

The Plant Press

THE ARIZONA NATIVE PLANT SOCIETY

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New Plant Issues Emerge at Annual Meeting

One evening last January, 14 ANPS board members gathered around a conference table to discuss various themes for this year's annual fall meeting. At the end of the evening the theme chosen was "Arizona's Rivers and Wetlands." Who could have predicted in January that shortly before the annual meeting (held in Sierra Vista on September 21st and 22nd), the plants of Arizona's Rivers and Wetlands would fall subject to a new threat. Not a concrete or tangible threat from development, pilferage, off-highway vehicles, or over-grazing, but rather a threat from the pen and ink of a new federal document.

Federal Register Vol. 56, released August 14, 1991, proposes that more rigorous criteria be used to delineate wetlands in the new *Federal Manual for Delineating Wetlands*. The new criteria, if adopted, could remove many—perhaps even most—areas in our State from qualifying as wetlands and in so doing would deprive them of certain protections they now receive as wetlands under section 404 of the Clean Water Act. This wetlands criteria issue was introduced as a last minute addition to the annual meeting agenda (See page 10, "The Conservation Page," to learn more).

"Arizona's Rivers and Wetlands'" speaker presentations at the meeting were "Riparian Arizona in the 16th Century," by Dr. Richard Felger; "Riparian Forest Ecology and Conservation," by Dr. Julie Stromberg; "Restoring Riparian Vegetation" by Karen Reichhardt; "Ways to Protect and Restore Rivers," by Eva Patten; and "The San Pedro Riparian Area," by Dave Krueper of the BLM.

Linda Brewer and Scott Wilkins were voted in as new members to the ANPS Board of Directors at the meeting.

Also on the agenda was a tour of historic San Pedro House and a short walk along the San Pedro River followed by a catered supper and "The Seasons of Ramsey Canyon," a music-enhanced video/slide show by Robert and Patricia Day. Hikes to Garden Canyon, Ramsey Canyon, Canelo Hills/Patagonia Preserves, and the San Pedro were options for the following day.

There was an exciting spirit of cooperation between ANPS members and agency representatives at this meeting. Particularly encouraging were the remarks of Jim McGinnis of the newly reorganized Arizona Department of Agriculture. McGinnis described the Department's implementation of the Native Plant Law and delivered the welcome news that the Department has applied for federal funds (under Section 6 of the Endangered Species Act) to improve data collection for native plants in Arizona. In retrospect, this year's annual meeting may come to be seen as the beginning of a new and broader forum for the preservation of Arizona's native flora.

The 1991 annual meeting was masterfully organized by ANPS Board Member Nancy Stallcup. We have her to thank for this educational and uplifting event. Thanks are also due to Nancy and Larry Stallcup for extending personal hospitality to all who attended, and to Bill Feldman and Barbara Tellman for their work on the program agenda. □



**Wildflower Brochure
Has Arrived!**
(see page 4.)

Notes from the President

Fall greetings to you all. I hope that you had a good and enjoyable summer. Once more, we have been reminded of what it really means to live in an arid region—generally sparse, highly variable rainfall, variable both in time and in space. Human beings and their institutions are also prone to variation and change over time, as current events in the perhaps soon-to-be-former U.S.S.R. have shown. A little closer to home are recent changes in the structure and management of the Arizona Department of Agriculture (ADA), in particular those changes that bear on the future of the Arizona Native Plant Law. As of January 1, 1991, the ADA officially came into being under the leadership of its first Director, Mr. Keith Kelly.

Our new Agriculture Department includes the Arizona Commission of Agriculture and Horticulture, which has as one of its primary responsibilities the administration of the Arizona Native Plant Law. This far reaching and forward looking legislation was revised extensively during the 1989 legislative session. The drafting of the revision was carried out by a committee of citizens comprised of representatives from government, industry, agriculture, public horticulture, environmental groups (including ANPS President Karen Reichhardt) and interested laypersons. The re-drafting process was arduous, exhaustive and highly political. The resulting Native Plant Law has been both praised as visionary and damned as unenforceable. I, for one, feel that it is most praiseworthy indeed and that it is both legally enforceable and achievable in terms of its goals.

The key to both of these virtues is the attitude and commitment of the ADA. With the recent formation of a Technical Advisory Board, as mandated by the Native Plant Law, Director Kelly has shown by action that he is committed to achieving the intent of the new law. Mr. Kelly has appointed Mr. Jim McGinnis to oversee the implementation of the NPL and related areas of native plant protection. Agriculture and Horticulture Commission staff with longstanding NPL involvement report a new departmental spirit of interest in and sympathy with the intent of the law.

All of this is very promising, but it will still require increased human and financial resources for the proper administration and enforcement of the NPL. At some point in the future the ADA may very well need our help to speak up as citizens for the provision of such resources. In addition, we in the ANPS can help by interpreting, clarifying, and demystifying the intent and provisions of the NPL to the general public. Finally, on the enforcement end, we should be vigilant as regards violations of the law that we may witness or become aware of, and should report such violations to law enforcement or ADA personnel. □

Bill Feldman

**Heartfelt thanks to Chris Renner
for organizing the successful
1991 Chiricahua Mountain Workshop**

Editor's Desk

As I write this "Editor's Desk" column, my thoughts are on the 63 people who attended the annual Labor Day ANPS Chiricahua Mountain Workshop. Regrettably, I was not among them.

I was not among those who witnessed the mixed blessing of heavy rain as the activities began on Friday afternoon, and then enjoyed refreshed air and a fragrant forest throughout the rest of the weekend. I wasn't there to marvel at the bounty of this year's mushrooms and late summer wildflowers, nor there to go spelunking through Crystal Cave. Nor was I there to feel the hospitality of the Research Station staff and taste their now legendary "Corpse Reviver" cookies. But of greater concern as editor, I was not there to meet other members, learn about their interests and talents, and encourage their submissions to *The Plant Press*.

One of my editorial goals has been to publish original articles, photos and illustrations—coming largely from within the society—that reflect the knowledge and talent of our members. This goal has been achieved in every issue published, though it has required continuous effort. Thus, when I miss an opportunity like the one at the Chiricahua Workshop, I do regret it.

Those of you who *were* there can help me regret it less. Capture the enthusiasm you felt for the teaching and learning that took place at the workshop, transfer it onto paper, find an envelope and one of those 29-cent aberrations of the 1 oz. postage stamp, and drop it in the mail!

Another goal of mine has been to build a file of articles and illustrations as a base for future issues. Compiling a balanced and attractive newsletter is a much easier task when there is a selection of material from which to choose. I haven't yet sustained this second goal, though perhaps my successor will.

Yes, I did say "successor." A new full-time job in my work life may soon make it difficult to continue on as editor. I greatly enjoy working on *The Plant Press*, and I'm not resigning just yet; but if someone were to have an interest in taking over the editorship, I'd now welcome that interest. And I'd hope to have compiled a file of articles and illustrations to pass along as start-up material. I'm therefore appealing to all readers to send in those illustrations, photos, articles, and plant lists that will help build a base for the future of *The Plant Press*. Let's have our newsletter reflect all that we are! □

Karen Enyedy Breunig

The Native Landscaper:

Introductions of Little Known and Seldom Grown Species

Blue Yucca: by Greg Starr

Nomenclature: *Yucca rigida*, Blue Yucca; Family Liliaceae

Description: A tall, trunk-forming species which grows to 5 meters high (16½ ft.). The few branches develop in the upper one-third of the plant. Individual leaves are powder blue with yellow margins; they are rigid with sharp tips and measure up to 1 meter long (3¼ ft.) and 2.5 cm (1 in.) wide. Old leaves dry and remain on the trunk. In summer, compound panicles of white flowers appear above the leaf crown. Woody capsules are 3-7 cm long (1-3 in.) and 1.5-2.5 cm wide (½-1 in.), brown or tan, and dehisce from the apex to the base.

Habitat and Distribution: Occurs on rocky hillsides and bajadas in Chihuahuan Desert scrub and semi-desert grasslands of the Chihuahuan Desert Region. Found at altitudes of about 1,000-1,700 meters (3,300-5,500 ft.) with *Larrea divaricata* (Creosote), *Leucophyllum candidum* (Texas Ranger), *Cassia* sp., *Agave striata*, *Lycium* sp. (wolfberry or tomatillo) in the Mexican states of Chihuahua, Durango, Zacatecas and Coahuila. Annual precipitation varies from about 200-300 mm (8-12 in.).

Propagation, Cultural Requirements, and Maintenance: Blue Yucca is easily propagated by seed. One-gallon size plants can be obtained in two years from seed. Plants can be grown in pots in light shade or full sun once they reach one-gallon size. Blue Yucca is cold hardy to at least -12°C (10°F) and possibly lower. In the landscape, plants should be placed in full sun and given periodic, thorough waterings during summer, although plants will survive on 10-12 inches of annual rainfall. Blue Yucca grows well in most soils as long as there is good drainage. Large planting holes and improved soil are not necessary because Blue Yucca is well adapted to soils of the desert southwest. Old leaves are persistent on the trunk and need not be removed. One potential problem is a susceptibility to grubs which damage roots and eat the stem from below the ground.

Landscape Application: *Yucca rigida* is an excellent accent plant which can be used in the transition and desert zones of a xeriscape. This Yucca is as much at home when planted with the white-leaved *Leucophyllum candidum* as it is when planted with the rich green color of *Larrea divaricata*. Fast growth, low care, and increasing availability make Blue Yucca a good candidate for residential and commercial landscapes.

Comments: Blue Yucca is an attractive plant that deserves more attention from landscape professionals as well as homeowners. The powder blue leaves blend well with many other desert landscape plants. When placed in the proper location, plants achieve a striking form. Care should be taken not to plant near high traffic areas because, as the name implies, the leaves are quite rigid. *Yucca rigida* is closely related to *Yucca rostrata* which differs in having thinner, shorter, more flexible leaves. *Y. rostrata* has similar landscape

applications and may become more widely available in the future.

References: Standley, P.C. 1920-26. *Trees and Shrubs of Mexico*. Contributions from the United States National Herbarium. Volume 23, parts 1-5. □

Greg Starr was the ANPS Tucson Chapter president from 1981-83. He has a B.S. and M.S. in Horticulture from the University of Arizona and is the owner of Starr Nursery in Tucson, which specializes in southwestern native plants from desert regions.

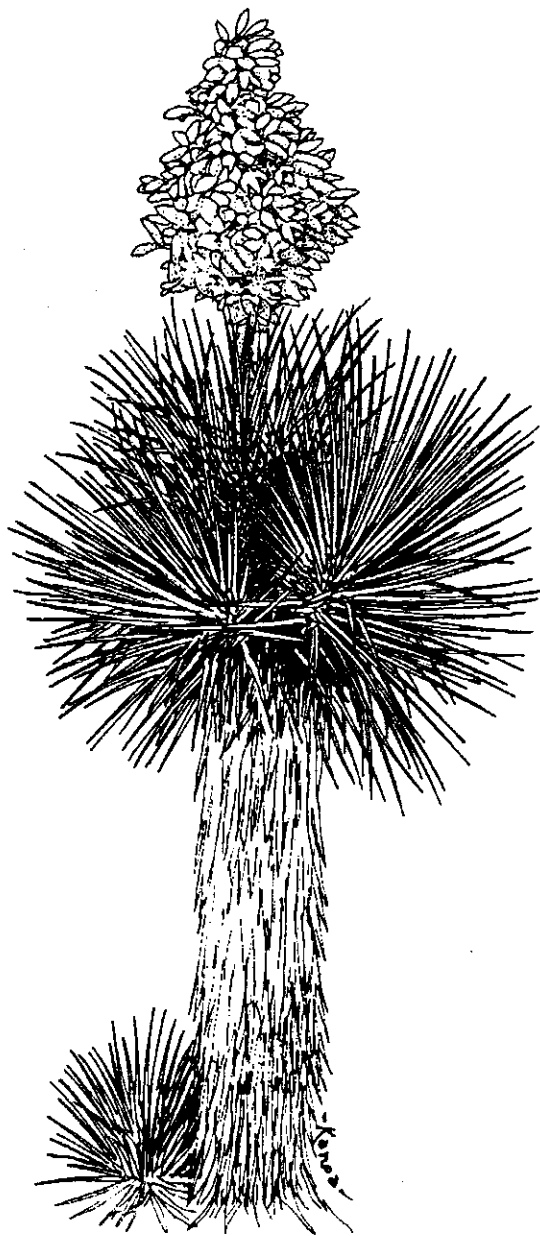


Illustration by Kanoa

ANPS member "Kanoa" (Kim Duffek) is a free-lance illustrator and wildlife artist in Tucson.

Mushrooms and Truffles of the Southwest, by Jack S. States, Tucson: University of Arizona Press, 1990. (Published with the assistance of the Transition Zone Horticultural Institute, Inc., The Arboretum at Flagstaff.)

Dr. Jack States, Professor of Botany at Northern Arizona University, has broken new ground with the publication of the first book focusing on mushrooms and other fungi of the Southwest. It's geographic area is primarily Arizona and New Mexico, with the southern parts of Colorado, Nevada, and Utah also included. The introductory chapters are well written and concise, offering information for both novices and seasoned fungi aficionados.

The book's format combines the best features of mushroom texts, with their extensive keys, and the best features of popular picture identification books. A basic key directs the reader to the correct mushroom family where picture guides, with excellent color photographs, are arranged in alphabetic order by genus and species. A description accompanies each photo, giving its pertinent species characteristics, information on its habitat, season of fruiting, edibility, and toxicity. A picture key to the major groups of fungi, consisting of excellent line drawings, accompanies the narrative key. One of the nice features of the descriptions is that numerous other texts are referenced for those wishing to delve deeper into the study of mushrooms.

It is unusual in a book of this type to see such extensive coverage of truffles, although this is not a surprise considering that they comprise one of Dr. States's areas of expertise. Slime molds and lichens are also included, in brief chapters, with additional references for those whose interest is piqued.

Here's the really good news—the price is only \$9.95 in paperback (\$19.95 cloth bound), a real bargain for a book printed on quality paper with lots of color photographs! *Mushrooms and Truffles of the Southwest* received a "trail test" at the ANPS Chiricahua Workshop, where Susan Fleming and Dr. Harry Thiers led the annual mushroom walk. □

Feature editor Susan Husband reviewed this issue's "Pressed Pages" selection in conjunction with Susan Fleming, an amateur mycologist.

Fall Plant Sale Schedule

Arboretum at Flagstaff	December 14
Herb (and herb crafts) Sale	10:00 a.m.–2:00 p.m.
Arizona-Sonora Desert Museum	Nov. 2 & 3
Desert Harvest Celebration	9:00 a.m.–4:00 p.m.
Boyce Thompson Southwestern Arboretum	November 9 & 10
Fall Landscaping Festival	8:00 a.m.–5:00 p.m.
Desert Botanical Garden	Oct. 18, 19 & 20
Member's Preview Sale	Oct. 18; 3:00–6:00 p.m.
Fall Plant Sale	Oct. 19 & 20; 9:00 a.m.–5:00 p.m.
Desert Survivors	October 12 & 13
Tucson Botanical Gardens	October 5 & 6
Members Preview	October 5; 8:00–10:00 a.m.
Public Sale	October 5; 10:00 a.m.–4:00 p.m. October 6; 10:00 a.m.–2:00 p.m.

Wildflower Brochure in Print

by Jane Evans

The Urban Landscape Committee has been at it again, preparing "Desert Wildflowers," the fourth in a series of ANPS brochures on landscaping with desert plants. This brochure has been designed to provide helpful information for gardeners of various levels of expertise. For those who are just beginning, it provides planting times and techniques. For those with more experience, it includes a list of wonderful wildflowers with difficult cultural requirements, or in some cases with unknown cultural requirements! Thanks to the hard work of brochure editor Rita Anthony, and all of the committee members, the ambitious target publication date of September, 1991 was met and the brochure is now available — in time for everyone to purchase a copy, locate some wildflower seed, and plant a favorite plot of ground this fall. To purchase the "Desert Wildflowers" brochure send \$2.00 for each copy requested, along with your name and address complete with city, state and zip code to: Arizona Native Plant Society, P.O. Box 41206, Tucson, AZ 85717. Other brochures available, also at \$2.00 each, are "Desert Trees," "Desert Shrubs," and "Desert Groundcovers and Vines." Happy Planting! □

PROVISIONAL FLORA OF GARDEN CANYON

Compiled by Nancy Stallcup**

Garden Canyon is on the military reservation of Ft. Huachuca, in the Huachuca Mountain Range of Cochise County, near Sierra Vista, Arizona. To visit Garden Canyon one must first check with Ft. Huachuca Range Control (Phone 602-538-8740) to be sure the canyon is open, as it borders the Post Firing Range and is sometimes closed for military exercises. Three miles of dirt road and 1½ miles of paved road run through Garden Canyon.

**Assistance with this list was given by Meg Quinn, Horace Miller, Rebecca Van Devender, Dr. Steven McLaughlin, Janice Bowers, Dr. George Yatskievych, Dr. Don Pinkava and Dr. Corinna Gries.

HERBACEOUS PLANTS

AMARANTHACEAE

Froelichia arizonica

Gomphrena nitida

Iresine heterophylla

ASCLEPIADACEAE

Asclepias angustifolia

Asclepias elata

Asclepias lemmoni

Asclepias nummularia

Asclepias quinqueidentata

Asclepias subverticillata

Asclepias tuberosa

BORAGINACEAE

Lithospermum cobrense (?)

Lithospermum multiflorum

CAMPANULACEAE

Lobelia anatina

Lobelia cardinalis

CAPRIFOLIACEAE

Lonicera arizonica

CARYOPHYLLACEAE

Arenaria

Silene laciniata ssp. *greggii*

CHENOPODIACEAE

Chenopodium graveolens

COMMELINACEAE

Commelina erecta & *dianthifolia*

Tradescantia pinetorium

COMPOSITAE

Artemesia dracuncululus

Artemisia ludoviciana

Aster (lemmoni) potosinus

Baccharis neglecta

Baccharis thesioides

Bahia dissecta

Berlandiera lyrata

Bidens aurea

Bidens bipinnata

Bidens heterosperma

Bidens lemmoni (leptocephala?)

Bidens pilosa

Brickellia betonicaefolia

Brickellia californica

Brickellia chlorolepis (Kuhnia rosmarinifolia)

Brickellia floribunda

Brickellia grandiflora

Carminatia tenuiflora

Carphochaete bigelovii

Centaurea rothrockii

Chrysothamnus nauseosus
var. *latisquamis*

Cirsium arizonicum

Cirsium neomexicanum

Cirsium wheeleri

Conyza sophiaefolia

AMARANTH FAMILY

Snake Cotton

Blood leaf

MILKWEED FAMILY

Western Whorled milkweed

Butterfly weed

BORAGE FAMILY

Gromwell/Puccoon

Many flowered Gromwell

BELLFLOWER FAMILY

Mt. Lobelia

Cardinal flower

CAPER FAMILY

Arizona Honeysuckle

PINK FAMILY

Sandwort

Mexican Champion

GOOSEFOOT FAMILY

Goosefoot/Pigweed

SPIDERWORT FAMILY

Dayflower

Spiderwort

SUNFLOWER FAMILY

Sage

White Sage

Lemmon Aster

Yellow ragweed

Greeneyes/Chocolate F.

Cosmos parviflorus

Dyssodia papposa

Erigeron divergens

Erigeron flagellaris

Erigeron neomexicanus

Erigeron rothrockii

Eupatorium herbaceum

Gaillardia pinnatifida

Galinsoga parviflora

Gnaphalium chilense

Gnaphalium leucocephalum

Gnaphalium pringlei

Gnaphalium wrightii

Gutierrezia sarothrace

Gutierrezia wrightii

Gymnosperma glutinosum (Selloa glutinosa)

Helianthus annuus

Heliopsis parvifolia

Heterosperma pinnatum

Heterotheca psammophila

Hieracium lemmoni

Hieracium pringlei

Lactuca graminifolia

Machaeranthera pinnatifida ssp.
pinnatifida

Melampodium hispidum/strigosum

Melampodium longicorne

Pectis filipes

Perityle coronopifolia

Sanvitalia abertii

Schkuhria wislizenii

Senecio douglasii, var. logilobus

Senecio neomexicanus

Solidago missouriensis

Solidago sparsiflora & wrightii

Sonchus sp

Stephanomeria sp

Stevia micrantha

Stevia serrata

Tagetes lemmoni

Tagetes micrantha

Taraxacum officinale

Trixis californica

Verbesinia longifolia

Viguiera annua, dentata

Xanthium strumarium

Xanthocephalum gymnospermoides

Xanthocephalum wrightii

Zexmenia podocephala

Zinnia grandiflora

Zinnia (multiflora) peruviana

CONVOLVULACEAE

Convolvulus equitans

Evolvulus arizonicus

Ipomoea barbatisepala

Ipomoea coccinea

Ipomoea costellata

Cosmos

False Dog Fennel

Fleabane

Gaillardia

Quick weed

Cud weed

Cud weed

Sunflower

Oxeye

Camphor weed

Hawkweed

Lettuce

Spiny Haplopappus

Rock daisy

Threadleaf

Threadleaf groundsel

Goldenrod

Goldenrod

Sow Thistle

Wire Lettuce

Lemmon Marigold

Common dandyion

Crown Beard

Golden eye

Common coglebur

Broomweed

Prairie zinnia

MORNING GLORY FAMILY

Bindweed

Arizona Blue eyes

Scarlet creeper

Morning glory

<i>Ipomoea hederacea</i>	Morning glory	<i>Phaseolus heterophyllus/Macroptilium gibbosifolium</i>	
<i>Ipomoea leptotoma</i>	Hairy Bird's Foot	<i>Phaseolus ritensis</i>	
<i>Ipomoea plummerae</i>		<i>Psoralea tenuiflora</i>	Scurf pea
<i>Ipomoea tenuiloba</i> var. <i>lemmoni</i>		<i>Rhynchosia texana</i>	Rosary bean
CUCURBITACEAE	GOURD FAMILY	<i>Senna hirsuta</i> var. <i>glaberrima</i>	Slim Pod Senna
<i>Cucurbita foetidissima</i>	Buffalo gourd	(previously <i>cassia leptocarpa</i>)	
CRASSULACEAE	ORPINE FAMILY	<i>Tephrosia thurberi</i>	
<i>Sedum cockerellii</i>	Stoncrop	<i>Trifolium amabile</i>	Clover
CRUCIFERAE	MUSTARD FAMILY	<i>Vicia exigua, leucophaea, pulchella</i>	Vetch
<i>Descurainia pinnata</i>	Tansy mustard	LILIACEAE	LILY FAMILY
<i>Erysimum asperum</i>	Wallflower	<i>Allium cernuum</i>	Nodding onion
<i>Lepidium</i> sp	Peppergrass	<i>Allium glandulosum</i> (?) (<i>plummarae</i> ?)	Wild onion
<i>Pennellia micrantha</i>		<i>Anthericum torreyi</i> ¹	Crag/amber lily
<i>Sisymbrium/Thelypodopsis linearifolium</i>	Pink Windmills	<i>Milla biflora</i>	Mexican star
EUPHORBIACEAE	SPURGE FAMILY	LINACEAE	FLAX FAMILY
<i>Acalypha lindheimeri</i>	Three Seeded Mercury	<i>Linum lewisii</i> Lewis	Blue flax
<i>Euphorbia alta, bilobata,</i>		<i>Linum neomexicanum</i>	NM flax
<i>chamaesula, dentata, exstipulata</i>		LYTHRACEAE	LOOSESTRIFE FAMILY
<i>Euphorbia heterophylla,</i>		<i>Cuphea wrightii</i>	
<i>hysopifolia, lurida, plummerae</i>		<i>Lythrum californicum</i>	Purple Loosestrife
<i>Euphorbia revoluta, serpyllifolia, vermiculata</i>		LOASACEAE	STICKLEAF FAMILY
<i>Jatropha macrorhiza</i>		<i>Mentzelia texana/asperula</i>	Blazing star
<i>Tragia nepetaefolia</i>	Stinging Nettle	MALVACEAE	MALLOW FAMILY
GENTIANACEAE	GENTIAN FAMILY	<i>Anoda cristata</i>	
<i>Gentianella detonsa, ssp superba</i>		<i>Sida abutilifolia/procumbens, neomexicana</i>	
(<i>gentiana grandis</i>)		<i>Sphaeralcea fendleri</i>	Fendler Globe mallow
<i>Gentianella microcalyx</i>		NYCTAGINACEAE	FOUR O'CLOCK FAMILY
GERANIACEAE	GERANIUM FAMILY	<i>Boerhaavia coccinea, purpurascens</i>	Red Spiderling
<i>Geranium caespitosum</i>		<i>Mirabilis longiflora</i>	Sweet Four O'clock
<i>Geranium wislizeni</i>		<i>Oxybaphus comatus</i> (?)	
HYPOXIDACEAE	Wild geranium	ONAGRACEAE	EVENING PRIMROSE FAMILY
<i>Hypoxis mexicana</i>	Gold Eye Grass	<i>Calylophus toumeyii</i>	Sundrops
IRIDACEAE	IRIS FAMILY	<i>Epilobium tiliatum</i>	
<i>Nemastylis tenuis</i>	Cienega Ghost Iris	<i>Gaura gracilis</i>	Gaura
<i>Sisyrinchium demissum</i> v. <i>amethystinum</i>	Blue-eyed Grass	<i>Oenothera hookeri</i>	Hooker's Eve. Primrose
LABIATAE	MINT FAMILY	<i>Oenothera primiveris</i>	
<i>Agastache barberi</i>	Giant Hyssop	<i>Oenothera rosea</i>	Rose sundrop
<i>Hedeoma dentatum</i>		ORCHIDACEAE	ORCHID FAMILY
<i>Hedeoma drummondii</i>		<i>Malaxis corymbosa</i>	
<i>Hedeoma hyssopifolium</i>	Mock-pennyroyal	<i>Malaxis soulei</i>	Mt. Malaxis
<i>Monarda austromontana</i>		OROBANCHACEAE	BROOM RAPE FAMILY
<i>Monarda menthaefolia</i>	Beebalm	<i>Orobanche multiflora</i>	Broom Rape
<i>Salvia arizonica</i>		OXALIDACEAE	WOOD SORREL FAMILY
<i>Salvia lemmoni</i>		<i>Oxalis albicans</i>	Yellow Wood Sorrel
<i>Slavia subincisa</i>		<i>Oxalis decaphylla/grayii</i>	Gray's Sorrel (pink)
<i>Scutellaria drummondii</i> (?)*	Drummonds skullcap	PAPAVERACEAE	POPPY FAMILY
<i>Scutellaria tessellata</i>		<i>Argemone</i> sp	Prickle poppy
<i>Stachys coccinea</i>		PLANTAGINACEAE	PLAINTAIN FAMILY
<i>Trichostema arizonicum</i>	Texas Betony	<i>Plantago hirtella, major</i>	
LEGUMINOSAE	Arizona Blue Curls	POLEMONIACEAE	PHLOX FAMILY
<i>Astragalus bigelovii, nothoxys</i>	Locoweed	<i>Ipomopsis macombii</i> (?)	Gilia
<i>Calliandra humilis</i> var. <i>reticulata</i>		<i>Ipomopsis thurberi</i>	Thurber's Gilia
<i>Cologania angustifolia, lemmoni</i>		POLYGALACEAE	MILK WORT FAMILY
<i>Cracca edwardsii</i>		<i>Monnina wrightii</i>	
<i>Crotalaria pumila, sagittalis</i>	Rattlebox	<i>Polygala alba</i>	Milkwort
<i>Dalea albiflora</i>		<i>Polygala obscura</i>	
<i>Dalea filiformis, grayi, leporina</i>	Pea bush	POLYGONACEAE	BUCKWHEAT FAMILY
<i>Desmodium arizonicum</i>	Tick clover	<i>Erigonum polycladon</i>	Sorrel buckwheat
<i>Desmodium batocaulon, cinerascens, grahamii, rosei</i>		<i>Eriogonum wrightii</i>	Buckwheat
<i>Galactia wrightii</i>		<i>Polygonum lapathifolium</i>	Willow smartweed
<i>Lotus greenii</i>	Lotus/Deer vetch	PORTULACACEAE	PORTULACA FAMILY
<i>Medicago lupulina</i>	Black medick	<i>Talinum paniculatum</i>	Pink baby breath
<i>Melilotus</i> sp (?)	Yellow Sweet clover	PRIMULACEAE	PRIMROSE FAMILY
<i>Mimosa grahamii</i>		<i>Samolus vagans</i>	
<i>Petalostemum exile</i>	Prairie clover	RANUNCULACEAE	CROWFOOT FAMILY
<i>Phaseolus acutifolius</i>		<i>Aquilegia chrysantha</i>	Yellow Columbine

Delphinium andesicola, scopulorum

Thalictrum fendleri

ROSACEAE

Potentilla thurberi

RUBIACEAE

Crusea subulata

Diodia teres

Galium aparine

Galium wrightii var. rothrockii

Houstonia wrightii

Mitracarpus breviflorus

SAXIFRAGACEAE

Heuchera sanguinea

SCROPHULARIACEAE

Brachystigma wrightii

Castilleja integra, laxa, tenuiflora

Linaria texana

Maurandya antirrhiniflora

Mimulus cardinalis

Mimulus floribundus

Mimulus guttatus

Mimulus rubellus

Penstemon barbatus

Penstemon stenophyllus

Verbascum virgatum

Verbascum thapsus

Veronica americana

SOLANACEAE

Datura wrightii

Nicotiana trigonophylla

Physalis Hederacifolia

Solanum douglasii

Solanum elaeagnifolium

Solanum jamesii

Solanum rostratum

UMBELLIFERAE

Eryngium heterophyllum

Eryngium lemmoni

Lilaeopsis schaffneriana, ssp. recurva

Pseudocymopterus montanus

VALERIANACEAE

Valeriana sorbifolia

VERBENACEA

Verbena bipinnatifida²

Verbena carolina

Verbena neomexicana

VIOLACEAE

Hybanthus attenuatus

Viola nephrophylla

VITACEAE

Parthenocissus vitacea

Vitis arizonica

ZYGOPHYLLACEAE

Kallstroemia parviflora

SUCCULENTS

AGAVACEAEA

Agave palmeri

Agave parryi, var. huachuensis

Dasyliirion wheeleri

Nolina microcarpa

Yucca schottii

CACTACEAE

Echinocereus rigidissimus

Echinocereus triglochidiatus,

var. melanacanthus

Larkspur

Meadow rue

ROSE FAMILY

Crimson Cinquefoil

MADDER FAMILY

Rough buttonweed

Common Bed Straw

Houstonia

SAXIFRAGE FAMILY

Coral Bells

FIGWORT FAMILY

Indian Paintbrush

Toadflax

Little Snapdragon vine

Red Monkey flower

Yellow Monkey flower

S.W. Beardtongue

Penstemon

Moth Mullein

Common Mullein

American brookline/Speedwell

NIGHTSHADE FAMILY

Sacred Datura

Desert Tobacco

Ground Cherry

Silverleaf Nightshade (horse nettle)

Buffalo Bur

PARSLEY FAMILY

Mexican Thistle

Button Snakeroot

Mt. Parsley

VALERIAN FAMILY

Valerian

EVERVAIN FAMILY

Sm. flowered Verbena

Vervain

VIOLET FAMILY

Green violet

Violet

GRAPE FAMILY

Virginia Creeper

Canyon Grape

CALTROP FAMILY

GAVE FAMILY

Palmer Agave

Huachuca Agave

Sotol

Bear grass

Hairy Yucca

CACTUS FAMILY

Rainbow cactus

Claret-cup hedgehog

WOODY SHRUBS

ANACARDIACEAE

Rhus choriophylla

Rhus glabra

Rhus radicans

Rhus trilobata

BERBERIDACEAE

Berberis wilcoxii

CORNACEAE

Cornus sericea

ERICACEAE

Arctostaphylos pungens

GARRYACEAE

Garrya wrightii

LEGUMINOSAE

Amorpha fruticosa, var. occidentalis

Erythrina flabelliformis

Mimosa biuncifera

Mimosa dysocarpa

Robinia neomexicana

RHAMNACEAE

Ceanothus fendleri

Rhamnus betulaeifolia

Rhamnus californica

ROSACEAE

Cercocarpus montanus

Cowania stansburiana³

Prunus serotin ssp. virens

RUBIACEAE

Bouvardia glaberrima

RUTACEAE

Ptelea angustifolia

SALICACEAE

Salix lasiolepis

SAXIFRAGACEAE

Fendlera rupicola

TREES

ACERACEAE

Acer grandidentatum

BIGNONIACEAE

Chilopsis linearis

CUPRESSACEAE

Cupressus arizonica

Juniperus deppeana

ERICACEAE

Arbutus arizonica

FAGACEAE

Quercus arizonica

Quercus emoryi

Quercus gambelii

Quercus hypoleucoides

JUGLANDACEAE

Juglans major

OLEACEAE

Fraxinus velutina

PINACEAE

Pseudotsuga menziesii

Pinus discolor

Pinus engelmannii

Pinus leiophylla var. chihuahana

Pinus ponderosa var. arizonica

PLATANACEAE

Platanus wrightii

SALICACEAE

Populus fremontii

Salix goodingii

CASHEW FAMILY

Mearns Sumac

Smooth sumac

Squaw Bush

BARBERRY FAMILY

Barberry/Mahonia

DOGWOOD FAMILY

Red Osier Dogwood

HEATHER FAMILY

Manzanita

SILK TASSEL FAMILY

Silk Tassel

PEA FAMILY

Bastard Indigo

Southwestern Coralbean

Cat claw Mimosa

Gatuno/Velvet pod

NM Locust

BUCKTHORN FAMILY

Buckbrush

Buckthorn

CA Buckthorn

ROSE FAMILY

Mt. Mahogany

Cliff Rose

Southwestern Chokecherry

MADDER FAMILY

Scarlet Bouvardia

RUE FAMILY

Hop Tree

WILLOW FAMILY

Arroyo Willow

SAXIFRAGE FAMILY

False Mock Orange

MAPLE FAMILY

Bigtoothed Maple

BIGNONIA FAMILY

Desert Willow

CYPRESS FAMILY

Arizona Cypress

Alligator Juniper

HEATHER FAMILY

Arizona Madrone

BEECH FAMILY

Arizona White Oak

Emory Oak

Gambel Oak

Silverleaf Oak

WALNUT FAMILY

Arizona Walnut

OLIVE FAMILY

Velvet Ash

PINE FAMILY

Douglas Fir

Border Pinyon Pine

Apache Pine

Chihuahua Pine

Ponderosa Pine

PLANE TREE FAMILY

Arizona Sycamore

WILLOW FAMILY

Fremont Cottonwood

Goodding Willow

GRASSES

Following is primarily Horace Miller's list from 1986 and 1987, with recent additions from others.

GRAMINEAE

<i>Aegopogon tenellus</i>	
<i>Agropyron/Elymus arizonicum</i>	Arizona Wheat grass
<i>Agropyron spicatum</i>	Bluebench Wheat grass
<i>Agrostis alba</i>	
<i>Agrostis exarata</i>	Spike Bent grass
<i>Agrostis semiverticillata</i>	Water Bent
<i>Agrostis stolonifera</i>	Red Top
<i>Andropogon gerardi</i> ¹	Big Bluestem
<i>Aristida adscensionis</i>	Six weeks Three-Awn
<i>Aristida arizonica</i>	Arizona Three-Awn
<i>Aristida orcuttiana</i>	Beggar-Tick Three-Awn
<i>Bothriochloa barbinodis</i>	Cane Beardgrass
<i>Bouteloua curtipendula</i>	Side-Oats Grama
<i>Bouteloua gracilis</i>	Blue Grama
<i>Bouteloua hirsuta</i>	Hairy Grama
<i>Bouteloua radicata</i>	Purple Grama
<i>Bromus carinatus</i>	California Brome
<i>Bromus ciliatus</i>	
<i>Bromus frondosus</i>	
<i>Bromus inermis</i>	Smooth Brome
<i>Bromus marginatus</i> ²	Mountain Brome
<i>Bromus richardsonii</i>	
<i>Cenchrus insertus</i>	Field Sandbur
<i>Chloris virgata</i>	Feather Fingergrass
<i>Dactylis glomerata</i>	Orchard grass
<i>Digitaria sanguinalis</i>	Common Crabgrass
<i>Echinochloa crusgalli</i>	Barnyard grass
<i>Elymus canadensis</i>	Canada Wildrye
<i>Eragrostis chloromelas</i>	
<i>Eragrostis var. conferta</i>	Boer Lovegrass
<i>Eragrostis cilianensis</i>	Stink grass
<i>Eragrostis curvula</i>	Weeping Lovegrass
<i>Eragrostis intermedia</i>	Plains Lovegrass
<i>Eragrostis lehmanniana</i>	Lehman Lovegrass
<i>Eragrostis mexicana</i>	Mexican Lovegrass
<i>Eriochloa acuminata</i>	Cup grass
<i>Hackelochloa granularis</i>	
<i>Heteropogon melanocarpus</i>	Sweet Tanglehead
<i>Koeleria pyramidata</i>	June grass
<i>Leptochloa dubia</i>	Green Spangletop
<i>Lolium multiflorum</i>	Italian Ryegrass
<i>Lolium perenne</i>	Perennial Ryegrass
<i>Lycurus setosus</i>	Wolftail grass
<i>Muhlenbergia emersleyi</i>	Bullgrass
<i>Muhlenbergia glauca</i>	
<i>Muhlenbergia goodingii</i>	
<i>Muhlenbergia longiligula</i>	Long-tongue Muhly
<i>Muhlenbergia minutissima</i>	
<i>Muhlenbergia montana</i>	Mountain Muhly
<i>Muhlenbergia monticola</i>	Mesa Muhly
<i>Muhlenbergia pauciflora</i>	New Mexican Muhly
<i>Muhlenbergia polycaulis</i>	Cliff Muhly
<i>Muhlenbergia rigens</i>	Deer grass
<i>Muhlenbergia rigida</i>	Purple Muhly
<i>Panicum bulbosum</i>	Bulb Panicum
<i>Panicum capillare</i>	Witch grass
<i>Panicum hirticaule</i>	
<i>Panicum obtusum</i>	
<i>Piptochaetium fimbriatum</i>	Pinyon Ricegrass

GRASS FAMILY

<i>Poa fendleriana</i>	Mutton grass
<i>Polypogon interruptus</i>	Ditch polypogon
<i>Schizachyrium hirtiflorum</i>	
<i>Setaria grisebachii</i>	Grisebach Bristlegrass
<i>Setaria viridis</i>	Green Bristlegrass
<i>Sorgham halepense</i>	Johnson grass
<i>Sphenopholis obtusata</i>	Wedge grass
<i>Sporobolus wrightii</i>	Sacaton
<i>Stipa pringlei</i>	Pringle Needle grass
CYPERACEAE	SEDGE FAMILY
<i>Carex alma</i>	
<i>Carex leucodonta</i>	
<i>Carex ultra</i>	
<i>Cyperus fendlerianus</i>	Flat sedge
<i>Cyperus havus</i>	
<i>Cyperus manimae</i>	
<i>Cyperus wrightii</i>	Flat sedge
<i>Eleocharis parishii</i>	Spike rush

FERNS AND FERN ALLIES

Copied from the computerized list at the U of A herbarium, most located and verified by George Yatskievych.

EQUISETACEAE

HORSTAIL FAMILY

<i>Equisetum hiemale</i>
<i>E. ferrissii</i>

POLYPODIACEAE

FERN FAMILY

<i>Asplenium exiguum</i>	
<i>A. monanthes</i>	
<i>A. resiliens</i>	
<i>Bommeria hispida</i>	
<i>Cheilanthes eatoni</i>	
<i>C. fendleri</i>	
<i>C. lendigera</i>	
<i>C. lindheimeri</i>	
<i>C. villosa</i>	
<i>C. wootoni</i>	
<i>C. wrightii</i>	
<i>Cystopteris fragilis</i>	
<i>Dryopteris patula</i>	
<i>Notholaena aschenborniana</i>	
<i>N. aurea</i>	
<i>N. cochisensis</i>	
<i>N. grayi</i>	
<i>N. integerrima</i>	
<i>N. limitanea</i>	
<i>N. sinuata</i>	
<i>Pellaea atropurpurea</i>	
<i>P. intermedia</i>	
<i>P. ternifolia</i>	
<i>P. wrightiana</i>	
<i>Phanerophlebia auriculata</i>	
<i>Pityrogramma triangularis</i>	
<i>Polypodium thysanolepis</i>	
<i>Woodsia mexicana</i>	
<i>W. plummerae</i>	
SELAGINELLACEAE	SELAGINELLA FAMILY
<i>Selaginella underwoodii</i>	
<i>var. dolichotricha</i>	

*If verified, would be new record for state or region (per Dr. D. Pinkava)

¹Echeandia flavescens

²Glandularia bipinnatifida

³Purshia stansburiana

Our Unique Arizona Flora: Arizona Leather Flower

by Joyce Maschinsky



Photo by Joyce Maschinsky

Arizona leatherflower (*Clematis hirsutissima* var. *arizonica*; family *Ranunculaceae*) is an herbaceous perennial with pinnately compound leaves, fine leaflets, and solitary purple bell-shaped flowers that nod at the ends of stalks. At maturity, the golden-awned seeds ripen into a plumed ball similar to Apache plume. Unlike ornamental *Clematis* species that have vining habits, *C. hirsutissima* var. *arizonica* has a multi-stalked rhizomatous shrubby growth form. Large plants may reach 0.5 meters (20 in.) in height.

Although once given specific status by Heller as *C. arizonica*, it was renamed by Erickson (1943) and has since remained as a variety of the more widespread *C. hirsutissima*. It is distinguished from the typical variety primarily by a wider, approximately 90° angle at which the mature petioles depart from the stem; the relatively narrower leaflets; and smaller flowers (Kearney and Peebles 1960).

The variety is known from the high elevations of northern Arizona and New Mexico 7,000-8,500 ft. (2,134-2,593 meters). In the Coconino National Forest near Flagstaff and the Kaibab National Forest near Tusayan, Arizona leatherflower prefers to grow on north-facing slopes of limestone outcroppings in Ponderosa pine habitats. Kearney and Peebles report that the plant is found on the south rim of Grand Canyon, but recent confirmations of these populations have not been made. Because the populations reported from New Mexico are growing in oak forests—a completely different habitat—some experts feel their varietal identification as *arizonica* must be re-examined.

Arizona leatherflower is a candidate for federal protection under the Endangered Species Act and is considered to be "sensitive" by the US Forest Service. Because many of the populations are growing in proposed or existing timber sale areas, the Forest Service is concerned that logging could threaten the taxon. As a first measure to protect Arizona leatherflower, the Forest Service has created 100-foot buffer zones around known populations growing in timber sale areas. In addition to timber harvesting, recreational activities and land development also threaten this variety.

To learn more about the distribution and basic biology of Arizona leatherflower, the Coconino National Forest has been actively surveying for the taxon and has underwritten contracts to study its biology. Many factors about the taxon's biology are unknown. For example, early surveys and studies indicated that plants had greater sexual reproductive success in shaded habitats. In 1989, plants growing under Ponderosa pine canopies set 18% more fruit and had larger, heavier seeds with greater viability than did seeds produced by plants growing in sunny habitats. This is good circumstantial evidence that plants require shade for healthy reproduction; however, experiments demonstrating this fact have not yet been done. Further, we know little about seedling germination and establishment in shaded vs. unshaded habitats. Basic demographic information, including the age of reproducing plants, the extent of clonal reproduction, and the major mortality factors of the species are unknown. The Arboretum at Flagstaff began studies to address these questions this past summer, with financial support from the Coconino National Forest.

Public input about Arizona leatherflower can help federal agencies make decisions about its status. Because most of the Forest Service's information about populations is from federal lands, little is known about this variety's distribution on private and state lands. Interested members of the Arizona Native Plant Society can help conduct surveys for the plant. Exact locations on federal, state, or private land, numbers of plants sighted, and the habitat where plants are growing should be reported to Dr. Barbara Phillips at (602) 527-7434, Sue Rutman at (602) 379-4720, or Bruce Palmer at (602) 942-3000. □

Joyce Maschinsky has a Ph.D. in Botany from N.A.U., is Curator of Plants at the Arboretum at Flagstaff, and is active in the ANPS Flagstaff Chapter.

"...The breath of flowers is far sweeter
in the air...than in the hand."

Francis Bacon

LEGISLATIVE ISSUES

Federal Legislative Issues

Proposed New Definition of Wetlands

On August 14th, the Federal Register Vol.56 published a proposed revision of the *Federal Manual for Delineating Wetlands*. By changing the criteria for delineating wetlands, this revision could, if enacted, greatly decrease areas in Arizona which are considered wetlands by the federal government and as such have received protection under section 404 of the Clean Water Act. The previous (1989) manual defined wetlands by the three criteria listed below.

Hydrology: 7 days of inundation or saturation within the top 18 inches of soil during the local growing season. **Soils:** based on definition of the National Technical Committee for hydric soils. **Vegetation:** more than 50% of the species had to be facultative or obligate wetland species. Major changes in the 1991 revision occur in the hydrology criteria. It will now be required for the surface to be inundated for at least 15 days or saturated for more than 21 days during an also newly defined and shortened growing season. Vegetation will have to be described by a prevalence index which requires a greater botanical expertise. Another major point of criticism (from desert regions) is the fact that riparian areas were not considered wetlands in the 1989 manual, nor in the proposed revision. Overall the 1991 criteria are much harder to meet and the manual itself is extremely complicated to read and evaluate. Call the EPA HOTLINE 1-800-832-7828 to request more information. Send letters of concern to Gregory Peck, Chief, Wetlands and Aquatic Resources Regulatory Branch, Mail Code (A-104F), USEPA, 401 M Street S.W., Washington, D.C. 20460 and to your congressmen. (Public comment period runs through October 12.)

The National Wild & Scenic Rivers Program

Your information about special plant values along waterways in Arizona could help obtain Wild and Scenic designation for certain Arizona rivers or streams. Designation protects free flowing streams or stream segments having "outstanding scenic, recreational, geologic, historic, archeologic, fish and wildlife, or other" (i.e. plant!) values from further development and/or from abuse or mismanagement. Designation helps maintain a river in its present condition and calls for its future management according to either "wild," "scenic," or "recreational" guidelines. New water projects or mining claims may be restricted, but previously established claims, water rights and property rights remain intact. Farms, homes and cabins along the river continue to be used just as they were before.

In Arizona, a 39.5 mile segment of the Verde River was designated as Wild & Scenic in 1984, and the Black River has been recommended for designation. Many other Arizona rivers might also benefit from such protective legislation. The Arizona Rivers Coalition has put together a book listing and describing rivers eligible for designation. A copy of *Arizona Rivers: Life Blood of the Desert* is available for \$15 from Arizona Rivers Coalition, 3601 N. 7th Ave., Phoenix, AZ 85013.

If you find your favorite river listed in there, call or write your U. S. representative and senators about it, asking for public hearings or field meetings and for their support for its Wild and Scenic designation. Remember, information you may have about special plant values along the stream will help support designation!

State Legislative Issues

First Heritage Fund Alliance Conference

The Heritage Fund Alliance, of which the ANPS is a member, will hold a conference on November 2nd. The meeting agenda, with State Parks and Game and Fish, will include a status report on allocation of funds and preparation plans for the fall State

legislative session. Mark the 2nd of November in your calendar and call The Nature Conservancy at 220-0490 (Phx.) or 622-3861 (Tsn.) for information about the location.

OTHER

Adopt-a-Plant-Species Program Report

by Barbara Tellman

(Julia Fonseca is on a nine month sabbatical. Until her return contact Barbara Tellman (address pg 12) about the Adopt-a-Plant-Species Program.)

Coconino National Forest invites ANPS to provide input on development of a habitat management plan for *Clematis hirsutissima* var. *arizonica* (see article on pg. 9). This plant has no adopter at this time. If you would like to help, contact Dave Bertelsen at 325-0741 or write Dr. Barbara Phillips, Coconino National Forest, 2323 E. Greenlaw Lane, Flagstaff, AZ 86004.

U.S. Fish and Wildlife Service is preparing to propose listing *Coryphantha sheeri* var. *robustispina* as endangered without critical habitat. Scot Mills has been working closely with USFWS on gathering data with respect to the listing. If you can provide any specific information (threats that might affect it or additional status or distribution info.) please contact Sue Rutman USFWS, 3616 W. Thomas, Suite 6, Phoenix, AZ 85019.

David Mount is putting together a proposal for "rapid genome analysis" of *Rumex orthoneurus*, a dock found in wetlands of the Chiricahua and Pinaleno Ranges. Uncertainties in the taxonomy of the plant have been the principle deterrent to listing it as threatened or endangered. Genetic mapping, in conjunction with other sources of information, can clarify the taxonomic issues. Mount has also reviewed and commented upon the Coronado National Forest's management plan for the plant, saying that the plan is good, but lacking a timetable and budget.

Jim Malusa of The Nature Conservancy led a field trip to look for *Dalea tentaculoides* in its only known place of occurrence, Sycamore Canyon. Field trip participants identified many new plants and verified the absence or presence of existing populations along the stream.

Julia Fonseca has reviewed allotment management plans for grazing leases which contain *Salix arizonica*. The Forest Service has not yet addressed her questions concerning their preferred alternative, an intensive grazing management scheme. Fish and Wildlife Service has proposed a different alternative from the Forest Service. FWS has stated its intent to propose listing the species as endangered with critical habitat.

Mark Egger wrote the Forest Service on behalf of *Castilleja mogollonica*, a paintbrush endemic to the same White Mountains wetlands as *Salix arizonica*. Egger took issue with the Forest Service's generalization that *Castilleja* tends to increase under grazing. Egger also intends to look for *C. cruenta*, a paintbrush of the Chiricahua Mountains that Fish and Wildlife Service indicates is extinct. He also wants to know a common site for *C. laxa* which is fairly widespread.

New Conservation Committee Plant List Program

Plant lists, useful when we comment or take action on such items as mining in the Portal area, are needed from all parts of the State. Renee Rondeau's knowledge of the Tucson Mountains, for example, was instrumental in getting Rep. Kolbe's support for expanding Saguaro Nat. Mnmt. We are now cooperating on a Sky Island Cons. Area proposal for the Coronado Forest and need specific plant information for these areas. Send species lists you may have for the Conservation Committee's new plant list files to Barbara Tellman (127 E. Mabel, Tucson 85705; 792-4515).

Chapter and Committee News

FLAGSTAFF CHAPTER:

Chapter meetings are held the third Tuesday of each month at 7:00 p.m. on the N.A.U. campus in Rm. 313 of the Biological Sciences Building. **News Items:** Summer, always pleasant in Flagstaff, saw a round of well attended field trips and programs. Among the highlights were programs on threatened and endangered plants, herbarium specimen preparation, and grass taxonomy; and field trips to the Lockett Trust land, W. Fork of Oak Creek, Humphrey's Saddle, Walnut Canyon, Lockett Meadow/Inner Basin, Kelley and James Canyons, and Kendrick Peak. **October Events:** Oct. 5th—field trip to **Red Mountain** led by Marc Leitermann. Oct. 15th—Chapter Meeting features a presentation on the **taxonomy of the Asteraceae** by Randy Scott. October 19th—field trip to **O'Leary Peak**. For information on the Flagstaff Chapter contact Bob Wilson at 774-1441 (days) or write to him at P.O. Box 670, Flagstaff, AZ 86002.

PHOENIX CHAPTER:

Regular meetings are held September through May on the second Monday of each month at 7:30 in Webster Auditorium at the Desert Botanical Garden. **News Items:** The Memorial Day Weekend Extravaganza was especially well attended and both restorative and informative. Fall activities in the Phoenix Chapter opened Sept. 9th with a potluck/meeting and a lecture by Bob Johnson on the "Ecology of Ants." **October Events:** Oct. 14—Meeting includes a **wildflower program** by Rita Jo Anthony and a wildflower seed release/exchange (members bring seeds and seed reports if they have them). Oct. 26—Field trip to **Mountain States Nursery**. To help with an ANPS booth at the Tamarisk Park Cave Creek/Carefree annual **Earth Rally III** on Oct. 26 & 27th call Karen Breunig at 274-9737. **November Events:** Nov. 11—Dr. Laura Jackson lectures on "**Revegetation of Abandoned Desert Farmland**." The Phoenix Chapter will participate in a "**Gardens for Desert Living**" show to be held three weekends in November at various malls (November 2/3; 9/10; and 16/17—Call Kent Newland to help with these events!). **December Events:** Meeting on Dec. 9th is a Holiday Potluck and Plant Exchange with "**New Plants for Desert Gardens**" lecture by Mark Dimmitt. **January Events:** January 13th meeting program by Kevin Dahl on **Tarahumara/Sierra Madre Forestry Developments**. For information on the Phoenix Chapter contact Chapter President Kent Newland at 8376 Cave Creek Stage, Cave Creek, AZ 85331; (602) 261-8369(W) or 585-3630(H).

PRESCOTT CHAPTER:

For information on activities in the Prescott area contact Patrick Boles at 372 Dogwood Lane, Prescott, AZ 86301; (602) 778-1128.

SOUTH CENTRAL CHAPTER:

Meetings are held on the first Saturday of each month at 9:30 a.m. in the Community Room of the Student Activities Center on the Signal Peak campus of Central Arizona College (CAC) in Casa Grande. For information about the South Central Chapter and its events contact Chapter President Velma Adams at 450 Sun West Dr., No. 30, Casa Grande, AZ 85222; (602) 426-9172.

TUCSON CHAPTER:

Regular Meetings are held on the second Wednesday of the month at 7:30 p.m. at the Tucson Botanical Gardens, 2150 N. Alvernon Way, Tucson, AZ unless otherwise noted. **News Items:** A full round of activities over the summer wrapped up with the Chiricahua Workshop, organized this year by Chris

Renner of the Tucson Chapter. Sept. 7 & 8 the chapter also participated, at the request of the U.S. Forest Service, in a plant survey of the natural burn that occurred two years ago on Centella Point in the Chiricahua Mts. Larry Stallcup and Morris Fishbein led the survey trip. The information gathered will help the Forest Service design and implement its Wilderness Management Plan for the area. Peter Warren spoke on "Sensitive Plants of the Coronado National Forest" at the fall potluck meeting held on Sept. 11.

October Events: Dr. Jon R. Weeks of the U. of A.'s Environmental Research Lab speaks on "**Farming Halophytes**" at the chapter meeting on October 9th. **October Field Trips:** Oct. 6th—**Turkey Creek**, Aravaipa Canyon led by John Luepke; Oct. 12th—**Arroyo Chico**, urban Tucson led by Richard Barber; Oct. 19th—**Kings Canyon**, Tucson Mts. led by David Bertelsen; also Oct. 19th—**Oak Creek and Aravaipa Canyons** led by John Luepke and Oct. 26th—**Ragged Top Mt.** led by John Wiens. **November Events:** Nov. 13th Chapter Meeting features Dr. Tony Burgess speaking on "**70 Years of Research at the Desert Laboratory**." **November Field Trips:** Nov. 9th—**Saguaro National Monument Expansion Area** led by Mark Rami; Nov. 17th—**Greenhouse tour of Plants for the Southwest**, Tucson, led by Gene Joseph. **December Events:** Dec. 11th Chapter Meeting presents Dr. Christine Conte speaking on "**Recent Activities of the Arizona Chapter of the Nature Conservancy**." For information on the Tucson Chapter contact Peter Gierlach at 3505 W. Overton, Tucson, 85741 (602) 744-0434

YUMA CHAPTER:

Regular Meetings are held on the third Monday of each month at 7:30 p.m. at the Univ. of Az. Agricultural Station in Yuma Valley on 8th St. For information on Yuma Chapter activities contact Chapter President Pat Callahan, Rt. 1, Box 28M, Somerton, AZ 85350 (602) 627-2773.

CONSERVATION COMMITTEE:

The Conservation Committee will next meet on **October 23, at 6:00 p.m.** at the Flying J Truck Stop in Eloy. All are welcome to attend. Contact Chairman Barbara Tellman (phone 602-792-4515 at 127 E. Mabel, Tucson, 85705) if you have an interest in this committee. (Also see page 10 of this issue.)

URBAN LANDSCAPE COMMITTEE:

Contact Jane Evans, 2945 N. Fontana, Tucson, AZ 85705; 628-8773(D) 792-1592(E) for information on committee activities.

ELECT LUCRETIA BREAZEALE HAMILTON, Plant Illustrator and a Founding Member of ANPS, to the **ARIZONA WOMEN'S HALL OF FAME!** Lucretia Breazeale Hamilton, the preeminent Arizona plant illustrator who contributed uniquely and unforgettably to Arizona's natural and artistic heritage, has been nominated to the Arizona Women's Hall of Fame. Please write your state representatives and senators in support of Lucretia's election between now and February, 1992. Questions? Contact Mona L. McCroskey, P.O. Box 4257, Prescott, AZ 85302 (602-766-4689).

CONGRATULATIONS TO STEVEN PRCHAL! The Roger Tory Peterson Institute has named ANPS member Steven Prchal a winner of its \$1,000. "Educator of the Year" award for his community-based nature education program as executive director of Sonoran Arthropod Studies, Inc.

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