Colorado Native Plant Society



NEWSLETTER

VOLUME 4 NUMBER 2

MARCH - APRIL 1980

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

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The Colorado Native Plant Society

P. O. Box 200

Ft. Collins, Colorado 80522

MEMBERSHIP RENEWALS & INFORMATION

Please direct all membership applications, renewals and address changes to Myrna Steinkamp, Membership Chairperson, CONPS in care of the above address.

SCHEDULE OF MEMBERSHIP FEES

LIFE	$ 250.00
SUPPORTING	50.00
SOCIETY	25.00
FAMILY	12.00
INDIVIDUAL	8.00
STUDENT & RETIRED	4.00

Nonmembership subscriptions to the Newsletter are $ 4.00.

NEWSLETTER ARTICLES

Please direct all articles of interest to the CONPS to Dieter Wilken, Editor, CONPS, in care of the above address. Deadlines for the 6 bimonthly Newsletters are the end of January, March, May, July, September and November.

PICEANCE BASIN: AN INTRODUCTION TO THE VEGETATION

The Piceance Basin is geographically located within and floristically related to the Uinta Basin. The first concentrated study of the flora within the region was undertaken by Edward Graham of the Carnegie Museum and published in 1937 as "Botanical Studies in the Uinta Basin of Utah and Colorado". Graham began his work in 1931 because areas of the Basin had not been visited by botanists, because it provided a natural physiographic entity, and the Museum was involved in paleontological investigations there for many years. Though he spent 3 field seasons collecting, Graham admitted that his work was only a sketch of the region.

It was not until the early 1970's that specific investigations of the Basin were initiated. The energy resources mentioned in the last article of this series (NEWSLETTER 4 # 1) were the catalyst for this interest. Kim Vories, a founder of the CONPS, completed his Master's Thesis (A Vegetation Inventory and Analysis of the Piceance Basin and Adjacent Drainages) at Western Colorado State College in 1974. Except for this work, most recent studies have not been concerned with the floristics of the Basin. Kim Vories compiled a list of 413 species of flowering plants within his study area, which also included the Roan Cliffs.Some of the species found in over half of the plant associations in the area were SAGEBRUSH (Artemisia tridentata), INDIAN RICEGRASS (Oryzopsis hymenoides), CHEATGRASS (Bromus tectorum), RABBITBRUSH (Chrysothamnus viscidiflorus), SERVICE BERRY (Symphoricarpus oreophilus), UTAH JUNIPER (Juniperus osteosperma), PINYON (Pinus edulis), LONGLEAF PHLOX (Phlox longifolia), NEEDLE & THREAD (Stipa comata) and SILKY CRYPTANTHA (Cryptantha sericea). Recently, Goodrich et al. (1980) have compiled a preliminary checklist of the Uinta Basin that contains over 1500 species. Future activities will undoubtedly bring further understanding of the Basin's floristics.

The vegetation of the Basin has and is being studied by numerous investigators (Ferchau, 1973; Ward et al., 1974; Emrich & Painter, 1978; Terwilliger, 1973; and Wiley-Eberle, pers. comm.) but much of this work is oriented toward the plant community level. Generally, the vegetation of the Basin can be separated into 8 zones along an elevational gradient from low to high: (1) RIPARIAN, (2) BOTTOMLAND SAGEBRUSH, (3) DESERT SHRUB, (4) UPLAND SAGEBRUSH, (5) OAK-MOUNTAIN MAHOGANY, (6) PINYON-JUNIPER WOODLAND, (7) GRASSLAND and (8) DOUGLAS FIR ASPEN FOREST. These zones have been further divided into 18 plant soil units by Tiedeman and Terwilliger (1978) and 35 associations by Vories (1974).

Some of the unique plants that are members of the Piceance Basin flora include the following: BARNEBY'S COLUMBINE (Aquilegia barnebyi), UTAH FESCUE (Festuca dasyclada) and DRAGON MILKVETCH (Astragalus lutosus). Their uniqueness is related chiefly to an occurrenceon certain specialized soil types, which limit distribution and population size.

BARNEBY'S COLUMBINE, a very handsome species with yellow sepals and petals and red spurs, is a member of the Ranunculaceae (BUTTERCUP FAMILY). It appears to be arare endemic of the Green River formation, having been found only in the Piceance Basin, Glenwood Canyon, and in southern Uintah County, Utah. I have seen populations of several 100 individuals but they were distributed along an outcrop of shale that functioned as a barrier for a perched aquifer. Groups of under 50 are more common. Specific geological substrates and the presence of adequate moisture allow plants to flourish in an area of ca. 9 inches of precipitation. I have also seen this species grown in a greenhouse from seed. Along Piceance Creek, this Columbine grows with the UTAH FESCUE.

The UTAH FESCUE, a member of the Gramineae (GRASS FAMILY), was listed as endangered on the USFWS list of 1976 and on the CONPS list. This species is different from other members of its genus in having a 2-flowered spikelet, an open, divaricately branched inflorescence, and hairy (dasy) branches (clada). If one does not look closely, one might mistake it for Oryzopsis hymenoides. This unusual FESCUE was first found and described from central Utah in 1896, then was thought extirpated until only about 4 years ago. At that time, James Irvine made several collections on the Roan Cliffs in Garfield County, Colorado (Emrich & Painter, 1978). No individuals have been relocated in Utah. Warren Keamerer also found a population in Rio Blanco County. Known populations grow on sites ranging from dry, south-facing slopes of loose shale to north-facing, mesic slopes along Piceance Creek. A thorough search in many habitats will be necessary to establish its full range in the Basin.

Present throughout the Piceance Basin is the DRAGON MILKVETCH, though its distribution is limited. This member of the LEGUME FAMILY (Leguminosae) received its name from the now nonexistent town of Dragon, Utah just west of the Basin. The species was relocated in Utah in 1978 near Rainbow, Utah by Elizabeth Neese and I, but more work is needed to establish its distribution in Utah. A broad distribution in the Piceance Basin of Colorado was established by Emrich and Painter (1978). The DRAGON MILKVETCH is usually found on barren shale knolls or loose scree of the Green River Formation and occasionally on the Uinta Formation. Though a small plant, it can be recognized easily by its unique leaf and fruit. This species has no threatened or endangered legal status but does appear on the CONPS list. Since its occurrence is geographically and edaphically limited, it would be vulnerable to reduction in population size and number should widespread development become a reality in the Basin.

References cited in this article can be obtained from the writer.

---- J. Scott Peterson

REVEGTATION PROVISIONS OF THE "PROPOSED RULES AND REGULATIONS OF THE COLORADO MINED LAND RECLAMATION BOARD".

REVEGETATION PROVISIONS OF THE "PROPOSED RULES AND REGULATIONS OF THE COLORADO MINED LAND RECLAMATION BOARD"

It took considerable searching in this 335 page document to learn completely what the Colorado Mined Land Reclamation Board proposes for the revegetation of mined lands. However, it was worthwhile. As the complete proposed rules and regulations unfolded, I gained the impression that they could have been written by the CONPS. It was comforting to find that the revegetation principles to which we are committed are so fully understood, and expressed as proposed regulations, by such a potentially influential regulatory agency as the CMLRB.

The apparent objective of the rules and regulations is, with some exceptions, to restore reclaimed lands to the pre-mining plant associations. If the pre-mining vegetation was in poor condition, the objective shifts to similar lands where the existing vegetation has been "properly" managed.

It is one thing to have desirable objectives, it is quite another to achieve them. On this score the proposed rules and regulations impressed me being quite promising. Any application for a nit for extensive exploration or for mining (surface or underground) must be accompanied by a number of documents which include a site description, land-use information, and descriptions of all environmental resources that may be impacted. Among the latter is vegetation (section 2.04.10). Some excerpts are:

The vegetation information must include "... vegetation map..., acceptable to the Division, which dilineates plant communities...The dilineation...shall be on the basis of visually dominant species."

"Plant communities shall be described in terms of species composition, cover and productivity."

"The potential for impacts to rare and endangered plant species shall be evaluated..."

"The application shall include a conceptual plan for the evaluation of the success of revegetation..."

"In no case may a vegetation type be disturbed until adequate data are obtained."

The application also must be accompanied by a reclamation plan (2.05.4). Included must be a detailed timetable, a plan for removal, storage and redistribution of topsoil, subsoil and other material, and a plan for revegetation. The latter must include a schedule, species, amounts of seed **eedlings**, methods, mulching, irrigation if needed, and measures to evaluate success.

For certain post-mining land uses, as cropland or development, non-native species are acceptable. For most post-mining uses, however, native species are specifiied. A performance bond is required. The period of liability under the performance bond can extend as long as 10 years in some areas. The section on performance standards for revegetation pins the requirements down quite well. A few key statements include:

"...a diverse, effective, and permanent vegetation cover of the same seasonal variety...[shall be established promptly].

"This vegetation cover shall be of predominantly native species [with exceptions, depending on proposed land use]..."

"The operator shall utilize seed and seedlings genotypically adapted to the area, when available..."

--- Lloyd Hayes

ADDITIONAL FIELD TRIP TO THE PLAINS CONSERVATION CENTER AND NATURAL AREA.

TRIP LEADERS: Bob Heapes 779-0888 (Denver)
David Buckner 494-3231 (Boulder)
Sandy Emrich 399-5228 (Denver)

A 7th field trip for the 1980 season has been scheduled by Bob Heapes, Field Trip Coordinator. 9:00 AM Saturday, May 31st (NO, this is not Memorial Day weekend) will find us at the Plains Conservation Center and Natural Area in Arapahoe County. Located at 21901 East Hampden in Aurora, Colorado the Center can be reached from the north and west via I-25 and US 36 (Boulder Turnpike) to I-270 bypass to I-70 at the airport, then east to I-225, exiting at Parker Road (Colorado Highway 83). Take Parker Road south about 1 mile to Hampden and then east on Hampden about 5.5 miles to the Center.

This area, owned and managed by the West Arapahoe Soil Conservation District, is a well-preserved shortgrass prairie and includes among its fauna pronghorn antelope, burrowing owls, prairie dogs and other animals typical of the native Colorado prairie. This 1600 acre area has been used as an outdoor recreation facility for Denver school children for the last 30 years and also contains replicas of early sod houses and other buildings. The prairie flora will be at its peak this last weekend in May and 40-50 blooming species can be expected.

Bring a sack lunch. CONPS will provide the soft drinks. A canteen for the hike will be useful. This field trip will be widely publicized to attract new members. Consequently, good attendance by members to share the hosting activities will be appreciated.

IT IS ESSENTIAL that you contact Miriam Denham 303-442-1020 (Boulder) to register the number of partcipants. Miriam also will have information on a meeting place for car pools originating in Boulder (cars will leave Boulder at 7:45 AM). Call Sue Martin (303-226-3371) Fort Collins for car-pooling from that city (cars will leave at 7:20 AM).

INAUGURATION OF THE FLORISSANT FOSSIL ARBORETUM

43 million years ago a volcanic ashflow from the now extinct Guffey volcano dammed the southward flow of Grape Creek and created Lake Florissant. Intermittent clouds of volcanic dust followed and, as they fell upon the lake, encased both insect and plant remains within the strata of the lake bottom. Today what remains is a wealth of finely preserved fossils which represent the life and environment which existed in central Colorado so long ago.

It takes tremendous imagination to visualize what Florissant was like during the Oligocene. There were no polar ice caps and the adjacent seas were much warmer. Perhaps the towering cumulus clouds of our summer skies continued year round. The elevation above sea level was around 2000-3000 feet and hard frosts were absent. Through the hard work and diligence of paleontologists we may now identify many of the fossil legacy. Some of the plants, like YELLOW PINE, MOUNTAIN MAHOGANY, WILLOW and SERVICEBERRY are still represented in the area. Others, like SEQUOIA, SUMAC, ELM, SOAPBERRY, HICKORY, HORNBEAM, OREGON GRAPE, HAWTHORN AND REDBUD have followed climatic shifts to other regions of North America. The important aspect revealed by the Florissant, however, is the presence of semi-humid species like MESQUITE, MOUNTAIN MAHOGANY, LIVE OAK AND OREGON GRAPE for here is an early record of the beginnings of our upper Sonoran flora.

Beside imgaination, it takes a great deal of humility and time-perspective to study and respect these ancient environments. The Florissant Fossil Beds represent a thin slice of time a mere 43 million years ago, and our minds should consider the 100's or even 1000's of millions of years that life has existed on earth. To begin to grasp the meaning of and to develop a deep, abiding love for the earth and its history is a major goal of the Colorado Outdoor Education Center located near Florissant.

The inauguration of the Florissant Fossil Arboretum is a project aimed at achieving the goal. We have made a modest beginning and would hope that members of the CONPS would help us by sending seeds, saplings or information concerning plants in the Florissant area. Over 95% of the identified fossil plants are still extant with regard to their generic relationships and many are still found in Colorado. For more information and lists of the Florissant Oligocene flora, contact the writer.

--- Rick Sanborn
Colorado Outdoor Education Center,
Florissant, Colorado 80816

MAGNOLIAS FOUND NEAR GRANBY!

Last Fall, Dr. Bob Bowman of CSU led 8 students into the Colorado mountains as part of an experimental course on the evolution of flowering plants. The group spent an October weekend searching for fossil plant remains that had grown in Colorado during the Paleocene. By gathering evidence in the field and comparing it to the work of paleobotanists, the students hoped to gain some concept of what the landscape was like some 60 million years ago.

The fossils were collected in Willow Creek Canyon north of Granby. The idea of digging in that locality came from an examination of literature on Colorado's fossil floras and particularly from a M.S. thesis by Charles Barnhardt at CU, Boulder. The manuscript had never been published and had remained unrecognized for nearly 30 years. Barnhardt described his excavations and extensive fossil collections made in Middle Park.

All of the fossil material was found in a thick sedimentary stratum termed the Middle Park formation, which underlies Middle Park and extends into the adjacent mountains. The formation was formed during the Paleocene and Eocene epochs, periods of time characterized by vast regional uplifts of the earth's crust. The sediments derived from the mountains settled in tervening basins such as Middle Park As the Rocky Mountains began to rise, they also began to erode. The volume of these deposits from erosion is enormous and approach a mile in thickness. Contained within the Middle Park formation is a variety of sedimentary rocks, ranging from very fine-grain siltstones to pebbly breccias and conglomerates. Even oil shale is found in the region.

The collection site for Dr. Bowman's class was one of the sedimentary exposures previously discovered by Barnhart. That the latter indeed had been there was apparent from the shallow pit marking his dig. He had described the outcrop, which formed a ledge topping a steep open slope, as yielding the finest specimens and greatest variety of forms. It had weathered and cracked, and the resulting downward movement of rock fragments had formed a fossil-laden talus. By sifting through the debris and searching in Barnhardt's excavation, the students were able to obtain over a 100 pounds of stone with leaf, branch and seed impressions.

The assemblage collected from this site contained more than 40 kinds of plants, only a few of which have relatives now native to Colorado. Several of the ancient species have modern relatives in the deciduous forest of eastern North America (e.g. MAGNOLIA, HICKORY, WALNUT, SYCAMORE, BUCKTHORN and several FERNS.). Also found were giant red-

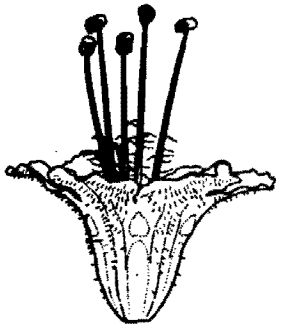
woods, indistinguishable from those presently growing in California. There even were 2 types of trees, Zelkova, a member of the ELM family, and Cercidiphyllum, the KATSURA TREE, now restricted to the Far East. Not all of the fossil genera have disappeared from Colorado. MAPLES, COTTONWOOD, WILLOW and HORSETAILS still grow on our landscape today.

After identifying the fossils, the class tried to determine what conditions had allowed such a diverse mixture of plants to flourish. They concluded that 1 of the major factors was precipitation. Today the Sierra Nevada and other mountains west of the Rockies wring out much of the water from eastward moving air masses. Only a fraction of the moisture ever reaches Colorado. However, in the Paleocene, those mountains were lowlands or low hills, which minimally interfered with circulation patterns. Most of the moisture then fell as air masses were uplifted in the vicinity of the present Rockies.

The 2nd major environmental factor was temperature. The region was much warmer 60 million years ago than it is today and probably was more like the present-day Gulf Coast than the Colorado mountains. Temperatures were not only higher but also less variable. This made for moderate and prolonged summers and relatively short, warm winters. In fact, the growing season was estimated to have been 6 months long, twice that of Granby, Colorado today. The warmer temperatures combined with abundant moisture probably created a scene similar to that of the luxurient forests now found in the southeastern states.

This moisture-loving, almost tropical forest was lost as the Rocky Mountains continued to rise over the next 50 million years. When the fossils were deposited, Willow Creek stood at only about 1500 ft. above sea level, compared to its present elevation at around 9000 ft. With each increase of a 1000 ft., a drop in temperature of about 3° F occurred. Obviously, the climate has cooled considerably. With the recent uplift of the Sierra Nevada and other western mountain ranges, Pacific moisture was gradually cut off. So the Paleocene vegetation gradually died out, unable to withstand the climatic change. It was replaced by plant life more tolerant of cold and dryness, e.g. the conifers, shrubs and grasses now typical of the region and the montane zone. By comparing the ancient forms to modern vegetation, the students were able to see both the way in which physical conditions have changed and the manner in which plant life has responded to the changes. As more and more fossil sites in the region are examined, Bowman expects that our ideas concerning the evolution of the North American flora, topography and climate will become much clearer.

--- Paul Moran



PICEANCE BASIN FIELD TRIP UPDATE

This field trip of June 14-15 has accrued a lot of interest. It will please you to know that Mr. Ed Baker has graciously agreed to host us on a stop at the C-b oil shale tract. This will give us the opportunity to learn more about the development of the Piceance Basin energy industry. If you desire to stay in a motel in Meeker for this trip, it would be appropriate to obtain your reservations well in advance. Reservations are not needed for camping in the Meeker City Park.

The portion of the trip that will take us to Cathedral Bluffs lies at 8000 feet in elevation, and because of the late Spring, it is very difficult to know if the flowers will be near the peak blooming period on June 14. Karen Wiley-Eberle will be able to tell us more during the last week of May. Since we want to know approximately how many people plan on going and there may be a necessity to contact you prior to the next newsletter, please drop a card to me care of the CONPS P.O. Box with your address and the proposed number of participants. Karen and I are looking forward to seeing you in June.

--- J. Scott Peterson

PHACELIA FORMOSULA, AN ENDANGERED SPECIES

Phacelia formosula Osterhout, located in Jackson County, is threatened by aggressive motorcyclists, public use of an adjacent campground and picnic area, and disturbances associated with road maintenance. The known distribution of this rare, annual or biennial member of the WATERLEAF Family (Hydrophyllaceae) is an area north of Walden, Colorado. This species was proposed as an endangered species in the 1976 Federal Register and presently is being processed for official listing as an endangered species. Much of the groundwork toward getting this species to its current standing in the listing process has been the result of much hard work and perseverance by an avid CONPS member, Karen Wiley-Eberle. I would like to thank her for her determination and concern shown toward this unique member of the native Colorado flora.

--- J. Scott Peterson

ASSOCIATION OF WESTERN PLANT SOCIETIES

Representatives from the native plant societies of the western states met in Salt Lake City on April 19 to develop the purposes and format of this new association. Input toward the realization of the umbrella association came from the native plant societies in Arizona, California, Colorado, Hawaii, Idaho, Nevada, New Mexico, Oregon, Utah and Washington. Further information regarding the Association will be reported in a forthcoming Newsletter.

Following is a list of addresses for western native plant societies similar to that of our own:

Arizona Native Plant Society
P.O. Box 18519
Tucson, Arizona 85731

Southern California Botanists
Rancho Santa Ana Botanic Garden
1500 North College Avenue
Claremont, CA 91711

Hawaiian Botanical Society
Dept. of Botany
University of Hawaii
3190 Maile Way
Honolulu, Hawaii 96822

Idaho Native Plant Society
Herbarium
University of Idaho
Caldwell, Idaho 93605

California Native Plant Society
2380 Ellsworth Street Suite D
Berkeley, CA 94704

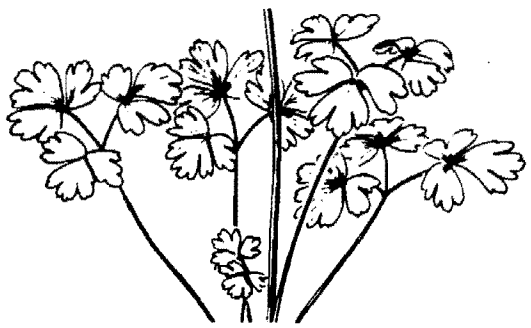
Northern Nevada Native Plant Society
P.O. Box 8965
Reno, Nevada 89507

Native Plant Society of New Mexico
Route 4
Puesta del Sol
Santa Fe, New Mexico 87501

Oregon Native Plant Society
1920 Engel Avenue N.W.
Salem, Oregon 97304

Utah Native Plant Society
1448 North 500 East
Centerville, Utah 84014

Washington Native Plant Society
Dept. of Botany
University of Washington
Seattle, Washington 98195



A CELEBRATION OF SPRING - THE CONPS POSTER

A poster was recently executed by internationally acclaimed poster artist, John Sorbie, a professor of graphic design at CSU. Professor Sorbie has won numerous awards for his works, including the Poster of the Year Award, Print Magazine, New York. His work has been exhibited worldwide in the most prestigious graphic arts publications and also in such exhinitions as the International Poster Exhibition, Ireland and the International Poster Biennale, Warsaw, Poland. His prints are found in the art collections of the U.S. Embassy, Rome, Italy; The Library of Congress, and the International Poster Museum, Warsaw, Poland. Professor Sorbie also recently won the CSU Durrell Research and Creative Award.

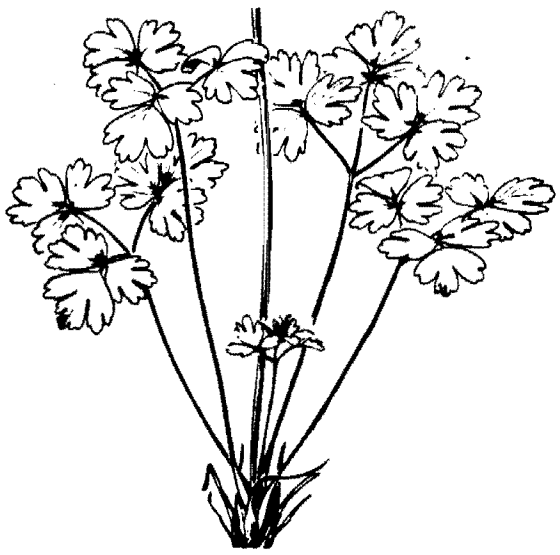
This poster was commissioned by the CONPS for the purpose of public relations and advertisement. It will be displayed in public areas to make the CONPS more visible. The poster is 23" by 35" and is a multicolored representation of a field of wildflowers, printed on heavy stock.

So that we can distribute the posters to public areas, increasing the effectiveness of the Society and not deplete our financial resources, the poster is available to you and friends of the CONPS for a donation of $3.00 (a real bargain for a small donation!). To encourage you to obtain copies for friends, home and office, the poster is also available in lots of 5 at $10.00. Since there were only a limited number printed and a large number already have been dispensed, it would be wise to order yours now!

Orders may be placed by sending a check or money order to CONPS Poster, P.O. Box 200, Ft. Collins, CO 80522. Please add 50¢ to cover the cost of mailing and a protective mailing tube. Please allow about 3 weeks for delivery.

If you know of any locations to display the poster in an effective manner for maximum visibility to the general public, please let us know.

--- J. Scott Peterson



FLORISSANT FOSSIL PLANTS & FOSSIL BUTTERFLIES

One of my long-term projects is cataloguing all described animals found as fossils at the Florissant Fossil Beds National Monument. Most of these are insects. This is forcing me to review a lot of forgotten entomology. It also has spurred me to look into the plants found in the Florissant shales. Insects, like every other animal, are ultimately dependent upon plants for food. Most insects are directly dependent and only a few are indirectly so. Some are tied to a single genus or even a single species of plant.

We know a great deal about butterfly-plant relationships. Since more Oligocene butterflies are known from Florissant than from the rest of the world together, what can we learn from the Florissant record? One thing that piques my curiosity is the absence of 2 families of butterflies today common at Florissant. These are the WOOD- and GRASS-NYMPHS (Satyridae) and the BRANDED SKIPPERS (Hesperiinae). Both of these families have larvae which feed exclusively on Gramineae. What do the plant fossils tell us? There is a scarcity of GRASS fossils from Florissant shales. MacGinitie in 1953 listed only Stipa florissanti, although Brues described another in 1908 that is not noted by MacGinitie. With grasses so scarce in the shales, it appears that the chance of finding either a SATYRID or HESPERIINE is slim.

Which butterfly families are represented among the Florissant fossils? There are 3. The Pieride, common SULPHURS and WHITES of today, feed as larvae on Leguminosae. At least 10 species of Leguminosae are represented in the Florissant shales. Modern North American species show little exclusivity in preferences within the Leguminosae; consequently the PIERIDS of Oligocene Florissant had plenty of food sources within the Leguminosae. The Libytheidae or SNOUT BUTTERFLIES are rare in Colorado today but were more common in the warmer Oligocene. Today their larvae feed exclusively on Celtis (HACKBERRY). Ancient Florissant had its Celtis mcchoshii Lesquereaux! The BRUSH-FOOTED BUTTERFLIES (Nymphalidae) are the most common butterfly fossil found at Florissant. Although modern larvae feed on a variety of plants, one of the fossils is very close in structure to a modern genus whose larvae feed on Celtis. Four others are placed in or near modern genera which utilize Salix (WILLOW) and Populus (COTTONWOOD).

A fossil butterfly that I am about to describe is in a modern genus. The modern species within the latter feed on NETTLES (Urticaceae). Thus far no nettles have been found in the Florissant shales. I'll bet that some botanist will find nettle leaves among the undetermined material already in collections from the Florissant.

What does all of this mean? It seems to indicate that old food habits are as hard to change among insects as among humans. Anybody for a snack of toasted grasshoppers?

--- F. Martin Brown

REVISION OF "HANDBOOK OF ROCKY MOUNTAIN PLANTS"

A revision of Ruth Ashton Nelson's popular text on Rocky Mountain wildflowers has recently become available. The revision describes more than 700 plant species occurring in the Rocky Mountains at elevations greater than 5000 feet and extending from the Canadian border to northern New Mexico and Arizona.

Its 330 pages contain 75 color photographs, over 300 line drawings, keys for identification and data on ecological distribution.

Copies can be obtained from Skyland Publishers, Box 1258, Estes Park, CO 80517

2 NEW PUBLICATIONS OF INTEREST TO PLANT ENTHUSIASTS

The editor recently received copies of 2 periodicals being published in the state of Texas. One of these is the Texas Wildflower Newsletter, published by GREEN HORIZONS, an organization akin to the CONPS. The address is 500 Thompson Drive, Kerrville, Texas 78028. This publication contains, on a regular basis, such diverse information of Texas native plants as seed sources, book reviews, locations of outstanding wildflower displays in Texas and particularly the use of native plants in landscaping and horticulture.

The second publication is The Chihuahuan Desert Discovery, published bythe Chihuahuan Desert Institute, P.O. Box 1334, Alpine, Texas 79830, a high quality magazine with glossy pages, color plates and excellent articles on the flora, fauna, preservation programs and research studies of the Chihuahuan Desert of Texas and northern Mexico.

NEW ADDRESS FOR THE CONPS

Please note the new address of the CONPS as listed on the Cover Page. All correspondence to the Secretary, other officers of the Society, all inquiries regarding memberships, address changes and Newsletter articles should be directed to:

Colorado Native Plant Society
P.O. Box 200
Fort Collins, CO 80522