

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.

Vol. XIII No. 1

January 1980

NOMINATIONS FOR NEXT YEARS NPSO OFFICIERS

The members of the nominating committee: Clinton Urey, Ruth Ronse, Carl Oates, Keith Chamberlin, Charlene Holliworth and David Wagner, chairman are to be commended for their efforts. The business of the committee was conducted largely through the facilities of Ma Bell and her friends with a considerable saving of energy (no meeting, no gasoline).

Three of this years officers have consented to serve a second term. Frank Lang, President; Herb Armentrout, Vice President; Mary Jane Fredricks, Secretary. Mary Jane was selected to serve out the term of Anne Whitmeyer by the NPSO Board of Directors and she has consented to serve another term.

Charlene Holzworth chose not to run for another term as Tresurer. She was an excellent treasurer in all ways and served the society loyaly and well. She has earned the thanks and gratitude of the entire membership.

The following represents the nominating committee report:

| Office | | Resume |
|--------------------|---------------------|--|
| President | Frank A. Lang | Current NPSO President, former NPSO Vice President. Co-Editor of the NPSO Bulletin. Member of the Siskiyou Chapter. |
| Vice-President | Herb Armentrout | Current NPSO Vice-President. Lontime NPSO member of the Portland Chapter. |
| Secretary | Mary Jane Fredricks | Current NPSO Secretary, former Treasurer of the Portland Chapter. |
| Treasurer | Russ Graham | 1st President of the Mid-Willamette Chapter. A businessman who studies plants as a hobby. Interested in Plant Nurseries. |
| Board of Directors | Ruth Hansen | Former NPSO President for 2 years, former President and field trip chairman of Portland Chapter. Active in several horticultural organizations, Portland Garden Society. Member of the Portland Chapter. |
| | Florence Ebeling | Former Secretary of the Portland Chapter. Editor of the NPSO Bulletin for three years. Member of the Portland Chapter. |

Karl Urban
Biology teacher at Blue Mountain Community College in Pendleton. Teaches plant identification. Avid wildflower photographer and student of the Steens Mountain Flora. Member of the Blue Mountain Chapter.

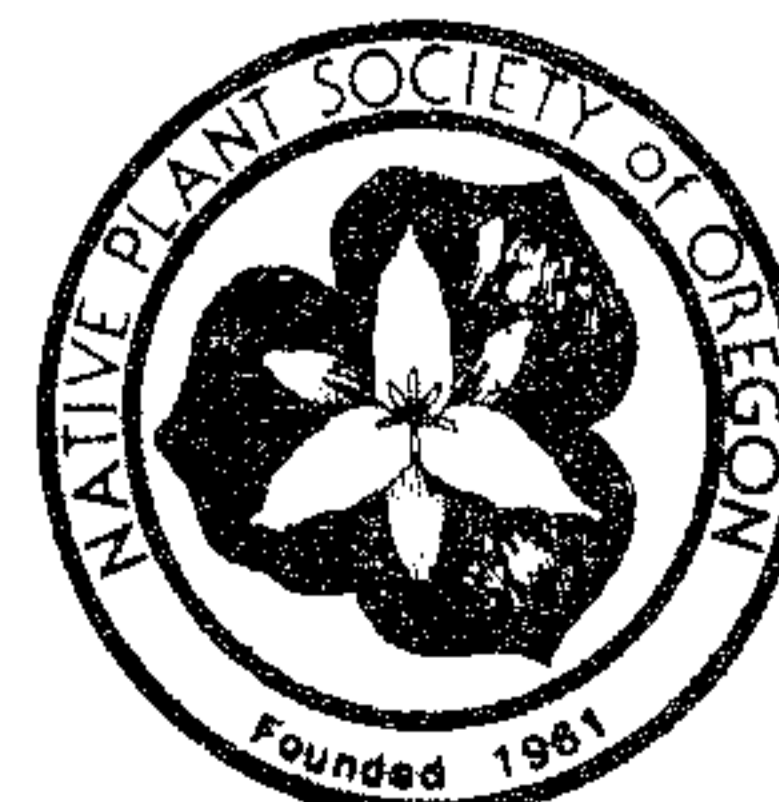
Franklin (Herm) Fitz
Science Teacher at McKenzie River High School, Blue River, Oregon. Ph.D. in pollination ecology Univ. of Utah. Former Oregon's Biology Teacher of the Year. Working on a Flora of the McKenzie River drainage. Member of the Emerald Chapter.

Mary Falconer
Current NPSO Membership Chairman and President of the Mid-Willamette Chapter. Active in Orchid Society. Self taught botanist interested in locating and photographing native orchids. Charter member of the Mid-Willamette Chapter.

Gordon Larum
Current President and former Vice President of the Siskiyou Chapter. Self taught botanist of considerable skill. Active So. Ore. Conservationist. Founding member of the Mazama Mushroom Society. Member of the Siskiyou Chapter.

This constitutes the report of the nominating committee. Any group of 5 or more paid members may submit additional nominees. Names of members, nominee, and resume must be submitted to the editors by January 15th for publication in the February issue of the NPSO Bulletin. Ballots will be mailed with the March Bulletin.

Frank A. Lang



WHAT DO YOU THINK?

Now and then your editors and officers receive suggestions or comments that are of interest to the general membership, but which need more than merely a news note in the Bulletin. We feel these communications need consideration by our members over a period of time to do them justice. Three examples of what we mean are given below. We ask that our readers think about each idea for a time and then register your comments with the NPSO Board of Directors. Perhaps some discussion at the Chapter level would also be constructive. -- The Editors.

"Sometime during the next few years someone is going to start work on a first-class book of Pacific Northwest wildflowers, comparable to Polunin's 'Flowers of Europe' and Clark's 'Wildflowers of British Columbia'. Such a book should be illustrated by the very best pictures that can be obtained (Rickett's two large volumes are disappointing because of the surprisingly low quality of many of the illustrations).

"From the machinegun rattle of camera shutters on Oregon Native Plant Society field trips I estimate that several thousand pictures could be made available even now, and that the number increases by a couple of hundred every summer weekend. So I suggest that NPSO maintain a list of people who have photos that might be useful."

Thomas W. Childs
Portland

"Once a month for several years now because I am a member of the Native Plant Society of Oregon, I have been receiving in the mail a printed Document crammed with information about past, present, and yet-to-be-done activities of the Society. It is always well written and very informative. The title of this Document seems to be "Native Plant Society of Oregon", but somehow it does not seem appropriate that the name of a Document should be the same as the organization sponsoring the Document.

"Ever since I received my first issue, I have thought that this Document should have its own name. On many occasions I have noticed references in the Document to something known as the "Bulletin" but I have never seen the Bulletin itself. Maybe it is time this mysterious Bulletin came out of the closet. My guess is that when Document and Bulletin are introduced to each other it will be love at first sight. The subsequent marriage could be an excuse for NPSO members to have a big party. Most important of all, however, Bulletin could hold his head high and the lovely, shy, and most prolific Document could give all her future offspring a good solid name."

W. Robert Powell
Agronomy and Range Science
University of California
Davis, CA

"I wonder if the NPSO might consider starting a seed exchange of Oregon natives. Some NPSO members are avid gardeners and would delight in sharing seed of natives successfully grown in or collected for their gardens and in receiving seed from areas where they are not able to collect. The trend in horticultural circles, so I am told by those in that trade, is moving towards planting natives in the garden. An NPSO seed exchange would fit in with that trend. Both the Northern Nevada Native Plant Society and Alpine Garden Club of B.C. offer remarkable native seed lists this year.

"I feel the NPSO would benefit by offering a seed exchange. It would attract new members by reaching those not able to attend meetings or field trips. It would also create an excellent opportunity for members to see in 3-D some of those plants they've heard about but have never experienced. It may help Oregon's R/E plants both by familiarising members with R/E indentities (for more accurate monitoring in the field) and by increasing the chance of finding the 'garden adaptables' of those extremely difficult (horticulturally speaking) plants which could be used to alleviate some of the inevitable over-collection by the horticultural trade. I'm sure a seed exchange is a subject that has come up for discussion in the past and been turned down for various reasons, but I'm wondering if maybe the time is ripe to attempt it."

Bonnie Brunkow
Portland

HOW YOU CAN HELP SAVE THE COLUMBIA RIVER GORGE

Because of concern for protection of the scenic magnificance of the Columbia River Gorge, the National Park Service has initiated a study to determine future management for the Gorge. All that glorious expanse of river, cliff, forest, and waterfall is now under the jurisdiction of two states, six counties and nearly 50 agencies, and Skamania Co., Washington, across from Crown Point has no zoning. It does seem that uniform management would be in order.

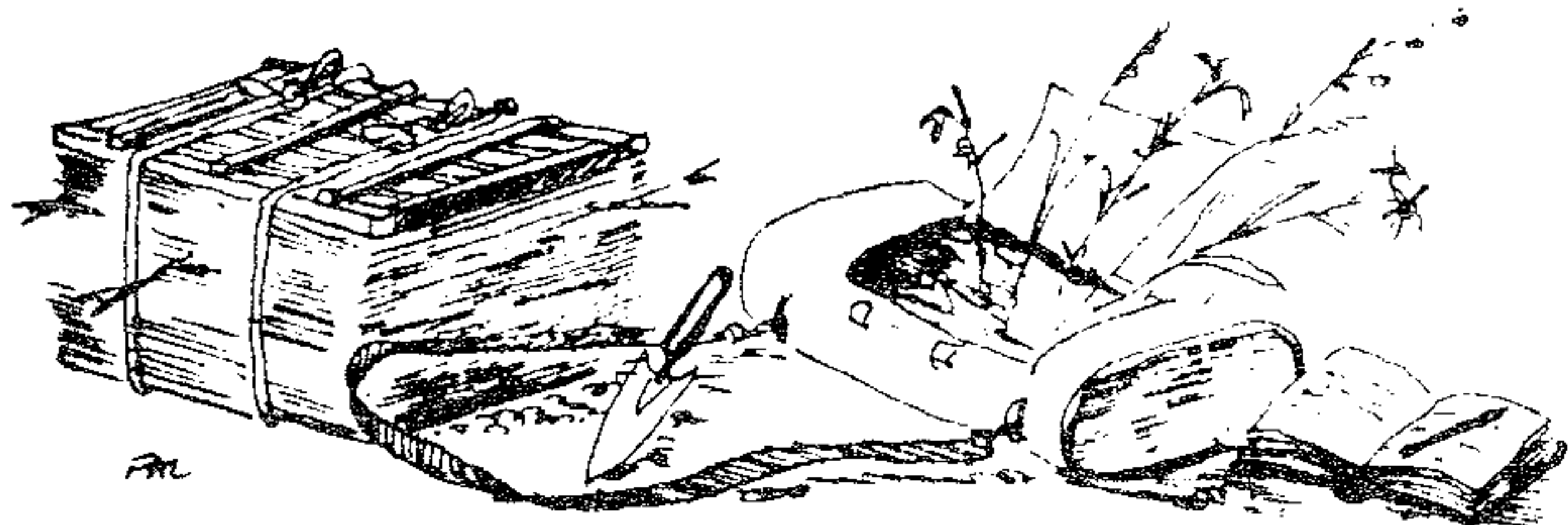
The study comes at an excellent time, because with the completion in 1982 of the new interstate bridge (I-205) east of Portland, the most critical stretch of the Gorge could well become a bedroom community of Vancouver, Washington. There are many parks and public lands on the Oregon side, thanks to the efforts of generous and public-spirited people, but the state of Washington has done little with parks, and there is very limited access to the river on the north side. What this means is that our view is subject to change as the Washington side develops.

If a National Scenic Area were created, funds for land acquisition and development of additional scenic viewpoints, trails, campsites, and boat launches would be available. Existing private residences and compatible uses of land would remain but further development in the Gorge would take place only within the existing population centers.

Those of us who love the Gorge and want it to look the same 10 years from now should write the U.S. Park Service and Governor Atiyeh and ask them to pursue federal action in the Columbia River Gorge--the creation of a National Scenic or National Recreation Area.

Letters should to to the Governor at the State Capitol Building, Salem, Oregon. Those to the Park Service should go to: Mr. Rich Giamberdine, National Park Service, Denver Service Center, P. O. Box 25287, Denver, Colorado 80225.

Submitted by: Nancy N. Russell
4921 S. W. Hewett Blvd.
Portland, Oregon 97221



BOTANICAL PIONEERS

JOHN CHARLES FREMONT: "THE PATHFINDER" AS BOTANIST
IN THE AMERICAN WEST

By

Mariana D. Bornholdt

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"Now will you repair to St. Louis as soon as practicable and organize your party for additional surveys in the vicinity of the Rocky Mountains, limiting your expenditures to about the amount of your second estimate, and your operations to as much as can well be done with the sketch enclosed with my letter of the 10th inst."

-J. J. Abert
Col., Corp. 28
Bureau of Topographical Engineers
23 March, 1843, Washington, D.C.

Pursuant to the above orders, thirty year old U. S. Army Lieutenant J. C. Fremont (1813-1890) executed the second of a series of reconnaissances for the U. S. War Department, surveying and mapping a route for immigrants into the Oregon country from Fort Hall, Idaho, to the mouth of the Columbia River. He was accompanied by thirty eight armed men, principally Creole, French Canadian, and American, many having served with him previously. In the company were also a volunteer, Jacob Dobson, "a free young colored man of Washington city who..... performed his duty manfully"; a tourist, Frederick Dwight of Springfield, Massachusetts, en route overland to the Sandwich Islands (Hawaii) and China; and an individual named L. Maxwell.

Equipment and supplies for the expedition were carried in thirteen carts, each drawn by two mules. Two vehicles were of special design: one for transporting the surveying and scientific instruments; the other was a mobile mount for a 12 lb. howitzer (cannon). The party was guided from St. Louis, Missouri, through Indian country by Fremont's old friend, Christopher "Kit" Carson, then proceeded west along the Snake River to Fort Boise, and thence down the Columbia River to Fort Vancouver. There outfitted, equipped, and reprovisioned by Dr. John McLaughlin of the Hudson Bay Company, Fremont and his party, somewhat reduced in number, returned west to The Dalles. On November 21, 1843, disregarding warnings by the Chief Factor and others about winter weather, the expedition turned south along the Deschutes River through Central Oregon east of the Cascades. Reaching Klamath Lake in the dead of winter, with the exhausted mules still dragging the howitzer through deep snow, Fremont then turned east into northwestern Nevada, continuing south to the Truckee River. In early March of 1844, after crushing difficulties and extreme privation, the party crossed the Sierras near Lake Tahoe and reached Sutter's Fort at "New Helvetia, Upper California" on the Sacramento River. Here seven men were paid off and left the party, including two fined \$20.00 each for stealing 40 pounds of sugar from the expedition's stores.

After a few days rest, repairs, and reprovisioning, Fremont's party continued south. Finding the price of Captain Sutter's pack animals too high, but purchasing a silver-plated bridle and Spanish saddle for his own use, Fremont secured transport by barge via the Sacramento River to the delta. Then, following the San Joaquin River south to the Kings River on horseback, his party next traversed the southern Sierras through Tehachapi Pass east to the Great Salt Lake, following along parts of the old Spanish trail. Thus was mapped and established an immigration route into Southern California as well as into Oregon. Returning to Washington, D.C., Fremont immediately prepared a detailed report to Congress of his journey, together with the previous expedition to the Rocky Mountains, with the help of his wife, the daughter of Senator Thomas Hart Benton of Missouri.

Printed in thousands of copies by order of the House of Representatives for distribution to the general public, Fremont's report, consisting of a journal, maps, reports, astronomical and climatological observations, detailed drawings, lists and descriptions of fauna, flora, minerals, fossils, and soil types, was eagerly read both in the United States and abroad. Thus came recognition and acclaim to a young army officer who would remain almost constantly in the public eye for the next forty years, as often a source of controversy as an object of admiration.

In fact, his career in topographical mapping for the U.S. Army, requiring long absences in the field, had been initiated by his future father-in-law, Senator Benton, who opposed his daughter's choice of Fremont and sought to part the young lovers.



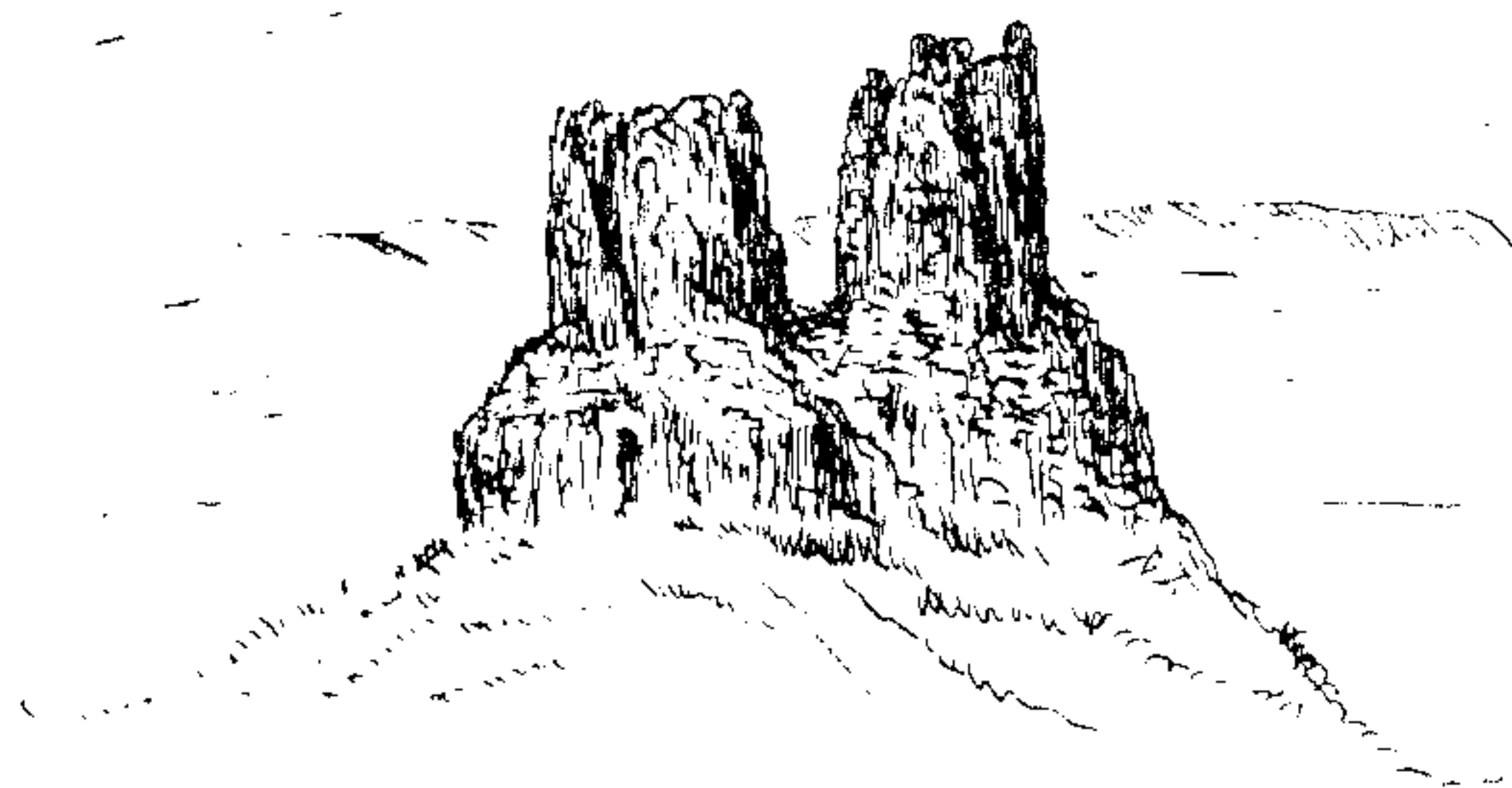
THE PATHFINDER

John Charles Fremont

How, then did Fremont organize his assignment, and what did he accomplish? He met his principal guide, Thomas Fitzpatrick at St. Louis, Missouri, on April 1, 1843, where the expedition officially began. His party left Fort Hall on May 3, 1843, returning to Washington, D.C., on September 6, 1844, covering approximately 6000 miles in 493 days, an average daily rate of twelve miles per day. Most of the journey was accomplished on horseback over rugged mountain ranges and rough terrain, a few portions along waterways by canoe or barge. The voyageurs who accompanied him received in addition to expenses and equipment a stipend of between \$.45 and \$1.16 1/3 per day. Seven served the entire journey. Fitzpatrick, the guide, received \$3.50 per day; Charles Preus, "Topographical Assistant", received \$4.00 per day; and Theodore Talbot, engaged at the behest of Senator Benton "with a view to advancement in his profession", was paid \$2.00 per day.

Fremont's mission was to "explore and map an overland route" in the name of the U.S. Army "from the Mississippi to the Columbia", linking with the Wilkes ocean expedition commissioned by the U.S. Navy, which had entered the Columbia waterway two years earlier. Fremont was admirably suited to this task, having received college training in engineering and mathematics and having seen sea duty as a naval officer and mathematics instructor. He had served from 1838 to 1849 as chief topographical assistant to Joseph Nicholas Nicollet, the eminent French cartographer, during the exploration of the headwaters of the Mississippi and Missouri Rivers commissioned by the Secretary of War. On this assignment, Nicollet had turned over to Fremont the reconnaissance and survey of the route and found him able, energetic and accurate. It was a well-qualified cartographer that Senator Benton, an ardent westward expansionist, had chosen to lead the prestigious Army expedition into the west. Fremont's maps, produced under Nicollet, for the Rocky Mountain exploration of 1842, and on the 1843-44 western expedition, were the standard of American topographical mapping for many decades.

To be continued in the next issue.



HILL OF COLUMNAR BASALT ON THE COLUMBIA RIVER
after a Fremont Expedition lithograph

CHAPTER CALENDARS

WILLAMETTE VALLEY CHAPTER

Meeting -- Mon., Jan. 21. The Nature Conservancy. Wayne Rifer, speaker. Mr. Rifer will illustrate his talk with slides. Meet at 7:30 p.m. in the First United Methodist Church, 600 State St., Salem.

PORTLAND CHAPTER

Meeting -- Mon., Jan. 14. Flowers and Their Pollinators -- There is no Free Lunch., Dr. Bert G. Brehm, speaker. Dr. Brehm, a botany professor in the Biology Department of Reed College, long a member and supporter of NPSO, is an outstanding speaker and will undoubtedly tell us many fascinating things about plant pollinators that we didn't know previously.

Meeting -- Mon., Feb. 11. A Comparison of Some Species of Flowering Plants of the Northeast with the Northwest. Celeste and Vernon Holloway, speakers. This will be an outstanding program, with selections from 13 families and 25 genera. Dr. and Mrs. Holloway have been NPSO members for four years since moving to Oregon from the East, where they pursued for 25 years their interest in native plants and photography. The photographs will be superb; Celeste's presentation will be clear, interesting, and authoritative. Members of other chapters are cordially invited to attend.

Workshops: Meet 10:00 a.m. each Sat., Room E. Central Library.

Jan. 5. Plant Photography, with Joe Bargar.

Jan. 12. Oregon Salt Marshes, with Dr. Janet Hohn.

Jan. 19. A Botanical Trek in Sikkim, with Ruth Hansen.

Jan. 26. Winter Twigs, with Jean Siddall. In a discussion of how to identify deciduous trees and shrubs of northwestern Oregon in the winter, Mrs. Siddall will refer to her 1978 booklet Winter Twigs of Tryon Creek State Park, which will be available at the workshop for \$1.50.

Feb. 2. Plants of Steens Mountain and Vicinity with George E. Lewis, Jr.

SISKIYOU CHAPTER

Meetings -- 7:30 p.m., Rm. 171, Science, SOSC, Ashland

Thurs. Jan. 3. Geologic History of Southwestern Oregon. Prof. Monty Elliott, Southern Oregon State College, speaker. Returning by popular request, Dr. Elliott will give us some geological background pertinent to plant distribution in this region.

Thurs. Feb. 7. Evolution and Speciation of Siskiyou Vegetation. Tom Atzet, Plant Ecologist with the U.S. Forest Service, speaker.

Nature Photography Workshops

Sat., Jan. 19. 9:00 a.m. - 12:00 p.m. -- Science 214, SOSC. Conducted by Vern Crawford and Frank Lang. This will be the first of three workshops for beginning and intermediate nature photographers. Topics covered in this session will include basic equipment, techniques, materials and "tricks of the trade" for successful nature photography. Bring cameras, etc., if possible but, these are not necessary in order to participate.

The second workshop will be held in early spring and involve application of information learned in the first session (a photography - field trip). The third workshop to be held in late spring will be a "results" show of participants slides and/or pictures.

FIELD TRIP REPORTS

WILLAMETTE VALLEY CHAPTER

Nov. 10. -- The lichens were beautiful along the trail to Bagby Hot Springs. There were many different kinds to be seen and our leader, Corinne Sherton, named and pointed out the important characteristics of them. Among those seen were Icmadophila, with its beautiful pink apothecia, Lobaria oreganum, Lobaria pulmonaria, Alectoria sarmentosa, Philoporon aciculare, Philoporon hallii, and Pseudocyphellaria rainierensis.

WELCOME TO NEW MEMBERS

Portland Chapter

Sandra L. Stallcup, Lake Oswego

PLANT FAMILY PROFILES
by Herm Fitz

The Liliaceae - LILY FAMILY

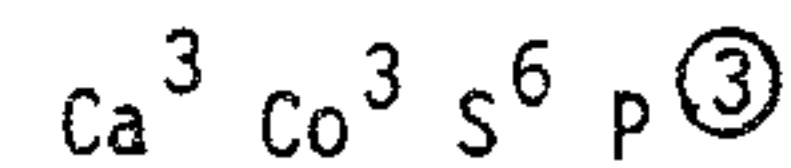
One of the best known families of flowering plants is the Lily Family, with members scattered over all the earth, but concentrating in the warm temperate and tropical regions. The family is large and varied, numbering some 240 genera and about 4000 species - depending on the authority. In Oregon are found 22 different genera, most of them familiar because of their showy, attractive, springtime or early summer flowers. We have the Wake Robin or Trillium (*Trillium*), harbinger of spring with a whorl of 3 broad leaves and one solitary flower, the Fairy Bells and Fairy Lantern (*Disporum*), species of Fritillary (*Fritillaria*), Adder's tongue (*Erythronium*), also called Trout, Fawn, or Glacier Lily, or Dog-tooth Violet, the Camas Lily (*Camassia*) with edible bulbs and Death Camas (*Zigadenus*) with poisonous bulbs. In open sites are found many species of Wild Onion (*Allium*), Brodiaea (*Brodiaea*) species, Cat's Ear, Mariposa, or Sego Lily (*Calochortus*), and striking lilies (*Lilium*) such as the Tiger Lily and the Cascade Lily. In bogs are Tofieldia (*Tofieldia*) and False Hellebore (*Veratrum*). In woods are Queen Cup or Bride's Bonnet (*Clintonia uniflora*), False Solomon's Seal (*Smilacina*), Stenanthium (*Stenanthium occidentale*), False Lily of the Valley (*Maianthemum dilitatum*), Twisted Stalk (*Streptopus*), and the somewhat rare, very early-blooming and inconspicuous Slink Lily or Fetid Adder's Tongue (*Scoliopus hallii*). The small Alp Lily (*Lloydia serotina*) barely enters Oregon from the Northwest on ridges and cliff crevices. In the drier country, sagebrush desert and montane forest, is found the Mountain Lily (*Leucocrinum montanum*) - and the dioecious Asparagus (*Asparagus officinalis*) has escaped from cultivation along fence rows and ditchbanks. Finally, scattered throughout medium elevations in the mountains in open woods and on exposed hillsides and ridgetops is the familiar Bear Grass or Indian Basket Grass (*Xerophyllum tenax*).

These are the lilies of Oregon. All are perennial herbaceous plants arising from either a bulb, a corm, or a tuber. Leaves are variously positioned, basal, whorled, or alternate on the stem, and of various shapes and sizes, but all have parallel veins, as do the monocots, the larger group to which the Lily Family belongs. The flowers may be solitary, as in Queen Cup or Trillium, in a raceme, as in Camas Lily, or in an umbel, as in Wild Onion. The insect-pollinated flowers are generally large, strongly scented and showy, as in Tiger Lily, but are sometimes small, then usually clustered in a showy inflorescence, as in False Solomon's Seal. Sepals and petals are 3 each, except in False Lily of the Valley (*Maianthemum*), which is 2-parted (there's always an odd-ball!). The sepals are most often colored like the petals; the six are then referred to as "tepals." Less commonly, as in *Trillium*, *Calochortus*, and *Scoliopus*, the 3 sepals are green and distinctly different from the petals. Stamens are most often six, occasionally only 3 (*Brodiaea* and *Scoliopus*) or 4 (*Maianthemum*). The pistil bears a superior ovary of 3 united carpels, with 3 chambers (locules) and seeds forming on the inner walls (axile placentation). Fruits are typically capsules or reddish, inedible berries.

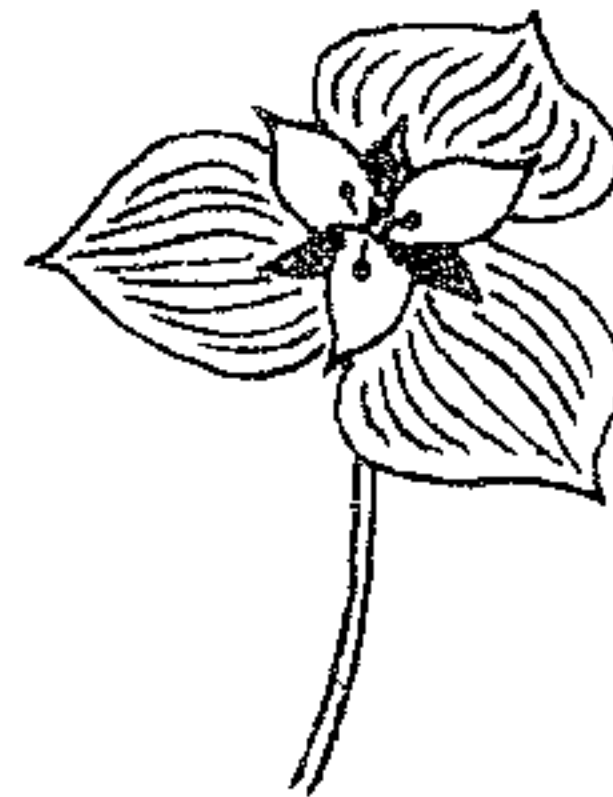


Cross section of ovary in Liliaceae - note 3 locules, axile placentation

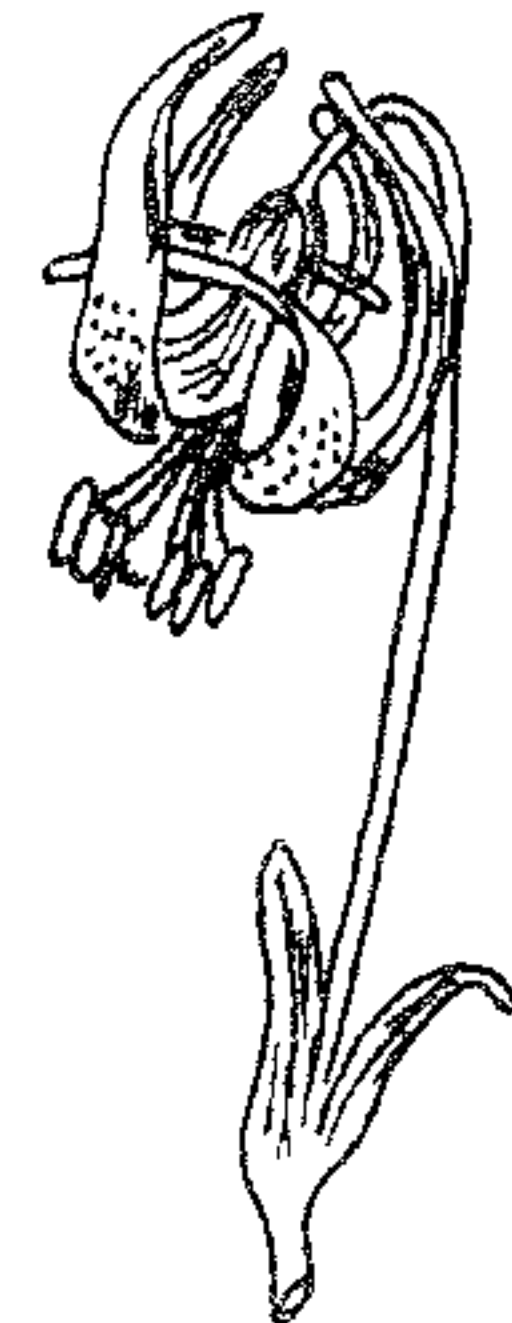
The floral formula for the family may then be written:



You will find members of the Lily Family most easy to recognize. Anytime you encounter an herbaceous plant with parallel-veined leaves and flowers of the floral formula given above, you very likely have chanced upon some member of the Liliaceae - the LILY FAMILY.



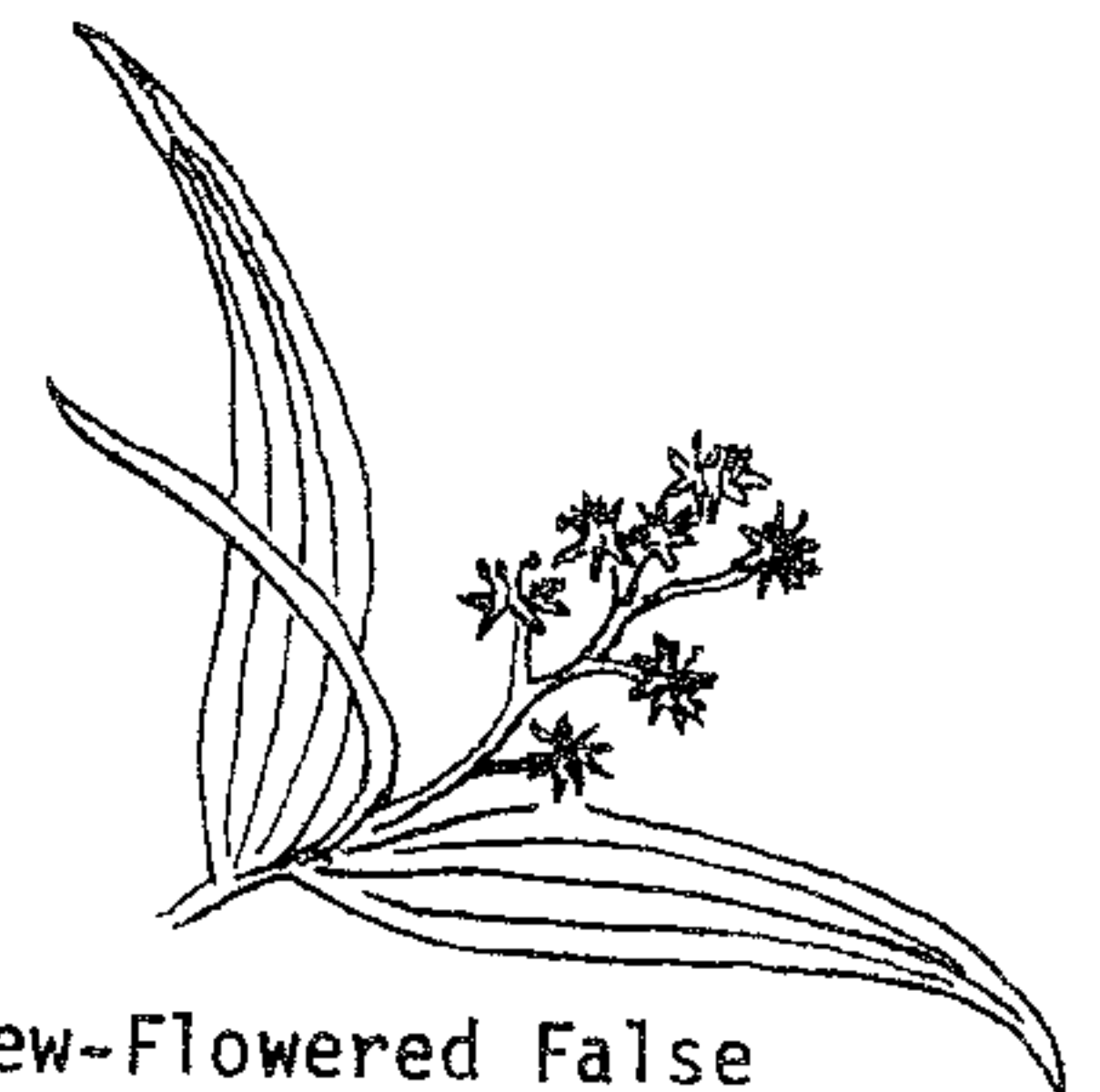
Wake Robin or Trillium (*Trillium*)
sepals and petals unlike



Tiger Lily (*Lilium columbianum*)
sepals and petals alike



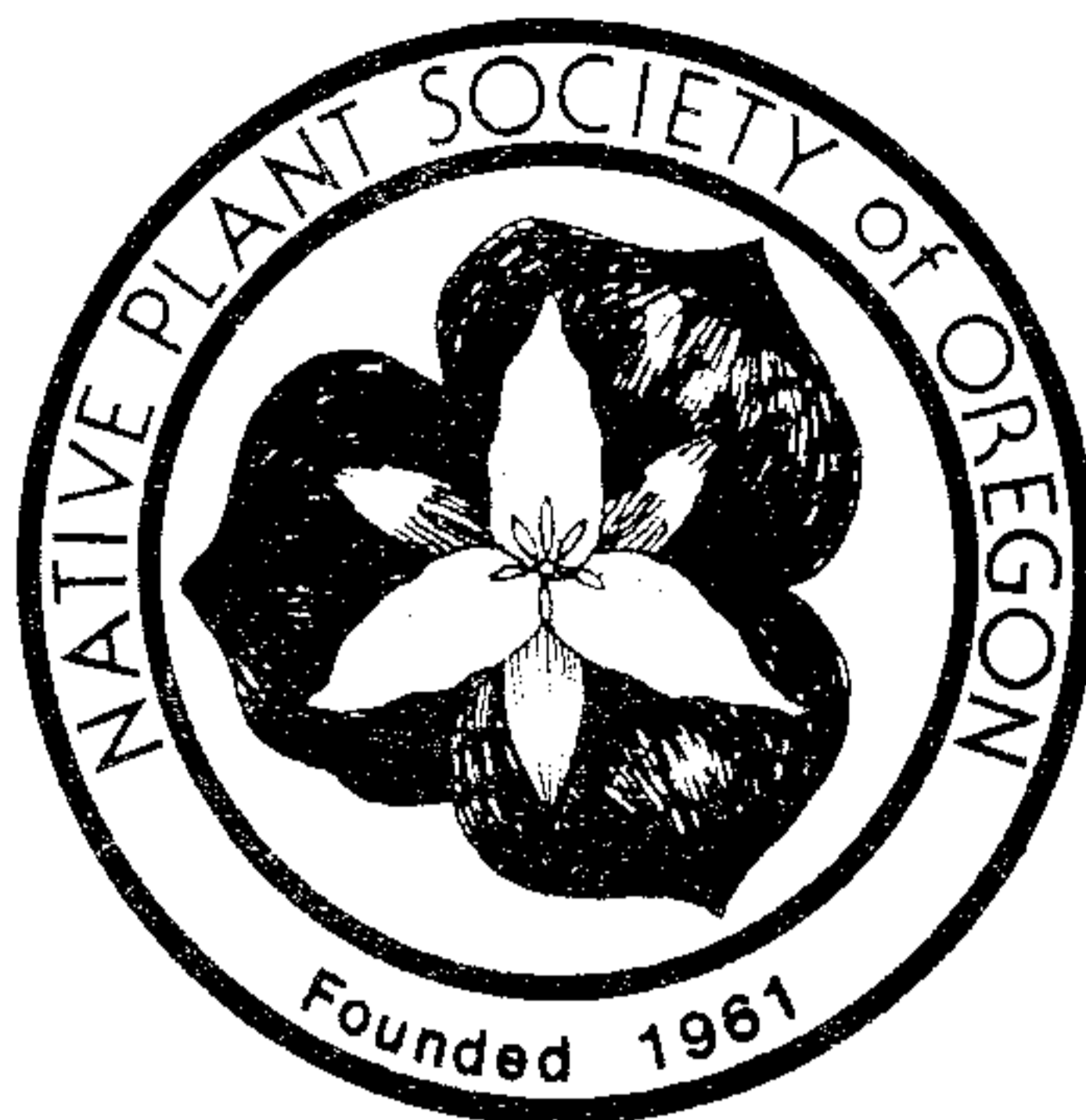
Queen Cup or Bride's Bonnet (*Clintonia uniflora*)
Note the parallel-veined leaves



Few-Flowered False Solomon's Seal (*Smilacina stellata*)
flowers small, in clusters



Hairy Cat's Ear or Mariposa Lily (*Calochortus*)
sepals and petals unlike



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For change of address or information on membership, contact your nearest chapter or Mary Falconer, 1920 Engel Ave., N.W., Salem, 97304.

Contributions to the NPSO Bulletin or non-delivery notice should be sent to: the Editors, Native Plant Society of Oregon, Department of Biology, Southern Oregon State College, Ashland, 97520.

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