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. 12 DECEMBER 1980

CHAPTER CALENDARS

PORTLAND CHAPTER

Field Trips:

Sat. Dec 13 -- Collins Combination. Glenn Waltall, leader. Meet 9:00 a.m. at Audubon House, N.W. Cornell Road. Our virtuoso of natural history will show a few slides of fungi, bryophytes and such and then lead a ramble through the sanctuary. Bring your sack lunch to eat on the Bird Porch. Also scheduled is a visit to Audubon's wildlife facility.

Sat. Jan. 10 -- Oregon's Rare Plants with Dr. Janet Hohn, Regional Botanist with the Endangered Species Office of the U.S. Fish and Wildlife Service, Portland. Dr. Hohn will show some slides and discuss why the species are so important.

Sats. Jan. 17,24.31 -- These sessions will focus on other aspects of the rare plant drama, about which more later.

Workshops: All meet at 10:00 a.m. in room E, Central Library, same as before.

Meeting:

Mon. Dec. 8, 7:00 p.m., Central Library, 801 S.W. 10th, Portland, Trekking in Sikkim, Ruth Hansen, speaker. Ruth has made two trips to Sikkim and has many exciting experiences to share with you. Come and bring a friend.

SISKIYOU CHAPTER

Meetings:

Thurs, Dec. 4, 7:30 p.m. Room 171, SOSC Science Building, Ashland -- Lilies of the Siskiyous, Orrel Ballentine, professor at College of the Redwoods, speaker. NPSO's very attractive T&E notecards will also be available at special prices.

Thurs. Jan. 8, 7:30 p.m., Room 171, Science Building, SOSC, Ashland -- The Pines, seedsman Frank Sesock, speaker.

GIVE KASHMIR FOR CHRISTMAS

Join the Himachal Pradesh/Kashmir Botanical Expedition...or make it a gift to that special someone! Plus...$100 of your cost of attending this exciting trip will go directly to NPSO. So plan to join the group May 5-29, 1981. The program in India will be hosted by an Indian Botanist who will accompany the group during the entire trip. Four days will be spent in Delhi with a tour of the city included. Ten days botanical trekking in the Himachal Pradesh, with proters, tents, cook & kitchen help, all meals, and sherpas will follow. At the return of the trek, we will go further north to Srinagar and explore the region and gardens of Kashmir. Our program will reach an end in Delhi after the flight from Srinagar. A day's rest at Janpath, then the group will board the palne for the return flight. An optional two-day visit to the Taj Mahal, Red Fort, and Bharatpur Bird Sanctuary.
Land Cost: $1450
Airfare: $1250 (east coast slightly less. Subject to change.)
For information, contact Folkways International Trekking, Inc., 14903 S.E. Linden Lane, Milwaukie, OR 97222, telephone (503) 653-5882.

WELCOME TO NEW MEMBERS

Siskiyou Chapter

Terry Hoffman, Ashland
Susan Aldrich, Medford
Rick Prusz, Ashland
Teri Martin, Ashland
Lenny White, Ashland
Robbin Pearce, Ashland
Sylvia Thomas, Medford

SEASONS GREETINGS FROM YOUR NPSO EDITORS

A special greeting from Editors Lang and Crawford to all native palnt people everywhere! We hope this has been a rewarding year in the field, garden, herbarium, or armchair--wherever you do your botanizing. It has been a very productive year for NPSO: the new High Desert Chapter, the state T&E Committee, our support of a Western alliance of native plant societies, the T&E Symposium at Southern Oregon State College in July, solid growth of our chapters and their influence, and--thanks to our faithful correspondents in the far outposts of Oregon--some excellent articles written for the Bulletin. Happiest holidays to everyone, and happy botanizing right through into 1981!

Thanks to Mariana Bornholdt for pointing out our embarrassing oversight: we (Crawford), in crediting two Bulletin articles to Vi Sobolik, associated her with Portland Chapter. Now don't get us wrong, there's nothing embarrassing about associating oneself with Portland Chapter! But Vi "is and always has been a staunch member of the Willamette Valley Chapter", as Mariana pointed out. Our apologies Vi--we hope this note gets you back home!

DUES ARE STILL DUE

Please think about renewing your membership for next year. Fill out the membership form you received with the last issue of the Bulletin and mail the form and your money to YOUR CHAPTER Treasurer.

NPSO T/E NOTECARDS ARE NOW AVAILABLE FROM YOUR CHAPTER PRESIDENT FOR $2.50 PER SET.

NPSO BULLETIN SEEKS NEW EDITORS

As your editors, we, Frank Lang and Vern Crawford, have begun a search for our successors. With the installation of new society officers in April, 1981, we will have enjoyed the monthly terror of "getting out the Bulletin" for two full years. We feel next spring will be the proper time for us to step down and let some fresh hands take over. It has truly been a pleasant but nagging task to perform each month's "miracle", since we haven't always known until the last minute what we'd have to print. But as of next summer, Dr. Lang will begin a year's sabbatical leave from SOSC, and Vern Crawford--well he's running out of steam.

So give some consideration to who might become the Editor or Editors of your Bulletin--might it be you? If you have questions about what being an NPSO Editor is all about, write or call either of us and we will be glad to discuss it. It is an important and needed role in our society, and we hope energetic, dependable people will step forward to take up the cause.

NPSO T&E COMMITTEE SEEKS FIELD TRIP LISTS

One of the projects that is an offshoot of the NPSO Threatened and Endangered Plant Committee is a master list of plant lists gathered by NPSO members on past field trips. Charlene Holzwarth has laboriously collected and compiled these lists, and copies of the master list are now available. Lists like these, needless to say, need to be continually updated. Portland Chapter has been trying to collect one list from each trip and to share the writing, so that the burden falls on no one person.

Inventories of plants that we have identified on field trips are invaluable records of an enormous amount of expertise and knowledge. They can be used by the U.S. Forest Service in aiding inventories, in making as atlas of plant distributions for Oregon, in historical studies, as our lists for Mt. St. Helens were, and so forth.

I am suggesting that each chapter start keeping its own field trip records and send master copies to Charlene Holzwarth. It's an easy matter for one member to write down names of plants seen on a field trip; another member can be appointed permanent collector and compiler of lists for your chapter. Charlene has volunteered to be central compiler for the state.

I have sent a copy of the master list to each chapter president. For individual copies of the master list, or individual plant lists, please send a stamped, self-addressed envelope and 15¢ for each one. Charlene has asked that you make your own multiple copies and be feee to pass lists out on field trips.

Annie Kowalashin

WHO WAS BARRETT?

Did you know: Penstemon barrettiae was named after the first female botanist in the Oregon Territory? She was also probably the first woman in the Pacific Northwest to wear "trousers". This interesting note comes from Annie Kowalashin, Portland Chapter. Does anyone know more about this early botanist: If so, contact Annie at 4949 NE 34th, Portland, OR 97212, telephone 288-2736.

PLANT FAMILY PROFILES
By Herm Fitz

The Iridaceae - IRIS FAMILY

Worldwide, the Iris Family consists of between 1000 and 2000 species in 50 or more genera. These plants are widely scattered in tropical and temperate regions in both hemispheres. Many cultivated garden ornamentals are well known: Crocuses, Freesias, Irises, Gladioli, and others. Native to Oregon are only two genera: Iris, Flag, or Fleur-de-lis (*Iris*), so named after the Greek *Iris*, or Rainbow, because of the many colorful flowers, and Blue-Eyed Grass and Grass Widows (*Sisyrinchium*). Each genus contains only a few species scattered throughout Oregon in open, rocky or grassy to boggy habitats.

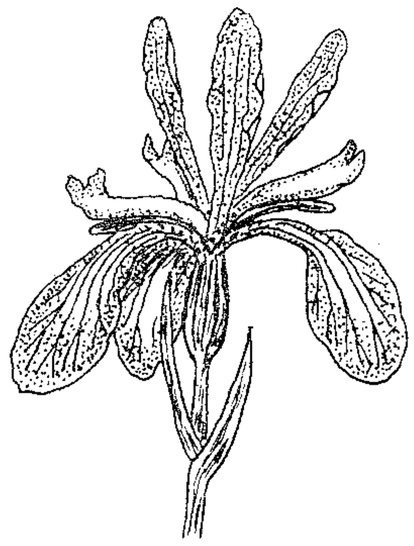
This is a family of perennial herbs with underground storage organs - corms, rhizomes, or less often, bulbs. The leaves are narrow, linear, tough-textured, with parallel veins, and usually arranged in overlapping ranks. The flowers are showy, and bear 3 sepals and 3 petals. All six of these perianth parts are petaloid, and are alike in *Sisyrinchium*, giving the flower a regular shape, or arranged in 2 unlike sets of three each, as in *Iris*. In the latter flower the three outer segments, the sepals, are spreading or reflexed, while the three inner segments, the petals, are erect. Three stamens are arranged opposite the sepals. The style is simply branched into 3 lobes in *Sisyrinchium*, but in *Iris* it is highly modified into 3 flattened, petaloid and colorful structures with reflexed crests above the stigmatic surface. These arch out over the sepals to form a tube-like structure over each stamen. The resulting configuration - showy sepals with pencilled "nectar-guides" and "landing field," the style and stigma and stamen contained between - serves to attract pollinators which crawl down the tube toward the nectar secreted at its base. Pollen from a previously visited flower is rubbed off onto the stigmatic surface as the bee enters the tube; pollen from the immediate flower is effectively dusted over the insect's back as it crawls beneath the anther in the tunnel. The whole mechanism is an ingenious way of ensuring cross-pollination.

Beneath the flower is an inferior ovary comprised of 3 carpels fused, but of separate chambers (locules) with the numerous ovules borne on axile placentae. This ovary matures to a capsule with many seeds.

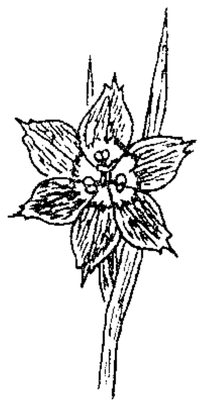
The floral formula is very clearcut in the Iris Family:

$$Ca^3\ Co^3\ S^3\ \underline{P^{(3)}}$$

You may recall that the Lily Family has six stamens in almost all cases, while the Orchid Family has only one. So when you find a plant with parallel-veined leaves and showy flowers, if it has only 3 stamens and if the ovary is inferior, you likely have found either a Blue-Eyed Grass or a species of Iris - both members of the Iridaceae - the Iris Family.



Flower of Oregon Iris (*Iris tenax*). Note the broadened, attractive sepals, the erect petals, the flattened style branches arching over the sepals and enclosing the stamens, and the inferior ovary.



Flower of Western Blue-Eyed Grass (*Sisyrinchium angustifolium*). Note the six equal perianth parts, the 3 stamens, and 3-parted stigma. Flowers are blue with a yellow "eye" in this species.

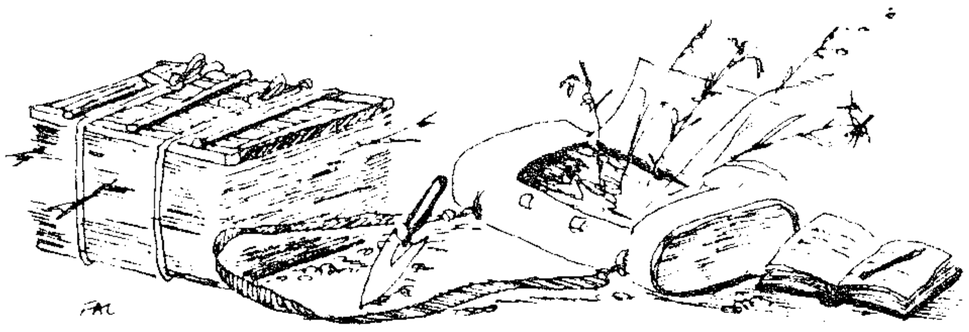
WILHELM N. SUKSDORF

The story of Wilhelm Suksdorf might have been that of a poor farm boy who went to the big city and gained scientific fame and fortune. Instead, it is the history of a poor farm boy who stayed on the farm and labored in obscurity, but whose love of plants led him, in the end, to botanical immortality.

Born in Germany in 1850, Suksdorf emmigrated with his parents and six brothers to Iowa in 1858, and finally settled in Bingen, Washington, in 1876. His curiosity about plant life began during his youth on the Iowa farm. He taught himself the names of the prairie wildflowers, using Asa Gray's botanical textbooks. In Washington, Suksdorf lived in an area of incredible botanical richness. Bingen is in the Columbia River Gorge, a slash through the Cascade Range that unites the flora of the arid eastern steppes with the humid forests of the coastal strip. It formes a natural migration route for the mingling of plants from different vegetation zones, and it is a pocket of endemism for many species that occur nowhere else. The botany books Suksdorf brought from Iowa were of little help to him in naming the plants he first encountered when he moved to Washington. In fact, there were few books in any of the world's libraries that would have answered his needs; he was truly alone, a botanical pioneer in unexplored territory.

From a modern perspective, it is perhaps hard to appreciate the imposing difficulties Suksdorf faced in his botanical studies. We might think that the many explorers who had passed by the Columbia River route--including Lewis and Clark, David Douglas, Thomas Nuttall, W.D. Brackenridge, Charles Geyer, David Lyall, and others-- would already have discovered all the interesting plant species. But their specimens had been returned to distant herbaria in Europe and New England, and the books describing the plants they found were unavailable to a person such as Suksdorf who lived in isolation and had no contacts with scientists able to help or advise him.

Much of the territory accessible to Suksdorf was, in fact, scientifically unexplored. Mt. Adams, for example, did not even have its modern name (Suksdorf called it "Mt. Paddo," using an Indian name for the peak), and it had never been visited by botanists. No previous botanist had been a resident of the southern Washington region, whereas Suksdorf had a home base there from which he could travel to observe and record all the diversity of the flora, in all seasons, over a succession of years. Through his determination and tireless energy, the young botanist was able to overcome the obstacles of isolation, absence of formal training, inadequate reference books, primitive systems of travel, and lack of financial resources. Every spare moment was spent in his botanical avocation, and he eventually built up a private herbarium which was among the best of its time in the Pacific Northwest.



Very important to Suksdorf s development as a scientist was his relationship with Asa Gray, the "Father of American Botany." It began in 1877, wehn Suksdorf realized he needed help to identify the many interesting plants he was finding in the vicinity of Bingen. He sent some of his best collections to Dr. Gray at Harvard University, along with a covering letter requesting advice. Gray maintained an extensive correspondence with plant collectors throughout the western region; from them he received the hundreds of specimens of new species on which he based his published papers and books. He detected in Suksdorf the makings of an outstanding botanist; the young naturalist's collections were of high quality, and his field notes were accurate and insightful. In 1879, Gray paid Suksdorf the high compliment of naming a new genus of plants in his honor --Suksdorfia, a member of the family Saxifragaceae, which the naturalist had found on the cliffs along the Columbia River near his home. Gray's encouragemtn inspired Suksdorf to make collections of all the local species, to search for rarities, and to distribute his specimens by sale to leading American herbaria and patrons of botany. The practice of selling collections of dried palnts, as well as seeds and bulbs, was common in those days as a m means of meeting wxpenses and making a modest income.

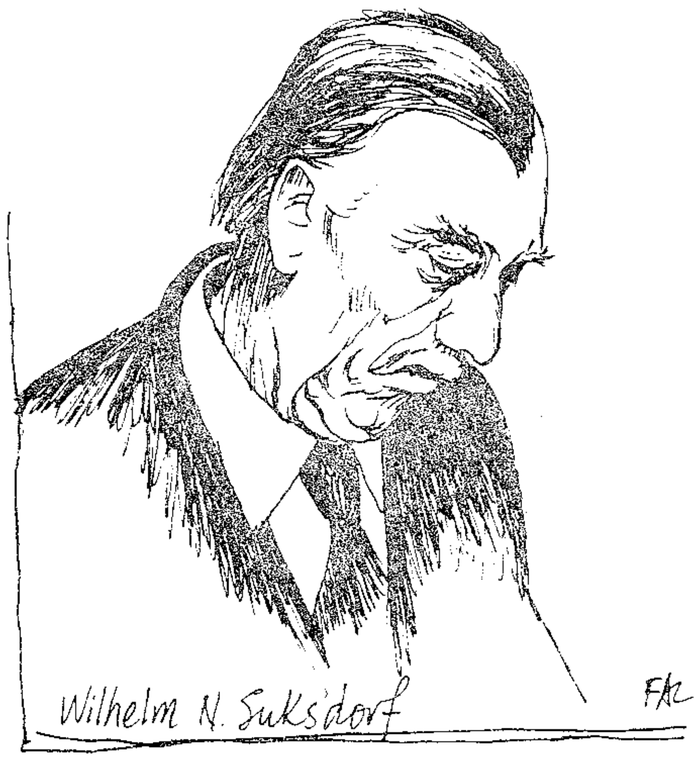
In 1886 an event occurred which could have launched Suksdorf on a professional career in botany: he was invited by Dr. Gray to become his assistant in the herbarium at Harvard University, and to undertake advanced training in taxonomy. Suksdorf's first year at Harvard was a happy one, but in late 1887 tragedy struck--Dr. Gray died, after a brief illness. Gray's successor, Sereno Watson, was not friendly to Suksdorf; and in addition the farm boy from Washington felt he was discriminated against by the New Englanders because of his German background (for example, he accused them of refusing him the right to vote because of his foreign birth, although he was a naturalized citizen). Suksdorf, who was modest and retiring by nature, was sensitive to such slights, and feeling he was not welcome in the East, he returned to Bingen, never again to venture forth on the national scientific scene.

Suksdorf might yet have attained professional fame if he had published more of his botanical observations and taxonomic studies. However, his stubbornness on one crucial point worked against him--he insisted on writing his scientific papers in the German language. American editors (to their discredit) consistently refused to accept his papers, so his botanical contributions eventually had to appear in "obscure" German journals where they were practically inaccessible to American botanists, especially those of the West Coast. Late in his life, Suksdorf did receive recognition through an honorary degree and a research fellowship granted by the State College of Washington, in Pullman. He initiated a botanical journal, written entirely by himself, and published in it a major monograph of the difficult genus Amsinckia of the Boraginaceae. After his death in 1932,Suksdorf's personal herbarium of over 30,000 sheets was donated to Pullman and is now part of the herbarium of Washington State University. The importance of his lifetime of collecting and exploration can be judged by the fact that at least 375 names of vascular plants have been based on his specimens, plus about 70 new species of fungi and at least 7 names of lichens.

Suksdorf's scientific accomplishments, made under difficult circumstances, are great. But we will never know what greater promise he might have fulfilled had this modest, sensitive, and reclusive individual been received more kindly by the Eastern American botanical "establishment", and had he not felt so stronly the "stigma" of his national origins and preference for the German language. Perhaps we can draw the lesson from this, that science works best when human differences, of all kinds, are tolerated, and talents, of all kinds, are encouraged.

Reference: St. John, Harold. 1955. Biography of Wilhelm Nikolaus Suksdorf...Research Studies of the State College of Washington, Vol. 23, pages 225-278.

Kenton L. Chambers
Oregon State University
Department of Botany



Examining Specimens

MEETING THE MINING THREAT

We are all aware that demand is increasing world-wide for non-renewable mineral and energy resources. Oregon, too, will soon be grappling with questions that as yet have not been local issues.

There is strip-minable coal in northeastern Oregon, nickel, chromate and oil shale deposits in southwestern Oregon, and uranium in southeastern Oregon.

Existing state laws provide for minimal protection from, or compensation for, the unavoidable local environmental degradation caused by large scale mineral recovery operations. Multi-national corporations are now assessing Oregon's resources for future exploitation. They will obey any laws but it is up to us to make sure that the laws serve our needs.

In October, I attended a meeting in Eugene of concerned individuals and organizations. A committee has been formed to evaluate mining laws of other states and propose legislation for Oregon. Companies interested in exploiting Oregon resources can be expected to resist more regulation. Your support is needed. If you are interested in helping to insure wize use of our natural wealth, please contact:

Jacqueline Greenleaf
415 Experiment Station Road
Medford, OR 97501

or

John Charles
Oregon Environmental Council
2637 SW Water Avenue
Portland, OR 97201

J. Greenleaf

PROTECTION FOR ERIOGONUM CUSICKII

In May of 1979 a temporary off-road vehicle closure was designated in the Black Hills located south of Christmas Valley, Oregon. This closure has been amended to a permanent off-road vehicle closure to protect a candidate species of plant under consideration for threatened status by the U.S. Fish and Wildlife Service, Eriogonum cusickii Cusicks buckwheat.

Two dead-end roads remain open into the Black Hills to provide access for Non-vehicular recreation activities. Vehicles must remain on the designated roads.

The protection of an area such as the Black Hills is not assured by the mandate of an agency. Public recognition, cooperation and support of such protective actions must be recognized as the only way to assure a successful program.

If you have any questions about the closure contact Richard A. Gerity, District Manager at (503) 947-2177 or P.O.B. 151, Lakeview, OR 97630.

NATIVE PLANT SOCIETY of OREGON
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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, Or 97520

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