

OREGON FLORA NEWSLETTER

Volume 1 Number 1 • Oregon State University • January 1995

The Oregon Flora Project

Scott Sundberg

This is the first issue of the Oregon Flora Newsletter, the newsletter of the Oregon Flora Project (formerly the Oregon Vascular Plant Checklist Project). This quarterly newsletter will be a vehicle for disseminating news and information about the Flora Project. Articles will cover topics of general interest, such as the naming of plants, why names change over the years, native versus exotic status, new records for the flora of Oregon, and how to deal with hybrids. The Oregon Flora Newsletter will also describe activities of the people who are involved in the project and will keep you abreast of our progress.

The ultimate goal of the Oregon Flora Project is to produce an illustrated Flora of Oregon in text and electronic forms. We are currently working on three components of this project: the Oregon Vascular Plant Checklist; a pilot project to gather plant distribution data; and development of infrastructure for writing the Flora.

The Checklist will be a comprehensive list of the native and naturalized vascular plants that occur in Oregon. Its main function will be to provide a taxonomic framework for Oregon plants. Decisions regarding the delimitation of species, subspecies, and varieties will be reflected in the list. For example, discrepancies between treatments in the *Flora of the Pacific Northwest* and *The Jepson Manual* (the new reference for the California flora) will be evaluated along with other sources of information, and decisions will be made on which names to accept. Many new sources of information derived from biosystematic, floristic, and evolutionary studies will be considered in formulating the list of accepted names.

Synonyms (mostly names accepted in earlier floras but no longer applied) will be listed after currently accepted names. Synonyms from six floras covering parts or all of Oregon or adjacent

See *Oregon Flora*, page 2

What's the latest name for that plant?

Kenton L. Chambers

In the process of assembling a new checklist of the vascular plants of Oregon, we will be evaluating many proposed changes affecting the naming and classification of the state's flora. Although relative stability of scientific names is an important goal of taxonomy, one should not expect the classification system to be set in concrete. Changes in plant names often reflect an improved knowledge of relationships, for example by the use of sophisticated new research techniques. The International Code of Botanical Nomenclature, containing rules about spelling variations, priority of publication, and legitimacy of names, also may alter the names of plants.

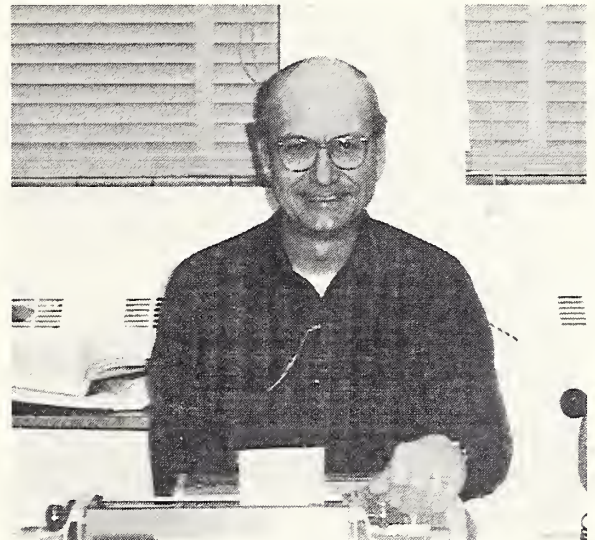


Photo: R. Love

Kenton L. Chambers

For this article I have selected three examples of recent proposals to change some Oregon plant names. One of these affects the familiar genus *Disporum* (fairy-bells) of family Liliaceae. In a recent publication (Z. K. Shinwari, et al., *Taxon* 43:353-366, 1994), convincing new evidence is presented that favors separating all the American

See *Plant Names*, page 3

states (our standard set of references) will be included.

The most widely used common names will be given in the Checklist and, where possible, native or non-native status will be indicated. For plants not listed in our set of standard references, literature citations will be provided to guide users to additional sources of information.

The Checklist is maintained in a Paradox 5.0 database in the OSU herbarium. It currently has 4,410 accepted names and 819 synonyms, but the total changes almost daily. We expect that the finished Checklist will contain more accepted names and that the list of synonyms will double.

The Checklist Project is sponsored by the Oregon State University Herbarium in Corvallis and has received grant support from the Native Plant Society of Oregon. With the exception of two paid student assistants, the project is entirely a volunteer effort. Participants in the project include a coordinator, a group of ten project leaders, an Advisory Board composed of professional and amateur botanists from throughout the state, invited contributors, student assistants, and volunteers. The project leaders are responsible for producing and editing the checklist. The main role of the Advisory Board, which is now being formed, is to support the project in any of a

variety of ways. Most critical of these is to review portions of the Checklist as advanced drafts are completed. Outside contributors are being invited to edit lists for certain families. Student assistants help with text entry, mailouts, filing literature references, searching for additions to the Checklist in the herbarium, and several other support activities. Volunteers have so far helped with a variety of tasks, including literature reviews, herbarium specimen analysis, and comparison of the Checklist and treatments in floras.

In summary, the Checklist will be much more than just a list of names. It will be a tool that will help people make better use of existing floras and guide them to additional information in the literature, and it will be a step toward the eventual publication of a new Flora of Oregon.

How You Can Help

The checklist will eventually involve input from dozens of botanists throughout Oregon. Inclusion of new plant names in the checklist will require that we see plant specimens collected in Oregon before adding the names to the list. We therefore especially want to encourage anyone who knows of new plant records to contact us and to send specimens documenting their finds. Field work done by volunteers can also "target" particular plants, for example *Clarkia heterandra*, which hasn't been found in Oregon since 1888. In addition, if you live in the Corvallis area or can drive here, we could use help with a variety of other tasks. We need help proof-reading the list and checking it against a national species checklist. We could also use help doing library research and xeroxing. Finally, there are several tasks in the herbarium related to the checklist project that could be done by qualified volunteers. If you would like to volunteer, please contact Scott Sundberg (see page 2 for address and phone number).

Oregon Flora Newsletter is published quarterly by the Oregon State University Herbarium and the Oregon Flora Project. The Editor is Rhoda Love.

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Robert Meinke	Brad Smith
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Cover illustration of *Erythronium oregonum* by Jeanne Janish, taken from Hitchcock et al. 1969, *Vascular Plants of the Pacific Northwest*, courtesy of University of Washington Press.

species of *Disporum* from those found in eastern Asia. If this is done, the New World species take the genus name *Prosartes*; in Oregon we have *Prosartes hookeri* Torr., *P. smithii* (Hook.) Utech, Shinwari & Kawano, and *P. trachycarpa* S. Watson. There are differences between *Disporum* and *Prosartes* in leaf venation patterns, hairiness, stigmatic lobing, and fruit color. The generic separation is supported by molecular studies comparing the sequence of nucleotide bases of a gene in the chloroplast chromosome. This sophisticated genetic analysis confirms that *Disporum*'s closest relative is *Uvularia*, an eastern North American genus, whereas *Prosartes* is closely allied to *Streptopus*, not to *Disporum*. The revised classification is thus well justified, although it means we must learn new names for Oregon's three "*Disporum*" species.

The opposite of generic splitting, as in the above case, occurs when taxonomists combine two or more previously separate genera into one. Several examples of this type of change can be found by comparing Peck's *Manual of the Higher Plants of Oregon* (2nd edition, 1961) with *The Jepson Manual--Higher Plants of California* (1993). In the family Onagraceae, for instance, *Boisduvalia* and *Zauschneria* have now been merged with *Epilobium*. Another change, affecting one of Oregon's rarest species *Heterogaura heterandra* (Torr.) Coville, results from combining this genus with *Clarkia*, the well known "farewell-to-spring." According to Harlan Lewis and Peter Raven (Madroño 39:163-169, 1992), *Heterogaura* shares numerous traits with two species-groups in *Clarkia*, and its chloroplast DNA is remarkably

similar to that of *Clarkia dudleyana*. They rename the species *Clarkia heterandra* and place it in a unique section of that genus, based on its unusual nut-like fruits. The species has been collected only once in Oregon, in 1888, near the town of Woodville (now Rogue River), Jackson County. In Peck's *Manual* it was misnamed as "*Gaura heterantha*." Although the species is widespread in California, its present status in Oregon is unknown.

A change of name at the species level that I discussed previously (Douglasia 18:11-13, 1994) concerns the common bunchberry *Cornus canadensis* L. That name is used in *The Jepson Manual*, although research by Canadian botanists in 1965 had suggested that Oregon and California plants belong to a separate species *Cornus unalaschkensis* Ledeb. Recently Z. E. Murrell (Systematic Botany 19:539-556, 1994) published a detailed morphological, multivariate study of bunchberries throughout North America. *Cornus unalaschkensis* stands out as a tetraploid species of hybrid origin, distinct from both its parental taxa *C. canadensis* and *C. suecica* L. All but one of the Oregon populations he sampled belong to *C. unalaschkensis* (one site in the Siskiyou contained backcrosses to *C. canadensis*). Bunchberries are taxonomically "difficult" due to a long history of natural hybridization, but Murrell's work supports changing the name of Oregon's plants to *C. unalaschkensis*. I will reserve additional examples of new Oregon plant names for discussion in future issues of the newsletter.

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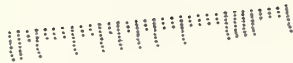
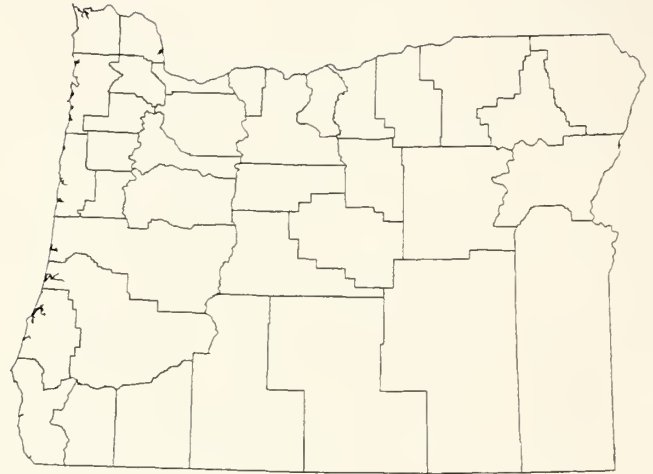
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Would you like to make a donation?

Tax-deductible donations can be made to the Oregon Flora project by sending a check made out to the Oregon State University Foundation to Scott Sundberg at the address on page 2. Please note on the check that it is for the Oregon Flora Project. Your donations pay student wages, newsletter mailing costs, and for supplies and software. They go a long way.

Did you know?

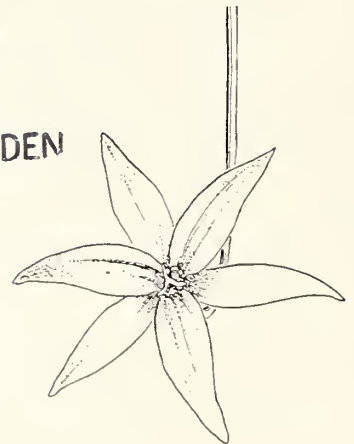
- "Play it again, Sam" -- botanical version: In the scientific name for kinnikinnick, *Arctostaphylos uva-ursi*, "*Arctostaphylos*" means "bear-grape" in Greek, while "*uva-ursi*" means "bear's-grape" in Latin.
- *Aster chilensis*, native to coastal Oregon and California, was mistakenly named for Chile although it does not grow there. The original collection by Haenke, in 1792, was labelled (in Latin) "in regio montanis," meaning "in Monterey" (Spanish for "royal mountain"). The botanist who named the species translated this phrase as "in mountainous regions," meaning the Andes mountains of Chile, which Haenke had explored earlier during his voyage with the Spanish sea-captain Malaspina.
- When going through *The Jepson Manual - Higher Plants of California*, we found over 750 changes from the original Oregon checklist compiled from available sources in 1989. Most of these changes were nomenclatural, but there was also a substantial number of new reports for Oregon.



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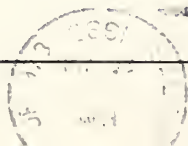
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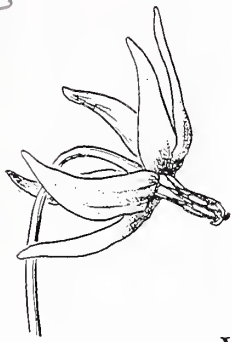


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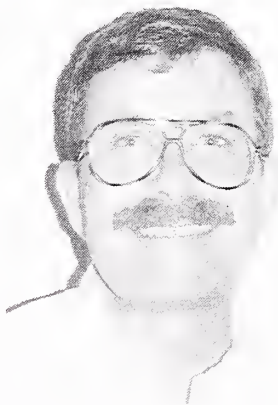
Volume 1 Number 2 • Oregon State University • April 1995

Requiem for a Laptop: Seeds of the Oregon Checklist Project Karl Urban

I probably will never discard my old worn-out Zenith 286 Supersport laptop computer because it elicits so many fond memories of a wonderfully challenging year at Oregon State University: long days spent in the OSU Herbarium, long nights in the Kerr Library, the sprint to finish my project, and the exciting day I submitted my gargantuan, 18-pound, computerized "Preliminary Database for a Flora of Oregon" to Dr. Kenton Chambers. The date was June 9, 1989.

My involvement with the Oregon Checklist database project began in 1982, during my first summer as a botanical contractor for the Umatilla National Forest. That year, I decided to use the Forest Service's Alphanumeric Code Book and Checklist for the Flora of Region 6 (Pacific Northwest), to compile species lists for the areas I was surveying. However, I quickly discovered that the alpha code book (book of abbreviations of Latin names of plants) was very weak on species in the southern half of Oregon. Also, for

See Requiem, page 7



Karl Urban

Checklists of Oregon Plants Scott Sundberg

Two articles concerning checklist projects are featured in this issue of the Oregon Flora Newsletter. The first, by Karl Urban, describes his motivation for compiling an Oregon checklist and the process he used for this huge task. Karl's Oregon checklist forms the nucleus for the checklist being developed by the Oregon Flora Project. It is being extensively modified, but much of the basic structure and content remain intact. The second article, by Mary Carlson, Lois Hopkins, and Mildred Thiele, provides the background of the *Douglas County Flora* project. A book, which lists the plants of the county, is a product of this ongoing project by four avid lay botanists (Mary Carlson, Joan Fosback, Lois Hopkins, and Mildred Thiele) from Roseburg. Mary reports that for many years they have been going out to the field nearly every Tuesday during the field season to make species lists for different areas in the county. Their latest publication is a list of 1418 species and their known distributions in 64 areas delineated in Douglas County.

There are numerous other checklists of Oregon plants. One, compiled by George Lewis from floras, covers the entire state and is similar to the one developed by Karl Urban, although it lacks synonyms and is not in a database. Charlene Simpson and the Lane County Checklist Group are actively working on a list for that county. We have received checklists for the Warm Springs Indian Reservation, the Umatilla, Wallowa-Whitman and Winema National Forests, the Vale District of the Bureau of Land Management, Steens Mountain, and Crater Lake National Park. Checklists of smaller areas, such as Fairview Peak, Iron Mountain, and the Oregon Dunes National Recreation Area also exist. All of these lists are currently being checked for new Oregon records. We will be searching for other checklists for various parts of the state over the next few months, so please let us know if you are aware of lists that we may not already have. *

Douglas County Flora

Mary Carlson, Lois Hopkins and Mildred Thiele

It all started in the early sixties over an orchid. Lois Wesley Hopkins learned that Mildred Thiele thought a coral root was a member of the heath family. She called Mildred to correct the error and they discovered a mutual interest in their new-found love of wildflower identification. In 1967 they met Joan Fosback at the Glide Wildflower Show and then they were a team of three.

Their summer outings took them exploring the network of forest roads in Douglas County. Sometimes problems occurred—like what to do when they found a tree had fallen while they were up a dead-end road, or do you break the car window when you have locked the keys inside, or who moved that creek because it was not there on the map.

They met weekly to process and identify their specimens. With Peck as their only reference (no illustrations), they would attack the key, and hammer out each lead until they were all satisfied with the identification. The appearance of the first illustrated references were like manna from heaven!

The plant lists of special areas accumulated rapidly



Left to right: Mildred Thiele, Joan Fosback, Mary Carlson, Lois Hopkins.

Photo: Douglas County Museum Photograph

and their cataloguing became cumbersome. A workable system was needed. Roughly following watersheds, they divided the county into sixteen areas and each of those into four sub-areas. Incorporating this with their flora sightings they made a survey booklet for each area. Now by using initials for specific locations they could record their sightings for a trail, a camp, or a specific roadside area.

In 1977 they were delighted with a new challenge. The Bureau of Land Management contracted with them to compile a *Para-Botanist Training Package*. It was also used for their first District Botanical Report. The county checklist was printed in full with the Threatened and Endangered plants indicated. The group continued to help with the T and E project.

The Douglas County Museum of History and Natural History has an excellent natural history department. In 1980 the group was invited to house their collection of botanical material at the museum and to establish a scientific herbarium. The Friends of the Museum were generous with cabinets, dissecting scope, scientific books and various supplies. Dr. Wagner and Dr. Chambers gave valuable suggestions. Now collecting and mounting started in earnest.

Then came the computer age! Mary Carlson had joined the group in 1982. The summer of 1987 Lois Hopkins asked Mary to baby-sit her computer and by summer's end they had a database. Later a second database was created. It contains the distribution of Douglas County flora, incorporating sightings in the sixteen areas and the four subareas.

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Checklist Project Leaders:

Kenton Chambers	Brad Smith
Richard Halse	Scott Sundberg
Jimmy Kagan	Karl Urban
Aaron Liston	David Wagner
Rhoda Love	Peter Zika
Robert Meinke	

Checklist Advisory Board:

Ed Alverson	Susan Kephart
Karen Antell	Frank Lang
Henrietta Chambers	Don Mansfield
Tom Kaye	Kareen Sturgeon

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several years, I had been using hand-written index cards and a typewriter to compile my lists, and this required spending a tremendous amount of time.

As the 1986 season approached, I somewhat nervously decided that perhaps it was time to switch to a computer data base. So I traveled to Portland and bought my first computer, an IBM-compatible, and taught myself to use it. That field season I found to my delight that I could return from the field after completing a survey, type in the alpha codes of the species I had encountered, and let the computer print the final species list. It was a pleasant race to see whether the computer would finish printing the list before or after I had finished showering!

Once I had sampled the power of computer technology, I began to be haunted by the desire to update the entire alpha code and checklist so it would be comprehensive for all of Forest Service Region 6 as well as being taxonomically current and academically accurate. At the time, I felt willing to take on this project, even if ultimately I might be the sole user.

In 1988, I applied for a long-overdue sabbatical leave. I had spent twenty years as an instructor at Blue Mountain Community College and recognized the need for a year of refresher studies at Oregon State University, where my wife would also be completing her bachelor's degree. So, I proposed to Dr. Kenton Chambers that while taking course work, I might also compile the checklist database. He agreed to "coach" me through this project if I obtained the sabbatical leave and was accepted as a graduate student at the University in the fall. It all came to pass.

Little did I know just how time-consuming the project would be, nor had I any idea that I would have to purchase my own Zenith portable computer to make it happen. I had academic commitments at OSU which were dictated by the conditions of the sabbatical leave, and fall quarter I found little time to work on the database. Winter quarter, however, more of my credits were dedicated to my project and it began to flourish. On a daily basis I cross-checked synonyms and regional and national codes, attempting to reconcile all valid species names in the published Floras for Oregon and Washington. I reviewed herbarium specimens and literature, attempting to estimate geographic distributions, recording it all in the memory of my little Zenith.

But as spring approached, I realized that I had to shift to an even higher level of diligence if I was going to finish. So, my final quarter I enrolled for an early morning section of immunology and then retreated to the herbarium for the rest of the day. Thus I went from


antibodies to *Zauschneria* in one term! On June 9, 1989, I beamingly presented Dr. Chambers with my cumulative efforts, thinking to myself as I did, that it might serve as a catalyst for working on a Flora during his retirement years. Five days later I was back home in eastern Oregon.

Later that summer I met Brad Smith, a Forest Service ecologist, who had dealt in southwestern Oregon, with the problem of inadequate alpha codes and incomplete floristics. He suggested that we work together to enlarge the database so it would update archaic species names to currently valid names and codes. So I began to work nights and weekends to replace invalid names which I had earlier eliminated at OSU.

I changed jobs in 1991, leaving Blue Mountain Community College to become the Umatilla National Forest's first Forest Botanist. The new job left me with virtually no time to spend revising the database. So, although I desperately wanted to incorporate the changes proposed in the Jepson Manual, I reluctantly put my project to bed, realizing that the opportunities that had existed in 1988-89 at OSU (herbarium, library facilities, and professional direction) were never to be mine again. However, the hope that Dr. Chambers would, indeed, use my work in his retirement lingered. Somehow, I just couldn't picture him as a passive retiree.

In February of 1994, shortly after the University of Oregon Herbarium had been moved to OSU, I received a call from Dr. Chambers: "We would like to use your database..." In a state of shock I mumbled something about, "I'll be in Corvallis in March. Could I come a day early and meet with your group to make arrangements?"

I couldn't conceal my glee. My efforts, imperfect as they may have been, were to serve as one of several catalysts that would help the Oregon Checklist and Flora projects get under way. My work is in good hands now, as Oregon's professional botanical community revises and builds upon a foundation I helped initiate. I am ecstatic that my work was not in vain!

So I probably won't part with the old Zenith laptop that served me so well during that wonderful year at Oregon State. It collects dust in my attic, but I am certain that at the very edge of its overstuffed hard disk are the last words that ever flowed through its silicon veins: "A Preliminary Database for a Flora of Oregon, Presented to Dr. Kenton Chambers in Partial Fulfillment of the Requirements for Botany 505, Oregon State University, June 1989." *


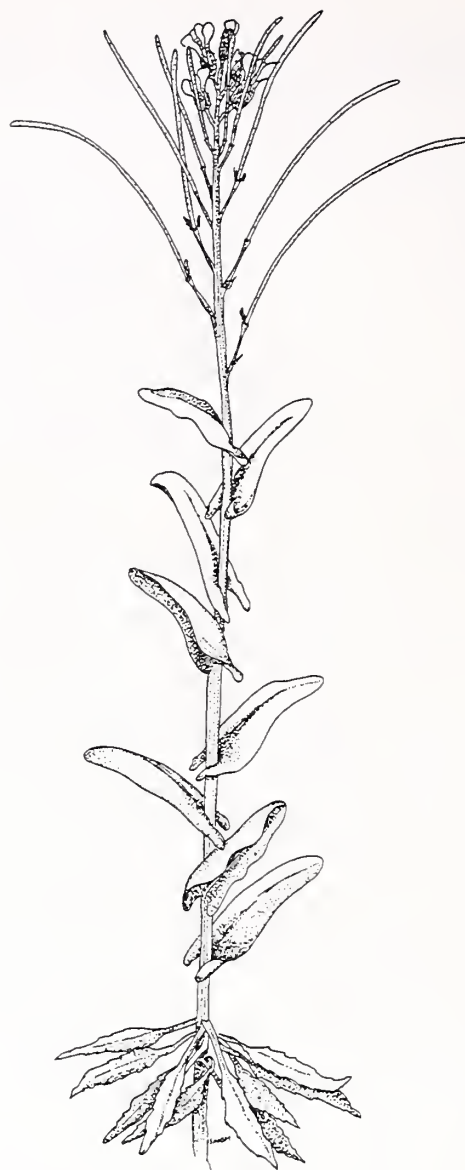
The group is presently computerizing existing field checklists for specific sighting locations in each of the 64 subareas. Their third publication *Flora Distribution Survey* was another computer challenge.

To date, this group has published three flora distribution surveys and they have 2450 specimens housed in their collection. They may be Little Old Ladies In Hiking Boots but they also have their sights on the future and are having a good time getting there!



Did you know?

- *Filipendula occidentalis* (Queen-of-the-forest, family Rosaceae), a species endemic to coastal northwestern Oregon, has no close relatives in North America. It is morphologically very similar to *Filipendula camtschatica*, found in northern Japan, the Kurile Islands, and Kamchatka, Russia.
- Several subtropical plant species were collected in old ship ballast (soil and gravel used to weigh down ships) dumping grounds around Portland in the early 1900s. These may have lasted only one growing season, perishing in cold winter weather.
- *Claytonia (Montia) sibirica* (candy-flower) does not occur in Siberia, despite its species name. The closest it comes to the Asian mainland is on the Commander Islands, a westward extension of the Aleutian Island chain.
- *Cirsium arvense* (Canada thistle) may have been first introduced into Marion County, Oregon around 1872 “when a man bought a new separator [farm machine] from the East. The spot on which the machine was set up and first run was found to have a number of fine Canada thistle plants the next year” (Craig 1892, Oregon Agricultural Experiment Station Bulletin # 10)
- There are no published illustrations for many Oregon plants, for example *Arabis sparsiflora* var. *atrorubens* (sicklepod rockcress, illustration at right), drawn by Susan Massey for an in-house field guide of rare plants of the BLM Prineville District.



Arabis sparsiflora var. *atrorubens*
sicklepod rockcress

Duckweeds Wanted!

While looking through specimens of Oregon Lemnaceae in the herbarium, I discovered that we had fewer than 5 specimens for 10 of the approximately 13 species of duckweeds (*Lemna*, *Spirodela*, *Wolffia*) that have been found in the state. These are among the smallest flowering plants in the world and are poorly collected. If you see any species of the duckweed family (except water lentil, *Lemna minor*), please send material to me in a moist paper towel inside a sealed plastic bag. I will provide an identification, and you'll be helping the Oregon Flora Project! - Scott Sundberg

Cover illustrations of *Erythronium oregonum* by Jeanne Janish, taken from Hitchcock et al. 1969, *Vascular Plants of the Pacific Northwest*, courtesy of the University of Washington Press.

Your Donations Help!

Private donations to the Project so far have ranged from \$10 to \$350. A \$10 donation defrays the cost of the newsletter for three people for one year. This issue of the *Oregon Flora Newsletter* has been produced using Aldus Pagemaker, which was purchased with one contribution of \$100 that was matched by an employer. It took much less time to put together than the first issue, which was cut and pasted, and this gave us a lot more time for working on the Project. Thanks! Your continued contributions, from \$10 up, help keep the Oregon Flora Project running. Matching donations, which are available from many Oregon employers, typically double the amount. The following have made donations to the Oregon Flora Project:

Bert Brehm	Dave & Jan Dobak
Bob Frenkel	Molly Grothaus
Patricia & Noel Holmgren	Charlene Holzwarth
Rhoda & Glen Love	Karl Urban
Esther & Peter McEvoy	Julie Kierstead Nelson
John Reynolds	Sara Barnum
Joan & Ollie Fosback	Tektronix Corporation
Ken & Henny Chambers	

Have you seen these plants?

As we work on the Checklist, we turn up herbarium specimens of plant taxa that are known from only a single locality in Oregon. As an occasional feature of the Oregon Flora Newsletter, we will be listing these plants and mapping their approximate localities on the back page. If you are aware of populations of any of these, or would like to check to see if the plants still exist in their recorded locations, please contact us. We can provide full label data from the specimens in the Herbarium.

Oregon Flora Project News

Scott Sundberg

The past three months have been an active period for the Oregon Flora Project. In January we received a generous grant of \$2000 from the Native Plant Society of Oregon. Other notable activities included formation of the Checklist Advisory Board, planning for an Oregon vascular plant atlas, invitations to outside contributors to the Checklist, and work on the Checklist draft. Several botanists from outside the Checklist group are preparing treatments of families, and most families have been assigned.

The Checklist database now has 4349 accepted taxon names (species, subspecies, and varieties) and 868 synonyms, and continues to change nearly daily. The number of accepted taxon names has decreased over the past few months, partly due to the removal of redundant entries and general cleaning up of the list, but the number of synonyms has increased with the submittal of treatments of several small families and 51 genera of Asteraceae.

The Checklist Advisory Board has been recently formed. People on the Board will help primarily by reviewing draft treatments in the Checklist, or will be involved in the project in other ways.

Meetings have been held to explore possibilities of producing an atlas of Oregon vascular plants using a database of locality information. We have approached the Douglas County flora group and the Lane County checklist group and several individuals to see if there is interest in such a project. Although details of the project have not been worked out, the response has been generally positive. A tentative database structure has been developed, and methods for gathering data are being explored. ✿

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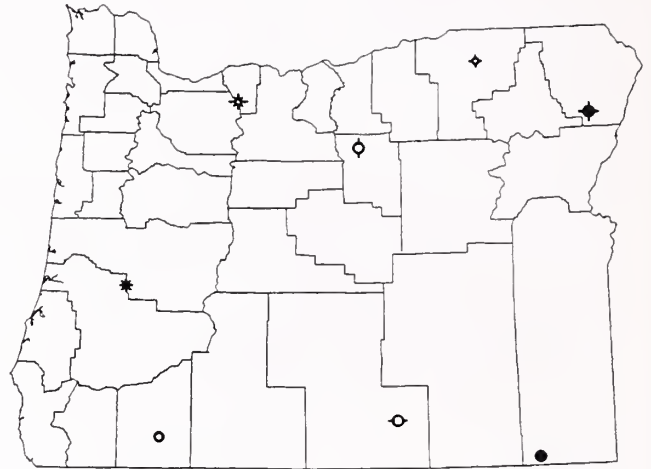
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Have you seen these plants?

- ✧ *Petasites frigidus* (L.) Fr. var. *nivalis* (Greene)
Cronq. (alpine coltsfoot)
- ✧ *Helianthella californica* A. Gray var. *nevadensis*
(Greene) Jeps. (California false sunflower)
- ◊ *Helianthella quinquenervis* (Hook.) A. Gray
(nodding helianthella)
- ✧ *Lygodesmia juncea* (Pursh) D. Don ex Hook.
(rush skeletonplant)
- ◊ *Malacothrix stebbinsii* W.S. Davis & P.H.
Raven (Stebbins' malacothrix)
- ◊ *Microseris douglasii* (DC.) Sch. Bip. ssp.
douglasii (Douglas' microseris)
- *Rafinesquia californica* Nutt. (California
chicory)
- ✦ *Taraxacum ceratophorum* (Ledeb.) DC.
(horned dandelion)

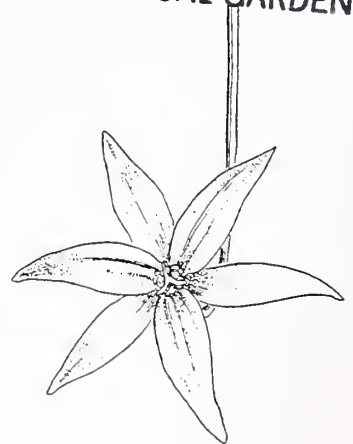


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OREGON FLORA NEWSLETTER

Volume 1 Number 3 • Oregon State University • July 1995

Scott Sundberg: Coordinator of the Oregon Flora Project

Scott Sundberg is currently a Faculty Research Associate in the Department of Botany and Plant Pathology at Oregon State University. His present support comes from a National Science Foundation grant to integrate the University of Oregon Herbarium into the Oregon State University Herbarium. He reports that his experience at OSU is proving to be very rewarding, both in seeing the two herbaria merged into an important regional resource, and in interacting with dozens of professional and lay botanists in his role of Coordinator of the Oregon Flora Project.

Scott was born in Eugene where his father is a member of the University of Oregon Department of Psychology. He tells us that his interest in plant systematics began when he took an undergraduate botany course at the University of Oregon taught by Dr. George Carroll, who was assisted by the late Dr. Leighton Ho and Dr. Rhoda Love. The course, which he found to be rigorous, but one of the best he has

See Sundberg, page 12



Scott Sundberg

Photo: R. Love

Introducing the Oregon Plant Atlas Project! Scott Sundberg

The Oregon Plant Atlas Project, a partnership between the Oregon Flora Project and the Native Plant Society of Oregon (NPSO), was launched at Oregon State University on April 11. The goal of the project is to produce an atlas of Oregon vascular plants in conjunction with a new Flora of Oregon. The atlas will include dot maps for each species, a series of map overlays (e.g., ecoregions, actual vegetation, potential vegetation, climate zones), and an introductory chapter on factors that influence plant distributions. The Atlas will be available in both printed and computerized forms.

The Atlas project is led by a diverse group of professional and lay botanists, a cartographer and Geographical Information System specialist, a database specialist, and two ecologists (see list on page 12). It is coordinated by Scott Sundberg. At its June 18 state board meeting, the NPSO enthusiastically supported involvement in the Atlas project by agreeing to be a partner in coordinating field data collection. Bruce Newhouse, the Emerald Chapter President and member of the central committee of the Atlas project, was appointed to fill the new position of NPSO Statewide Atlas Field Coordinator / Rare and Endangered Plant Chair.

Information for the Atlas is kept in a Paradox 5.0 database, the structure of which has recently been finalized. Sources of records include lists prepared for academic studies, herbarium specimen label data, the Oregon Natural Heritage Program database of rare plant records, and various checklists. We roughly estimate that 167,000 records are available from herbarium specimens and 70,000 from other existing sources.

We are currently gathering species lists and establishing procedures for interpreting them. A test round of data entry has been completed. We have written portions of a draft *Handbook for Field*

See Atlas Project, page 12

Participants in the Oregon Plant Atlas Project and plan to finalize it over the next few weeks.

In order to collect plant locality information from throughout Oregon, the state has been divided into 174 "blocks" of 12-20 townships. Most blocks are squares 24 miles on a side containing approximately 576 square miles, but they vary in size, especially along the state's borders. The initial goal will be to secure a list that includes one specific locality for each plant species, subspecies, and variety in each block.

People can become involved in the Atlas project by adopting a block and listing its plant localities, compiling species lists for specific sites, reporting unusual plant sightings, or collecting voucher specimens to document the presence of species in particular ecoregions (see also 1 in 20 Rule, page 13). If you would like to participate in field work for the project, please write Bruce Newhouse at 2525 Potter St., Eugene, Oregon, 97405 (e-mail: newhouse@efn.org). To help with other aspects of the project, contact Scott Sundberg at the address below. ✍

The Oregon Flora Newsletter is published quarterly by the Oregon State University Herbarium and the Oregon Flora Project. The Editor is Rhoda Love.

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Kenton Chambers	Brad Smith
Richard Halse	Scott Sundberg
Jimmy Kagan	Karl Urban
Aaron Liston	David Wagner
Rhoda Love	Peter Zika
Robert Meinke	

Checklist Advisory Board:

Ed Alverson	Susan Kephart
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Atlas Project Leaders:

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Manuela Huso	Charlene Simpson
Tom Kaye	Scott Sundberg
Jon Kimerling	Barbara Wilson
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taken, introduced him to what he refers to as "the splendid diversity of flowering plants throughout the world." Early influences in systematics also came from Georgia Mason and later, Dr. David Wagner, both of the University of Oregon herbarium.

After receiving his B.S. in Biology at the U of O, Scott worked as a botanist at the Coos Bay District of the Bureau of Land Management for three years. He then moved to the University of Texas at Austin, where he pursued a Ph.D. on the systematics of a subgenus of *Aster* under the supervision of Dr. Billie Turner. Following receipt of the Ph.D., he spent a year at Ohio State University, where he was awarded a postdoctoral fellowship to work with Dr. Tod Stuessy on mechanisms for maintaining species integrity in sunflowers and on the *Flora de Nicaragua*.

Scott subsequently moved to Seattle, Washington, where he was a member of the research faculty in the University of Washington Botany Department, and later a consultant working on wetland and rare plant studies. Scott is now back in his home state, close to his parents, and hoping soon to be reunited with his wife, Linda Hardison, who is finishing a Ph.D. in botany at the University of Washington. ✍

Columbia Hawthorn: Readers Help Wanted

J.B. Phipps of the University of Western Ontario, who is contributing the western red-fruited hawthorns (genus *Crataegus*) to the Flora of North America, has written to ask how far south we find the taxon we know as *Crataegus columbiana*. Peck and Hitchcock both say east of the Cascades in northern Oregon. But the Jepson Manual hints that *C. columbiana* may get as far south as California's Modoc Plateau region.

Crataegus columbiana is distinguished from the more common *C. douglasii* by its mature fruits which are red and somewhat hairy rather than black and shiny, styles usually 2-4 rather than 5, and longer thorns (4-7 cm).

Does this taxon get south of the Columbia River drainage? Can our eastside botanists in Oregon, Idaho and northern California help us with this? Please send siting reports and vouchers to the Oregon State University Herbarium c/o Scott Sundberg at the address on this page. Many thanks. ✍

A Rule of Thumb for Botanists: the 1 in 20 Rule

David H. Wagner

There have apparently been instances in the past where well-meaning botanists have destroyed plant populations through over zealous collecting. The case most familiar to me concerns one of the world's rarest ferns, the pumice grape-fern, *Botrychium pumicola*. A student searching for new sites found two individuals of this species on Oregon's Tumalo Mountain in 1954 which he collected to make herbarium specimens. In the late 1970s I searched the top of Tumalo Mountain with friends. We were experienced fern hunters, but we found no *Botrychium*. I strongly suspect that the two plants removed in 1954 eliminated the population at this location. Today we would hope that botanists finding only one or two plants at a site would document their discovery with photographs and notes. Good photographs and careful field notes are increasingly acceptable for recording plant discoveries.

Nevertheless, from time to time, a field worker may encounter a small population of a plant and feel it is necessary to collect a bit of it for positive identification and documentation. The Native Plant Society of Oregon's Guidelines and Ethical Codes for botanists urges that a collector use good judgement and rules of thumb when deciding whether or not to collect. But in this case, what is a good rule of thumb? During the past 10 years, I have been using what I call the "1-in-20 Rule."

The 1-in-20 Rule dictates that a botanist never collect more than one out of twenty plants. It means NOT collecting ONE plant UNTIL you have found at least TWENTY. Only if twenty are found should you consider collecting one plant. And forty should be present before two are taken, and so on. The rule applies to parts of plants, also: remove no more than five percent (one-twentieth) of a shrub, one fern frond from a clump of twenty, 5% of a patch of moss, 5% of seeds from a plant. I use the 1-in-20 Rule whether I am collecting voucher specimens for the herbarium, doing rare plant work, or gathering common species for classroom use.

The 1-in-20 Rule does not obviate the need for good judgement. Only when a botanist has the knowledge to assess whether collecting is both ecologically justified and legally permitted should a specimen be taken. Any pertinent factor relating to the survival of a population needs to be superimposed on the 1-in-20 Rule. The main value of this rule of thumb is to provide a clear point of reference from which to begin

assessing a situation. It helps a botanist determine how much time should be spent inventorying before sampling is appropriate. I suggest the 1-in-20 Rule as a minimal criterion to be met before any taking of a plant be considered.

There is at least a modicum of scientific logic behind this rule. Statistically, a population sample of nineteen is not significantly different from a sample of twenty. One population geneticist I consulted advised me that contemporary statistical theory would support the 1-in-20 Rule. Another pointed out, however, that repeated collecting would tend to reduce every population to nineteen individuals. This caution serves to emphasize that the 1-in-20 Rule is a rule of thumb, not a license to ravage.

An interesting line of argument in support of the 1-in-20 rule has developed since I first published the idea in the Bulletin of the Native Plant Society of Oregon in 1991. First, I received a letter from James Grimes of the New York Botanical Garden querying whether or not I had picked up the idea from a similar article he and others had published in the newsletter of the Idaho Native Plant Society a few years before. I honestly cannot recall seeing their note. Then, last year, four botanists from Australia and New Zealand published an article in the international journal, *Taxon*, which made essentially the same recommendation. Thus, three botanists or groups of botanists, deliberating independently, have arrived at the same standard. I submit that this concurrence from three separate sources speaks strongly for the sensibility of the 1-in-20 Rule. ~~ky~~



Botrychium pumicola

Omnia Brodiaea est Divisa in Partes Tres

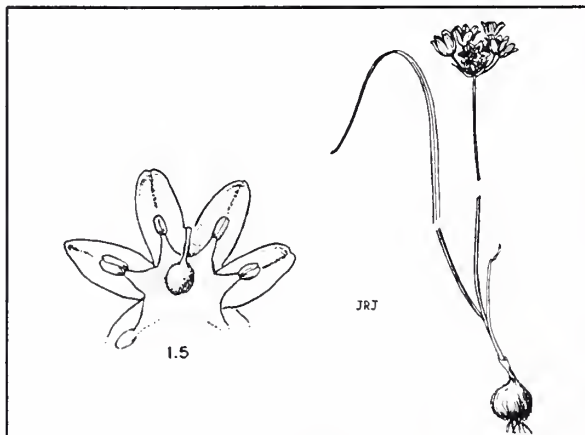
Kenton L. Chambers

Julius Caesar's famous quote about Gaul now applies to the lily genus *Brodiaea*--it is "divided into three parts." At Rhoda Love's suggestion I will briefly review the status of Oregon's species of *Brodiaea*, *Triteleia*, and *Dichelostemma*, the "three parts" of *Brodiaea* as treated in the new *Jepson Manual* (1993) and *Intermountain Flora* (vol 6, 1977). In *Peck's Manual* (1961, PM below) *Brodiaea* has 16 species in Oregon, but with corrections and additions we now recognize 15 species distributed in three genera:

Brodiaea coronaria (Salisb.) Engl. ssp. *coronaria* [*B. coronaria*, PM]; ***B. elegans*** Hoover ssp. *elegans* [*B. elegans*, PM]; ***B. elegans*** Hoover ssp. *hooveri* T. F. Niehaus [not in PM]; ***B. terrestris*** Kellogg ssp. *terrestris* [*B. coronaria* var. *macropoda*, PM]. ***Triteleia bridgesii*** (S. Watson) Greene [*B. bridgesii*, PM]; ***T. crocea*** (A. W. Wood) Greene [*B. crocea*, PM]; ***T. grandiflora*** Lindl. [*B. douglasii*, PM]; ***T. howellii*** (S. Watson) Greene [*B. douglasii* var. *howellii*, PM]; ***T. hyacinthina*** (Lindl.) Greene [*B. hyacinthina*, PM]; ***T. ixioides*** (Aiton) Greene ssp. *anilina* (Greene) L. W. Lenz [*B. scabra* var. "anilina" PM]; ***T. hendersonii*** Greene var. *hendersonii* [*B. hendersonii*, PM]; ***T. hendersonii*** var. *leachiae* (M. Peck) Hoover [*B. leachiae*, PM]; ***T. laxa*** Benth. [*B. laxa*, PM]. ***Dichelostemma capitatum*** A. W. Wood ssp. *capitatum* [*B. capitata*, PM]; ***D. congestum*** (Sm.) Kunth [*B. pulchella*, PM]; ***D. ida-maia*** (A. W. Wood) Greene [*B. ida-maia*, PM]; ***D. multiflorum*** (Benth.) A. A. Heller [*B. multiflora*, PM].

Not verified for Oregon is *Brodiaea californica* Lindl. [PM p. 216]; taxa not now recognized are *B. dissimulata* [PM p. 214, a synonym of *T. hyacinthina*] and *Dichelostemma venustum* (Greene) Hoover [sporadic hybrids involving *D. ida-maia*, says the *Jepson Manual*]. Unfortunately, *D. capitatum* is renamed *D. pulchellum* (Salisb.) A. A. Heller in the *Intermountain Flora*, a controversy yet to be resolved.

Triteleia has 6 fertile stamens, all the anthers alike, and no staminodes; *Brodiaea* has 3 stamens alternating with 3 staminodes; *Dichelostemma* (except *D. capitatum*) has 3 stamens, no staminodes (in Oregon species), and broad filament-appendages forming a crown outside the anthers [*D. capitatum* has 3 large and 3 small anthers plus a crown].



Triteleia hyacinthina

A New Ecoregion Map for Oregon

Jimmy Kagan, Oregon Natural Heritage Program

Oregon has a new ecoregion map for use by the Oregon Natural Heritage Program (ONHP), the Oregon Flora Project and the Oregon Biodiversity Project. The older Physiographic Province (or Ecoregion) Map in the Natural Heritage Plan was used in the past. The original map was a direct descendant of the Physiographic Province Map in the *Natural Vegetation of the Pacific Northwest*, by Franklin and Dyrness, modified by Jerry Franklin for the first Natural Heritage Plan. More recent information, on which the new ONHP map is based, comes primarily from two sources: 1) the recently updated Oregon portion of the Ecoregions of the United States Map, by James Omernik and his staff at the Environmental Protection Agency lab in Corvallis (with input from state and federal soil scientists, ecologists and geologists); and 2) a revision of another national ecoregion scheme, developed by Robert Bailey, the U.S. Forest Service and the BLM, as part of the Columbia River Basin assessment.

The revised Oregon Ecoregion Map on the back page supersedes earlier maps. The new modifications maintain the ten ecoregions of earlier ONHP physiographic province maps, but shift boundaries to match Omernik's new ecoregions for much of the state or Bailey's new boundaries in parts of eastern Oregon. The most significant difference is in southwestern Oregon, where the former Siskiyou Mountains province and the southern outliers of the Western Oregon Interior Valleys province have been combined into a Klamath Mountains province, and pulled away from the ocean. Now, the Coast Range province continues south to the Bay Area in California, although it gets quite narrow in southern Oregon. The Umpqua Valley was included in the Klamath Mountains province, after extensive debate.

Specific information about the new boundaries will be available in computerized form (ARC/INFO) at the Oregon State Service Center in Salem, the ONHP, and at the Oregon Department of Fish and Wildlife's Corvallis Laboratory at Adair. Since this updated Ecoregion Map will be used for the 1998 update of the Oregon Natural Heritage Plan, the Oregon Biodiversity planning effort, and the Oregon Flora Project, it is anticipated that it will remain unchanged for at least five years. ✍

Thanks!

The following people have helped the Oregon Flora Project over the past year. Many have given us advice, sent in checklists or information on Oregon herbaria, alerted us to new state records, or sent us other types of information. Our volunteers are noted with an asterisk. Together they have donated 362 hours over the past year. Members of the central groups for the Flora and Atlas projects are listed on page 12. We also thank our hard-working undergraduate students, Ann Marie Badeau, Shannon Clery, Sue Gagner, Sami Gray, Lareina Holkenbrink, Cathy Murphy, and Eric Peterson. Thanks to everyone who has been involved with the Project!

Mari Baldwin*, Wilbur Bluhm, Bert Brehm, Paula Brooks, Henrietta Chambers*, John Christy, Jeff Damisch*, Christine Ebrahimi, Nancy Eid, Clint Emerson*, Barbara Ertter, Marjorie Ettinger, Jean Findley, Dylan Fischer*, Doug Goldenberg, Michael Green, Lisa Grubisha*, Barbara Halliday, Ron Halvorson, Ron Hartman, Russ Holmes, Lucile Housley, Dale Johnson, Marilyn Karbonski, Greg Karow, Frank Lang, George Lewis, Robin Lodewick, Don Mansfield, Vernon Marttala, Susan Massey, Sherry Pittam, Sandy Poinsett*, Lundy Reynolds, Bruce Rittenhouse, Freeman Rowe, Larry Scofield, Susan Stevens*, Richard Straw, Kareen Sturgeon, Greg Sundberg, Mara Taylor, Arnold Tiehm, Andrew Townesmith*, Dick VanderSchaaf, Linda Vorobik, Gilbert Voss*, Louis D. Whiteaker, Dieter Wilken, Rebecca Wilson*, Robert Wooley.

Illustrations of *Erythronium oregonum* (cover) and *Triteleia hyacinthina* (page 14) by Jeanne Janish, taken from Hitchcock et al. 1969, *Vascular Plants of the Pacific Northwest*, courtesy of the University of Washington Press.

Oregon Flora Project News Scott Sundberg

The Atlas project is now underway! (see Atlas project, front page). We have made progress in other areas as well. For example, we have officially adopted the Oregon Ecoregion Map (see article, page 14) and, of course, work on the Checklist continues.

The Checklist now lists 4378 accepted names and 1001 synonyms. A large number of the 133 synonyms added since the last newsletter came from Morton Peck's *A Manual of the Higher Plants of Oregon, 2nd Edition*. Checklist treatments of several more Asteraceae genera, several small families, and the sedge genus (*Carex*) have been submitted.

We have recently applied to the National Science Foundation for a grant to fund the Flora project for three years. We have also submitted a grant proposal to the National Biological Survey and will soon be seeking funding from charitable foundations. Private donations and Native Plant Society of Oregon funding continue to provide needed basic support. ✍

Your Donations Help!

Thanks to each of you who has donated to the Oregon Flora Project. Your continued contributions, from \$10 up, help keep the Flora project running. Matching donations, which are available from many Oregon employers, typically double the amount. The following people have recently donated to the Oregon Flora Project:

Stanton Cook, Dave & Jan Dobak, Florence Ebeling, Nancy Eid, Stu Garrett, James Gerdeman, Louise Godfrey, LaRea Johnston, Marilyn Karbonski, John Koenig, Leach Botanical Garden, Glen & Rhoda Love, Robert Ornduff, Theodore Palmer, Clair Siddall, Mildred Thiele, Richard Wescott, Mark Wilson & Sherry Harlan.

To be added to our mailing list (if not already on it):

Name _____

Address _____

Phone _____

E-Mail _____

Would you like to make a donation?

Tax-deductible donations can be made to the Oregon Flora Project by sending a check made out to the Oregon State University Foundation to Scott Sundberg at the address on page 12. Please note on the check that it is for the Oregon Flora Project. Your donations mostly go toward newsletter expenses and student wages.

Did you know?

• Ironically, species names derived from "California" (*californicus*, *californica*, *californicum*) occur more frequently in the current draft of the Oregon Checklist than any other. There are 62 accepted names and 15 synonyms derived from this state name (Tom McCall, roll over in your grave!). Latin words referring to the west (*occidentalis*, *occidentale*) are second, with 50 accepted names and 15 synonyms. Species names referring to Oregon are farther down the list, with only 30 accepted names and 7 synonyms.

• According to *Maples of the World* (Van Gelderen et al. 1994, Timber Press), our native bigleaf maple (*Acer macrophyllum*) has the largest leaves of any maple in the world.

• White meadowfoam (*Limnanthes alba*), which is a relatively new oilseed crop in the Willamette Valley, occasionally escapes as a roadside weed.



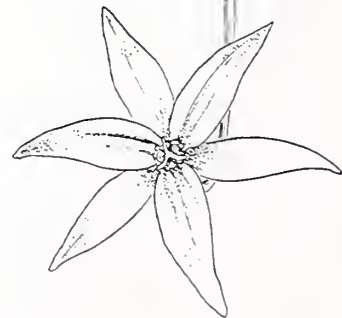
Ecoregions of Oregon

- | | |
|---------------------|------------------------|
| BM = Blue Mountains | HP = High Plains |
| BR = Basin & Range | KM = Klamath Mountains |
| CB = Columbia Basin | OU = Owyhee Uplands |
| CR = Coast Range | WC = West Cascades |
| EC = East Cascades | WV = Willamette Valley |

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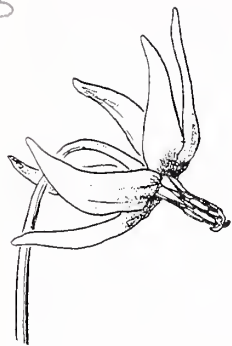
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**Aaron Liston:
Director of the OSU Herbarium**

by Camille V. Tipton

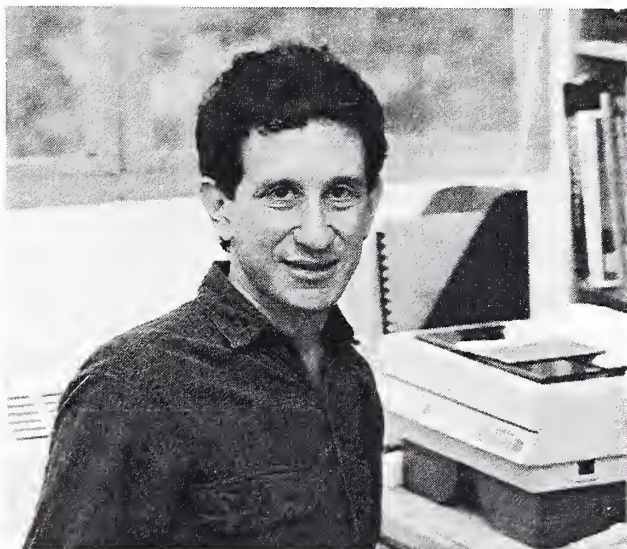
After years of studying Mediterranean plants in Jerusalem, Herbarium Director Aaron Liston faces new challenges in research, teaching, and participating in the Oregon Flora Project.

Aaron, an assistant professor at Oregon State University, teaches plant systematics and evolution. He oversees four graduate students working in diverse projects including molecular biogeography — using data from molecular studies to answer biogeographical questions — and conservation genetics.

Recently, his interests have expanded to include conservation studies in Oregon flora and coevolution between pines and their associated endophytic fungi. His botanical interest began with Mediterranean and South-west Asian floras in 1981 while he was studying at The Hebrew University in Jerusalem and now focuses on plant molecular systematics and evolution.

Aaron, a native of Arizona, began his career with OSU in 1991 after receiving his Ph.D. from Rancho Santa Ana Botanic Garden in Claremont, California.

See Liston, page 18



Aaron Liston

More New Name Changes: Daisies and Tansies

by Kenton L. Chambers

In previous articles dealing with changes in the names of Oregon plants I have suggested that there are several reasons for names of familiar species to be altered. New taxonomic research may change our ideas of relationships, or alternatively, past errors may be discovered that invalidate certain names.

During my studies of some genera of Compositae (Asteraceae) for the Oregon Flora Checklist, a third reason for name-changing has appeared; it might be called simply “breaking with tradition.” By this I mean that the traditional names used in standard West Coast floras and manuals may have been incorrect or out-of-date years ago when the books were written.

The daisies and tansies mentioned in the title are classified in *Chrysanthemum* and *Tanacetum* in the standard floras for Oregon. Many are not natives here but are Eurasian garden plants or weeds. Over several decades, beginning in 1916, European botanists studied these genera, reclassifying many of the species. The changes were accepted and became common in European floras but were ignored or overlooked by the authors of our western American floras.

The common oxeye daisy, *Chrysanthemum leucanthemum* was long ago renamed *Leucanthemum vulgare* Lam. in European botanical references, because significant taxonomic differences were found between the two genera. We are using the latter name for oxeye daisy in our Checklist and it also appears in the new *Jepson Manual* for California. There is one species of true *Chrysanthemum* which we believe has escaped from cultivation in Oregon, *C. segetum* L. (corn marigold). It was collected by Lilla Leach at Gold Beach, Curry County in 1928, and botanists in that part of Oregon should look for it in weedy waste areas away from garden cultivation. The *Jepson Manual* says it is commonly naturalized in coastal regions of northwestern California.

See Name Changes, page 18

Two other European plants that have traditionally been classified in *Chrysanthemum* in Oregon floras will be renamed species of *Tanacetum*, following European practice. These are *Tanacetum parthenium* (L.) Sch. Bip., (feverfew or featherfew), and *Tanacetum balsamita* L., (costmary). Both are found occasionally as escapees in Oregon. Readers of this article are urged to be on the lookout for Shasta daisy escaped from cultivation; we need better verification of this having occurred in Oregon (there is only one old herbarium record from Salem, in 1922). The name used for this plant in the Checklist is *Leucanthemum maximum* (Ramond) DC.

Common tansy, *Tanacetum vulgare* L., a non-native species, retains this name in our Checklist, but the native dune tansy, formerly *Tanacetum douglasii* is renamed as *T. camphoratum* Less. Typical forms of the latter species occur in central coastal California, but there is too much intergradation northward into south-coastal Oregon to allow separation of two species. Finally, two species native to eastern Oregon, traditionally placed in *Tanacetum*, have been transferred to *Sphaeromeria* as *S. potentilloides* (A. Gray) A. Heller, and *S. cana* (D. C. Eaton) A. Heller. The latter taxon barely enters the state on Steens Mountain from its main range farther south. Additional collections are needed to judge the extent of the Oregon populations of *S. cana*, as only three old herbarium records of it exist. ✎

The Oregon Flora Newsletter is published quarterly by the Oregon State University Herbarium and the Oregon Flora Project. The Editor is Rhoda Love and the Production Assistant is Camille V. Tipton.

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Before that, he received a bachelors degree in biology and a masters degree in botany in Jerusalem.

"I started working in the herbarium sorting species (in 1981) and I fell in love with it," he said. "I knew that was my life's work. It clicked. It just clicked."

In addition to his course work, he travelled extensively in Israel and published several articles on the flora of the country. In 1985, he traveled to the Canary Islands to identify Mediterranean plants. His masters thesis analyzed introduced and native weedy species in Israel's Arava Valley, nestled between the Dead and Red seas.

The desire to identify Western North American plants with evolutionary ties to plants in the Middle East led him back to the United States in 1986 to complete his dissertation *An evolutionary study of Astragalus sect. Leptocarpi subsect. Californici*.

During his Ph.D. work, he collected plants in Mexico. Later, he spent six weeks collecting in a remote region of northwest China along the "Silk Road." He said the plant collecting trips weren't directly related to his dissertation, but contributed to other published work.

Current projects at OSU include clarifying the phylogenetic position of *Astragalus* (milk vetch) and related legumes; working on the pines of Mexico in collaboration with a botanist at the Universidad Nacional Autónoma de México and on the phylogeny of *Lathyrus* (sweet pea) in collaboration with the botanists of the University of Aarhus, Denmark.

He has recently completed a draft treatment of *Astragalus* for the Oregon Checklist. Aaron has published dozens of articles in technical journals and is cited in the *Jepson Manual*.

Aaron and his wife, Sara — whom he met on a plant collecting field trip — enjoy traveling, working in their garden at home, and visiting the gardens of others. ✎

Atlas Workshops to Follow NPSO Symposium

A symposium on the "Conservation and Management of Oregon's Native Flora," sponsored by the Native Plant Society of Oregon and the OSU Department of Botany and Plant Pathology, will be held at Oregon State University, November 15-17.

On the 17th after the symposium, brief workshops will be held for people who wish to participate in the Atlas project by making species lists, being regional coordinators, or helping in other ways. For information on the Atlas project workshops contact Scott Sundberg. For information on the NPSO symposium contact Bruce Rittenhouse at (503) 756-0100.

Herbarium Home Page Goes On-line

by Camille V. Tipton

Within the next five years, computerized publications, such as floras and journals, will become increasingly available over the Internet via the World Wide Web. The computer revolution will make more information available to every computer-user.


"I see people being able to use publications straight off the web," said Aaron Liston, assistant professor at OSU and the university's herbarium director. "The lines between book publications and web publications could become very blurred. What that means to the majority of botanists in Oregon is that they will have up-to-date, up-to-the-minute information."

In order to access the world of information out there, you need to have access to the appropriate software (a web browser like Netscape or Mosaic works well).

Once you have installed the necessary software, check out the Oregon State University herbarium home page at the <http://www.orst.edu/Dept/botany/herbarium/> address.

Web services offered by OSU's herbarium home page include an overview of the herbarium; information on current projects; biographies of staff, students, and volunteers; and current and past issues of the Oregon Flora Newsletter. From the herbarium home page you can link up to other botanical references throughout the world, selecting and reading only the topics that interest you.

The herbarium Web site was designed and is maintained by Eric Peterson, an undergraduate at OSU, under the guidance of Aaron Liston.

The Oregon Flora Project intends to make its publications available in electronic form over the World Wide Web so keep an eye on the OSU home page over the next few years. 

Illustrations of *Erythronium oregonum* by Jeanne Janish, taken from Hitchcock et al. 1969, *Vascular Plants of the Pacific Northwest*, courtesy of the University of Washington Press.

Oregon Flora Project News

by Scott Sundberg

The project continues to roll along, with special attention to organizing the Atlas project and revising the Checklist. Five people have volunteered to serve as regional coordinators for the Atlas project. The coordinators will organize local efforts for making species lists for the 174 blocks in Oregon. We have gathered 390 species lists from around Oregon, most of which are suitable for entry into the Atlas database. We have also agreed to share noxious weed locality data with the Oregon Department of Agriculture noxious weed program.

The Checklist now has 4,391 accepted names and 1,177 synonyms. Recently, we have been adding as many names (mostly synonyms) to the list as possible to improve links between the Checklist and Atlas databases. Treatments of *Salix* (willow), *Astragalus* (milk vetch), and several other genera have been submitted, and hundreds of housekeeping changes have been entered in the Checklist database.

Thanks!

Thanks to the following people, who are among the many people who have helped the Oregon Flora Project during the past three months. Volunteers are noted with an asterisk and student workers are noted with two asterisks: Ann Marie Badeau**, Bruce Barnes, Paula Brooks, Henrietta Chambers*, Shannon Clery**, Christine Ebrahimi, Doug Goldenberg, Graham Gori**, Sami Gray**, Barbara Halliday, Glenn Halliday, Steve Harvey, Don Heller, Dennis Isaacson, Marilyn Karbonski*, Chris Kiilsgaard, Judith Manning*, Cathy Murphy**, Eric Peterson**, Jessie Reiber*, Katy Reiber*, Freeman Rowe, Sherry Spencer, Gerald B. Straley, Richard Straw, Chris Thoms*, Camille Tipton**, Maxine Thompson, Gilbert Voss*, Sue Vrilakas, Margi Willowmoon**, and Michael Woodbridge.

Thanks to each of you who has donated to the Oregon Flora Project during the past three months: Betty Baum, Sara J. Barnum & Joyce Beemans, Mike & Nancy Fahey, Charles & Eleanor Ford, Jay & Cecelia Lunn, Vernon & Madeline Martalla, Freeman Rowe, Harriett Smith, Richard H. Sommer, Veva & Robert Stansell, Gerald B. Straley, Norman & Donna Sundberg, Tektronix Corporation, Wetland Specialties Inc., and Margaret Wiese.

To be added to our mailing list (if not already on it):

Name _____

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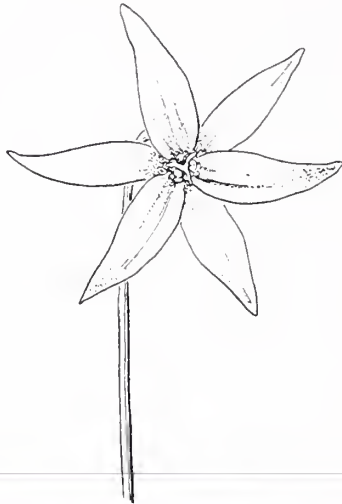
Would you like to make a donation?

Tax-deductible donations can be made to the Oregon Flora Project by sending a check made out to the Oregon State University Foundation to Scott Sundberg at the address on page 18. Please note on the check that it is for the Oregon Flora Project. Your donations mostly go toward newsletter expenses and student wages.



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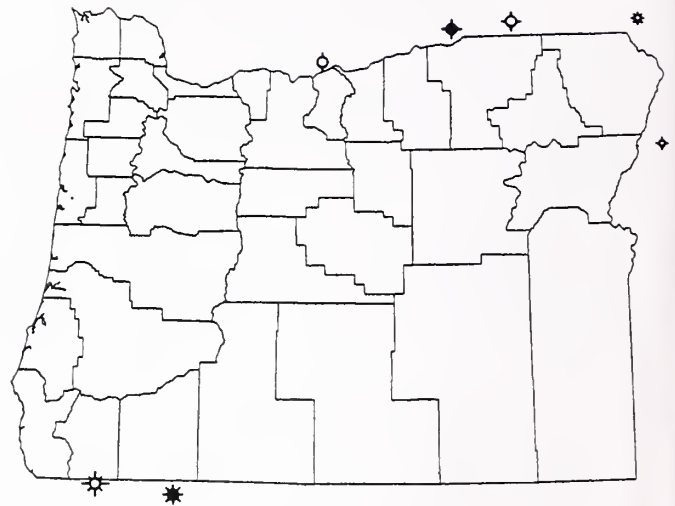
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Did you know?

- The Lane County Checklist Group has been busy locating and documenting plant occurrences in Lane County; compiling a checklist of vascular plant species; and assembling maps and plant lists in preparation for an active 1996 field season. Several interesting new plant localities have been found this year.
- The *International Code of Botanical Nomenclature* dictates the rules for naming plants. There are different rules for naming animals. One difference between the two is that the species name for an animal can be the same as the genus name (e.g., *Gallinago gallinago*, the common snipe), but this is not allowed for plants.
- Bruce Barnes has written computerized keys to the plants of the Umatilla and Wallowa-Whitman National Forests. These are multi-entry keys, in which plants can be identified by entering characters in any order, unlike standard dichotomous keys, which require that characters be evaluated in a defined sequence.



"Near Misses"

Please report if found in Oregon.

- | | |
|---------------------------------|--|
| ◆ <i>Allium scilloides</i> | ★ <i>Mirabilis greenei</i> |
| ◇ <i>Bryonia alba</i> | ◇ <i>Nothocalais nigrescens</i> |
| ◇ <i>Helianthus maximiliani</i> | ★ <i>Rudbeckia californica</i>
var. <i>interior</i> |
| ★ <i>Lomatium salmoniflorum</i> | ● <i>Tetradymia tetrameres</i> |
| ◇ <i>Mentzelia torreyi</i> | |