Colorado Native Plant Society

NEWSLETTER

VOLUME 5 NUMBER 3

JULY-SEPTEMBER 1981

"DEDICATED TO THE APPRECIATION AND CONSERVATION OF THE COLORADO FLORA"

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P.O. BOX 200
Ft. Collins, CO 80522

SCHEDULE OF MEMBERSHIP FEES

LIFE	$ 250.00
SUPPORTING	50.00
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Nonmembership subscriptions to the NEWSLETTER are $ 4.00 per year.

NEWSLETTER ARTICLES

Please direct all contributions and articles to the EDITOR, Beth Painter, in care of the Society's mailing address.

Deadlines for the quarterly NEWSLETTERS are the last day of February, May, August and November.

MEMBERSHIP RENEWALS AND INFORMATION

Please direct all membership applications, renewals and address changes to the MEMBERSHIP Chair, Myrna Steinkamp, in care of the Society's mailing address.

Please direct all other inquiries regarding the Society to the SECRETARY, Sue Martin, in care of the Society's mailing address.

Announcements

ROCKY MOUNTAIN REGIONAL RARE PLANT CONFERENCE

ENERGY DEVELOPMENT AND RARE PLANTS:

PLANNING FOR THE FUTURE

The third Rocky Mountain Regional Rare Plant conference, entitled "Energy Development and Rare Plants: Planning for the Future" will be held November 5 and 6 at the Denver Botanic Gardens, 909 York Street, Denver. The conference, which promises to be both informative and action-oriented, is sponsored by the Botanic Gardens in conjunction with the Native Plant Societies of the Rocky Mountain Region, including the Colorado Native Plant Society.

It will provide information on federal regulations affecting rare plants, sources of rare plant data, and methods to reduce or eliminate potential conflicts surrounding the development of natural resources and the retention of rare plants or unique ecosystems. In addition, representatives from each of the states will give an update on activities in their states.

We'll explore the different roles of professionals collecting rare plant data in industry, federal government, state government, and consulting firms. Defining the roles and responsibilities of individuals will let us examine areas of common interest and look for areas where cooperating agreements may prove to be mutually beneficial. In addition, conference participants will identify existing or potential problems that may affect the effectiveness of the rare plant effort. Some solutions may be developed at the conference while others may require additional study. Data compatibility, storage, and retrieval needs will also be discussed.

It will be a productive and exciting conference. We encourage you to register early. If you have any questions plear feel free to call:

Jacqui Lansing - (303) 234-6443

Scott Peterson - (303) ~~623-4913~~ 866-5987

Pre-registration is requested

$10 General Admission

$ 5 Denver Botanic Gardens or Native Plant Society Members

$ 5 Students

Registration materials will be sent to you upon receipt of the registration fee and will include an agenda, a list of nearby motels and eating establishments, directions to the Botanic Gardens, and other items of interest.

DISCUSSION TOPICS

* The Federal Threatened and Endangered Plant Program
* Criteria for Listing and Delisting Plants
* Information Sources on Rare Plants and Ecosystems
* Reduction of Conflict
* Why Save Rare Plants?
* State Rare Plant Policies
* Role of Native Plant Societies
* Recommended Inventory Field Methods
* Natural Heritage Programs; Data Clearinghouse
* What Plants Are We Talking About?
* Where Do Most Rare Plants Occur?
* Industry Experience
* How Data Gaps Can Be Filled Most Cost Effectively
* What Is the Feasibility of Finding a Rare Plant or Ecosystem in a Project Path

CONTRIBUTING ORGANIZATIONS

Colorado Native Plant Society
Denver Botanic Gardens
National Park Service
Association of Western Native Plant Societies
Wyoming Native Plant Society
Utah Native Plant Society
New Mexico Native Plant Society
U.S. Fish and Wildlife Service

PLEASE SEND REGISTRATION FEE AND INFORMATION TO

COLORADO NATIVE PLANT SOCIETY
Rare Plant Conference
P.O. Box 200
Fort Collins, CO 80522

NAME_____

REPRESENTING_____

NO. OF PERSONS_____ AMT. ENCLOSED $_____

ADDRESS_____

_____

_____

ANNUAL MEETING WILL FEATURE PUBLIC LAND MANAGEMENT AND WILDFLOWER PHOTOGRAPHY

The Annual Meeting of the Colorado Native Plant Society will start promptly at 1:00 pm on October 17 in two basement rooms of the Denver Botanic Gardens, 909 South York Street, Denver.

The program will have two highlights. First will be a panel discussion of "Programs for the Protection of Colorado's Natural Flora from the Impacts of Intensified Land Uses". Many of Colorado's least disturbed lands are public lands managed by governmental agencies. We have therefore invited four public agencies to participated on the panel: U.S. Forest Service, U.S. Bureau of Land Management, U. S. Fish and Wildlife Service and Colorado's Department of Natural Resources. The first two manage extensive areas of public lands. The latter two manage fewer acres, but both have vital interests in habitat protection. A question and answer period will follow presentations.

At this writing, Mr. Brady Towns, Terrestrial Ecologist, has been designated to represent the Fish and Wildlife Service. Among other things, Mr. Towns will describe the Habitat Evaluation Procedure under development by the Service, which is expected to provide guidance for the avoidance, mitigation, and reclamation of impacts on habitats. Dr. Carse Pustmueller will probably represent Colorado's Department of Natural Resources. Representatives from the policy level have been requested from the Forest Service and the Bureau of Land Management.

Panelists are being asked to cover four points: (1) Which of their activities or land uses impact native plants and ecosystems. (2) What do they, or can they, do to minimize detrimental impacts (including protection of rare plants). (3) What actions do they, or can they, take to restore altered ecosystems. (4) How might the Colorado Native Plant Society help them to maintain native plants and ecosystems.

Also featured at the Annual Meeting will be a slide talk and demonstration, "Use of One or Two Electronic Flashes for Wildflower Photography", by Earl G. Ruppel. Dr. Ruppel, a research scientist with the U. S. Department of Agriculture in Fort Collins, is a member of the Photographic Society of America and an experienced photographer with a long list of awards and credits. In his presentation he will explain the reasons for using electronic flash for flower photography, show how to calculate flash placement to permit obtaining maximum depth of field with your lens, and demonstrate a complete, working setup as it was used to take the slides he will show. In addition, his program includes a comparison of the flower color rendition of several popular slide films. Several Society members saw the program when Dr. Ruppel presented it for the Fort Collins Camera Club; they say DON'T MISS IT!!

One of the two rooms reserved at the Botanic Gardens will be used for exhibits and refreshments. That will be a stimulating place to spend your mid-session break! Our Education Committee will be asked to include, among the exhibits, their first educational program on native plants. It is an audio-visual program for use at grade school levels. It is an outstanding program.

The annual business meeting will follow the programs. President Hayes will report briefly on membership, the treasury, and accomplishments in the past year. New members for the Board of Directors will be elected.

WE WILL SEE YOU THERE!!!

--- Lloyd Hayes

CSU 482-7717 → Sue Martin
Wayne Steincamp.

FLORISSANT HERBARIUM PROJECT

On our field trip to Florissant Fossil Bed National Monument in June, Dr. F. Martin Brown told us of the need for a herbarium collection of plants which now grow in the vicinity of the fossil beds. Dr. Brown emphasized two needs for the Herbarium. First, to help identify fossil plants. Second, to indicate the extent to which plant hierarchies have persisted or changed during the elapsed period of about thirty million years. Before the field trip was ended, the assembled members of the Society voted enthusiastically to make the Florissant Herbarium an official project of CoNPS. The Board of Directors supported the undertaking.

The project consists of two tasks: (1) prepare a list of all species of plants that now grow on the National Monument property and (2) collect representative herbarium samples of all the plants on the species list, mount them in standard herbarium folders, label them, verify their identities, and deliver them to Dr. Brown.

The collections of each species should include all plant parts which will be needed for positive identification and verification, and all parts which may be found in a preserved condition in the fossil beds. For small plants that means collections should include stems, roots, foliage, flowers, and seeds or fruiting structures. For some species even insect galls will be wanted since insect galls are found in the fossil beds. For larger plants, including trees and shrubs, it will be necessary to omit or sample lightly such structures as stems and roots.

Both the species list and the herbarium collection was started by the field trip group on June 13. Small groups of members have added to both on two subsequent visits.

The project committee includes only two members at this time, Mary Edwards and Velma Richards. Others will be added as they volunteer.

Mary and Velma are presently compiling the two master lists; the species list and the list of species already collected. They will also receive materials that are collected and see that they are properly pressed, dried, mounted, labeled, and verified.

Any member or group of members who would like to participate in the field work are encouraged to do so. Before going out, however, two steps are necessary. First, let me or Mary Edwards know when you plan to go to Florissant the number that will be in the party. We will then make arrangements, through Dr. Brown, with the Park Superintendent so you will be expected. Phone numbers for both Mary and me are listed with the Board of Directors on the front page of this newsletter. Second, obtain from Mary or Velma a copy of the master lists of plants already identified and collected and a sheet of instructions for making herbarium collections. Once the project is fully organized we hope to keep up-to-date lists, instructions, and equipment and supplies needed for collection on hand at the National Monument.

Dr. Brown and the Park Service are setting up a scientific work center in an old ranch house that is on the National Monument property. By spring it is expected to include space for the Herbarium and for herbarium work and equipment. It is also expected to include cooking and sleeping facilities for a few people at a time. It may be made available for small groups of herbarium workers upon request.

--- Lloyd Hayes

Field Trips

FIELD TRIP TO FLORISSANT FOSSIL BEDS

Florissant Fossil Beds National Monument, 35 miles northwest of Colorado Springs, was the location of the second CoNPS field trip of the summer. 30 people, including members of CoNPS, Denver Botanic Gardens members, and guests, met at the Monument headquarters at 9 am on June 13.

Co-leaders of the group were Dr. F. Martin Brown and Bob Heapes, field trip chairman. Dr. Brown, a noted geologist and naturalist, has been associated with the Florissant Fossil Beds National Monument for many years. The objective of the trip was to learn more about "Wildflowers--Past and Present". Dr. Brown started off the morning with a discussion of the geology of the Florissant area and the slow changes that took place leading to the preservation of thousands of insects, plant foliage from many tree species, even fish, which began in the Oligocene Epoch, at least 34 million years ago. Ancient Lake Florissant formed when mud flows from volcanic activity near Guffey dammed up streams in the valley. Intermittently, over perhaps several thousand years, ash and pumice showered down on the lake, carrying insects and plant foliage to the bottom where the debris was trapped, and later preserved in fine layers of shale. Dr. Brown said that plants had been found in 14 different horizons (layers), and showed us beautiful examples. The presence of gigantic Sequoia stumps, closely related to those found today on the Pacific Coast, indicate that the area at one time was no more than 2500 ft. above sea level and with comparable climate. (The elevation at Florissant today averages about 8500 ft.).

Following his discussion, Dr. Brown led us on a fascinating walk along one of the Monument trails. We looked for fossils in the same pit where Dr. Theodore L. Mead first discovered fossil leaves and insects in 1871. At the same time we observed and identified modern flora along the trail.

After a picnic lunch, the group was ready to pursue the second goal of the trip, which was to collect the first plant specimens for an herbarium at the Monument, a necessity to have available for visiting scientists, student, and other interested persons. Half of the group collected in a meadow which had been regularly grazed for 100 years; the second group collected in an adjacent, similar meadow which had formerly been grazed at the same time, but in which grazing had been prohibited for the last 10 years. A comparison of the collections may show interesting differences in the ecology of the areas.

Dr. Brown asked if CoNPS would be willing to accept, as a long range project, the collectiong, mounting, and organizing of specimens for the new Florissant herbarium. His suggestion was met with enthusiasm and details of the project will be worked out by the Board of Directors at a later date.

One of the chief delights of the day was in having one of our most honored members, author Ruth A. Nelson, along with us. She helped with plant identification and discussed some interesting plants.

--- Mary Edwards

MT. LINCOLN FIELD TRIP

On July 11, 1981, twenty-nine members of the Colorado Native Plant Society and the Denver Botanic Gardens gathered at the foot of Mt. Lincoln in preparation for a hike up the mountain to Cameron Bowl to enjoy the vast array of wildflowers that were in bloom. To help orient the group, Panayoti Callas, the curator of the Rock-Alpine Garden at the Denver Botanic Gardens, gave an informative "trail-head" lecture. The tiny SIBERIAN GENTIAN, Ciminalis prostrata, was pointed out at the lecture site to the delight of everyone.

The group was then led to Cameron Bowl by Dr. Louise Roloff, who has an intimate knowledge of this mountain area. As the group made its way up the mountainside. Dr. Roloff identified plants of special interest, including the ALPINE BALL-HEADED GILIA, Ipomopsis globularis. Upon reaching Cameron Bowl, some of the group spent time enjoying the plants to be found there, while others hiked up another five hundred feet to explore the rocky slopes above.

For many the highlight of the trip was seeing the delicate, pale yellow ALPINE POPPY, Papaver kluanense, for the first time. There were, however, many other delightful flowers to be seen, including the brilliant yellow ALPINE BLADDER-POD, Lesquerella alpina, an abundance of ALPINE SPRING BEAUTY, Claytonia megarhiza, the lovely SNOWLOVER, Chionophila jamesii, the tiny HAWKSBEARD, Crepis nana, and the red-tinged Ligularia soldanella, to name but a few.

The mining operation being conducted at 14,000 feet on Mt. Bross to the south, with the accompanying noise and the rumbling of huge trucks racing up and down the mountainside, attracted the attention of the group. This activity stood out in sharp contrast to the otherwise quiet and peaceful alpine surroundings in which even the elusive ptarmigan was seen.

A light rain fell as the group began to descend the mountain. Back at the parking area, soft drinks furnished by the CoNPS provided a final, refreshing touch to an exhilarating day.

--- Eleanor Von Bargen

Recent Events

LACEY ACT AND ENDANGERED SPECIES ACT

The following report was received from Faith Campbell, Natural Resources Defense Council, Inc., and may be of interest to CoNPS.

1) LACEY ACT

Great news! On Friday, July 24, the Senate passed S. 736, amendments to the Lacey Act, which will extend that law's protections to certain plants traded in interstate or foreign commerce. One substative change was made to the bill which had been reported out by the Committee on Environment and Public Works: felony penalties will be applied only to those who import, export, or engage in commercial interstate transfer of specimens valued at $350 or more. Formerly, a person convicted of a prior offense would have been eligible for a felony indictment no matter what the value of the specimen.

Passage of the bill in the face of certain hunters' groups' opposition proved more difficult than anyone had anticipated. We owe thanks to the members of the Committee who worked hard for this bill: Robert Stafford (R-Vt.), Howard Baker (R-Tenn.), John Chafee (R-R.I.), Slade Gorton (R-Wash.), Jennings Randolph (D-W.Va.), Daniel Moynihan (D-N.Y.), George Mitchell (D-Me.), and Max Baucus (D-Mont.).

Sponsors of the plant provision who are not on the Committee also deserve our thanks for their initiative; these are S. I. Hayakawa (R-Calif.), Alan Cranston (D-Calif.), and Dennis DeConcini (D-Ariz.).

Mark-up in the House Committee on Merchant Marine & Fisheries was scheduled for later in July (CoNPS has not received notice on the outcome there).

2) ENDANGERED SPECIES ACT

There is now a coordinated campaign to assure continuation of a strong endangered species conservation program. On July 15 and 16, representatives of 18 national conservation organizations met to discuss probable threats to the Act and our own strategy. We reviewed amendments already proposed by various development interests, most of which would weaken or

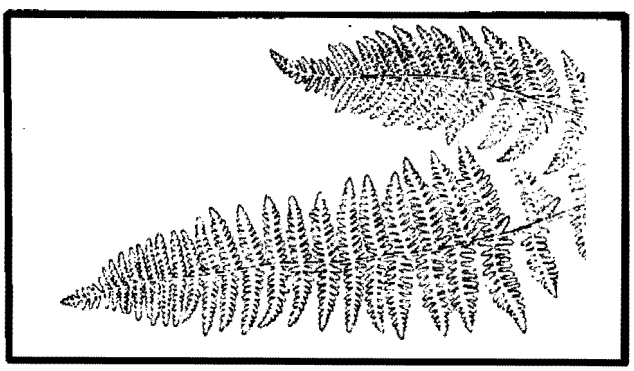
virtually eliminate Section 7 of the Act. This crucial section protects species and their habitats from the unintended effects of development projects, that is, it tries to reduce the most important cause of endangerment. Other amendments attack Federal regulation of taking and interstate trade in listed species.

On the positive side, the conference set up a number of subcommittees to begin preparing for the reauthorization fight. These were committees on public education, media relations, research on various aspects of program implementation, and establishing a grass-roots lobbying network. In the immediate future I expect to be particularly active on the public education and research groups. I am eager to cooperate with you in developing attractive posters, brochures, or even small books to educate the public about rare plants. Please let me know what your group can do. Any of you interested in working on other aspects of the reauthorization should contact me so I can put you in touch with the relevant chairperson.

I wish to thank those of you who have already contributed to the reauthorization effort. These donations will make possible an early brochure intended to build public support. Buoyed by our apparent Lacey Act success, let's all work together to save the endangered species program.

ALERT! Our fears that endangered plants might face a special threat appear to be coming true. I just learned that Rep. James Martin, Republican from the 9th District of North Carolina, has publicly stated that the Endangered Species Act should protect only mammals and birds. The statement was made at a symposium on science and society during a discussion of laws which have become "too extreme". Since Rep. Martin volunteered this view out of context, I believe we must consider this a serious threat.

Editor's note: Anyone who wishes more information about any of this should contact Ms. Campbell at the Natural Resources Defense Council, Inc.
1725 I street, N.W.
Suite 600
Washington, D.C. 20006
(202) 223-8210



FORT COLLINS CHAPTER MEETING: ORCHIDS OF COLORADO

The Fort Collins Chapter of CoNPS will meet on Wednesday, September 23, at 7:30 p.m. in the downstairs meeting room of the Fort Collins Museum. Everyone is welcome to attend.

The speaker will be Mr. Les Shader, USDA Crops Research Lab, discussing "Orchids: Colorado Natives". Les will present a brief introduction to the natural history and classification of the Orchid family, based on a recently published book by Robert L. Dressler. Following the introduction will be slides of native orchids, most of which were taken on field trips this summer with Lucian Long, brother of the author of Native Orchids of Colorado, published by the Denver Museum of Natural History.

Feature Articles

OXALIS VIOLACEA L. ON THE MONUMENT DIVIDE

In the introduction to A Rocky Mountain Flora, William A. Weber underlines the extent to which the north-south running Rocky Mountains have served as an avenue for the migration of plants through this region. As one would expect, the migration has tended to be mostly from the north and south. Colorado is rife with spectacular disjunctions from arctic regions and much of our flora consists of northern-most stations for Chihuahuan and Navajo Desert plants.

The high plains comprise not only the bulk of eastern Colorado, they also have served as a barrier to the migration of plants from more mesic regions to the east. The number of Eastern Woodland plants that extend their range to Colorado is remarkably small. Those that do are usually abundant elsewhere in the West. Aralia nudicaulis L., for example, which is abundant in the eastern woods, can also be found in quite a number of canyons along the eastern face of the Front Range. However, further north it extends all the way to the Pacific Coast in British Columbia; this is not so much an eastern disjunct as it is the southern extension of a boreal species. Anemone canadensis L., Lilium philadelphicum L., and Cypripedium calceolus are all similar in their distributions.

The situation that exists among the Pteridophyta is probably true for other plants as well. In his short paper on Colorado ferns, Edgar T. Wherry grouped the fifty-six pteridophytes then known to occur in Colorado into seven groups:[1]

Circumborial plants growing also in Eurasia	23
Northern North American derivatives	8
Rocky Mountain endemics	2
Southwestern Upland plants	9
Pacific Slope plants	4
Midland or Eastern plants	5
Widespread species of Western North America	5

Although a number of species of pteridophytes have been added to the state flora since the time of Wherry's analysis, still less than ten percent of the fern flora of the state could be characterized as "Midland or Eastern plants". This would probably be true of most other groups of plants in the state as well.

With this situation in mind, one can appreciate the pleasure with which I encountered large quantities of Oxalis violacea L. growing wild on a recentfield trip to Elbert and Douglas Counties. This OXALIS is widespread throughout most of the eastern states, growing thickly in forests and along streams in almost every state east of the Mississippi River. There are several specimens of this OXALIS in local herbaria from counties to the south of the Arkansas Divide. I did not expect to find it in such abundance on the northern fringes of the Black Forest.

Oxalis violacea L. is readily distinguishable from the other species of native and naturalized OXALIS because of its pale lavender flowers and bulbous roots; it forms dense mats reminiscent of the REDWOOD OXALIS--lifting a specimen one can see how each bulblet produces a number of long runners, each ending in a small bulblet of its own. Oxalis europaea Jord. can be densely rhizomatous, but its roots are always fibrous and this pernicious weed is always yellow-flowered.

I first encountered Oxalis violacea L. in two local gardens; in both Denver and Colorado Springs it has proven to be an almost ineradicable weed in shade areas where its spaghetti runners insinuate themselves into every corner of the garden in a few years. The owners of both gardens were ignorant of where the plants originated. I suspect that previous owners probably transplanted plants from some of the plains localities where the plant is common. I would not recommend that this distinguished but potentially dangerous native plant be used horticulturally because of rampant growth.

I first encoutered it in the wild on Sunday, July 12, 1981, at the Richard T. Parker Center for Advanced Study and Research northeast of Colorado Springs. Here, along the eastern boundaries of the Center there were dozens of colonies of the OXALIS growing on both sides of the intermittent stream called Running Creek which forms a dramatic canyon on the property. This Elbert County station is over 7,000 feet in elevation. Later on the same day I found large colonies growing perhaps a thousand feet lower on both sides of Cherry Creek where it passes under Highway 83. In both locations the OXALIS grew among PONDEROSA PINE and ROCKY MOUNTAIN JUNIPER, usually in some shade or where some duff had accumulated among rocks. Many colonies in both localities were growing on solid bedrock in full sun. Obviously, in a wet year such as this year, the plants were more luxuiant than they might otherwise be. Blooming was sparse, however; only a few blossoms appearing out of dozens of individual plants.

Both localities appeared to be the same rock substrate--a coarse conglomerate of the Dakota Formation. The OXALIS apparently tolerate little competition. Few grasses grow in the steep canyon sides where the OXALIS are most common. In both drainages, the PURPLE OXALIS occurs with Oxalis stricta L., its tiny, yellow-flowered Great Plains relative. Dense mats of Selaginella occur in both localities and there were a variety of xerophytic ferns growing at both sites: Cheilanthes fendleri Hook., Asplenium septentrionale (L.) Hoffm. in rock crevices, Woodsia oregana D.C. Eaton, and W. scopulina D. C. Eaton.

Specimens from both localities have been deposited at the Denver Botanic Gardens Herbarium. Although no other specimens from these counties are present in any other local herbarium to my knowledge, I am certain that Oxalis violacea L. will be found wherever the Dakota Formation is transected by streams or seepage in the Monument Divide area. It is exciting when one can find new colonies of interesting plnats in the middle of a major urban corridor between Denver and Colorado Springs!

[1] American Fern Journal, "Colorado Ferns", Edgar T. Wherry, Volume 28, #4, 1938: October-December.

--- Panayoti Callas