

More fun than Club Med!

(Cheaper, too)



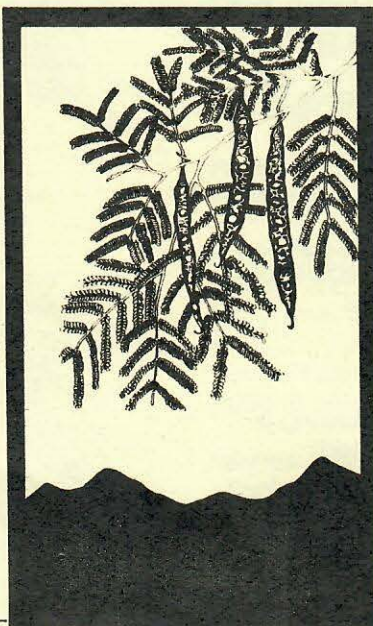
The weather was superb June 1 when Phoenix members went hiking and swimming along Tonto Creek. Members are (clockwise from far right): Roz Bentley, hike leader; Dona Shaver; Jenny Berendt; Chris Collard; Tom Janca, Phoenix chapter vice president; and Marc Mittleman, Plant Press editor.

DESERT BOTANICAL GARDEN

RICHTER MEMORIAL LIBRARY

The Arizona Native Plant Society

Flagstaff
Phoenix
Prescott
South Central
Tucson
Yuma



The Plant Press

Vol. 10, No. 1
Spring 1986

The Endangered Plant Program in Arizona: An Update

The Spring 1985 issue of the Plant Press included a summary of the endangered plant program in Arizona. Since that time the U.S. Fish and Wildlife Service (FWS) has published a Notice of Review (Federal Register 50(188):39526-39584) and has listed three additional species pursuant to Section 4 of the Endangered Species Act of 1973, as amended (ESA). This update addresses those species that are listed under the ESA or are currently being considered by FWS for listing as either threatened or endangered.

ENDANGERED

1. *Agave arizonica* Gentry & Weber; final determination published in Federal Register on 18 May 1984.
2. *Cowania subintegra* Kearney; final determination published in Federal Register on 29 May 1984.
3. *Echinocactus horizonthalonius* Lemaire var. *nicholii* L. Benson; final determination published in the Federal Register on 26 October 1979.
4. *Echinocereus triglochidiatus* Engelm. var. *arizonicus* (Rose ex Orcutt) L. Benson; final determination published in the Federal Register on 25 October 1979.
5. *Pediocactus bradyi* L. Benson; final determination published in the Federal Register on 26 October 1979; FWS has developed an approved recovery plan for this species.
6. *Pediocactus peeblesianus* (Croizat) L. Benson var. *peeblesianus*; final determination published in the Federal Register on 26 October 1979; FWS has developed an approved recovery plan for this species.
7. *Pediocactus sileri* (Engelm.) L. Benson; final determination published in the Federal Register on 26 October 1979.
8. *Tumamoca macdougallii* J.N. Rose; final determination published in the Federal Register on 29 April 1986.

THREATENED

1. *Carex specuicola* J.T. Howell; final determination published in the Federal Register on 8 May 1985.
2. *Coryphantha robbinsorum* (Earle) A.D. Zimmerman; final determination published in the Federal Register on 9 January 1986.
3. *Senecio franciscanus* Greene; final determination listed in the Federal Register on 22 November 1983.

PROPOSED

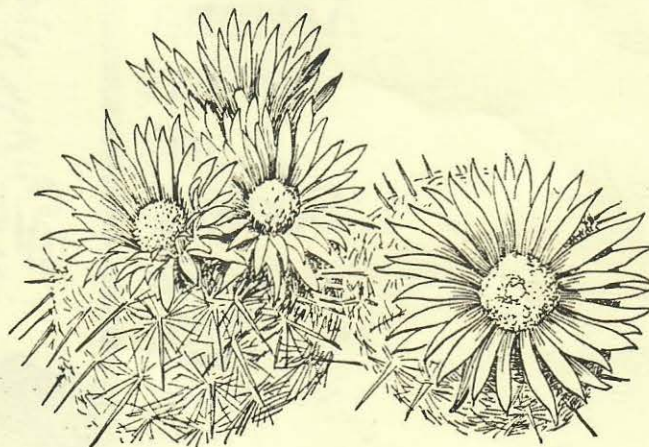
1. *Mammillaria thornberi* Orcutt; proposal to list as a threatened species published in the Federal Register on 24 April 1984.

CATEGORY 1 CANDIDATE SPECIES

2. *Amsonia kearneyana* Woodson; FWS is considering a proposal to list *A. kearneyana* as an endangered species.
10. *Flaveria macdougallii* Theroux, Pinkava & Keal; known from spring sites near the Colorado River in the western portion of the Grand Canyon.

CATEGORY 2 CANDIDATE SPECIES

8. *Argemone arizonica* G.B. Owenby; Coconino County in the Grand Canyon, at base of the Vermillion Cliffs and Houserock Valley and possibly Mohave County near Dolan Springs.
28. *Cleome multicaulis* DC.; known in Arizona from the Wilcox Playa, Cochise County.
31. *Cynanchum wigginsii* Shinnery; isolated localities in Cochise, Pima, and Santa Cruz counties with additional populations in Sonora, Mexico.
35. *Eriogonum apachense* Reveal; northwest of Bylas, Graham County; in association with *Cowania subintegra*.
45. *Lesquerella kaibabensis* Rollins; known from northeastern Mohave County.
46. *Limosella pubiflora* Pennell; known from the Chiricahua Mountains, Cochise County.
52. *Opuntia whipplei* Engelm. & Bigel. var. *multigeniculata* (Ciokey) L. Benson; plants referable to this variety probably do not occur in Arizona.
60. *Perityle cochisensis* (Niles) Powell; known from the Chiricahua Mountains, Cochise County.
61. *Perityle saxicola* (Eastw.) Shinnery; Gila County on the Tonto National Monument and Maricopa County near Roosevelt Dam.
62. *Phacelia cephalotes* Gray; Navajo County, near Holbrook.
63. *Phacelia welshii* Atwood; Coconino County, north of Flagstaff to Cameron.
64. *Pholisma arenarium* Nutt.; Yuma County, from Parker to Bouse.
65. *Pholisma sonora* (Torrey ex Gray) Yatskievych; Yuma County, Yuma desert with additional populations in northern Sonora, Mexico.
70. *Psoralea thompsonae* (Vail) Welsh & Atwood var. *whitingii* (K. & P.) Barn.; Coconino County on Wupatki National Monument.
73. *Salix arizonica* Dorn; Apache County in the White Mountains.



74. *Silene rectiramea* Robins.; Coconino County, along south rim of the Grand Canyon.
 75. *Streptanthus lemmonii* Wats.; Pima County in the Santa Catalina Mountains.
 76. *Talinum marginatum* Greene; Cochise County in the Huachuca Mountains.
 77. *Talinum validulum* Greene; Coconino County.
 78. *Vaquelinia pauciflora* Standl.; Cochise County in Guadalupe Canyon.

The Arizona Natural Heritage Program developed a more comprehensive list that includes not only species of interest to FWS but also endemic or peripheral species that are rare in Arizona. Information on these species was entered into a data base that is now being managed by the nongame branch of the Arizona Game and Fish Department.

For more information on these species, interested members may contact Bruce Palmer, Nongame Branch, Arizona Game and Fish Department, 2222 West Greenway, Phoenix, Az. 85023. Phone 602/942-3000.

There are a number of ways in which Society members may become involved in the endangered species program. Additional inventory is needed to improve our understanding of the distribution and habitat requirements of the majority of these species. Monitoring known populations of rare plants is needed to adequately document threats and to assess the status of the species. Members interested in learning more about Arizona's endangered species please contact:

Andy Laurenzi, The Nature Conservancy, 30 N. Tucson Blvd., Tucson, Az. 85716. Phone 602/327-4478 or Peggy Olwell, Endangered Species Office, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico, 87103. Phone 505/766-3979.

Participate in Plant Surveys and Salvages this Summer

*Along the Central
Arizona Project*

*For more information call
Stephanie Meyer, 296-4385.*

Newly-elected Education Chairman Lists Innovative Activities

Help with native plant identification on school grounds. Chapter members could be available to accompany classes. Or chapter members could give in-service sessions to faculty members who are interested.

Encourage classroom use of local nature trails, parks and native plant gardens for field trips. Provide chapter members as guides if none others are available. Or provide a written trail guide of area.

Produce videotapes to be available for classroom use. Or copy plant related programs from Channel 8 and loan videotapes to schools.

Produce slide shows of area plants to be used in classrooms. Provide narration on a cassette or do narration live.

Encourage schools to plant native, low water use trees and shrubs. Help school districts to buy these, plant them and care for them.

Encourage through school contact the home planting of native plants. Advertise any plant sales at schools and encourage their participation.

Provide lists of plant books to school libraries for student research. In some cases donate field guides or books about plants to schools and libraries.

Provide information on endangered, threatened, or sensitive species of native plants.

Provide schools with information on Blue Palo Verde and Saguaro as state tree and flower and encourage their planting on school grounds.

Provide neighboring school districts with information on all chapter activities and encourage teachers to participate in outings and meetings.

Provide information on native plants as food sources especially their historic use by native Americans.

Provide information on Search seeds as historic food sources and in some cases practical water efficient crops for modern times.

Provide information to junior and senior high school students on careers in botany and botany-related fields.

Sponsor botanical drawing contests on state or on chapter level for junior and senior high students.

Kathryn Michel
Education Committee Chairman

Rare Plant Conference

The California Native Plant Society (CNPS), in conjunction with several government agencies, conservation groups and private corporations is sponsoring a conference on the conservation and management of rare and endangered plants.

The conference will be held November 5-November 8, 1986 at the Capital Plaza Holiday Inn, 300 J. Street, Sacramento, Ca.

For more information contact: Dr. Thomas Elias, Program Chairman, Rancho Santa Ana Botanic Garden, 1500 North College Avenue, Claremont, Ca. 91711. Phone 714/625-8767.

Welcome New Members

PHOENIX

Denise Ball
Chris Trask
Bill & Phyllis Weaver
Chris Collard
D. Massion, PhD.
Allan Dunstan
Jenny & Ted Rudberg
Robert Van Laanen

TUCSON

Robert M. Dixon
Michael & Paula Plagens
Stuart Garrett, M.D.
Don Bernant
Mr. William Daily
John & Yvonne Erdrizzi
Howard Lehman
Paul N. Powell
Mirian Finkel
Joel Peterson
Mary Holman
Mary Erickson
Alexander Clay
Mrs. Mary George
Charles Schaughnecy
Helen Corbett
Emily Whitehead
Madelyn Lepp

FLAGSTAFF

Charlotte Minor
Scott Hetzler

SOUTH CENTRAL

Guy Acuff
Dixie Allen
Marci Cassity
Jessie Donahue
Ken Dunning
Ethel Lyman
David & Aggy Mishkin
Ken Taber
Julie & Phil Bond
Bill Feldman
Judith Shappee

YUMA

Judith Lebowski
Richard Robinson
Helen Siler

Chapter Events



Tucson

July 27. Field Trip to Carr Peak, Huachuca Mountains. For details call Stephanie Meyer 296-4385.

Aug 1-2. Tim Clark leads a wildflower expedition into the White Mountains near Greer, Az. For information call Tim at 621-7191 days.

August 16-17. Annual trip to Mount Graham in the Pinaleno Mountains. For information call Stephanie Meyer.

Chapter meets the second Wednesday of the month at 7:30 P.M. at the Tucson Botanical Garden.

Flagstaff

Chapter meets on third Thursday of the month at Flagstaff Adult Center, 7:30 p.m. For information call Dave Haygs 635-9234.

Prescott

The Prescott Chapter is a new edition to our organization. Lets give them our full support by offering our ideas and programs. For information call Robert Mason (w) 778-7202, (h) 778-7592.

South Central

Chapter meets the first Saturday of the month at 10:00 a.m. at the Central Arizona College. For more information contact Bill Kinnison 836-8562 or Mary Lou Durbin 836-2430.

Yuma

Chapter meets on the first Monday, 7:30 p.m. at the Yuma Extension Service Office. For information call Pat Callahan at 627-2773.

Phoenix

Chapter meets the second Monday, 7:30 P.M. in Webster Auditorium of Desert Botanical Garden.

Open House & Plant Sale

Saturday, July 12th
The Arboretum at
Flagstaff
10-4 pm

Interested people can call
774-1441 for directions and details.

Go Chihuahuan!

The Chihuahuan Desert is the largest of the four North American Deserts. The vast Chihuahuan covers the Mexican states of eastern Chihuahua, western Coahuila, San Luis Potosi, southern Nuevo Leon, northeastern Zacatecas, eastern Durango, northeastern Sonora southwestern Texas, southern New Mexico and southeastern Arizona.

The climate and altitude of the Chihuahuan Desert can best be described as hot in summer (40 degrees Centigrade common), cold in the winter (minus 30 degrees centigrade extreme) and high in elevation (400 meters to 1,600 meters). These climatic factors have help evolve a flora of the Chihuahuan Desert that is arid adapted and frost resistant.

On first appearance, the vegetation of the Chihuahuan Desert would only offer ornamental horticulture, the common creosote bush. However, the botanical resources of the vast Chihuahuan Desert region offer ornamental landscape horticulture a wide array of interesting trees, showy shrubs, prolific ground covers, unusual vines, spectacular cacti and luxuriant succulents.

With a growing awareness of the need of arid landscape plant materials in southern Arizona has also come an increased use of ornamental plants of the Chihuahuan Desert. With the periodic cold winters of southern Arizona, many Chihuahuan Desert plants have performed exceptionally well in the landscape. The following is a survey of some ornamental landscape plants of the Chihuahuan Desert.

TREES

Acacia, *Acacia shaffneri* – Shaffner's Acacia. A small spreading shade tree to 7 meters with stiff white spines and globose yellow spring flowers. *Acacia farnesiana* – Sweet Acacia. A shade tree to 10 meters with fine green leaves and yellow spring flowers.

Chilopsis, *Chilopsis linearis* – Desert Willow. A slender, deciduous, narrow leaf tree to 10 meters with pink-purple orchidlike flowers for summer color.

Leucaena, *Leucaena retusa* – Golden Ball Lead Tree. A small tree to 8 meters with small round leaves and showy yellow globose flowers.

Pithecellobium, *Pithecellobium brevifolium (pallens)* – Tenaza. A slender tree to 9 meters with deep green foliage and a silver gray trunk.

SHRUBS

Acacia, *Acacia berlandieri* – Guajillo Acacia. A spreading shrub to 5 meters with delicate fernlike leaves and cream yellow flowers. Excellent for screening.

Buddleia, *Buddleia marrubifolia* – Woolly Butterflybush. A gray velvet leaved shrub to 1 meter with unusual globose orange flowers.

Cassia, *Cassia wislizenii* – Shrubby Cassia. A multi-branched shrub to 3 meters with dense green summer foliage and brilliant yellow flowers.

Cordia, *Cordia parvifolia* – Little-leaf Cordia. An evergreen shrub to about 1 meter with small but prolific white flowers.

Fallugia, *Fallugia paradoxa* – Apache Plume. A straggling shrub to 3 meters with showy white flowers and feathery pink fruits.

Leucophyllum, *Leucophyllum candidum* – Big Bend Silverleaf. A low shrub to a ½ meter with silver foliage and intense purple flowers. "Silver Cloud" is a recently released outstanding form of *Leucophyllum candidum*.

Mimosa, *Mimosa dysocarpa* – Velvet-pod Mimosa. – A fernlike shrub to 2 meters with large flat prickles and showy summer pink flowers.

Rhus, *Rhus microphylla* – Little Leaf Sumac. A clump forming shrub to 5 meters with small green leaves, fragrant flowers and clustering red fruit.

Sophora, *Sophora secundiflora* – Mescal Bean. An evergreen shrub to 10 meters with outstanding fragrant violet-purple flowers and pod-like fruits.

VINES AND GROUNDCOVERS

Dalea, *Dalea argyrea* – Silver Dalea. A low shrubby ground cover with silvery-haired leaves and striking purple flowers.

Zinnia, *Zinnia grandiflora* – Prairie Zinnia. A low ground cover with thin green leaves and bright yellow flowers.

CACTI AND SUCCULENTS

Agave, *Agave lechuguilla* – Lechuguilla. A low-growing, clustering narrow-leaf green agave with striking purple flowering spikes. Closely related to *Agave lophantha* – Crest flowered agave also an excellent landscape agave. *Agave victoriae-reginae* – Royal Agave. One of the best of the genus with dense compact white stripe rosettes.

Hechtia, *Hechtia scariosa* – Gray Hechtia. A leaf gray spiny succulent of the pineapple family with pink flowers. *Hechtia texensis* is a similar species with larger rosettes is also in cultivation.

Hesperaloe, *Hesperaloe parvifolia* – Red Hesperaloe. A narrow green grass-like leaf succulent with reddish pink flowering spikes. *Hesperaloe funifera* with white flowers is also a worthwhile landscape plant.

Nolina, *Nolina microcarpa* – Beargrass. A large grasslike green leaf succulent forming large clumps with white flowering spikes.

Compiled by Kent C. Newland
Horticulturist
Boyce Thompson Southwestern Arboretum