BULLETIN OF THE

NATIVE PLANT SOCIETY of OREGON

•OBJECTIVE•
To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest.

1981

VOL. XIV NO. 12 DECEMBER 1982

DUES*DUES*DUES*DUES*DUES*DUES*DUES

INCLUDED IN THIS ISSUE ARE THE MEMBERSHIP FORMS FOR RENEWAL OF YOUR MEMBERSHIP IN NPSO. PLEASE FILL THEM OUT COMPLETELY, NOT FORGETTING TO MARK THAT THIS IS A RENEWAL (OR NEW, IF NEW). WE HAVE NOT INCREASED DUES FOR THE 1982 YEAR, BUT ARE OPERATING VERY CLOSE TO THE RED LINE. IF AT ALL POSSIBLE, DO TAKE OUT A MORE GENEROUS MEMBERSHIP LEVEL. MAKE OUT CHECKS TO NATIVE PLANT SOCIETY OF OREGON AND MAIL DIRECTLY TO:

MARY FALCONER
MEMBERSHIP CHAIRPERSON
1920 ENGLE AVE NW
SALEM, OR 97304

IF YOU WISH, YOU MAY TAKE YOUR FILLED-OUT FORMS AND CHECKS TO YOUR NEXT CHAPTER MEETING AND TURN THEM OVER TO THE CHAPTER TREASURER TO SEND EN MASSE TO MARY.

DUES*DUES*DUES*DUES*DUES*DUES*DUES

NPSO OFFICERS FOR 1982

According to the By-Laws of NPSO, the President is to appoint a Nominating Committee by November 15th, who are to report back to the President the nominees selected by the Committee by December 15th, for printing in the January or February Bulletin. The By-Laws say that any group of 5 or more paid members may submit names for the offices. Although the By-Laws say that the members of the Nominating Committee are to be published in the January Bulletin along with the nominees, we list them here so that any member may contact them before the December deadline:

Chairperson
Ruth Hansen 289-5832 (Portland)
Non-Board members
Marge Ettinger 382-2255 (Bend)
Ruth Rouse 276-4791 (Pendleton)
Joan Seevers 482-5492 (Ashland)
Tony Sobolik 623-2630 (Dallas)

Remember, no person's name should be suggested without the permission of the nominee. Nominee resumes are to be printed in the February Bulletin and ballots distributed with the March Bulletin.

CHAPTER NEWS

WILLAMETTE VALLEY CHAPTER

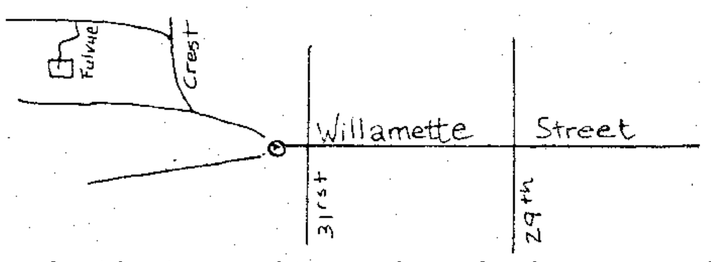
Meeting:

No December meeting. Next meeting 18 Jan. 1982. See January Bulletin.

EMERALD CHAPTER

Meetings:

Monday, December 7, 7:15 p.m. Christmas Social and Gift Bazaar. In lieu of our regular meeting at the City Library, Emerald NPSOers and guests are invited to the home of Rhoda Love, 393 Fulvue Drive (near the Wayne Morse property off Crest Drive). We'll enjoy "seasonal" refreshments and bid on an array of "gift" items. Call 345-6241 if you get lost.



We ask that each coming bring a saleable item of interest to NPSOers. Suggestions: potted plants, seed packets, photographs, books, magazines or monographs, calendars, note cards, dried arrangements, wreaths, mistletoe, maps, hand lenses, metric rulers, etc. Do not wrap the item. Come prepared to price it. If no one offers the minimum price the donor keeps it. All proceeds will go to the Emerald Chapter treasury to help finance the work of the society. Also on sale will be note cards featuring line drawings of rare, threatened and endangered native Oregon species, the proceeds helping to finance the efforts of the state R, T and E Committee.

Monday, January 7, 7:15 p.m., Slides from Australia and New Zealand. Eugene City Library. John Christy, NPSO and Emerald Chapter Treasurer, will show slides of his recent visit to Australia and New Zealand. John attended the XIII International Botanical Congress, held in Sydney, and participated in several regional moss and lichen forays. In New Zealand he collected in the spectacular Southern Arlps. The region is well known for its endemic flora.

HIGH DESERT CHAPTER:

There will be no meeting in December.

SISKIYOU CHAPTER

Meetings:

December 3, Thursday, "Natural dyeing with local plants," an illustrated lecture by Carolyn Steiber. Plant specimens and yarn samples will be on display. 7:30 p.m., Room 275, Science Building, SOSC.

January 7, Thursday, "Why save native plants?" a discussion introduced by Dr. Darlene Southworth, Department of Biology, SOSC. 7:30 p.m. Room 275, Science Building, SOSC.

PORTLAND CHAPTER

Meeting:

Thursday, December 17, 7:00 p.m., Central Library, 801 S.W. 10th, Portland. Show and Tell. This program will give members a chance to show 5-10 of their most unique slide pictures of flowers taken in the last year. Members wishing to participate, please call Don Barr at 246-2785 so we can schedule time in the program.

BULLETIN: REGARDING MEETING TIMES BEGINNING IN JANUARY 1982. The day for the meeting is changed to the fourth Wednesday for 1982.

Saturday workshops:

2 January 1982. No workshop scheduled.

9 January 1982. Flower Close-ups. Joe Barger. 10:00 AM, Multnomah County Library. Room to be announced. Joe will discuss techniques in photographing wildflowers. His discussion will include tips on extension tubes, flash, fast films and special lenses. If you've got questions, bring your camera.

16 January 1982. Alpines of Switzerland. Fred Dragger. Same time and place as 9 January workshop. Fred will show selections from several trips to the Swiss Alps.

23 January 1982. Endangered Plants of the Willamette Valley. Dr. Janet Hohn. Same time and place as 9 January workshop. Janet will discuss in detail a few of the Willamette Valley T & E's, so that we can all learn their characteristics and perhaps make some new sitings.

30 January 1982. Threatened and Endangered Legeslation in Oregon. Ann Whitmyer. Same time and place as 9 January workshop. Ann will update us on recent political history and the current situation regarding her work in T & E legislation for Oregon plants.

ENDANGERED SPECIES LIST CORRECTIONS PUBLISHED

A list of 30 technical corrections to the U.S. List of Endangered and Threatened Wildlife and Plants was published by the Service (F.R. 9/30/81). These changes constitute amendments to 50 CFR, Part 17, 11 and 12.

In some instances scientific names have been updated to reflect current usage. In making these determinations, the Services relies to the extent practicable on the International Code of Zoological Nomenclature and the International Code of Botanical Nomenclature, and the scientific community. In cases in which more than one name are commonly used for a taxon, synonyms have been provided to avoid ambiguity. Historic ranges for some listed taxa have been updated.

The Service is preparing an updated version of the entire U.S. List of Endangered and Threatened Wildlife and Plants which will incorporate the revisions mentioned above. This list will be available in late November 1981 from the Publications Unit, U.S. Fish and Wildlife Service, Washington, D.C. 20240. from Endangered Species Technical Bulletin.

HAAG LAKE FIELD TRIP REPORT

What a fantastic fall day to greet Hallow's Eve. The object of the trip was to view fungi, lichens and review the mosses. Two new lichens were collected for the Haag Lake area that I will publish through NPSO in Feb. or March, 1982.

Peltigera collina is almost black when wet, has dense marginal soredia, and rarely has apothecia. This was the first year since starting the survey at Haag that the apothecia were present. Also showing up for the first time were beautiful specimens of fruiting Pseudocyphellaria anthraspis. These two specimens were on the same branch of an oak with Lobaria pulmonaria. This species is a beautiful bright green when wet.

The other major interest today was in the most prolific fruiting of the good, edible, but virulent parasitic fungus, Armellaria mellea. This is by far one of the most destructive tree parasites of forests, gardens, and nurseries in North America. We saw this fungus on Rhododendron, Douglas Fir, Prunus (Cherry), Western Hemlock, White Oak, Bigleaf, and Vine Maple, and even at the base of Poison Oak. This fungus has also been seen on several species of currant, including Ribes sanquineum; all sorts of garden vegetables like tomatos, carrots, parsnips, and rhubarb. It also invades mine timbers far below ground level, and can invade and block water pipes.

There were excellent specimens of Stropharia ambigua, a few Canthrellus cibarius, one excellent cluster of Lyophyllum multiceps. This species is very similar to that raised commercially by Sung Kum Lee of Gresham, who serves it with Asian dishes in his restaurant. Also common were many Pseudohydnum gelatinosum on twigs down in the Stokesiella oregana and Rhytidiadelphus triquetrus mosses. There were excellent dense mats of the palm tree moss Leucolepis menziesii and Plagiomnium insigne, the badge moss.

The fall colors were spectacular around the lake, but this trip should be done probably a week or two earlier when most of the good edible fungi would be at their peak ... especially Agaricus sylvaticus. I almost cried when I saw over 400 sq. meters one to two weeks past its prime.

Only Mallards were seen on the lake, but Hermit Thrush, Song Sparrows, Rufus Sided Towee, Bewick's Wren, Down Woodpecker, Winter Wren, Red Tail Hawk and Dark Junco were seen along the trail.

Glenn E. Walthall
Portland Chapter

NEWS RELEASE 11-4-81. CALENDARS

Something new appears. One out of every ten American wild flowers is threatened with extinction by man's activities. Information about the problem and how you can help, is provided in Endangered Wild Flower Calendar (10½ x 17" open, 14 color photographs), produced by New York Botanical Garden. Copies can be obtained for $5. Funds raised will assist conservation efforts. Call chapter officers to order your copy. Suitable for gifts.

From: T/E Committee NPSO

[Included in the calendar is Mirabilis macfarlanei, endangered Macfarlane's four-o'clock from eastern Oregon and western Idaho.]

COULD PLANTS AGAIN BE LEFT UNPROTECTED?

Before the Endangered Species Act of 1973 only animals were protected by national legislation. When this law was passed, the U.S. Congress did include plants in the list of things they wanted to protect from careless endangerment and extinction. This Act applies to species on Federal land or those species that might be affected by Federally funded activities. In January of 1975, as was required by the law, a report was made by the Smithsonian Institution that named 3,187 plant taxa which were recommended for legal protection. By the end of 1980 there had been only 56 native plants officially listed.

In Oregon only 2 out of a possible 185 candidate plants have survived the long and complicated process for official listing. The added importance of this law to the flora of Oregon is emphasized when we are made aware that over half of Oregon is Federal land and even more so as we are reminded that Oregon has no state law to protect its own flora.

In the Spring of 1982 the Endangered Species Act is coming up for reauthorization. A nationwide campaign is being organized to help assure a strong act as some of the most important members of the current administration are unwilling to commit to continued protection of plants. Since it appears that plants could be left out, there is an urgency that we do what we can to aid in this campaign.

The Endangered Plant Committee of the NPSO is planning to cooperate with the Natural Resources Defense Council to help educate the public about the Act and to develop a grass-roots lobbying network. We are a small committee right now and need more active members. We also need to get a list of those willing to write &/or phone their Senators and Representatives just prior to the times of voting on the Act. It is important to include people in all four of the Congressional Districts to make these contacts.

If you are interested in being an active committee member, or if you are willing to help with this campaign, please write us.

Jeanne Huffstutter
9525 S.W. 12th Drive
Portland, Or 97219

or Chairperson: Anne E. Kowalishen
4949 N.E. 34th
Portland, Or 97212

Proposal to Make the Sunflower the National Flower.

Mr. Mark Askew of Sacramento, California, has initiated a proposal now introduced as bills in the Congress to make the Annual Sunflower (Helianthus annuus) the offical flower and floral emblem of the United States. Some of his reasons are that the annual sunflower: is the only important food plant domesticated by American Indians in what is now the United States of America; is now become again an important crop in its native land; is grown in all of the states in some of its forms; and that it has various forms valued as crops, ornamental garden flowers, and wildflowers. Botanists may want to let their Senators and Representatives know of their interest in these bills.

From: Plant Science Bulletin
October 1981

BOOK BARGAIN FROM UW PRESS!

If you have always wanted the five-volume set Vascular Plants of the Pacific Northwest, but couldn't afford the $137.50 list price, it is now on sale for $82.50 for the complete set. For a catalog with order form, write to:

Univ. of Washington Press
P.O. Box 9785
Seattle, Washington 98109

ACT FAST; the sale ends January 31, 1982!

Oregon Natural Heritage Plan Approved by Legislature. Natural Heritage Advisory Council Embarks upon Implementation. The council, as directed by statute, will work with state and federal agencies and private parties in developing protocol for setting aside and dedicating Natural Heritage Conservation Areas. Copies of Oregon Natural Heritage Plan can be obtained by remitting a check or money order for $4.00, payable to Natural Heritage, 1445 State St., Salem OR 97310.

A thank you to KGO-TV: Five public service announcements aired for the period of 7/1/81 through 9/30/81. Total cost $875.00. NO CHARGE!

ECOLOGICAL NOTES

The Cogswell-Foster Reserve - a Nature Preserve in the mid-Willamette Valley

One can make ecological observations almost anywhere and anytime. For ecological research, on the other hand -- especially that which continues for a span of years -- an important requirement often is that the study area remain relatively free from major man-caused disturbances. For this reason, a field ecologist often chooses to work in designated Research Natural Areas or on Nature Preserves, where his/her work will, hopefully, not be suddenly disrupted by human activities which are beyond the worker's control.

One very important Nature Preserve in the Willamette Valley is the Cogswell-Foster Reserve. This Preserve is located in Linn County approximately midway between Corvallis and Eugene. The Cogswell-Foster Reserve (hereafter called the CFR) was acquired by the Nature Conservancy in 1969 and was named for the donors, Lee and Lucille (née Cogswell) Foster. The CFR is a 36-hectare tract of former pasture and farmland located on Powerline Road just southwest of Halsey. The Little Muddy Creek meanders through the Reserve which is at present almost completely surrounded by commercial grass seed fields.

The CFR has some stands of 100-year-old Oregon Oak (Quercus garryana), and in wetter areas, stands of Oregon Ash (Fraxinus latifolia). The Reserve has been invaded by some naturalized introduced shrubby plant species -- especially by English hawthorn (Crataegus monogyna). The CFR also supports a population of hawthorns which are hybrids between the English hawthorn and our native hawthorn (Cretaegus douglasii).

In addition the Reserve provides food and cover for deer, foxes, beavers, turtles, various rodents, approximately 45 species of birds, and numerous smaller animals such as butterflies and other insects.

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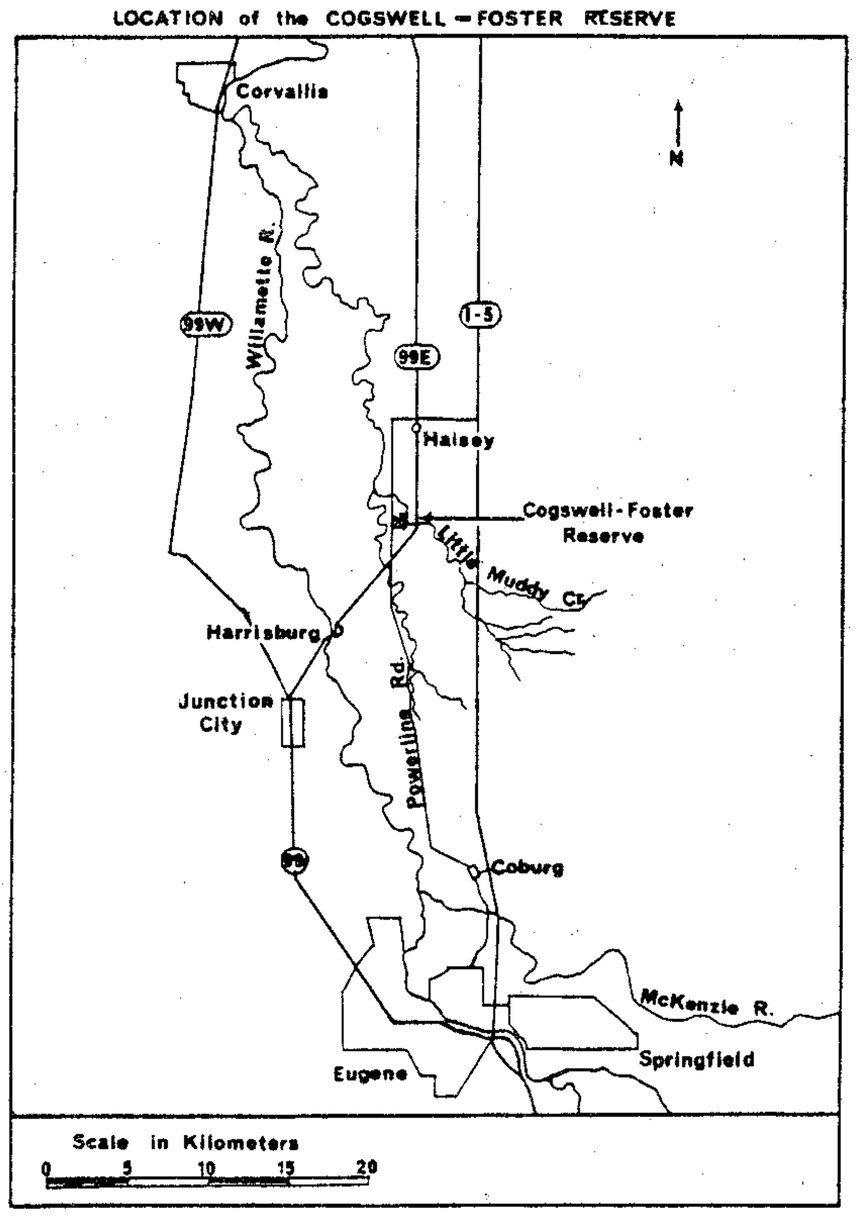
ECOLOGICAL NOTES, continued

The Spring wildflower display is not overly spectacular but includes such beautiful species as: Delphinium menziesii, 4 spp of Ranunculus, Cardamine penduliflora, Lupinus sulphureus, Sidalcea campestris, Eryngium petiolatum, Apocynum medium, Brodiaea coronaria, Camassia quamash, and Erythronium oregonum. (A list of all the flowering plant species collected at the CFR has been prepared by G ee Goodrich of the Emerald Chapter of NPSO.)

The CFR is an ideal area in which to study interactions between native and introduced plant species, and plant colonization of former agricultural land. In addition, with the large oak population, research on oak-insect relationships could be carried out there. For example, details of the life cycle of the cynipid wasp which causes the globular oak galls are mostly unknown and could be investigated at the CFR.

In Science for October 26, 1979, an interesting paper by R. T. Holmes et al. (pp. 462-462) shows that when birds were kept away from maple trees, moth larvae were significantly more abundant than on trees left open to bird predation. Such a study could easily be repeated using various tree or shrub species at the CFR.



For naturalists of all kinds including plant and animal lovers, bird watchers, and ecologists -- obervers and researchers -- the Cogswell-Foster Reserve is a valuable Nature Reserve located conveniently close to most of us who live in the Willamette Valley. For more information, lists, maps, etc., call he Nature Conservancy in Portland, or Rhoda Love (503-345-6241) in Eugene.

Rhoda Love
Emerald Chapter

SECTION 6 FUNDS CEASE; STATE PROGRAM SUMMARIZED

September 30, the final day of fiscal year 1981, also marked the end of a five year grant-in-aid program of the Endangered Species Act of 1973. Termination of this program, to assist states in endangered species conservation efforts, was effected by Congress as part of the 1982 budget-trimming procedures. Twenty-four million dollars in matching Federal funds were given over the five year period to states having cooperative agreements with the Fish and Wildlife Service. Only 1% of funds distributed were allocated to plant surveys. For more information, see the Endangered Species Technical Bulletin, published by the Department of Interior U.S. Fish and Wildlife Service, Endangered Species Program, Washington D.C. 20240. L.A.V.

[Because we do not have an Endangered Species Act, the state of Oregon did not receive any of those funds.]

PLANT FAMILY PROFILES

By Herm Fitz

The Aristolochiaceae - BIRTHWORT FAMILY

The Birthwort Family is primarily tropical, but extends into the temperate zones in Africa, Eurasia and both North and South America. No representatives occur native to Australia. Seven genera with some 625 species (Moore, 1978), mostly herbs and shrubs, often scandent, inhabit forests within their range. Three genera are monospecific: Saruma of China, Holostylis and Euglypha of Argentina, Brazil, Bolivia, and Paraguay. Ten species of Thottea and 12 of Apama occur in Malaysia and eastern India. Some 100 species of Asarum inhabit temperate Eurasia and North America. But the bulk of the family, Aristolochia, with about 500 species, are spread throughout tropical and temperate Eurasia and North America. Oregon is home for only 3 members of this family, all in the genus Asarum. Most widespread is the common Wild Ginger (A. caudatum), on cool shady forest floors from British Columbia to California; more restricted is the Marbled Wild Ginger (A. hartwegii) on drier, rockier, but shaded slopes in the coastal and Cascade Mountains from Douglas County south to northern California; narrowly endemic and known only from the Mt. McLaughlin-Lake of the Woods area in Jackson and Klamath Counties, is the Green-Flowered Wild Ginger (A. caudatum var. viridiflorum), listed as rare and threatened (Siddall, Chambers, and Wagner, 1979).

Members of this family have alternate, simple, often palmately-veined leaves, without stipules. Flowers are bisexual, axillary, solitary (ours) or in racemes or cymes, mostly zygomorphic (Aristolochia, Holostylis, Euglypha), but also actinomorphic (the others, including Asarum). The calyx is 3-4 lobed, usually enlarged, petaloid, and even of bizarre trumpet-like or bell-like shapes. The corolla is almost always absent (present in Saruma). Stamens vary from 6 to 40, in 1 or 2 rows, are free, connate below, or even adnate the style. The pistil is single, with an inferior ovary of 3 to 6 locules and the same number of stigmas. The fruit is a many-seeded capsule, the seeds being quite small.

Our ordinary Wild Ginger is a typical member of the family and produces its green-brown-purplish flowers on the ground, often beneath last fall's leaf litter. This is not a strange place to bloom, because the plant pollinators are various ground beetles and carrion beetles following its mildly fetid scent. The long-petioled, heart-shaped leaves of this creeping vine-like perennial announce its presence, and, upon parting the dead leaf litter, one finds the freely-rooting stem, at the tip of which, from between two leaves, blooms the solitary flower. In our Wild Ginger there are 3 spreading elongate sepals, no petals, 12 stamens (6 long and 6 short), and the single pistil of 6 carpels.

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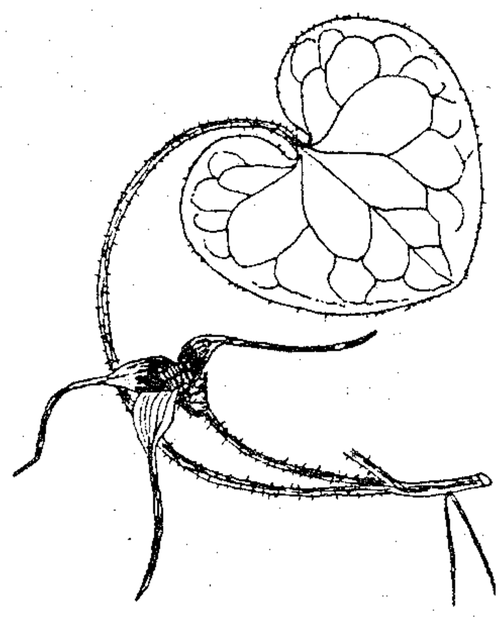
Phylogenetically this family is difficult to place. It shows obviously advanced characters as the united carpels, inferior ovary and loss of petals; however, pollination by ground beetles is considered to be primitive. Pollen features and the presence of cells containing essential oils indicate an affinity with the Magnolia Family. Economically the family is known for many species of Aristolochia and Asarum cultivated for their interesting flower shapes and variegated leaves. Dutchman's Pipe (Aristolochia macrophylla), Bird's Head (A. ornithocephala), and Pelican Flower (A. grandiflora) are among the better known.

The specific floral formula for our species of Asarum can be given:

$$Ca^{3}\ Co^{0}\ S^{6+6}\ P\textcircled{6}$$ with inferior overy.

When you encounter a low-growing, trailing and mat-forming herb with large, heart-shaped leaves, and if you uncover from beneath last fall's leaf litter a purplish, 3-parted flower, you know you have found the Wild Ginger, Oregon's only representative from the Aristolochiaceae - the Birthwort Family.

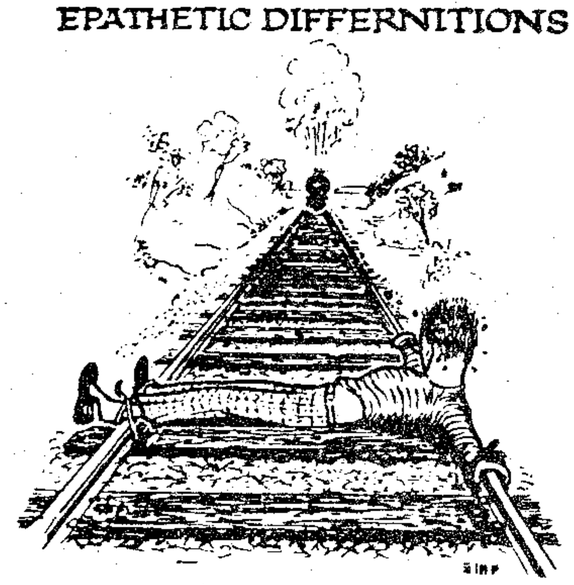


Wild Ginger (Asarum caudatum)
Note the three elongate sepals of the ground-blooming purplish flower and the conspicuously veined heart-shaped leaves.

EARLY EXPERIENCES OF A BOTANIST by L.F.Henderson
continued from November 1981 Bulletin

Thomas Howell, then living at the homestead on Sauvie's Island, just where the Willamette joins the Columbia, was a great friend of mine, and I had visited him frequently, rowing down the river from Portland, staying with him, hunting ducks and geese or studying plants Saturdays and Sundays, 'till it was time for me to row back to Portland for my classes on Mondays. So in 1882, he proposed our taking a trip together in his express wagon, first down to Tillamook Bay, then back and up to Mt. Adams. We set out a bright day in June for McMinnville, thence crossed the Coast Range by the old wagon road over the mountains, and camped one night on the Trask. While catching a mess of trout for supper, it was my good fortune to run onto a peculiar Rosaceous plant about two feet high. I took it back to Howell to see whether he knew it, as he had collected in the Coast Mountains far more than had I, and consequently was more acquainted with their flora. This was the first time he had seen it, so we collected it in quantity. Later we sent it on to Drs. Gray and Watson, and the latter named it Filipendula occidentalis. By many this genus has been reduced to Spiraea, but Filipendula holds the field again.

EPATHETIC DIFFERNITIONS



Decumbent: Reclining but with the tip ascending

(by Ed Paulton from the Fiddlehead Forum Bulletin of the American Fern Society)

The next day we were soon in the town of Tillamook, consisting of but few houses at that date! We left our team of horses and wagon at a livery stable, hired a row-boat, and were soon rowing down to the spit, where now is Bay Ocean; but at that early day there was not, as I remember it, a single habitation showing from the water on the whole bay, save a little hamlet of a very few houses at Garibaldi. We went into camp just above high tide, and soon found that the "fly in our ointment" was to be on the one hand mosquitoes, on the other lack of good water. The first we had to endure day and night; the second we overcame by digging with our spade a hole in the sand close up to the spruces, where moist sand alone showed the presence of underground water. Here we lived for two days literally combing the dunes, tide-lands, and even shallows for specimens. Most of the plants we gathered were already known to the books, but a few were new species, as we afterwards found out. Among these were the grasses Poa macrantha and Poa confinis, both named by Vasey, and Sanicula howellii, of Coulter and Rose. At the end of our two days, wishing for a good meal of rock-oysters, for which we had heard Garibaldi was noted, we broke camp and rowed across the outlet to the bay. Very foolishly we took a strong ebb-tide and only by most vigorous rowing did we escape being carried out to sea. After dinner we waited for an in-coming tide, and made our way back to Tillamook. The row back, as well as out, though long, was hardly tiresome, so busy were we in noting the bird-life. In fact, at this early day, our advancing boat was always heralded by flocks of ducks which rose in front of us, circled and then dropped just back of us. The whole surface of the bay was almost covered by these hordes of ducks of dozens of species.

We returned to Sauvie's Island to dry out and deposit our large collections, and then proceeded up the Columbia, mainly by wagon over the old road, and finally reached the ferry at Hood River. Near the great rock-slide we discovered on the rocks that peculiar, light-colored grass, known as Calamagrostis howellii, and named by Vasey. The next day we were across the Columbia and on the way to Camas Prairie. On reaching the north end of the valley, we turned westwardly towards Mt. Adams, expecting to find the "good road" for our team and wagon, about which we had been so repeatedly informed since leaving White Salmon. While the yellow pine woods lasted, all went well--the trail forcing us only occasionally to go around some fallen tree, which was easily accomplished in those open, grassy woods. As we ascended the mountain higher and higher, the pine woods gave out, while fir, white pine and mountain or black hemlock took their places. More and larger trees were now across the trail. At first we tried to go around these, but the brush becoming at times impenetrable, we became exasperated by the delays, and finally Howell himself made a most surprising proposition. It was that we both get out and walk, he driving the team and I catching hold of a wheel and helping team and wagon over the logs! As the wagon itself

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EARLY EXPERIENCES, continued

was comparatively new and well-made we thought we ran little risk of breaking it to pieces, especially as our load was almost of no weight. So we proceeded for several miles, he whipping up the team when we came to a log, which was practically every minute or two, the horses jumping the log with their front legs, then yanking over the front wheels as they cleared the log with their hind legs, and then, with bumping and crashing, pulling over the back wheels, I all the time assisting with arms and shoulders to keep the team going. This we found was the main point, for if they halted when only the front wheels were over, it was almost impossible to get the hind wheels to follow, if the log was several feet through, as many of them were. Thus, by very exhaustive work, we were able to reach the snow line and a most beautiful camping spot by night.

And the glory of those subalpine and alpine slopes of Mt. Adams at that early period! Stock, especially sheep, had not ruined the native pasture at that time, and there were succulent bunch- and other grasses up to your knees. Now these grasses have largely vanished under over-pasturing, and often you can barely find any sustenance for your horses if you wish to camp there. Probably the most beautiful and succulent of these grasses is Festuca viridula, then a new species and found by us for the first time on Mt. Adams, though Suksdorf, who was up there at the same time with a band of sheep, first sent it to Vasey. This grass and some of the other bunch-fescues and Poas were then so abundant on the open slopes that a horse when picketed amongst them by a forty-foot rope would eat his fill and lie down without finishing his forage within the radius of his rope. Now one has often to travel miles before he will see a stalk of these grasses and then only when protected by rocks or brush. On this same trip we likewise found the then unpublished Prickly Gooseberry, named Ribes ambiguum by Watson, but later changed to Ribes watsonianum.

Here we camped for nearly a week, sometimes working together, and as often solitary on our tramps. Many of the plants were old friends I had seen in '78 and '79, but most of them, on account of later season, were new to both of us, and hundreds of plants were added to our collections. As Thomas Howell was supporting himself almost wholly by the sale of his collections, while I had my regular teacher's salary, I always allowed him to send off what collections went East for naming, as anything new, or even rare, brought the most money in the plant market. We were much surprised to find, when names came back to us from our collections, how very few were new from the high mountains, since the alpine and subalpine floras have a great kinship, whether collected in California, Oregon or Washington, or even in British Columbia and Alaska. This can be directly attributed to the glacial epochs when this flora was driven further and further south by the glaciers and was the only one to survive.

The tramp of one day is still fresh in my memory. While Howell took one of the lower areas for the day, I proceeded over the glaciers and snowfields to that protuberance, really a young volcano, on the eastern slope of the mother-mountain, sometimes called Red Mountain, often Little Mt. Adams. I took right up the glacier, and, in my ignorance of snow mountains which was still profound, I crossed many snow bridges over crevasses, some of which had fallen in when I returned at the end of a very hot day. When I looked at some of the places I had crossed only because they were then frozen tight, and now saw how many of these bridges had fallen in since I first crossed them, and as I now, late in the afternoon, looked down into their blue-black depths, I shuddered at the death I had escaped as well as at my supreme ignorance of alpine dangers. That at any rate taught me to keep off all glaciers which are at all cracked and still covered by snow. Soon I was off the glacier and proceeding up a hog-back of loose material. I soon reached a level field just west of the red cone. Here a riot of color and new plants pressed close to the ground awaited me, and I spent several hours in this locality finding almost every few steps some delicate little thing blooming far above the glaciers and snow fields, and which were all new to me. While busy gathering these plants and putting them in my press, I looked over a slight ridge and there I saw for the first time in their native habitat a band of mountain goats. The wind was luckily from them to me, so as some very large boulders were between us, I determined to drop my pack and creep along on my knees and belly, keeping the rocks between us and see how near I could get to them. By a change of rocks every now and then, I was able to come remarkably close to them. Finally, taking off my colored hat, I peered over a rock. I must have made some slight noise in my crawling for they were all standing and staring at the rock not ten yards away -- a great billy-goat in front, his yellow eyes blazing with what I thought then was anger, but later proved to be suspicion and fright. I suppose I was the first human being they had ever seen approaching them from that direction. As I thought, the huge beast, his neck-ruff standing up on end, was about to charge down upon me. I rose suddenly, waving my hat in the air and hallooing. At that, with a sharp whistle from the leader, they all faced about and then dashed for and over a cliff to their certain death, it seemed to me. Running up to the cliff, I looked over. It dropped thousands of feet to the Klikitat Glacier and stream below, and I could see no trace of my goats. "Suicide from sudden panic," I muttered to myself. Then looking more closely, I could see a shelf of rock running downward along the right hand cliff not more than a couple or possibly three feet wide in places, and on examining the approach to this, I could see plainly the marks of their scampering hoofs. So down that narrow shelf, along that dizzy precipice, they must have dashed, pell-mell, for they were out of sight before I reached the edge! A few days after we began our return to Hood River by the same trail we had used a week before, but with slightly easier going since it was mainly down hill and also the second attempt at this novel method of crossing fallen timber.

continued on next page

In the early summer of 1883 I married Miss Kate Robinson, a teacher like myself in the Portland schools. As our honeymoon trip we spent a few weeks on the numerous lakes south of Tacoma, an almost uninhabited country at that time, though now filled with beautiful country houses. Thence we travelled to the Chehalis Indian Reservation to visit my brother, then Indian agent, and with him took a trip up and down Black River. This was a novel experience to my wife, though not to us men, as the river was too narrow and log-filled to admit of using oars, while it was in many places too swift to use paddles. Nearly the whole of the trip was, therefore, taken in a dug-out, using paddles in the wider stiller reaches of the river, but part of the way down and practically all the way back, a day each way, we used poles, I on one side, my brother on the other. I had enough to think about in guiding the canoe, so I collected almost nothing on this trip, especially as most of the flora I had already had from about Portland. It will be noticed that I have spoken only of the longer trips so far; yet many spring and early summer days were spent in quick trips by foot, often by train, to near-by or even distant localities. One might wonder how a teacher ever got enough money together to take many trips by train or boat, but bear in mind that those were the halcyon days when passes to scientists were in vogue, as well as to many not so worthy causes and individuals. Noting my desire for botanical research, and the slimness of my purse, many of my older friends in Portland, notably D.P. Thompson, J.N. Teal, Henry Failing, and Senator Corbett, spoke a good word for me to heads of railway and steamboat lines so that I often had in my pockets passes over every rail line and most of the boat lines, even those to Alaska. Unfortunately the latter I never used, as other expenses beyond mere traveling ones would have prevented my using them to Alaska. Yet, I may add, I was always scrupulously punctilious in the use of these passes. I had inherited one of these awful New England consciences from my mother, and so I always paid my own way when not on botanical work, though my pocket was full of passes-- this often to the scorn of some of my friends who considered such action ridiculous. Yet in their hearts I believe most of my friends considered it as an act of common honesty; I am sure the rail-road heads did when they heard of it.

My regular plan during the spring, while I was still teaching, was to rush home Friday afternoon after work was done, hastily change into working clothes, and then "jump a train," sometimes literally. I would travel 'til daylight was breaking in the morning, work all day collecting, and then board the first night train, passenger or freight, for home. That method of operations often gave me from two or three in the morning to nine o'clock at night, or a day of 16 to 18 hours, which I believe most people would agree was long enough! This was sometimes in Eastern Oregon and the Blue Mountains, sometimes in Southern Oregon. Every few weeks I would find some new plant, which would repay me for all my labors. Among these were that handsome sedge from sunny bogs in Multnomah County called by Bailey Carex hendersonii; the beautiful vari-colored Lamb's Tongue, Erythronium hendersonii, of Watson, from Josephine and Jackson Counties; the northern Yellow Brodiaea, Brodiaea hendersonii, of Watson, from the same counties.

During the spring of 1884 I suggested to my wife, " I saw a lot of plants between here and Forest Grove when on my trip with Howell in '82, that I am not sure that I know. How would you like to take a walk from here to Forest Grove one day, and back the next, and do you think you could stand it?" "I think I can stand as much as you can," she bravely countered. So one bright day, early in the morning, we started, and before night had reached the hotel in that city. Here we were kindly called on by both the Professors Marsh. The next day, at break of morn, we started on the return trip, reaching Portland before 7:00 p.m., tired, but delighted with the beauty of the scenery, while my pack was overflowing with specimens. The one I had desired most was a Bird's Bill, which we obtained in both mature fruit as well as flower. When I had studied this carefully, I saw it had never been described, but sent it on with notes to Dr. Asa Gray. Soon the reply reached me, in which speaking of the Bird's Bill or Dodecatheon, he said, "Your notes and specimens of different Dodecatheons have caused me a couple of hard days' work, with an entire revision of the genus, soon to be published." When the revision came out, I found that my renamed Dodecatheon bore the name of D. hendersonii A. Gray.

During that summer my wife and I took a trip, she on horseback, I leading a pack-animal, to Lost Lake and thence by a very obscure trail to the snow-line of Mt. Hood. I was much disappointed with this trip, since I do not remember finding a new plant, while the hardships and experiences we went through were enough to pretty nearly fill a lecture. Suffice it to say of these latter, that we went one day from dinner time to the next evening without a drink of water or a bite to eat!

The next three summers were spent mainly at Ilwaco on the Washington coast and at Seaside on the Oregon, since our two little daughters were happiest there, while the parents found much to do and to enjoy. At the first of the places I suppose I was the first botanist to collect the flora, for the sands of the beach yielded me the peculiar sand-binding sedge, Carex pansa Bailey, and the little bog-rush, Juncus oreganus Watson; while the bluffs near the ocean gave me the big, woolly umbel, Angelica hendersonii Coulter and Rose, and another slightly smaller umbel, Coelopleurum maritimum, of the same authors. The year we spent at Seaside I discovered up the Necanicum a slight distance, or on "Clatsop Bay" as I see I called it, the pretty, remarkably smooth marsh mallow, called by Watson, Sidalcea hendersonii. This I afterwards found at Cannon Beach, and still later further south at Florence. A spring trip, which I took to Ashland and Ashland Butte in 1886, yielded me a new rosaceous plant named by Howell, Horkelia hendersonii. I likewise found, also near Grants Pass, a very peculiar member of the Leguminosae or Pea Family, and called Astragalus hendersonii by Watson. This plant has ripened pods simulating unhulled peanuts to a remarkable degree, which latter plant, to add further interest to the similarity, is also a member of the Leguminosae, but ripening its pods underground. After a few years, it was found by Sheldon that there was already an Astragalus hendersonii, belonging to the old world, and named for another man; so naturally this old name could not stand when applied to a new plant, and Sheldon renamed it Astragalus pacificus.

to be continued in the January 1982 Bulletin

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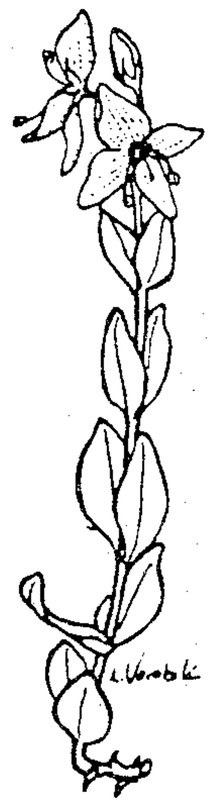

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