



Newsletter of the Idaho Native Plant Society Promoting Interest in Idaho's Native Flora

Idaho's Monarch Butterfly Connection

By Beth Waterbury, Wildlife Biologist, Idaho Department of Fish and Game, Salmon Region

Few species spark people's wonder and passion like the monarch butterfly. With its fiery-orange and black pattern and large wingspan, the monarch is among the most recognized insects in North America. Its life cycle is a complex marvel involving a lengthy migration completed relay-style by several generations in a single year. During their summer wanderings, female monarchs lay their eggs on the leaves of milkweeds—the sole food source for their striking yellow, white, and black-striped caterpillars. Milkweeds are the essential links of the chain that connect monarch breeding populations across North America.

Monarch butterflies have made their mark on Idaho as the official state insect. Idaho is one of 11 western states that contribute to the western monarch population. Most western monarchs migrate to hundreds of small, wooded groves along the California coast to overwinter. In contrast, the much larger eastern population (generally found east of the Rocky Mountains) migrates to high elevation fir forests in central Mexico. Both migrations are spectacular natural phenomena for an insect weighing less than a gram, rivaling the epic migrations of songbirds and salmon.

The North American monarch is now facing an uncertain future. Overwintering monarch populations have declined by 74% in coastal California and more than 80% in central Mexico since monitoring began about 20 years ago. Loss of milkweed has been identified as the most significant factor contributing to declines in the eastern U.S. But little is known about the reasons for decline west of the Rockies. Until a few years ago, very

little was known about milkweed and breeding monarch distribution in the West. This was certainly the case for Idaho, where as recently as 2014, only a handful of monarch and milkweed records existed for the entire state.

Federal grant helps to leverage monarch work in Idaho and Washington

Through a grant from the U.S. Fish and Wildlife Service, Idaho Department of Fish and Game (IDFG), Washington Department of Fish and Wildlife (WDFW), and the Xerces Society for Invertebrate Conservation partnered on a multi-faceted project to address monarch and milkweed data gaps in Idaho and Washington. Starting in 2016, partners worked to compile monarch and milkweed occurrence records for Idaho and Washington from museum vouchers, online herbaria, scientific literature, butterfly researchers, botanists, land managers, and many other sources to gather a baseline dataset. Surveys for monarchs and milkweeds were conducted from late May through September 2016. In Idaho, surveys covered portions of the Panhandle, lower Clearwater Basin, and the entire east-west span of the

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President's Letter

I am just happy I have the opportunity to write this letter. It's amazing what we appreciate when the things we love are almost lost. Most of you are probably aware that I suffered a massive heart attack last summer while collecting plants in the Frank Church Wilderness for the Stillinger Herbarium. I won't bore you with the details, but suffice it to say that I am very lucky to be alive, much less functional. I was recipient of an amazing chain of miracles demonstrating God's willingness to let me have a few more years of life. I am also in deep debt to my hiking companions, Tony McCammon (INPS Vice President), Paul Allen (INPS Sawabi member), and Wayne Jones (UI County Educator in Idaho Falls), who did some amazing things to keep me alive and get me out of the wilderness and on the way to hospital care. It has been a long road to recovery, but I am now back to work full-time and chipping away at my INPS Presidential duties. Not to say I am back to full health. Having an artificial heart makes a normal life somewhat unattainable. But I am alive and looking at life through a pair of rose-colored glasses. And more than ever, I am truly looking forward to our annual meeting this summer. Bill Bridges and Tony McCammon have done yeomans duty putting together arrangements and programs. They will be hosting the meeting in Challis, the doorstep to some of Idaho's most spectacular country. One of the tour destinations planned for the meeting is Railroad Ridge and the nearby Chinese Wall. If you have never visited this high alpine habitat, you are in for the double fudge, a la mode, chocolate chip-sprinkled, whip cream-covered version of native plant heaven. Other wonderful stops are planned as well, interspersed with informative programs such as a presentation by Bill Varga, retired University of Utah ethnobotanist. I plan to load up my extra battery packs and other supplies for keeping my heart operational and have the time of my life. I hope you will join me.

Stephen Love

INPS President

Announcements

Applications Sought for American Penstemon Society 2017 Special Project Grants

The purpose of the American Penstemon Society (APS) Special Projects Program is to stimulate activities that promote knowledge and appreciation of Penstemons. The Society is particularly interested in funding projects that: (1) promote conservation of Penstemon species in the wild, especially rare or sensitive ones, through understanding of factors that affect their survival, or (2) promote appreciation for the diversity and beauty of Penstemons in wild and domestic landscapes, through horticultural research, dissemination of information of interest to gardeners, or the construction or enhancement of educational display gardens.

All applicants must be current members of APS, and may join APS for the purpose of submitting a proposal. Maximum award amount is \$1000. Awards are not intended to pay wages or travel to meetings. The number of successful awards in any year will be determined by the number of high-quality proposals, value of the awards, and the annual budget. Awardees are required to submit a final project report, due one year after the award is made, and provide either an article for the newsletter or an oral presentation at an annual meeting.

More information about the APS and the Special Project Grants proposal application process and format can be found at Penstemons.org. Proposals are due by March 31, 2017.

Annual Botanical Foray 2017

The annual Idaho Botanical Foray celebrates its 10th anniversary in 2017. This year the event will take place July 6-9 in Bear Valley, located approximately 25 miles north of Lowman, Idaho, in the Boise National Forest. This is a region of large high meadows surrounded by higher mountains in country that forms some of the Middle Fork Salmon River headwaters. The foray is a fun opportunity to improve your botany skills, contribute to the collection of plants for Idaho herbaria, meet and spend time with fellow plant enthusiasts, and enjoy time in the Idaho backcountry. The event typically attracts a mix of professional botanists from various colleges, universities, and agencies, students, and a host of other folks interested in Idaho botany. The 2017 Foray is being sponsored by Boise State University. More detailed information about directions, camping, and other logistics will be available soon on the INPS webpage and on Facebook on the Idaho Botanical Foray link.

2017 Idaho Native Plant Society Annual Meeting Reminder

The 2017 Idaho Native Plant Society Annual Meeting will be held July 14-17. Base Camp will be the Living Waters Ranch, located 4 miles west of Highway 93 on Main Street in Challis (3 miles west of the Golf Course). Living Waters Ranch will provide dinner Friday and Saturday night. If you have any questions, call Bill Bridges at (208) 293-2426.

Make your own reservations with the Living Waters Ranch:

Tents: \$12/day

RV: \$15/day

RV with full hook-up: \$18/day

Bunk House: \$14/day

Motel rooms 2 twin beds: \$48/day

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Mini Lodges: 8 bedrooms, each with 2 twins or a queen bed and private bath, large kitchen, \$66 per room, 5 rooms minimum

Living Waters Ranch

PO Box 1190

Challis, ID 83226

(208) 879-2888

lwrinc@custertel.net

Website: www.livingwatersranch.org

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Announcements, Continued

Orton Botanical Garden Receives Special Use Permit

The Twin Falls Planning and Zoning Commission (P&Z) on February 28, 2017, granted Orton Botanical Garden (OBG) a special use permit (SUP). All seven Commissioners voted for the SUP, several commenting that it will benefit Twin Falls' tourism and open space. The garden is now recognized as a city-approved botanical garden, rather than just LaMar and Rosalie Orton's backyard. The SUP opens up new possibilities for the garden such as signage, regular visitor hours, conversion of an adjacent rental home to a garden office, classes with 12–18 attendees, and allows some public events in addition to the annual open house/plant sale and Christmas light display. The SUP also provides assurance that the garden can continue into the future and allows greater fund raising capabilities for its 501(c)(3) corporation.

The SUP hearing was upbeat and run in a friendly, receptive style. LaMar Orton gave a thorough, carefully prepared presentation to the P&Z. Then many OBG fans spoke in favor of the SUP, including four other board members—Ann DeBolt, Rosalie Orton, Caroline Morris, and Lisa Detweiler (who brought along her new 3-month old daughter, a cute child who stayed quiet thanks to gentle rocking by her father, another OBG board member, Mike Barker). Several nearby neighbors said they enjoyed the Garden's proximity. Two men from other parts of Twin Falls lauded OBG's greenspace and

its wonders for children. They also praised OBG for its xeric landscape versus the water-demanding green lawns in too many Twin Falls subdivisions. We learned that five of the seven Commissioners had visited OBG (avoiding whether they went only to see the holiday lights). Rosalie lovingly spoke for the interests of OBG's resident quail, song birds and pollinators. Ann's persuasive talk emphasized the Garden's unique botanical importance and collaborations, along with the vast numbers of educational tourists and volunteers shepherded there. Several other supporters sent favorable email statements.

Preparations for the hearing required many hours by many people, who all were delighted with the positive results. Quoting INPS member Alice Crockett: "Yahoo! I love it when good things happen." Visitors to OBG will continue to need appointments until there is adequate staff or volunteer coverage. Extensive new, durable plant signage should be installed during 2017, depending on grant funding. If you have time and interest to volunteer at OBG, please contact LaMar Orton, (208) 734-7959 or plantasiacactusgardens.com. What a gorgeous Garden!

The OBG will be having a plant sale May 18–20 and May 25–27. This would be a great opportunity to visit and enjoy OBG, and maybe even pick up some beautiful plants for your own garden.

— Caroline Morris, Pahove Chapter

Idaho Wildflowers
Plant Identification App

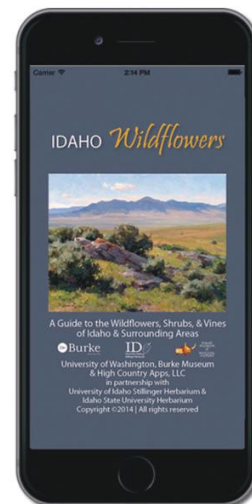
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Freshly emerged from their chrysalises, adult monarch butterflies sip nectar from the flowers of showy milkweed (*Asclepias speciosa*). Photo by Beth Waterbury.

Snake River Plain. Field crews searched for new milkweed populations and breeding monarchs, and collected important data on habitat associations, management impacts, and potential threats to breeding areas.

The grant also supported a well-attended workshop co-hosted by IDFG and Xerces Society titled "Monarch Butterfly and Milkweed Conservation for Resource Managers," held at Deer Flat National Wildlife Refuge near Nampa in July 2016. IDFG and partners also netted, tagged, and released nearly 300 monarch butterflies to gain insights on the direction, route, and destination of monarch migratory movements. Tagged monarchs from Idaho in previous years have been recovered in California, but there is also intriguing evidence of a migration trajectory towards Mexico.



Monarch caterpillars feed exclusively on milkweed. They sequester chemicals, known as cardenolides, from milkweed, making them toxic to predators as both caterpillars and adults. Photo by Beth Waterbury.

New western monarch and milkweed website launched

A highlight of the project is the recent development and launch of the Western Monarch Milkweed Mapper (www.monarchmilkweedmapper.org/about), a web-based repository for milkweed and monarch occurrences across the West. The website will directly address remaining data gaps by encouraging users to report monarch and milkweed occurrences in 11 western states. All that's needed is a smart phone or a digital camera and access to a computer. In addition, users can use an interactive milkweed ID tool to identify 46 milkweeds to species, learn more about monarch conservation efforts in the West, and participate in other citizen science projects. A special feature of the website is the ability to explore and download over 40,000 western monarch and milkweed records, from historic to present day. All data submitted through the website will feed directly into this growing database.



Participants in the 2016 Monarch Butterfly and Milkweed Conservation for Resource Managers workshop head to the field to observe monarch life stages. Photo by Beth Waterbury.

Looking ahead to the 2017 field season

For 2017, project activities in Idaho will include surveys of remaining areas with data gaps, development of a monarch/milkweed habitat suitability model, hosting a monarch/milkweed workshop for citizen scientists, and tagging of migratory generation monarchs. Collectively, these efforts will help to identify key areas in Idaho to conserve and restore native milkweed stands and nectar corridors with the ultimate goal of keeping Idaho's monarchs connected across the western landscape.

For more information on the Idaho Milkweed and Monarch Survey, contact Salmon Region Wildlife Biologist Beth Waterbury at beth.waterbury@idfg.idaho.gov or (208) 756-2271, x-245.

Note: This article is also available on the Idaho Department of Fish and Game homepage. •

Alpine Plant Communities at Sheep Mountain, Lemhi Mountains

By Michael Mancuso and Rose Lehman, Idaho Native Plant Society

Idaho is renowned for its mountains that lend an aura of ruggedness and remoteness to many parts of the state. At their highest elevations, most mountains across Idaho support subalpine forest/woodland or shrubland



Sheep Mountain, Lemhi Range. Photo by Michael Mancuso.

habitat intermixed with rock outcrops and other openings. These areas lack the elevation and associated abiotic conditions necessary for the exclusion of trees and development of a distinct alpine treeline. Alpine habitat occupies a zone above upper treeline and in Idaho is limited to mountain ranges in the central and east-central portions of the state. However, topography even in these mountains tends to restrict alpine vegetation to a narrow band extending along the highest crests. Although wind, soil attributes, and other factors play a role influencing upper treeline formation, most research indicates heat deficiency is the primary factor determining alpine (and arctic) treelines (Knight 1994). Plants need to carry out photosynthesis, a temperature dependent process. In the northern hemisphere, trees are typically absent where the mean July temperature is lower than 50°F, or the mean July maximum temperature is lower than 52°F. In these areas, temperature is apparently too low for too much of the growing season to permit sufficient photosynthesis for large plants like trees. A walk in the alpine is an opportunity to pass through a vegetation mosaic influenced by slope, aspect, topographic position, and other factors that give rise to changes in plant composition, plant species ratios, abundance, and productivity ranging from subtle to the dramatic. The alpine is also an area where one minute you can be worried about sunburn and a short time later about freezing.

Alpine areas in Idaho provide some of the state's most picturesque landscapes. Nonetheless, alpine plant

communities have received little study in Idaho over the years. One exception is the Sheep Mountain area in the Lemhi Range, located approximately 20 miles south of the small town of Leadore. In 1992, Steve Urbanczyk conducted an alpine plant community classification study in the Sheep Mountain area as his graduate research project for the University of Idaho (Urbanczyk 1993). The project included collecting community-level plant composition and canopy cover data at a series of 77 plots. Basic environmental and topographic data were also collected at each plot. The resulting classification and ordination recognized eight alpine plant community types linked to apparent habitat preferences (Urbanczyk and Henderson 1994).

The predominant alpine plant communities produced by the classification were the curly sedge (*Carex rupestris*), blackroot sedge (*Carex elynoides*), and purple reedgrass/blackroot sedge (*Calamagrostis purpurascens/Carex elynoides*) community types. Other less common plant community types included blackroot sedge/Hayden's clover (*Carex elynoides/Trifolium haydenii*), spike fescue (*Leucopoa kingii*), eightpetal mountain-avens (*Dryas octopetala*), snow willow (*Salix nivalis*), and Rocky Mountain goldenrod/Hayden's clover (*Solidago multiradiata/Trifolium haydenii*). The original classification showed the alpine zone at Sheep Mountain to be dominated by dry, turf-like vegetation, with occasional snowbed-influenced communities contributing to the



Upper treeline on the western flank of Sheep Mountain. Photo by Michael Mancuso.

overall vegetation mosaic. Sheep Mountain remains one of the few alpine locations in Idaho with a quantitative plant community dataset.



View south from Sheep Mountain towards Bell Mountain and other peaks of the Lemhi Range. Photo by Michael Mancuso.

In 2016, we collaborated with the Caribou-Targhee National Forest (NF) and Salmon-Challis NF on a project to resample a subset of the alpine plant community plots originally included in Urbanczyk's Sheep Mountain study (Mancuso and Lehman 2016). We based our sampling on the same methods used in 1992. This resampling presented an opportunity to compare, assess, and document plant community-level changes that may have occurred within the alpine vegetation at Sheep Mountain during the intervening 24 years. We succeeded in establishing and sampling 10 plots in July 2016, with data collection including 6 of the 8 plant community types originally described for Sheep Mountain. Although based on only limited sampling in 2016, comparison of the 2016 and 1992 datasets suggested a general similarity in species composition and relative abundance patterns for the 6 resampled community types. The comparisons did not point to any clear, large-scale differences in the alpine vegetation at Sheep Mountain since 1992. Plant communities dominated or co-dominated by blackroot sedge



Klara Varga and Rose Lehman sampling during a rain squall. Photo by Michael Mancuso.

or curly sedge covered a large percentage of the Sheep Mountain alpine zone in 2016, just as they did in 1992.

Most plots included in the original 1992 study were located within the boundaries of what would become the Sheep Mountain Research Natural Area (RNA) in 1996. This designation conferred special management directives, opportunities, and protection. It also officially recognized the alpine ecosystem at Sheep Mountain to be an important ecological reference area and its role in research, education, and maintaining biological diversity. Centered along the crest of Sheep Mountain, the RNA encompasses 1542 acres at elevations ranging from 9840 feet to 10,865 feet. The RNA is dominated by alpine vegetation, but also contains areas supporting whitebark pine (*Pinus albicaulis*) communities. The RNA designation provided extra incentive to resample some of Urbanczyk's original plots in 2016. We view the 2016 project as a first step in using the original 1992 dataset as a baseline to track and assess possible changes to Sheep Mountain's alpine vegetation over time. The alpine zone represents an ecosystem at a climate extreme and very temperature dependent. We anticipate information from Sheep Mountain to become more timely and relevant over time in light of climate change concerns in alpine environments. Data collection has applicability beyond just Sheep Mountain. Other portions of the southern Lemhi Range share vegetation, topographic, and geologic similarities to Sheep Mountain. Information learned at Sheep Mountain may prove useful to land managers responsible for alpine habitat conservation elsewhere in the general region.

Knight, D.H. 1994. Mountains and plains—the ecology of Wyoming landscapes. Yale University Press, New Haven, CT. 338 pp.

Mancuso, M. and R. Lehman. 2016. Alpine plant community sampling and stewardship assessment in the Sheep Mountain Research Natural Area, Lemhi Mountains, Idaho. Report prepared for the Caribou-Targhee National Forest, Idaho Falls, ID and Salmon-Challis National Forest, Salmon, ID. 21 pp. plus appendices.

Urbanczyk, S.M. 1993. Classification and ordination of alpine plant communities, Sheep Mountain, Lemhi County, Idaho. M.S. thesis. University of Idaho, Moscow. 54 pp.

Urbanczyk, S.M. and D.M. Henderson. 1994. Classification and ordination of alpine plant communities, Sheep Mountain, Lemhi County, ID. *Madrono* 41(3):205-223. •

More photos on page 8

Sheep Mountain Alpine Vegetation



Michael sampling alpine vegetation. Photo by Rose Lehman.



Lloydia serotina. Photo by Rose Lehman.



Castilleja pallescens. Photo by Rose Lehman.



Dryas octopetala. Photo by Rose Lehman.



Townsendia parryi. Photo by Rose Lehman.



Lewisia pygmaea. Photo by Rose Lehman.



Eritrichium namum. Photo by Rose Lehman.



Hymenoxys grandiflora. Photo by Rose Lehman.

All About Yew

By Lynn Kinter, Idaho Department of Fish and Game

It's not often that a rather ordinary-looking shrub grabs the news headlines. But yew (*Taxus spp.*), a common landscaping shrub has gained notoriety this winter since it has caused wildlife deaths in multiple incidents across Idaho.



Pruned *Taxus* shrubs in landscape setting. Photo by Lynn Kinter.

Concern about yew arose last winter when it was implicated in the poisoning deaths of 20 elk in Blaine County. The winter of 2017 has been even worse, with more than 85 confirmed wildlife fatalities from yew. Incidents have been reported across Idaho, including the Payette, Boise, Challis, North Fork, Idaho Falls, and Preston

areas. Yew poisoning has killed elk, deer, moose, and pronghorn antelope this winter, with events ranging from individual animals to a group of 50 pronghorn antelope in the town of Payette.

Yews are very popular in residential and commercial landscapes across Idaho and the US. They are attractive, easy to prune, easy to grow evergreen shrubs tolerant of shade and a variety of soil types. Yews are conifers and in most cases dioecious, having pollen-bearing and ovulate-bearing reproductive structures on separate plants. Unlike most other conifers, yew seeds are not borne in a cone or cone-like structure. Instead, they produce a bright red, fleshy, berry-like structure called an aril that surrounds most of the solitary seed.

Despite yews' popularity as an ornamental shrub or tree, they have long been recognized as toxic to livestock and humans. The English or European yew (*Taxus baccata*), has been described as a toxic plant for over 2000 years. In Julius Caesar's book on the Gallic Wars, which occurred ~55 BC, he referred to a king who committed suicide by drinking juice from the yew tree. English yew is renowned as one of the most poisonous plants in Europe, and Japanese yew is even more toxic.

Shakespeare references yew poison in several plays: Macbeth (the three witches making their brew): "Double, double toil and trouble; fire burn, and cauldron bubble...gall of goat and slips of yew slivered in the moon's eclipse." Twelfth Night: "I am slain by a fair cruel maid. My shroud of white, stuck all with yew." Richard II: "The very beadsmen bend their bows of double-fatal yew against thy state."

Yew's toxic effects

Toxic alkaloids in all parts of the plant except the fleshy aril cause breathing difficulties, convulsions, coma, heart failure, and death. These alkaloids, called taxines, affect sodium and calcium channels in the heart. The potent poison acts quickly, and only a small amount is needed to stop an elk in its tracks. Animals can die from eating less than 1% of their body weight in plant material. Dogs can die from carrying the pruned branches in their mouths. Some birds can eat the fleshy aril safely because they excrete the poisonous seed without digesting it. However, chickens and other bird species have died from the poison, as have many types of wild and domestic mammals. Despite yew's toxicity, wildlife may be attracted to it, particularly when snow covers most other forage, making it is one of the few green plants available.

Types of yews

Four types of yews or their hybrids are commonly found in residential and commercial landscapes across the western US. All four are poisonous, though the amount of poison varies among the types and varieties. Japanese yew and its hybrid with English yew are the main ones planted in southern Idaho.

1) Japanese yew (*Taxus cuspidata*)—native to Japan and neighboring regions; many varieties are widely planted in the US; a shrub or small tree, with some varieties reaching 40 feet tall.

2) English yew, or European yew (*Taxus baccata*)—native to Eurasia; many varieties are widely planted in the US; a shrub or small tree, with some varieties reaching 50 feet tall.

3) Chinese yew (*Taxus chinensis*, *T. sumatrana*, *T. celebica*)—native to Asia; a few varieties of these three species are sometimes planted in the US; a shrub or small tree.

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4) Canadian yew (*Taxus canadensis*)—native to eastern North America; a few varieties are planted in the US; a low-growing shrub to 5 feet tall.

Pacific yew, or western yew (*Taxus brevifolia*) is native to the northwestern US and adjacent Canada, and is found in Idaho from Valley and Washington Counties northward. It is a shrub or medium-sized tree reaching 60 feet tall that occurs in moist, shady habitats. It is not typically used in landscaping in southern Idaho—probably because of its high water requirement. Pacific yew has only very low levels of taxine, and provides important winter forage for moose, elk, and deer. Canadian yew in its native range is also eaten by white-tailed deer. The deer can metabolize taxine to some extent, but Canadian yew may also have lower levels of the toxin, particularly in certain areas.

Identification

Yews can be identified by their short, flat evergreen leaves or needles that are approximately 1 inch long and 1/8 inch wide with a short pointed leaf tip, and a 2-rank arrangement along the branch. In addition, female plants have pea-sized, fleshy, bright red arils with an opening that shows a single hard, brown seed inside. This aril is distinctive—no other evergreens in Idaho have one. However, arils can be hard to find in the winter, when they have dried and fallen off the shrubs, and they are absent on male shrubs.



Taxus needles and aril. Photo by Lynn Kinter.

Yews look superficially similar to several other common Idaho conifers such as hemlock, spruce, fir, and Douglas-fir. But all of these evergreen trees have cones, as well as differences in needle shape and/or arrangement. In addition, they usually grow as a single trunk, not as a multi-stemmed shrub. Spruce trees are very

common in residential landscapes of Idaho, along with other conifers such as cedar, juniper, and pine.

Options for landowners and homeowners

For yews currently planted in landscaping, there are two options: (1) Wrap yews in burlap for the winter, until grazing animals have migrated away. (2) Remove the plants and dispose of in a covered landfill. Be aware that dead yews or dry, pruned branches retain the poisonous compounds. Also, yews resprout from cut stumps, so all large roots need to be dug out unless an herbicide has been used to kill the roots.

Alternative shrubs that can be planted instead

Part of the popularity of yew in landscaping is that it is evergreen and grows well on shady sites. These Idaho native evergreens are non-toxic and can tolerate at least some shade:

- Western swordfern (*Polystichum munitum*)—shade or part shade, medium water; 2 to 4 feet tall
- Oregon boxleaf (*Pachystima myrsinites*)—shade or part shade, medium water; 2 to 4 feet tall
- Curl-leaf mountain mahogany (*Cercocarpus ledifolius*)—part sun or full sun, low water
- Russet buffaloberry (*Shepherdia canadensis*)—part sun or full sun, medium to low water
- Oakleaf sumac (*Rhus trilobata*)—part sun or full sun, low water
- Oregon grape-holly (*Berberis aquifolium*, = *Mahonia aquifolium*)—full shade to part shade, medium water; may spread

Several other Idaho native shrubs tolerate at least some shade, but are not evergreen:

- Red-twig dogwood (*Cornus sericea*)—full shade to part sun, medium to high water; beautiful red branches; a yellow-twig cultivar is also available
- Syringa (*Philadelphus lewisii*)—part shade to full sun, low water; Idaho's state flower
- Woods rose (*Rosa woodsii*)—full shade to full sun, low water
- Thimbleberry (*Rubus parviflorus*)—full shade to part sun, medium water
- Oceanspray (*Holodiscus discolor*)—part shade to full sun, medium water
- Mallow ninebark (*Physocarpus malvaceus*)—part shade to full sun, low water
- Rocky mountain maple (*Acer glabrum*)—part shade to full sun, low water
- Golden currant (*Ribes aureum*)—part shade to full sun, low to medium water

- Red flowering currant (*Ribes sanguineum*)—part shade to part sun, low to medium water
- Common snowberry (*Symphoricarpos albus*)—full shade to part sun, low water
- Highbush cranberry/mooseberry (*Viburnum edule*)—full shade to part shade, medium water
- Serviceberry (*Amelanchier alnifolia*, *A. utahensis*)—part shade to part sun, medium water
- Twin berry honeysuckle (*Lonicera involucrata*)—full shade to full sun, high water

- Mountain ash (*Sorbus scopulina*)—part shade to full sun, medium water
- Mountain huckleberry (*Vaccinium membranaceum*)—part shade, medium water

Several non-native evergreen shrubs that tolerate at least some shade are also commonly available.

For more information on poisonous plants, including yew:

Brownie, C.F. 2017. Merck veterinary manual. Merck & Co., Inc., Kenilworth, New Jersey. Accessed 1 Feb 2017 at: <http://www.merckvetmanual.com/toxicology/poisonous-plants/houseplants-and-ornamentals>

Kingsbury, J.M. 1964. Poisonous plants of the United States and Canada. 3rd Edition. Prentice Hall, Englewood Cliffs, New Jersey.

Panter, K.E., et al. 2011. Plants poisonous to livestock in the Western States. U.S. Department of Agriculture, Agriculture Bulletin No. 415. Agricultural Research Service, Poisonous Plant Research Laboratory, Logan, Utah. Accessed 1 Feb 2017 at: <https://www.ars.usda.gov/is/np/PoisonousPlants/PoisonousPlants.pdf>

Tirmenstein, D.A. 1990. *Taxus brevifolia*. Fire Effects Information System, online. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory. Accessed 1 Feb 2017 at: <https://www.fs.fed.us/database/feis/plants/tree/taxbre/all.html>

For more information on alternative species to plant:

Parkinson, H. et al. 2003. Landscaping with native plants of the Intermountain Region. Technical Reference 1730-3. Bureau of Land Management, Boise, Idaho. Accessed 1 Feb 2017: <https://www.blm.gov/style/medialib/blm/id/publications.Par.71153.File.dat/Landscaping-small.pdf> •

Idaho Mystery Plant

This photo was taken by Lisa Harloe on an ash bed in northern Owyhee County. What is your guess for this plant? The answer will be revealed in the next edition of *Sage Notes*. The Idaho Mystery Plant in the December 2016 issue was alpine springbeauty (*Claytonia megarhiza*), a species in the springbeauty family (*Montiaceae*) that occurs in moist gravels, talus, and rock crevices typically near or above upper timberline. It seems to have a spotty distribution across the central Idaho mountains, but extends from the Canadian Rockies southward to California and New Mexico. Have an Idaho Mystery Plant to share? Send it in to the editor:

sage-editor@idahonativeplants.org

— Michael Mancuso



INPS Chapter News

CALYPSO CHAPTER

When: Meetings are the first Wednesdays of March, April, May and October at 7:00 pm. Field trips take place during the spring, summer, and early fall months.

Where: Meetings are held in the conference room of Idaho Department of Fish and Game, 2885 W. Kathleen Ave., Coeur d'Alene

Contact: Derek Antonelli, ds.ca.antonelli@gmail.com

Upcoming events:

March 15: North Idaho Rare Plant Working Group, 9:30 am to 3:30 pm, Idaho Fish and Game Office, 2885 W Kathleen Ave, Coeur d'Alene. The working group discusses issues related to Idaho rare plants.

March 25: TGWO "Thank God Winter's Over" hike, 10:00 am, meet in Coeur d'Alene at Tubbs Hill east entrance parking lot.

April 5: Chapter meeting—Tentative Presentation: Ponderosa Pine and Douglas-fir Forests of North Idaho.

April 22: Earth Day, time TBD, Coeur d'Alene Library. We will have a booth.

April: Plant Hike TBD, a volunteer to organize and lead this hike is needed.

May 3: Chapter meeting—Tentative Presentation: Diversity of North Idaho Marsh and Aquatic Plants.

May 13: Antoine Peak Conservation Area Hike/Survey, 10:00 am, meet at the Walgreens at Appleway and US 95 to carpool.

May: Cedar Mountain Perennials Field Trip, date and time TBD.

Spring/summer: Rare Plant Surveys—Derek Antonelli will be leading rare plant surveys throughout the season around the area. Contact Derek if you would like to help out or tag along.

Summer: Plant Hikes TBD, let us know your ideas.

LOASA CHAPTER

When: Meetings are held the third Thursday of each month at 7:00 pm.

Where: Taylor Building, Room 248, College of Southern Idaho, Twin Falls.

Contact: Bill Bridges, bridgesbill34@yahoo.com

Upcoming events:

March 16: The Chapter meeting will feature Kelley Weston speaking about Using Native Plants for Landscaping.

April 20: Speaker TBD.

June 9–10: The Master Gardeners in Twin Falls are proposing to have a Native Plant conference in Twin Falls. This conference will be for gardeners in the Magic Valley.

Learn how to use Native Plants in your garden. Friday night: Drive to several gardens in Twin Falls and see what others are doing. Saturday: Meet 9:00 am–4:00 pm at CSI for presentations by several speakers.

PAHOVE CHAPTER

When: Meetings are held on the second Tuesday of each month from September–April at 7:00 pm. Dates and times are occasionally subject to change. Upcoming meeting information is sent to members via postcard and/or email. Events are also posted on the Pahove Chapter page of the INPS website:

<http://idahonativeplants.org/local-chapters/pahove/>

Where: The MK Nature Center Auditorium, 600 S. Walnut Street, Boise.

Contact: For more information about Pahove Chapter activities please visit the Pahove Chapter page of the INPS website, or email Karie Pappani at pahove.chapter.president@gmail.com

Upcoming events:

March 14: The Tuesday Trifecta: Three presentations, all in one night.

1) "Bee City USA" - Garden City is the first city in Idaho to be listed as a "Bee City." Judy Snow will give a brief talk on how she and the Chinden Gardeners Club are working for pollinators and how they got their city listed.

2) "A Ghost in the Making: Searching for the Rusty-patched Bumble Bee"—a 20 minute film about the once abundant native pollinator. On January 10, 2017, it became the first bee in the continental U.S. to be listed under the Endangered Species Act.

3) I-Naturalist with Dr. Charles Peterson of Idaho State University. Dr. Peterson will teach us how we can contribute to science by using our devices to record and share our findings in scientific data repositories.

April 11: Presentation by Bert Bowler about fire and invasive species in the Boise Foothills.

April 28–29: Go Native! Annual Plant Sale—featuring many firewise and waterwise plants. Member sale Friday 5:00–7:00 pm and public sale Saturday 10:00 am–1:00 pm. We have lots to celebrate with the coming of spring in April. Earth Day is April 22 and Arbor Day is April 28. In addition, Native Plant Appreciation Week is officially recognized during this time. Please consider volunteering and/or attending our annual native plant sale, and help spread the word to neighbors and friends.

Spring Wildflower Walks

Each spring, Idaho Botanical Garden (IBG) offers free, guided tours in the Boise foothills to see and appreciate

our native (and not so native) flora. Walks are led by IBG botanist, Ann DeBolt, along with other area botanists. Walks this year will be held on April 27 and May 4 beginning at 6:30 pm. Participants meet at the IBG administration building at 2355 Old Penitentiary Road in Boise and are led into the foothills from there. The walks are free of charge, but registration is encouraged so that arrangements can be made to accommodate all who are interested. For more information call (208) 343-8649 or visit www.idahobotanicalgarden.org

Board Position Opening

The Pahove chapter is seeking a new board president. Current president, Karie Pappani, has served the chapter exceptionally for 5+ years, and the time has come to select her successor. Interested individuals are encouraged to contact the board at pahove.chapter.president@gmail.com

SAWABI CHAPER

When: Meetings are the first Monday of the month.

Where: Earl Pond Student Union Building on the Idaho State University campus during the winter months.

Contact: Karl Holte at plantprof@live.com, (208) 241-8358

Upcoming events:

April 3: The Sawabi Chapter Annual Meeting at 5:30 pm. This will be a no-host dinner and meeting at the Puerto Vallarta restaurant in Pocatello. Field trip suggestions will be solicited and officers for 2017 will be elected.

May 1: Photo Share Program at 7:00 pm in the North Fork Room of the Earl Pond Student Union Building on the Idaho State University campus. Members have the opportunity to share photos of plants or activities from the past year. If you wish to do a photo share, contact Paul Allen (pokyallen@hotmail.com). The public is invited.

Past Events:

Dr. Karl Holte, the Sawabi Chapter co-president, was awarded the distinction of "Naturalist of the Year" at the Idaho Museum of Natural History's Mardi Gras Masquerade Ball and fundraiser on March 4.

UPPER SNAKE CHAPTER

The Upper Snake Chapter is currently inactive.

Contact: Rose Lehman, jojorose@cableone.net

If anyone is interested in reviving the chapter, they are welcome to contact Rose.

WHITE PINE CHAPTER

When: Meetings are held once a month except during the summer. Field trips occur most any month. Please check the chapter website at www.whitepineinps.org for events which may be scheduled or finalized after *Sage Notes* is printed; or email the chapter officers at whitepine.chapter@gmail.com

Where: Great Room of the 1912 Building, 412 East Third St. in Moscow (between Adams and Van Buren)
Contact: INPS, White Pine Chapter, PO Box 8481, Moscow, ID 83843 or whitepine.chapter@gmail.com

Upcoming events:

March 9: Fred Rabe, University of Idaho Emeritus Professor of Biology, will present "Diversity of Aquatic Ecosystem Types in Northern Idaho." As Dr. Rabe points out, "There's an interest in identifying different kinds of birds, plants and other natural objects. Why not add ecosystem types to the list? Have you visited our largest water bodies? Do you know anything about types of high mountain lakes, vernal pools, streams, beaver ponds, waterfalls or wetlands? Are you acquainted with our large river systems and watersheds to which they belong?" A list of these ecosystem types will be provided to aid discussion.

April 25: Trish Heekin (Planner, Latah Soil and Water Conservation District), and Susan Firor (Terragraphics) will present a program with the intriguing title: "Wetland and Riparian Restoration in the Potlatch Watershed—from Faux Beaver Dams to Skinny Weasel Graves."* They will present an overview of restoration projects completed over the last decade in the Potlatch River Watershed. The impetus for these projects is protection and enhancement of habitat for endangered steelhead. But we take a larger view of habitat, and some of the elements they have implemented might surprise you. Topics will range from beavers to vegetation, and cover many concepts in between! (*No weasels were injured in the making of this restoration project!)

May 20: The White Pine Annual Native Plant Sale. Members\$help will be needed to set up on May 19 as well.

June 3: (Date tentative, depending on snow pack.) Mike Hays, Forest Service Botanist out of Grangeville, will lead a trip to Mud Springs or Center Ridge west of Lucille. We will be looking at a wide array of native plants and searching for the invasive weed, common crupina. This area has some beautiful grassland habitat. We will be hiking in and around *Silene spaldingii* populations during this field trip. *Silene* will not be blooming yet, but many

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other native plants will be. As we enjoy the native bloomers, we will be pulling crupina wherever we see it, so bring your gloves.

Past events:

Despite the snowy weather, a large and diverse crowd showed up for the January 31 presentation “Palouse Prairie Remnants in Whitman County—Surveys of 2015 and 2016.” James Riser PhD, Palouse Conservation District Botanist, demonstrated the many ways that native plant ecology traverses the states of Idaho and Washington. He spoke on how Palouse Prairie is defined by soils and climate, issues of weed invasion, and of a project to catalog and assess prairie remnants in the area. A working definition of potential Palouse Prairie designation became “Never been tilled or drilled.” James shared how the project to assess private land with potential Palouse Prairie remnant vegetation was carried out in three phases:

Phase 1) Initial GIS-based inventory of potential remnants; completed in 2012; 1,120 potential remnants identified covering 9,646 acres.

Phase 2) Landowners contacted, offering brief education and reassurances information, and securing permission to survey remnants; completed 2013/2014; approximately 1,000 landowners contacted; 10% replied—some landowners proud to be involved, others wondered why

the survey was interested in those “weeds”; permission granted to survey 1,200 acres. Phase 3) Survey of remnants initiated summer 2015 and continued in 2016; 115 potential remnants to survey; 61 landowners; visited remnants were assessed for ecological condition and presence of rare plant species.

Palouse Prairie condition rank, based on native species cover:

<u>Category</u>	<u>Percent cover</u>	<u>Total acres</u>
A Rank	75-100%	59
B Rank	50-75%	57
C Rank	25-50%	124
D Rank	10-25%	11
Converted Upland	<10%	158

WOOD RIVER CHAPTER

When: Meetings are held various weekday evenings beginning at 7:00 pm.

Where: Meetings are held at the Sawtooth Botanical Garden, located three miles south of Ketchum, on Highway 75 and Gimlet Road.

Contact: Cynthia Langlois at cplangloisACRP@msn.com for information about fieldtrips and presentations. Also, check the Sawtooth Botanical Garden website, sbgarden.org, for updates on presentations. •



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