

Newsletter of the Idaho Native Plant Society • Promoting Interest in Idaho's Native Flora Dr. Wilcox—Army Doctor, Botanist—and His Primrose: Part III

By Carol Prentice and Barbara Ertter, Pahove Chapter

Wilcox did not limit his studies to plants but was truly a naturalist. He was a keen observer of all categories of life in the natural world, which he both documented and published papers about. Collections of particular interest were submitted to the Smithsonian Institution, including anthropological items. After being proposed for membership by Alphonso Wood, Wilcox joined the Torrey Botanical Club in 1880 and was made a life member in 1930. He also belonged to Phi Beta Kappa (the oldest academic honor society in the United States), Alpha Delta Phi, the Cosmos Club (founded by John Wesley Powell as a gentlemen's club for those interested in science), Biological Society of Washington, and the National Geographic Society (Eggleston 1933).

Published Observations

The earliest of his articles we have located is an observation of ants, whimsically titled "Intellect in Brutes" (Wilcox 1880), written while at Fort Boise. One senses his affinity with the military-like behavior of "red or agricultural" ants (presumably harvester ants, *Pogonomyrmex*) in passages such as:

The fighting is all done by the warriors, who, on being called upon by the sentries, sally out in great numbers, and rush to the attack; some seize and hold the victim, while others attack it on every side; as soon as it ceases struggling, the warriors return to their burrows, leaving to the workers the labor of cutting up and carrying in. The next known publication is the one deemed most worth mentioning in his obituary (Eggleston 1933), as having "caused much comment" by calling attention to the absence of earthworms in Boise (Wilcox 1884). These are now ubiquitous in Boise lawns and similar moist areas, all deriving from early introductions (intentional or otherwise) by early settlers. According to the abstract of Wilcox's article:

Mr. Robert M. Christy writes on the absence of earthworms from the prairies of the North-West. I can confirm his statement, and extend them to cover the prairies of Kansas, the Indian Territory, Idaho, and Washington Territory. In all the above-mentioned territory of the United States the soil is more or less alkaline, and it seems to me that to this cause the absence of earthworms may be attributed. Ants and some burrowing beetles, or the larva of the latter, are, however, common, and no ... Continued on Page 4

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Letter from the President

I was minding my own business on a neighborhood walk one late October day. Something caught my eye as I glanced across to a canal bank not far from the sidewalk. What plant is that? As I made my way over to it, I noticed numerous small flowers that were 2-lipped and spurred at the base. Having no idea regarding its identity, I grabbed a couple of individuals to try and make an identification at home. Fortunately, it readily keyed to dwarf snapdragon (*Chaenorhinum minus*), an introduced annual species in the plantain family. A new one for me. Out of curiosity, I checked the Consortium of Pacific Northwest Herbaria website and found there were nearly a dozen collections of dwarf snapdragon from northern Idaho, but no record for the state from south of the Grangeville area. An afternoon that started with a simple neighborhood walk evolved into the surprise of an apparent first record for dwarf snapdragon in southern Idaho. A couple of days later, another plant surprise occurred when I encountered a white-flowered individual of a species that typically has purple flowers.

One of my favorite botanical surprises this past summer was a stunning display of bitterroot flowers on a high ridge in central Idaho's White Knob Mountains. The abundance of bitterroot plants was unexpected, but what surprised me the most was seeing some of them with more than 15 buds getting ready to burst into bloom!

I hope every INPS member enjoyed at least a few botanical adventures and surprises this past season. Maybe it was stumbling across a plant you had never



I was surprized to encounter bitterroot (Lewisia rediviva) plants with 15 or more flowers. This photo taken in the White Knob Mountains in an example of one such plant. Photo by Claire Parsons.

seen before or finding a plant you are well acquainted with in a new, unexpected place. Maybe it was visiting an area with a totally unfamiliar flora and being excited to learn a few new plant species or simply going on a favorite hike to marvel at the wildflower colors. We all have our reasons for being enamored by and finding joy in plants. We've come to that time of year when slumber rules the plant world in Idaho. But under the snow, new surprises await the return of spring. In the meantime, please remember to renew your INPS membership for 2023. It's an easy and effective way to show your continued commitment to educating the public about native plants and to the conservation of our native flora.

Happy Holidays, *Mike Mancuso*

Announcements 2023 INPS ERIG Solicitation for Proposals

By Steve Rust, ERIG Chair

To support its mission, the Idaho Native Plant Society (INPS) annually grants awards through the Education Research Inventory Grant (ERIG) program. Since 2005 INPS has awarded over \$30,000 in grants of up to \$1,000 that stimulate and lend support to educational, research, and conservation activities that promote an appreciation for native plants and plant communities in Idaho. Continuing in that tradition, in 2023, INPS will partner with projects that contribute to the appreciation, conservation, and knowledge of Idaho's native flora. The Idaho Native Plant Society encourages you to submit a proposal for a project that may qualify. The deadline for submitting proposals is February 15, 2023.

Grant Guidelines: The ERIG program is intended to support direct project costs. Grant proposals should not include expenses for salary and personnel benefits, the purchase of personal equipment, equipment not dedicated to the project, or other expenses not essential to the project. Indirect costs such as administrative costs will not be funded. Expenditures shall be verified by receipt submittals. Here are some examples of costs the grant may cover:

- Direct costs of travel, meals, and lodging for the project.
- Supply and service expenses used for the sole purpose of the project (e.g., native plant material, interpretive signs, lab materials).
- Printing costs for public outreach material or research publications.

Application Procedure and Requirements: Proposals must contain the following information, as line items, in the application. Please be succinct:

1. Project Title.

- 2. Contact Information: Name, address, phone number, organization/affiliation, and email.
- 3. Project Description:
 - a. Outline the project objectives, methods, and final product.
 - b. Explain how the project will benefit the appreciation, conservation, or knowledge of Idaho's native flora.
 - c. Where applicable, will there be public access to the project.
 - d. Describe how project success will be evaluated.
- 4. Itemized budget: Outline an overall project budget, including the amount you are requesting (up to \$1,000). Include other funding sources.
- 5. Timeline: Please provide a timeline for completion of all major milestones associated with the project, including presentation of the results.

Project proposals must pertain to native plants of Idaho. Please limit grant requests to a maximum of \$1,000 and be aware that less may be awarded due to INPS budget constraints and the number of applications submitted. Recipients of these awards have a timeline of two years from the date of the award to complete their projects. Successful applicants are required to submit a final report to INPS documenting project accomplishments and a summary of the project to be published in the INPS newsletter, Sage Notes. INPS membership is not a prerequisite to apply for, or receive, an ERIG grant.

Please submit proposals by email to Steve Rust at srust@naturescap.com (refer to "ERIG proposal" in the subject line) or by mail to: ATTN: ERIG Committee Chair, Idaho Native Plant Society, P.O. Box 9451, Boise, ID 83707. •

2023 Idaho Rare Plant Conference

The 2023 Idaho Rare Plant Conference will be held February 28–March 2, 2023 in Nampa, Idaho, at the Fish and Game Office (the same location as the 2020 RPC). This is the 31st RPC. We will have rare plant ranking presentations from the North and South Rare Plant Working Groups, as well as conservation presentations, a banquet, snacks, and lots of time for networking. Please contact Kristin Williams or Brittni Brown if you have ideas for speakers or would otherwise like to help with planning. Also please join the Rare Plant Working Groups to learn about and help share information on Idaho's rare plants; contact Derek Antonelli for the Northern Idaho RPWG and Beth Corbin for the Southern Idaho RPWG. Look for on-line registration for the RPC available after the first of the year.

~Beth Corbin

Dr. Wilcox and His Primrose ... Continued from Page 1

doubt do much service in the manufacture of plant food, as well as in the destruction of decaying material. At Boise City, Idaho, some enthusiastic disciples of Izaak Walton imported and successfully reared the coveted bait for their fish-hooks in soil suited to the habitat of the Lumbricidae.

In contrast, Ewan & Ewan (1981) homed in on a different publication (Wilcox 1885) to include in their extremely brief biographical sketch of Wilcox. Curiously, the Ewans' statement that "He 'introduced [pheasant and bobwhite] in Oregon and Idaho [vicinity of Boise]'" does not match the actual article, in either wording or content. Wilcox mentions the occurrence of Japanese pheasants near Portland, while he was on duty at Vancouver Barracks, but without claiming to have anything to do with their introduction. A similar situation exists for bobwhite: "Three years since I found a covey on the west side of the Snake River, fifty miles below Boise City, where they were first liberated. I never saw coveys so large or numerous as I found them around Boise. Cover and food, as well as climate, are all favorable."

Two years later, Wilcox's botanical interest overlapped with his medical expertise when describing a highly questionable treatment for cattle poisoned by locoweed (Wilcox 1887):

The treatment employed by the cow-boys in Idaho for poisoning by the loco-weed consists in amputation of the tails of the animals affected. They claim that they seldom lose any stock when this treatment is instituted early enough. Oxytropis Lambertii, Astragalus mollissimus, and possibly others of the Leguminosae are charged with producing loco-poisoning. In Idaho, the cowboys call these plants 'larkspur,' although true larkspur [Delphinium] is rarely found in their line of march and at that season of the year.

The most intriguing of Wilcox's publications on Idaho natural history, however, is the one reporting on the former presence of California condors (called California vultures at the time) near Boise (Wilcox 1918). In a presentation to the 572nd regular meeting of the Biological Society of Washington on 20 October 1917, held in the assembly hall of the Cosmos Club, Wilcox reported that:

I have been requested to record, as it has been doubted, the occurrence of the California vulture in Idaho, then a territory. In the fall of 1879 I came

upon two which were feeding on the carcass of a sheep. They hissed at me and ran along the ground for some distance before they were able to rise in flight. They were much larger than Turkey buzzards, with which I was guite familiar, and I was very close to them so that I could not be mistaken in their identity. The cattleman said that the California vulture or Buzzard was not uncommon there before they begin to poison carcasses to kill wolves. Doctor Coues gives as their habitat "Rocky Mountains to the Pacific." Boise River mountains rise to over 7000 feet just back of where the vultures were feeding. The exact locality was near the Hot Springs above Boise City. Poison and population have now destroyed that far north habitat. The Boise Statesman, if any of editor Kelly's time are now living, may be able to confirm the above statement.

More of Wilcox's natural history observations have been captured in publications by other authors. Charles Bendire, a retired Captain in the U.S. Army, was both a friend of Wilcox and Honorary Curator of the Department of Oology at the U.S. National Museum. When writing on the birds of North America, Bendire (1892) quotes from a letter written by Wilcox, providing an abundance of astute observations on Sooty Grouse, including a very unusual hunting technique: "I once caught an old grouse with a fishhook. I had my rod on my shoulder and suddenly came upon a covey about the size of quails, and caught one with my hands. This made the old bird frantic; she attacked me, and alighted on my rod, the hook pierced her foot. I was pulling her in, when my leader broke and she flew off."

Donations to the National Museum

Wilcox was a prolific collector; in addition to the herbarium specimens addressed in Part 2 (Wilcox as Botanist), he sent a wide assortment of natural history collections to eastern institutions, primarily to the United States Natural History Museum of the Smithsonian Institution. Items sent by Wilcox from Idaho include antlers from a mule deer and specimens of the Western European house mouse (*Mus musculus domesticus*). In 1914, he donated an Indian basket from near Big Creek on the Middle Salmon River, captured during the Sheepeater Conflict addressed in *Part I*. Notes associated with the basket indicate that "most Shoshone baskets were made of willow (*Salix* spp.), though red osier dogwood (*Cornus sericea*) was also used. Rods in body of this basket and in the wrapped rim appear to be all willow." From Nebraska, Wilcox collected and sent fossils of mammoth and *Merycodus warreni*, an extinct pronghorn relative. Later, while at Fort Huachuca in Arizona, he sent collections of *Bassariscus astutus flavus*, com-

monly called ringtail cat. He also donated at least 40 bird collections as well as those of other fauna, such as pallid bat, white tailed deer antlers, a pickled horsehair worm, two new species of millipedes (Cook 1910), a leech (Moore 1899), and some sixty reptiles of which two were type specimens



Photo from Museum of Natural History. Smithsonian, 2022, (www.naturalhistory.si.edu/).

(Stejneger 1903). He also sent a fossil of an extinct camel from Florida and fossil wood from Chicago (records of U.S. National Museum).

A detailed description of one of Wilcox's acquisitions in central Alaska, and its disposition, can be found in McLain's (1905) engrossing report of a senatorial factfinding mission to the territory in 1903:

[A]ll relics of prehistoric days are suggestive to the imagination and no little interest was excited by the discovery on the roof of one of the Rampart cabins of a pair of enormous horns joined together by a portion of the skull of the animal to which they once belonged. . . Colonel Timothy E. Wilcox, deputy surgeon general of the United States army, who first joined our party at Juneau, and subsequently fell in with us again at Eagle, and who was on a tour of inspection of the hospital service and sanitary condition of the Alaska military posts, obtained from the owner of these horns permission to forward them to the Smithsonian Institution, where they may now be



Assigned #2838 in McLain's report, no. 3 on Plate 15. Smithsonian photo.

seen. This was the most perfect pair of horns of this kind ever found in Alaska, so that this contribution to the Smithsonian collection is no doubt a valuable one.

Another particularly noteworthy item, which illustrates the complexity of military and Native American interactions, is a buffalo robe that Wilcox donated two years before his passing. According to the records of the Smithsonian Institution:

The original accession file lists it as a "[b]uffalo robe, given to Gen. Wilcox by a tribe grateful for the recovery of one of their favorite young men under his treatment." Information on the collection was evidently conveyed verbally by Wilcox, who identified the origin of some pieces, many as Sioux, but did not identify the "grateful tribe" from whom this robe

came. ... Striped robes were made by several Plains tribes, but the arrangement of colors on this one suggests that it was produced by a member of one of the quilling societies that existed among the Cheyenne, Arapaho and Gros Ventre. Women in these soci-



eties undertook specific projects in fulfillment of a vow, often as a prayer for the welfare of beloved relatives. "The recovery of one of their favorite young men" would, for example, be an appropriate occasion for such a vow.

Assistance to the Scientific Community

In addition to his own publications and collections, Wilcox's contributions to science include the assistance he provided to other members of the community. The letter to Sereno Watson quoted in *Part 2* is an excellent example, and an examination of his correspondence would undoubtedly yield numerous similar interactions.

The best-documented example relevant to our narrative involves another botanist who had also previously been in Idaho. This was A. Isabel Mulford, who collected extensively in southwestern Idaho in 1892, including the plant that would be named after her (Mulford's milkvetch, *Astragalus mulfordiae*). Mulford's trip to Idaho was 10 years after Wilcox's departure, but she did con-

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nect with another Boise area resident, Mary Hallock Foote (a renowned writer and illustrator previously mentioned in *Part 2*). The two even went out collecting on horseback, most likely the area above the Boise River where Foote had once lived (Mulford 1894).

Mulford, who has the distinction of being the first stu-

dent to earn a Ph.D. at Washington University in St. Louis, did her doctoral research on agaves. In her published dissertation (Mulford 1895), she gives credit to Wilcox for assistance and for photos, specifically noting the value of his "habit photos." Plate 48 is one of Wilcox's photographs of a sergeant from Fort Huachuca standing next to a large *Agave palmeri*.

Mulford also quotes Wilcox describing which species of agave that cows will eat in Arizona. It is uncertain whether Mulford and Wilcox ever actually



Agave palmeri at Fort Huachuca. Photo from Arnold Arboretum (harvard.edu).

met in person, or only corresponded. Although she is known to have collected in Texas and New Mexico in the 1890s, as confirmed by her collections at the Missouri Botanical Garden, there are no equivalent collections from Arizona.

It is also likely that Wilcox provided aid and congenial companionship to field naturalists exploring the poorly known regions around the remote posts where he was stationed. As evidence, some specimens of Mexican pinyon (Pinus cembroides) collected in the Huachuca Mountains in June 1892 specify Wilcox as collector, while others bear Lemmon Herbarium labels (SEINet search, Oct. 2022). This suggests that Wilcox spent at least one day in the field with the famous botanical couple, John and Sara Lemmon, during their exploration of southeastern Arizona in 1892 (Agnew & Agnew 2020). Ten years previously in 1882, the Lemmons had stayed at Fort Huachuca and received considerable help from the post commander. Most of their follow-up trip a decade later was spent in the Chiricahua Mountains, accompanied by a former sergeant from Fort Bowie, but they did make at least a brief visit to the Huachuca Mountains in June, by which time Wilcox was in residence.

The Lemmons' reports also provide excellent context on the ongoing rationale for the forts in Arizona during this period, in the form of bloody conflicts involving hostile tribes, massacred settlers, and army actions. As later reported by Sara, however (letter quoted in Agnew & Agnew 2020, p. 370):

In our thirteen years of hand to hand work in these jagged mountains and wild plains, we have never carried among the Apaches, the Navajoes and among all the hostile Indians we have met, especially in Arizona and New Mexico, anything more warlike than our little sheath knife for the purpose of gathering bulbs and plants. In the rocky crags, the deep ravines, in every conceivable place,--among the cacti, in the caverns, wherever we camped in between the rocks, we have met the Indians and never have we had any warlike action from them. Sometimes they would look surprised to see a man and woman walking side by side as we did in our work. They called us Medicine men and would follow us fifteen or twenty miles and bring their arms full of bulbs and plants and they were able to give us the Indian names for the medicine plants that we might have.

It is likely that Wilcox had much the same experience, especially as a practicing physician. This could also be the source of his report of medicinal properties for *Agave palmeri* and a species of *Jatropha* (Bastede 1896).

Epilogue

We return to Fort Boise for a fitting tribute to Wilcox, indirectly provided by the aforementioned Mary Hallock Foote. Although Foote did not arrive in Idaho until a year and a half after Wilcox's departure, a letter (25 May 1884) to her friend Helena De Kay Gilder provides us with a lovely narrative of an activity that would have been a daily routine in Wilcox's life while at the Boise Barracks. At the end of a Sunday walk with her family, from the boarding house at 7th and Jefferson



Wilcox photo in dress uniform. Photo from JSTOR, photo date unknown.

(run by her sister and brother-in-law), up the toll road toward Idaho City, and back to Boise on a trail called the Pipe Trail, Foote (1884) recalled:

The sun had not yet set when we reached the mouth of the [Rocky] canyon and the children begged that we might go up on the hill back of the Post [Fort Boise] and hear the "retreat." I had to be informed by my son [Arthur Jr.] that the retreat was the flourish of bugles at sunset -- so we went up the hill -- and set down on the dry, short grass, across the valley the sun was touching the edge of the low line of mountains, seen in perspective. As it became a red half circle above the mountains, we heard the first notes of the bugle. The soldiers formed in two dark lines across the parade ground opposite the officer's quarters and the flagpole. A soldier came out and stood by the cannon -- and another by the halyards of the flag. Lieutenant Galbraith came out with white gloves on. Two more buglers joined the first one and then - "sweet sweet o Pam!" -- piercing sweet and melancholy -- the bugles played. It was too short, like a bird's song. Then the cannon was fired -and the flag floated down and then Lieutenant saluted ...And it was the first "outward and visible sign" of the respect due to the flag, that little Arthur ever saw, I believe.

Thank you for your service, Brigadier General Dr. Timothy Erastus Wilcox, Naturalist and Botanist. •

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Annual Meeting 2023 INPS Annual Meeting—Exploring the Heart of Idaho

By Kristin Fletcher and Lisa Horton, Wood River Chapter

When: June 30, July 1, 2, and 3, 2023.

Where: We'll center ourselves at the Sunny Gulch Campground Pavilion, 4 miles south of Stanley on Highway 75 near the Redfish Lake turnoff. Stanley is located 60 miles north of Ketchum, 133 miles east of Boise and 256 miles south of Moscow.

Registration: Includes field trips and speakers - \$30 per person, students \$15, no charge for children under 15. Registration postmark deadline is May 26, 2023. Additional details on registration form (https://woodriverinps.wixsite.com/wrinps/about-4).

Schedule:

June 30-July 2. (Subject to change.) (All times MDT.) *Friday, June 30*

- 2:00-6:00 p.m. Check in at the Sunny Gulch Pavilion; receive packet and campsite assignment (if applicable) and updates; finalize field trip schedules.
- 3:00-4:00 p.m. Quarterly meeting of the INPS state board at Stanley Community Library, 240 Niece Ave, Stanley, Idaho.
- Arrival-6:00 p.m. Campground Wanderlust–How many species can you find?
- 6:00 p.m. Potluck dinner at Pavilion. Bring a dish to share, beverage and reusable plates, cups and utensils.
- 7:00 p.m. Welcome by INPS State President; meeting logistics by Wood River Planning Committee.
- 7:15 p.m. Kickoff presentation at Pavilion–"Dark is the New Black" with Tim Frazier, astronomer, tele-scope maker and photographer.
- 10:00 p.m. Dark sky observing with Tim's very cool telescopes, assisted by naturalist Kristin Fletcher (weather permitting).

Saturday, July 1

- Field trips (choose one)
 - o Remarkable Fens of Central Idaho & Trap Creek Meadow (limit 15 participants, 2/3 day)
 - Historic Pole Creek Ranger Station and RNA (30, 2/3 day)
 - o Bear Valley Wet Hillside & Camas Meadows (20, full day)
 - o Fourth of July Lake Alpine Plants (15, full day)
 - o Impacts of Wildfire (25, full day)
 - o Redfish Lake Inlet & Lily Lake (12, full day)



Sawtooth Mountain Range. Photo by Jay Dorr.

- 3:00-5:00 p.m. Drop off auction items at Stanley Community Building, 510 Eva Falls Ave/Highway 21.
- 5:00-7:00 p.m. Happy Hour & Silent Auction at Stanley Community Building; auction benefits the Education Research Inventory Grant (ERIG) program.
- 7:00 p.m. Catered dinner at Stanley Community Building; indicate meal preference on registration form.
- 8:00 p.m. INPS annual business meeting and election of officers.
- 8:15 p.m. Keynote presentation: "The Geology of Central Idaho as Related to Soil Fertility and Plant Habitat" with Dr. Paul Link, Emeritus, Idaho State University Department of Geosciences; co-author of new Roadside Geology of Idaho; book signing to follow.
- 9:15 p.m. Clean up ~ volunteers appreciated!

Sunday, July 2

- Field trips (Choose one)
 - o Remarkable Fens of Central Idaho (limit 15 participants, 1/2 day)
 - o Botanical Field Sketching (15, 2/3 day)
 - o Rocks, Plants and Fungi, Oh My! (25, 2/3 day)
 - o Stanley Lake Earthquake and Endemics (20, 2/3 day)
 - o Geology and Plants of the Sawtooth Basin and Malm Gulch (30, full day)
- 7:00 p.m. Bring-your-own dinner & get together at Pavilion.
- 8:00 p.m. Closing presentation "Designing Custom Identification Keys for the Sawtooth NRA Flora with Steve Botti, author of An Illustrated Flora of Yosemite National Park and Mayor of Stanley.

Monday, July 2

- Field trips (Choose one)
 - o The Imperiled Whitebark Pine (limit 30 participants, 1/2 day)
 - o On-your-own field trip (1/2 day, see information below)
- 11:00 a.m. Campground check out.
- INPS Annual Meeting & Campout ends.

Field Trips:

Meet at Sunny Gulch Pavilion, elevation 6,200 ft. Be prepared for changeable Idaho weather, dress in layers and prepare for temperature extremes and rain. Bring sufficient water, sunscreen, bug juice, a snack/lunch and hiking poles, if you use them. Wear a hat and sturdy walking shoes. Toilet access available on all trips. *Note:* Leashed dogs allowed on most field trips.

(***) All-day trips start 8:00 a.m., back about 4:00 p.m. (**) 2/3-day trips start 9:00 a.m., back about 3:00 p.m.

(*) 1/2-day trips start 9:00 a.m., back about 1:00 p.m.

Hike Difficulty Rating–Please know and respect your limitations!

- *Easy:* Mostly level walking on paved roads or improved paths/roads, short distances.
- *Easy/Medium:* Some elevation changes; paths are not paved but well defined.
- *Medium Difficult:* Expect hills and uneven footing. Bring hiking poles if you use them.
- *Difficult:* Cross country hiking, significant elevation changes or high elevations.
- *RT* means round trip driving distance from Pavilion, unless otherwise specified.

Saturday

Remarkable Fens of Central Idaho & Trap

Creek Meadow ():** Visit Mays Creek Fen Research Natural Area to see rare carnivorous species, orchids and other species at this remarkable, sensitive site. Then, visit Trap Creek Meadow north of Stanley. Short walks on wet, uneven terrain. Bring footwear for wading in water and mud, and maybe poles. Drive 28 miles RT on paved & and 2 miles on dirt roads; short walks. From Pavilion drive 32 RT miles on paved road to Trap Creek. Led by Dr. Lynn Kinter/Idaho Department of Fish and Game Lead Botanist. No Dogs. *Medium Difficult to Difficult for terrain.*

• *Historic Pole Creek Ranger Station and RNA* (**): Visit the historic Pole Creek Ranger Station built in 1909 and used until the 1950s. Located in the center of a wide valley bottom, the station is adjacent to the Pole



Pole Creek Station. Photo by Paul Ries.

Creek Exclosure Research Natural Area established in the mid-1990s. Compare vegetation inside and outside of the exclosure and impact and recovery from heavy sheep grazing in the intervening years. Led by Paul Ries/ forester and former Sawtooth NRA Area Ranger and Steve Botti/author of An Illustrated Flora of Yosemite National Park and Mayor of Stanley. Drive 22 miles RT on paved and 6 miles on dirt roads. *Medium Difficult*.

• **Bear Valley Wet Hillside & Camas Meadows** (***): Visit a remarkable wet hillside with large diversity of species, adjacent drier ground, and riparian area. Short walks from road on very steep, wet, uneven terrain. Continue to Bear Valley to explore huge, spectacular camas



meadows and drier meadows. Led by Jay Dorr/retired Sawtooth NRA trails manager and John Shelly/retired USFS range manager. No dogs. Drive 50 miles on paved and 35 miles on dirt roads RT. *Medium Difficult to Difficult for terrain.*

Bear Valley wet hillside. Photo by Kristin Fletcher.



Camas Meadow. Photo by Lisa Horton.

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• *Fourth of July Lake Alpine Ecology (***):* On the way to the Fourth of July Lake trailhead, we'll briefly stop to observe post wildfire regeneration of the 2005 Valley Road Fire, and then continue to trailhead. The 3 mile RT hike follows a mountain stream to a lovely lake to observe alpine species (8,800' trailhead to 9,400' lake). Led by Paul Allen/plant enthusiast & Master Naturalist and Beth Corbin/retired BLM botanist (Owyhee Field Office) and current Southern Idaho Rare Plant Working Group Coordinator. Drive 42 miles RT on paved and 20 miles RT on dirt roads. *Medium Difficult to Difficult for altitude*.



Fourth of July Lake. Photo by Kristin Fletcher.

• *Impacts of Wildfire! (***):* Visit the 2005, 41,000 acre Valley Road Fire along Fourth of July Creek Road, and then drive to areas burned in September 2022 during the 38,000 acre Ross Fork Fire. Learn about fire behavior, fire ecology and how nature heals and regenerates herself in different habitats. Drive 22 miles RT on paved & 11 miles RT on dirt roads. Led by Nick Yturri/Sawtooth NRA fire management officer, Eva Strand/University of Idaho Associate Professor of Rangeland Ecology and Management and Kristin Fletcher/naturalist and former nationally certified Firewise educator. *Medium Difficult*.



Valley Road Fire. Photo by Kristin Fletcher.

• **Redfish Lake Inlet & Lily Lake (***):** Take a gorgeous, 4.5 mile boat ride to far end of Redfish Lake (extra fee of \$22/person RT due at check in at Pavilion). Wilderness hike to lovely Lily Lake and waterfalls, and then backtrack to explore lakeside, springs, huckleberry patches and a spruce forest ecosystem. Drive 8 miles RT on paved road; boat trip; 2 mile RT hike. Led by Dr. Steve Bunting/Professor Emeritus, University of Idaho Department of Forest and Fire Ecology and Mary McClanahan/ retired BLM plant ecologist. *Medium Difficult*.

Sunday

• **Remarkable Fens of Central Idaho (*):** Visit Mays Creek Fen Research Natural Area to see rare carnivorous species, orchids and other species at this remarkable, sensitive site. Short walks on uneven, wet terrain. Bring footwear for wading in water and mud, and maybe poles. Drive 28 miles RT on paved & 2 miles on dirt roads; short walks. Led by Dr. Lynn Kinter/IDFG Lead Botanist. No Dogs. *Medium Difficult to Difficult for terrain*.

• **Botanical Field Sketching (**):** Beginners can learn the arts of field sketching and field notes; those who already draw or paint plants will sharpen their skills. After discussing basic anatomy, participants will have about 2¹/₂ hours of supervised sketching time near the campground. Choose watercolor or color pencils. Led by Poo Wright Pulliam/award winning local plant and wildlife artist and assisted by Lisa Horton/artist and naturalist. Supply list will be posted in advance at https:// woodriverinps.wixsite.com/wrinps/about-4. Easy.

• *Stanley Lake Earthquake & Endemics (**):* A short walk to the Stanley Lake inlet reveals where the beach and surrounding forest suddenly sank into the lake during the March 2020, 6.5-magnitude earthquake. Then explore a flat, 1 mile RT trail leading through a variety of dry and wet forest, open ground and ending in a large wet meadow. Finally, drive to a special spot, home to several species narrowly endemic to the Stanley area. Drive 18 miles RT on paved and 7 miles RT on dirt roads. Led by Dr. Don Mansfield/College of Idaho Professor of Biology and Curator of the Harold M. Tucker Herbarium and Jay Dorr/retired Sawtooth NRA trails manager. *Easy/Medium*.

• **Rocks, Plants and Fungi, Oh My! (**):** Dive into the many intricate relationships between geology, plants, their habitats and the Kingdom Fungi ... and why it matters. Then, scour nearby environs for mushrooms and learn how to identify them. Led by Genny Steiner/ past president of Southeast Idaho Mycological Association. *Easy/Medium to Medium*. • *Geology and Plants of the Sawtooth Basin & Malm Gulch (***):* Learn about the amazing geological history of the spectacular Sawtooth and White Cloud Mountains and nearby Challis Volcanics, with its petrified sequoia and endemic species, formed when calderas exploded about 50 million years ago. After a geological overview of the Sawtooth area, drive to Malm Gulch for high desert species and endemics, then hike to a petrified sequoia forest to learn about the volcanism that preserved the trees. Drive 100 miles RT on highway; 7 miles RT on dirt roads; hike 2¹/₂-3 miles RT on trail and in dry creek bottom. Led by Dr. Paul Link/Emeritus, Idaho State University Department of Geosciences and John Shelly/retired USFS range manager. *Difficult*.

Monday

• The Imperiled Whitebark Pine: (*) An intimate look at whitebark pine, why it is being considered for listing under the Endangered Species Act and what Sawtooth NRA biologists and botanists are doing to reverse its decline. Visit high altitude stands near Galena Summit (8,700') and learn about their remarkable ecology, current threats and restoration efforts such as planting resistant seedlings and removing competing species. Drive 80 miles RT; carpool for short, steep 4WD road; hike < 1 mile RT. Led by Robin Garwood/Sawtooth NRA wildlife biologist, Dr. Steve Bunting/Emeritus, University of Idaho Department of Forest and Fire Ecology and Dr. Penny Morgan/University of Idaho Professor of Fire Ecology and Forest Ecology and Certified Senior Fire Ecologist. *Medium Difficult to Difficult for altitude*. **On-Your-Own Adventures:** Stanley and the Sawtooth Valley offer myriad opportunities for on-your-own discovery and adventure. Find a list of recommendations at https://woodriverinps.wixsite.com/wrinps/about-4.

Auction: The ERIG auction will have a few fresh takes this year. For example, each chapter will be asked to provide a gift basket filled with items representing their region of Idaho. Also, Silver Creek Preserve has donated an overnight stay in a classic cabin rarely accessible to the public. Individuals will also be asked to bring an item to donate as in the past. We accept check or cash only; no credit or debit cards. ATMs available in Stanley.

Accommodations: We plan to reserve as many campsites at Glacier View Campground (Redfish Lake) as we can, plus some in Sunny Gulch Campground. However, if you need RV hookups or a hotel room during this busy summer season, please act quickly. Find a list of all accommodations and campsites at https://woodriverinps.wixsite.com/wrinps/about-4 •





Field Explorations

The 25 Peaks Project: Idaho's High Country

By Paul Allen, Sawabi Chapter

The alpine: A mountain biome region that occurs above the tree-line and below the snow-line; a place of botanical wonderment.

When Mike Mancuso introduced the idea of including "25 peaks in Idaho" as part of a floristic study of alpine mountain summits in western North America, I jumped at the opportunity. In brief, the project aims to document the presence of all vascular plant species on a geographically diverse set of 25 of Idaho's prominent alpine summits. Mike will tell you more about this project in a future issue of *Sage Notes*.

Alpine plant communities offer a fascinating study in adaptation and convergent evolution. The challenges that plants face in these harsh environments are many and demand novel solutions:

- Short growing season
- Cold winters
- Thin, nutrient poor soil
- Hurricane force winds
- Drought
- Extreme temperature variation
- Intense, damaging ultraviolet radiation
- · Limited pollinators
- Mountain goat herbivory

Add to these challenges the fact that different aspects of a summit will experience very different exposure to the sun and wind. Just think about how a prevailing wind will produce deep snow cornices on lee slopes. By July, plants on our northeast faces may yet be buried and wet under snow pack while the southwest faces are scorched and dry.

Another interesting feature stems from their evolutionary history. Many alpine plant communities may be relics of past ice ages. As climate has warmed, these communities have migrated upslope and are now isolated disjuncts on "sky islands." Being reproductively isolated, novel adaptations and speciation may occur.

So, what is to be found? The majority of alpine vascular plants in Idaho are perennial forbs. The growing season is just too short for many plants to complete their life cycle as annuals. Fleshy roots and underground organs store resources through the long dormant periods, allowing the plant to quickly grow when snow melts. Many plants form flower buds as winter approaches, allowing a quick bloom for the following spring.

Above the tree line, extreme winds limit a plant's size and flatten their shape. The brutal winds prune growth



The author above base camp at Bear Creek Lake. Selfie by Paul Allen.

both by direct mechanical effects but especially through desiccation. Consequently, many alpine plants share the fleshy leaves and dense trichomes of their desert cousins. Small size or dwarfism is a common adaptive feature to these extremes, and most alpine plants are just a few inches tall. Even plants of a species common to the lowlands may exhibit diminished stature here. One botanist wrote, "Plants adapt by scrunching down close to the ground where botanists have to crawl around on their bellies with hand lenses to fully appreciate the diversity of life ... Plants are mere centimeters tall, forming a mat so dense that it's hard to pick out separate species." Another noted, "a world of miniature plants only a few inches high... leaves huddle near the ground or contour it with mats or cushions. Typically, the leaves of these plants are waxy or densely hairy-anything to protect them from the wind and intense solar radiation."

It is fascinating to observe how plants from very distantly related taxa have, through convergent evolution, met the demands of life above tree-line in similar ways. There is much more to say on this topic, but let me share a few reflections on the "25 Peaks in Idaho" experience.

I joined two strong teams led by seasoned botanists Bob Moseley (Wet Peak South) and Mike Merigliano, Kristin Kaser, and Trista Crook (Mount Baird).

The expedition to Wet Peak South in the Lost River Range covered 3 days in mid July. Bob was joined by Kim Ragotzkie, Renée Mullen, Gary Hundt, and myself. A full backpack climb took us to base camp at a glacially carved basin with a lovely cirque lake. The following day we labored up scree fields, mountain meadows, and exposed ridgelines to a summit surrounded by other giants yet cloaked in snow. We documented many dozens of species using whole specimens, tissue samples, and photography. Long ago, Bob conducted extensive field studies in these mountains and had co-authored the book "Alpine Wild Flowers of the Rocky Mountains," which he now used as a reference. Two of my favorite encounters included: *Hymenoxys grandiflora* (graylocks), and *Pedicularis contorta* var. *ctenophora* (coiled parrot's beak), the latter occurring as a purple morph that none of us had previously encountered (see photos).

Mount Baird lies just north of Palisades Reservoir; the tallest summit in the Snake River Range in Southeast Idaho. Here, our leaders were joined by Linda Merigliano and myself. We got it done in just one day but left at dawn and managed the plant presses in the dusk. One species, new to all of us, was *Angelica roseana*, an unusually robust plant to be found in the alpine zone. The pictures tell the story best... •



From left to right: Kim, Paul, Bob, and Renée. Photo by Gary Hundt.



Pedicularis contorta, var. ctenophora. Photo by Paul Allen.



Bob Moseley. Photo by Paul Allen.



Kim and Paul getting low. Photo by Gary Hundt.



The approach to Wet Peak. Photo by Paul Allen.

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The 25 Peaks Project...Continued from Page 13



Collomia debelis. Photo by Paul Allen.



Hymenoxys grandiflora (graylocks). Wet Peak in distance. Photo by Paul Allen.



Polemonium viscosum, sky pilot. Photo by Paul Allen.



On Mount Baird. Kristin, Trista, and Mike. Photo by Paul Allen.



From left to right. Gary, Kim, Renée, and Bob. Photo by Paul Allen.



Mike Merigliano with Angelica roseana. Photo by Kristin Kaser.



Kristin Kaser. Photo by Paul Allen.

Botanical Publications

Ornamental Yew Brochure

From Lynn Kinter, Pahove Chapter

The Idaho Department of Fish and Game and Blaine County Weed Department recently published a brochure on the dangers of using ornamental yew in home and business landscaping. •



Botanical Foray

15th Annual Idaho Botanical Foray

By Don Mansfield, Pahove Chapter

From July 7-11, 2022 at least 20 folks with a passion for plants from all corners of Idaho and as far as Seattle gathered at the Yellow Pine Campground along beautiful Johnson Creek just south of the town of Yellow Pine, 30 air miles ENE of McCall, Idaho. These crazy botanists spent four days exploring northern reaches of the Boise National Forest (BNF) and the southern part of the Krassel District of the Payette National Forest (PNF) at the western edge of the Frank Church River of No Return Wilderness. Each day two to four groups of seasoned and aspiring botanists searched new areas to voucher Idaho's diverse and amazing vascular flora. At the end of each day's exploration we returned to camp to press plants, meet with old acquaintances, make new friends, and share meals.

Each morning participants could choose which group to join for the day. Some groups undertook lengthy hikes while others did not venture far from cars, but rather stopped at many places along the way—lots of options. But all groups collected plants from areas as diverse as coniferous forests, lush montane wetlands, montane and riparian meadows and subalpine ridges.

Over the course of four days we visited places including: along Johnson Creek to meadows south of Landmark and to Hennesey Meadows, Profile Gap towards Coin Mountain, trail to Crater Lake southwest of Profile Gap, headwaters of Big Creek and up Lick Creek trail, Monumental Summit towards Murphy Peak, Parks Creek trail, and Sugar Creek. In the four days we gathered more than



View of the River of No-Return Wilderness. Photo by Don Mansfield.



15th Annual Idaho Botanical Foray participants: standing left to right: Beth Corbin, Sandy Smith, Gary Hundt, Nathan LeClear, Don Mansfield, Jim Smith, Trista Crook, Derek Antonelli, Rob LaPort, Julienne Ng. kneeling left to right: Ian Clifford, Elizabeth Mandala, Nyika Campbell, (Sophie Prospero RIP), Liz Martin, Wesley Boscom, Teague Scott (Moseley). Not pictured: Daniel Botello, Chadwick LeFehr, Ty Clayton, Paul Allen, Anne Halford, and Steve Martin (photographer!).

830 unique collections to document the diverse flora we observed. These will be deposited in the Snake River Plains herbarium at Boise State University, with several duplicates at the College of Idaho herbarium. Collections from these forays contribute to the ongoing study of Idaho's remarkable flora. And they can be viewed online at the Consortium of Pacific Northwest Herbaria (https:// pnwherbaria.org/data/search.php) after we have identified, labeled and photographed them (see below if you are interested in helping with that project this winter!!) And new to the Foray program this year will be a checklist of vascular flora submitted to each of BNF and PNF.

There are always some unusually interesting plants we find during our explorations. This year, for example, we found an extension to the distribution of the rare Sacajawea bitterroot (Lewisia sacajaweana) (NOTE: We did not collect it!) We relocated a few species that had been collected many decades earlier in the general area. For example, in the Landmark area, we found sweetgrass (*Hierochloe odorata*), with whom many of you may be familiar if you have read Robin Walls Kimmerer's book, Braiding Sweetgrass. Another rare plant that we saw, mahala mat (prostrate ceanothus or *Ceanothus prostrata*), is one whose origins in Idaho may be from either Forest Service or early settler plantings. Members of the Rare Plant Working Group are trying to figure out if this plant is native to Idaho. For some of us in southern Idaho, seeing Antennaria racemosa is always a surprise as we might mistakenly think we are seeing a snakeroot

(*Eupatorium*), even though it is more common in Northern Idaho. Other plants we observed, extending down from northern Idaho that are not very common closer to Boise include: single delight (*Moneses uniflora*), northwestern sedge (*Carex concinnoides*), white-veined wintergreen (*Pyrola picta*), and Farr's willow (*Salix ferriae*). Of course, we have not yet identified all the plants we collected. If you want to help in that project, see below to find out how.

As has been the case with the prior 14 Idaho Botanical Forays, we celebrated each evening around the campfire, shared stories, and enjoyed what has become our traditional Saturday night potluck dinner. We even had a bit of music. A good time was had by all.

If you would like to help with the identification of the plants collected during this foray, please join us for one or more of the upcoming Identification Workshops each month on a Thursday evening:

Session	Date	Time	Location
1	Nov 3, 2022	6-9 pm	BSU Herbarium
2	Dec 8,2022	6-9 pm	C of I Herbarium
3	Jan 5, 2023	6-9 pm	BSU Herbarium
4	Feb 16, 2023	6-9 pm	C of I Herbarium

If interested, please contact me (Don Mansfield: dmansfield@collegeofidaho.edu) for directions. (NOTE: The BSU herbarium has moved from the Science Building to a new location on Royal Street just west of 9th Street.)

Keep your eyes peeled (forthcoming INPS newsletters and website) for announcements of the Sixteenth Annual Foray, which will be scheduled for sometime during the summer of 2023. The foray location has yet to be determined, but it will likely be in Northern Idaho. Seasoned and novice botanists alike can enjoy getting to know the plants of our diverse and beautiful state. Feel free to join in. No prior knowledge of plants is required, but you will

be guaranteed to be surprised by what we collectively find, no matter what your background! •

Elizabeth pressing plants. Photo by Steve Martin.





Nathan LeClear holding specimens (L to R): Oregon saxifrage (Micranthes oregana), white bog orchid (Platanthera dilatata), globe penstemon (Penstemon globosus). Photo by Gary Hundt.



Pressing plants (L to R): Anne, Ian, Beth, Sandy and Nyika. Photo by Steve Martin.



Cusick's biscuitroot (Lomatium cusickii). Photo by Gary Hundt.



Don, Ty and Nathan playing some music. Photo by Beth Corbin.

Paul (in green) telling a spellbinding story. Photo by Don Mansfield.





Ian, Nyika, Beth and Anne near Profile Gap. Photo by Beth Corbin.

From Clarkia (Idaho) to China: Pahove Members Explore the Floristic Connection by Way of Fossils

Article and Photos by Bob Moseley, Pahove Chapter

I'm pretty sure when you mention Clarkia to most INPS members, they think of the genus in the evening primrose family that includes the striking, pink-flowered *Clarkia pulchella* common across parts of Idaho. It's also the name of a small logging community in the Clearwater Mountains east of Moscow. Both are named after the Clark of Lewis and Clark fame, understandably Latinized in the case of the plant, oddly so in the case of the village. However, Clarkia, the village, is world-renowned in botany circles as the site of extraordinarily preserved Miocene plant fossils.

Hopefully you were lucky enough to see paleobotanist, Dr. Bill Rember's, Pahove presentation on the Clarkia fossil beds in 2019. As a brief background for those who missed it, I offer this: Just shy of 15 million years ago the valley that is now the upper St Marie's River contained a lava-dammed lake surrounded by deciduous forest that dumped tons of leaves into the water every year. These became covered by sediments that eventually filled the lake. So far this is so typical. There are many Miocene fossil beds like this around Idaho. The extraordinary partand why it's world famous-is that the lake was chemically stratified, so there wasn't much disturbance by insects or fungi, and the region has not been tectonically active since the lake filled. In other words, the anaerobic conditions of water-saturated sediments limited decomposition and preserved the plants themselves, not mere impressions. Whole leaves can be lifted off the moist sedimentary cleavage planes 15 million years after they fell off the tree, sometimes with fall colors intact! It's as exquisite as it is astonishing.

I first visited Clarkia in the early 1980's, at the original 1972 fossil discovery site, a cut bank for expansion of what was then a snowmobile racecourse, but is now a motorcycle track (warming climate?). In the 1990's Bill purchased a fossil exposure on nearby Emerald Creek, where he's living the dream of having a limitless supply of fossils a few steps from his front door. In late July he graciously hosted a gang of INPS members including INPS President Michael Mancuso, botanist Barbara Ertter, xeriscaper Peg Faith, and myself. We decided this qualified as an Idaho Native Plant Society field trip... for plants that were native here 15 million years ago!

Digging with us was Patrick Fields, a paleobotanist and expert on the famous Miocene flora of Succor Creek in southeastern Oregon (and who gave a Pahove presentation earlier this year). A retired academic from Michigan, Dr. Fields is now a Curator of Paleontology at the Orma J. Smith Museum of Natural History at the College of Idaho in Caldwell. He was in Clarkia to work with Bill and augment the Museum's already extensive Miocene fossil collection including Succor Creek, Ponderosa State Park/McCall, and elsewhere in the region. Bill estimates that aside from his own (at the U of I), the Smith Museum's Clarkia collection is the second largest in existence.

There are hundreds of scientific papers describing the Clarkia flora, its geologic setting, and the Miocene ecology it represents. The predominant fossils include a mix of broadleaf and coniferous trees that ecologically characterize forests from moist, warm temperate—verging on subtropical—environments. Today you can see forests like this only in the Southeastern US and the highlands of Southern China and adjacent Southeast Asian countries.

The diversity of conifers in the Clarkia flora is greater than any other of the many Miocene floras in the Columbia Basin, and a particular specialization of Bill. While they were all native to Miocene Idaho, only a few gymnosperm genera are still extant in Western North America, while others only survive in the southeastern US and/ or Southern China. Here's a list of the conifers occurring in the Clarkia flora, many of which we unearthed in our weekend of digging:

Pine family

- Fir (*Abies*): Northern Hemisphere
- Cathaya: Southern China

• Pine (*Pinus*): Northern Hemisphere **Yew family**

- Amentotaxus: Southern China and Southeast Asia
- Yew (Taxus): Northern Hemisphere

Redwood relatives

- Cunninghamia: Southern China and Southeast Asia
- *Glyptostrobus*: Southern China and Southeast Asia
- Dawn redwood (Metasequoia): Southern China
- Bald cypress (*Taxodium*): Southeastern N. America

Arborvitae relatives

- Incense cedar (*Calocedrus*): China and Western US
- Cedar (Chamaecyparis): East Asia and North America

The broadleaf tree flora at Clarkia is also diverse. Only alder, birch, maple, aspen and willow still occur as na-

tives in our modern flora. The beech family (Fagaceae), no longer native to Idaho, is well-represented with beech (Fagus), oak (Quercus), stone oak (Lithocarpus), and an abundance of chestnut (Castanea) fossils. There is also an extinct beech genus (Pseudofagus) known only from Clarkia and a few sites nearby. Then there are many genera composed of species that occur in the modern floras of BOTH the Southeastern US and Southern China, such as tupelo (Nyssa), magnolia (Magnolia), honey locust (Gleditsia), tulip tree (Liriodendron) snowdrop tree (Halesia), and sweetgum (Liquidambar). You might recognize fossils of the widely distributed north-temperate plane tree genus (Platanus) and the widespread, mostly subtropical-to-tropical laurel family (Lauraceae; think avocado). We also found well-preserved fruits of Zenia, a legume genus that has only one living species narrowly distributed in Southern China, where it happens to be a nationally protected threatened species.

Despite extensive collecting at Clarkia for half a century, surprising and valuable new discoveries are still being found regularly. Our trip was no exception, with Bill expressing delight at several of our finds: quillwort (*Isoetes*) looking like a squashed spider, sweet-fern leaf (*Comptonia*), *Cunninghamia* cone, and even some fossilized poop full of insect parts! Peg was rewarded with a possible tiny flower, and Barbara puzzled everyone with a poinsettia-like mystery fossil. Bill then showed off his technique for freeing well-preserved leaves by partially dissolving the matrix with hydrofluoric acid, making sure we all had a 15-million-year-old leaf to take home as a memento.

As a bonus, and to escape the worst of the afternoon heat, Bill led us to the nearby Hobo Cedar Grove on the St. Joe National Forest. Thanks to the far-sightedness of an early forester, this 240-acre stand of old-growth western red cedar (*Thuja plicata*) was spared the ax and is now a National Natural Landmark. Wandering in the

A 15-million-year-old birch leaf, now preserved in glycerin between plastic sheets.



Tulip tree and bald cypress fossils appear nearly identical to modern relatives in the southeastern US.

Multiple layers of fossils including poplar and the fruit of Zenia (lower left), with the dark spot being a seed.





Counterparts showing the two sides of chestnut leaf fossils.

cool shade of towering conifers hundreds of years old, enjoying the many ferns and shade-loving wildflowers in the understory, is always a wonderful treat, especially for Pahove Chapter members more used to sagebrush and open forests. •

Paleobotanist Bill Rember at home (literally) in his fossil bed.

Cone of the extant (Cunninghamia lanceolata), native to and widely planted across Southern China.

In Memorium

Marjory Stage 1930-2022

By Nancy Miller and Judy Ferguson, White Pine Chapter

A long-time and charter member of White Pine Chapter, Marjory Roller Stage, passed away on July 21, 2022, at the age of 92 at home in her own bed looking out her window at the surrounding nature.



Marjory was born in 1930 in Akron, Ohio, to Winfield and Edna Roller. Winnie, from Colorado, and Edna, from eastern Pennsylvania, met in Akron as part of one of the largest gatherings of the deaf from all parts of the country. They were encouraged to come work in the rubber factories.

Marjory at the Little Boulder Creek Campground in Latah County. Photo by Judy Ferguson.

Marjory studied at Akron University, then at Oberlin College for a Bachelor of Arts degree, and later at the University of Michigan for her Master of Science degree. She met Albert Stage. After their graduations, while Albert served in the Korean War, Marjory taught physical education to grades 1-12 in St. Clair, Michigan.

They married in 1954. Albert was hired by the U.S. Forest Service to work as superintendent of the Priest River Experimental Station in Idaho for two years. Their daughter Helen, a Whitepine Chapter member and former treasurer, was born while they were there. Albert was transferred to the Experiment Station in Spokane where sons, Winfield and Morgan, were born. Morgan and his wife Deb are also White Pine chapter members. While in Spokane, Marjory became Health Education Director at the Spokane YWCA and was active in Spokane's synchronized swimming program. After a short residence in Ann Arbor, the family moved in 1962 to Moscow. In December, Ben was born.

Marjory loved games of all types, whether board or card games, or sports. She retired from teaching and judging competitions in 1977. A number of chapter members enjoyed playing tennis with her, Al and other friends, playing multiple days per week. In later years, her group of friends again including some chapter members got together weekly to play board and card games.

Marjory also loved nature and the out-of-doors. She served three years as camp director at the Campfire Day



Bettie Hoff, Sage Fife, Logan Fife and Marjory Stage with the Palouse and the Kibbie Dome in the distance. Photo by Judy Ferguson.

Camp at Idler's Rest, where she introduced many Moscow-area girls to the joys of nature. In 1963, she and Albert purchased 80 acres on Moscow Mountain, later building their dream home in the forest, where she enjoyed tending her gardens, their horses and snow sports on the mountain. The large windows in the house looking over the forest gave her immense pleasure as she watched birds, small animals and larger wildlife in their element. Marjory served on the Chapter Conservation Committee for several years. Her dedication to conservation and preservation of natural resources was shared by the family and led to the creation of a conservation easement for some of their property with Palouse Land Trust.



White Pine members Jo Bohna, Marjory Stage, Bettie Hoff, Ray Hoff on the left. Helen Stroebel, Brent Knapp, Reid Miller on the right. Other Annual Meeting attendees join them at the table, Heyburn State Park pavilion, 2010 State Annual Meeting hosted by White Pine Chapter. Photo by Nancy Miller.

Al and Marjory were members of an early group at UI interested in native plants. This group with several others became the nucleus of the charter members of the White Pine Chapter of INPS. At one point Al was president of the White Pine Chapter and Marjory helped organize the meetings. With her friendly nature she was always considered the Welcome Chairperson. She made it a point to talk to all who were there for the first time. She also was in charge of refreshments for several years, asking others to volunteer, and we all appreciated the cookies that she made and brought. The Stages helped organize field trips, especially to see forested areas such as at the Priest River Experimental Station and the UI Experimental Forest. They also hosted chapter members at their home for meetings and potlucks. Marjory and Al enjoyed attending the State INPS Annual meetings. Reid and Nancy Miller have fond memories of hosting Marjory in their pickup camper at one of the State INPS Annual Meetings. The table which was made into a bed was a little short as she was quite tall, but she was glad to be inside and slept at an angle.

All the chapter members who knew Marjory would have their own stories of this warm and friendly woman. Gifts in her memory may be made to the Palouse Land Trust, Idaho Native Plant Society or Sojourner's Alliance. Condolences may be left at shortsfuneralchapel.com.

Carol DeDecker Wiens 1933-2022

By Paula Wiens and Dr. Don Mansfield, Pahove Chapter

The Southwest Idaho community of botanists, naturalists and explorers lost a dear friend to a stroke last May.



Carol Lynne DeDecker Wiens was born North Hollywood, California, on September 29, 1933. She moved with her parents and older sister to Independence, California when she was two years old. Her child-

hood was spent exploring the Sierra and Inyo Mountains and accompanying her botanist mother, Mary DeDecker, on collecting trips. Carol and her sister wrote about their childhood in the memoir *Sage & Sierra: Growing Up in Owens Valley*.

Carol married Del Wiens after they graduated from Pomona College. They had three daughters, Paula, Wendy and Alison. In keeping with their own childhood, she and her sister took their seven children on backpacking trips throughout their school years, an activity that continued a lifetime. Carol hiked the 213 mile John Muir Trail with her daughter Paula when she was 78.

Carol was ALWAYS up for an adventure. She had no hesitation in accompanying Del on plant collecting trips to South America, Europe, Africa, Australia and New Zealand with their young children in tow, including a year-long drive from London to Cape Town. After her daughters left home, she and Del continued their active lives exploring rivers in the Canadian Shield and a 7-year sailing voyage in the Pacific, until her peaceful death on May 4, 2022. She had been an active member of the Idaho Native Plant Society for the past 19 years that they lived in Boise. The following is a song written by her dear friend, Douglas Gilson. It aptly captures her spirit and love of her family, friends and our amazing world.

The Sage From Independence by Douglas Gilson

There's a valley in California Where Carol came of age In a town called Independence Surrounded by the sage

Sierra tower to the West Glean moisture from the sky Make a desert of the valley floor And the Inyo very dry

Carol trod the desert in her teens Camped out by mountain streams Gazed at the stars' stark majesty And formed her life-long dreams

Carol ventured forth and explored In canyon and ravine In partner with the man she loved They made an awesome team

When Del proposed a botanical trip From London to Cape town Carol's brow didn't wrinkle She never thought to make a frown

"Let's take the girls along with us!" The idea came alive And Delbert said, "You're right My Dear, To suggest that we should drive!"

Crossed deserts, found oases Spanned the Heart of Darkness too Steamed from the Cape cross the ocean To the land of the Kapgaroo

To the land of the Kangaroo

Then home from their roam to the Beehive Grown girls all left home Delbert said to Carol, "It's time to make ourselves a Dome." They did just that, it took a while Distractions did surround Progress interrupted By the urge to be outbound

Canoed the Green and San Juan Hiked the Escalante too Paddled five Arctic rivers Geodesic's finally through!

But that only fueled their dreaming Of what life would be like afloat So they sold the dome, searched around Bought themselves a sail boat

Eight years around the Ring of Fire

Then they left the sea, moved inland To Boise in Idaho State

It's there that Carol pondered Whatever might come next While reducing her verbal stories Into Chapters of published text

Sage and Sierra was a hit Round Independence town Their local storyteller Now an author of renown

We're gathered here to bid adieu To our very special friend And our collective stories Are a journey without end

To the Sage from Independence You're special to the core Wife and Mom, friend to us all We couldn't love you more

Chapter News

CALYPSO CHAPTER

When: Chapter meetings are held on the first Wednesday evenings of March, April, May, and October at 7:00 pm. The public is invited to all chapter activities. All chapter activities are subject to change—watch chapter emails for updates.

Where: Meeting are held in the Wildlife Building, North Idaho Fairgrounds, Coeur d'Alene.

Contact: For more information about Calypso Chapter activities, contact Derek Antonelli:

ds.ca.antonelli@gmail.com, (208) 691-1070.

Upcoming Events

March 1: The presentation topic for this meeting has not been determined yet. Please submit topic suggestions for this or future meetings.

April 5: The presentation topic for this meeting has not been determined yet. Please submit topic suggestions for this or future meetings.

April 22: Spring Plant Walk. Post Falls Community Forest. Watch emails for details.

April 28 to May 1: Worldwide City Nature Challenge. Submit iNaturalist observations. Chapter will plan outings to support this event.

LOASA CHAPTER

When: Meetings are held third Thursday of each month at 7:00 p.m.

Where: Taylor Building, Room 247, College of Southern Idaho, Twin Falls.

Contact: Bill Bridges, bridgesbill34@yahoo.com

PAHOVE CHAPTER

When: Meetings are held on the second Tuesday of each month from October–April starting at 7 p.m. Times, dates, and topics are tentative. Current information regarding meetings, announcements, and activities will be sent to members via email. Events are also posted on the Pahove Chapter page of the INPS website:

https://idahonativeplants.org/pahove/

Where: Chapter presentations are underway. Starting November 2022, we will offer a hybrid format with inperson viewing at the MK Nature Center and at home viewing via a Zoom link.

Contact: For more information about Pahove Chapter activities visit the website: www.idahonativeplants.org or email Karie Pappani at

pahove.chapter.president@gmail.com.

Past Events

October 12: We had a very warm and welcoming chapter social at the Sun Ray Cafe. We were so happy to see everyone's smiling faces in person. Thank you to Susan for orchestrating the gathering. It was a success! During that time, we elected new officers. Please view a list of our current officers in *Sage Notes* and on our chapter webpage. Thank you all for serving on the Pahove board!

November 8: Dr. Megan Cattau, Assistant Professor in Human-Environment Systems at Boise State University, presented "Mapping of Invasive Species with Unoccupied Aerial Systems (UAS)" and spoke about the importance and wonder of native plants.

Upcoming Events

December 13: Rob Laport, Assistant Professor of Biology & Director of the Harold M. Tucker Herbarium at the College of Idaho, will speak on "Hidden biodiversity: Genome duplication shapes pollinatorvisitation, herbivore specialization, and plant community structure."

January 10: Michael Mancuso, State INPS President will present "Made in Idaho: Idaho's Endemic Plant Species."

February 14 or 15: Ron Bitner/Amy Dolan will speak about the Pollinator Project.

March 14: Matt Lavin, INL Research, will speak. Topic TBD.

April 11: Bob Moseley will present "Revisiting Shangri-La: Photographing a Century of Environmental and Cultural Change in the Mountains of Southwest China."

SAWABI CHAPTER

When: Board meetings at least quarterly and to be announced. Plant walks generally occur each Saturday and Monday through the early blooming season and as the season allows thereafter. Winter programs are scheduled for the first Monday evening of October, November, January, February and March. An autumn potluck and Christmas get together are also planned.

Where: Winter programs are presented in the North Fork room of the ISU Student Union Building in Pocatello. Field trips generally carpool from the bison statue in front of the ISU Museum of Natural History. *Contact:* Paul Allen at pokyallen@hotmail.com,

208 241-5265

Upcoming Events

Winter speaker program to be determined.

UPPER SNAKE CHAPTER (INACTIVE)

Contact: Kristin Kaser, kaser.kristin@gmail.com

WHITE PINE CHAPTER

When: Meetings are typically held the third Thursday of the month, September through April. Current information is posted on our chapter webpage:

https://www.whitepineinps.org/WPschedule.html Chapter members will receive an email notification before all events.

Where: We are currently offering hybrid meetings. The in-person meetings are held at the 1912 Center in Moscow with a zoom link for virtual attendance. *Contact:* For more information about White Pine Chapter activities, contact us at INPS, White Pine Chapter, PO Box 8481, Moscow, ID 83843 or whitepine.chapter@gmail.com. Or visit the chapter website for upcoming event information:

https://www.whitepineinps.org/

Past Events

Recordings of all talks from this past fall and spring are posted on the White Pine Chapter YouTube Channel.

Past Events

November 17: "Native plants as an essential restoration component in the Potlatch River watershed." Brenda Erhardt of the Latah Soil and Water Conservation District spoke about wetland and meadow restoration in the Potlatch River Watershed. This presentation provided examples of past and current projects in Latah County. Of special importance to these projects is the revegetation effort where native plants are essential tools to ensuring project resiliency and stability.

Upcoming Events

January 19: "Gardening with natives in changing climate" by Bertie Weddell. More information on this talk will be posted as it gets closer. 7 p.m. at the 1912 Center.

WOOD RIVER CHAPTER

When: Typically we have talks in the cold months and walks in the warm ones. Non-members are welcome. We need additional volunteers to help us put on the State Campout and Annual Meeting in 2023. See our website or email newsletter for information on all programs. *Where:* Field trip and talk locations and details will be included with the description, posted online and emailed to members and other interested parties. *Contact:* For more information about Wood River Chapter activities: email: woodriverinps@gmail.com; website: www.woodriverinps.wixsite.com/wrinps; phone: Mary (559) 696-9953; to subscribe to the newsletter: email us.

Upcoming Events

As more winter programs are confirmed, we will post them on our website.

December 10: Annual Potluck and Election of Officers for 2023. We will meet at the Hailey Town Center West Building (River X Croy Sts, Hailey) at 5:30p.m. for socializing, fine potlucking and a work session (brochure folding, ribbon tying etc.) in preparation for the annual meeting next summer. Beverages will be provided. Please bring a dish to share plus your own plate, utensils, cup etc. Done by 8p.m.. Please come!

January 21: "How to Tell a Hawk from a Handsaw: Adventures with the Dichotomous Key." You don't have to be as crazy as some of Shakespeare's characters in Hamlet to feel that keying out plants can be a maddening experience. In this beginner's look, Lisa Horton will tease our curiosity with painless activities to introduce "keying out" plants. We'll talk about how and why plants got their names, play some games, learn a little terminology and then plunge into keying out some plants to genus level. You'll leave understanding the whys for the "road not taken" or at least having had some fun and learned a little bit. Town Center West Building, River St X Croy St, Hailey. 6p.m.-7:30p.m.. Lisa Horton holds a M.S. in Plant Anatomy and is a Member at Large of the Wood River Chapter of INPS Board. •





Idaho Native Plant Society Membership Form

Membership Level:

 \Box Student \$10

 \square Senior \$15

□ Individual \$20

□ Household \$25

□ Sustaining \$40

□ Patron \$100+

□ Household-Senior \$25

Name_____

Address

*City/State*_____*Zip*_____

Phone _____ E-Mail _____

Chapter Affiliation:

□ Calypso (Coeur d'Alene) □ Loasa (Twin Falls)

- □ Pahove (Boise)
- □ Sawabi (Pocatello)
- □ Upper Snake (Idaho Falls) Inactive
- □ White Pine (Moscow)
- □ Wood River (Ketchum/Sun Valley) □ No Chapter

Please indicate if your membership is:
□ New □ Renewal
I would prefer to receive *Sage Notes*: □ Print □ Electronic □ Both

Send completed form and full remittance to: Idaho Native Plant Society, P.O. Box 9451, Boise, ID 83707

Memberships run calendar year. New memberships enrolled after June 1 include the following year. *Renew or join online: https://idahonativeplants.org/membership/*

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Past Issues: Available online. https://idahonativeplants.org/sage-notes/