

OREGON FLORA NEWSLETTER

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Confessions of a diverger

by Frank A. Lang

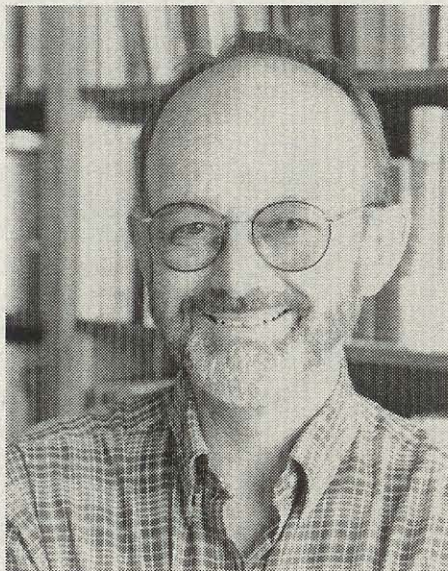
[Dr. Frank Lang of Ashland is a member of the Oregon Flora Checklist Advisory Board. Many people consider Frank to be "Mr. Botany" of southern Oregon because of his prominent position in the botanical community in that part of the state.]

I was born and raised in Olympia, Washington. My life's ambition always was to be a biologist and as luck would have it, my Boy Scout Nature merit badge counselor was naturalist Margaret McKenny, author of *The Savory Wild Mushroom*. A good part of my high school years were spent on field trips with Margaret and her friends. I met Roger Tory Peterson at that time.

I studied botany in high school in Olympia and after graduation decided to major in the subject at Oregon State College (now OSU). I enjoyed my four years in Corvallis, meeting my wife of 40 years there. Dr. Albert N. Steward, director of the herbarium, was my systematic botany teacher. I worked for him, filing plants and making drawings. Ferns were an interest of mine so I planned to study that group in graduate school at the University of Washington.

In Seattle I found no one interested in ferns. However, Dr. Arthur Kruckeberg asked me if I would be interested in determining why the gravelly prairies of western Washington

See Lang, page 4



Frank Lang

Tofieldia gives way to *Triantha* in Oregon

by Kenton L. Chambers

Under the category of new names, it seems that another genus of Liliaceae is going to "disappear" from the state's flora; that is, it will receive an unfamiliar new name. We have previously noted the loss of *Smilacina*, which was absorbed into *Maianthemum*, and of *Disporum*, which changed its name to *Prosartes* for all the New World species. The latest victim is *Tofieldia*, which has been split in a way that transfers the Oregon taxa to the genus *Triantha*. In his recent review of *Tofieldia*, Dr. John G. Packer (*Novon* 3:278-279, 1993) noted that the "*Tofieldia glutinosa* group" differs from other species of the genus in having glandular-pubescent stems (rather than glabrous ones) and racemes with multiple flowers per node (instead of always one per node). These features, together with microscopic differences in the leaf epidermis, led him to place *T. glutinosa* in the genus *Triantha*. The change, which originated with J. G. Baker in 1879, has now been adopted by other modern experts on the Liliaceae; however, it has yet to make its way into the floristic literature for western North America.

Flora of the Pacific Northwest uses the name *Tofieldia* (now *Triantha glutinosa*) for the Oregon species, but Dr. Packer assigns our plants to the segregate taxon *Triantha occidentalis* (S. Watson) R.R. Gates. He recognizes two subspecies in the state: ssp. *occidentalis*, ranging from the Siskiyou southward into California, and ssp. *brevistyla* (C.L. Hitchc.) Packer, extending in the Cascades from Crater Lake to Mt. Hood and north to coastal Alaska. A third subspecies occurs in the Rocky Mountains.

The closely related species, *Triantha glutinosa* (Michx.) Baker, which is widespread in the eastern United States and Canada, differs from *T. occidentalis* in lacking a loose, spongy covering on its seeds. In 1991, I found several herbarium specimens from coastal Coos County, collected over 45 years earlier, whose seed morphology was like *T. glutinosa* (*Bull. Native Plant Soc. Ore.* 24:15-16). A 1997 collection of *T. glutinosa* by Peter Zika from a cranberry bog near Floras Lake, Curry County, shows that this species has indeed been introduced into Oregon, probably as an unnoticed hitchhiker on cranberry plants imported from the East Coast for commercial propagation! ❁

Species lists requested for the Atlas project

The Atlas project is gearing up for the coming field season and needs your species lists! We need the lists so field workers can search for unlisted species. This field season volunteers will be searching for new records in many of the 174 Oregon "blocks" [areas of approximately 525 square miles; see OFN 2(2)]. We will provide lists of previously reported species to people who wish to "adopt" blocks, and we hope to make these initial lists as complete as possible. If you have lists you would like to include in the Oregon Vascular Plant Atlas, please send them to us. Send lists to Scott Sundberg (see bottom of this page for contact information), to Wilbur Bluhm, the new NPSO State Atlas Coordinator, or to your Regional Coordinator. Contact us to adopt a block or for more information on the Atlas project.

Illustrations of *Erythronium oregonum* on the front and back covers by Linda Ann Vorobik.

The Oregon Flora Newsletter is published three times a year by the Oregon Flora Project and the Oregon State University Herbarium. The Editor is Rhoda Love and the Production Assistant is Aaron Hodges.

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Look for *Limnanthes macounii* on the Oregon coast

by Adolf & Oluna Ceska

[The following is taken with permission from a longer article which first appeared in Botanical Electronic News (BEN) # 225, June 7, 1999 and was reprinted in *Menziesia*, Vol 4 # 4, 1999.]

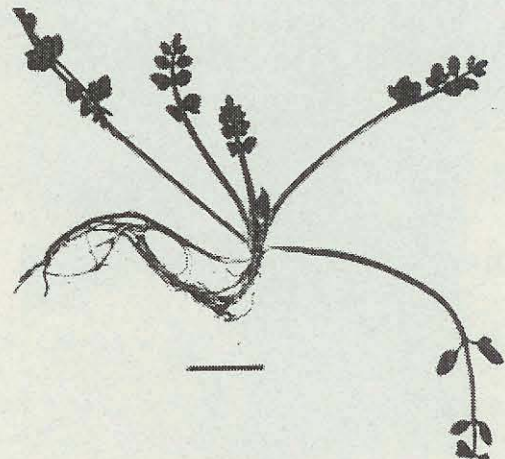
Macoun's meadowfoam, *Limnanthes macounii*, is an enigmatic plant which was first described from Victoria, B. C. and until recently was known only from Vancouver Island and adjacent areas. The first specimens were collected by John Macoun (pronounce "Macown") "in ditches at Victoria" in 1875. W. Trelease described the new species, naming it for the collector. The plant was at the center of botanical interest in Victoria at the beginning of this century when botanists regularly visited certain populations and a few new sites were found. Hitchcock described it as "rare and seldom collected."

The tiny meadowfoam is a winter annual that occurs along the coast in vernal pools, depressions in rocks, seepy places, and often also in open Garry oak and Douglas fir forests. The sites are seasonally wet or flooded from winter rains and bone dry in summer. The plant germinates in October after the first heavy rains. At this phase it is the most conspicuous since it starts well ahead of other annual species. Later it is easily overlooked, as its 4-merous flowers are inconspicuous and it is usually overgrown with other vegetation.

Our interest in the distribution of *Limnanthes macounii* began in 1972 when we found a new site in Victoria. By the late 1980s we were able to list 53 populations of Macoun's meadowfoam from about 25 localities on Vancouver and nearby islands. However, the species remained a local endemic with a very narrow range.

It is difficult to explain the presence of this species, relatively distinct from other species of the genus, in an area that was glaciated until approximately 12,000 years ago. In our 1987 report we offered several possibilities for this distribution. The hypothesis we prefer is that the present range is a northern extension of an originally more southerly distribution, the species having spread into its present localities together with various other southern floristic

See *Limnanthes*, page 4



Limnanthes macounii

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Unexpected rushes (*Juncus*) in Oregon's cranberry fields

by Peter Zika

Cranberries (*Vaccinium macrocarpon*) are native to eastern North America. Their tart taste was popular enough to create a cranberry industry, centered in southeastern Massachusetts, which currently is worth more than \$50 million a year. Starting in 1885 farmers began cutting their cranberry vines and shipping them to the west coast, where the vines (and weed seeds on the vines) became established on coastal Oregon farms. During our summer drought, cranberry fields are irrigated to satisfy the thirsty *Vaccinium* vines, and a number of interesting wetland sedges and rushes coexist with them on the sandy or peaty substrate. Some of the rushes were previously unknown from Oregon, and were first discerned when the Oregon Flora Project turned a critical eye to the herbarium collections in Corvallis.

Now we know that there are several rushes (*Juncus*) from eastern North America firmly established among the cranberries. You will find no mention of these in our regional botany books. One is brown fruited rush, *Juncus pelocarpus*, first collected in Oregon in 1958 among cranberries. With widely spaced solitary flowers (Figure 1), it resembles the common toad rush, *J. bufonius*, but a fleshy rhizome distinguishes *J. pelocarpus* from *J. bufonius*, an annual. Brown fruited rush commonly spreads by fragmentation of its fragile rhizome, or by deciduous bulbils that replace flowers in its inflorescence. These propagules float, and when cranberries are harvested by flooding the fields, the bulbils and seeds are released into the nearest waterway.

Tapered rush (*Juncus acuminatus*) and jointed rush (*J. articulatus*) are two common native species west of the Cascades in Oregon (Figure 2). They are both common plants in cranberry farms and along drainage ditches intermixed with *Vaccinium*. Their inflorescences are much branched, and their

leaves are hollow and tubular, with cross-walls at short intervals. Mingling with them are two cryptic eastern invaders: short tailed rush (*J. brevicaudatus*) and Canada rush (*J. canadensis*) (Figure 3). The four cranberry weeds can be distinguished in fruit. The two introduced species, *J. brevicaudatus* and *J. canadensis*, have seeds with tails. The seeds are black in the former and brown in the latter. The two native taxa, *J. acuminatus* and *J. articulatus*, have seeds lacking tails.

In addition, short tailed rush and jointed rush both have smaller flower clusters. Short tailed rush has a reduced inflorescence, with incurved ascending branches, while



Figure 1. Introduced brown fruited rush, *Juncus pelocarpus*.

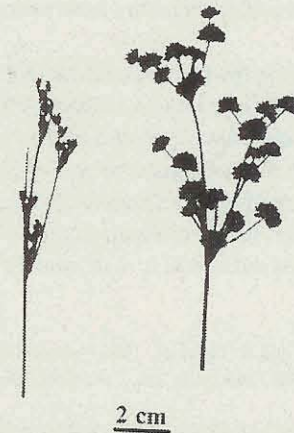


Figure 3. Introduced rushes: short tailed rush, *Juncus brevicaudatus* (l) and Canada rush, *J. canadensis* (r).

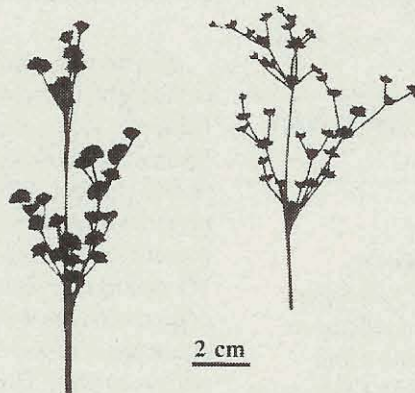


Figure 2. Native rushes: tapered rush, *Juncus acuminatus* (l) and jointed rush, *J. articulatus* (r).

jointed rush has a more widely spreading and intricately branched inflorescence.

More than ten rush species can be found in some of the large cranberry complexes in Coos County, including all of those mentioned above. These plants are annoying to the farmers, and perhaps ecologists should be alarmed too. Canada rush and brown fruited rush have both hopped over the garden fence, and are invading native plant communities in natural wetland systems. Cranberry weeds like rushes, bog candle (*Lysimachia terrestris*), and many St. Johnsworts (*Hypericum* spp.) are becoming pests in the wild in Oregon, Washington and British Columbia.

elements during the Hypsithermal period, while in the south it either became extinct—or was overlooked.

In March 1998 Eva Buxton found a large population of *L. macounii* near Moss Beach, San Mateo County, California, where it is abundant on approximately 18 acres of a seasonally fallow cabbage field. It is obvious that a cabbage field is not the native habitat of Macoun's meadowfoam in California! The question remains: can we find this plant in native habitats south of British Columbia?

We urge west coast botanists to be on the lookout for *Limnanthes macounii* this winter. The best time to search is in mid-winter when the seedlings still have cotyledons and are conspicuous by their yellow-green color. When in flower the plants are almost impossible to find, but they again become more noticeable when they bear young fruits which are light yellow.

In Oregon the plant should be looked for in depressions in rocks with *Plagiobothrys scouleri*, *Plantago bigelovii*, *Trifolium depauperatum* and *Isoetes nuttallii*. It also grows in seeps with *Mimulus guttatus* and *Montia fontana*, and we have seen it even in grazed Douglas fir forest with *Bellis perennis*. Until we get more information on the distribution of *Limnanthes macounii*, it will remain an enigmatic and elusive species.

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Photos of *Limnanthes macounii* can be found at the website: <http://victoria.tc.ca/Environment/Botany/pictures.html>.

Atlas of Oregon Carex

The Carex Working Group recently announced the publication of the *Atlas of Oregon Carex*. This publication, which documents the results of nearly 7 years of sedging in Oregon, is the first *Occasional Paper of the Native Plant Society of Oregon*. The *Atlas of Oregon Carex* has 128 location maps, one for each *Carex* taxon in the state of Oregon. Also included are Oregon geography maps, synonymy, a history of the project, and fun facts about sedges. For your copy, send a \$5 check payable to the Native Plant Society of Oregon to:

Atlas of Oregon Carex
c/o Keli Kuykendall
4550 SW Nash Ave.
Corvallis, OR 97333

were giving way to Douglas fir. I went to work on that problem, concluding that no regular fires since Indian times was the cause.

When it came time to seek a Ph.D., I considered working at the University of British Columbia on an ecological problem. However, when I visited, I met T. M. C. Taylor who asked if I would be interested in doing a taxonomic treatment of the *Polypodium vulgare* complex in the Northwest. For my thesis I worked out the evolution and taxonomy of our three taxa using comparative morphology, cytology, and geographical-ecological criteria.

In 1966 I came to Southern Oregon College (now Southern Oregon University), where I stayed for 30 years teaching botany, ecology and botanical illustration. In addition I served as department chair and chairman of the Faculty Senate. Eight summers were spent at the Malheur Field Station teaching biological illustration.

Upon retirement in 1996 I took up employment with the Bureau of Land Management. At present an intensive study of the Cascade/Siskiyou Ecological Emphasis Area between Pilot Rock and Soda Mountain occupies my time.

Some of my career highlights have been: Discovering that my *Polypodium* work was confirmed based on DNA and isozyme analysis. Also I had two year-long sabbaticals, one to learn medical illustration, the other as a Visiting Scholar at Harvard University's Gray Herbarium. I served as President of the Native Plant Society of Oregon, coeditor of their newsletter, and editor of the society's magazine *Kalmiopsis*. And for three years I was on the Oregon State University Press Board of Editors, the last year as chairman. Recently I received a Volunteer of the Year award from the Nature Conservancy.

My proudest accomplishments are a forty-year marriage and two wonderful children. I also wrote and broadcast several hundred "Nature Notes" on Public Radio. And I trained a host of students who took up botany as a career.

Friends news

The Friends group has opened the new year with enthusiasm. Our committee has a new chair, Dr. Linda Hardison. Other currently active members are Michael Hartman, Keli Kuykendall, Rhoda Love, Esther McEvoy and Scott Sundberg. We are updating a brochure, and preparing a poster to be distributed for display at society and professional meetings. We thank the NPSO for their unflagging support. We continue to seek funding from foundations and organizations as well as from individual donors. One generous donor has contributed money earmarked for a scanner. This will greatly help in the production of the newsletter. Other items on our wish list include a color printer, and funds to purchase the text, *Illustrated Companion to Gleason and Cronquist's Manual: Illustrations of the Vascular Plants of Northeastern United States and Adjacent Canada*.

All contributions will be cheerfully accepted and gratefully acknowledged. Please make your checks out to NPSO, and mail to: Friends of the Oregon Flora Project, P.O. Box 402, Corvallis, OR 97339-0402, or they can be made out to the OSU Foundation and sent to the address in the box on page 5.

Project news
by Scott Sundberg

With this issue, the *Oregon Flora Newsletter* begins its sixth year! It is now sent to more than 560 subscribers as well as several libraries, botanical gardens and agencies in 26 states and five countries. Thanks, Rhoda, for editing the newsletter, and thanks to Camille Tipton, Alisa Anderson, and Aaron Hodges, who have assisted in its production over the past five years. The online version of the newsletter has been maintained by Eric Peterson, Doug Linn and Joe Blank. Currently we do not have a webmaster but we hope to update the web page soon.

During the past few years the draft Checklist has been used for a number of projects. For example, a new printing of the book *Winter Twigs*, by Helen Gilkey and Patricia Packard, will have updated nomenclature, based on the names currently accepted in the Oregon Checklist. Dr. Packard is revising it with the assistance of Rhoda Love and myself. The Checklist has also been used for revising nomenclature in the Lane County Checklist, collections in a few herbaria, and several books, including popular field guides, wetland manuals, and guides to fruits and berries. OFP members are consulted on a regular basis for information on names of Oregon plants.

I'm pleased to announce that Wilbur Bluhm and Caroline Lindstedt are joining the Atlas project. Wilbur [see OFN 3(2)], who is a prolific compiler of Oregon plant species lists, is the new Native Plant Society of Oregon State Atlas Coordinator. He will coordinate activities of Regional Coordinators (RCs) and other volunteers who are compiling species lists. Caroline Lindstedt is the new RC for Region 8, which comprises a large area in Central Oregon. She takes over from Katie Grenier. Katie has been the RC of that region since the beginning of the Atlas project and continues to be an active participant. Thanks, Caroline and Katie!

Thanks

Thanks to the Native Plant Society of Oregon, which has made a significant contribution to the Oregon Flora Project. Thanks also to its Emerald and Portland chapters.

The following people have recently contributed via the OSU Foundation or the NPSO Friends:

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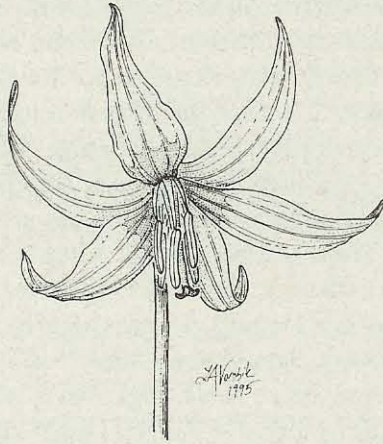
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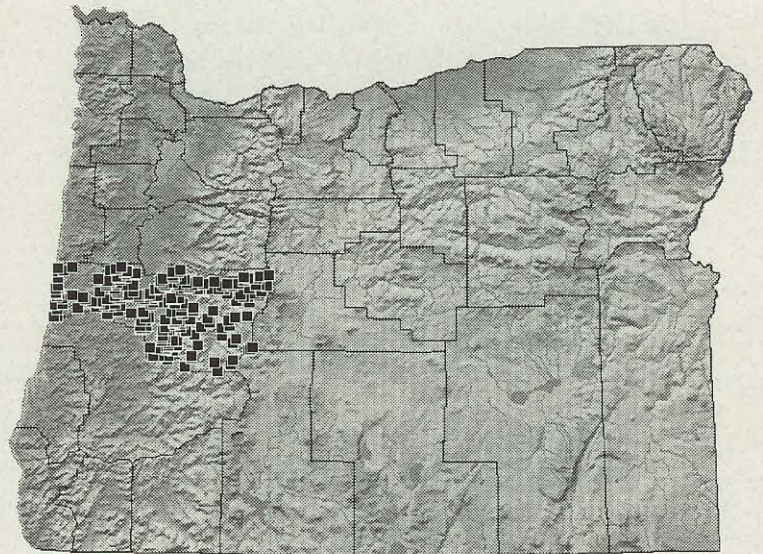


Did you know?

New species for Oregon —one hundred years ago

A century ago, on a 1900 sabbatical leave at Harvard University's Gray Herbarium, Louis F. Henderson described and named a number of new species he had collected. (See Bulletin of the Torrey Botanical Club, 27(6): 342—359.) Although first found in Idaho, the three below are part of the Oregon flora.

- Western quillwort, *Isoetes occidentalis*, was collected at Lake Coeur d'Alene. The type specimens burned in the Idaho fire of 1906, but fortunately the botanist had deposited duplicates at Harvard and Columbia. A recent description can be found in Volume I of *Flora of North America*.
- Least phacelia, *Phacelia minutissima*, was collected at 8,000 ft. elevation on Soldier Mountain and can be found in the Oregon Wallowas. The dwarf annual is rarely collected. Henderson deposited duplicate types at the Smithsonian and the Gray Herbarium.
- Snake Canyon nemophila, *Nemophila kirtleyi*, was found in warm loose soil under ponderosa pines near Florence, Idaho. It barely gets into Oregon in the Snake River canyon. There is a type specimen at the Smithsonian and a duplicate type at Harvard.



Lane County species lists in the Atlas database

Lane County has been well-botanized! One of the ways we can check for errors in the Atlas database is to make maps showing records from a particular county or ecoregion. The first time we mapped locations of Lane County lists, one dot fell far outside the county, in Central Oregon. This revealed a typographical error in the database, which was subsequently corrected.