, the spruce beetle. For whitebark pine (along with lodgepole, ponderosa, and several other pines), the villain is *Dendroctonus ponderosae*, the mountain pine beetle.

This industrious insect makes its home in whitebark pine's phloem, or inner bark, where it feeds on the tree and lays eggs. A pioneer female initiates the infestation before sending out a pheromone signal to other beetles in the area, and the onslaught begins. A healthy pine can sometimes fight the invasion with sap, but pine beetles carry a blue stain fungus that inhibits the tree's resin production, effectively disarming the pine's defenses. With beetles cutting off the supply of nutrients traveling from the roots upward to the rest of the tree, compromised whitebarks succumb in two to three weeks.

Pine beetles, spruce beetles, and other forest pests are of course nothing new. They have been a part of the ecosystem for millennia, providing a check on excessively profligate trees, culling the weak, and helping to maintain genetic integrity. The check on beetles, in turn, has primarily been climatic parameters.

Pine beetles respond to temperature. A warm spring combined with a mild fall can allow beetles to produce a second generation in a year, when normally they would only reproduce and mature once per season. Conversely, a late spring cold snap can kill beetles that are emerging from their winter larvae stage, and an early freeze in the fall can keep beetle eggs from hatching. In summer, cool weather can inhibit mature beetles from flying between trees. In winter, extreme low temperatures will kill beetle larvae that are over wintering in the bark.

In recent decades these temperature thresholds on the pine beetle have rarely been reached. Even a cursory examination of weather records for the Intermountain West illustrates a dearth of low

temperatures in recent years. In Stanley, Idaho, near the Imogene tree (and one of the coldest locations in the continental U.S.), temperatures of -40 Fahrenheit have occurred in 11 of the past 44 winter seasons. Ten of those 11 occurrences came prior to 1990, and it has never reached -40 since that year.

On Alaska's Kenai Peninsula, where the white spruce vanished, the story is eerily similar. Extreme low temperatures (-30 degrees for this location) have been reached 38 times in the past half-century. Only five of those 38 extreme low temperatures were post-1990. Researchers in the Sawtooths measuring phloem temperatures, where *Dendroctonus* eggs over-winter, found that annual minimum phloem temperatures had "increased significantly" between 1980 and 2006.

Higher temperatures equals more beetles equals less whitebark pines. In a nutshell, this is the dilemma, but it covers only the tip of the melting iceberg. Whitebark decline is just one domino in a building wave of change, and a singularly significant domino at that.

*Pinus albicaulis* is a keystone species of subalpine forests. Through its seeds, it provides an energy-rich food source coveted by creatures large and small. The prized seeds are picked and stashed by red squirrels in some habitats, but more commonly, whitebark seeds are the domain of Clark's nutcracker. This iconic high country bird is almost entirely interdependent with whitebark pine, because it is the primary seed disperser for the tree.

Clark's nutcrackers have a specially developed pouch for transporting whitebark seeds. They sometimes travel over 20 kilometers with a pouchful before placing their harvest in a cache. Wind does not spread the dense seeds of whitebark pine. Only the nutcracker and an occasional squirrel can do that job.

Once stashed, the seeds are a favorite find of another mountain icon, the grizzly bear. Grizzlies can get over half their digested energy from whitebark pine seeds, making it a critical part of the bruin's diet. Some studies have shown that during bad whitebark pine seed crops, bear encounters with humans increase as grizzlies are forced to wander out of their preferred range in search of food.

Besides their seed production, whitebark pines are also considered nurse trees. They thrive in relatively harsh treeline environments, where cold drying winds and intense high altitude sun are standard conditions. Whitebarks create shelter in this difficult environment, making habitat for a host of plant species including paintbrush, lupine, arnica, goldenrod, mountain sagewort, wild strawberry, heather, and various sedges.

Without the micro-habitats created by white-

## WHITEBARK'S NEXT GENERATION

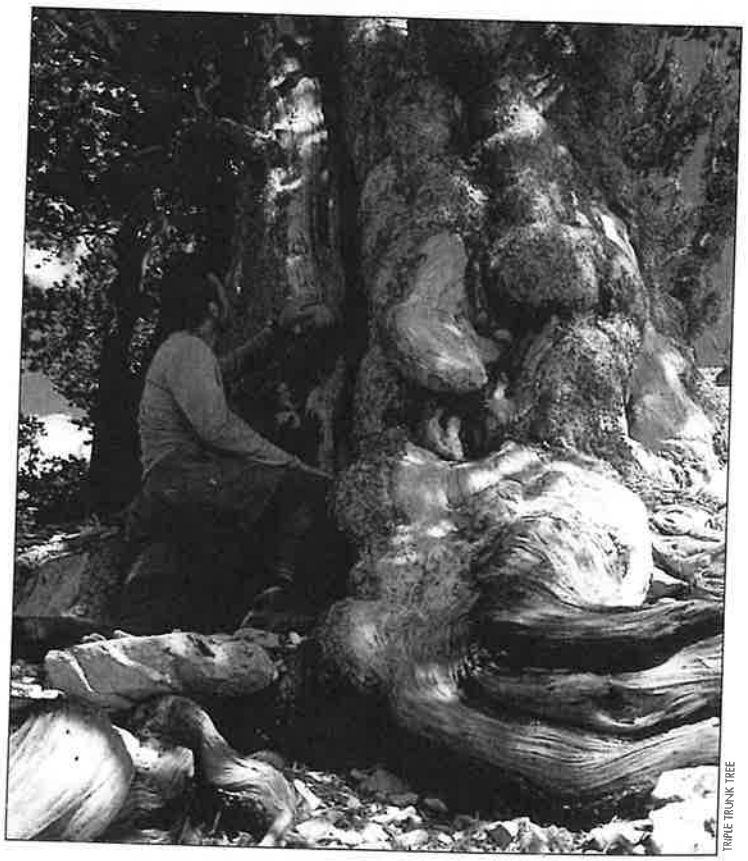
**After searching remote** high mountain basins near the Imogene Lake tree, I discovered and nominated a new champion for the now-empty whitebark pine throne. Ironically, it is located right next to the trail.

"Triple Trunk" is the largest of a trio of huge whitebark pines located along the trail between Edith and Imogene Lakes in the Sawtooth National Recreation Area of Idaho. As is common in whitebark pines, the Triple Trunk tree forks into separate trunks several feet above the ground. It is the massive confluence of these three trunks that creates a girth of 268 centimeters and pushes the tree to champion status.

Next to Triple Trunk is another impressive whitebark that is actually taller than the record holder. This tree, located on the last switchback of trail above Edith Lake, lacks the girth of Triple Trunk, and therefore scores fewer points than the new champ. Just downhill from these companion trees, another huge whitebark completes the trio of giants.

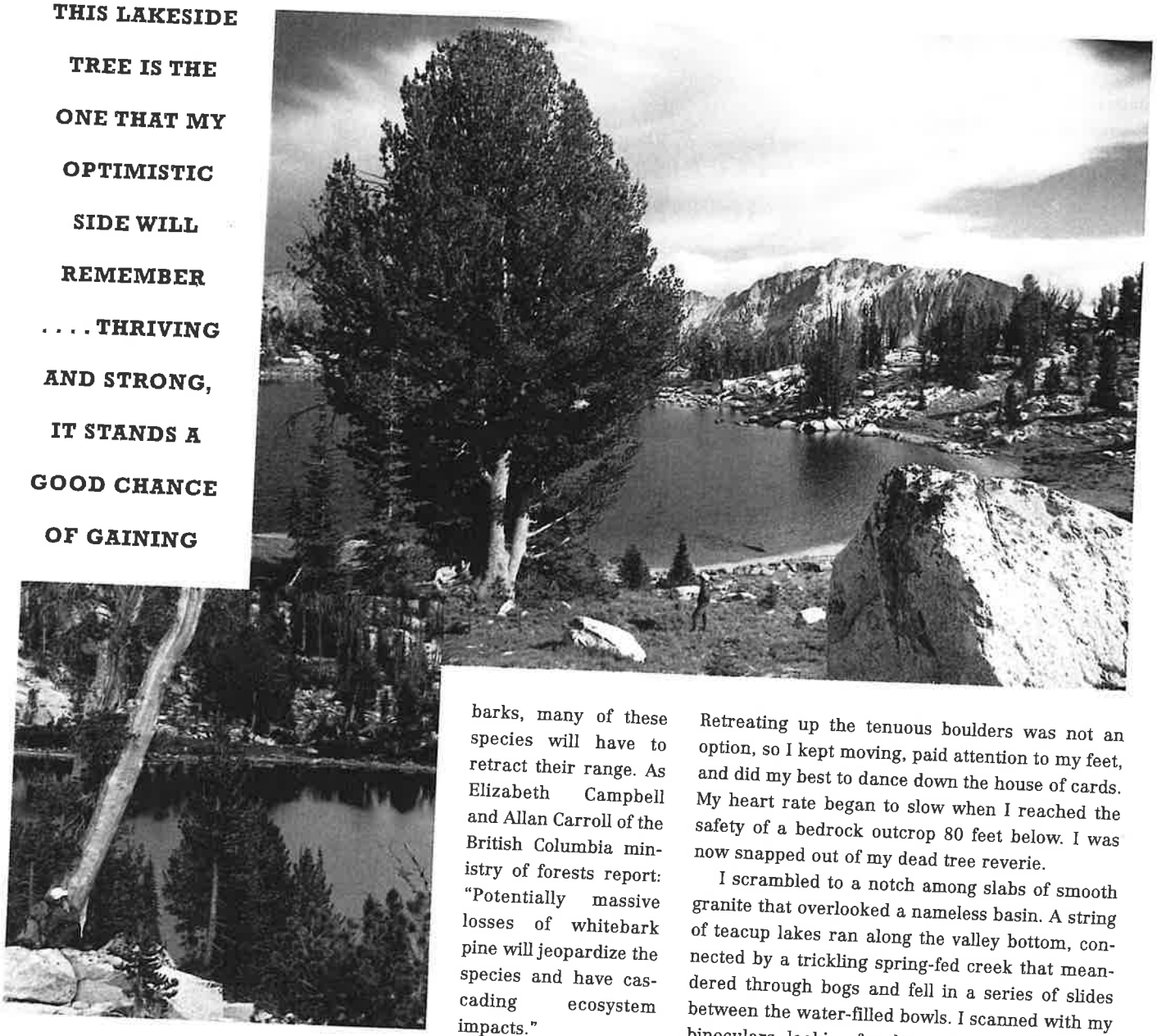
Although this grove of whitebarks is remarkable and record-setting, none of these ancients are in the same league as the now-dead Imogene Lake Tree. That amazing specimen scored 412 points compared to the new champion's 340, but even those vastly differing numbers don't tell the whole story. The Imogene Lake Tree had a singular trunk that did not fork for more than 20 feet. Its spreading arms were numerous, and it had great sculpted burls worn by eons of wind and snow.

Still standing, the Imogene Lake Tree dominates the surrounding landscape definitively, and possesses a presence displayed by only the most elite big trees. Like the Douglas-firs that were the world's tallest trees before falling to the ax, the Imogene Lake whitebark pine is a giant tree emblematic of times past.—Tyler Williams



TRIPLE TRUNK TREE

**THIS LAKESIDE TREE IS THE ONE THAT MY OPTIMISTIC SIDE WILL REMEMBER . . . . THRIVING AND STRONG, IT STANDS A GOOD CHANCE OF GAINING THE TITLE SOMEDAY.**



*Above: Eyeballing future champs. Top: The lakeside tree stands a good chance of gaining the title someday.*

barks, many of these species will have to retract their range. As Elizabeth Campbell and Allan Carroll of the British Columbia ministry of forests report: "Potentially massive losses of whitebark pine will jeopardize the species and have cascading ecosystem impacts."

With my mind racing with these dire thoughts, I wandered away from the Imogene tree listlessly. It was, regretfully, time to find a new champion. My mental wanderings allowed my feet to lead the way, and in minutes I was hopping across a field of loose fallen boulders.

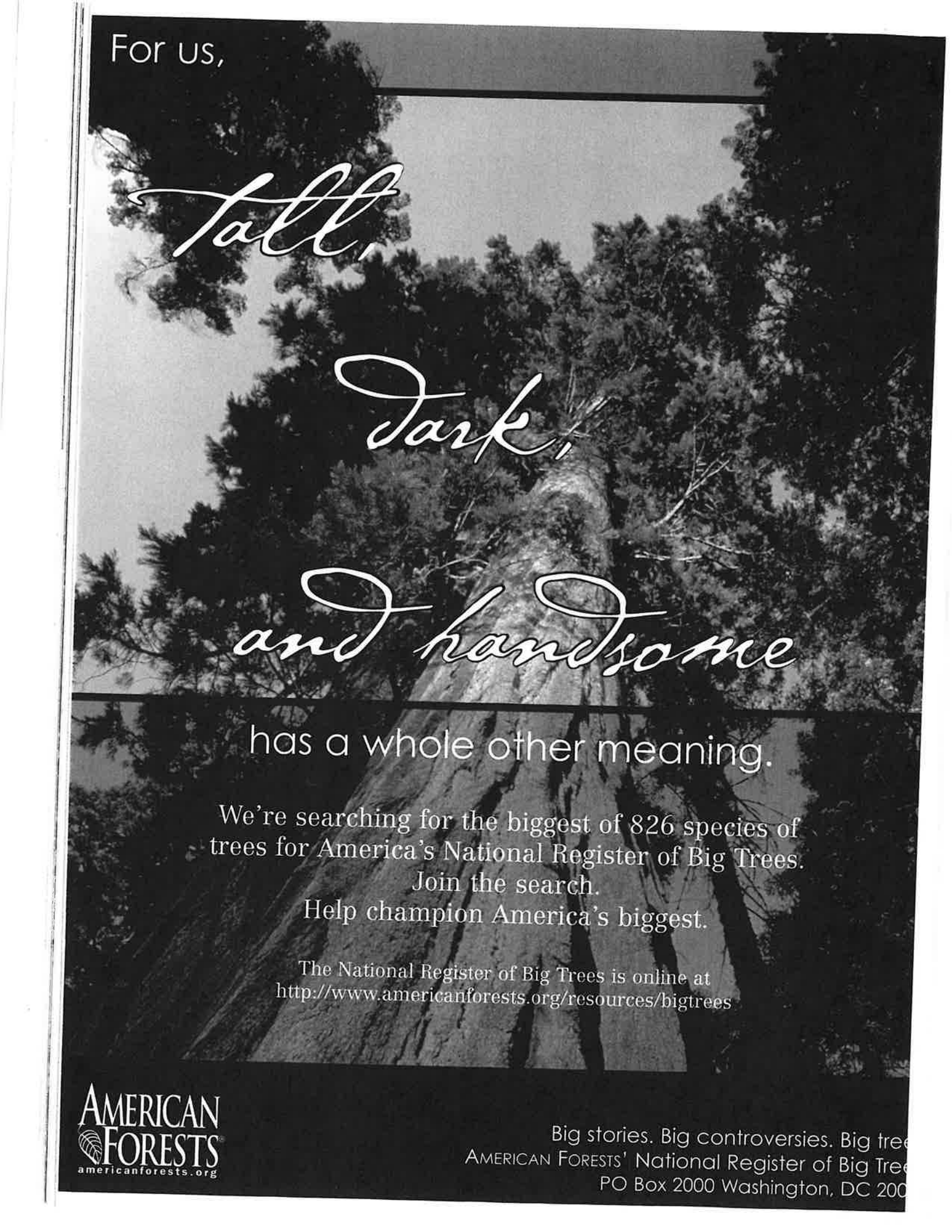
A hundred-pound chunk of white granite moved as I stepped on it, sending me scurrying for more stable footing. I thought of Aron Ralston, the experienced backcountry traveler (like me) who was scrambling solo (like me) when a loose rock shifted, pinning his arm beneath it. Four days later he snapped his necrosed arm off near the elbow and staggered back to his car. I didn't want to be the next Aron Ralston.

No sooner had I conjured that gruesome image when I found myself on the side of a steep debris pile, still with big loose blocks underfoot. Retreating up the tenuous boulders was not an option, so I kept moving, paid attention to my feet, and did my best to dance down the house of cards. My heart rate began to slow when I reached the safety of a bedrock outcrop 80 feet below. I was now snapped out of my dead tree reverie.

I scrambled to a notch among slabs of smooth granite that overlooked a nameless basin. A string of teacup lakes ran along the valley bottom, connected by a trickling spring-fed creek that meandered through bogs and fell in a series of slides between the water-filled bowls. I scanned with my binoculars, looking for the next great tree. At the very back of the basin, where talus met forest, there was a pine. It had the characteristic broad sweeping crown of a whitebark, and it was big. An hour of off-trail hiking later, I arrived at the tree.

It grew at the edge of a perfect alpine lake, looked relatively young and robust, and it was big. I measured it: 57 feet tall, 42 feet of spread, 16 feet of circumference. It wasn't as dramatic as the old champ, and I would later find that it was slightly smaller than another tree I measured on the trail out of the mountains. However, this lakeside tree is the one that my optimistic side will remember. Sitting deep in the wilderness, thriving and strong, it stands a good chance of gaining the title someday. Most of the challengers, after all, are dropping with the permanence of a red-hot setting sun. **AF**

*Freelance writer/photographer Tyler Williams also wrote about the national champ subalpine fir.*


For us,
tall,
dark,
and handsome
has a whole other meaning.
We're searching for the biggest of 826 species of trees for America's National Register of Big Trees.
Join the search.
Help champion America's biggest.
The National Register of Big Trees is online at
http://www.americanforests.org/resources/bigtrees
AMERICAN FORESTS
americanforests.org
Big stories. Big controversies. Big tree
AMERICAN FORESTS' National Register of Big Tree
PO Box 2000 Washington, DC 200

# A Day in the Life of GENERAL SHERMAN

Our intrepid reporter gets up close and personal with this long-time champ and perennial favorite big tree.
Story and photos by Whit Bronaugh

Big trees. You can measure them, pore over their statistics; compare their age to human history; draw, paint, photograph or rhapsodize about them; or stand under them and gawk. You can be stunned into awed silence or jolted into shouts of animated amazement. But if you are like most other visitors to a national champion tree, you will leave within a few minutes, an hour at most.

These are all valid ways to appreciate big trees, as is learning about them through pictures, prose, or word of mouth. But our human way of life, especially the modern American variety, places a dark filter over our perceptions of the life of a big tree. They say it takes one to know one but I'm not about to start injections of chloroplasts and plant hormones. So I decided to slow down and spend an entire day getting to know one champ better. And what better one than the biggest tree on Earth—the General Sherman giant sequoia in Sequoia National Park, California?

### November 14, 2007, Sunrise

After an 8-minute, 92-million-mile journey, at 7:24 a.m. the first direct rays of the sun paint the dead spires of General Sherman's crown with a ruddy glow. Although the crown is 275 feet up—about even with the torch hand of Lady Liberty—it is already an hour past official sunrise because General Sherman stands in a depression below a higher ridge.

Three minutes later the sun lights up the highest green foliage and gradually the chloroplasts start waking up. Robins, juncos, nuthatches, chickadees, and woodpeckers have been active and calling for a good while, but the tourists have not yet braved the cold morning air.

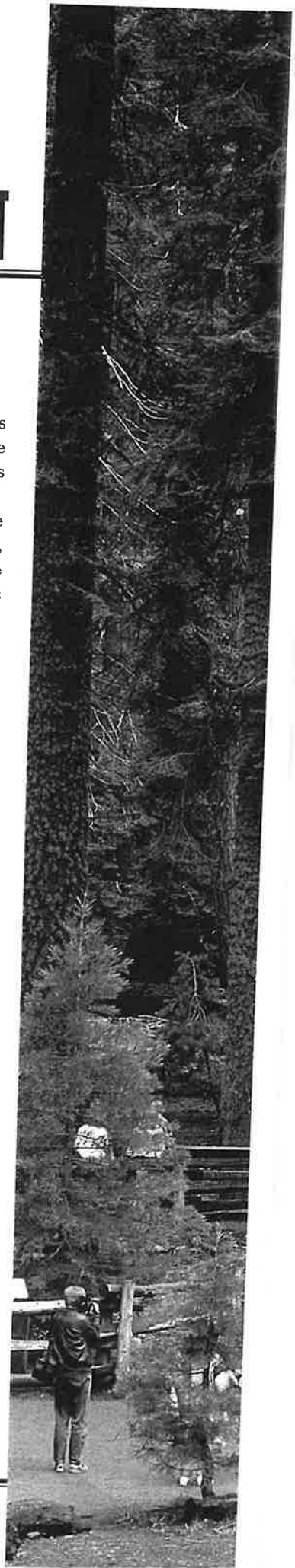
The first thing everyone notices about this giant sequoia, of course, is its size. No matter where you go in the world you will not find a bigger tree. This is the Mother of all Trees, the Big Enchilada, the King of Kings, the Great One, the Numero Uno. And yet, although you can tell it's really, really big, you can't really tell it's the biggest just by looking.

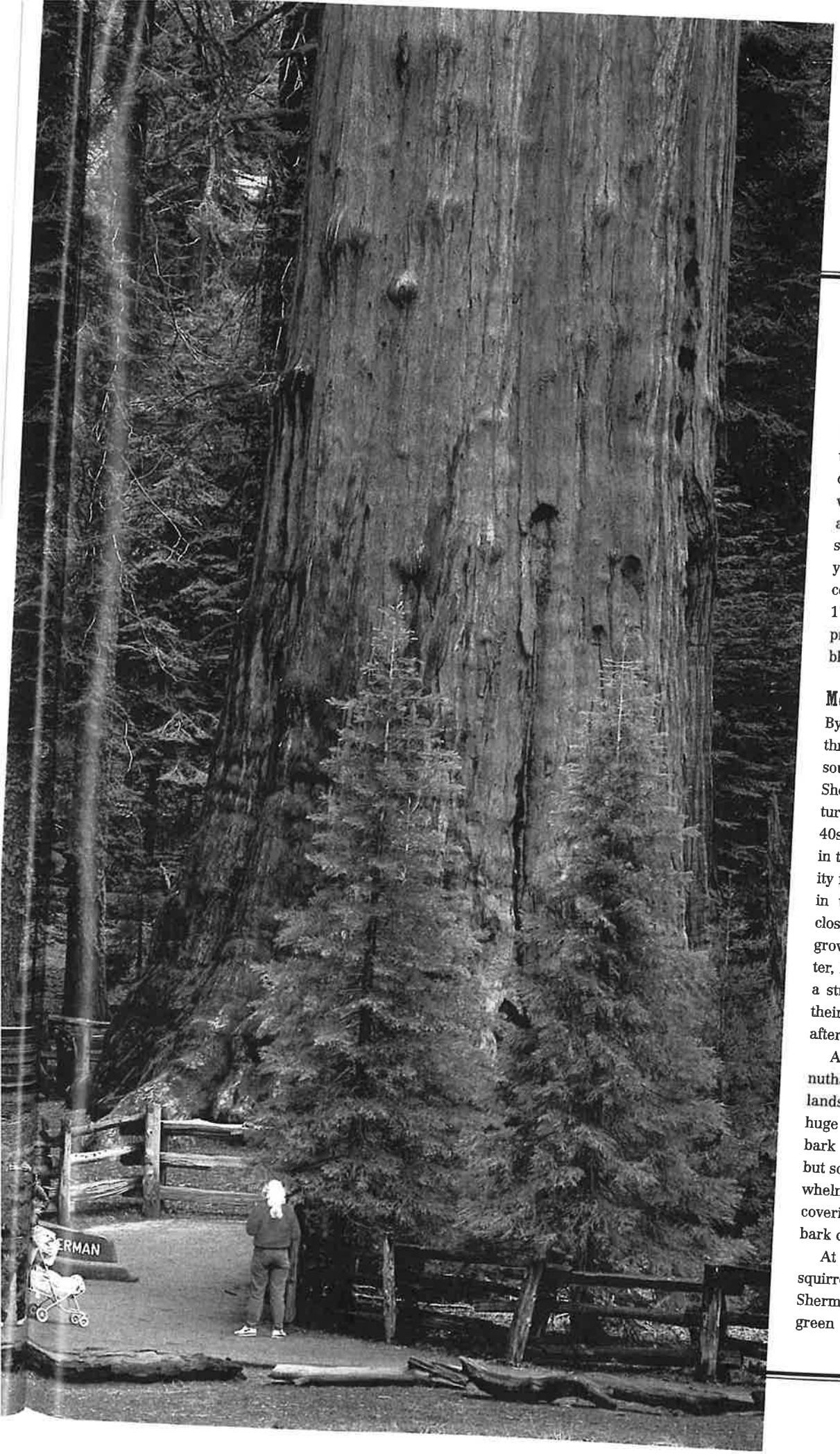
That is partly because it grows in a forest of giant sequoias with a number of them indistinguishable in size by the eyeball method. John Muir didn't call this grove the Giant Forest just because of General Sherman. In fact, he made no mention of this tree. Some, like the 286-foot Diamond Tree, are taller. Others, like the Washington Tree, General Grant, and the Grizzly Giant, are a few inches to a few feet wider near the base where we lowly humans are most easily impressed.

But when Master Tree Measurers like J.W. Jourdan, Robert Van Pelt, and the late Wendell Flint did their magic with survey lasers and the kind of mathematics most of us were glad to find out we actually didn't need later in life, they found the General Sherman occupied more than 55,000 cubic feet—about 10 percent bigger by volume—than its nearest rival.

There are many other more colorful ways to convey the true size of General Sherman, like the National Park Service sign that says an equivalent volume of water would supply the average household for three and a half years. But short of clambering around on it like a squirrel, I think the best way to appreciate its size is to mentally bring it down to our level. Picture just the main trunk lying down on a football field, its base on a goal line.

Now add a row of two-story houses along the length of the tree. As you walk along the sidelines, starting at the goal line across from the tree's base, how much of the houses would you see behind the trunk? At the goal line, only the top of the chimneys would be visible; take a couple steps and the roofline would appear. Just before the






12-yard line the gutter would come into view. Sprint down to the 50-yard line expecting a big change, but the trunk still would prevent you from seeing anything below the second story windows. Go another 25 yards and you are now 80 percent of the way. Even here, just 17 yards from the crown, the prone trunk would completely block the front door.

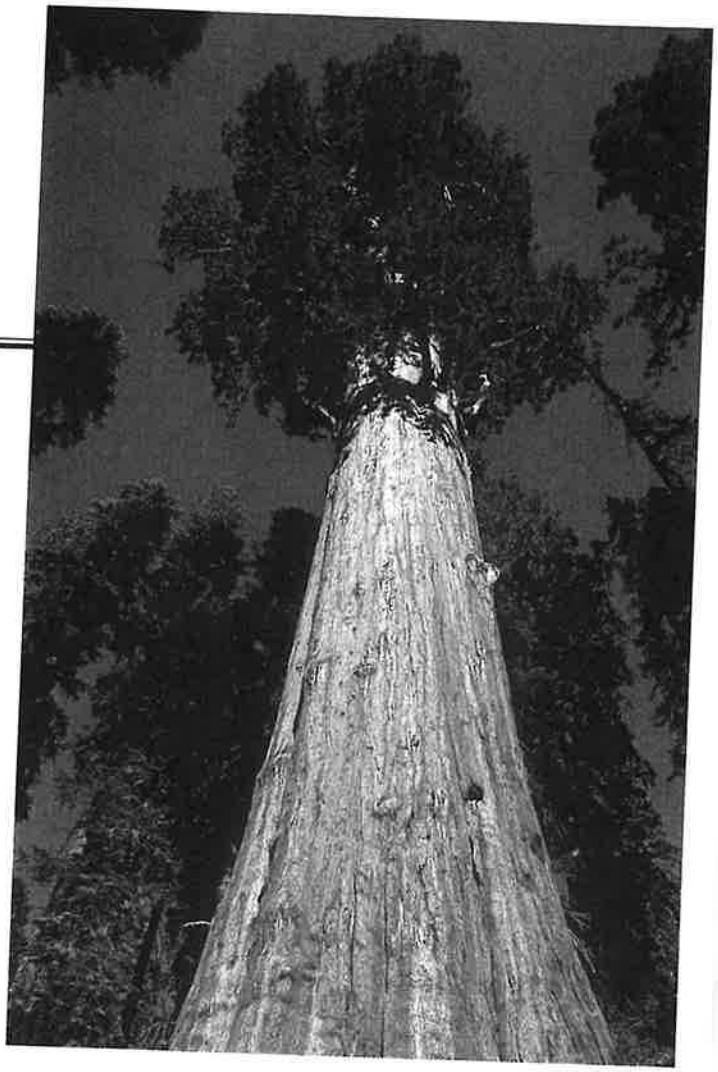
## Morning

By 8:00 a.m. sunlight filters through the forest to dapple the southeastern side of General Sherman. With the temperature climbing but still in the 40s, and the sun still fairly low in the sky, photosynthetic activity is sluggish at best. This late in the year photosynthesis is closing in on the point where growth will cease for the winter, but the clear skies promise a strong finish. Birds continue their frantic search for food after the long, cold night.

An audacious red-breasted nuthatch, just 4 1/2 inches long, lands on General Sherman's huge flank. It pokes around in bark crevices for hiding insects but soon flies off, perhaps overwhelmed by the prospect of covering 17,000 square feet of bark on one tree.

At 8:45 a.m. a Douglas's squirrel calls out from General Sherman's crown and seeks out green cones. During the aver-

**General Sherman's sides stand out starkly against the starry field but the black void between them seems impossibly wide all the way up.**



age day it will cut and eat or store nine or 10 cones, the equivalent of about 3,500 cones in a year.

A big sequoia like General Sherman produces about 2,000 new cones each year, but they remain green for several years until cut. So inconsequential are sequoia seeds that it takes 90,000 to make a pound; their nutritional value is so low squirrels ignore them in favor of the soft tissue of the green cone scales. Many of General Sherman's potential progeny are released in the process although the likelihood of their survival to a mature tree is on the order of a million to one.

So far, General Sherman's day is just like any other sunny November day in the last 2,200 years. But now, at 9 a.m., the King of Kings is visited by an animal unknown to it in its first two millennia: The first two tourists have arrived. Like many others throughout the day, they cannot resist the gravitational attraction of General Sherman and, against posted requests to the contrary, hop the fence to pose with and touch greatness.

## Afternoon

Photosynthesis is now in full swing. The stomata are all open to take carbon dioxide into the scaly leaves, capillary action is sucking up water through the xylem, chlorophyll is absorbing sunlight to power their combination into energy-storing carbohydrate. But despite this knowledge, it is difficult to gaze up at a living organism that weighs as much as three 747's and imagine how it formed, literally, out of thin air, water, and light. It's difficult because we are short-lived humans; the road to truly understanding big trees is paved with time.

The sun is now warm enough to stir air currents and launch a few insects.

Biologists have catalogued nearly 200 species of insects and arachnids that spend a significant part of their life cycling on or in a giant sequoia. Although many burrow into the bark or suck juices from the needles, their effect is generally negligible and none have been known to directly kill a mature tree in the wild. At the peak of summer, General Sherman may harbor well over 100,000 arthropods and yet be little worse for the wear, thanks to its chemical defenses and bark that's up to 2 feet thick.

At 4:40 p.m. the last tourist snaps a photo and walks away shaking his head in disbelief. Even though it is a weekday in November, more than 100 tourists, representing at least five different languages, have visited General Sherman today. In the summer that number would be many thousands.

## Sunset

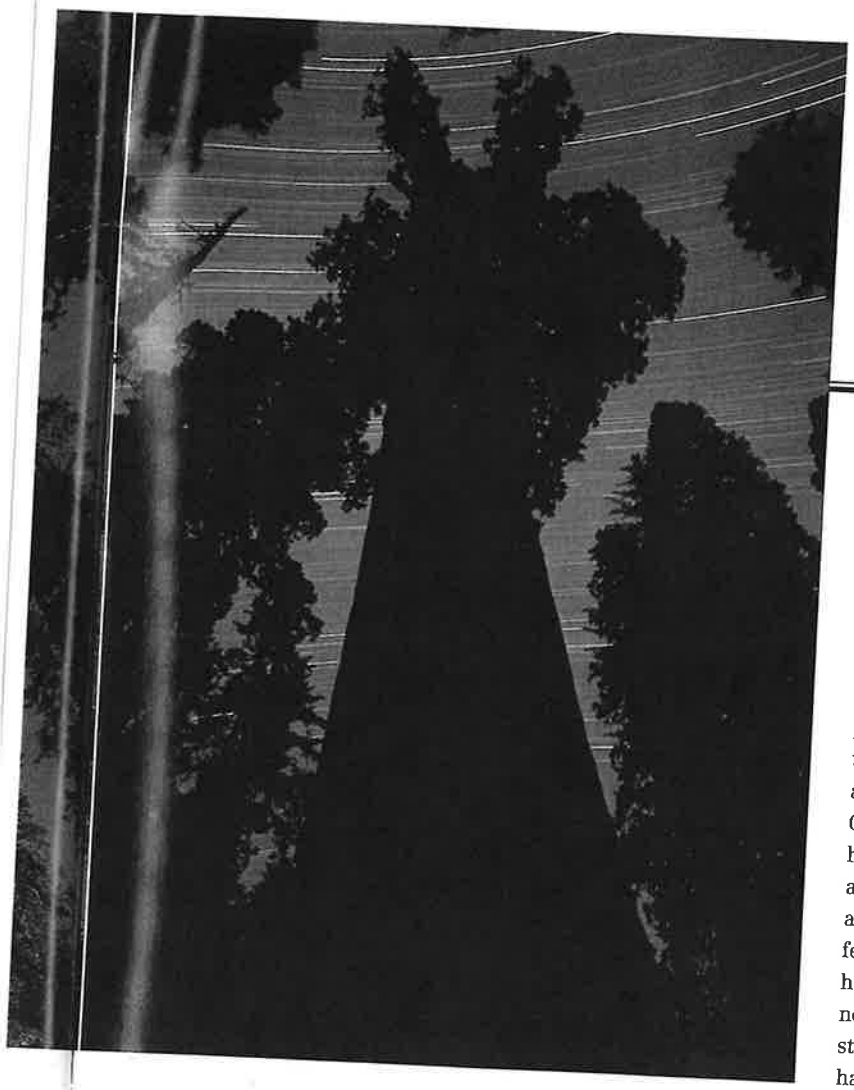
In the fading light General Sherman closes its stomata to reduce water loss and shuts down photosynthesis. Now, the starch produced in the chloroplasts is shunted through the phloem for maintenance and growth. At this point in its life, the biggest tree in the world increases its radius only about a millimeter each year.

Sudden changes in nature like tornadoes, earthquakes, and mass migrations make headlines, but most of the natural world, including big trees, is built by incremental changes magnified by time.

But now the General Sherman's size really comes into play. If all its bark were laid out in one flat continuous sheet, the resulting area could easily hold three professional basketball courts with room left over for the coaches and bench warmers. Beneath all that bark lies the cambium, the living, growing, wood-producing layer that has made General Sherman what it is today. The low and short-lived November sun probably resulted in little growth today, but on average, General Sherman grows a layer of wood equivalent to a 2x4 nearly 4 feet long every day. That makes it one of the fastest growing organisms in the world.

## Early Night

As darkness envelopes the tree, the color, texture, and other details are lost to my senses and the intimidating mass forces itself to the fore of my perception by the deeper darkness it creates against the night sky. General Sherman's sides stand out starkly against the starry field but the black void between them seems impossibly wide all the way up. A spot-



*General Sherman: amazing 3,800 tourists on an average day.*

ted owl calls out to state the obvious: this is an old-growth forest.

The temperature drops rapidly into the 30s with a touch of breeze as the cooler air moves downslope. Occasionally, a branch creaks in the forest. Otherwise, I sense no change other than the slow turning of the universe overhead.

In the daylight, General Sherman's bulk gives an impression of great longevity and permanence. But around 9:00 p.m. I look up past the crown and see that the Andromeda Galaxy, the farthest object visible to the naked eye, shines down on General Sherman's crown with 2 million-year-old light. Yes, someday, even General Sherman will fall. The only question is, what will be the cause?

Today, General Sherman and many other giant sequoias are protected in national parks but they live only in a narrow elevation belt in the Sierra Nevada. Above 7,500 feet it is too cold, below 5,000 feet it is too dry. This Sequoia Belt moves up or down the mountains according to long-term climate.

From pollen in soil layers we know that sequoias have only been in this elevation range for about 4,500 years, only a couple of sequoia lifetimes. Global warming will move this belt higher. The sequoia species may move upward with the change in climate, and we might have to help, but the big old trees will be left low and dry. Fortunately, at 6,900 feet, General Sherman grows near the high side of the Sequoia Belt, but will we someday have to install a sprinkler system?

## Midnight

With my headlamp I found a tiny spider and two mites, smaller than a period on this page, running about in spite of the cold. I've been running around, too, to keep warm. Otherwise, nothing else has happened in the last few hours, although I could speculate that a perching bird ruffled its feathers and small rodents have silently tended their business. Meanwhile, your not-so-stalwart photojournalist starts having serious thoughts about hot chocolate and a sleeping bag. Since little to nothing has happened in the last several hours, this reporter will unabashedly guess that for the next five hours little to nothing will continue to happen.

## Dawn

As far as I can tell, I was right. Andromeda and Pegasus have been replaced by Mars and Gemini, but all else is the same. One half hour later, the dawn twilight begins to chase away the darkest shadows and dimmest stars. Within another half-hour a muted color returns to General Sherman's bark. At 6:15 a.m., 15 minutes before official sunrise, the first bird, a brown creeper, calls out a tentative, high-pitched see. Fifteen minutes after sunrise, two American robins perch on the two highest spires of General Sherman, as irreverent to royalty as a fly buzzing around a king's head.

The past 24 hours of General Sherman's life are probably typical for a November day but they have not been average because so many things change with the seasons. On an average day, statistically speaking, General Sherman would sequester two pounds of carbon dioxide, grow four pounds of wood, six cones, and 1,200 seeds, amaze 3,800 tourists, and pose for thousands of pictures. But still, that would be just one day.

In its lifetime, General Sherman has experienced over 803,000 sunrises and sunsets, 28,700 full moons, 880 total lunar eclipses, six total solar eclipses, and survived about 90 fires and dozens of earthquakes. It has produced more than 3 million cones and 600 million seeds, fed over 1,000 generations of Douglas's squirrels, and harbored hundreds of millions of bugs.

By spending a day with General Sherman I have gotten to know it better in ways words and pictures cannot truly convey. Ultimately, there is no way to completely understand what time with a big tree means unless you experience it yourself. Do so, and I guarantee your enlightenment. General Sherman will oblige, I'm sure, but any big tree will do.

*Whit Bronaugh hails from Eugene, Oregon.*

# The Age of PINUS

All that's fit to print about what has been called the world's "most ecologically and economically significant tree genus."

Story and photos by Whit Bronaugh

**Much of human** history and prehistory is divided up into ages according to some great influence of the time: the Stone Age, the Bronze Age, the Age of Reason, the Space Age. But, to varying degrees, much of human experience in North America could also be called the Pine Age. Experts have hailed *Pinus* as the "most ecologically and economically significant tree genus in the world." To see why, let's follow a lineage of pines down through the ages.

*Pinus* is the largest genus of conifer with about 110 species, 40 of which are found in the U.S. For our tour of the Pine Age, we will choose the Pinus that knows time best: *Pinus longavea*, the Great Basin bristlecone pine, oldest of all living things.

Incredibly, we only need three generations of bristlecones to cover the entire 15,000-year history of humans and pines in North America. The oldest tree ever recorded—at over 4,900 years—was discovered by some naturalists high in the Snake Range of eastern Nevada around 1960. They named it Prometheus after the Greek god who created humans and gave them fire and knowledge. In keeping with the family tree of Greek gods, we will call this tree's grandmother Gaia, goddess of the Earth, and suppose that she lived from 15,000 to 10,000 years ago.

Early in Gaia's life the paths of humans and the pines of North America had yet to cross so the natural patterns were pristine. Within our relatively short human lifetimes it is easy to see forests as static and tied to geography: bristlecones live at timberline above 10,000 feet, jack pines are mainly found in Canada, Chihuahua and apache pines extend north into Arizona and New Mexico, and ponderosa is the signature pine of the Rocky Mountains.

But this is just a snapshot of a complex dance of trees that are constantly moving about and changing partners. The main choreographers of this dance are glacial advances and retreats, and the associated changes in climate. When the glaciers covered Canada and the northern states, jack pine grew in a narrow band south of Virginia and Kansas, Chihuahua and Apache pines had taken refuge in Mexico, and ponderosa pine was practically absent from the Rocky Mountains. Although Gaia sprouted when the glaciers were in retreat, she would have lived several thousand feet lower than where her grandson Prometheus would stand, and below the spruce-fir zone, not at timberline.

Having been pushed downslope, far south, and out onto the plains by the glaciers, pines and other trees now climbed higher and marched north as the ice melted. Many species made prodigious journeys, although how fast the trees chased the receding glaciers depended on species and geographic region.

**Incredibly, we need only three generations of bristlecones to cover the entire 15,000-year history of humans and pines in North America.**

*The king of the ancients: bristlecone pine, Inyo National Forest, White Mountains, California.*

Obviously, individual trees like Gaia are rooted in the ground for life and cannot move with the changing climate, but their seed progeny can. Pines migrate primarily via seed dispersal by wind or animals. The seeds of most of our pines are winged, like a maple seed, to slow their descent and so increase the distance any wind will carry them. Like airliners, the size of the wing is usually proportional to what it carries. Big-seeded species like longleaf, coulter, and sugar pine have the largest wings, while those of jack, pitch, and lodgepole pine are several times smaller. Although violent storms can scatter the seeds farther afield, most winged seeds will land relatively close to the parent and mainly on the downwind side, although their reach can be expanded by seed-hoarding squirrels, chipmunks, and mice.

This dispersal strategy works well in forgiving climates where the chances of germination are good. But what about very dry habitats where seeds would lie dormant on the ground for long periods

exposed to hungry critters? Pines that grow in the extreme environments of the dry lower slopes and the cold timberline heights of western mountains have given up on the vagaries of the wind in favor of the more dependable appetite of jays.

The pinyons of the Southwest (singleleaf, twoleaf, Parry, border, Mexican, and papershell) have wingless, heavy seeds full of fat and protein, which are eaten by western scrub, Steller's, and pinyon jays, and a related bird called Clark's nutcracker. Since the seeds are not abundant year round, the birds bury most of them for later retrieval. Inevitably, some of the cached seeds germinate before they are recovered.

The association between birds and pines is even closer with the high altitude limber, bristlecone, and whitebark pines. Very little germination of these trees takes place without a nutcracker first burying the seed, and nutcrackers eat little else. In a special throat pouch they can carry up to 100 seeds, which they disperse up to 13 miles from the parent tree. They may cache as many as 89,000 seeds in one year, an average of over 240 each day! The whitebark pine would never have evolved without these

**The hotspot of pine diversity is California with 19 species, more, even, than any country except Mexico.**

*Clockwise from top: Fire damages some pines, allows others to disperse seeds; Clark's nutcracker: pinyon lover; the fire-resistant extra-thick bark of the ponderosa, signature pine of the Rockies; Fallax pinyon pine cone.*

ANDREW ORLEMANN/ISTOCKPHOTO.COM

WING-CHI POON

birds. Long ago, Eurasian nutcrackers moved across the Bering region into North America, dispersing Asian stone pines along the way. Over time, the birds and trees coevolved into Clark's nutcracker and whitebark pine.

By the time Gaia passed on, around 10,000 years ago, one of her seeds, we will suppose, germinated higher up in the Snake Range after transport by a nutcracker. Let's call this bristlecone pine Iapetus, who was the son of Gaia, father of Prometheus and, appropriately enough, the god of mortal life span. During Iapetus' 5,000-year life, the climate continued to warm and the glaciers made their final retreat. Pine forests continued their dance according to climate change, but by now there was a new choreographer in town—*Homo sapiens*—and no doubt fires set by those early North Americans and their decendants affected the pines.

Lightning strikes the Earth eight million times each day, so pines have always had to deal with fire. In fact, many pines see fire as an invitation to colonize new ground. Jack, lodgepole, pitch, Table Mountain, pond, knobcone, and other pines have closed cones that remain on the tree for years; resin holds the cones tightly shut to protect the seeds from animals. A fire's heat melts the resin, opening the cones and allowing the seeds to flutter down onto freshly enriched soil now devoid of plant competitors.

Lightning fires allowed some pines to invade new lands, but the frequency of fires doubled after the arrival of Paleoindians. They set fires to improve game habitat, to herd them in hunts, to attack their enemies, and to favor certain plant foods. Among other changes, these fires caused jack pine to replace white spruce in Minnesota and southeastern pines to replace hardwoods in Florida.

While fires favor closed cone pines, other pines have evolved a variety of fire defenses. Sand, shortleaf, and pond pine have the ability to resprout from saplings and young trees. Jeffrey, sugar, and ponderosa pine have extra-thick bark and self-prune their lower branches to prevent fires from reaching their crowns. The longleaf pine grows in the Southeast where over half the wildfires in the U.S. occur. These are usually ground fires that the longleaf survives by living for five to 20 years in a bunchgrass form, growing in a clump with long roots that can more easily find water. Its fire-resistant needles protect the terminal bud while the root system stores carbohydrates until the tree can rapidly grow past the vulnerable sapling stage.

When the Iapetus bristlecone would have been 3,500 years old, around 6,500 years ago, glaciers and major climate change were no longer choreographers and, with relatively minor adjustments, the distribution of pines was much like that of today. The diversity of *Pinus* species in the U.S. is concentrated in the far West, the southern border states, and the Gulf and Atlantic coastal states. They are found almost wherever trees can grow, from foggy coasts to alpine timberline and southwestern desert margins to the subarctic Yukon. Many of our forests consist principally, if not entirely, of pine trees.

The hotspot of pine diversity is California with 19 species, more, even, than any country except Mexico. Walled in by high mountains, ocean, and desert, the Golden State has been fertile ground for the diversification of *Pinus*. Foxtail pine, gray pine, and Torrey pine are endemic—found only there—while Coulter, bishop, Monterey, Parry pinyon, knobcone, Washoe, Jeffrey, and sugar pine are near endemics with only small portions of their ranges leaking over into Oregon, Nevada, and/or Baja California.

Nevada is the next most diverse with 11 species, although the ranges of six of those barely enter the state. Oregon, Arizona, New Mexico, Texas, Georgia, and South Carolina all have 10 species. All other continental states have at least two species of pine except Iowa, which supports only eastern white pine, and Kansas, which has none.

With Iapetus presumably expiring around 3,000 B.C., we move on to his son, Prometheus, a real tree dispersed by a nutcracker even higher in the Snake Range. Prometheus germinated at the end of the Stone Age in Europe and the start of civilization in the Americas. It was over 400 years old when the Great Pyramid of Giza was completed. Its first millenium saw the erection of Stonehenge. By the time the Greeks first wrote about the god Prometheus, the tree Prometheus was already 2,300 years old. It passed its 3,000th birthday during the early days of the Roman Empire and was 4,500 around the time of Columbus.

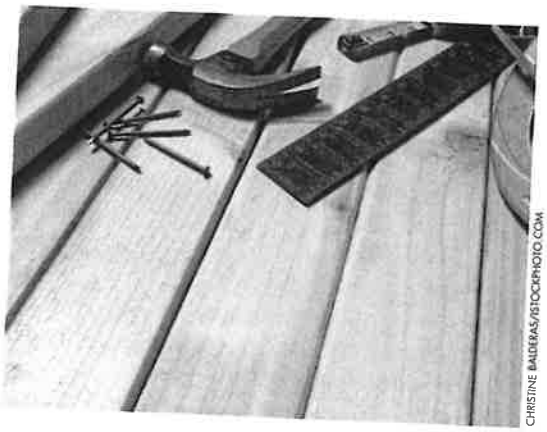
Up to this point, the long evolutionary history of Prometheus' pine relatives, with over 20 major glacial and climate cycles, had inured them to most changes wrought by the prehistoric human invaders from Asia. But environmental change took on a new meaning with the invasion of modern humans from Europe.

It began in the eastern white pine forests with the first sawmill in Maine in 1626 and quickly progressed until Bangor was the world's biggest exporter of pine with shipping destinations on four continents. In addition to its commercial importance, eastern white pine was instrumental in American history. Part of the motivation for the American Revolutionary War was the British law that reserved the best old-growth pines for masting

the Royal Navy. Eastern white pine was featured on the battle flag at Bunker Hill and on American Navy ships; today it proudly waves from the state flags of Maine and Vermont.

It wasn't long before the old-growth eastern white pine forests were gone. This caused passage of the first conservation laws in America, but legislation has not prevented the destruction of all but a tiny fraction of commercially viable virgin pine forest from coast to coast. The importance of pine logging across the country would eventually lead to 10 states adopting a pine as their state tree. While most of our pine species are in no danger of extinction, their normal life spans of hundreds to thousands of years have been truncated by logging rotations much shorter than a century.

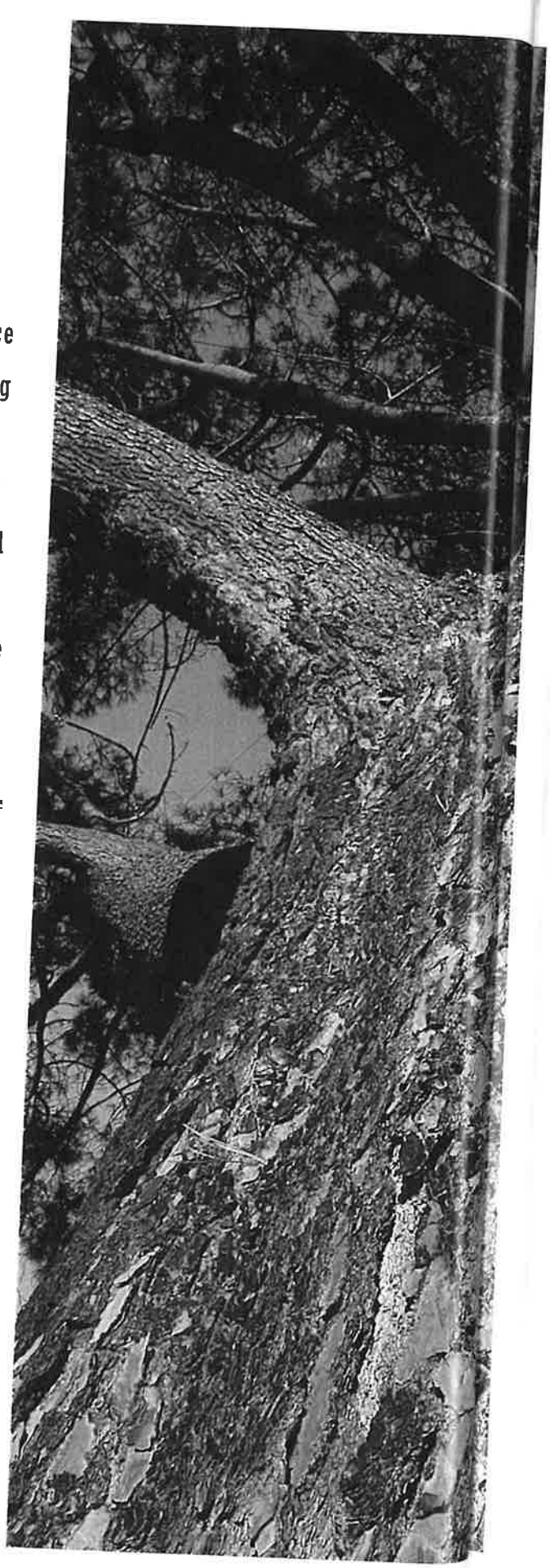
All this because pines are so amazingly useful. Humans have known and used pines ever since our hominid ancestors first saw them when they migrated to the Mediterranean over a million years ago. During Gaia's time, humans ate pine nuts, cooked over pine campfires, and manipulated pine forests for hunting. In the Old World, the "Iapetus period" saw the first construction of wood settlements, the extraction and use of turpentine, and the building of pine-planked ships.



CHRISTINE BALDEKAS/ISTOCKPHOTO.COM

**The importance of pine logging across the country would eventually lead to 10 states adopting a pine as their state tree.**

*Pine is a popular wood for flooring. At right, the former national champion torrey pine; that throne is now vacant.*



The uses of pines in Prometheus' time have been myriad and disparate: solid wood for construction, fences, furniture, toys, and musical instruments; wood fiber for paper, rayon, and explosives; charcoal for ore smelting and ink; living trees for erosion control, shelter belts, and landscaping; bark for basket weaving and food, seeds for flour, medicines, and lighting oil; resin for varnishes, adhesives, incense, and soap; and cut trees and other parts for Christmas and other religious and ceremonial uses.

And let's not forget how the study of the tree rings of ancient bristlecone pines like Prometheus has enriched our knowledge of the history of fire, climate, and wooden artifacts.

Ironically, this interest in history is what brought an end to the Prometheus tree itself. It took nearly all of recorded human history for this tree to grow its nearly 5,000 layers of wood. But on a summer