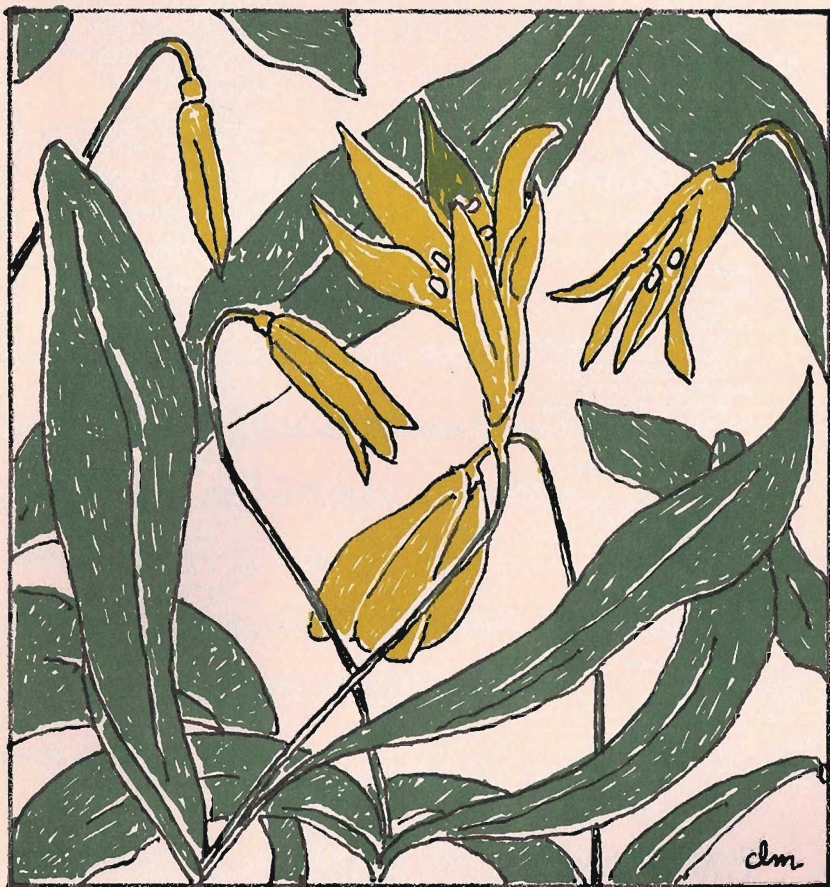


Kansas Wildflower Society

NEWSLETTER

Volume 2 Number 1

Spring 1980





Kansas Wildflower Society

Sponsored by the Mulvane Art Center

DIRECTORS

Honorary

R. James Hunt
Topeka
Bradbury Thompson
Riverside, Connecticut

Advisory

Mrs. Robert H. Callahan
Topeka
William E. Drenner
Topeka
Mrs. Richard H. Finney
Topeka
John A. Dickerson
Murdock, Nebraska
Harriet J. Lange
Topeka
Fred Markham
Kansas City, Missouri
Robert A. McClure
Topeka
John H. Stauffer
Topeka

Active

Mrs. James A. McClure
President, Topeka
Dr. Janet Bare
President-Elect, Lawrence
Dr. Ross E. Johnson
Vice-President, Topeka
Mrs. Robert H. O'Neil
Recording Sec'y, Topeka
Mrs. John R. Mettner, Sr.
Corresponding Sec'y, Topeka
H. H. Sutcliffe
Treasurer, Grainfield

Bobbie H. Alexander
Shawnee Mission
Philip H. Arnold
Ashland
James E. Arnwine
Independence
Mrs. W. D. Bancroft
Ottawa
Mrs. James M. Brier III
Topeka
Ralph E. Brooks
Lawrence

L. Harold Caldwell
Wichita
Mrs. Louis Cohen
Topeka
Roger D. Coleman
Oskaloosa
Warren Hall Coutts, Jr.
El Dorado
Dr. James K. Greig, Jr.
Manhattan
Dr. Houchang Khatamian
Manhattan
Mrs. Fred Chase Koch
Wichita
Rev. Richard E. Kretschmar
Pittsburg
Charles L. Marshall
Topeka
Charles E. Marson
Topeka
Dr. Ronald L. McGregor
Lawrence
Mrs. Richard A. Mermis
Hays
Carroll Morgenson
Berryton
Loren J. Pearson
Hays
Mrs. Linda Pettijohn
Alma
Dr. Dwight Platt
Newton
L. R. Quinlan
Manhattan
Dr. Howard C. Reynolds
Hays
Miss Rachel Snyder
Prairie Village
Ron Tittel
Paola
Dr. G. W. Tomanek
Hays
Fredrick W. Trowbridge
Colby
Mrs. Mary C. Wallace
Tonganoxie
Mrs. L. Duane Walrafen
Topeka
Jack W. Walstrom
Salina
Robert D. Wood
Pratt

KANSAS WILDFLOWER SOCIETY

NEWSLETTER

Volume 2, Number 1

Spring, 1980

Table of Contents

FEATURES:

Operation Wildflower	5
Prairie Forbs: Use in Conservation	7
Endangered and Threatened Species	13
Wildflower in the Spotlight: May Apple	17
Wildflowers of Kansas--A Voice From The Past	25

IN EVERY ISSUE:

From the President's Desk	2
Our Members Write	4
Daisies Pied and Violets Blue	15
Book Review	19

OPERATION WILDFLOWER RESEARCH	11
---	----

SEEDS FOR PRAIRIE RESTORATION	12
---	----

SUNFLOWER AS NATURAL HERBICIDE	18
--	----

1980 SPRING OUTINGS	20
-------------------------------	----

WILDFLOWER & PLANT ECOLOGY CLASSES	23
--	----

ANNUAL MAGAZINE PUBLICATION	30
---------------------------------------	----

OUR CONTRIBUTORS	32
----------------------------	----

Newsletter Editor: Dr. Janét Bare, Lawrence

Cover: The cover illustration is of Dogtooth Violets
drawn by Charles L. Marshall, Topeka.

FROM THE PRESIDENT'S DESK

Dear Member:

As we begin our second year, the KWS hopes and plans for painting the Kansas landscape with colorful patches of wildflowers continues to grow. We are dedicated to our purpose of developing an awareness in our citizens of the beauty of Kansas wildflowers, the value of their use in landscaping public and private areas, and their importance in our ecology. We are concerned, too, with the serious problem of endangered and threatened species.

You will find some interesting articles in this Newsletter on the "Operation Wildflower" project. Of course, part of the success of this project will depend on the amount of seeds donated to the Kansas Department of Transportation for planting at our rest areas and along our roadsides.

The most successful way to preserve our Kansas wildflowers is to spot good looking wildflower patches in the spring. Fall is an excellent time to gather and dry seeds. Make an effort to collect your seed from wild stands that have superior ornamental value. Care should be taken to not endanger the plants themselves. Always leave a few to reseed the area.

It is especially important for a large project, such as our roadsides, that the origin of the seed germ plasm should be Kansas and, of course, no noxious, prohibited, or restricted weed seeds will be used.

Even though our citizens are becoming increasingly aware of our need for conservation, the use of native grasses and wildflowers is a completely different approach to landscaping. We must educate ourselves and the public to appreciate the more natural look as opposed to the more usual trimmed, all green, approach. Also, it will take patience to wait the two or three years necessary to establish successful wildflower stands that will make bright splashes of color at different seasons of the year.

If you are planting a small area in your backyard, you may want to start your collected seeds in peat pots. For starting leguminous plants, it is often desirable to inoculate the seed with a nitrogen-fixing bacterium. The inoculum is available at garden centers. When the plant appears ready to transplant into the ground, be sure to remove the plastic mesh at the bottom of the peat pot and split the sides. Early May is the best time for transplanting.

We have many requests for seeds and seed sources. There are a wide variety of wildflower seeds available through local nurseries and commercial companies. It is difficult for the KWS to recommend their purchase unless we know their origin. We hope you will do your own research before making your purchases. We do have the names of some of our members who have seed to trade. Perhaps, with your help, we can develop this into a substantial service in the future.

Seeds received by the KWS from our members are donated to area wildflower projects and to the KDOT for planting at our rest areas. You will find a list of seed producers listed in Jack Walstrom's article on pages 7-10.

We were very pleased to have completed our 1979 year with 670 Charter members, and to have paid the basic expenses for publishing the 50,000 "Yes, Kansas Has Wildflowers" leaflets with the contributions from our members and friends.

Certificates of Charter Membership are enclosed for our Charter members. Membership cards are being mailed to our 1980 members. To date, we have 400 1980 members which includes 35 new members. We need and appreciate your continued support and interest.

I want to thank the directors and members who have been so helpful in working on our membership renewals, the Outings, the slide library, the Topeka and Hutchinson Flower and Garden Shows, and for contributing the articles and other tasks necessary to publish this Newsletter. The theme for our summer issue of the Newsletter will be "The Powers of Observation in the Out-of-Doors".

Mary Jo McClure

OUR MEMBERS WRITE



WARRENHALL COUTTS, Jr.,
ElDorado: "I have greatly enjoyed the December Newsletter and want to compliment you upon your work."

RACHEL SNYDER, Prairie Village: "In my year-end clean-up, here is my KWS membership renewal. The last issue of the Newsletter was top notch."

H. A. STEPHENS, Americus: "I have a personal seed collection of about 1700 wildflower and weed species. But this is strictly a research collection. Possibly I could collect seeds for a beautification project, but surely people know that such a thing takes complete cooperation between state, county and local authorities. - - - - The whole thing is a wonderful idea, and I am for it, but before I put any time and effort into it, I would have to have assurance that it would work. Perhaps I'm too skeptical, but I've seen the project fail many times (in several states--not Texas) and have seen it as successful in only a few cases. And I have traveled on highways and byways in every county throughout the central states.

Yes, I believe in roadside beautification, but I am quite sure the whole thing requires more study, more understanding and more cooperation. Then it might work!"

ROBERT CHATHAM, Abilene: "Enclosed is my check for an individual membership into the Kansas Wildflower Society. - - - - This sounds like a most interesting organization. A friend, Joan Angst, let me read her Newsletter and it was that publication that 'caught my fancy'."

PROF. L.R. QUINLAN, Manhattan: "The KWS Newsletter came last week and it is a splendid number."

OPERATION WILDFLOWER

Submitted by Carroll L. Morgenson, Chief Landscape Architect, Kansas Dept. of Transportation, Topeka

Wildflowers have been a part of the prairies and woodlands since the beginning of time. Wildflowers take many forms, some hardly noticeable, while others are very showy. We are all familiar with wildflowers in one way or another. Our home flower gardens are made up of former wildflowers from over the globe. However, we do not think of these in the same sense as the prairie natives.

"Operation Wildflower" was started by the Tulsa Garden Club in 1972, with the suggestion that seed be donated to the Oklahoma Highway Commission to help beautify the roadsides. This was not a new idea as the Texas Highway Department had been planting wildflowers along roadsides for over 30 years. In December, 1973, the Federal Highway Administration announced the National "Operation Wildflower" Program. This program is a joint effort of the National Council of State Garden Clubs, State Highway Department and Federal Highway Administration, to promote propagation and growth of wildflowers along highways. Individuals, Kansas Wildflower Society, Scouts, 4-H Clubs or local garden clubs may provide seed to the State Highway Department which will plant it in suitable locations on highway right-of-ways. The Federal Highway Administration may provide funding for the planting process at the discretion of the local Highway Department.

Over the past two years, the Kansas Department of Transportation has been the recipient of many pounds of seed donated by individuals and groups, including the Kansas Wildflower Society, interested in establishment of wildflowers on Kansas roadsides. On new highway construction, wildflower seed has been planted as a part of the seeding contract. We are beginning to see results on some projects.

The road system in the state comes under the responsibility of several different government levels. The Interstate, U. S. and K Highways are the responsibility of the Kansas Department of Transportation. The County and Township roads outside city limits are the responsibility of the County Highway Departments, and Urban streets belong to the

Municipal Street Department. The wildflower program is aimed primarily at the roads under the Kansas Department of Transportation responsibility, since many of the county roads do not have adequate right-of-way for planting of wildflowers.

There has been some concern expressed regarding the treatment of the roadsides with herbicides. "Indiscriminate spraying" has been the feeling most often expressed. While noxious weeds must be treated under state law, the Kansas Department of Transportation does very little spraying on the roadsides. Most locations I have observed where these treatments have occurred have been rather carefully controlled. Utility companies are required to secure a permit for line clearance work. Since we do not allow spraying to any extent, this involves mostly pruning or removing woody growth under utility lines. You will find most "indiscriminate spraying" has been done on county roads, and this problem must be resolved with the local county road department. It is unfortunate that herbicides can not distinguish which plants should and should not be killed.

Kansas has a wide range of climatic conditions and soil types that give us a variety of native flowers. There are many wildflowers with showy blooms that can be planted on the roadsides. Seed sources for these are limited and some varieties are available only if you locate and collect the seed. Collection of seed is time consuming but can be very rewarding. Some of the more showy varieties are: Butterfly Weed, New England Aster, Prairie Coneflower, various Sunflowers, Primroses, Goldenrods, Gayfeather, Prairie Clover, Pitcher Sage, Black Samson, Blackeyed Susan and Yucca. These are mentioned only to guide you to types that may be planted.

The Kansas Department of Transportation will be happy to work with you or your group to determine suitable varieties for your area in an effort to add more colorful wildflowers to the roadsides. If you wish further information, please contact me and I'll do all I can to help. My address is State Office Building, Topeka, Ks., 66612. Telephone 913-296-3901.

* * * * *

PRAIRIE FORBS: USES IN CONSERVATION

Submitted by Jack W. Walstrom
U. S. Department of Agriculture, Salina

Prairie forbs are those prairie plants which are not grasses, sedges, rushes, shrubs, or trees. They are herbaceous and die back to the ground each year. Many of our so-called weeds, wildflowers, and legumes are listed in this category.

Some of the most beautiful forbs are those which have been domesticated and selectively bred for their colorful foliage or flowers. Millions of cut flowers and plants are sold annually through commercial businesses. Some of these plants bear little resemblance to their native ancestors and have lost their ability to compete under adverse conditions. In recent years, however, there has been a renewed interest in planting wildflowers in natural settings and even in urban areas.

Americans are becoming more aware and concerned about our energy resources. As a result, alternatives to our costly roadside maintenance programs are being considered. Most state highway departments are either planting or considering planting their highway rights-of-way to native grasses and wildflowers. When mowing is reduced or delayed until the native forbs have seeded, the establishment of esthetically pleasing vegetative diversity becomes practical and indeed desirable. Roadside rights-of-way collectively constitute millions of acres of land. As stewards of the land, we must see that these areas are managed with multipurpose objectives, not the least of which are safety, erosion control, wildlife, and beauty.

Another use of forbs, which is often overlooked but is vitally important to mankind, is their medicinal value. Although many of the remedies used by the Indians and pioneers are not now considered helpful medications, some, such as grayhead prairie coneflower, roundhead lespedeza, and black samson echinacea, are being evaluated for their oils and medicinal properties.

The first release of a wildflower produced under a seed certificated (limited generation) program was in 1973 through a cooperative effort of the agricultural experiment stations of New Mexico State University and Colorado State University, the New Mexico State Highway Department, and the USDA Soil Conservation Service. The plant released as a superior selection was 'Bandera' Rocky Mountain penstemon (*Penstemon strictus* Benth). It was tested at the PMC in Los Lunas, New Mexico. Since then, the Manhattan PMC*, in cooperation with the Nebraska and Kansas Agricultural Experiment Stations and the Nebraska Department of Transportation, has released five wildflower forbs. These are 'Eureka' thickspike gayfeather, 'Kaneb' purple prairieclover, 'Nekan' pitcher sage, 'Sunglow' grayhead prairie coneflower, and 'Prairie Gold' Maximilian sunflower. *Plant Materials Center.

Role of Commerical Plant Growers

After the long and expensive process of developing or selecting superior plant materials, they must, in the final analysis, be accepted and planted for increase by the commercial seed producer or nursery. State and federal agencies should recommend the use of the specific varieties that are best adapted for a particular problem or geographic area. Commercial availability of these materials depends greatly on whether potential users know about them and ask producers to supply them. Producers then must advertise the availability of their products.

The selection of improved plants must be accompanied by the best information available regarding cultural and management practices. Seed prices vary according to supply and demand. As with any other crop, fertilizer, water, time of harvest, equipment and handling all play an important role in the quantity and quality of seed. Seed and nursery producers are required to conform with applicable laws and regulations regarding their crops. They need to be flexible, honest and knowledgeable or they will not be in the seed and plant production business long.

Another hurdle to be overcome is the control of weed species. Chemical sprays are most generally ruled out if a number of forb species are used because of their vulnerability to broad spectrum weed control chemicals. Mowing is one answer; high intensity, short duration grazing may be another. Dr. Salac, University of Nebraska, investigated the response of 11 species of wildflowers to 12 mowing dates during the growing season. A clipping height of 4 inches was used. Wildflower species were included in one of three groups: (a) early blooming, (b) midsummer blooming, and (c) late summer blooming. The effects of mowing on survival, height of lateral shoots, number of lateral buds forced, dates and duration of bloom, and esthetic appearance were documented. These dates can be especially valuable to seed producers for determining management directed toward ease of harvesting tall growing forbs and quantity of seed production. Some wildflower forbs tend to grow much taller when grown under cultivation and thus lodge readily or cause harvesting problems unless they are clipped to prevent this occurrence. Clipping of some species at the proper time increases the attractiveness even though fewer flower heads may be produced.

Another question requiring further study is the rate, date and compatibility of species. A rate-of-seeding study is being conducted on replicated plots at the Manhattan PMC and the University of Nebraska Horticultural Station at Meade, Nebraska.

The availability and cost of native forb seeds also causes concern for those desiring to include wildflowers in their projects. It is difficult to maintain a current listing of seed producers and impossible to keep up-to-date price quotations. The Plant Resources Conservation Division of the Soil Conservation Society of America has a list of the sources of native seeds and plants. This list can be obtained from the Soil Conservation Society of America, 7515 N. E. Ankeny Road, Ankeny, Iowa, 50021. Single copy - \$2; ten or more copies \$1.50 each, postpaid.

The following seed producers sell adapted varieties of native seeds or plants. Listings do not constitute an endorse-

ment on the part of the Kansas Wildflower Society. If you have additions, corrections, or suggestions, please send them to Chairman, Plant Selection Committee, KWS, 2092 Edward, Salina, Ks., 67401.

Native Trees and Shrubs:

Env. Imp. Services, Inc. (Seed), P.O. Box 646
1621 E. Kansas Ave., McPherson, Ks., 67460

Skinner Nursery Company (Plants), P. O. Box
8068, Topeka, Ks., 66608

Willis Nursery Company, Inc., (Plants), P. O.
Box 530, Ottawa, Ks., 66067

Marshall Nurseries (Plants), 205 No. 2nd,
Arlington, Ne., 68002

Plumfield Nurseries (Plants), Box 410,
Fremont, Ne., 68025

Wildflower Seed:

Sharp Bros. Seed Co., Healy, Ks., 67850

Miller Seed Co., 1540 Cornhusker Highway,
Lincoln, Ne., 68521

Stock Seed Farms, Inc., Rt. 1, Box 112,
Murdock, Ne., 68407

Arrow Seed Company, Inc., Box 722
Broken Bow, Ne., 68822

CENEX Seed Plant, 951 Rundell Road., P. O.
Box 279, Gering, Ne., 69341

Summary:

The interest shown by the public in native forbs, including wildflowers, has stimulated government agencies and private industry to accelerate means of evaluation, production, and use of these plant materials for conservation uses. Forbs that serve multiple uses receive highest priority for evaluation purposes. Erosion control, forage production, natural areas, beautification, and wildlife all benefit when prairie forbs are used in conservation planting.

* * * * *

OPERATION WILDFLOWER RESEARCH

From The Kansas Gardener, Oct., Nov., Dec., 1979:

J. C. Penney, along with National Council is sponsoring a collection of linens decorated with wildflower designs by Marie Monagan of Spring Mills. These are botanically correct and are beautiful.

If you are in need of sheets, pillow cases, towels, curtains, or shower curtains, try your local J. C. Penney store. If you do not find them in stock, this merchandise will be listed in the 1980 spring and summer catalog.

National Council will receive 1% of gross sales and the money will be used, in part, to pay for research into many facets of wildflower growth and propagation.

From News and Views, published by American Horticultural Society:

The Missouri Botanical Garden is compiling a directory of researchers in the field of wildflower propagation in cooperation with the National Council of State Garden Clubs. The aim of the project is to report what research has been undertaken in wildflower propagation and to make this information available, especially to state highway departments, to promote the use of indigenous wildflowers, grasses and shrubs along roadsides.

The basis of the directory is to report: 1) Researchers' names; 2) Species Studied; 3) Data on these native plants allowing an accurate and concise description of propagation technique; and 4) Species most suitable for roadsides.

All members of the American Horticultural Society who may be engaged in this work are encouraged to get in touch with Gene Sullivan, Project Manager. Write to him at the Missouri Botanical Garden, 2345 Tower Grove Avenue, St. Louis, Missouri, 63110.

In response to a letter of inquiry to Gene Sullivan, Project Manager, Missouri Botanical Garden, the KWS received the following information:

"The study by the Missouri Botanical Garden is funded by a grant from the National Council of State Garden Clubs. The National Council S.G.C. awarded the grant from the one percent of gross sales received from Spring Mills. Our study is to report all resources to date, in order that new research can be directed toward needed areas, especially regarding propagation along roadsides."

* * * * *

SEEDS FOR PRAIRIE RESTORATION

Arthur L. Muller Naturalist at the Chicago Horticultural Society Botanic Garden, has contacted botanists in the central U.S. to request seeds for 114 native prairie plants, mostly forbs. The CHS is developing a 7-acre prairie restoration area which will be composed primarily of plants of the tall grass prairie community, although they also plan to include a modest sized replica of Great Plains mixed prairie. Correct identification of the seeds is important and state and county in which the seeds are collected should be stated. A list of desired species can be obtained by writing to Janet E. Bare, 606 West 29th Place, Lawrence, Kansas, 66044, or you may contact Mr. Muller directly at the Chicago Horticultural Society Botanic Garden, P. O. Box 400, Glencoe, Ill., 60022, telephone 312 835-5440.

* * * * *

KANSAS WILDFLOWER SOCIETY T-SHIRTS

May 17 and 18, we will be at the Mulvane Art Fair on the Washburn University Campus, where we will have KWS T-Shirts for sale. Or you may order a T-shirt by using the enclosed order coupon.

ENDANGERED AND THREATENED SPECIES

Submitted by Dr. Ronald L. McGregor, Director,
State Biological Survey of Kansas, Univ. of Kansas,
Lawrence

In September of 1975, the Smithsonian Institute, acting on a charge from the U. S. Department of the Interior, held a several day session during which the list of the 1700 plant species considered as endangered was developed. I participated in this session as the representative from the plains states - Region 6.

Later, our Kansas legislature passed our Kansas nongame and endangered species conservation act and its implementation was assigned to the Kansas Fish and Game Commission. Unfortunately, the Kansas act made no provision for the inclusion of plants. In November, 1979, the U. S. Department of Interior, Fish and Wildlife Service, sent out a request for input regarding plant taxa which are considered to be threatened or endangered in our state. The Service will repropose plants based on information accumulated over the past three years, and hope to publish a new proposal in the Federal Register this spring. Dr. James L. Miller, Endangered Species Staff Botanist, Region 6, in Denver, Colorado, has been informed of the existence of the Kansas Wildflower Society and thus the Society is now on the list of organizations which will receive requests, etc., in the future.

Because the problem of endangered and threatened species is a serious one, and will be with us for some time, I think it would be a good move on the part of the Wildflower Society to develop an endangered and threatened species committee charged with being rather quickly responsive to future requests which will surely arrive.

On December 1st, I attended a meeting in Emporia where representatives of some 30 or more Kansas organizations met to consider development of a citizens advisory committee to our Fish and Game Commission on matters relating to endangered and threatened species. About 75

persons attended. As I was on the program, I made a plea for the consideration of plants and noted the rapid development of the Kansas Wildflower Society. An ad hoc steering committee was appointed to develop plans for developing an advisory committee, and I was appointed as one of its members. Hopefully this advisory committee will be developed by spring.

The overall program on endangered and threatened species is developing slowly across the country, but Kansas has fallen behind. In general, the Federal portion of the program relates to species which are endangered or threatened nationally. Then each state may declare certain species to be endangered or threatened. Thus, a species may be endangered in a state but not nationally. For Kansas, the list of rare native plants is a substantial one.

* * * * *

A bill allowing Kansas taxpayers to check off some of their state income tax refund to go to state non-game wildlife measurement program was introduced January 29, 1980, in the Kansas Senate. Non-game wildlife programs deal with any species of wildlife not legally classified as a game species or fur-bearing animal under state law.

The money would be spent to study and manage endangered species, start an urban wildlife program, prepare publications and provide other services related to non-game management.

Donations would be voluntary and funds would be administered by the Kansas Fish and Game Commission. The Kansas Fish and Game Commission is currently working with a fund of approximately \$30,000 from hunting and fishing license fees.

SB 2772 was modeled after a successful bill in Colorado where voluntary contributions raised about \$300,000 last year. Whether or not the Kansas Bill passes, anyone interested in contributing voluntarily may do so by sending their check to the Kansas Fish and Game Non-Game Wildlife Preservation, c/o Mr. Marvin Schwillig, Pratt, Kansas, 67125.

DAISIES PIED AND VIOLETS BLUE

Submitted by Charles Marson,
Producer and Host of "In Your Own Back Yard"
TV Garden Show, Channel 13, Topeka

Sometimes we overlook some of the good native shrubs and trees that are very beautiful and will do much for a landscape. They are well adapted to our soil and weather conditions and should be used more. Here are some that we have found to be satisfactory especially in Eastern Kansas. Try some of them.

Ironwood (Ostrya virginiana) also called Hop Hornbeam is very plentiful in Kansas but should be used more. It is a small tree about 15 to 20 feet tall with egg-shaped dark green leaves. It flowers in mid-April on the female catkins. Male and female catkins grow on the same tree. The fruit clusters are composed of small flattened light brown pods with 1 seed per pod. The bark is red to dark brown with shallow furrows and shaggy scales. The wood is heavy and very strong.

Pawpaw (Asimina triloba) is a small tree reaching about 15 feet, usually in dense thickets. The leaves are simple, alternate and deciduous, widest near the outer end and tapered at the base. The flowers have 6 egg-shaped pointed petals 1 inch or more long of deep purple. The fruit is more prominent being greenish yellow turning brown and edible as they mature. They are 2 to 6 inches long and banana shaped.

The wild Crabapple (Pyrus ioensis) is a scrubby native but very good for use in naturalization. It is a wonderful cover for birds and their nests. It grows 15 to 18 feet tall with large pink flowers in May. The fruit is bitter but is made into good jelly. While it is in the pear family it is still called wild Crabapple. It is somewhat spiny so use with caution.

Juneberry (Amelanchier arborea) is called Service berry or Shad bush also. It is a large bush with several stems from one base or a small tree up to about 25 feet tall. It flowers in early April with white clusters before the leaves are very far along. The leaves are oval with toothed edges, dark green on top and paler below. The fruit grows in clusters that are dark purple in color. The birds are very fond of them. It is not used as much as it should be. It likes a rocky spot.

Cockspur Hawthorn (Crataegus crus-galli) is fairly common in Eastern Kansas growing best in rocky pasture. It is a small tree growing from 6 to as much as 12 feet tall. It flowers in April-May, after the leaves come, in white clusters. It has small dark green glossy leaves that are wider at the outer end. The branches grow nearly horizontal giving it a flat-top look. It is an excellent nesting tree for many birds although they seldom eat the fruit. A fine ornamental tree for naturalization in spite of the large thorns.

The RedHaw or Hawthorn (Crataegus mollis) is sometimes called the Downy Hawthorn because of the downy leaves. It is the largest of the native hawthorns. It also likes rocky hillside. The leaves and fruits are much larger than the other hawthorns and the fruit is edible. It makes luscious jams and jellies. A very fine native tree that grows primarily in Eastern Kansas, but is very adaptable.

The beautiful clusters of white flowers of the Wild Plum (Prunus americana) in early April are a great sight along the Kansas roads. It grows in thickets about 12 feet high and 30 to 40 feet across. The fruit is edible if the birds don't get them first. Their only problem is that they send up sprouts from the roots and form dense thickets. A good plant for naturalization where there is enough room.

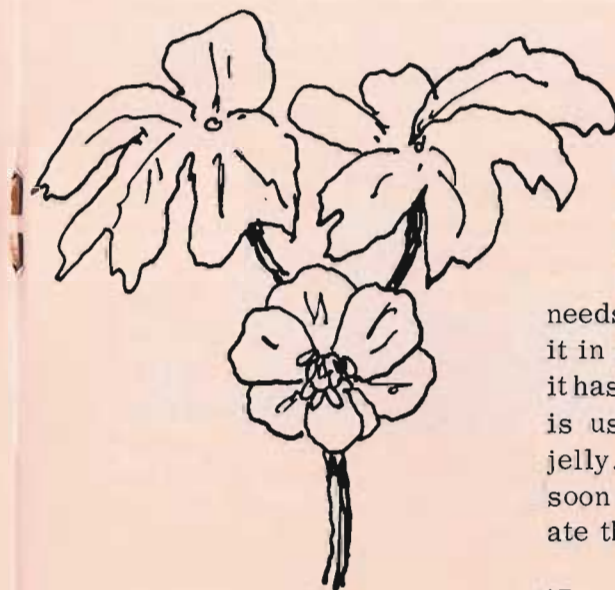
These are a few of the native plants that are very interesting and also very beautiful. We will list a few more of them in future articles. We think that many of them can be used in a wildflower setting to very good advantage.

WILDFLOWER IN THE SPOTLIGHT:
MAY APPLE, *Podophyllum peltatum* Linnaeus
(Wild Mandrake)

Submitted by Charles L. Marshall, Architect
and Board Member, Topeka

The May Apple can be found in low woods, moist banks and clearings from Western Quebec and Southern Ontario to Minnesota, Kansas, Florida, Louisiana and Texas. An interesting sight in the April woods is their coming up, one leaf, bent sharply downward like a nearly closed umbrella, enfolding and making gangway for the rest. The May Apple has basal leaves often nearly a foot in diameter, deeply five to nine lobed, on 1 to 1 1/2 feet high stems from a perennial, horizontal poisonous rootstock.

Flowers, 1 1/2 to 2 inches broad, creamy white, fragrant, appear in May and June from the base of the upper leaf or usually from the fork between the two leaves. As to the neat flower, overspread by its leaf canopy, some people enjoy the odor and to others, it is unpleasant. The ovoid ovary forms a large, yellowish, edible berry, 1 1/2 to 2 inches long, with numerous seeds and enclosed in fleshy arils within the fruit.



When the fruit has ripened in July or August into a large yellow berry, some people are attracted and others are repelled by its taste. The fruit is edible and harmless and no one needs to be afraid of eating it in moderation. To some, it has a strawberry flavor and is used to make May Apple jelly. The white immigrants soon discovered the Indians ate the berries with relish.

The rhizomes and leaves are not edible. Both foliage and root are said to be poisonous and serious results have followed the use of the leaves as greens. They contain a poisonous, resinous substance, podophyllin, unpalatable but medicinal in properly regulated doses. The Indians used the rhizomes as one of their most effective purgatives, and our own medicinal practice makes use of it.

References: "Wildflowers" by Homer D. House and "Kansas Wildflowers" by William Chase Stevens.

* * * * *

SUNFLOWER AS NATURAL HERBICIDE

The U. S. Agriculture Department, in a press release from Washington, says it may be possible to use sunflower plants as natural weed killers. Tests have shown that extracts of sunflower plants "inhibited the growth of many of our toughest weeds by 50 to 75 percent", according to a report by the department's Plant Disease Research Laboratory at Frederick, Md.

Some of the weeds inhibited by sunflowers include: jimsonweed, velvet-leaf, johnsongrass, curlydock, red sorrel, ragweed, purslane, Pennsylvania smartweed, wild mustard and lambsquarter, the report said.



Spring! And thoughts of wildflowers.

BOOK REVIEW

Submitted by Dr. Janét Bare, Private Consultant in Remote Sensing and Vegetation Mapping, Lawrence

For those wishing to add to their Kansas wildflower libraries for a very small investment of funds, two small books are available:

Know Your Wild Flowers by Florence McKinney was published in 1960 and may be obtained for fifty cents from Wild Flower Book Department, Capper Special Services, Inc., 616 Jefferson, Topeka, Kansas, 66607. One hundred species are included and arranged according to flower color. Both common and scientific names are given. Descriptive material includes information on habitats, blooming time, uses of the plants by people and by wildlife, as well as black and white line drawings taken, with permission, from "Wildflowers in Kansas" and "Weeds in Kansas", both published by the Kansas State Board of Agriculture, but now out of print.

More recently, an 80 page guide containing descriptions of 45 native wildflowers and 6 native grasses has been released by the Smoky Hills Audubon Society of Salina.

Favorite Prairie Wild Flowers and Grasses was written by Mary Louise Johnson, edited by Dana Jackson and designed and illustrated by Iralea Barnard. As with McKinney's book, the flowers are grouped according to flower color and both common and scientific names are included. Descriptions are similar in nature to McKinney's. The ink drawings are less detailed than those of the other book and would not be suitable for detailed comparison of similar species. Still, artist Barnard has done a reasonable job of capturing the "essence" of the plants. This book can be ordered for \$2.00 plus 50¢ for postage, from the Smoky Hills Audubon Society, Box 173, Salina, Kansas, 67401.

* * * * *

1980

SPRING OUTINGS

Submitted by Philip H. Arnold, Outings Chairman, Ashland.

The following are the Spring Outings confirmed at this time. Additional outings are in the planning stage. You will receive a schedule with more detailed information in April.



April 26, Saturday, 9:30 a.m. - 4 p.m. GIRARD

Crawford State Lake, North of Girard - REV. RICHARD KRETZSCHMAR, Ecumenical Christian Ministries, Pittsburg, has a Masters Degree in Botany and for the past 14 years has been collecting, eating and identifying wild edible plants. He will bring books on the subject and have samples for the participants to taste.

May 3, Saturday, 9 a.m. - 3 p.m. WILSON LAKE

TOM CANNON, Chief Ranger at Wilson Lake, Corps of Engineers, is an avid birdwatcher and wildflower photographer. Plans for the day include a brief slide show of wildflowers of Wilson Lake, a tour of Bur Oak Nature Trail and a trip to Lucas Park, a mid-grass prairie. Sack lunch at Sylvan Park.

May 2 - 4 SUMNER COUNTY

Anyone interested in learning more about the flora and fauna found along the Chikaskia in Sumner County, Kansas, is invited to attend the 4th Annual Wildlife Study. The location will be just north of where highway 81 crosses

the river, half-way between Caldwell and South Haven. Signs will be up to guide those attending to the meeting and camping area. For more information, contact Larry Miller, 524 N. Osage, Caldwell; Joseph T. Collins, Museum of Natural History, Univ. of Kansas, Lawrence; Gene Trott, 1116 East Lincoln, Wellington, Ks.

May 10, Sunday, 9 a.m. READING

A morning tour only - DR. GILBERT A. LEISMAN, Professor of Biology, Emporia State University, will conduct a guided field trip at Reading Woods.

May 17, Saturday, 9:30 a.m. - 4 p.m. OTTAWA

MRS. MARY BANCROFT and MRS. MERLE CANNON will co-host a tour of Native Prairies, Ferndell and Camp Kivawood. Mrs. Bancroft has a degree in Biology from Ottawa University. Mrs. Cannon, a graduate of Kansas State Teachers College, Emporia, is vitally interested in all phases of nature.

May 17, Saturday, 1:30 p.m. DODGE CITY

DR. JEFF BURKHART will host a tour of native pasture north of Ford County Fishing Lake. Dr. Burkhart, Assoc. Prof. of Biology at St. Mary of the Plains College, received his degree in Ecology and Zoology from Arizona State and has been in Kansas 4 years.

May 18, Sunday, 2 - 4 p.m. HUTCHINSON

A wildflower hike through Sand Hills State Park led by DR. DWIGHT PLATT, Chairman, Dept. of Biology, Bethel College; BILL MABEN, Prof. of Biology, Hutchinson Community College; RANDY CLARK, wildlife biologist with Kansas Fish and Game Commission; DR. HOWARD C. REYNOLDS, Dept. of Biological Sciences, Ft. Hays State Univ.; and JIM SMITH, Director, and LORENA COMBS, volunteer naturalist at the Dillon Outdoor Education Center, Sponsors.

May 31, Saturday, 10:00 a.m. . WABAUNSEE COUNTY

DR. CLENTON OWENSBY, Dept. of Agronomy, KSU, Manhattan, and DR. ROSS JOHNSON, Prof. of Biology, Washburn Univ., Topeka, will led the tour of Wm. G. and Jane Munns (Topeka) two ranches in Wabaunsee Co. on the eastern edge of the Flint Hills, Buffalo Mound Area.

June 1, Sunday, 11:45 a.m. - 5 p.m. ASHLAND

PHILIP H. ARNOLD, rancher, will conduct a bus tour of either Arnold Ranch or Clark County Lake Area.

June 7, Saturday, 9:30 a.m. NEWTON

DR. DWIGHT PLATT, Dept. of Biology, Bethel College -- the day will be spent visiting wildflower areas in Eastern Harvey County. Sack lunch at noon.

June 7, Saturday, 9 a.m. HAYS

DR. HOWARD C. REYNOLDS, Dept. of Biological Sciences at Ft. Hays State Univ., will host a full morning tour of the Mixed Prairie. Participants will also view the original Phillips 66 Oil Paintings of Wildflowers and Rubye Munsells original paintings of wildflowers.

June 15, Saturday, 10 a.m. OSKALOOSA

ROGER COLEMAN, Soil Conservation Service, his wife, JACKIE, and DR. ROSS JOHNSON, Topeka, will host an outing at Lake Perry and observe native grass and forbs, and wooded area to be selected. Sack lunch followed by visit to Seaman outdoor lab., established about 3 yrs. ago.

May 17, Sunday, 1 p.m. ERIE

We have received a late confirmation of an Outing in Crawford County. W. W. HOLLAND, D. V. M., Erie, will be leader for the tour to view the beautiful wildflowers of Southeast Kansas.

WILDFLOWER AND PLANT ECOLOGY CLASSES

The following information includes: Course description, Instructor, Date, Time, Meeting place, Fees and Enrollment procedure:

Wildflower Identification, Dr. Howard C. Reynolds, Professor of Botany, Ft. Hays State University, Ellsworth, Kansas, \$18.00. Tentative plans are to conduct the course on three Saturday mornings, May, 1980. For more detailed information, contact Mrs. C. K. Helwich, 703 No. Washington, Ellsworth, Kansas, 67439.

Prairie Wildflowers, Dr. Dwight Platt, Bethel College, Newton, April 10, 24, May 1, plus field trips in May and June, Thursdays, 7 to 9 p.m., Science Hall 108, \$10.00 plus transportation. Maximum 25. Registration fee due by April 3 to Bethel College, Continuing Education, North Newton, Ks., 67117, (316) 283-2500. This will be an introduction to some common prairie wildflowers of south central Kansas and the plant families to which they belong for persons with little science background. Includes identification, natural history, uses by native Americans and pioneer settlers and use in prairie landscaping.

Introduction to the Plants of Eastern Kansas, Steven P. Churchill, April 1, 8, 15, 22 - 7:30 to 9:00 P.M., April 19 & 26 - 1:00 - 4:00 P.M. This course, under the sponsorship of the Univ. of Kansas Herbarium of the Museums of Natural History, will offer an introduction to the vegetation of the prairie and woodland of this area. Four lectures will include a survey of the diversity of the plant kingdom, discussion of past and present vegetation in the plains area, identification of edible and poisonous plants and spring wildflowers and a review of Native American plant usage. April 19 and 26 are field trips so that participants can locate and identify plants discussed in lectures. Fee: \$22.50 for Museum Associates members; \$25.00 for non-members. Limited to 20 participants. Send application and payment payable to Museums Associates to: Public Education Office, Museums of Natural History, 602 J Dyche Hall., Univ. of Kansas, Lawrence, Ks., 66045.

Kansas Wildflowers, Dr. Ross Johnson, Professor of Biology, Washburn University, Topeka, Kansas. \$20.00. A series of field trips throughout the spring, summer and autumn to surrounding locales to present many of the conspicuous wildflowers. Emphasis will be on identification and one session will be devoted to keying. Participants will be expected to provide their own transportation for short field trips. The first sessions will be organizational. Limit: 20. Six sessions. March 31 through October, 7:00 - 9:00 P. M., Monday, 101 Stoffer Hall. This and the following course are non-credit community service courses. To enroll, contact Office of Special Instructional Programs, Washburn University of Topeka, Topeka, Kansas, 66621, telephone (913) 295-6300, ext. 619.

Wildflower Photography, Dr. Stanley Alexander, Emeritus Professor of Physics and Dr. Ross Johnson, Professor of Biology, Washburn University, Topeka, Kansas. \$15.00 Techniques and procedures used in close-up wildflower and plant photography will be stressed along with plant identification. Participants must provide their own equipment and transportation. Co-sponsored with the Topeka Camera Club. Six sessions, Saturday afternoons or weekday evenings, as dictated by the weather. First session, Saturday, March 29, at 1:00 P.M. To enroll, see address above.

* * * * *

In our effort to stimulate an awareness of wildflowers and their importance and value to our ecology, we had our KWS Booth at the 1980 Annual Topeka and Hutchinson Flower, Lawn and Garden Shows. With the assistance of many volunteer members, the free "Yes, Kansas Has Wildflowers" leaflets were distributed. KWS 1979 Newsletters and T-shirts were offered for sale. 11,500-12,000 visitors attended the Topeka Show and 3,500-4,000 attended the Hutchinson Show.

WILD FLOWERS OF KANSAS -- A VOICE FROM THE PAST

The following is a paper on "The Wild Flowers of Kansas" read by Dr. Eva Harding at the meeting of the Shawnee County Horticultural Association:

"When I studied botany I was taught the names and forms of the plants alone, but now the study of botany is like a course in biology, as only the functions of plants are studied. This is so new to me I thought it might be new to some of you too, and so give a little summary of my readings in the new methods of studying plants.

"Perhaps it is not too much to say that the wild flower of late has become popular, and there are so many new books written in plain English and with drawings plainer than English, that one need not be a botanist to be able to identify a plant, but it is not enough to know merely the name of the flower you meet -- you must know its inner meanings, its scheme of salvation for its species in the struggle for survival that has been slowly perfecting with some insect's help, through the ages. It is not a passive thing to be admired by human eyes, nor does it waste its sweetness on the desert air; it is a sentient being, impelled to act intelligently through the same strong desires that animate us, and endowed with certain powers differing only in degree, but not in kind, from those in animal creation.

"I quote the paragraph from 'Nature's Garden' -- Desire ever creates form. Do you doubt it? Then study the mechanism of one of our common orchids or milkweeds that are adjusted with such marvelous delicacy to the length of a bee's tongue or of a butterfly's leg; learn why so many flowers have sticky calices or protective hairs; why the skunk cabbage, purple trillium and carrion flower emit a fetid odor while other flowers, especially the white or pale yellow night bloomers, charm with their delicious breath; see if you cannot discover why the immigrant daisy already whitens our fields with descendants as numerous as the sands of the sea shore, whereas you may

tramp a whole day without finding a single ladies' slipper. What of the dew that not only catches insects, but secretes gastric juice to digest them?

"What of the bladderwort, in whose inflated traps tiny crustaceans are imprisoned, or the pitcher-plant that makes soup of its guests? Why are gnats and flies seen about certain flowers, bees, butterflies, moths or humming birds about others, each visitor choosing the restaurant most to his liking? With what infinite pains the wants of each guest are catered to. How relentless are pilferers punished! The endless devices of the more ambitious flowers to save their species from degeneracy by close inbreeding through fertilization with their own pollen, alone prove the operation of mind through them.

"How plants travel, how they send seeds abroad in the world to found new colonies, might be studied with profit by Anglo-Saxon expansionists. Do vice and virtue exist side by side in the vegetable world also? Yes, and every sinner is branded as surely as Cain was. The dodder, Indian pipe, broom-rape, and beech drops wear the floral equivalent of the striped claiming most respectable and exalted kinsfolk, they are degenerates not far above the fungi. In short, this is a universe that we live in, and all that share the one life are one in essence, for natural law is spiritual law. 'Through Nature to God', flowers show a way to the scientist lacking faith.

"William Hamilton Gibson says, "Let us content ourselves no longer with being mere botanist-historians of structural **facts**. The flowers are not mere comely or curious vegetable creations, with colors, odors, petals, stamens and innumerable technical attributes. The wonted insight alike of scientist, philosopher, theologian, and dreamer is now repudiated in the new revelation. Beauty is not its own excuse for being, nor was fragrance ever 'wasted on the desert air'. The seer has at last heard and interpreted the voice in the wilderness. The flower is no longer a

simple passive victim in the busy bee's sweet pillage, but rather a conscious being, with hopes, aspirations, and companionships. The insect is its counterpart. Its fragrance is but a perfumed whisper of welcome, its odor is as the wooing blush and rosy lip, its portals are decked for his coming, and its sweet hospitalities humored to his tarrying; and as it speeds its parting affinity, rests content that life's consummation has been fulfilled."

"Now I will give you another quotation from 'Nature's Garden': 'To Sprengel belongs the glory of first exalting flowers above the level of mere botanical specimens.'" After studying the wild geranium he became convinced, as he wrote in 1787, that 'the wise author of nature' has not made a single hair without a definite design. A hundred years before, one, Nehemias Grew, had said that it was necessary for pollen to reach the stigma of a flower in order that it might set fertile seed, and Linnaeus had to come to his rescue with conclusive evidence to convince a doubting world that he was right.

"Sprengel made the next step forward, but his writing lay neglected over seventy years because he advanced the then incredible and only partially true statement that a flower is fertilized by insects which carry its pollen from its anthers to its stigma. In spite of his discoveries that the hairs within the wild geranium protect its nectar from rain for the insect benefactor's benefit; that most flowers which secrete nectar have what he termed 'honey guides' -- spots of bright gold, heavy veining or some such pathfinder for the visitor on the petals; that sometimes the male flower, the staminate ones, are separated from the seed-bearing or pistillate ones on distinct plants, he left to Darwin to show that cross-fertilization by insects the transfer of pollen from one blossom to another -- not from anthers to stigma of the same flower -- is the great end to which so much marvelous floral mechanism is adapted.

"The wind is a wasteful, uncertain pollen distributor. Insects transfer it more economically, especially the more highly organized and industrious ones. In a few instances, hummingbirds, as well, unwittingly do the flowers bidding

while they feast now here, now there. In spite of Sprengel's most patient and scientific research that shed great light on the theory of natural selection a half century before Darwin advanced it, he never knew that the flowers are nearly always sterile to pollen of another species when carried to them on the bodies of insect visitors, or that cross-pollinized blossoms defeat the self-pollinated ones in the struggle for survival. These facts Darwin proved in endless experiments.

"Because bees depend absolutely upon flowers, not only for their own food but for that of future generations, for whom they labor; because they are the most diligent of all visitors, and are rarely diverted from one species of flower to another while on their rounds collecting, as they must, both nectar and pollen, it follows that they are the most important of fertilizing agents. It is estimated that, should they perish, more than half the flowers in the world would be exterminated with them! Australian farmers imported clover from Europe, and although they had luxuriant fields of it, no seed was set for next year's planting, because they had failed to import the bumble bee. After his arrival their loss was speedily made good.

Ages before men cultivated gardens, they had tiny helpers they knew not of. Gardeners win all the glory of producing a Lawson pink or a new chrysanthemum; but only for a few seasons do they select and hybridize according to their own rules of taste. They take up the work where the insects left off after countless centuries of toil. Thus it is to the night-flying moth, long of tongue, keen of scent, that we are indebted for the deep, white, fragrant Easter lily, for example, and not to the florist; albeit the moth is in turn indebted to the lily for the length of its tongue and his keen nerves; neither could have advanced without the other. What long vistas through the ages of creation does not this interdependence of flowers and insects open!"

The preceding was a newspaper article published July 16, 1906, in the Topeka Daily Capital. The clipping was found in one of a pair of old "herbaria", bound books used by 2 young sisters, Maggie R. and Linda C. Wood, for keeping their collection of pressed and identified plant specimens. The Woods lived in Shawnee County, and the books are dated 1877 on the covers.

But who was Dr. Eva Harding? Surely, in spirit, she was a charter member of the Kansas Wildflower Society! She was a lover of nature and a successful cultivator of flowers of every conceivable sort including wildflowers. In response to my inquiries, Mrs. J. Earl Barney of Topeka sent me several additional newspaper clippings and helped me to date the article quoted above.

Dr. Harding was born in Springfield, Ohio, Sept. 13, 1857. She began her medical practice in Atchison, Kansas, and moved to Topeka in 1892. She was always interested in educational movements and philanthropic work, though she usually chose to pursue her philanthropic and humanitarian enterprises on her own rather than through clubs and other organizations. She gave the first playground to the children of Topeka and later gave a second 5-acre park to the city. She was appointed by the mayor on the park board in Jan., 1906.

She was particularly noted for her charity, including among her patients hundreds of poor people whose only compensation to the doctor was a "thank you" or "God bless you". She was also active in politics, being a staunch supporter of the woman suffrage movement, opposed to the draft law introduced by Pres. Harding and at one time ran for Congress on the Democratic ticket. Dr. Harding died in 1920 at the age of 63.

It seems likely, however, that she will be most remembered for her love of people and flowers and her enjoyment in bringing these two together.

J. E. B.

ANNUAL MAGAZINE PUBLICATION:

FLOWERING KANSAS

Submitted by Rachel Snyder, Editor-In-Chief,
Flower-and-Garden Magazine

To be issued annually or at other feasible intervals, Flowering Kansas, Journal of the Kansas Wildflower Society, will be a color-illustrated, slick-paper publication of magazine type. The contents will be articles and pictures developing in detail various aspects of the wild plants of Kansas -- descriptive, historical, documentary, reportorial, inspirational, or whatever style necessary to convey the fullest appreciation of our subject. The material selected will have beauty and permanence, with the expectation that members and purchasers will wish to preserve each issue. The aim will be to create a publication of quality and substance, contributing to wider knowledge and understanding of the flowers, grasses, and other plants of Kansas.

The basic format will be approximately 8 1/2 by 11 inches, 48 pages with self-cover, using 80-pound "Productolith" stock, saddle-stitched, offset-printed. Up to half of the pages may contain four-color work. For the first issue, we plan to print 5,000 copies. We expect to include up to eight pages of advertising to help defray costs; and we expect to sell each copy at a basic price of \$5.00 to the general public (outside of KWS membership).

A basic working schedule has been developed for the various stages in getting this project completed in time for a projected publication date of October 1, 1980:

- May 15 - Copy due on all articles
- July 1 - All reservations due for advertising
- July 15 - Advertising materials in hand
- July 15 - All copy to typesetter
- July 31 - Production material in hand and ready
for paste-up
- Aug. 30 - To Press

Committee members are: Rachel Snyder, chairman; Bobbie Alexander, Katherine Mermis (Mrs. Richard A.), Dr. Janet Bare, Dr. Ronald McGregor, Dr. Dwight Platt, Philip Arnold, and Charles Marson. They have put together some ideas for articles for the first issue; for example:

- The Roll of Insects as Pollinators
- James H. Carruth - Kansas' First Botanist
- Treasures That Lie in Herbariums over Kansas
- The Story of Fremont's Leather Plant
- Simple Helps in Identifying Wildflowers
- An Account of a KWS Field Trip, and What it Found
- A Winter View of Woods and Fields (photographic album)
- The Aristocratic Orchids of Our State
- Our Very Own Sundrop (*Oenothera fremontii*) Deserves More Respect
- How to Take Good Pictures of Wildflowers
- Colors That Come from Native Plants (dye plants)

We are proceeding to gather articles and illustrations for these subjects. Other ideas are welcome.

Contributions are being solicited to help us in financing this first issue. The Kansas Wildflower Society has qualified as a Publicly Supported Organization I. R. C. 509 (a). Contributions to the KWS are tax deductible under I. R. S. Sec. 170.

* * * * *

SLIDES FOR THE KWS STAMP COMMITTEE

In response to inquiries, the slides to be sent to the U.S. Postal stamp selection committee in Washington, D.C., should be sent to the KWS Stamp Committee, by late fall, 1980. This will allow you this spring, summer and fall to take close-up, sharp focus, good color photographs. For additional information write to John Dickerson, R. 1, Box 34, Murdock, Nebraska, 68407, or Dr. Ronald McGregor, Kansas Biological Survey, 2045 Avenue A, Campus West, Lawrence, Kansas, 66044.

OUR CONTRIBUTORS

Special thanks to the following members for their contributions to the Kansas Wildflower Society:

CONTRIBUTING MEMBERS

Mr. and Mrs. John T. Stewart, III, Wellington.

Mrs. Willis Anton, Topeka.

Mr. & Mrs. Ralph L. Weir, Jr., Brownsville, Texas,
(formerly of Junction City).

CONTRIBUTIONS FOR THE KWS LIBRARY

Mr. John J. Pinney, former owner of the Willis Nursery, Ottawa, has generously donated his extensive collection of Kansas Wildflower color slides. The collection is the result of nearly 40 years of photographing Kansas wildflowers.

The Smoky Hills Audubon Society, Salina, has donated their book, Favorite Prairie Wild Flowers and Grasses (see the Book Review, p. 19) along with color slides from photographs by Iralee Barnard and a 35 minute tape, written and narrated by Joyce Fent, well-known Salina naturalist, to accompany the book.

Mary Bancroft, Ottawa, contributed her collection of 200 different dried Kansas Wildflowers mounted and labeled. These were collected in Franklin County during the early 1960's.

Prof. L. R. Quinlan, Manhattan, donated a series of unsigned original ink sketches tentatively identified as being drawn by Frank C. Gates, Ph.D. for reports of the State Board of Agriculture in the '30's.

CONTRIBUTIONS FOR PRINTING THE "YES, KANSAS HAS WILDFLOWER" LEAFLET

Mr. and Mrs. Warren Newcomer, Shawnee Mission

Maxine McFall, Wichita

Mary P. Wells, Tiburon, California

Robert C. Hansen, Kansas City, Mo.



Gift Membership

in the

Kansas Wildflower Society



A Gift Bound to Please

A membership in the Kansas Wildflower Society would be a welcome gift for your family and friends. They will remember you with each issue of the Newsletter.

Other possible appreciated and thoughtful gifts of Kansas Wildflower Society memberships could be "In Honor of" a valued friend or relative, or "In Memoriam" to honor a friend or relative. The memberships could go to a rest home, or to a school or church library. A "Thinking of You" membership for a Birthday, Anniversary or a holiday would be another appreciated gift.

Notice of your gift membership will be mailed to the recipient as soon as possible.

**The Kansas Wildflower Society is sponsored by
Mulvane Art Center, 17th and Jewell, Washburn University
Topeka, Kansas 66621**