

Colorado Native Plant Society



NEWSLETTER

VOLUME 5 NUMBER 4

OCTOBER-DECEMBER 1981

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

OFFICERS

President:	Lloyd Hayes
Vice-President:	J. Scott Peterson
Secretary:	Sue Martin
Treasurer:	Myrna Steinkamp

BOARD OF DIRECTORS

Ann Armstrong (81) Boulder	494-0545
Bob Bowman (81) Ft. Collins	491-6524
Miriam Denham (82) Boulder	442-1020
Virginia Dionigi (82) Hygiene	776-2609
Tom Eamon (81) Golden	279-1076
Mary Edwards (82) Arvada	233-8133
Scott Ellis (82) Ft. Collins	493-6069
Lloyd Hayes (82) Ft. Collins	226-5365
Bob Heapes (81) Parker	841-3978
Sue Martin (81) Ft. Collins	226-3371
J. Scott Peterson (81) Denver	623-1913
Myrna Steinkamp (81) Ft. Collins	482-7717
Karen Wiley-Eberle (81) Craig	824-3417

COMMITTEES

CONSERVATION	Barry Johnston
EDITORIAL	Beth Painter
EDUCATION	Virginia Dionigi
FIELD TRIPS	Bob Heapes
HORTICULTURE & REHABILITATION	Mark Phillips
LEGISLATIVE	J. Scott Peterson
MEMBERSHIP	Myrna Steinkamp
PUBLICITY	vacant

ADDRESS

COLORADO NATIVE PLANT SOCIETY
P.O. BOX 200
Ft. Collins, CO 80522

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 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

ENDANGERED WILD FLOWER CALENDAR

The Rare and Endangered Native Plant Exchange has produced an Endangered Wild Flower Calendar. Proceeds from sale of the calendars are to be used to help native plant conservation projects across the nation. The calendars include 14 attractive, full-color photographs of endangered wild flowers in their native habitats. Species are from all sections of the country. The cover photo is a large, eye-catching picture of the deep red flower of the Eagle's Claw Cactus.

The calendar also includes several pages of text which cover a great deal of information, including the following:

Information about the habitat, unique features, reasons for endangerment, and recovery plans, if any, for each of the species featured.

Suggested ways for concerned citizens to help endangered wild flowers in their region of the country, with addresses for further information.

A map of the U.S. showing the number of endangered plant species in each state.

A list of selected reading material, including two books suitable for children.

Full page calendars with spaces for notes each day.

The Endangered Wild Flower Calendar was produced by members of the New York Botanical Garden, New England Wild Flower Society, North Carolina Botanical Garden, Tennessee Native Plant Society, Arizona-Sonora Desert Museum, California Native Plant Society, and Brooklyn College of the City University of New York, with assistance from botanists of the ULXL Fish and Wildlife Service-Federal Endangered Species Program.

Calendars can be obtained by individuals by sending \$5 to Rare and Endangered Native Plant Exchange, C/O The New York Botanical Garden, Bronx, N.Y. 10458. Wild flower conservation organizations are encouraged to order calendars for sale under a profit-sharing arrangement. For instructions, write the Rare and Endangered Native Plant Exchange or telephone (212) 258-1074, 6 to 9 pm on Mondays and Thursdays or 9 to 11 am on Tuesdays and Fridays.

--- Lloyd Hayes

DUES AND MEMBERSHIP INFORMATION

those of you who have not yet paid your 1982 dues will find a DUES NOTICE, an envelope to return it in, and a MEMBERSHIP INFORMATION FORM enclosed with your newsletter this time. Paid members get only the information form.

We would appreciate your filling out the forms and returning them.

If you received a dues envelope, both forms can be returned in it. If you did not, please send the information form to Virginia Dionigi by folding and stamping the form.

--- The Membership Committee

POSITION ADVERTISEMENT

FIELD BOTANISTS: Botanist
Botanical Technicians

Place: Piceance Basin (Meeker, Colorado)

Project outline: a. survey Piceance Basin (1200 sq. mi.) for rare plants.
b. collect data on plant communities within Basin.
c. major collection of the Basiflora.

Project Purpose: Major data collection for elements of natural diversity in the Piceance Basin to be utilized in decision making by federal & state agencies and the private sector.

Time Period: Three month contract between the latter part of April to the early part of August, 1982.

Employer: The Nature Conservancy
Colorado Natural Heritage Inventory
Project Director: J. Scott Peterson
Principal Investigator: William L. Baker

Compensation: Contract-\$1500/month Botanist;
\$1250/month Technician
\$10 per diem
trailer housing

Minimum Requirements:

Botanist: Bachelor degree in Botany or Biology with taxonomic emphasis; extensive botanical field experience; willingness to work hard under adverse field conditions; leadership ability.

Botanical Technician: senior standing in Botany or Biology with botanical emphasis; field experience; willingness to work hard under adverse field conditions.

Position Description:

Botanist: Functions as team leader under the direction of the principal investigator; supervises a botanical technician; responsible for population mapping, specimen collection, photography, and accurate record keeping; long hours and extensive foot travel (ca. 5 miles per day) required.

Botanical Technician: assist botanist with population mapping, plant pressing; completing forms, and photographing populations; long hours and extensive foot travel required.

Applications: Please send your resume and a letter of introduction to W. L. Baker
Natural Heritage Inventory
1550 Lincoln St., Room 106
Denver, Colorado 80203
by 8 January 1982

Interviews will be conducted in the latter part of January or early February, 1982.

Hiring decisions will be made by mid-February.

--- Scott Peterson
Bill Baker

HIGH ALTITUDE REVEGETATION

The fifth High Altitude Revegetation Workshop will be held in Fort Collins on March 8 and 9, 1982. It is sponsored by the High Altitude Revegetation Committee. Started in 1974, the committee includes representatives of industry, business, research and education. Major sponsors include AMAX, Colorado State University, Mile-Hi Seed Company, Aspen Skiing Corporation, Steamboat Springs, Colorado School of Mines, Colorado Mountain College, TOSCO, USDA-SCS, USDI-NPS, Winter Park Recreational Association, Gibbs & Hill, Inc., and Stoecker-Kemmerer and Associates. In addition to the workshop the Committee sponsors revegetation research through privately donated funds and funds generated through the Workshop.

The goals of the Committee are to address unique problems associated with revegetating and reclaiming high altitude lands disturbed by mining, skiing, road construction, etc. The Workshop is an effective way of bringing together experts in various fields. The biennial workshop, therefore, includes such topics as legal requirements of reclamation, high altitude ecology, techniques employed in revegetation and reclamation, and development of plant materials.

The first workshop was put together by an informal committee organized ten years ago, and was held in Fort Collins. Due to the success of this first effort, the Committee persevered and has

put on workshops on alternate years ever since. In addition, field tours have been sponsored every summer.

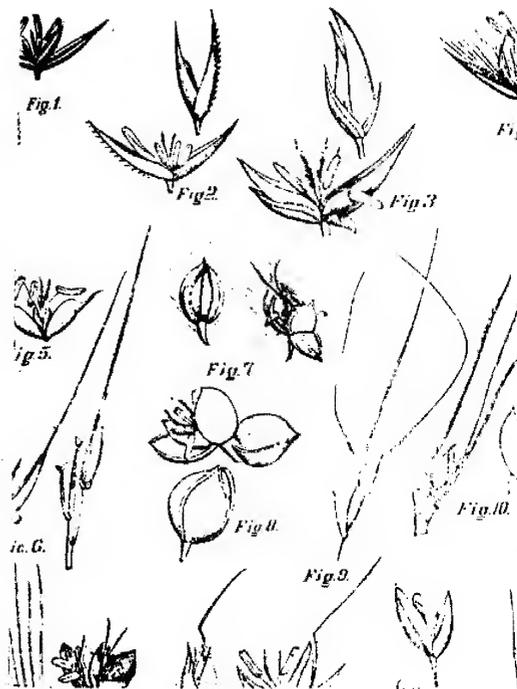
The fifth workshop--and the Committee's 10th anniversary--will be held again at Colorado State University in Fort Collins on March 8th and 9th, 1982.

The Committee hopes to have this be the best workshop ever, and plans for the program have been under way since the summer of 1981. The program will include presentations on Mount St. Helens, reclamation equipment, case studies in high altitude reclamation, a session on problems and solutions related to soils, and a keynote address.

The workshop will be attended by several hundred professionals and students representing a unique cross-section of industries, agencies, and institutions, and a diversity of disciplines. The workshop has achieved considerable prestige over the years and the published proceedings are widely recognized as an authoritative and useful reference for up-to-date information on high altitude reclamation.

REGISTRATION: Contact Julie Etra, Committee Secretary at CSU, Phone number (303) 491-6354 or (303) 491-6832

---Jeffrey L. Pecka
Committee Member
High Altitude Revegetation Workshop



Recent Events

ANNUAL MEETING WAS REWARDING

Approximately 55 members who attended the Annual Meeting on October 17 were rewarded with an informative panel discussion and an educational and entertaining slide talk.

Four panelists discussed the topic "Programs for the Protection of Colorado's Natural Flora from the Impacts of Intensified Land Uses". Each panelist approached the topic differently. That led to a diversified, well-rounded coverage of the subject.

Sidney Hanks of the U.S. Forest Service discussed the federal legislation under which federal lands are managed. Through the legislative process the desires of the people, as perceived by their elected legislators, are converted into laws that direct management policies and to some extent, practices. The Multiple-Use, Sustained Yield Act, for example, directs the Forest Service to manage the national forests for a number of specified products and services. The utilization of all the products and services, but perhaps most notably the harvesting of timber and grazing of livestock, unavoidably disturbs natural plant communities. Practices are intended to minimize disturbance and to restore damaged areas in most cases. In some regions attempts have been made to convert pinyon-juniper or some shrub types to grasses, but not in Colorado. (Although the density of sagebrush has been reduced in a few cases.) Management, however, involves protection. Under protection from fire some non-climax communities such as some aspen stands may in time change to coniferous forest. The Forest Service also complies with the provisions of the Endangered Species Act to protect endangered plants.

Rhio Jackson emphasized the U.S. Bureau of Land Management's desire to work with others for the protection of natural vegetation resources and told of some of the difficulties encountered in administering some authorized land uses. He gave special attention to the State of Colorado's recently issued list of threatened, endangered and sensitive species and the state's policy toward them. The policy is expected to provide guidance to BLM field managers and resource personnel in dealing with that special aspect of Colorado's native flora. The plant list will be considered in the land use planning and decision-making processes. Special inventories and studies will be made as needed to assist decision making. The

Bureau will continue to coordinate and cooperate with other federal and with State agencies in the management of the threatened, endangered and sensitive species.

The U.S. Fish and Wildlife Service manages but limited areas of public lands. Dr. Grady Towns chose to discuss his agency's Habitat Evaluation Procedure. It was a happy choice. The procedure includes a method of classifying habitats on the basis of ecologically significant characteristics. Through field inventory the land is divided into habitat types. Habitat types are indicative of the ecosystems to which each is adapted, including plant associations of the ecosystem. The types are also expected to be indicative of the sensitivity of each to disturbance, provide guidance for mitigating detrimental disturbances, and guidance for the reclamation of damaged areas. The procedure sounded like a useful land management tool.

Dr. Carse Pustmueller reported that the Colorado Department of Natural Resources (DNR) manages little land but it has a substantial influence on the protection of the state's native flora through the Mined Land Reclamation Division and the Natural Areas Program. The Mined Land Reclamation Division has formulated requirements to minimize damage to federally listed plants and native plant communities from coal mining and to reclaim mined areas.

The Natural Areas Program is charged with identifying, evaluating and protecting (with landowner approval), significant and sensitive ecological areas in Colorado, including relatively undisturbed examples of native plant communities and habitat for rare species of native plants. The Program is the state's conservation agency through a Cooperative Agreement (Section 6, Endangered Species Act) between DNR and the U.S. Fish and Wildlife Service. As the program applies to lands of all ownerships, it leads to cooperation with all public land managing agencies in Colorado, with private land owners, and with private conservation organizations. The Natural Area Program's Natural Heritage Inventory, a joint venture with The Nature Conservancy (TNC) contains site-specific, statewide data on special plants and plant communities, in addition to other elements of natural diversity. These data are available to the public upon written request. The database is evaluated by the Inventory's TNC staff to identify priority protection sites for registry and designation as state natural areas, for acquisition by

The Nature Conservancy, or for incorporation into management plans of the federal land managing agencies in Colorado.

The panel discussion was followed by a refreshment break. The variety of refreshing snacks and drinks provided by Ann Armstrong and Mary Edwards was outstanding as always. Also in the refreshment room were the Education committee showing their first audiovisual program for school children, and interesting displays by AMAX Corporation and by Western Evergreens Nurserys.

After the break, Dr. Earl Ruppel demonstrated several kinds of photographic equipment and their use in wild-flower photography. He emphasized the use of flash equipment to overcome problems in photographing wild flowers out of doors, in the wind, depth-of-focus, inadequate light or light from the wrong direction. The slides that he used to illustrate his talk convinced all of us that his methods work beautifully.

Two items from the President's report may be worth repeating. First, membership grew from 144 at the time for the 1980 Annual Meeting to 178 in 1981. Second, Treasurer Myrna Steinkamp reported a balance of \$2,254.06 at meeting time. Seventy-eight percent of the funds were in a savings account, 22 percent in a checking account.

The membership expressed warm appreciation to the Directors whose terms expired with the meeting: Ann Armstrong, Karen Wylie Eberle, Bob Heapes, and Sue Martin. They then elected, or reelected, the following Directors to two-year terms: Bill Baker, Karen Wylie Eberle, Bob Heapes, Beth Painter and Myrna Steinkamp.

---Lloyd Hayes

BOD Activities

ACTIONS OF THE BOARD OF DIRECTORS

The Board met October 17 immediately following the Annual Meeting. Actions of possible interest follow:

Officers for the new year were elected:
President, Lloyd Hayes (reelected)
Vice President, Sue Martin
Secretary, Eleanor Von Bargaen
Treasurer, Myrna Steinkamp (reelected)

The appreciation of the Board was extended to all retiring board members, officers and chairs of standing committees: Ann Armstrong (Board), Tom Eamon (Board), Sue Martin (Board and Secretary), Scott Peterson (Vice president), and Beth Painter (Chair, Editorial committee). Happily, all "retirees" either moved to other positions or expressed willingness to serve on special assignments.

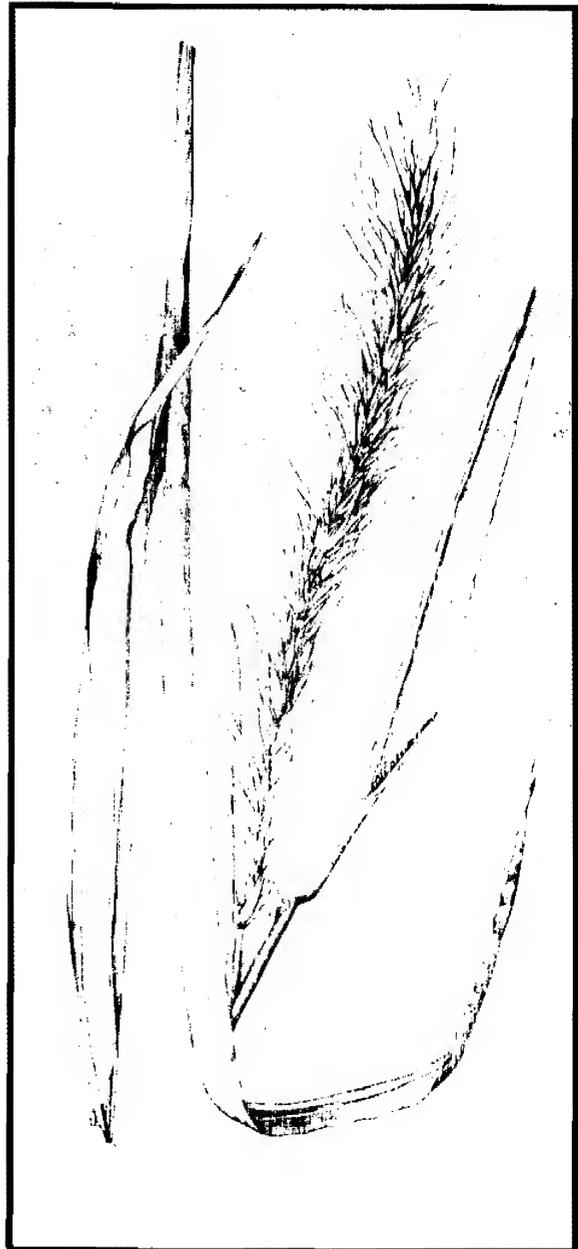
Candidates to chair the standing committees were selected. As of this writing the following chairs have been accepted:

Committee
Conservation
Education
Field Trips
Governmental Affairs
Membership
Publicity
Editorial

Chairperson
Barry Johnston
Virginia Dionigi
Scott Ellis
Scott Peterson
Myrna Steinkamp
Robert Bowman
Leslie Shader

The Horticulture and Rehabilitation Committee is still without a chair.

---Lloyd Hayes



Feature Articles

RIVER BIRCH

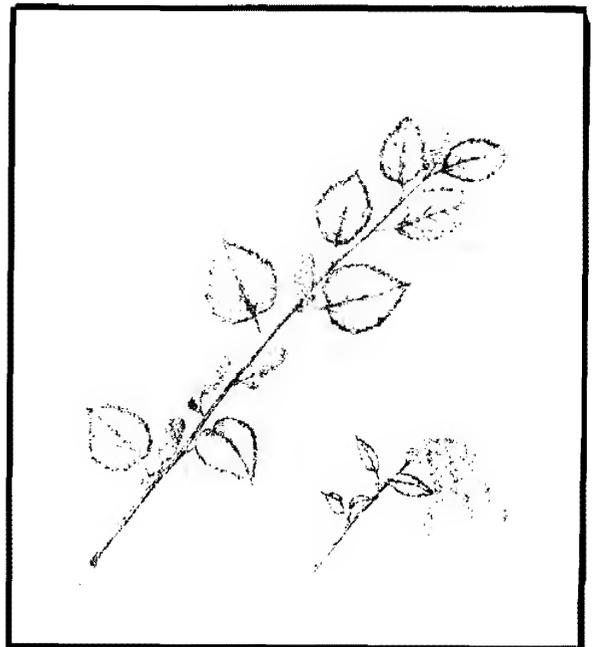
The river birch (*Betula fontinalis*) is a familiar sight along the margins of streams in the Colorado foothills. The natural beauty of this native birch, its rapid growth, and ease of propagation have awakened interest in the use of this species as a home landscape plant. The multiple, bronze stems of this small tree support an open canopy of small serrate leaves. In the spring, the pistillate and staminate catkins form a line along the branches. In the fall, leaves turn greenish-yellow and are not persistent.

This birch needs full sun and is adapted to a wide variety of soils. It appears to be tolerant of mildly alkaline soils as long as abundant water is supplied. In nature, the species grows with its "feet in the water". Under horticultural conditions, river birch grows well when watered to the same extent as a blue grass lawn. Small (2 ft) container stock grows to a height of 10 to 12 ft in approximately 5 years. Controlling rapid shoot growth is the main problem in shaping this plant. During the summer, I cut back rapidly elongating shoots that are beginning to bend down, and, during the winter, I prune the lower lateral branches to increase the visibility of the stems and clip out the numerous crown sprouts. River birch appears to be largely free of serious insect pests. Occasionally, the caterpillars of a geometrid moth will attach to the terminal leaves, but are not numerous enough to cause serious defoliation.

In nature, the small winged seeds fall from the trees during late winter and spring and germinate during the spring on bare soil or sand along stream channels. Seeds are easily stripped from the cone-like strobiles during the fall or early winter. Seeds should be planted on or just under the surface of damp sandy soil or perlite. Planted seeds should be exposed to at least 8 hours of light. Optimum germination temperatures are approximately 85°F during the day and 65°F at night. Germination will occur between 15 and 40 days after planting.

River birch container stock is presently available from several nurseries in the Denver and Ft. Collins areas. Stock is usually small (2 ft.), although plants up to 5 ft. may be encountered.

--- Scott L. Ellis



NATIVE SEED DISTRIBUTION

The Horticulture and Rehabilitation Committee is planning to revive the CONPS native seed distribution. Seed distributions are based on donations of field (or garden) collected seeds of common native species which are then made available to CONPS members in small quantities. Seed distributions depend on the willingness of members to collect seed (a few ounces to a pound, depending on the seed size). Collected seed is then sorted, labelled, and packaged for distribution to other members. Our approach is to accept donations of seed during the 1981 growing season. We will then prepare a list of species available for distribution which will be published in the March 1982 newsletter. For 1981 we would like to focus on species that provide a "quick return on investment" - species that germinate easily, flower within one to three years, and are relatively widely adapted.

The casual seed collector should go to the field armed with a variety of envelopes and paper bags. Coin envelopes for small, loose seeds, and ordinary letter-size envelopes work well for small collections. Lunch bags and grocery bags are needed for larger seed heads and pods.

The seed collector must closely follow the flowering and fruiting periods of desirable species. A notebook for recording flowering dates and flagging to mark plants for future seed gathering are helpful.

Envelopes containing seeds should be labelled according to location, date, exposure (sun, shade), growing conditions (dry, moist), and soil type (loamy, sandy, rocky).

For seed collecting purposes, native plants can be classified by the length of time seeds persist on the plant. Examples of persistent-seeded species include rose, serviceberry, some prickly pear cacti, river birch, fourwing saltbush, and buffalo-berry. Seeds of persistent-seeded species can be gathered in the fall and early winter.

A second group includes families and genera in which seeds are semi-persistent because they are contained in capsules or follicles for a certain

period of time. Examples of this group include most legumes, mallows, phlox, some members of the buttercup family (columbine and delphinium), and various lily family members (yucca, mariposa lily). Seeds of this group are best collected just as the capsule or follicle begins to open. Seeds are usually mature and often loose at this stage. Seeds can be dumped out of capsules into envelopes, or capsules may be collected for seed extraction later.

The last group of species are non-persistent. This group includes wind-dispersed species in many families, most grasses, and species whose seed-holding structures shatter quickly. Examples in this group include most members of the sunflower family, most borages, mustards, and grasses. Seeds in this group are best collected when still slightly "green" - seeds should be fully developed, but are not ripe enough to freely fall from the plant. The proper harvesting time varies widely among species. Experimentation is required to see if harvest time has an effect on seed germination. Seed heads should be clipped and placed in paper bags to dry. Seeds may be separated later by shaking or beating.

In Colorado's dry climate no special seed drying methods are usually needed. Seeds can be stored in paper bags in cool (40-50°F) dry place. Seeds should be separated from wet fleshy fruits and dried. Fumigation may sometimes be necessary to control seed-eating insects that are included in seed collections.

The following list of plants represents candidates for a seed distribution. As stated previously, these plants are expected to meet the objectives of being attractive, reasonably easy to grow, and flower or attain a conspicuous size within a reasonable period of time.

For further information, please write or call: Mark Phillips, 11842 Billings, Lafayette CO 80026, Phone 665-2618, or Scott Ellis, 1011 W. Mountain Ave., Fort Collins CO 80521, Phone 493-6069.

---Seeds persistent---

snowberry (Symphoricarpos)
saltbush (Atriplex)
Gambel oak (Quercus gambelii)
gooseberry (Ribes)
Lead plant (Amorpha)
Mountain ash (Sorbus)

---Seeds semi-persistent---

hedgehog cactus (Echinocereus)
ball cactus (Coryphantha, Pediocactus)
coneflower (Ratibida)
black-eyed susan (Rudbeckia)
hymenoxys (Hymenoxys)
golden smoke (Corydalis aurea)
gentians (various genera)
geranium (Geranium)
pink bergamot (Monarda fistulosa)
skullcap (Scutellaria)
golden pea (Thermopsis)
lupine (Lupinus)
sweet vetch (Hedysarum)
locoweed (Oxytropis)
milkvetch (Astragalus)
wild 4 o'clock (Mirabilis)
evening primrose (Oenothera)
phlox (Phlox)
jacobs ladder (Polemonium)
trumpet gilia (Ipomopsis)
false buckwheat (Eriogonum)
shooting star (Dodecatheon)
anemone (Anemone)
windflower (Pulsatilla)
larkspur (Delphinium)
columbine (Aquilegia)
nine-bark (Physocarpus)
raspberry (Rubus)
alum-root (Heuchera)
monkey flower (Mimulus)
penstemon (Penstemon)
Indian ricegrass (Oryzopsis)
yucca (Yucca)

---Seeds non-persistent---

false forget-me-not (Hackelia)
bluebells (Mertensia)
fleabane (Erigeron)
aster (Aster)
arnica (Arnica)
rabbitbrush (Chrysothamnus)
blazing star (Liatris)
pearly everlasting (Anaphalis)
pussytoes (Antennaria)
hymenopappus (Hymenopappus)
sagebrush (Artemisia)
goldenrod (Solidago)
easter daisy (Townsendia)
bladderpod (Lesquerella)
double bladderpod (Physaria)
fireweed (Epilobium angustifolium)
mountain mahogany (Cercocarpus)
bluestem (Andropogon)
Indiangrass (Sorghastrum)
giant reed (Phragmites)
festuca (Festuca)
wheatgrass (native species)
junegrass (Koeleria)

---Mark Phillips
---Scott Ellis

EDIBLE PLANT RECIPES

These recipes are also from Karen Wiley Eberle. We plan to continue this column in the newsletter as long as we have recipes to share. If anyone in the Society has recipes they would like to share, please send them to the editor.

Typha latifolia - "cattail"

Cattail Flapjacks

2 cups cattail pollen (or flowers)
2 cups wheat flour
4 t. baking powder
1 t. salt
2 eggs
1/2 cup evaporated milk
1 1/2 cups water
1 T. syrup
bacon drippings

Beat eggs, add milk, water, and syrup. Mix and add dry ingredients, beating until mixture is creamy. Add bacon drippings. Fry in a hot greased pan or skillet. Makes about 20 cakes.

Caltha leptosepala - "marsh marigold"

Marsh Marigold Rolls

8 large marsh marigold leaves
2 pieces white bread, crusts removed
1 egg
1 cup milk
1 t. salt
1/2 t. pepper
1 onion, finely chopped
1 lb. minced meat
molasses

In a bowl crumble the bread; add the egg and milk, let soak a few minutes. Add onion and the minced meat; work the mixture well with your hands. Simmer the marigold leaves in water for 5 min. after they have come to a boil. Drain, pat the leaves dry, and cool. Spread the leaves out on a board, and spoon 2 T. of the meat mixture on to each leaf, fold up, and secure with a toothpick. Place the rolls side by side in a well greased oven dish, sprinkle some molasses over them and dot with butter. Bake at 400°, covered, for 45 min. Baste the rolls with cooking juices. Serves 4.

Typha latifolia - "cattail"

Smothered cattails

16-20 central inner cores of the lower stem
of the cattail
2 T. butter
Salt, pepper
cheese or hollandaise sauce

Cook inner cores as you would asparagus in boiling water, until tender. Add butter, dash of salt, pepper. Strain off cooking water. Pour cheese or hollandaise sauce over cattails. Serve hot. Serves 4.

