

# Colorado Native Plant Society



## NEWSLETTER

Volume III      Number 3

May-June              1979

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

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All correspondence and inquiries regarding activities of the Society should be addressed to Charles Olmsted, 1419 15th Ave., Greeley, CO 80631.

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### MEMBERSHIP RENEWALS AND INFORMATION

Sue Martin, USDA Crops Research Lab, Colorado State University, Ft. Collins, CO 80523.

### SCHEDULE OF MEMBERSHIP FEES

Life	\$250.00
Supporting	50.00
Society	25.00
Family	12.00
Individual	8.00
Student & Retired	4.00

The CONPS Newsletter is sent to all other Native Plant Societies in exchange for theirs. Nonmembers may subscribe to the Newsletter for \$4.00.

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### NEWSLETTER

EDITOR: Dieter H. Wilken, Dept. of Botany & Plant Pathology, Colorado State University, Ft. Collins, CO 80523.

The editor seeks articles of interest to all aspects of Society activities. Such articles should not generally exceed 4 typewritten, double-spaced pages, although consideration will be given to longer articles if space permits.

Deadlines for the 6 bimonthly newsletters are the last day of January, March, May, July, September, and November.

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## NEW AMENDMENTS TO THE ENDANGERED SPECIES ACT

On Friday, November 10, 1978, President Carter signed the Endangered Species Act Amendments of 1978, which restored funding to the Office of Endangered Species and significantly modified the Endangered Species Act of 1973. The Office of Endangered Species was out of business for 41 days, following September 30, when their funding expired.

Perhaps the greatest change in the 1973 Act was the inclusion of an exemption process which may result in extinction of a species in the case of irrevocable conflict with a federally funded or authorized project. This change was essentially a compromise brought about by the recent Supreme Court ruling preventing the completion of Tellico Dam because of the snail darter, an endangered fish. A number of members of Congress felt that the 1973 Act needed modification to provide for human and economic as well as biological considerations in resolving conflicts under Section Seven of the Act. (Section Seven required that federal agencies not jeopardize the continued existence of endangered or threatened species, or allow their actions to adversely modify such species' critical habitat.)

For a project or agency to qualify for exemption from the Act, an exemption application must be approved by a three-member review board and a seven-member endangered species committee. Formal consultation must be initiated with the Fish and Wildlife Service (FWS) and a biological opinion rendered by the FWS before the exemption process can begin. The entire process would take a maximum of 540 days, or 570 days if extinction of a species would result from exemption.

The amendments had provisions for more rapid consideration of the exemption applications for the Tellico and Grayrocks projects (FWS had determined that completion of the Tellico dam would cause extinction of the snail darter, and the proposed Grayrocks reservoir is likely to jeopardize the existence of the whooping crane by altering its critical habitat). On January 24, the endangered species committee, chaired by Secretary of the Interior Andrus, ruled that the Grayrocks project could proceed and they prevented completion of the Tellico project. The Grayrocks project was not particularly significant, as an out-of-court settlement was made which placed constraints on the operation of the Wyoming reservoir. A minimum flow below the dam was required and a 7.5 million trust fund was established for the maintenance of the whooping crane's critical habitat.

The stopping of the Tellico project, which was 90 percent complete, was important in that the ruling indicated the extinction of a species will not be taken lightly. In their ruling, the endangered species committee mentioned that a cost-benefit analysis doesn't support completing the project.

A new listing process for endangered and threatened species is provided for by the Endangered Species Act Amendments. Public hearings are now required if critical habitat is listed. The hearings must be in the area of the critical habitat and must be publicized beforehand in a local newspaper. An analysis of the economic and other relevant impacts of critical habitat designation must accompany critical habitat proposals.

The 1978 Amendments require simultaneous listing of a species and its critical habitat, to the "maximum extent prudent". This apparently means that if publication of the critical habitat of an exploited endangered or threatened species may result in a potential increase in exploitation of the species, critical habitat listing can be foregone. This stipulation is important in regard to the exploited endangered and threatened cacti in Colorado--Pediocactus knowltoni, Sclerocactus glaucus, Sclerocactus mesaverdae, and Echinocereus triglochidiatus var. inermis.

If a species is listed without accompanying designation of its critical habitat, public meetings are not required unless requested by any person within 45 days of listing.

According to the new Amendments, if a species or critical habitat remains proposed for two years and has not been finalized, it will be dropped from the proposed list. The species may be repropoed only if additional information indicating a need for final listing is obtained. Approximately 2,000 currently proposed endangered and threatened species (1,850 are plants) have a one year grace period to remain proposed (beginning on November 10, 1978).

Section VI cooperative agreements (including matching state funds with federal funds on a 1/3 to 2/3's basis), formerly just available for animals, also are now available for plants.

Unfortunately, the protection against exploitation of listed plants, which was very weak under the 1973 Act, has not been changed by the 1978 Amendments. Only interstate sale involving commercial activity or change of ownership of a listed plant is prohibited. There are no prohibitions against the "taking" of plants, their intrastate transport and sale, or their interstate transport if not involving commercial activity or change of ownership.

Enforcement of the Endangered Species Act by the Office of Endangered Species is expected to be slowed as a result of the 1978 Amendments.

The workload accompanying each listing process will be greater due to the new requirements for economic analysis and public hearings. According to John Spinks, Chief of the Office of Endangered Species, the Fish and Wildlife Service was anticipating listing approximately 200 species in fiscal year 1979. Due to the new amendments they now expect to list no more than 20 to 30 species within fiscal year 1979.

Appropriations for enforcing the Endangered Species Act were authorized for only an additional 18 month period, ending on March 31, 1980. At that time they must be reauthorized by Congress.

--Jim Ratzloff



#### JUNIOR HIGH STUDENTS LEARN ABOUT NATIVES

The CONPS Education Committee's slide bank is being put to good use this year in Jefferson County Junior High Schools. For one 9-week term, life science students learn the ecology of the prairie. During field studies, they measure environmental conditions (i.e. wind, slope, light intensity), identify and map distribution of prairie plants, and study plant adaptations that enable survival in the semi-arid environment.

Last year, in a preliminary pilot of the program, students had difficulty identifying plants. This year slides will be used in the classroom prior to the field work to teach students the names of the more common natives (e.g. EASTER DAISY, SAND LILY, YELLOW VIOLET, CONE FLOWER, PENSTEMON, and BLAZING STAR). Teachers are enthusiastic about the approach and students are frequently amazed to find wildflowers growing and blooming in the "desert" in which they live.

Since 1/3 of Jefferson County Schools are on a year-round schedule, classes will be using the new Prairie Unit during the summer months as well as during the spring and fall quarters. This year the program is in use in 8 schools, with 22 teachers and over 2000 students involved. If all goes well, ca. 6000 students at the seventh-grade level district-wide will be out on prairie lands learning about plants and animals during the 1980-1981 session.

Bob Heapes is thanked for his generous contribution of color slides to the Colorado Native Plant Society's Education Committee slide bank.

--- Karen Hollweg

#### FIRST NATIVE WILDFLOWER OF THE SEASON

Few people took advantage of our contest to find the first native wildflower of the year. Despite the low number of records offered for consideration, Mrs. W. H. Anderson of Denver Colorado provided us with a photograph to document a Townsendia exscapa blooming on the 18 of February just north of Walsenburg.

Credit should also go to Ann Cooper and Rick Sanborn, of Boulder and Florissant, who provided records for both February and March, despite the lateness of the season.

Mrs. Anderson received a copy of Anne Bliss' new book "WEEDS, A GUIDE FOR DYERS", as an award for her observation.

CORRECTIONS TO H. W. RICKETT'S  
WILDFLOWERS OF THE UNITED STATES: CENTRAL  
MOUNTAINS AND PLAINS.

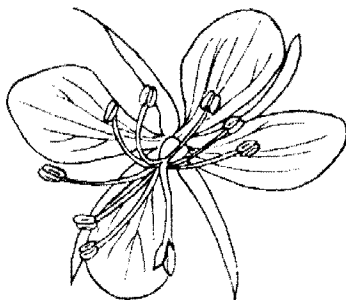
Now that spring has come, members of the CONPS may be checking their identifications of native plants in this 3-volume work recently published by the New York Botanical Garden. I was a named collaborator in these volumes but never was asked for my opinions on identifications of the photographs. In fact, at least 1 photo of my own, submitted with the correct name, had its name

changed to an incorrect one during publication. Members may indeed find more, but many of the photos were taken at a distance and are inconclusive. In the following list, the plate number is given, followed by the given name (if necessary, with the position on the page), followed by the correct identification and notes. I have not attempted to comment on situations in which my usage of nomenclature differs with the authors'.

<u>Plate and published Name:</u>	<u>Correction and Notes:</u>
8. <u>Zygadenus venenosus</u>	<u>Frasera montana</u> (Gentianaceae)
33. <u>Eriogonum umbellatum</u> (upper left)	<u>Eriogonum subalpinum</u> . I am aware that Reveal synonymizes the 2 but in Colorado they are distinct without question.
54. <u>Clematis hirsutissima</u> (upper right)	<u>Clematis scottii</u>
56. <u>Anemone drummondii</u>	The light green leaves belong to <u>Acomastylis rossii</u> but the flowers + darker leaves belong to <u>Dryas octopetala</u> .
61. <u>Potentilla ovina</u>	<u>Potentilla crinita</u> var. <u>lemmonii</u>
62. <u>Potentilla plattensis</u>	<u>Acomastylis rossii</u>
64. <u>Waldsteinia idahoensis</u>	<u>Sibbaldia procumbens</u>
76. <u>Draba crassifolia</u>	<u>Draba crassa</u>
82. <u>Physaria australis</u>	<u>Physaria bellii</u>
91. <u>Stellaria calycantha</u>	Not a <u>Stellaria</u> , the leaves alternate, but difficult to tell what it might be.
105. <u>Pseudocymopterus montanus</u>	<u>Harbouria trachypleura</u>
156. <u>Androsace lehmanniana</u>	<u>Androsace carinata</u> , see the other picture below, of the same species.
159. <u>Gentiana prostrata</u>	<u>Gentiana bisetata</u> Howell, an endemic of southwestern Oregon
164. <u>Acerates latifolia</u>	<u>Asclepias cryptoceras</u>
167. <u>Phlox longifolia</u>	<u>Phlox multiflora</u> or a close relative.
170. <u>Leptodactylon caespitosum</u>	more likely a <u>Paronychia</u>
171. <u>Ipomopsis aggregata</u> (upper left)	more likely <u>Ipomopsis attenuata</u>
172. <u>Gaultheria humifusa</u>	<u>Arctostaphylos uva-ursi</u>
174. <u>Phacelia splendens</u>	<u>Phacelia sericea</u>
175. <u>Phacelia demissa</u>	another species of <u>Phacelia</u> ; <u>P. demissa</u> has simple leaves.
197. <u>Monarda pectinata</u>	possibly <u>Monarda punctata</u>
226. <u>Haplopappus parryi</u>	probably <u>Solidago spathulata</u>
234. <u>Helianthella quinquenervis</u>	<u>Helianthella californica</u>
242. <u>Aster foliaceus</u>	<u>Aster glaucodes</u>
246. <u>Townsendia parryi</u>	<u>Xylorhiza venusta</u>
252. <u>Cirsium foliosum</u>	<u>Cirsium coloradense</u>
253. <u>Cirsium plattense</u>	<u>Cirsium nuttallii</u>
254. <u>Saussurea americana</u>	<u>Saussurea weberi</u> ( <u>S. americana</u> has petiolate triangular, dentate leaves!)
255. <u>Chaenactis alpina</u>	<u>Chaenactis douglasii</u>
256. <u>Artemisia frigida</u>	<u>Artemisia pedatifida</u>

Any additional corrections would be welcomed.

--- William A. Weber



## EDITORIAL

The following editorial appeared in the journal PLANT WORLD in 1901, 78 years ago. Its message is appropriate even at this late date. Thanks go to Frank Hawksworth, who brought it to the NEWSLETTER's attention.

"It has not usually been found necessary to protect plants against botanists, for no true plant-lover will uproot the last specimens of a rare species, no matter how much he may desire them for his herbarium. The perpetuation of a plant in its original habitat is of far more importance than the possession of the last-known dried specimen of it. But with some amateurs and the pestiferous "summer visitor" the case is far different, and well may concealment be resorted to to save the showy, rare or otherwise interesting plants from vandal hands. The passing of the climbing fern from many of its New England haunts is still too fresh in mind to permit of experiment. It is, therefore, with feelings of profound astonishment that we open the pages of a recent issue of a prominent botanical journal, and find therein the advertisement of a well-known railroad under the caption: 'If you are looking for the best botanizing in the Eastern States you should save up pennies enough to visit The \* \* \*'. Then follows a two page list of rare or interesting plants, with explicit directions how to reach them--via this railroad! Of course this advertisement, or the essential part of it, was written by a botanist [sic], and evidently a thoroughly competent one, who has sold his birthright for a mess of pottage, possibly in the form of an annual pass over this railroad: The certain effect of turning loose a horde of more or less irresponsible people among "rare" plants is shown conclusively in the same issue of this journal, and in the same State! Following is the wail of despair: '*Camp-tosorus rhizophyllus*. In one locality only, growing over a ledge, near \*. When I last visited the place in 1894, the plants were being decimated by local amateur collectors.'

'Twelve years ago *Adiantum pedatum* was very common all about this region, but the plant has been so much sought after by summer visitors that it is practically extinct in all accessible localities.'

Need anything further be said?"

## MAY 27 FIELD TRIP A SUCCESS!

Thanks to the efforts of Jim Ratzloff and Scott Ellis, the May 27 field trip to the western slope was a great success. Jim and Scott introduced us to the rare and unusual plants of the western slope via a slide show in Hotchkiss on Saturday at 7:00 PM and the next day they covered the unusual Mancos shale vegetation between Paeonia

and Delta. The field trip concluded with a lunch and hike to the unique hanging garden sites of Escalante Canyon, west of the Gunnison River. A total of 21 persons attended. Following is a partial species list observed by members of the field trip and compiled by Jim Ratzloff.

Atriplex confertifolia  
Artemisia tridentata  
Astragalus asclepiadoides  
Asclepias cryptoceras  
Allium textile  
Androstephium breviflorum  
Atriplex gardneri  
Atriplex corrugata  
Abronia fragrans  
Aristida longiseta  
Astragalus linifolius\*  
Amelanchier utahensis  
Astragalus mollissimus  
Aquilegia micrantha  
Astragalus chamaeleuce  
Allium acuminatum  
Bromus tectorum  
Brickellia scabra  
Betula occidentalis  
Cirsium calcareum  
Chrysothamnus nauseosus  
Calochortus nuttallii  
Cymopterus bulbosus  
Cryptantha paradoxa  
Camissonia eastwoodae  
Cymopterus fendleri  
Camissonia scapoidea  
Chaenactis stevioides  
Ceratoides lanata  
Chrysothamnus greenei  
Chrysothamnus linifolius  
Clematis ligusticifolia  
Comandra umbellata  
Coryphantha missouriensis  
Descurainia sophia  
Distichlis stricta  
Delphinium scaposum  
Eriogonum lonchophyllum  
Erysimum repandum  
Eriogonum gordonii  
Eriogonum inflatum  
Eriogonum pelinophilum\*  
Echinocereus triglochidiatus  
var. melanacanthus  
Enceliopsis nutans  
Erodium cicutarium  
Eriogonum microthecum  
Festuca octoflora  
Fraxinus anomala  
Fendlera rupicola  
Gutierrezia sarothrae  
Gilia sinuata  
Gaillardia pinnatifida  
Galium coloradensis  
Hymenopappus filifolius  
Halogeton glomeratus  
Hilaria jamesii  
Hymenoxys acaulis  
Haplopappus spinulosus  
Heterotheca villosus  
Ipomopsis pumila  
Ipomopsis polycladon  
Juniperus osteosperma  
Kochia americana  
Kochia scoparia

Lepidium perfoliatum  
Lappula redowskii  
Lactuca serriola  
Lepidium densiflorum  
Lappula texana  
Lepidium montanum  
Leucelene ericoides  
Malcolmia africana  
Monolepis nuttalliana  
Mentzelia thompsonii  
Muhlenbergia asperifolia  
Muhlenbergia richardsonis  
Mentzelia albicaulis  
Malacothrix sonchoides  
Mirabilis multiflora  
Mimulus eastwoodiae\*  
Oenothera caespitosa  
Oryzopsis hymenoides  
Oxybaphus linearis  
Opuntia polyacantha  
Opuntia phaeacantha  
Opuntia hystricina  
Poa bulbosa  
Populus angustifolia  
Phragmites australis  
Phlox longifolia  
Penstemon retrorsus\*  
Physaria acutifolia  
Phacelia splendens  
Psilotrophe bakeri  
Platyschkuria integrifolia  
Phacelia corrugata  
Plantago patagonica  
Pinus edulis  
Rhus trilobata  
Ranunculus testiculatus  
Salsola kali  
Suaeda torreyana  
Stanleya albescens  
Stanleya pinnata Stenogonum flexum  
Stenogonum flexum  
Sarcobatus vermiculatus  
Sphaeralcea coccinea  
Sitanion hystrix  
Sisymbrium elegans  
var. juniperorum  
Senecio multilobatus  
Streptanthus cordatus  
Streptanthella longirostris  
Sisymbrium linifolium  
Salix exigua  
Sclerocactus glaucus\*  
Smilacina stellata  
Typha latifolia  
Tamarix pentandra  
Tetradymia spinosa  
Xylorrhiza venusta

The above list clearly attests to the diversity of the western slope flora and to the result of a second year's exceptional rainfall!

\*Plants marked with an asterisk represent extremely restricted distributions or endemics to the area visited on the field trip.

FORT COLLINS CHAPTER HOSTS  
GRASSLANDS FIELD TRIP

37 persons attended the June 2 Field Trip sponsored by the Fort Collins Chapter of CONPS. The field trip, led by Marvin Shoop, Jerry Dodd, George Turner and Robert Engle, covered portions of the Pawnee National Grasslands east of Fort Collins. The early summer flora was in abundance and the field trip leaders, accomplished researchers of the northern Colorado grassland ecology, provided excellent accounts of the dynamics of vegetation and vegetation change in the Pawnee Grasslands. Following is a partial list of the species observed:

Atriplex canescens  
Agropyron smithii  
Astragalus gracilis  
Allium textile  
Artemisia frigida  
Bouteloua gracilis  
Chamaesyce fendleri  
Cleome serrulata  
Comandra umbellata  
Cymopterus acaulis  
Carex heliophila  
Cryptantha jamesii  
Distichlis spicata  
Echinocereus viridiflorus  
Euphorbia robusta  
Eriogonum effusum  
Ipomopsis spicata  
Lepidium densiflorum  
Lappula redowskii  
Leucocrinum montanum  
Lomatium orientale  
Lupinus pusillus  
Musineon divaricatum  
Opuntia polyacantha  
Oenothera coronopifolia  
Oryzopsis hymenoides  
Penstemon albidus  
Penstemon angustifolius  
Plantago purshii  
Phlox bryoides  
Sphaeralcea coccinea  
Sporobolus cryptandrus  
Stipa comata  
Senecio tridenticulatus  
Scutellaria brittonii  
Sisymbrium altissimum  
Sporobolus airoides  
Tradescantia occidentalis  
Viola nuttallii

LAST but certainly NOT LEAST plentiful Buchloe dactyloides. Acknowledgement goes to Walt Ruzzo and Beth Painter for organizing the field trip and to Sue Martin for providing the species list.

# Colorado Native Plant Society



## ANNUAL MEETING

SATURDAY OCTOBER 27, 1979 1:00 PM

DENVER BOTANICAL GARDENS, 909 SOUTH YORK STREET, DENVER

### PROGRAM

#### "COLORADO KALEIDOSCOPE"

THE PROGRAM WILL CONSIST OF AUDIOVISUAL PRESENTATIONS PREVIEWING FORTHCOMING NATIVE PLANT SOCIETY FIELD TRIPS, AN OPPORTUNITY TO BECOME ACQUAINTED WITH THE DIVERSITY OF COLORADO'S VEGETATION AND PLANT SPECIES. AREAS TO BE "VISITED" INCLUDE THE PAWNEE NATIONAL GRASSLANDS, PICEANCE BASIN, ROCKY MOUNTAIN ALPINE, THE WESTERN SLOPE OF DELTA AND MESA COUNTIES, SOUTHEASTERN COLORADO AND THE DENVER METRO AREA.

THE ANNUAL MEETING OF THE COLORADO NATIVE PLANT SOCIETY IS OPEN TO ALL INTERESTED IN THE NATIVE FLORA OF COLORADO AND THE PUBLIC IS ENCOURAGED TO ATTEND.