

2016 Montana Register of BIG TREES



Vintage engraving of a Ponderosa Pine, Montana's State Tree



AMERICAN FORESTS

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Hybrid Larch, Larix lyallii x occidentalis, Missoula County

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Message from the State Coordinator

The Montana Department of Natural Resources & Conservation (DNRC) maintains records on the largest trees in the state. These trees are aptly called “Big Trees” as they represent specimen trees that have been catalogued as the largest representatives of their particular species discovered thus far.

Montana’s forests are a delight for current and future generations. Our trees provide everything from wood products and medicines to life-giving oxygen, clean water and energy conservation. The Montana DNRC hosts this program in order to encourage the appreciation of Montana’s forests and trees. Exploring our landscape for these big specimen trees can put you in touch with our natural resources heritage.

The DNRC would like to recognize our partners in this program. The U.S. Forest Service and its regional Rocky Mountain Research Station, the American Tree Farm System, and the American Forests organization are all valuable partners. The state’s Register of Big Trees is a result of the work of many people’s efforts over many years.

As there is no funding to support this program, its success is largely dependent on continued volunteer efforts of people such as you. Some of the records in the registry are older and the trees are due for re-measure. We welcome volunteer efforts to help re-certify these older champions. You can also add to the Register of Big Trees by filling out the nomination form for any champion caliber specimens you find.

If you are interested in learning more about the program please visit the Big Trees website at: <http://dnrc.mt.gov/Forestry/Assistance/BigTree/default.asp> or email me at DRogers2@mt.gov.

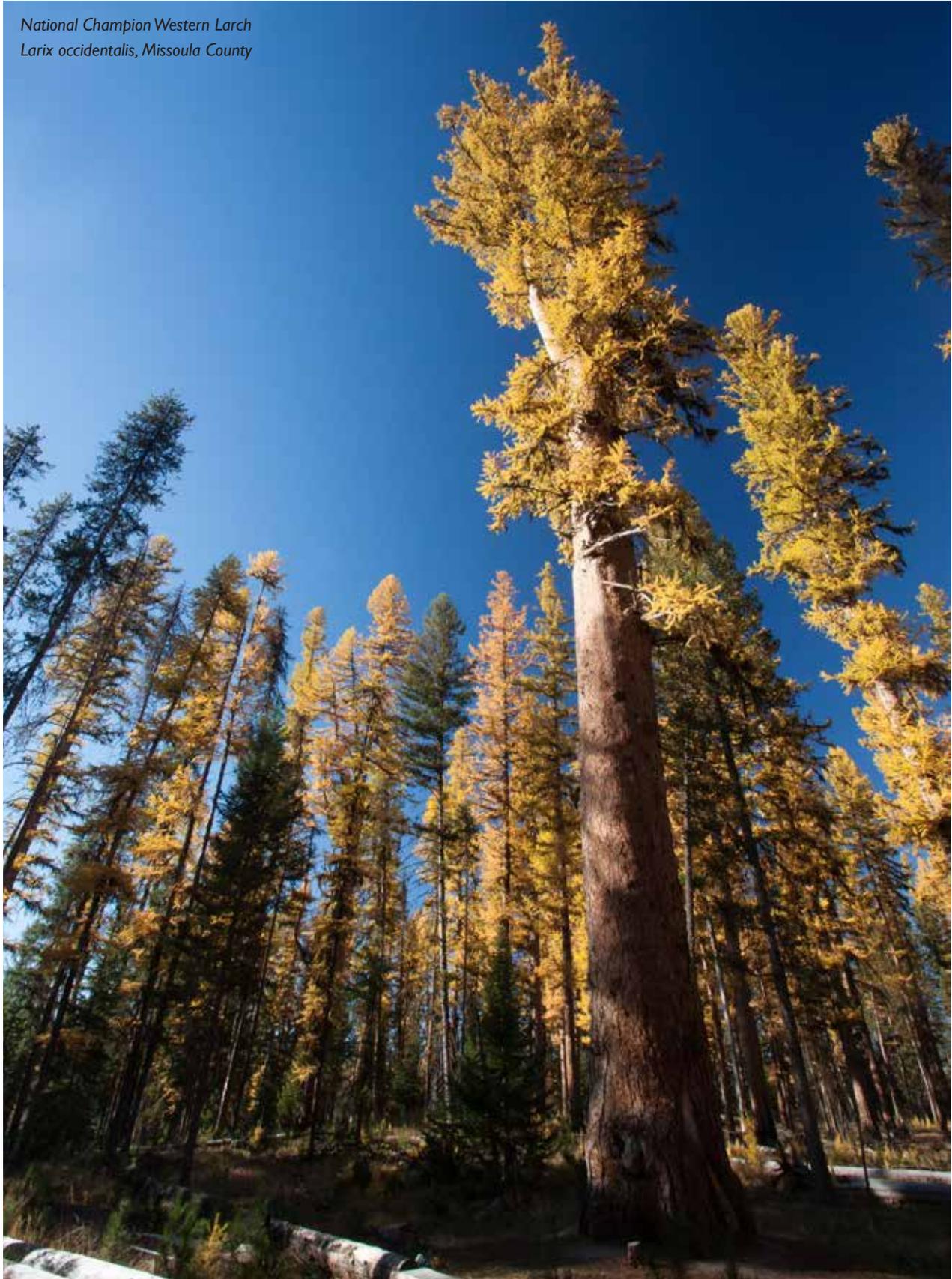
Good luck in your search!

Dan Rogers
Montana Big Trees Program Coordinator



AMERICAN FORESTS

National Champion Western Larch
Larix occidentalis, Missoula County



Big Tree Program Notes

“A Work in Progress” is a great way to think of the Montana Big Tree Register. As living entities, trees are always changing. A tree may earn a spot in the registry with strong growth or by being the first of its species submitted. A tree on the registry may fall out of the list due to limb loss, death, or discovery of a new champion. Publication of this registry represents a snapshot in time.

Champions are determined by points. Three dimensions of the tree are measured and points are calculated as follows: Circumference (inches) + Height (feet) + $\frac{1}{4}$ Average Crown Spread (feet)= Total Points. In the event two or more trees of a species have a score within 15 points of each other they are considered co-champions. An asterisk (*) appearing in the Scientific Name column of an entry indicates the co-champion status.

In addition to the point total for the species this register also lists the National Champion points total in parenthesis. So now, you can see how the Montana specimen measures up on the national scale. Currently, six of the Montana Champions are also reigning National Champion Big Trees. These champions are highlighted in the register.



Montana’s register of Big Trees includes a few subcategories. The largest distinction drawn is if a species is recognized as a Montana Native or a Non-Native species. You will notice in subsequent pages that the registry contains two separate lists based on this classification. Native trees are wild and grew naturally or spontaneously in the undisturbed forest vegetation before the arrival of Columbus or other Europeans. Non-native trees species have been brought into Montana.

Further, non-native trees may be recognized as being Naturalized. Naturalized trees represent non-native specimens that have been found self propagating or create viable seeds that have successfully germinated under normal conditions. Trees identified as Naturalized are designated in the registry by a Δ symbol.

The third distinction made in the registry concerns the actual location and growing conditions of the tree. Each tree is designated as either Urban or Wildland. In some instances both a Wildland and Urban specimen are listed as co-champions of the species, even though the point totals do not fall within the stated 15 point rule. This is due to the recognition that in the arid and semi-arid West most trees occurring in a natural, wildland setting will not reach the sizes the same tree in a irrigated, fertilized, or otherwise human influenced, urban environment may reach.

How to Read the Register

Points
top # = tree score
(#) = national champ score

Diameter at breast height
(4.5' from ground) in inches
Circumference in inches
Height in feet

Crown spread in feet
By County

Year when tree was
measured; if two years
are listed the second is
time of re-measurement

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
ASH										
Green	<i>Fraxinus pennsylvanica</i> *	U	236 (395)	48	151	70	61	Ravalli	1998	Mark Lewing
Green	<i>Fraxinus pennsylvanica</i> *	W	174 (395)	41	128	39	29	Prairie	2000	Peter Lesica

* Indicates co-champions Scores here are NOT within 15 points, but because one is Urban and one Wildland these two are co-champions.



Rocky Mountain Juniper, *Juniperus scopulorum*,
Missoula County

Montana Big Tree Program - Nomination Form

TREE

Common name:

Scientific name:

Date measured:

Condition of tree: Excellent Good Fair Poor

Required Photo included? Yes No

Date Photo Taken:

Permission to Use Photo in Publications and/or on Website? Yes No

MEASUREMENTS (see instructions)

(A) Circumference at **4.5 ft.** (in inches):

(B) Total height (in feet):

(C) Average crown spread (to nearest foot):

OWNER

Private, Owner's name:

Address:

Public, Agency:

National Forest/BLM Office:

Ranger District/Admin. Unit:

NOMINATION

Nominated by:

Address:

Verified by:

Address:

POINTS

Circumference (inches) + Height (feet) + $\frac{1}{4}$ Average Crown Spread (feet) = Total Points
from above: $A+B+(.25 \times C) = \text{Total Points}$

Calculated TOTAL POINTS:

LOCATION

Setting: Wildland Urban

County:

Township, Range, Section:

GPS coordinates, if available (see instructions):

DIRECTIONS & MAP

Give directions to the tree and, attach a photocopy of a USGS Topo map with location marked. If a topo map is not available, sketch a map below showing the location of tree, road names, and prominent features (e.g., streams, trails, houses).

ADDITIONAL COMMENTS: (on condition, setting, history, or other)

Mail this nomination form to: Montana Big Tree Program, c/o Dan Rogers,
MT DNRC Forestry Assistance Bureau, 2705 Spurgin Road, Missoula, MT 59804

HOW TO MEASURE A TREE FOR NOMINATION

(updated based on rules listed in The National Register of Big Trees 2000, page 3)

DEFINITION OF A TREE

A tree is defined as a woody plant having one erect perennial stem or trunk at least 9½ inches in circumference (3 inches in diameter) at 4½ 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.

Trees included in the National Register of Big Trees include native or naturalized trees in the United States, including Alaska but not Hawaii. Hybrids and minor varieties are excluded from the National Register, although one is listed on the Montana Register. 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.

* 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 (Δ).

MEASURING CIRCUMFERENCE

Measure circumference of the tree in inches at 4½ feet above the ground. If there is a fork at this point (at 4½ feet), measure the smallest circumference below the fork. If the tree branches below 4½ feet, measure the largest single stem at 4½ feet above the ground.

MEASURING TREE HEIGHT

The height of the tree, measured to the nearest foot, is the vertical distance between two level parallel lines when one passes through the center of the base of the tree and another through the top-most point of the tree. If the tree leans, this top-most point may not be directly over the base of the tree. For this reason, you must stand out from the tree far enough so the top-most point can be seen from at least two directions. Tree heights can be measured with instruments such as a clinometer, Abney hand level, hypsometer, survey laser, or a transit. If you have trouble with this measurement, ask a local forester or surveyor for help.

MEASURING THE CROWN SPREAD

Determine the widest and narrowest spread of the crown that line up through the trunk of the tree. At the widest point, hold the top of a plumb bob higher than your head and sight upward along the string at the crown edge overhead. Move toward or away from the tree trunk until you are directly under the edge of the crown. Mark this point on the ground with a stake. Next, mark another point on the opposite side of the crown. Measure the horizontal distance between the stakes. Now similarly measure the smallest diameter of the crown passing through the center of the trunk. If available, you can also use a survey laser for this measurement. Add the two measurements together, and divide the sum by two. Round this figure to the nearest foot to obtain the average crown spread to report.

GPS COORDINATES

If providing GPS coordinates, you must also include information on the projection, datum, spheroid, zone, and units as appropriate.

Outstanding Champions

$$\text{Points} = \text{Circumference (inches)} + \text{Height (feet)} + \frac{1}{4} \text{ Average Crown Spread (feet)}$$

 Signifies National Champion

The Big Ten

The biggest of the big, these trees are high scoring through combinations of large circumference and great heights. Three of Montana's six National Champion Trees appear in this list.

Points	Common Name	Scientific Name	County Location
566	Western Redcedar	<i>Thuja plicata</i>	Lincoln
552	Western Redcedar	<i>Thuja plicata</i>	Lincoln
 530	Plains Cottonwood	<i>Populus deltoides ssp. monilifera</i>	Ravalli
 461	Crack Willow	<i>Salix fragilis</i>	Ravalli
456	Ponderosa Pine	<i>Pinus ponderosa var. ponderosa</i>	Mineral
432	White Poplar	<i>Populus alba</i>	Gallatin
 426	Western Larch	<i>Larix occidentalis</i>	Missoula
420	White Willow	<i>Salix alba</i>	Ravalli
419	Western Larch	<i>Larix occidentalis</i>	Lincoln
417	Western White Pine	<i>Pinus monticola</i>	Lincoln

The Small Ten

Not every tree has the potential to grow to the towering heights of the Redcedar or the massive circumference of the Cottonwoods. The following is a list of diminutive champs.

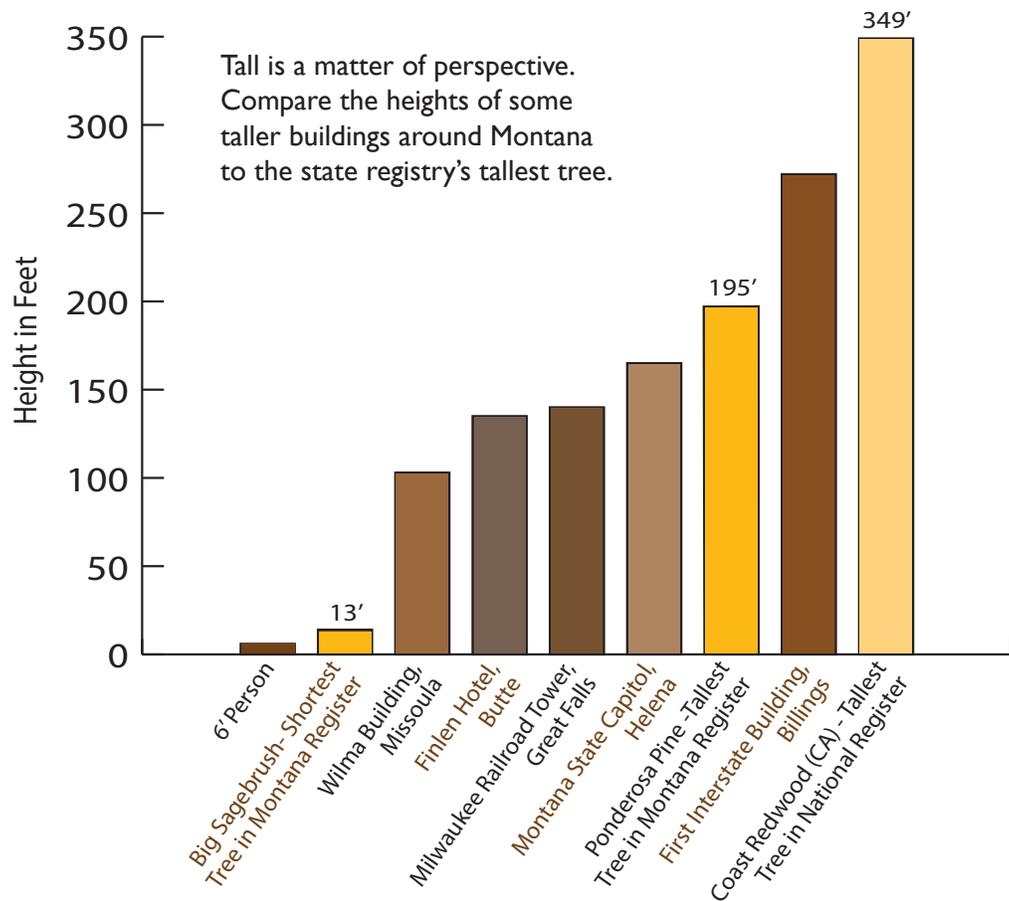
Points	Common Name	Scientific Name	County Location
33	Bristly Locust	<i>Robinia hispida</i>	Lake
33	Big Sagebrush	<i>Artemesia tridentata</i>	Beaverhead
36	Greene Mountain-Ash	<i>Sorbus scopulina</i>	Ravalli
37	American Mountain-Ash	<i>Sorbus americana</i>	Park
39	Green or Sitka Alder	<i>Alnus viridus ssp sinuata</i>	Flathead
40	European Buckthorn	<i>Rhamnus cathartica</i>	Lake
41	Rocky Mountain Bristlecone Pine	<i>Pinus aristata</i>	Yellowstone
41	Silver Buffaloberry	<i>Shepherdia argentea</i>	Sweet Grass
43	Green or Sitka Alder	<i>Alnus viridus ssp sinuata</i>	Flathead
46	Silver Buffaloberry	<i>Shepherdia argentea</i>	Madison

The Tall Ten

A tree is defined as a woody plant at least 13 feet in height. These champs have no trouble meeting the height standard. They are the tallest measured specimens in the state.

Height (ft)	Common Name	Scientific Name	County Location
195	Ponderosa Pine	<i>Pinus ponderosa</i> var. <i>scopulorum</i>	Mineral
181	Western White Pine	<i>Pinus monticola</i>	Lincoln
178	Grand Fir	<i>Abies grandis</i>	Lincoln
178	Rocky Mountain Douglas-Fir	<i>Pseudotsuga menziesii</i> var. <i>glauca</i>	Sanders
177	Western Larch	<i>Larix occidentalis</i>	Lincoln
175	Western Hemlock	<i>Tsuga heterophylla</i>	Lincoln
175	Western Redcedar	<i>Thuja plicata</i>	Lincoln
174	Western Hemlock	<i>Tsuga heterophylla</i>	Lincoln
173	Engelmann Spruce	<i>Picea engelmannii</i>	Flathead
172	Western White Pine	<i>Pinus monticola</i>	Lake

How Tall is Tall?



Story of a Champion: Plains Cottonwood

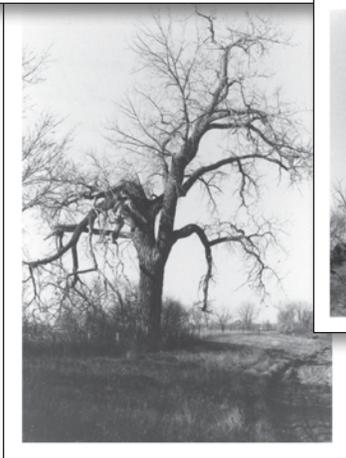
The Plains Cottonwood, *Populus deltoides*, is a fast growing species that can reach large volumes quickly, and Montana grows them very well. Found in areas of moist, low ground, it is a species that thrives across the state, east and west. This champion story starts on the extreme eastern edge of the state. The oldest record in the Montana Registry for the Plains Cottonwood was a 308 point tree in Wibaux County. Measured in February of 1980, the tree located on the property of the town of Wibaux's Christian Fundamentalist Church was recognized as the first champion, but it faced immediate competition.

308



A trio of trees, all in Richland County near Sidney, were measured and submitted to the registry in 1980. All three would qualify as co-champions under the current rule of the 15 point range.

The Wibaux tree was officially displaced as champion by a 402 point tree owned by Mel Bakken, also in the Sidney area. Measured in July 1981 at 25 feet in circumference and 80' tall, Mr. Bakken remembered the tree as 4-5 feet tall in 1911, a few years before he purchased the land.



The championship moved to western Montana in 1987 to a specimen on the Daly Mansion property in Hamilton in Ravalli County. The Daly tree almost as large as in circumference as the Bakken tree at 24 feet, measured 40 feet taller, at 120 feet to earn a total of 433 points.

The Sidney Area Challengers

Top: The Propp Farms Tree, 307 points, 74 feet tall and in excellent condition

Lower Left: The O'Brien Tree, 300 points, split by wind a few months before measurement

Right: The Dynneson Tree, 300 points, likely namesake of Lone Tree Creek (man standing at base)

Sidney Herald, Sidney, MT, Wed., Jan. 27, 1982-5

It's official: County cottonwood is the state champ

By KATHLEEN SCHULTZ
Staff Writer

There's a little friendly rivalry in this state that's going practically unnoticed by a major section of the Montana citizenry.

The battle cry of the initiated goes something like this: "Our *Populus deltoides* are bigger than your *Populus deltoides*!"

"And here in Richland County, it's true. Our *Populus deltoides* really are bigger. Well, one of them is, anyway. As a matter of fact, it's the new state champion.

The *Populus deltoides*, a.k.a. the Plains cottonwood tree, in question belongs to Sidney's Mel Bakken.

The man responsible for calling the cottonwood to the attention of the Montana Tree Farm Committee is Myron Saylor, local Soil and Conservation Services agent and self-record of nearly 200 species of champion trees not only as a source of entertainment for tree lovers, but also as a means of studying environmental conditions beneficial to the development of large trees.

Any tree that is a native of Montana can qualify for the state registry and anyone can send in a nomination, Saylor said.

The Christian Fundamental Church was measured at 11 feet in circumference, 70 feet tall with a crown spread.

Saylor has submitted cottonwoods to the co-challengers, another named registered trees.

One of them was the cottonwood, recently harvested by the people of Crane's with the Lower Yellowstone Electric Association.

The REA had intended to cut the tree down to make room for a power line. Crane refused.

The Bakken cottonwood measured 25 feet in circumference and 80 feet tall with a crown spread of 120 feet.

402



The Bakken Tree, Sidney area (person in lower right corner)
Photo Credit: USDA Soil Conservation Service, 1981

433

Then in 1999 two large trees in the Corvallis area of Ravalli County were measured for the registry. A 536 point tree on the old Quast Homestead owned by Wallace Weber became the new champion. The second tree located on the Huls Dairy property scored an impressive 506 points, just a little short of the mark.

Trunk view of the 433 point Daly Mansion tree in Hamilton



In 2004 a wildland Plains Cottonwood champ was added to the registry as co-champion. Located in central Montana's Sweetgrass County, this 288 point tree is thought to be one of the oldest trees on the Yellowstone River plain. (See Notes page concerning urban-wildland and co-champion rules.)

Upon re-measure in 2009 the Huls Dairy tree, originally nominated in 1999, was found to have gained eight feet of height and 17 inches in circumference. Now scoring 530 points, it earned co-champion status. In 2010 the Huls Dairy tree became outright Montana urban champ when the co-champion Quast Homestead tree was cut down. The Huls Dairy tree was further recognized as the National Champ Plains Cottonwood in 2012 on the death of the reigning tree in Colorado. The National Champ continues to face competition; the strongest contenders being within Montana.



Huls Dairy Tree, Corvallis
National Champ

530

In 2012 two new nominations breaking the 500 point barrier were found. One a 504 point tree in Billings owned by Harley O'Donnell. The second a 507 point tree in Lake County on Confederated Salish and Kootenai Tribal land. Edgar and Carl Sirucek lived on the land around this near-champion as kids before World War II, and the cable from their swing still hangs in the branches. Although these two trees fall just short of co-champion status in Montana, they both outscore nominated trees from other states. A Colorado tree at 466 points and a Iowa tree at 430 points are the runners-up nationally. One thing these massive trees show, is that Montana grows Plains Cottonwoods very well.

Recent Challengers

Top: O'Donnell Tree, 504 points, Billings

Bottom: Sirucek Tree, 507 points, Ronan area



Box Elder, *Acer negundo*, Ravalli County



Native Trees

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
ALDER										
Green or Sitka	<i>Alnus viridus ssp. sinuata*</i>	W	43 (none)	5	15	26	6	Flathead	2015	Mark Lewing
Green or Sitka	<i>Alnus viridus ssp. sinuata*</i>	W	39 (none)	6	18	19	10	Flathead	2015	Mark Lewing
Mountain or Thinleaf	<i>Alnus incana ssp. tenuifolia*</i>	W	95 (175)	12	39	50	24	Ravalli	2013	Mark Lewing
Mountain or Thinleaf	<i>Alnus incana ssp. tenuifolia*</i>	W	91 (175)	12	38	48	20	Ravalli	2011	Mark Lewing
Mountain or Thinleaf	<i>Alnus incana ssp. tenuifolia*</i>	W	80 (175)	11	35	42	12	Ravalli	2011	Mark Lewing
Red	<i>Alnus rubra</i>	W	180 (none)	35	111	59	38	Sanders	1999, 2013	Dennis Nicholls
ASH										
Green	<i>Fraxinus pennsylvanica*</i>	U	251 (395)	51	159	79	53	Ravalli	1998, 2012	Mark Lewing
Green	<i>Fraxinus pennsylvanica*</i>	W	176 (395)	41	128	41	29	Prairie	2000, 2013	Peter Lesica
ASPEN										
Quaking	<i>Populus tremuloides*</i>	W	245 (291)	38	118	119	33	Sanders	2014	Mark Lewing
Quaking	<i>Populus tremuloides*</i>	W	243 (291)	55	172	60	45	Lewis & Clark	1993, 2009	D.J. Bakken, Jim Greene
Quaking	<i>Populus tremuloides*</i>	W	238 (291)	37	116	115	29	Sanders	2014	Mark Lewing
Quaking	<i>Populus tremuloides*</i>	W	231 (291)	37	116	103	46	Sanders	2012	Mark Lewing, Ole Leivestad
Quaking	<i>Populus tremuloides*</i>	W	230 (291)	38	120	98	50	Sanders	2009	Drake Barton, Kathy Lloyd
BIRCH										
Paper	<i>Betula papyrifera var. papyrifera</i>	W	208 (333)	34	106	90	48	Sanders	1996, 2012	Dennis Nicholls
Water	<i>Betula occidentalis*</i>	W	150 (157)	18	59	82	36	Ravalli	2010	Mark Lewing
Water	<i>Betula occidentalis*</i>	W	145 (157)	16	53	82	38	Ravalli	2010	Mark Lewing
BOXELDER										
	<i>Acer negundo</i>	U	276 (312)	66	208	54	57	Ravalli	2001, 2012	Mark Lewing
BUCKTHORN										
Pursh's or Cascara	<i>Rhamnus (Frangula) purshiana</i>	W	63 (165)	7	21	35	29	Lincoln	2003, 2008	Alan Lane
BUFFALOBERRY										
Silver	<i>Shepherdia argentea*</i>	W	56 (138)	11	34	17	18	Madison	2013	Mark Lewing
Silver	<i>Shepherdia argentea*</i>	W	46 (138)	9	28	15	11	Madison	2013	Mark Lewing
Silver	<i>Shepherdia argentea*</i>	W	41 (138)	6	20	18	12	Sweet Grass	2004, 2013	Martin Flanagan

Native Trees

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
CHERRY										
Black Chokecherry	<i>Prunus virginiana</i> var. <i>melanocarpa</i> *	U	111 (107)	12	39	66	22	Flathead	2015	Mark Lewing, Trever, Joshua & Trystan Mertins
 Black Chokecherry	<i>Prunus virginiana</i> var. <i>melanocarpa</i> *	U	107 (107)	17	54	41	48	Powell	1991, 2012	Jim Anderson
Black Chokecherry	<i>Prunus virginiana</i> var. <i>melanocarpa</i> *	W	70 (107)	11	34	30	23	Flathead	2013	Mark Lewing, Pamela Lewing, Dave Jones
COTTONWOOD										
Black	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i> *	W	390 (525)	88	279	96	61	Ravalli	2010	Mark Lewing, Tom Ruffatto
Black	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i> *	W	383 (525)	73	230	138	59	Lincoln	1980, 2012	Russ Hudson
Lanceleaf	<i>Populus acuminata</i>	W	234 (none)	43	135	84	60	Sweet Grass	2004, 2010	Martin Flanagan
Narrowleaf	<i>Populus angustifolia</i> *	W	305 (312)	62	195	92	70	Sweet Grass	2014	Martin Flanagan, Mark Lewing
Narrowleaf	<i>Populus angustifolia</i> *	U	263 (312)	53	166	78	64	Carbon	2011	Martin Flanagan
 Plains	<i>Populus deltoides</i> ssp. <i>monilifera</i> *	U	530 (530)	124	394	112	94	Ravalli	1999, 2009	Mark Lewing, Pamela Lewing
Plains	<i>Populus deltoides</i> ssp. <i>monilifera</i> *	W	282 (530)	56	176	88	71	Sweet Grass	2004, 2014	Martin Flanagan
DOUGLAS-FIR										
 Rocky Mountain	<i>Pseudotsuga menziesii</i> var. <i>glauca</i>	W	414 (414)	71	223	178	48	Sanders	1996, 2012	Lynette Kelly, Jess Evans, Ben Isenburg
ELDER										
Blue	<i>Sambucus cerulea</i> *	W	77 (176)	13	41	27	35	Ravalli	2011	Mark Lewing
Blue	<i>Sambucus cerulea</i> *	W	66 (176)	12	39	22	20	Missoula	2015	Mark Lewing
ELM										
American	<i>Ulmus americana</i> *	U	300 (455)	65	205	74	83	Ravalli	2001, 2012	Mark Lewing
American	<i>Ulmus americana</i> *	U	297 (455)	59	186	95	65	Ravalli	2001, 2012	Mark Lewing
American	<i>Ulmus americana</i> *	W	131 (455)	31	96	25	39	Wibaux	2014	Mark Lewing, Duane Hanson
FIR										
Grand	<i>Abies grandis</i>	W	350 (499)	53	165	178	27	Lincoln	2008	Alan Lane, Mike Keller, Larry Coryell
Subalpine	<i>Abies lasiocarpa</i> var. <i>lasiocarpa</i> *	W	290 (389)	41	129	155	24	Lincoln	2008	Kendra Kitchen, Marge Juris, Alan Lane
Subalpine	<i>Abies lasiocarpa</i> var. <i>lasiocarpa</i> *	U	195 (389)	30	94	96	20	Ravalli	2013	Mark Lewing, Trever Mertins

Native Trees

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
HAWTHORN										
Black	<i>Crataegus douglasii</i>	W	95 (140)	13	41	35	38	Missoula	2006	Bill Vaughn
Castlegar	<i>Crataegus castlegarensis</i>	W	106 (none)	18	57	42	26	Flathead	2015	Mark Lewing
Fleshy	<i>Crataegus succulenta</i>	W	65 (none)	8	26	32	26	Flathead	2013	Mark Lewing, Pamela Lewing
HEMLOCK										
Mountain	<i>Tsuga mertensiana*</i>	W	309 (428)	48	152	150	27	Sanders	1999, 2013	Doug Shaner
Mountain	<i>Tsuga mertensiana*</i>	W	307 (428)	48	151	145	43	Sanders	2009	Doug Shaner
Mountain	<i>Tsuga mertensiana*</i>	W	296 (428)	48	152	134	41	Sanders	2009	Doug Shaner
Western	<i>Tsuga heterophylla*</i>	W	359 (527)	57	178	174	28	Lincoln	2008	Alan Lane, Mike Keller
Western	<i>Tsuga heterophylla*</i>	W	354 (527)	54	170	175	36	Lincoln	1998, 2008	Larry Coryell, Alan Lane
JUNIPER										
Rocky Mountain	<i>Juniperus scopulorum*</i>	W	195 (331)	41	130	55	39	Lake	2013	Mark Lewing
Rocky Mountain	<i>Juniperus scopulorum*</i>	U	148 (331)	28	88	51	36	Missoula	1994, 2012	Vick Applegate
LARCH										
Alpine	<i>Larix lyallii*</i>	W	261 (387)	57	178	78	43	Ravalli	1996, 2012	Steve Arno
Alpine	<i>Larix lyallii*</i>	W	247 (387)	43	136	91	39	Ravalli	2012	Mark Lewing
Hybrid	<i>Larix lyallii x occidentalis</i>	W	261 (none)	44	140	110	44	Missoula	2009	Steve Arno, Clint Carlson
Western	<i>Larix occidentalis*</i>	W	426 (426)	84	264	153	34	Missoula	1995, 2011	Helen Smith, Micha Krebs
Western	<i>Larix occidentalis*</i>	W	419 (426)	74	233	177	36	Lincoln	1979, 2012	E.L. Yahvah
MAHOGANY										
Mountain	<i>Cercocarpus montanus</i>	W	64 (none)	13	40	16	33	Ravalli	2013	Mark Lewing
MAPLE										
Rocky Mountain	<i>Acer glabrum*</i>	W	90 (194)	11	34	50	25	Lincoln	2003, 2013	Martin Flanagan
Rocky Mountain	<i>Acer glabrum*</i>	W	79 (194)	9	29	43	27	Lincoln	2013	Mark Lewing
MOUNTAIN-ASH										
Greene	<i>Sorbus scopulina</i>	W	36 (43)	3	10	23	12	Ravalli	2015	Mark Lewing

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Native Trees

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
OAK										
Bur	<i>Quercus macrocarpa</i>	ΔU	284 (426)	52	163	103	70	Ravalli	2013	Mark Lewing, John Koch, Krysta Mertins, Lindsey Lewing
PINE										
Limber	<i>Pinus flexilis</i>	W	268 (349)	72	225	34	37	Silver Bow	1992, 2013	Peter Lesica
Lodgepole	<i>Pinus contorta var. latifolia*</i>	W	236 (298)	35	110	121	21	Ravalli	2013	Mark Lewing, Jason Stewart, Trevor Mertins
Lodgepole	<i>Pinus contorta var. latifolia*</i>	W	225 (298)	36	113	100	47	Missoula	2009	Steve Thompson
Ponderosa	<i>Pinus ponderosa var. scopulorum*</i>	W	456 (none)	78	246	195	61	Mineral	1982, 2005, 2015	Donald M. Wood, Don Campbell
Ponderosa	<i>Pinus ponderosa var. scopulorum*</i>	U	330 (none)	68	212	105	51	Ravalli	2013	Mark Lewing
Western White	<i>Pinus monticola*</i>	W	417 (455)	74	231	181	19	Lincoln	1996, 2008	Alan Lane
Whitebark	<i>Pinus albicaulis</i>	W	287 (340)	57	180	94	52	Flathead	1986, 2013	Tom Hope
REDCEDAR										
Western	<i>Thuja plicata*</i>	W	566 (931)	129	406	150	39	Lincoln	1981, 2013	Bruce Miede
Western	<i>Thuja plicata*</i>	W	552 (931)	118	369	175	30	Lincoln	1998, 2012	Alan Lane
SAGEBRUSH										
Big	<i>Artemisia tridentata</i>	W	33 (49)	5	17	13	11	Beaver-head	2012	Mark Lewing
SERVICEBERRY										
Western	<i>Amelanchier alnifolia</i>	W	49 (138)	5	14	30	19	Lincoln	2003, 2013	Martin Flanagan
SPRUCE										
Engelmann	<i>Picea engelmannii</i>	W	409 (486)	72	227	173	35	Flathead	2014	Mark Lewing, Brandon Mertins
White	<i>Picea glauca</i>	W	287 (287)	60	191	91	20	Lincoln	2009	Mark Lewing
WILLOW										
Bebb	<i>Salix bebbiana</i>	W	94 (190)	15	48	40	24	Ravalli	2011	Mark Lewing
Peachleaf	<i>Salix amygdaloides</i>	W	176 (167)	35	110	50	64	Sweet Grass	2004	Martin Flanagan
Sandbar	<i>Salix interior</i>	W	59 (66)	9	29	24	24	Ravalli	2011	Mark Lewing
Scouler	<i>Salix scouler</i>	W	115 (229)	26	82	26	27	Ravalli	2011	Mark Lewing
Whiplash or Greenleaf	<i>Salix lasiandra var. caudata</i>	W	124 (none)	22	69	45	39	Sweet Grass	2014	Martin Flanagan, Mark Lewing

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Native Trees

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
YEW										
Pacific	<i>Taxus brevifolia*</i>	W	93 (242)	16	49	37	26	Lake	1992, 2012	Jerry and Caroline Bernier
Pacific	<i>Taxus brevifolia*</i>	W	85 (242)	17	52	26	28	Lake	1992, 2012	Jerry and Caroline Bernier



Mark Lewing with National Champion Douglas-Fir, *Pseudotsuga menziesii* var. *glauca*, Sanders County

Non-Native Trees

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
BIRCH										
Weeping	<i>Betula pendula var. daecarlica</i>	U	199 (none)	43	134	54	44	Ravalli	2014	Mark Lewing, Pamela Lewing
BUCKEYE										
Ohio	<i>Aesculus galbra*</i>	U	97 (275)	19	61	29	26	Missoula	2014	Huck Woolsey, Finn Woolsey, Mike DeGrandpre
Ohio	<i>Aesculus galbra*</i>	U	89 (275)	17	52	31	25	Ravalli	2013	Mark Lewing
BUCKTHORN										
European	<i>Rhamnus cathartica</i>	ΔW	40 (254)	5	17	18	18	Lake	2013	Mark Lewing
BUTTERNUT										
	<i>Juglans cinerea</i>	U	110 (355)	17	55	39	65	Ravalli	2015	Jamie Kirby, Paula Short
CATALPA										
Northern	<i>Catalpa speciosa</i>	U	195 (401)	40	126	59	40	Yellow- stone	2012	Steve Riley
ELM										
Siberian	<i>Ulmus pumila*</i>	ΔU	287 (389)	57	183	88	63	Ravalli	2010	Mark Lewing
Siberian	<i>Ulmus pumila*</i>	ΔW	202 (389)	36	114	70	71	Missoula	2011	Mark Lewing, Peter Lesica
FIR										
White	<i>Abies concolor</i>	U	172 (359)	33	103	61	31	Ravalli	2014	Mark Lewing
GINKGO										
	<i>Ginkgo biloba</i>	U	108 (none)	19	59	40	38	Yellow- stone	2013	Mike Garvey
HACKBERRY										
Common	<i>Celtis occidentalis</i>	U	177 (378)	30	93	70	54	Yellow- stone	2012	Mike Garvey, Fred Bicha
HONEYLOCUST										
Thornless Common	<i>Gleditsia triacanthos var. inermis</i>	U	178 (384)	29	90	74	55	Yellow- stone	2012	Mike Garvey, Fred Bicha
HORSECHESTNUT										
	<i>Aesculus hippocastanum</i>	U	244 (none)	54	169	62	52	Ravalli	2014	Mark Lewing
LILAC										
Common	<i>Syringa vulgaris</i>	U	54 (none)	9	28	23	10	Ravalli	2013	Mark Lewing
Japanese Tree	<i>Syringa reticulata</i>	U	122 (none)	26	83	32	29	Missoula	2014	Huck Woolsey, Finn Woolsey, Bridget Tinsley, Jamie Kirby, Dennis Bragg

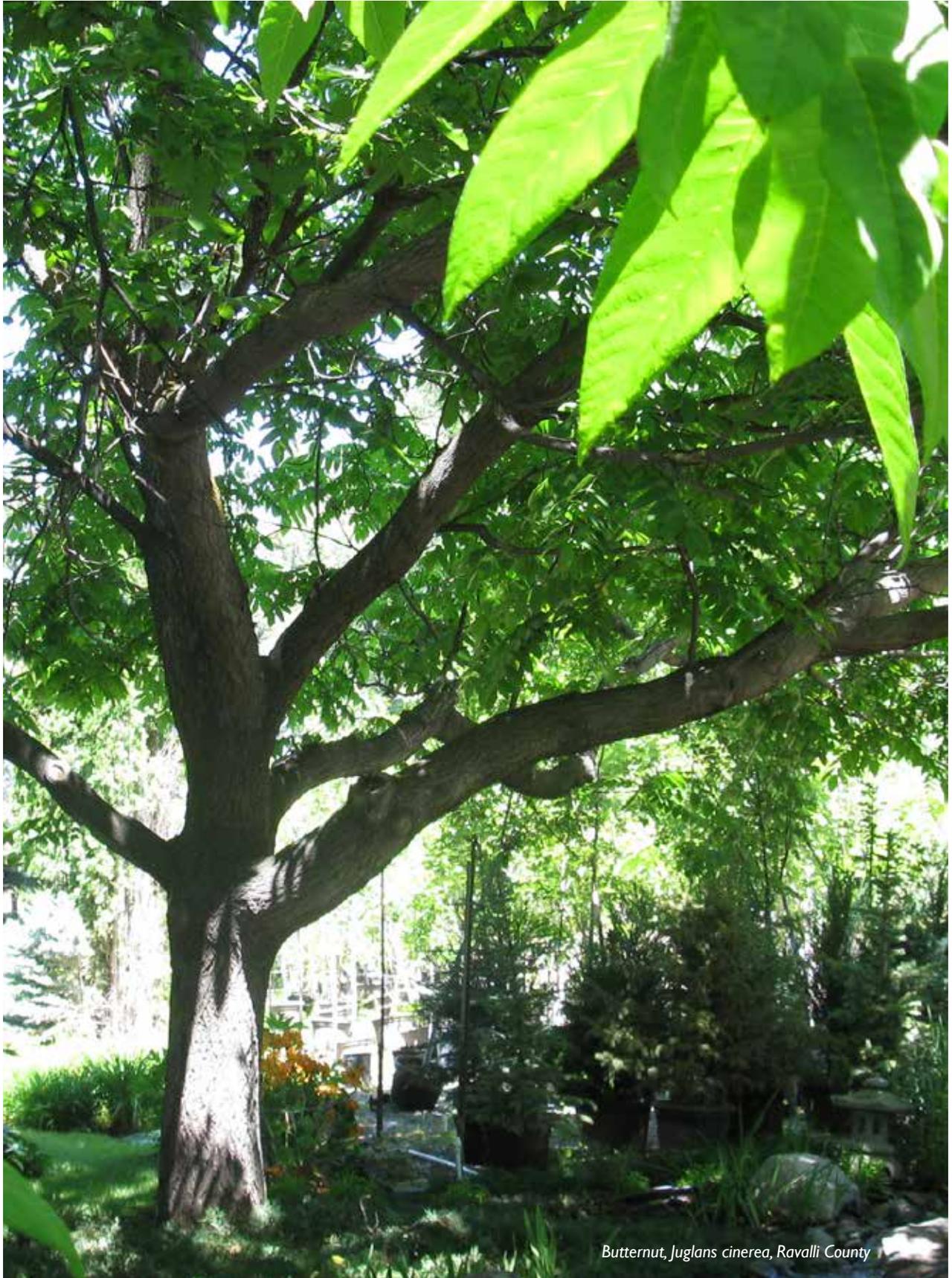
Non-Native Trees

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
LINDEN										
American	<i>Tilia americana</i>	U	241 (388)	42	136	94	42	Ravalli	2010	Mark Lewing
Littleleaf	<i>Tilia cordata*</i>	U	214 (none)	46	143	56	60	Missoula	2014	Huck Woolsey, Finn Woolsey
Littleleaf	<i>Tilia cordata*</i>	U	211 (none)	36	116	81	54	Ravalli	2010	Mark Lewing, John Koch
Littleleaf	<i>Tilia cordata*</i>	U	208 (none)	37	120	77	45	Ravalli	2010	Mark Lewing, John Koch
Littleleaf	<i>Tilia cordata*</i>	U	201 (none)	34	111	79	45	Ravalli	2010	Mark Lewing, John Koch
LOCUST										
Black	<i>Robinia pseudoacacia*</i>	ΔU	261 (443)	53	172	73	63	Ravalli	2010	Mark Lewing, Pamela Lewing
Black	<i>Robinia pseudoacacia*</i>	ΔU	249 (443)	57	182	54	53	Ravalli	2010	Mark Lewing
Bristly	<i>Robinia hispida</i>	U	33 (none)	4	12	18	13	Lake	2015	Mark Lewing, Trevor Mertins
MAPLE										
Norway	<i>Acer platanoides</i>	ΔU	288 (340)	63	203	68	67	Ravalli	2010	Mark Lewing, Pamela Lewing
Red	<i>Acer rubrum</i>	U	140 (382)	26	82	47	44	Missoula	2014	Huck Woolsey, Finn Woolsey
Silver	<i>Acer saccharinum</i>	U	359 (441)	78	248	94	70	Ravalli	2010	Mark Lewing
Sugar	<i>Acer saccharum</i>	U	198 (368)	40	126	60	49	Ravalli	2013	Mark Lewing, Lindsey Lewing, Krysta Mertins
Sycamore	<i>Acer pseudoplatanus</i>	U	123 (none)	20	62	52	37	Flathead	2015	Mark Lewing, Trevor Mertins
MOUNTAIN-ASH										
European	<i>Sorbus aucuparia*</i>	ΔU	138 (106)	29	90	40	31	Flathead	2013	Mark, John and Paul Lewing
European	<i>Sorbus aucuparia*</i>	ΔW	84 (106)	9	29	49	22	Missoula	2015	Mark Lewing
European	<i>Sorbus aucuparia*</i>	ΔW	80 (106)	10	30	44	24	Missoula	2015	Mark Lewing
European	<i>Sorbus aucuparia*</i>	ΔW	72 (106)	10	31	35	22	Missoula	2015	Mark Lewing
Oakleaf	<i>Sorbus x hybrida</i>	U	88 (none)	15	46	37	19	Ravalli	2015	Mark Lewing
OAK										
Pin	<i>Quercus palustris</i>	U	198 (420)	35	111	76	45	Missoula	2014	Huck Woolsey, Finn Woolsey
Red	<i>Quercus rubra</i>	U	246 (537)	53	167	66	50	Missoula	2014	Huck Woolsey, Finn Woolsey
Swamp white	<i>Quercus bicolor</i>	U	170 (394)	30	94	64	50	Yellow- stone	2012	Steve Riley

Non-Native Trees

COMMON NAME	SCIENTIFIC NAME	URBAN or WILDLAND	POINTS	DBH	CIRC.	HEIGHT	SPREAD	LOCATION	YEAR	NOMINATOR
PINE										
Rocky Mtn. Bristlecone	<i>Pinus aristata*</i>	U	55 (250)	9	27	21	26	Ravalli	2015	Mark Lewing, Silvia McNeil
Rocky Mtn. Bristlecone	<i>Pinus aristata*</i>	U	41 (250)	5	16	20	23	Yellowstone	2013	Mike Garvey
Scotch	<i>Pinus sylvestris</i>	U	181 (254)	32	100	73	33	Missoula	2013	Mark Lewing, Pamela Lewing
POPLAR										
Lombardy	<i>Populus nigra var. italica</i>	U	308 (none)	69	217	84	29	Ravalli	2013	Mark Lewing
White or Silver	<i>Populus alba</i>	ΔU	432 (289)	94	295	115	88	Gallatin	2014	Edie Dooley
RUSSIAN-OLIVE										
	<i>Elaeagnus angustifolia*</i>	ΔU	175 (205)	38	119	42	55	Sanders	2015	Mark Lewing, Trever Mertins, Leo & Sarah Pate
	<i>Elaeagnus angustifolia*</i>	ΔU	161 (205)	32	100	52	36	Missoula	2013	Mark Lewing, Trever Mertins
SPRUCE										
Blue	<i>Picea pungens*</i>	ΔU	233 (331)	34	109	116	31	Ravalli	2010	Mark Lewing
Blue	<i>Picea pungens*</i>	ΔU	231 (331)	35	113	110	31	Ravalli	2010	Mark Lewing
Norway	<i>Picea abies</i>	U	250 (357)	39	121	120	35	Ravalli	2014	Mark Lewing
SUMAC										
Staghorn	<i>Rhus typhina</i>	U	67 (none)	13	42	18	29	Ravalli	2014	Mark Lewing
SYCAMORE										
American	<i>Platanus occidentalis</i>	U	200 (506)	41	128	64	33	Ravalli	2013	Mark Lewing, Lindsey Lewing, Krysta Mertins
WALNUT										
Black	<i>Juglans nigra</i>	U	216 (none)	44	138	61	70	Missoula	2014	Mark Lewing, Bruce Maclay, Mary Maclay
WILLOW										
Crack	<i>Salix fragilis</i>	ΔU	461 (461)	124	388	55	72	Ravalli	2011	Mark Lewing
Weeping	<i>Salix babylonica</i>	ΔU	292 (412)	72	226	54	49	Ravalli	2014	Mark Lewing
White	<i>Salix alba</i>	ΔU	420 (440)	103	328	77	61	Ravalli	1995, 2009	Mark Lewing, Pamela Lewing, Rosemary O'Neil

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Butternut, Juglans cinerea, Ravalli County