

Bulletin of the
NATIVE PLANT SOCIETY of OREGON

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

Volume 18 No. 9

September 1985

CHAPTER NEWS

Blue Mountain

--- For information about August activities, call Chapter President, Bruce Barnes, 276-5547.

Corvallis

To register for field trips, please call Esther McEvoy (754-0893) or Dan Luoma (758-8063).

7 Sept., Sat. Field trip to MARY'S PEAK. For details contact Dan Luoma (758-8063) or Paul Allebeck (754-7462).

Emerald

9 Sept., Mon. Meeting, 7:15 p.m., Amazon Park Community Center, north craft building. Jeff Miller, a graduate student in botany at the Univ. of Oregon, will present a slide show and talk about gynodioecy in Tellima grandiflora; the evolution of reproductive strategies in the fringe cup.

High Desert

--- For information about September activities, call Chapter President Stu Garrett, 389-6981.

Mid Columbia

11 Sept., Wed. Meeting, 7:30 p.m., Mosier School.

North Coast

--- For information about September activities, call Richard Smith, 842-4324.

Portland

Please call the trip leader or Lois Kemp (760-4998), if there are any questions about a field trip. Bring lunch, liquids, and all-weather clothing for the trips.

7 Sept., Sat. Field trip, MT. HOOD MEADOWS. Meet 8 a.m. at Dept. of Motor Vehicles (DMV), NE 60th and Glisan; or 9:30 a.m. at Mt. Hood Meadows parking lot. Leader: Shep Wilson, 228-7823.

14 Sept., Sat. Field trip, WAHTUM LAKE/CHINIDERE MOUNTAIN. Meet 8 a.m. Dept. of Motor Vehicles (DMV), NE 60th and Glisan.

21 Sept., Sat. Field trip, INDIAN HEAVEN, Placid Lake loop by way of Lake Chenamus, Big Meadow and Bird Mtn., 8 miles roundtrip. Register with leader. Wilderness regulation limits size of group to 12 people. Meet 7:30 a.m. at K-Mart, NE 122nd and Sandy Blvd. (Exit I-84 at 122nd northbound), south end of parking lot. Leader: Elizabeth Handler, 244-5320.

28 Sept., Sat. Field trip, MIRROR LAKE and TOM DICK MTN. Scenery and Views. Fall Color. Meet 8:30 a.m. at Dept. of Motor Vehicles (DMV), NE 60th and Glisan; or 9:30 a.m. at Zigzag Ranger Station parking lot. Leader: Dave Dobak, 643-2213.

Siskiyou

12 Sept., Thurs. Meeting, 7:30 p.m., Room 171, Science Bldg., SOSC campus, Ashland. The SODA MOUNTAIN WILDERNESS will be the topic of a slide program by Bruce Boccard, Wildlife Biologist. He will present an overview of the proposed wilderness area highlighting the various ecosystems, plants, and wildlife in the area. Come learn how you can be involved in helping protect this unique area.

Willamette Valley

16 Sept., Mon. MEETING, 7:30 p.m. First United Methodist Church, Carrier Room. "HOW TO STUDY COMPOSITES," a workshop by Anne Kowalishen. Bring a selection of your favorite garden or wild composites (e.g. daisies, sunflowers, etc.) for dissection and study. A meeting of the Flower Show Committee will precede the regular meeting at 7:00 p.m..

Wm. Cusick

--- For information about September activities, Call Andrew Kratz at 963-9358.

PUBLIC SYMPOSIUM ON ENDANGERED PLANTS October 19, 1985

Improved public involvement in preserving Oregon's endangered plant species is the purpose of an October 19 symposium at Lewis & Clark College, co-sponsored by the Berry Botanic Garden of Portland. The symposium, "PLANT CONSERVATION IN OREGON: WHERE DO WE STAND?", will feature presentations by a number of federal and state agencies as well as by private conservation groups, and is designed to appeal to a wide audience of wildflower lovers, gardeners, and amateur and professional botanists.

One hundred and ten native Oregon plants are now threatened with extinction, but only two are protected by the federal Endangered Species Act. The symposium will help answer questions about how these plants can be kept alive, and will explain the various roles of public and private agencies in protecting endangered species.

Among agencies and organizations scheduled to take part are the U.S. Forest Service, Bureau of Land Management, U.S. Fish & Wildlife Service, Oregon Natural Heritage Advisory Council and Oregon Natural Heritage Data Base, The Nature Conservancy, Native Plant Society of Oregon (to be represented by Esther McEvoy, State Legislative Chair), and the Berry Botanic Garden.

The symposium will begin at 9:00 a.m. (registration at 8:15), with all sessions in the Council Chamber of Lewis & Clark's Templeton College Center. Registration information may be obtained by calling 636-4112, or writing the Berry Botanic Garden, 11505 SW Summerville Ave., Portland 97219.

A MESSAGE FROM THE EDITOR

After more than two years of hard work and producing an excellent Bulletin, Julie Kierstead has resigned as Editor. Fortunately, NPSO has not lost Julie and her abilities, for she has agreed to take over the Conservation Chair position, vacated by Rhoda Love. I will serve as Bulletin Editor until year's end, so please use my address listed on the last page for all mailings. Jan Anderson, NPSO Portland member, has enthusiastically agreed to serve as Editor after my departure for school in January, she will assist with the Bulletin this fall. *Angie Evenden, Editor*

"FALL IN LEACH GARDEN"

Every Saturday morning at 10 a.m., a guided tour of Leach Botanical Garden is provided by Leach Garden Friends. Trained guides will introduce you to plant collections, Garden features and the history of the Garden. Tours are open to the general public and are free. Because of plant varieties, Fall is an especially interesting season in this Garden.

Leach Botanical Garden is located just two blocks south of Southeast 122nd Avenue and Foster Road. For additional information, call 761-9503.

FOR SALE

Vascular Plants of the Pacific Northwest by

C.Leo Hitchcock, et al.
New complete 5 volume set for \$165.
Call Jan Anderson (Portland)
248-9242 or 297-7069



SAN JUAN FLORA: ATTRACTIVE NEW BOOK
CONTAINS USEFUL CHECKLIST
BUT HAS SOME FLAWS

The beautiful San Juan Islands of northwestern Washington State and southern British Columbia have never had a published Flora of their own -- a surprising fact in that the archipelago is botanically unique due to its glacial past, its xeric climate, and (I believe) to its herbivore fauna. (San Juan Island, until very recently, had an enormous rabbit population and deer are very abundant on all the islands.)

Several botanists, including Melinda Denton of the University of Washington Herbarium, Betty Higinbotham, now a San Juan resident and formerly a botanist at Washington State University at Pullman, and myself have, independently, done some preliminary work toward a San Juan Flora, but this summer, two relative newcomers to the San Juan botanical scene, Scott Atkinson and Fred Sharpe, have produced the first published Flora of the Islands.

Their book, *Wild Plants of the San Juan Islands*, is very attractive with a lovely photograph of shooting stars on the cover and I compliment the Seattle Mountaineers Press for producing a nice looking and well-edited volume. Several other positive aspects of the Atkinson and Sharpe work include: Use of a habitat format which emphasizes ecological relationships, and a color key to flower identification which makes the book helpful for non-botanists. The most useful feature of the book, in my opinion, is Appendix B: "Vascular Plants of San Juan County," a 31-page checklist of the 829 vascular plants now known to occur in the County.

However, although a good beginning, *Wild Plants of the San Juan Islands* has several flaws which I will mention briefly. The book is illustrated with 187 black and white line drawings (no photos), which, although often visually attractive, are frequently technically poor, omitting such field characteristics as petal number, ovary position, and stamen attachment. Also no size scale is used with the drawings.

Here are some examples of problems with the illustrations: One drawing labeled Bigleaf Maple (page 77) is not *Acer macrophyllum* (the samaras look like those of vine maple). The illustration of Oregon grape on page 67 shows five perianth parts when actually they usually occur in whorls of 3. Another thing bothers me about the drawings: Nearly every plant is shown with its stem in an artistic "S" curve. This does not reflect nature and becomes visually monotonous.

The written plant descriptions lean toward the "inspired" and the "poetic" rather than the scientific, and often fail to mention such important field marks as petal number, leaf arrangement, dioecism. Coy comments such as the following strike me as somewhat absurd: "Who is this peculiar little fellow of the sphagnum mat...?" (description of sundew, page 124).

Finally, since the book describes only 192 of the 829 plants listed in the Appendix, it can truly be considered only a preliminary Flora of the San Juans.

Reviewed by Rhoda Love

Wild Plants of the San Juan Islands
Scott Atkinson & Fred Sharpe, July, 1985
176 pages, 187 line drawings, paper \$7.95
Order from:
The Mountaineer Books
306 2nd Avenue West
Seattle, WA 98119

NEW HOPE FOR RARE U.S. PLANTS

Botanical gardens currently protect less than 10 percent of the more than twenty-five hundred endangered or threatened plant species native to the United States, including Hawaii. The Center for Plant Conservation aims to change this situation by setting up a national collection of endangered U.S. species to be held jointly at seventeen botanical gardens, arboreta, and seed banks around the country. Each of these institutions will maintain a living collection of rare plants native to its region.

The preservation of some of our most vulnerable genetic resources in a national collection will complement efforts to conserve habitats. As institutions propagate plants of rare species, con-

servationists may use surplus specimens to replenish natural habitats that have lost their native flora. In addition, plants derived from the collection will be made available to agriculturalists, botanists, geneticists, and horticulturalists for research purposes.

Dr. Thomas E. Lovejoy, World Wildlife Fund - U.S. vice president for science, and Dr. Linda McMahan, head of the WWF-US plant conservation program, serve on the Center's Scientific Advisory Board. It is responsible for guiding the scientific policies of the organization.

The above appeared in the July/August 1985 issue of *FOCUS*, World Wildlife Fund - US.

THE POLLINATION PROCESS IN TWO TWAYBLADES

Part 2: The Remarkable Listera cordata

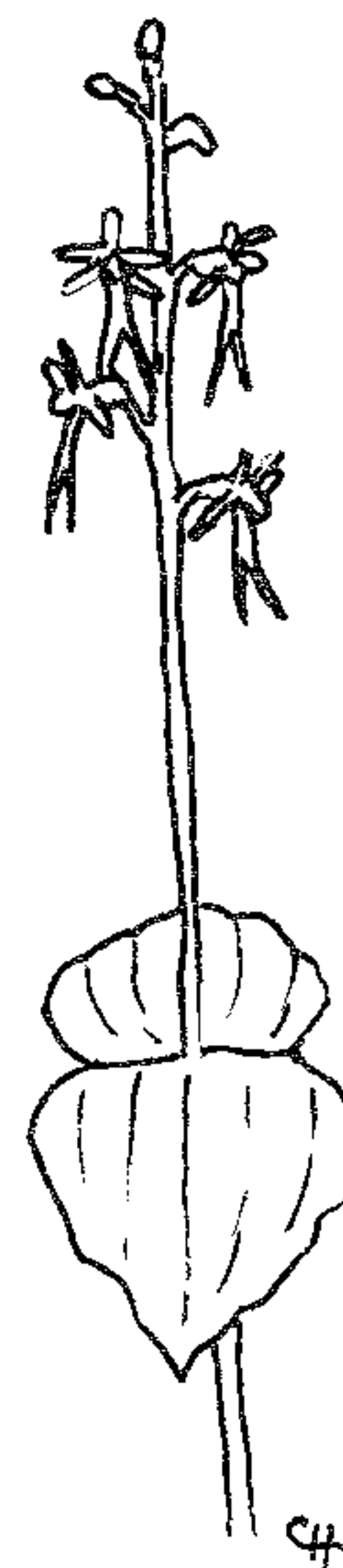
TEXT AND ILLUSTRATIONS BY CELESTE HOLLOWAY

Part I about Listera caurina (Northwest Twayblade) concluded that its pollination process was basically like that in L. ovata (Common Twayblade) although in L. caurina the rostellum, after the removal of the pollinia, quickly bent down to cover much more of the stigma. L. ovata was the European species intensively studied by Charles Darwin.

LISTERA CORDATA (5-25 cm tall) is one of the most widely ranging of orchids, growing around the world in the North. In No. America it extends across Canada from Alaska to Greenland and south into the Appalachian Mts., the Rockies and the No. Pacific States. The tiny flowers of L. cordata are usually green or reddish purple but can be tinted with both. The lip (3-10 mm long) is

split for half its length or more (Fig. 4, Stage I). There apparently is no trail with nectar on the lip. The attraction is the broadly ovate nectary, a little steep-sided cistern brimming with nectar, on the slanting top of a transverse ridge located a short way up from the base of the lip (Fig. 6). This ridge lies across approximately the middle three-fifths of the width of the lip and extends on each side into a slender tooth. Each tooth first makes an upward bend and then sticks outward beyond the lip, attached to it until the lip's outer edge is reached. In older flowers the teeth may pull up from the lip-edges. Carlyle Leur in The Native Orchids of the U.S. and Canada (1975) called these teeth "horns" and wrote (p. 84): "It would be interesting to know what role, if any, these horns play in the mechanism of this species for cross-pollination."

The short column and the large size of the rostellum, which may be adaptations to smaller insects as pollinators, are factors in the variation of the pollination-process in this species. The anther is hinged near the top edge of a semi-sheath of tissue, which is an extension of the back of the column (Fig. 5, Stage I). The anther-cases on the underside of the anther are at first directly over the concave rostellum upon which the pollen-masses fall. The broad rostellum curves up high on both sides of the pollinia, making a thick bundle, with the tips of the pollen-masses above the crest which has 1 to 3 stiff hairs. Soon after the flower opens, the rostellum, lad-



Listera cordata

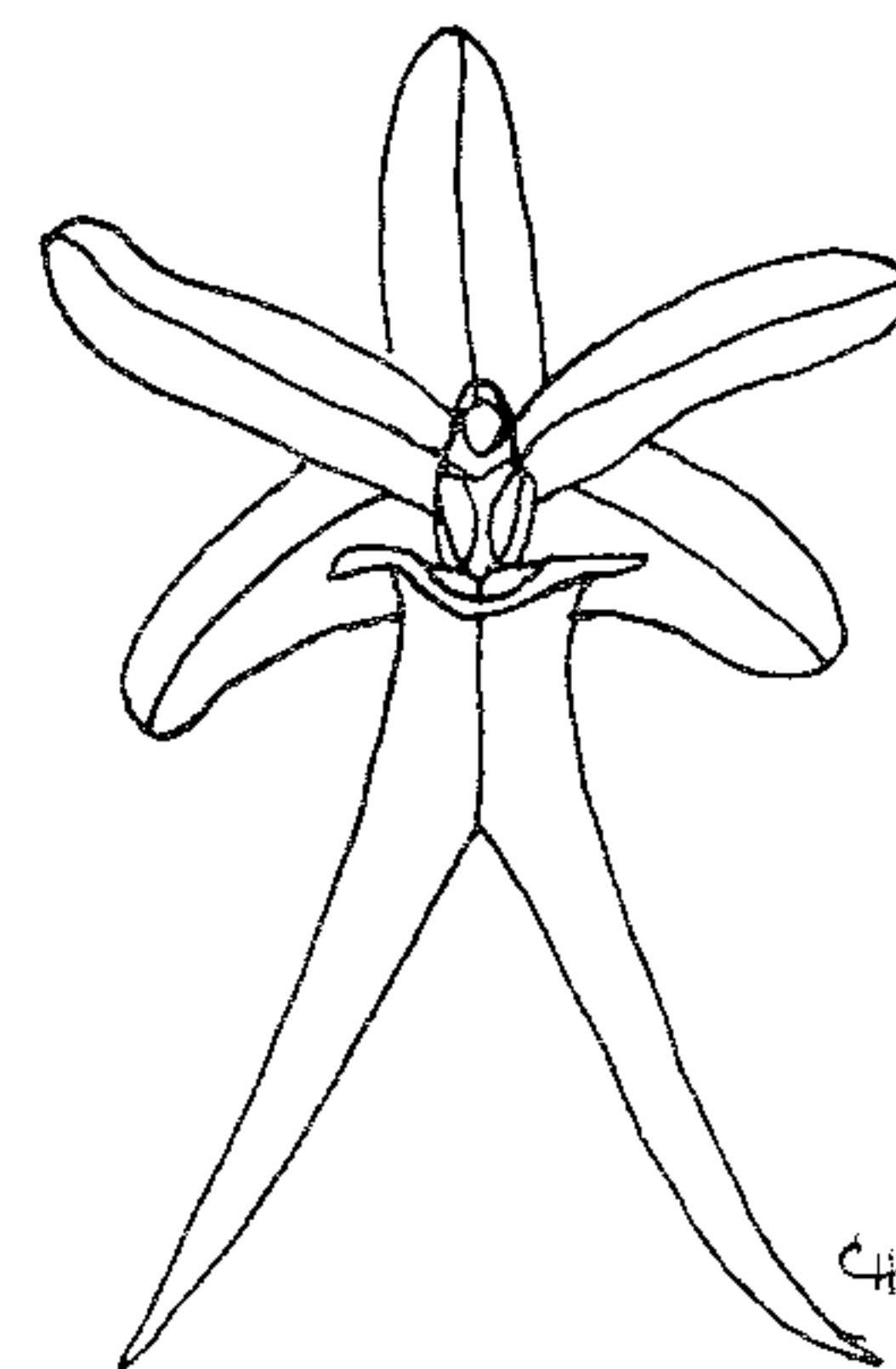


Fig. 4
Stage I - Flower

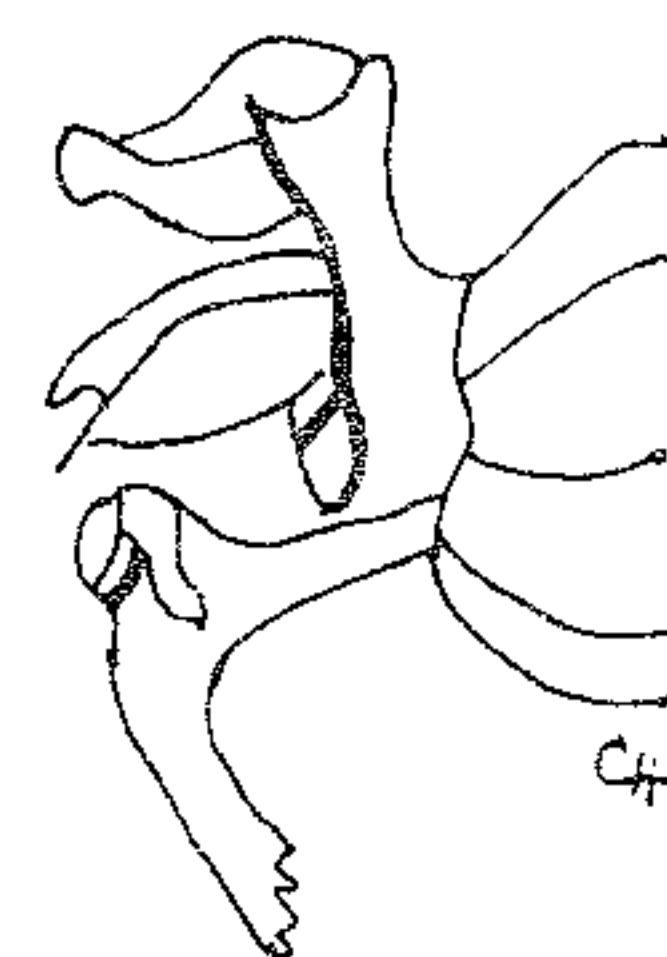


Fig. 5 Stage I
Column and Lower Lip

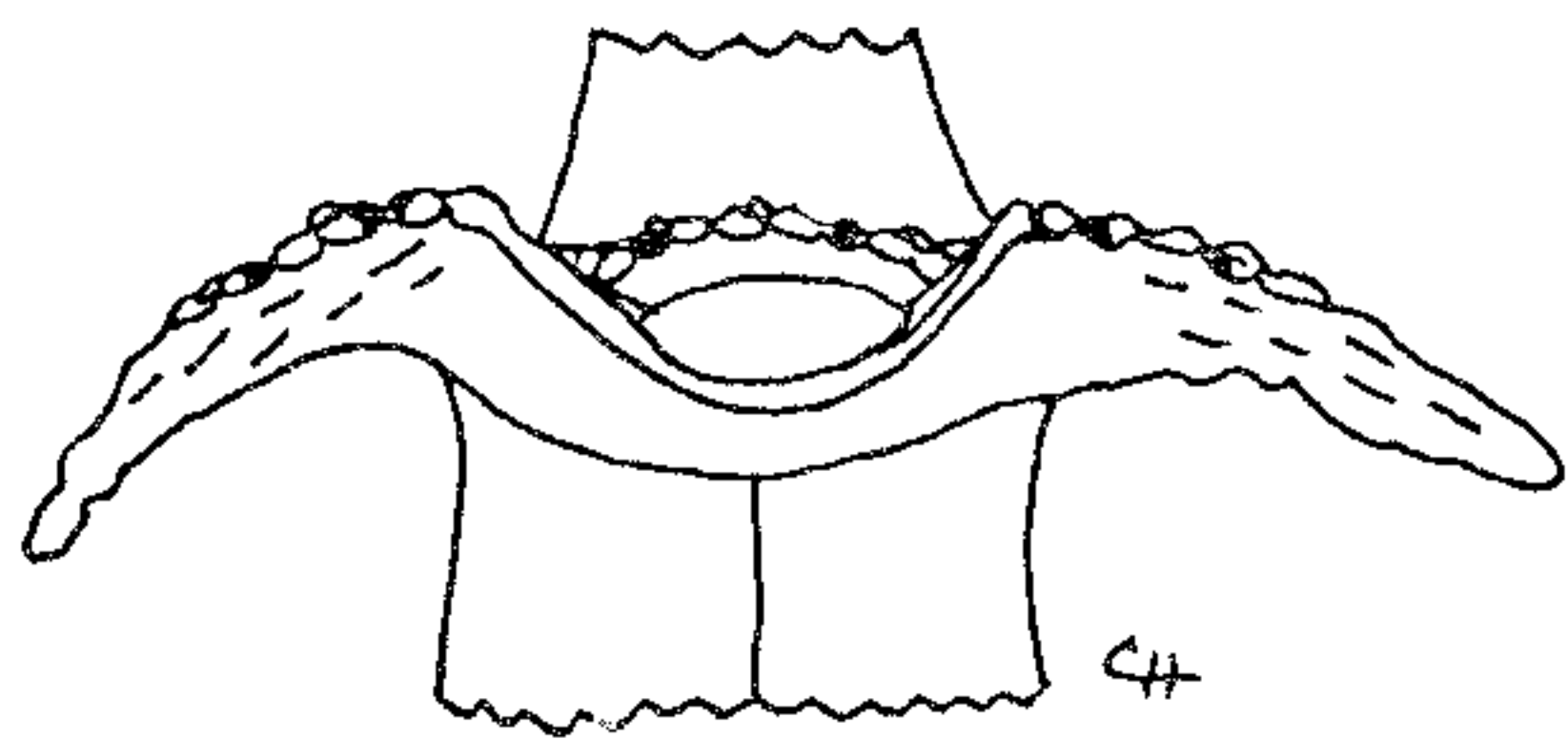


Fig. 6 Transverse Ridge with Nectary and Teeth

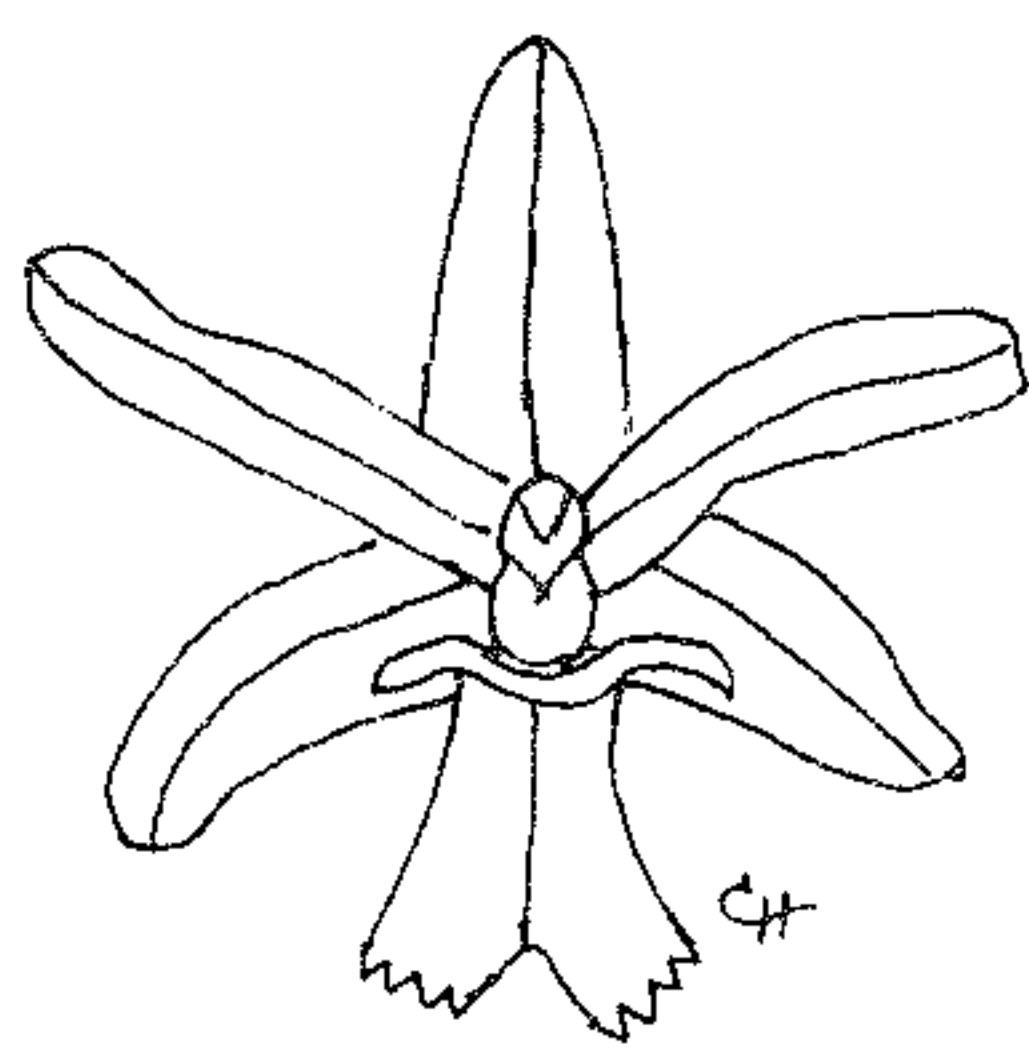


Fig. 7
Stage II - Flower

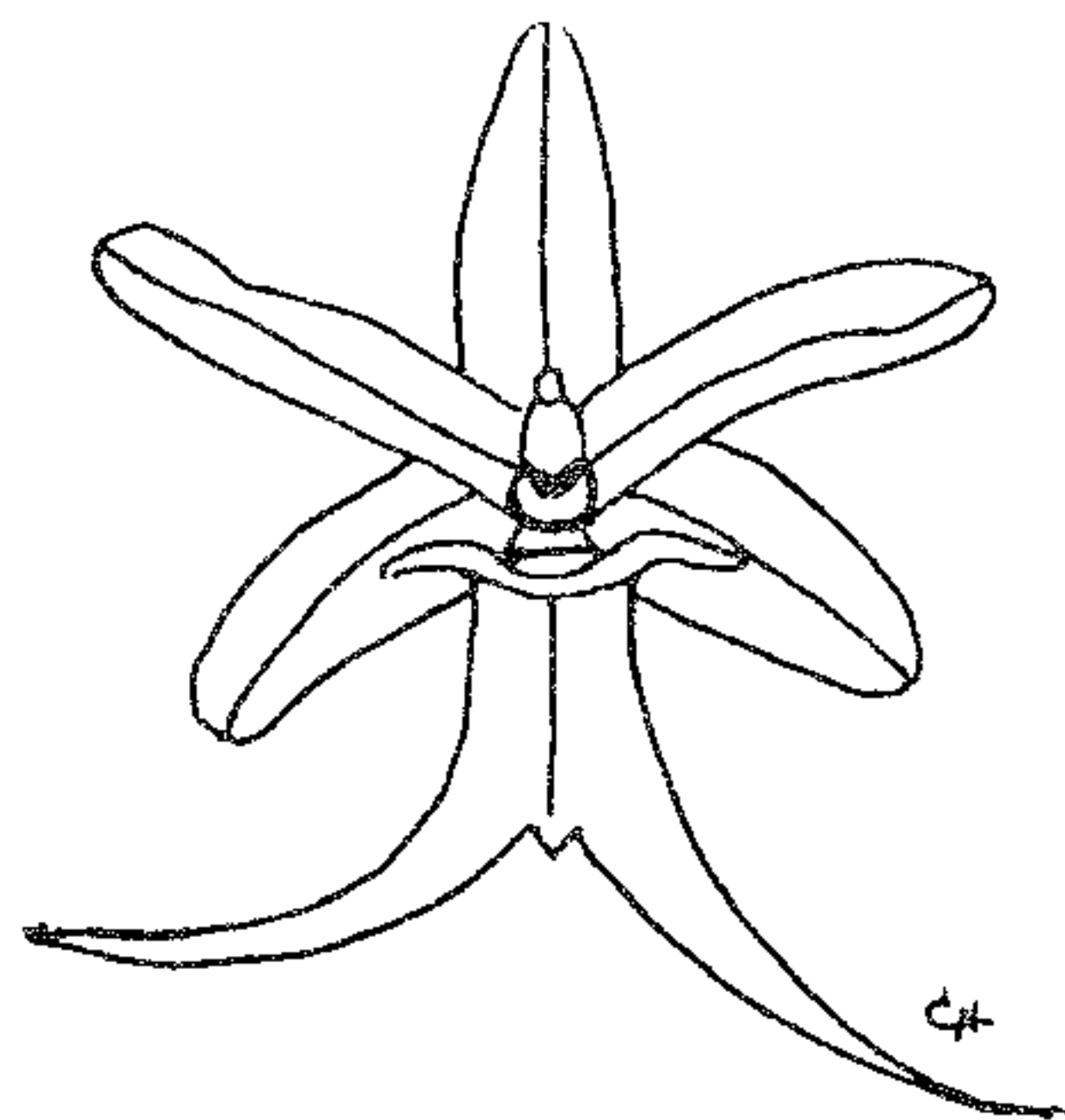


Fig. 8
Stage III - Flower

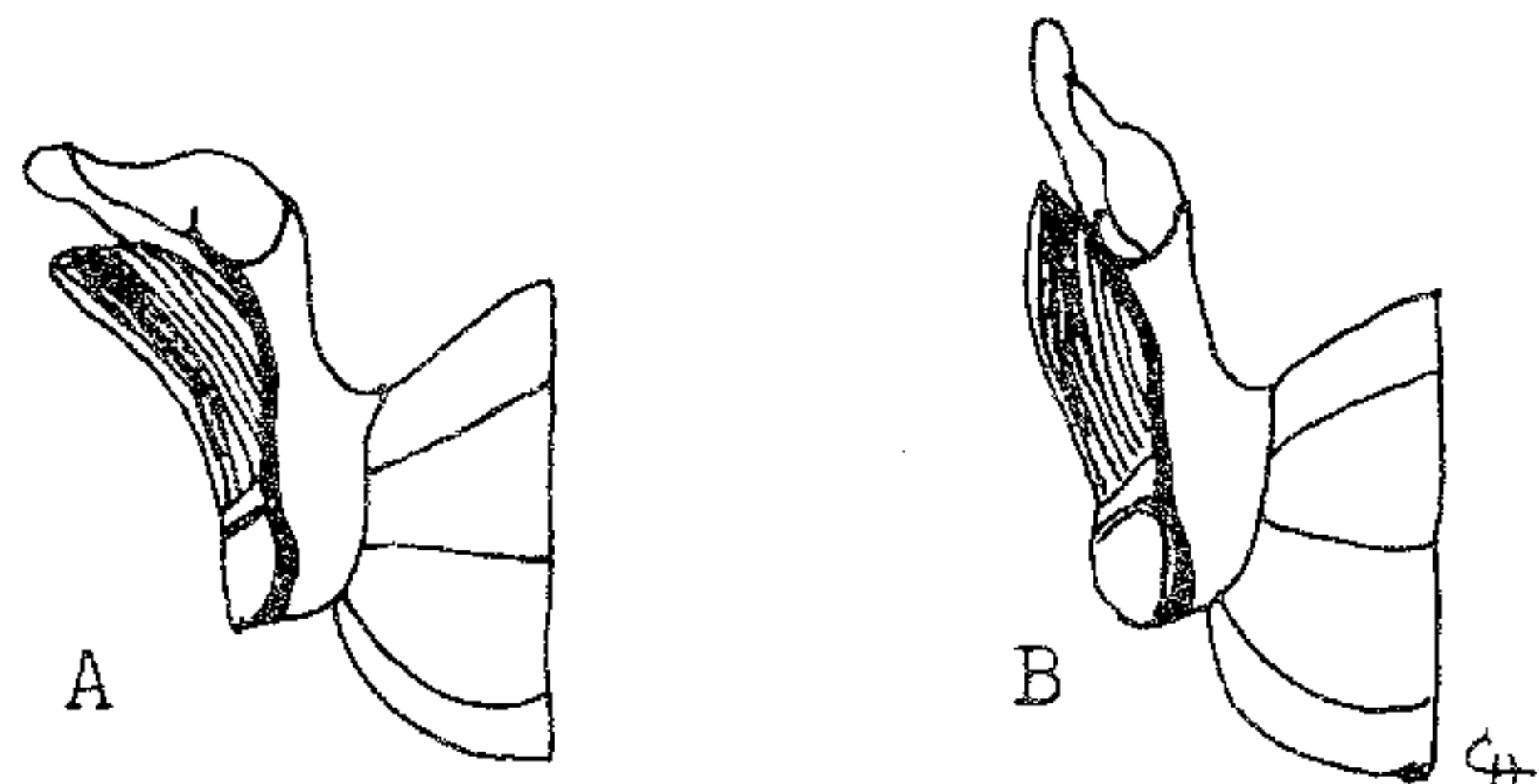


Fig. 9
Stage III - Column

en with the pollinia, slants downward in front of the stigma. The crest and the pollinia-tips are then near the nectary on the lip. The rostellum is said to have evolved from a third (the upper) stigma and therefore is a component, though sterile, of the female part of the column. In *L. cordata* it is remarkable (and an additional function) for the female rostellum to be a means of conveying the tips of the male pollen-masses from the anther to a location near the lip: a site apparently more favorable for the collision of the crest with the head of a nectar-seeking insect.

In *L. caurina* it was easy to remove the pollinia on a needle. In *L. cordata* the stiff hairs on the crest make it harder to do so correctly. It is necessary to touch the crest and the hairs from below, as by an insect moving up from the lip, not down from above.

Any downward movement of the rostellum is restricted by the back edge of the transverse ridge beneath it and by the upward bend in each tooth at the sides, which helps prevent the crest and the pollinia-tips from hitting the lip and sticking there. Immediately after the removal of the pollinia the empty rostellum ends up against the back edge of the transverse ridge. Its sides unfurl against the bases of the teeth, and its front edge projects a bit into the nectary! (Fig. 7, Stage II) This action can cause nectar to splash down the lip and helps prevent the front edge of the rostellum, which probably has some glue on it, from hitting anything solid to which it could adhere. Sometimes when things go awry, the rostellum with pollinia is cemented to the back edge of the ridge or wedged behind it, both of which also block the stigma. The glue shows up because it quickly turns brown.

The rostellum has been continually in front of the stigma but its unfurling gives added protection at the time of pollen-removal. Soon the empty rostellum slowly moves upward until it touches the anther, taking $4\frac{1}{2}$ to 10 hours in those I timed (Figs. 8 and 9A Stage III). Much less often the rostellum rises up a bit more, curling around part of the column and pushing up the anther which rarely falls off (Fig. 9B). Remnants of the anther-cases also remain.

Under the stereo-microscope the empty rostellum in *L. cordata* clearly shows longitudinal lines which indicate the internal septa that divide it into long sections. These sections contain the viscid matter and have the power to expel it violently. The septa lead toward the front edge of the rostellum, not just toward its crest. A study of two brown areas, one on each side of the crest on a particular front edge, showed that sometimes a pleat is made in each area bringing together the ends of the sections and producing a drop of glue. The two drops then become one.

Legislative Notes

Legislative Notes

I recently received an exciting letter from Bruce Manheim at the Environmental Defense Fund in Washington DC. The interest of the EDF in helping native plant societies adopt and enforce plant conservation laws comes to our group at a most appropriate time. The letter and response follow:

ENVIRONMENTAL DEFENSE FUND
1525 18th St. NW
Washington, D.C. 20036

May 30, 1985

Esther McEvoy
Oregon Native Plant Society
3290 SW Willamette
Corvallis, OR 97330

Dear Esther:

The Environmental Defense Fund is currently exploring ways in which it can assist state native plant societies in the adoption and enforcement of plant conservation laws. Based on our work over the past two years with various state agencies and with the U.S. Fish and Wildlife Service, it is clear that state native plant societies are critical to effective rare plant conservation. At the same time, however, it appears that such groups' efforts could be enhanced by information about events and experiences in other states and at the federal level. We believe that EDF could be of assistance to state native plant societies in this respect by providing specific legal and scientific information and advice, and assisting such societies in the protection of resident plant species under their respective state laws and under the federal Endangered Species Act. In order to clarify ways EDF can be most useful to your organization and plant conservation in the state, I now write to ask for specific information about your Native Plant Society.

- 1) When was the Native Plant Society established?
- 2) How many members belong to the Native Plant Society?
- 3) What are the principal objectives of the Native Plant Society?
- 4) To what extent does the Native Plant Society seek to influence state legislation and state administrative actions involving endangered plant species?
- 5) To what extent does the Native Plant Society seek to influence federal legislation and the actions of the U.S. Fish and Wildlife Service with respect to endangered plant species?

- 6) In pursuing these objectives, does the Native Plant Society communicate with national environmental groups or other state plant conservation organizations?
- 7) How could a national environmental group be of most use to your organization's efforts to secure protection for endangered plant species?
- 8) Would the Native Plant Society find a publication that specifically describes plant conservation issues in other states and at the federal level useful?
- 9) If so, what type of publication (i.e., an informal newsletter, a quarterly publication, an annual report)?
- 10) Would the Native Plant Society be willing to send a representative, on an annual basis, to a meeting or workshop to discuss with other state representatives significant plant conservation issues?

Thank you for taking the time to answer these questions.

Sincerely,

/s/ Bruce S. Manheim, Jr.
Wildlife Program

Dear Bruce:

Thank you for your letter expressing an interest in assisting our native plant group in adoption and enforcement of plant conservation laws. We are thrilled at the prospect of working with the Environmental Defense Fund.

The Native Plant Society was founded in 1961. As of February 1985 the membership was 589, counting families as one member. If you count families as 2 members, there are 665. This figure does not include two new chapters or complimentary subscribers. The principal objectives of the Native Plant Society of Oregon are "To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest".

We hope to be able to protect our endangered flora from both habitat destruction and from taking. We plan to influence our state legislation and agencies, and the USFW Service by enforcing a good program with specific guidelines for protection of our native flora. We have a conservation chairperson who does communicate with national environmental groups and other state conservation groups.

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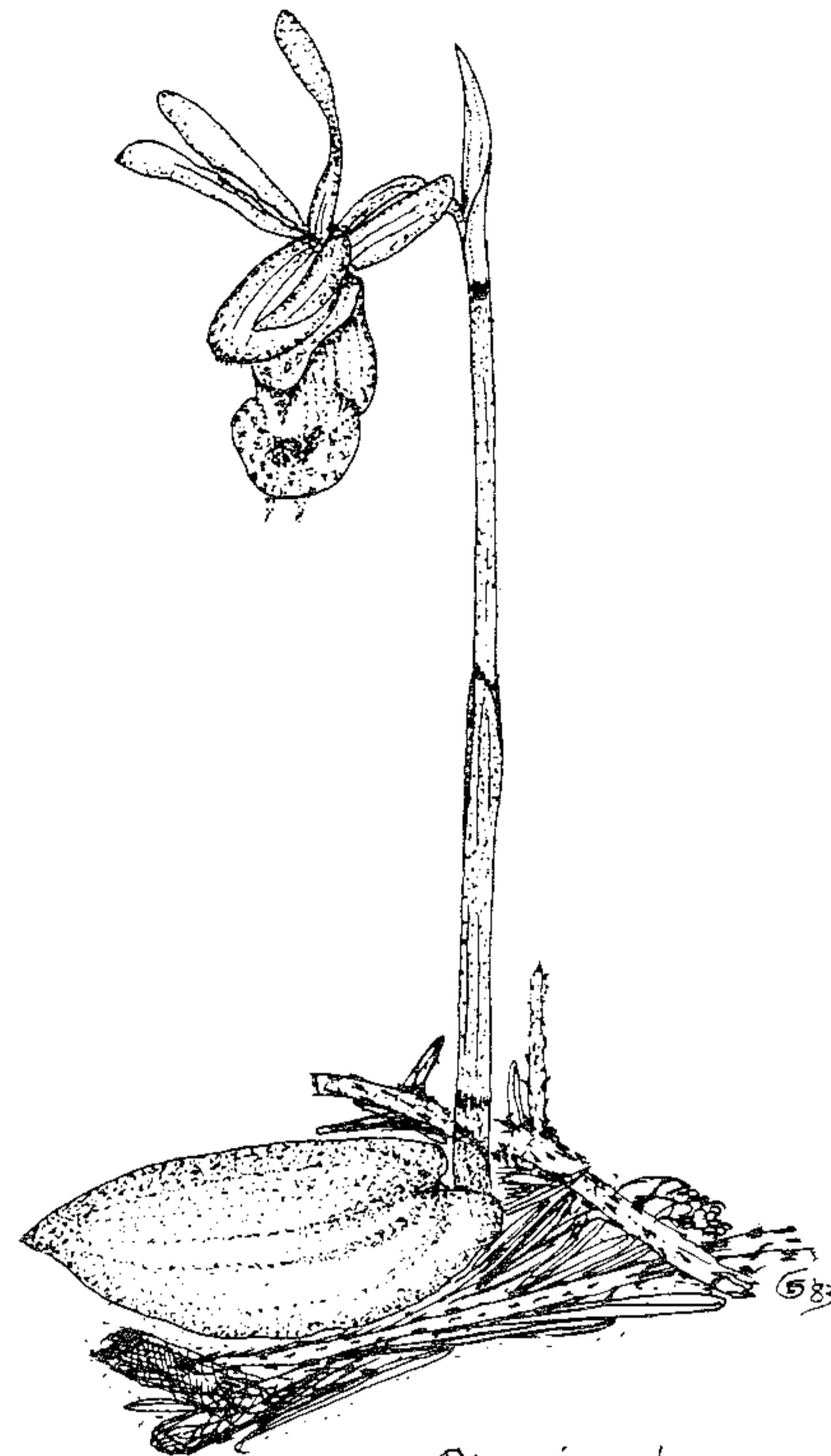
We would find a national environmental group to be most helpful in answering our numerous questions about how to produce an effective bill. Even though each state needs a different type of legislation, the experience of the EDF would be invaluable to our group for helping us with our specific needs.

Yes, a publication that describes plant conservation issues in other states and at the federal level would be useful. I feel a quarterly report or an annual report would be appropriate.

Yes, the Native Plant Society would be willing to send a representative to a meeting or workshop if it is within our budget.

We thank the EDF for showing a keen interest in plant conservation. We are looking forward to hearing from you in the near future.

Esther Gruber McEvoy
Corvallis Chapter



Drawing by
Esther Gruber McEvoy

EMANCIPATION FOR WILDFLOWERS

The following letter appeared in the May 1985 issue of *Horticulture*.

Dear Editor. Are you guilty of planting wildflowers? If so, you may have read with interest "A Note from the Editor" in the December 1984 issue of *Horticulture* about the 'wildflower trial' of Steve Kenney, who was found guilty not of violating any lawn or weed ordinance (none exists) but of violating the building code that prohibits one from "creating a public hazard" because he had planted prairie wildflowers in his front lawn. If you have bachelor buttons, black-eyed Susans, morning glories, and lupines in your front yard, as he does, you could be found guilty of the same thing in Kenmore, New York!

His three-day trial in September received international coverage, appearing on all three TV-network news broadcasts, in the *New York Times*, and in hundreds of newspapers and radio shows around the world.

The issue is that of civil liberties. Our citizens must be wary of communities that can dictate how people decorate their yards. Kenney's yard was not one of

neglect; he raked, seeded, weeded, and tended it daily. The flowers were just native species.

Kenney, an avid gardener and student of Henry David Thoreau, planted wildflowers not as a protest but because he thought they were more beautiful than the 'sterile' lawns that many communities force on their citizens. He also feels that using herbicides, fertilizers, and insecticides, together with wasting fuel and water, to keep the nation's lawns perfect are environmentally unsound practices.

He now faces thousands of dollars in fines and a possible jail sentence because he refuses to cut down his flowers. Even if his appeal in January is successful, he faces \$4,000 in attorney's fees. That is why many people have come together to ask fellow gardeners to contribute to a defense fund for Kenney. Contributions may be sent to the Kenney Wildflower Defense Fund, c/o Steve Kenney, English Department, Room 302 Clemens Hall, S.U.N.Y. - Buffalo, Buffalo, N.Y. 14260.

Helene Golden
Kenney Wildflower Defense Fund Amherst, N.Y.

The rostellum having moved upward, the stigma now is accessible and in total view for the first time. Located on top of a slanting ledge below the rostellum, it is broadly crescent-shaped with the rounded cusps upward. Along with the nectary which continues to glisten with nectar, the stigma is now also shiny with its adhesive fluid, ready for pollen-masses on an insect's head to be pushed against it for the completion of cross-pollination. Since in L. cordata the stigma is covered by the rostellum soon after the flower opens, and does not become accessible until the pollen-masses have been removed and the rostellum has moved upward, successive visits by insects are needed for cross-pollination and self-pollination is prevented.

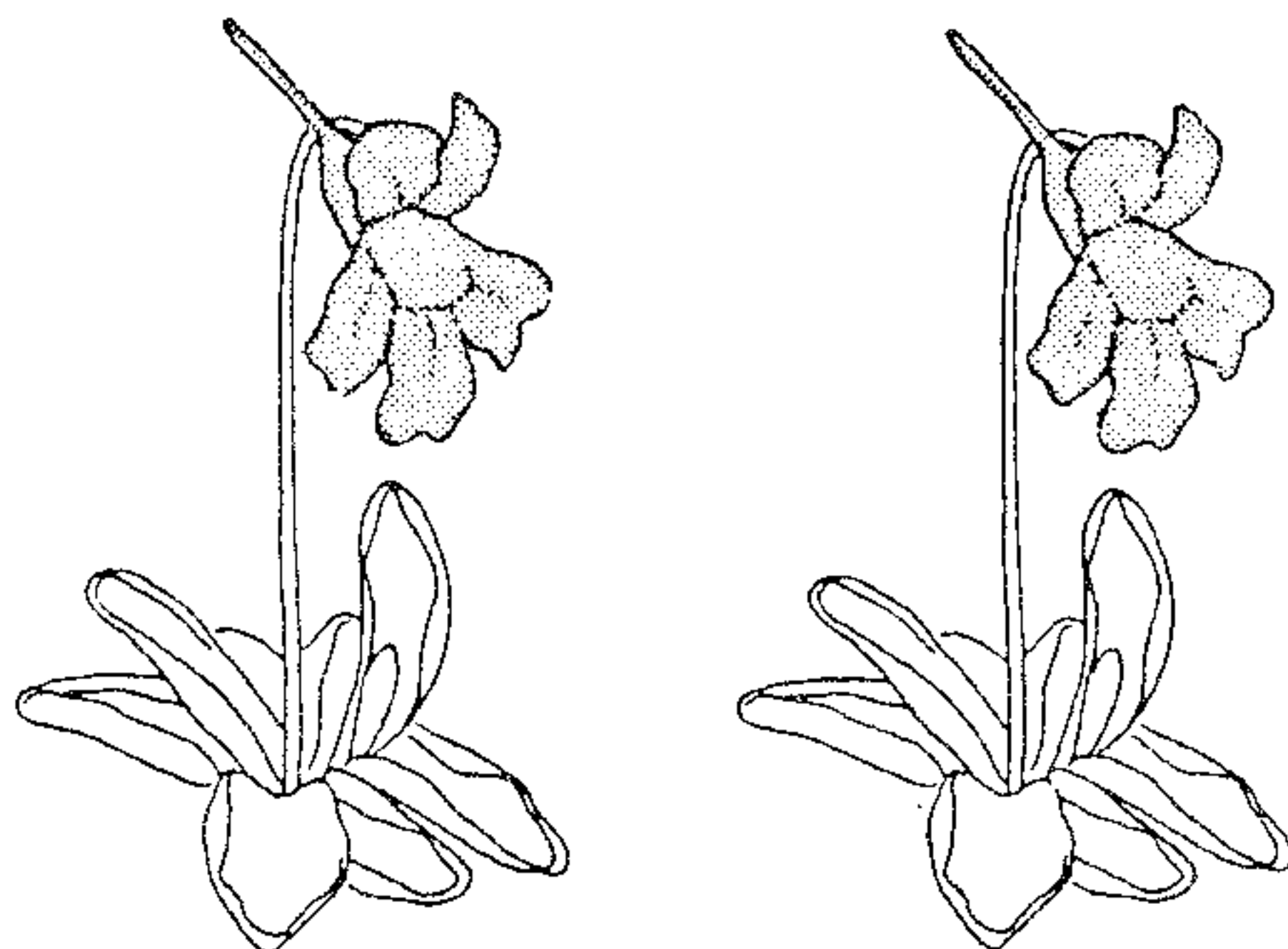
Important differences in L. cordata from the pollination-process in L. caurina and L. ovata are (1) the conveying by the rostellum of the tips of the pollinia downward to a position near the lip, and (2) the arrangement of the transverse ridge with nectary and teeth to help prevent the sticking of the rostellum, with or without pollinia, against the lip.

The transverse ridge between the teeth, though somewhat variable, is evidently present on the lips of flowers of L. cordata throughout the extent of its range in No. America. It is seldom mentioned (Hitchcock is an exception) in descriptions of L. cordata in No. American botanies. But there are drawings of this species which show the transverse ridge between the teeth on the lip, not only in botanies covering a wide range, such as Donavan Correll's Native Orchids of No. America (1950) and Leur's volume, but also in books dealing with the plants of a more local area such as: Britton and Brown's Illustrated Flora of the N. E. United States and Adjacent Canada (1963); the Appalachian Mountain Club's Mountain Flowers of New England (1964); Fred Case, Jr.'s Orchids of the Western Great Lakes

Region (1964); Dr. John C. Long's Native Orchids of Colorado (1965); Hitchcock and Others' Vascular Plants of the Pacific Northwest (1969); and Adam F. Szczawinski's The Orchids of British Columbia (1959).

L. ovata is one of only two species of Listera native to Europe. The other is L. cordata which grows mainly in the mountainous areas of the continent and in the northern part of Britain, Scandinavia and eastward. One researcher (Silen, 1906) found mosquitoes as well as ichneumonids carrying away pollinia from L. cordata in Finland. Darwin, in his time, was also interested in L. cordata but apparently never had a chance to study its pollination-process at first hand. A Prof. Dickie of Aberdeen, Scotland, kindly sent him some specimens but "rather too late in the season." Darwin noted on these plants that the lip had two basal lobes. The next year Prof. Dickie sent a description of pollination in L. cordata as he saw it, from which Darwin concluded (p. 124) that "here everything goes on as I have described under Listera ovata." V.S. Summerhayes in his Wild Orchids of Britain (1951) echoed this in writing (p. 174) of L. cordata that "pollination is carried out in the same way as in the Common Twayblade." I do not believe that can be said of the North American L. cordata.

The excellent, much enlarged, and detailed colored drawings in Henry Correvon's Album Des Orchidées d'Europe (1923) and a drawing in A. Duperrex's Orchids of Europe (1961) show no transverse ridge between the teeth on the lip of the European L. cordata. Each tooth begins and extends outward from the very outer edge of the lip. So L. cordata in No. America differs from the European plants in having part way across the lip near its base a transverse ridge (with nectary) which extends into a tooth on each side - an arrangement which has a relation to its pollination-process. Any differences between plants of a species on two continents is not surprising.



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 124 Anne St., McMinnville, OR, 97128; 472-2829
 Wm. Cusick (La Grande area) Andrew Kratz
 1207 Y Ave., La Grande, OR, 97850; 963-9358

MEMBERSHIP

Membership Chair Mary Falconer
 1920 Engel Ave. NW, Salem, OR, 97304; 585-9419
 Membership in the Native Plant Society of Oregon is
 open to all. Membership applications & changes of
 address (including old address & zip code) should be
 sent to the membership chair.

BULLETIN

Editor Angie Evenden
 P.O. Box 9338, Portland, OR, 97207; 246-8646
 The NPSO Bulletin is published monthly. Copy is due
 by the 10th of the month, & should be sent to the
 editors. News, articles, photos, drawings, & non-
 copyrighted material are welcomed.

GUIDELINES FOR CONTRIBUTORS

The Bulletin is not typeset; therefore typed, camera-ready copy is much appreciated. But no submission will be rejected because it is not typed. Please proofread & check facts.

DEADLINE: 10th of each month

FORMAT: Copy should be typed in 4 1/2 inch wide columns, of any length. Author's name & chapter affiliation (or other organization) are typed at the end of the article. There is no standard paragraph treatment; one of these is suggested:

* for long articles, double space between paragraphs, but do not indent the first word of the paragraph

* for short articles or short paragraphs, when double spacing looks odd, indent the first word of the paragraph instead

Type your own headline, centered, all caps. In case of special formats, e.g. plant keys, you are free to choose the layout.

CREDITS: For each submission, provide

* title

* author--specify whether byline is desired for news items

* instructions as to whether item is to be used in entirety or excerpted at editor's discretion

* source & date if item is not original

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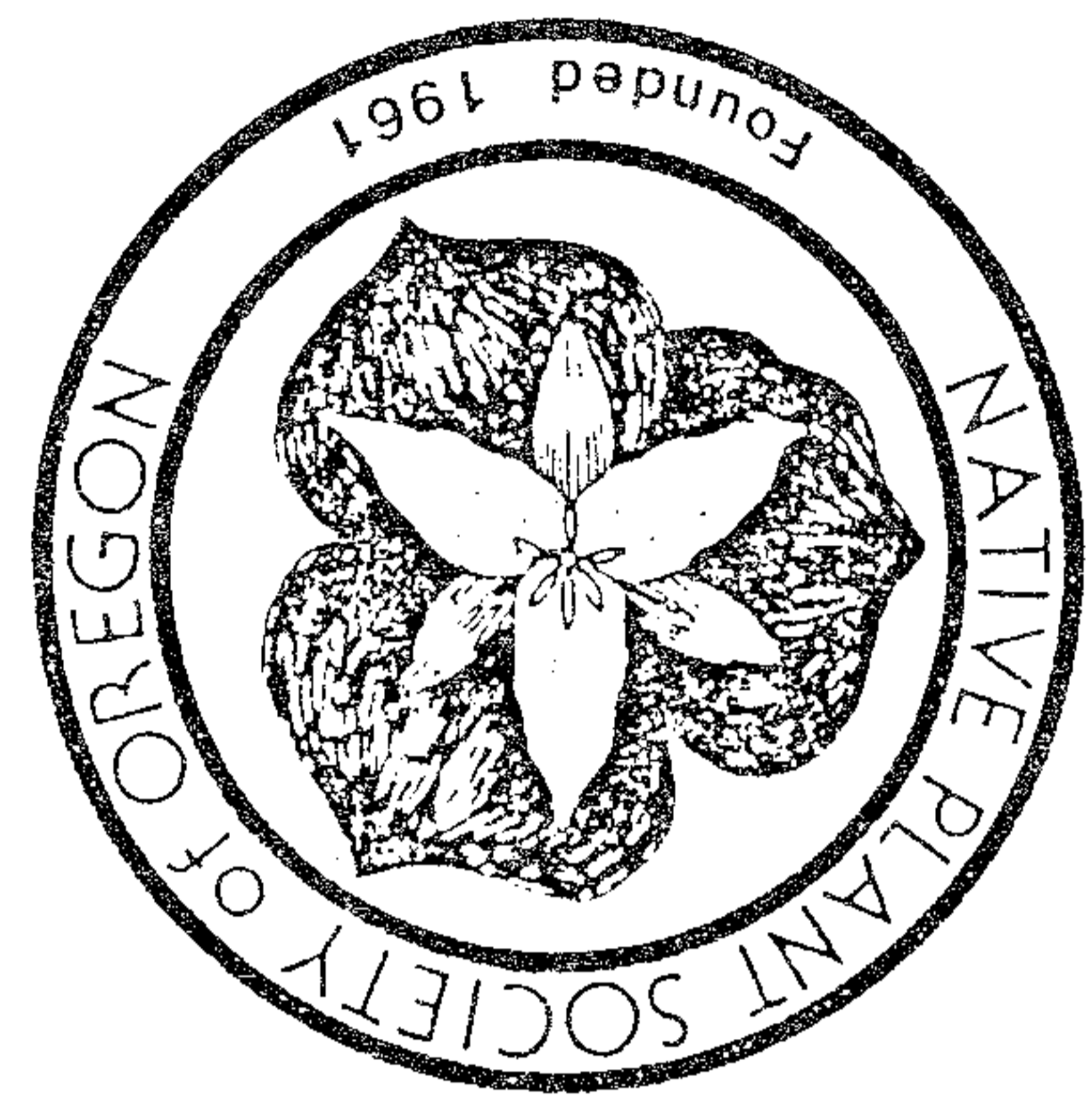
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