



The Plant Press

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Continental Ranch Revegetation Project Shows Some Success

by Julia Fonseca

On large tracts of abandoned farmland throughout our state, active efforts toward revegetation may be needed to stem the enduring problem of soil erosion. The recent deaths of motorists caught in a dust storm on Interstate 10 point out the tragic human cost of soil erosion in Arizona's agricultural areas. Yet these extensive tracts of farmland are among the most difficult sites to revegetate with native species. The soil is often compacted, dominated by exotic weeds and depleted in nutrients and mycorrhizal fungi. Native seed sources may be distant, another factor which hampers natural revegetation.

To understand how such lands may be reclaimed, ANPS members visited the banks of the Santa Cruz River north of Cortaro Road in Tucson to view one of the largest revegetation projects in the state. Led by Gary Maskarinec of Wildlands Restoration, we visited the Continental Ranch site on July 27, 1996.

In fall of 1987, Charles Keating's American Continental Corporation (Amcor) funded the revegetation of nearly 600 acres of denuded floodplain it had purchased for development-- land that had been farmed prior to Amcor's

involvement. After Amcor purchased the property, the site was further disturbed by extensive archaeological investigations and construction of soil-cement erosion protection along the Santa Cruz River. Thereafter, Amcor was required by Section 404 of the Clean Water Act to imprint and seed the sandy soils to reduce potential erosion. Imprinting is a mechanical treatment which furrows the soil to increase infiltration and germination of seeds. Irrigation was not required; the revegetation project had to rely on rainfall alone.

By May, 1988, the site supported a good cover of annuals and perennials, according to seedsman Maskarinec, who developed a keen interest in the project. He recalls that *Helianthus annuus* established most quickly, but proved short-lived, as did dropseed. Today the site has a high percentage of cover-- mostly saltbush (*Atriplex lentiformis* and *A. polycarpa*), which was prominent in the original seed mix. In between shrubs, the soil is partially stabilized by cryptogams (also known as microbiotic soil crusts). Because we visited the site at the end of a long drought, we saw few annual plant species.

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Wildflower Poster Under Development

A Tucson-based group of ANPS volunteers is working on a poster featuring plants of Arizona's deserts. The poster group is a subcommittee of the Urban Landscape Committee and includes Linda Brewer, Mima Falk, Antoinette Segade, Meg Quinn, Lynn Kaufman, Julia Fonseca, Nancy Zierenburg, Barbara Tellman, Jane Evans, Kristin Johnson and Sue Rutman.

The group began by reviewing flower posters from other states and discussing whether woody species or cacti would be included. The group agreed that we would include flowers from a few shrubs such as ocotillo and fairy duster. We have also enthusiastically selected flowers from a few vines. We intend that the poster use a standard frame size, have a border around the margin and use both scientific and common names.

Narrowing the list of plants down to a manageable level is progressing with consideration for variety in form, color, geographic distribution and flowering season. Antoinette Segade's superlative collection of slides of Arizona's wildflowers is assisting the decision-making.

The poster group hopes to solicit bids from artists in early February. The Publications Committee will see that the poster is printed and distributed.

At the November Board meeting, the Board began planning for the 1997 and 1998 annual meetings. Those persons with ideas for speakers and field trips for a Phoenix-based meeting should contact Sue Rutman. The theme of the Phoenix meeting would be native plant landscaping. Julia Fonseca will investigate having a meeting in Wickenburg. The Wickenburg meeting would feature a field trip to the Nature Conservancy's Hassayampa Preserve.

Please direct other field trip and speaker ideas for the Wickenburg meeting to Julia. The relative order of the meetings will be chosen based on the responses of the hosting organizations.

Spring Calender

Mar. 21-23 (Fri.-Sun.): Desert Botanical Garden's Spring Plant Sale, Papago Park, Phoenix.
Members-only presale on Friday, 3-6 p.m. Saturday and Sunday hours are 9 a.m.-5 p.m.

Mar. 22-23 (Sat.-Sun.): Spring Plant Sale at the Tucson Botanical Gardens, 2150 N. Alvernon Way, Tucson. Open to the public Sat. 10 a.m.-4 p.m. and Sun. 12 noon to 5 p.m.

Mar. 21- Apr. 6 (Fri.- Sun.): Boyce Thompson Arboretum Spring Plant Sale 8 a.m.-5 p.m. daily.

Apr. 4-6 (Fri.-Sun.): Desert Survivors Spring Plant Sale, 1022 W. 22nd St. Members only on Fri., 4 p.m. to dark; Sat., 8 a.m.-4 p.m.; Sun., 10 a.m.-4 p.m.

Year-round: Tohono Chul Park, 7366 Paseo del Norte, Tucson.
Mon.-Sat., 10 a.m.-4 p.m. from Oct. 1- May 1; 9 a.m.-1 p.m. from May 1 to October 1.

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Other species successfully established include velvet mesquite, blue palo verde and white thorn acacia. Maskarinec said that he had hoped to have greater success with tree species, but he observed that the contractors had problems distributing the large, heavy tree seeds with their equipment. Mexican palo verde (*Parkinsonia* sp.), condalia, *Aristida glabrata* and desert willow (*Chilopsis linearis*) established on their own.

The revegetation site stands in contrast to adjacent abandoned farmland, where there are few perennial species of any kind to protect the soil. Since desert broom is one of the most common perennials on these adjacent fields, the low occurrence of broom on the revegetation site is surprising. Maskarinec said that no post-seeding weed control was performed. He believes one of the keys to a successful seeding project is a diverse seed mix, something with summer and winter growth potential to germinate quickly and establish cover before more weedy species take over.

The Continental Ranch revegetation site shows that farmland in the low desert can be successfully stabilized against erosion using native plants without irrigation. The project is also a testimony to the benefits of Section 404 of the Clean Water Act and agencies such as the Arizona Game and Fish Department and Pima County Flood Control District, which insisted that the site be revegetated.

Editor's Comments

A happy and healthy new year to all of our readers! You may notice a feature missing in this issue. Our "Notes from the President" is on hiatus until the vacancy is filled in that position (fortunately, Sue Rutman and Mima Falk have stepped in as copresidents in the interim).

In this issue, Julia Fonseca gives us a report on the progress of the Continental Ranch revegetation project near Tucson. Its success is an encouraging sign for other restoration projects on abandoned farmland within our state.

Five years ago, Red Rock State Park near Sedona opened up its 286 acres as a habitat protection area and environmental education facility. Located at elevations of 3800-4200 feet, it is home to a variety of habitats including riparian-- 1 1/2 miles of Oak Creek courses through it-- juniper-pinyon, chaparral and some grassland. The "Checklist of Vascular Plants, Red Rock State Park" was prepared by Norman B. Herkenham, a staff botanist at the park at the time. The park is open year round from 9 a.m. to 5 p.m. and seeks volunteer botanists for its educational programs. Call (520) 282-6907 for more information.

- Balbir



Atriplex spp. form a prominent cover at the Continental Ranch revegetation site. Photo by Gary Maskarinec

Checklist of Vascular Plants, Red Rock State Park, Yavapai County, Arizona

Compiled by Norman B. Herkenham
with family Gramineae by Albert R. Purchase
1988-1990

Nomenclature in this checklist conforms basically with the widely accepted *Arizona Flora* by Kearney and Peebles (1951) and its 1960 supplement by Howell and McClintock, University of California Press. The exception is the family Cactaceae, for which *The Cacti of Arizona* by Lyman Benson (third edition, 1969), University of Arizona Press, is used for guidance. Even these references are not the final authorities for scientific and common names herein. The ultimate source is *A Catalogue of the Flora of Arizona* by J. Harry Lehr, Desert Botanical Garden (1978) and its supplements I (1980) and II (1982). In most cases, the nomenclature in Lehr's *Catalogue* is that generally adopted by the botanical community today, reflecting current literature and research. In the checklist below, wherever Lehr's scientific name differs from that in Kearney and Peebles or Benson, the latter follows in parentheses as a synonym. The arrangement of genera and species within each family is strictly alphabetical.

It will be noted that some plants in the list have no recognized common name, while others have two or more (not all necessarily appearing in Lehr). Where duplication in common names exists, those in Lehr are usually listed first. There is no attempt here to inventory all known common names for a given plant, but only those found in general usage.

Arizona's plant communities include many species with an exotic origin that are merely adventives or have become more or less established or naturalized to take their place among the native flora. The following checklist contains a few species whose inclusion may warrant some comment. For example, *Catalpa speciosa* (hardy catalpa), *Morus alba* (white mulberry), *Ulmus pumila* (Siberian elm) and *Cannabis sativa* (hemp, marijuana) are not listed in *Arizona Flora* but can be regarded as adventives which have found their way into the park's vegetation through natural processes, presumably from cultivation somewhere in the vicinity. Much less surprising are *Asparagus officinalis* (garden asparagus), *Pastinaca sativa*

common parsnip), *Apium graveolens* (common celery) and certain cereal grasses which are surely escapes from cultivation that have attained some degree of naturalization. At the end of the checklist is another listing of mainly arboreal species whose presence in scattered locations in the park is more attributable to direct introduction by man. These do not necessarily include the plantings made during the summer of 1990 for landscaping purposes.

Referral to the collections in the Deaver Herbarium at Northern Arizona University and consultation with members of its staff were of invaluable assistance in resolving some of the identifications in this checklist. Similar referrals of many of the Gramineae species to the staff of the University of Arizona herbarium were also of great value.

Checklist of Vascular Plants-- Red Rock State Park

Equisetaceae-- Horsetail Family

- Equisetum arvense*-- Common Horsetail
Equisetum hiemale var. *affine*-- Scouring rush,
canuela
Equisetum laevigatum-- Smooth scouring-rush

Adiantaceae-- Maidenhair Fern Family

- Pellaea truncata* (= *P. longimucronata*)--
Cliffbrake

Pinaceae-- Pine Family

- Pinus edulis*-- Pinyon, pinyon pine
Pinus monophylla-- Singleleaf pinyon
Pinus ponderosa var. *scopulorum*-- Ponderosa
pine, western yellow pine

Cupressaceae-- Cypress Family

- Cupressus arizonica* var. *glabra*-- Smoothbark
Arizona cypress
Juniperus monosperma-- One-seed juniper
Juniperus osteosperma-- Utah juniper

Ephedraceae-- Jointfir Family

- Ephedra viridis*-- Green jointfir,
mountain jointfir, Mormon tea

Typhaceae-- Cattail Family*Typha latifolia*-- Broadleaf cattail**Potamogetonaceae-- Pondweed Family***Potamogeton foliosus*-- Leafy pondweed
Potamogeton nodosus-- Pondweed**Gramineae-- Grass Family**

Agropyron intermediate-- Intermediate wheatgrass
Agropyron trachycaulum-- Slender wheatgrass
Agropyron trachycaulum var. *unilaterale*
 (= *A. subsecundum*)-- Bearded wheatgrass
Agrostis semiverticillata-- Water bent
Agrostis stolonifera (= *A. alba*)-- Redtop
Agrostis stolonifera var. *palustris*
 (= *A. palustris*)-- Creeping bent
Aristida divaricata-- Poverty three-awn
Aristida glabrata-- Three-awn
Aristida purpurea var. *glaucia*
 (= *A. glauca*)-- Reverchon three-awn
Aristida purpurea var. *longiseta*
 (= *A. longiseta*)-- Red three-awn
Aristida ternipes-- Spidergrass
Arundo donax-- Giant reed
Avena fatua-- Wild oat
Avena sativa-- Oat
Bothriochloa barbinodis
 (= *Andropogon barbinodis*)-- Beardgrass
Bouteloua aristidoides-- Needle grama
Bouteloua barbata-- Six-weeks grama
Bouteloua curtipendula-- Side-oats grama
Bouteloua eriopoda-- Black grama
Bromus anomalus (= *B. porteri*)-- Nodding brome
Bromus inermis-- Smooth brome
Bromus japonicus-- Japanese chess
Bromus marginatus-- Bromegrass
Bromus rigidus-- Ripgut grass
Bromus rubens-- Red brome, foxtail chess
Cenchrus insertus (= *C. pauciflorus*)-- Field sandbur
Chloris virgata-- Feather fingergrass
Cynodon dactylon-- Bermuda grass
Digitaria sanguinalis-- Common crabgrass
Echinochloa crusgalli-- Barnyard grass
Elymus canadensis-- Canada wild-rye
Eragrostis ciliaris-- Stinkgrass
Eragrostis curvula-- Weeping lovegrass
Eragrostis intermedia-- Plains lovegrass
Erioneuron pilosum-- (*Tridens pilosus*)-- Hairy tridens
Erioneuron pulchellum (= *Tridens pulchellus*)-- Fluffgrass
Festuca pratensis (= *F. elatior*)-- Meadow fescue
Glyceria elata-- Tall managrass
Hilaria mutica-- Tobosa

Holcus lanatus-- Velvetgrass*Hordeum glaucum* (= *H. stebbinsii*)-- Wild barley*Leptochloa dubia*-- Green sprangletop*Leptochloa filiformis*-- Red sprangletop*Lolium multiflorum*-- Italian ryegrass*Lolium perenne*-- Perennial ryegrass*Muhlenbergia porteri*-- Bush muhly*Muhlenbergia rigens*-- Deergrass*Panicum capillare* var. *occidentale*-- Witchgrass*Panicum obtusum*-- Vine-mesquite*Panicum virgatum*-- Switchgrass*Paspalum dilatatum*-- Dallis grass*Paspalum distichum*-- Knotgrass*Phalaris arundinacea*-- Reed canarygrass*Poa bigelovii*-- Bigelow bluegrass*Poa fendleriana*-- Muttongrass*Poa pratensis*-- Kentucky bluegrass*Polypogon monspeliensis*-- Rabbitfoot grass*Secale cereale*-- Rye*Setaria geniculata*-- Knotroot bristlegrass*Setaria glauca* (= *S. lutescens*)-- Yellow bristlegrass*Setaria grisebachii*-- Grisebach bristlegrass*Setaria macrostachya*-- Plains bristlegrass*Setaria viridis*-- Green bristlegrass, grass-foxtail*Sitanion hystrrix*-- Squirreltail*Sorghum halepense*-- Johnson grass*Sphenopholis obtusata*-- Prairie wedgegrass*Sporobolus contractus*-- Spike dropseed*Sporobolus cryptandrus*-- Sand dropseed*Vulpia octoflora* (= *Festuca octoflora*)-- Six-weeks fescue**Cyperaceae-- Sedge Family***Carex hystricina*-- Porcupine caricesedge, bottlebrush caricesedge*Carex nebrascensis*-- Sedge*Carex senta*-- River sedge*Carex vulpinoidea*-- Sedge*Cyperus acuminatus*-- Flatsedge*Cyperus esculentus*-- Yellow nutsedge, yellow nutgrass, chufa*Cyperus niger* var. *capitatus*-- Black flatsedge*Cyperus uniflorus*-- Flatsedge*Scirpus americanus* var. *polyphyllus*-- Three-square bulrush*Scirpus microcarpus*-- Panicked bulrush*Scirpus olneyi*-- Olney bulrush*Scirpus validus* (= *S. acutus*)-- Softstem bulrush, great bulrush**Lemnaceae-- Duckweed Family***Lemna minuta* (= *L. minima*)-- Duckweed**Commelinaceae-- Spiderwort Family***Tradescantia occidentalis*-- Spiderwort

Pontederiaceae-- Pickerelweed Family
Heteranthera dubia-- Water-stargrass, mud-plantain

Juncaceae-- Rush Family
Juncus ensifolius var. *brunnescens*
(=*J. saximontanus* forma *brunnescens*)-- Rush
Juncus mexicanus-- Rush
Juncus tenuis var. *dudleyi*-- Slender rush
Juncus torreyi-- Torrey rush

Liliaceae-- Lily Family
Asparagus officinalis-- Garden asparagus
Calochortus flexuosus-- Straggling mariposa, mariposa-lily
Dichelostemma pulchellum- var. *pauciflorum*-- Bluedicks

Agavaceae-- Agave Family
Agave parryi-- Parry agave
Nolina microcarpa-- Beargrass, sacahuista
Yucca baccata var. *vespertina*-- Banana yucca, blue yucca, datil
Yucca elata-- Soaptree yucca

Orchidaceae-- Orchid Family
Epipactis gigantea-- Giant helleborine, stream-orchis

Salicaceae-- Willow Family
Populus fremontii-- Fremont cottonwood
Salix amygdaloides-- Peachleaf willow
Salix bonplandiana (= *S. laevigata* var. *araquipa*)-- Bonpland willow, red willow
Salix exigua-- Coyote willow, narrowleaf willow, basket willow, sandbar willow
Salix gooddingii-- Goodding willow

Juglandaceae-- Walnut Family
Juglans major-- Arizona walnut

Betulaceae-- Birch Family
Alnus oblongifolia-- Arizona alder

Fagaceae-- Beech Family
Quercus arizonica-- Arizona white oak
Quercus chrysolepis-- Canyon live oak
Quercus dunnii-- Palmer oak
Quercus turbinella-- Shrub live oak, turbinella oak

Ulmaceae-- Elm Family
Celtis reticulata-- Netleaf hackberry
Ulmus pumila-- Siberian elm

Moraceae-- Mulberry Family
Cannabis sativa-- Hemp, marijuana
Humulus americanus-- American hop

Morus alba-- White mulberry
Morus microphylla-- Texas mulberry

Urticaceae-- Nettle Family
Parietaria hespera (= *P. floridana*)-- Pellitory

Viscaceae-- Mistletoe Family
Phoradendron tomentosum ssp. *macrophyllum*
(= *P. flavescens* var. *macrophyllum*)-- Mistletoe
Phoradendron juniperinum-- Mistletoe

Santalaceae-- Sandalwood Family
Comandra pallida-- Bastard-toadflax

Polygonaceae-- Buckwheat Family
Eriogonum abertianum-- Abert wild-buckwheat
Eriogonum jamesii var. *flavescens*
(= *E. bakeri*)-- Yellow antelope-sage
Eriogonum microthecum var. *foliosum*
(= *E. simpsoni*)-- Simpson wild-buckwheat
Eriogonum palmerianum (= *E. densum*)
Eriogonum polycladon-- Sorrel eriogonum
Eriogonum wrightii-- Wright wild-buckwheat
Polygonum argyrocoleon-- Silversheath knotweed
Polygonum aviculare var. *littorale*-- Prostrate knotweed, common knotweed
Polygonum convolvulus-- Black-bindweed, cornbind
Polygonum lapathifolium-- Common knotweed, willow smartweed
Polygonum pensylvanicum-- Pinkweed
Polygonum persicaria-- Lady's thumb
Polygonum punctatum-- Water smartweed
Rumex altissimus-- Peachleaf dock, pale dock
Rumex crispus-- Curly dock
Rumex hymenosepalus-- Canaigre, wild-rhubarb
Rumex obtusifolius-- Bitter dock

Chenopodiaceae-- Goosefoot Family
Atriplex canescens-- Fourwing saltbush
Atriplex elegans-- Wheelscale saltbush
Atriplex rosea-- Redscale, red orache
Chenopodium album-- Common lambs-quarters
Chenopodium berlandieri var. *sinuatum*-- Pitseed goosefoot
Chenopodium botrys-- Jerusalem-oak, feather-geranium
Chenopodium dessicatum-- Narrowleaf goosefoot
Chenopodium fremontii-- Fremont goosefoot
Chenopodium incanum var. *elatum*
(= *C. fremontii* var. *incanum*)-- Goosefoot
Chenopodium pratericola
(= *C. dessicatum* var. *leptophyloides*)-- Goosefoot
Kochia scoparia-- Summer cypress

Salsola iberica (= *S. kali* var. *tenuifolia*)--
Russian-thistle

Amaranthaceae-- Amaranth Family

Amaranthus albus-- Tumble pigweed
Amaranthus graecizans-- Prostrate pigweed
Amaranthus palmeri-- Carelessweed, Palmer amaranth, redroot

Nyctaginaceae-- Four-o'clock Family

Allionia incarnata-- Trailing-four-o'clock, windmills
Boerhaavia coccinea-- Red spiderling
Boerhaavia coulteri-- Coulter spiderling
Boerhaavia erecta-- Spiderling
Mirabilis coccinea (= *Oxybaphus coccineus*)
Mirabilis linearis (= *Oxybaphus linearis*)
Mirabilis longiflora var. *wrightiana*-- Sweet four-o'clock
Mirabilis multiflora-- Colorado four-o'clock
Mirabilis pumila (= *Oxybaphus pumilus*)

Portulacaceae-- Portulaca Family

Calandrinia ciliata var. *menziesii*-- Red maids
Portulaca oleracea-- Common purslane, pusley
Portulaca parvula-- Purslane
Portulaca retusa-- Western pusley
Talinum aurantiacum-- Flameflower

Caryophyllaceae-- Pink Family

Saponaria officinalis-- Bouncing bet, soapwort
Silene antirrhina-- Sleepy catchfly

Ranunculaceae-- Crowfoot Family

Aquilegia chrysanthia-- Golden columbine
Clematis ligusticifolia-- Clematis, virgin's bower
Delphinium scaposum-- Barestem larkspur
Ranunculus aquatilis var. *capillaceus*-- White water crowfoot, water buttercup
Thalictrum fendleri-- Fendler meadowrue
Anemone tuberosa-- Desert windflower

Berberidaceae-- Barberry Family

Berberis haematocarpa-- Red barberry, red mahonia, algerita

Papaveraceae-- Poppy Family

Eschscholzia californica ssp. *mexicana*
(= *E. mexicana*)-- Mexican goldpoppy

Fumariaceae-- Fumitory Family

Corydalis aurea ssp. *occidentalis*-- Golden corydal, scrambled eggs

Cruciferae-- Mustard Family

Arabis glabra-- Tower-mustard

Arabis perennans-- Rockcress

Brassica kaber-- Charlock

Brassica nigra-- Black mustard

Capsella bursa-pastoris-- Shepherd's purse

Chorispora tenella

Descurainia obtusa ssp. *adenophora*-- Tansy mustard

Descurainia pinnata var. *glabra*-- Yellow tansy-mustard

Descurainia sophia-- Flixweed

Dithyrea wislizeni-- Spectacle-pod

Draba cuneifolia-- Whitlow-grass

Erysimum asperum var. *purshii*

(= *E. capitatum*)-- Western wallflower

Lepidium lasiocarpum var. *typicum*-- Sand peppergrass

Lepidium virginicum var. *medium*

(= *L. medium*)-- Peppergrass

Lepidium virginicum var. *pubescens*

(= *L. medium* var. *pubescens*)-- Peppergrass

Lesquerella arizonica-- Bladderpod

Lesquerella gordoni-- Gordon bladderpod

Nasturtium officinale (= *Rorippa nasturtium-aquaticum*)-- Watercress

Rorippa islandica-- Bog marshcress

Sisymbrium altissimum-- Tumble-mustard

Sisymbrium irio-- London rocket

Thelypodium wrightii

Thysanocarpus curvipes var. *elegans*

(= *T. amplexans*)-- Fringepod

Cleomaceae-- Cleome Family

Cleome lutea var. *jonesii* (= *C. jonesii*)-- Yellow beeplant, yellow spiderflower

Polanisia dodecandra ssp. *trachysperma*
(= *P. trachysperma*)-- Western clammyweed

Saxifragaceae-- Saxifrage Family

Fendlera rupicola-- Fendlerbush, false-mockorange

Platanaceae-- Plane-tree Family

Platanus wrightii-- Arizona sycamore

Crossosomataceae-- Crossosoma Family

Forsellesia nevadensis (= *Glossopetalon nevadense*)-- Greasebush

Rosaceae-- Rose Family

Cercocarpus montanus var. *montanus*-- Alderleaf mountain-mahogany
Cowania mexicana var. *stansburiana*-- Cliffrose, quinine-bush
Fallugia paradoxa-- Apache plumc
Rosa fendleri-- Fendler rose
Rubus procerus-- Himalaya-berry

Leguminosae-- Pea Family**A. Mimosoideae-- Mimosa Subfamily**

- Acacia greggii* var. *arizonica*-- Catclaw
Mimosa biuncifera-- Wait-a-minute, catclaw mimosa
Prosopis velutina (= *P. juliflora* var. *velutina*)-- Velvet mesquite

B. Caesalpinoideae-- Senna Subfamily

- Hoffmannseggia drepanocarpa*-- Sicklepod
Senna bauhinoides (= *Cassia bauhinoides*)-- Twoleaf desert senna

C. Papilionoideae-- Bean Subfamily

- Astragalus allochrous*-- Halfmoon loco
Astragalus calycosus var. *scapus*-- Gray locoweed
Astragalus eremiticus
Astragalus lentiginosus var. *wilsonii*-- Spotted loco
Astragalus nuttallianus var. *astrinu*s-- Nuttall loco, peavine
Astragalus wootoni-- Wooton loco, bladderpod loco
Dalea formosa-- Feather dalea, indigo-bush
Dalea nana-- Dwarf dalea
Desmodium metcalfei-- Metcalf tick-clover, tick-trefoil, beggarticks, sticktight
Lotus corniculatus-- Birdsfoot-trefoil
Lotus humistratus-- Hill-locust
Lotus wrightii-- Wright lotus
Lupinus concinnus-- Elegant lupine
Medicago lupulina-- Black medick, none-such
Medicago minima-- Small burclover
Medicago sativa-- Alfalfa
Melilotus albus-- White sweetclover
Melilotus officinalis-- Yellow sweetclover
Phaseolus angustissimus var. *latus*-- Bean
Psoralea tenuiflora-- Scurvy-pea
Robinia neomexicana-- New Mexico locust
Trifolium repens-- White clover
Vicia ludoviciana (= *V. exigua*)-- Slender vetch

Krameriaceae-- Ratany Family

- Krameria parviflora*-- Range ratany

Geraniaceae-- Geranium Family

- Erodium cicutarium*-- Filaree, alfilaria
Erodium texanum-- Largeflower storksbill

Linaceae-- Flax Family

- Linum lewisii*-- Blue flax
Linum puberulum-- Plains flax

Zygophyllaceae-- Caltrop Family

- Kallstroemia californica*-- California caltrop
Tribulus terrestris-- Puncture-vine, caltrop, bullhead, burnut

Rutaceae-- Rue Family

- Ptelea trifoliata* ssp. *angustifolia*
(= *P. angustifolia*)-- Narrowleaf hoptree
Thamnosma texana-- Dutchman's breeches

Polygalaceae-- Milkwort Family

- Polygala longa*-- Milkwort
Polygala obscura-- Milkwort
Polygala scabriodess-- Milkwort

Euphorbiaceae-- Spurge Family

- Acalypha neomexicana*-- New Mexico copperleaf, threeseed mercury
Croton texensis-- Doveweed
Euphorbia albomarginata-- Rattlesnake-weed, whitemargin spurge
Euphorbia fendleri var. *chaetocalyx*-- Fendler spurge
Euphorbia glyptosperma-- Ribseed sandmat
Euphorbia hyssopifolia-- Hyssop spurge
Euphorbia micromera-- Sonoran sandmat
Euphorbia polycarpa-- Smallseed sandmat
Euphorbia prostrata-- Groundfig spurge
Euphorbia revoluta
Euphorbia serpyllifolia-- Thymleaf spurge
Euphorbia spathulata
Euphorbia supina-- Prostrate spurge, spotted spurge

Anacardiaceae-- Cashew Family

- Rhus glabra*-- Smooth sumac, scarlet sumac
Rhus ovata-- Sugar sumac, sugarbush
Rhus trilobata var. *anisophylla*-- Squawbush, skunkbush
Rhus trilobata var. *pilosissima*-- Squawbush, skunkbush
Toxicodendron rydbergii (= *Rhus radicans* var. *rydbergii*)-- Poison-ivy, poison oak

Celastraceae-- Bittersweet Family

- Canotia holacantha*-- Canotia, false-paloverde

Aceraceae-- Maple Family

- Acer negundo* ssp. *californicum*
(= *A. n.* var. *interius*)-- Box-elder

Sapindaceae-- Soapberry Family

- Sapindus saponaria* var. *drummondii*-- Western soapberry

Rhamnaceae-- Buckthorn Family

- Ceanothus greggii*-- Gregg ceanothus,
buckbrush
Rhamnus californica ssp. *ursina*-- California
buckthorn, coffeeberry
Rhamnus crocea var. *ilicifolia*-- Hollyleaf
buckthorn
Ziziphus obtusifolia var. *canescens*
(= *Condalia lycioides* var. *canescens*)--
Graythorn

Vitaceae-- Grape Family

- Parthenocissus vitacea* (= *P. inserta*)-- Thicket
creeper, Virginia creeper
Vitis arizonica-- Canyon grape

Malvaceae-- Mallow Family

- Abutilon parvulum*-- Small-leaf abutilon,
Indian-mallow
Malva neglecta-- Common mallow, dwarf
mallow, roundleaf mallow, cheeses
Sida procumbens
Sphaeralcea fendleri var. *venusta*-- Fendler
globemallow
Sphaeralcea grossulariaefolia var. *pedata*--
Gooseberryleaf globemallow
Sphaeralcea parviflora-- Littleleaf globemallow
Sphaeralcea subhastata var. *pumila*--
Globemallow

Guttiferae-- St. Johnswort Family

- Hypericum formosum*-- St. Johnswort

Tamaricaceae-- Tamarix Family

- Tamarix chinensis* (= *T. pentandra*)-- Tamarisk,
saltcedar

Violaceae-- Violet Family

- Hybanthus verticillatus*-- Green-violet

Loasaceae-- Stickleaf Family

- Mentzelia pumila*-- Blazing-star, stickleaf

Cactaceae-- Cactus Family

- Coryphantha vivipara* var. *arizonicana*
(= *Mamillaria arizonica*)--
Beehive cactus, biscuit cactus
Echinocereus fendleri var. *fendleri*-- Fendler
hedgehog cactus
Echinocereus triglochidiatus var. *melanacanthus*--
Hedgehog cactus, claretcup cactus
Opuntia chlorotica-- Pancake-pear
Opuntia leptocaulis-- Desert Christmas cactus
Opuntia phaeacantha var. *discata* (= *O.
engelmannii*)-- Engelmann pricklypear

- Opuntia phaeacantha* var. *major* (= *O.
phaeacantha*)-- Purplefruit pricklypear
Opuntia whipplei var. *whipplei*-- Whipple
cholla

Elaeagnaceae-- Oleaster Family

- Elaeagnus angustifolia*-- Russian-olive

Lythraceae-- Loosestrife Family

- Lythrum californicum*-- Purple-loosestrife,
hierba del cancer

Onagraceae-- Eveningprimrose Family

- Camissonia chamaenerioides* (= *Oenothera
chamaenerioides*)-- Longcapsule-
primrose
Clarkia purpurea ssp. *quadrigulnea*
Epilobium adenocaulon var. *parishii*--
Willowweed
Epilobium paniculatum forma *subulatum*
Gaura coccinea-- Scarlet gaura, butterflyweed
Gaura hexandra ssp. *gracilis* (= *G. gracilis*)--
Slender gaura
Gaura parviflora-- Velvetleaf gaura, lizard-tail
Oenothera albicaulis-- Prairie eveningprimrose
Oenothera caespitosa var. *marginata*-- Large
white desert-primrose
Oenothera hookeri ssp. *hewettii*-- Hooker
eveningprimrose
Oenothera pallida-- Pale eveningprimrose

Umbelliferae-- Parsley Family

- Apium graveolens*-- Common celery
Berula erecta-- Water-parsnip
Cicuta maculata (= *C. douglasii*)-- Water-
hemlock
Cymopterus multinervatus-- Purple cymopterus
Daucus pusillus-- American carrot
Lomatium foeniculaceum ssp. *macdougalii*
(= *L. macdougalii*)-- Macdougal Indian-
root, biscuit-root, hog-fennel
Lomatium neadense var. *parishii*-- Parish wild-
parsley
Pastinaca sativa-- Common parsnip

Garryaceae-- Silktassel Family

- Garrya flavescens*-- Quininebush, yellowleaf
silktassel
Garrya wrightii-- Wright silktassel

Ericaceae-- Heather Family

- Arctostaphylos pungens*-- Mexican manzanita,
pointleaf manzanita

Fouquieriaceae-- Ocotillo Family

- Fouquieria splendens*-- Ocotillo, coachwhip

Oleaceae-- Olive Family

Forestiera pubescens (= *F. neomexicana* var. *arizonica*)-- Adelia, New Mexico
forestiera, desert-olive, tanglebrush
Fraxinus anomala (= *F. lowellii*)-- Singleleaf
ash, Lowell ash
Fraxinus velutina-- Velvet ash
Menodora scabra-- Rough menodora

Apocynaceae-- Dogbane Family

Apocynum cannabinum var. *glaberrimum*--
Dogbane, Indian-hemp

Asclepiadaceae-- Milkweed Family

Asclepias asperula ssp. *capricornu* (= *A. capricornu*)-- Antelope horns, milkweed
Asclepias subverticillata-- Poison milkweed,
western whorled milkweed, horsetail milkweed
Matelea producta (= *Gonolobus productus*)--
Angle-pod
Sarcostemma cynanchoides (= *Funastrum cynanchoides*)-- Climbing-milkweed

Convolvulaceae-- Morning-glory Family

Convolvulus arvensis-- Field bindweed
Evolvulus nuttallianus (= *E. pilosus*)
Evolvulus sericeus
Ipomoea costellata-- Morning-glory
Ipomoea hederacea-- Morning-glory
Ipomoea hederifolia (= *I. coccinea* var.
hederifolia)-- Scarlet morning-glory,
starglory, scarlet-creepers
Ipomoea purpurea var. *diversifolia* (= *I.
hirsutula*)-- Woolly morning-glory,
Mexican morning-glory

Polemoniaceae-- Phlox Family

Allophyllum gilioides (= *Gilia gilioides*)--
Straggling-gilia
Eriastrum diffusum
Eriastrum eremicum
Gilia flavocincta
Gilia leptomeria-- Toothleaf gilia
Gilia sinuata
Ipomopsis aggregata (= *Gilia aggregata*)--
Skyrocket, scarlet-gilia
Ipomopsis longiflora (= *Gilia longiflora*)--
Whiteflower-gilia, longflower-gilia
Ipomopsis multiflora (= *Gilia multiflora*)--
Manyflower-gilia
Linanthus aureus-- Golden linanthus
Linanthus bigelovii-- Bigelow linanthus
Microsteris gracilis

Hydrophyllaceae-- Waterleaf Family

Eriodictyon angustifolium-- Narrowleaf yerba-
santa, mountain-balm

Phacelia affinis-- Purple-bell phacelia

Phacelia ambigua (= *P. crenulata* var. *ambigua*)--
Notchleaf phacelia
Phacelia distans var. *australis*-- Wild-heliotrope
Phacelia magellanica-- Phacelia

Boraginaceae-- Borage Family

Amsinckia intermedia-- Coast fiddleneck
Cryptantha barbigera-- Bearded cryptantha
Cryptantha crassispala-- Thick-sepaled
cryptantha
Cryptantha gracilis-- Slender cryptantha
Cryptantha micrantha-- Purpleroot cryptantha
Cryptantha nevadensis-- Nevada cryptantha
Cryptantha pterocarya-- Wingnut cryptantha
Lappula redowskii-- Stickseed
Lithospermum incisum-- Gromwell, puccoon
Pectocarya platycarpa-- Broadnut comb-bur
Pectocarya setosa-- Stiffstem comb-bur,
moonseed
Plagiobothrys arizonicus-- Bloodweed, Arizona
popcorn-flower

Verbenaceae-- Vervain Family

Aloysia wrightii-- Wright-lippia, lemon-
verbena, oreganillo
Glandularia bipinnatifida var. *bipinnatifida*
(= *V. ciliata*)-- Mexican vervain
Glandularia gooddingii (= *Verbena gooddingii*)--
Goodding-verbena
Tetraclea coulteri
Verbenabracteata-- Prostrate vervain

Labiateae-- Mint Family

Agastache wrightii-- Wright giant-hyssop
Hedeoma nanum ssp. *macrocalyx*-- Mock-
pennyroyal
Hedeoma oblongifolium-- Mock-pennyroyal
Lamium amplexicaule-- Henbit, deadnettle
Marrubium vulgare-- Common horehound
Mentha arvensis var. *villosa*-- Field mint
Mentha spicata-- Spearmint
Monarda menthaefolia-- Beebalm, horsemint
Nepeta cataria-- Catnip
Salvia dorrii ssp. *mearnsii*-- Mearns desert sage
Scutellaria lateriflora-- Mad-dog skullcap

Solanaceae-- Potato Family

Chamaesaracha coronopus-- Small-groundcherry
Datura meteloides-- Sacred datura, tolguacha
Lycium pallidum-- Wolfberry, tomatilla, rabbit-
thorn
Margaranthus solanaceus-- Netted-globeberry
Nicotiana trigonophylla-- Desert tobacco
Physalis hederifolia-- Ivyleaf groundcherry
Physalis hederifolia var. *cordifolia*
(= *P. fendleri*)-- Fendler groundcherry
Solanum americanum-- American nightshade

Solanum elaeagnifolium-- Silverleaf nightshade, white horsetail, trompillo
Solanum rostratum-- Buffalo-bur, prickly nightshade
Solanum xanti-- Purple nightshade

Serophulariaceae-- Figwort Family

Castilleja chromosa-- Indian paintbrush
Cordylanthus parviflorus-- Smallflower birdbeak, clubflower
Linaria dalmatica-- Toadflax
Maurandya antirrhiniflora-- Blue snapdragon-vine, twining-snapdragon
Mimulus guttatus-- Yellow monkeyflower
Mimulus rubellus-- Redstem mimulus
Orthocarpus purpurascens var. *palmeri*-- Mohave owlclover, escobita
Penstemon barbatus-- Scarlet bugler
Penstemon bridgesii-- Bridges penstemon
Penstemon eatoni ssp. *undosus*-- Eaton penstemon, firecracker
Penstemon jamesii ssp. *ophianthus*-- James penstemon
Penstemon linarioides ssp. *sileri*-- cardtongue
Penstemon palmeri-- Scented penstemon, Palmer penstemon
Penstemon pseudospectabilis ssp. *connatifolius*-- Desert beardtongue
Penstemon thurberi-- Thurber penstemon
Verbascum thapsus-- Common mullein
Veronica americana-- American brooklime
Veronicaanagallis-aquatica-- Water speedwell, brook-pimpernel
Veronica polita-- Wayside speedwell

Bignoniaceae-- Bignonia Family

Catalpa speciosa-- Hardy catalpa
Chilopsis linearis var. *arcuata*-- Desert-willow, desert-catalpa

Martyniaceae-- Unicorn-plant Family

Proboscidea parviflora-- Devil's claw, unicorn-plant

Orobanchaceae-- Broomrape Family

Orobanche cooperi (= *O. ludoviciana* var. *cooperi*)-- Burroweed strangler, broomrape

Plantaginaceae-- Plantain Family

Plantago lanceolata-- Buckhorn plantain, ribwort
Plantago major-- Common plantain
Plantago patagonica var. *gnaphaloides* (= *P. purshii*)-- Pursh plantain, Indian-wheat

Rubiaceae-- Madder Family

Galium proliferum-- Great Basin bedstraw
Galium stellatum var. *eremicum*-- Desert bedstraw
Galium wrightii-- Wright bedstraw
Galium wrightii var. *rothrockii* (= *G. r. othrockii*)-- Rothrock bedstraw

Caprifoliaceae-- Honeysuckle Family

Lonicera japonica-- Japanese honeysuckle
Symporicarpos rotundifolius-- Roundleaf snowberry

Cucurbitaceae-- Gourd Family

Cucurbita foetidissima-- Buffalo-gourd, calabazilla

Campanulaceae-- Bellflower Family

Lobelia cardinalis ssp. *graminea*-- Cardinal-flower
Nemacladus glanduliferus var. *orientalis*-- Thread-plant

Compositae-- Sunflower Family

Achillea millefolium var. *lanulosa* (= *A. lanulosa*)-- Western yarrow, milfoil
Acourtia wrightii (= *Perezia wrightii*)-- Brownfoot
Ambrosia acanthicarpa (= *Franseria acanthicarpa*)-- Annual burweed
Ambrosia aptera-- Bloodweed
Ambrosia confertiflora (= *Franseria confertiflora*)-- Slimleaf bursage, bursage, ragweed
Ambrosia psilostachya-- Western ragweed
Artemisia carruthii var. *wrightii*-- Wormwood

Fifth Annual Gila Bird and Nature Festival

April 25, 26, 27, 1997



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<i>Artemisia dracunculus</i> (= <i>A. dracunculoides</i>)--	
	False-tarragon
<i>Artemisia ludoviciana</i> --	Louisiana sagebrush
<i>Artemisia pacifica</i>	
<i>Aster coeruleescens</i> --	Aster
<i>Aster subulatus</i> var. <i>ligulatus</i> (= <i>A. exilis</i>)--	
	Slender aster
<i>Baccharis emoryi</i> --	Emory baccharis
<i>Baccharis pteronioides</i> --	Yerba-de-pasmo
<i>Baccharis salicifolia</i> (= <i>B. glutinosa</i>)--	
	Seepwillow, water-wally, batamote
<i>Baccharis sarothroides</i> --	Broom baccharis, desert-broom
<i>Baileya multiradiata</i> --	Desert-marigold, desert baileya
<i>Bidens frondosa</i> --	Sticktight, beggarticks
<i>Brickellia atractyloides</i>	
<i>Brickellia betonicaefolia</i> --	Betonyleaf brickellbush
<i>Brickellia californica</i> --	California brickellia, pachaba
<i>Brickellia floribunda</i> --	Brickellbush
<i>Brickellia scabra</i> --	Sandpaper brickellbush
<i>Cirsium arizonicum</i> --	Arizona thistle
<i>Cirsium neomexicanum</i> --	New Mexico thistle
<i>Conyza canadensis</i> (= <i>Erigeron canadensis</i>)--	
	Horseweed
<i>Dyssodia acerosa</i> --	Dogweed
<i>Dyssodia porophylloides</i> --	San Felipe dyssodia
<i>Encelia virginensis</i> (= <i>E. frutescens</i> var. <i>virginensis</i>)--	Encelia
<i>Ericameria laricifolia</i> (= <i>Aplopappus</i> <i>laricifolius</i> ; <i>Haplopappus laricifolius</i>)--	
	Turpentine-bush, larchleaf goldenweed
<i>Erigeron concinnus</i> --	Tidy fleabane
<i>Erigeron divergens</i> --	Spreading fleabane
<i>Erigeron flagellaris</i> --	Running fleabane
<i>Erigeron oreophilus</i> --	Fleabane
<i>Erigeron utahensis</i> var. <i>tetrapleurus</i> --	Fleabane
<i>Gaillardia arizonica</i> var. <i>pringlei</i> --	Arizona blanketflower
<i>Gaillardia pinnatifida</i> --	Blanketflower
<i>Gnaphalium wrightii</i> --	Wright cudweed
<i>Grindelia aphanactis</i> --	Gumweed
<i>Grindelia squarrosa</i> var. <i>serrulata</i> --	Curlycup gumweed
<i>Gutierrezia sarothrae</i> --	Broom snakeweed
<i>Helianthus annuus</i> --	Common sunflower
<i>Helianthus petiolaris</i> ssp. <i>fallax</i> --	Narrowleaf sunflower
<i>Heterotheca psammophila</i> (= <i>H. subaxillaris</i>)--	
	Telegraph-plant, camphorweed
<i>Heterotheca villosa</i> (= <i>Chrysopsis villosa</i>)--	
	Hairy golden-aster
<i>Heterotheca villosa</i> var. <i>foliosa</i> (= <i>Chrysopsis</i> <i>foliosa</i>)--	Golden-aster
<i>Hymenopappus filifolius</i> var. <i>lugens</i>	
	<i>Hymenothrix loomisii</i>
	<i>Hymenoxyx acaulis</i> var. <i>arizonica</i> -- Arizona actinea, perky Sue
	<i>Hymenoxyx cooperi</i> -- Cooper actinea
	<i>Lactuca ludoviciana</i> -- Western lettuce
	<i>Lactuca serriola</i> -- Prickly lettuce, wild lettuce
	<i>Layia glandulosa</i> -- Tidy-tips
	<i>Leucelene ericoidea</i> (= <i>Aster arenosus</i>)-- White- aster, rose-heath
	<i>Machaeranthera aquifolia</i> (= <i>Aster aquifolius</i>)
	<i>Machaeranthera gracilis</i> (= <i>Aplopappus gracilis</i> , <i>Haplopappus gracilis</i>)-- Slender goldenbush
	<i>Machaeranthera tephrodes</i> (= <i>Aster tephrodes</i>)
	<i>Malacothrix clevelandi</i> -- Cleveland yellow saucers
	<i>Melampodium leucanthum</i> -- Blackfoot-daisy
	<i>Microseris linearifolia</i> -- Silver puffs
	<i>Packera multiflora</i> (= <i>Senecio millelobatus</i>)
	<i>Parthenium incanum</i> -- Mariola
	<i>Senecio douglasii</i> var. <i>longilobus</i> (= <i>S. l</i> <i>ongilobus</i>)-- Threadleaf groundsel
	<i>Solidago altissima</i> -- Tall goldenrod
	<i>Solidago sparsiflora</i> -- Goldenrod
	<i>Solidago wrightii</i> -- Wright goldenrod
	<i>Sonchus asper</i> -- Spiny sow-thistle
	<i>Stephanomeria tenuifolia</i> -- Wire-lettuce
	<i>Tagetes patula</i> -- Marigold
	<i>Taraxacum officinale</i> -- Common dandelion
	<i>Thelesperma subnudum</i> -- Navajo-tea, greenthread
	<i>Townsendia annua</i>
	<i>Townsendia incana</i> -- Easter-daisy
	<i>Townsendia strigosa</i>
	<i>Tragopogon dubius</i> -- Goatsbeard
	<i>Verbesina encelioides</i> -- Yellowtop, cowpen- daisy, butter-daisy
	<i>Verbesina encelioides</i> var. <i>exauriculata</i> -- Crownbeard
	<i>Viguiera annua</i> -- Annual goldeneye
	<i>Virgulus falcatus</i> (= <i>Aster commutatus</i> var. <i>crassulus</i>)-- White prairie-daisy
	<i>Xanthium strumarium</i> (= <i>X. saccharatum</i>)-- Common cocklebur

Cultivated Species at Red Rock State Park

<i>Carya cordiformis</i> --	Bitternut hickory
<i>Gleditsia triacanthos</i> --	Honey-locust
<i>Malus pumila</i> --	Apple
<i>Pinus eldarica</i> --	Quetta pine
<i>Prunus amygdalus</i> --	Almond
<i>Prunus domestica</i> --	Plum
<i>Prunus persica</i> --	Peach
<i>Punica granatum</i> --	Pomegranate
<i>Pyracantha</i> sp.--	Firethorn
<i>Pyrus communis</i> --	Pear
<i>Robinia pseudoacacia</i> --	Black locust

TUCSON AUDUBON SOCIETY

POSITION ANNOUNCEMENT

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Responsibilities/Qualifications: Demonstrated ability to work with volunteer board, staff, other organizations and media. Experience in fundraising, grant writing, administration and environmental advocacy. Effective oral/written communication skills, initiative and creativity.

Applications accepted until February 15, 1997.

Apply to: Search Committee
Tucson Audubon Society
300 E. University Blvd., #120
Tucson, AZ 85705

"Craig's Juicy Native Grass Gossip & Research" Internet Newsletter (California)

*Craig C. Dremann, The Reveg Edge, Box 609, Redwood City, CA 94064
415/325-7333 FAX 415/321-8333.*

The question of native plant seed zones and "how local is local" is a problem faced by every ecological restorationist worldwide. A new internet newsletter has been established that discusses native grass ecotypes and their uses. Among the topics discussed are grass ecotypes and their value for determining native plant transfer zones. The current issue of the Juicy Gossip entitled "Native grasses and their revolutionary implications for geneticists, biodiversity, conservation, taxonomy, evolutionary sciences and ecological restoration in California," contains as a bonus, a comprehensive list of world literature on ecotypes and related research, 1880-1996. The Internet address= <http://www.batnet.com/rwc-seed/juicy.gossip.three.html>

Previous issues of the Juicy Gossip can be found at the same Internet address, substituting "one" or "two" in the place of "three." Issue number four, available in late spring 1997, will discuss intentionally planted weeds ("Blando" brome, crested wheatgrass, fountaingrass, orchard grass, red brome, smooth brome, etc.) Contributions to future issues of the Juicy Gossip are encouraged and welcome.

Conservation Update

by Julia Fonseca

Conservation Tools: Third in a series

Buehman Canyon Saved By Unique Waters Designation

A proposed open pit copper pit in Buehman Canyon appears unlikely now that the Arizona Department of Environmental Quality has increased water quality protection for this perennial stream. Buehman Canyon flows out of the Catalina Mountains to the San Pedro River. This sycamore-lined canyon is home to two species of native fish and lowland leopard frogs as well as other wildlife.

Buehman Canyon is part of the Bellota Ranch, which opposed the Korn Kob mine due to the impacts mining would inevitably have on the ranch. Although the ranch owned Buehman Canyon, the mineral rights underneath the property were owned by a mining company. Water quality protection was sought by the rancher because he felt that the higher standards set under the Unique Waters Program would make the mining operation too costly to construct. The Unique Waters designation was supported by many Tucson area and San Pedro River residents and ultimately approved by the state.

Since then, the mining company has withdrawn its plan and the rancher has donated approximately 1,000 acres of the canyon to The Nature Conservancy.

Invasive Plant Reports

The California Native Plant Society has decided to support release of two insect species to control tamarisk. The U. S. Department of Agriculture has been researching natural controls on tamarisk for several years and has recently obtained permission to release a type of mealy bug at four or five sites under caged conditions to test their effectiveness. Contact Jake Sigg at CNPS for more information.

Free copies of a 43-page BLM plan for controlling noxious weeds in the West are available from Western Weed Team, BLM, Montana State Office, 222 N. 32nd St., P. O. Box 36800, Billings, MT 59107-6800. The document is entitled "Partners against Weeds."

Federal Rare Plant Protection Eased

USFWS has eliminated the Category 2 and 3 candidate species list. This list identified species which merited further investigation to determine whether they should be protected under the Endangered Species Act. Apparently there were too many species on the list.

Coronado National Forest is updating its sensitive species list for the first time in many years. Like USFWS, the Forest Service is under pressure to reduce the number of species that merit monitoring or protection.

City of Tucson Promotes Native Plant Use and Protection

Tucson's Planning Department is proposing an ordinance to promote the in-situ protection of certain native trees, shrubs and cacti. The ordinance would require a native plant preservation and salvage plan for plants such as saguaros, barrel cacti, mesquite, ironwood, desert and canyon hackberry, desert willow, ocotillo, soaptree yucca, white thorn and catclaw acacia, blue and foothill palo verde and others. The ordinance would apply to all new development and expansions of existing development under certain circumstances.

In addition, the city's new landscaping in front of City Hall sets a good example. The new landscaping features native plants such as screwbean mesquite, blue palo verde, fairy duster, tecoma, desert hackberry as well as grasses such as Arizona cottontop and sideoats grama. The area was landscaped with donations by local contractors, including Desert Survivors.

Chapter Information

Flagstaff Chapter

Regular meetings are held on the 4th Tuesday of every month at 7:00 p.m. on the NAU campus in Rm. 313 of the Biological Sciences Building. For more information, contact Chapter President David Hammond at (520) 556-9487.

Phoenix Chapter

Regular meetings are held the 2nd Monday of the month at 7:30 p.m. September through May in Webster Auditorium at the Desert Botanical Garden. For more information, contact Chapter President Kent Newland at (602) 585-3630.

MEETINGS: Jan. 20-- "Old World Succulents" with Cathy Babcock; Feb. 17-- "Pollination Ecology of *Agave palmeri* and *Agave chrysantha*" presented by Liz Sluson of the DBG; Mar. 10-- Jim Brock of SASI will discuss "Butterflies of Southeastern Arizona;" Apr. 14-- "Tres Rios Wetlands" with Roland Wass of the City of Phoenix Water Services Dept; May 12-- "Native and Arid Adapted Vegetables and Crops," Frank Martin, Maricopa County Master Gardener (also Spring Potluck Dinner.)

FIELD TRIPS: Jan. 25-- **Tour of the Desert Botanical Garden** with Wendy Hodgson and Cathy Babcock; Feb. 22-- **Tonto Basin-Roosevelt Dam** with Wendy Hodgson; Apr. 19-- **Tres Rios Wetlands**, led by Roland Wass.

South-Central Chapter: Inactive

Southeast Subchapter

No regular meetings are scheduled for the January-May period. Please contact Chapter President Nancy Stallcup at (520) 378-1169 for more information.

New officers for 1996-1998: President --Nancy Stallcup; Program Chair--Sheridan Stone

Tucson Chapter

Regular meetings are held on the 2nd Wednesday of the month September through May at the Tucson Botanical Gardens, 2150 N. Alvernon Way, Tucson. For more information, please contact Chapter President Barbara Skye at (520) 751-0945.

New officers elected for 1996-1998:

President	Barbara Skye
Vice President	Marcia Tiede
Chapter Treasurer	Karen Sondak
Program Chairperson	Julia Fonseca

Field Trip Chairperson	Gary Bachman
Web Site Coordinator	David Sewell
Special Projects Coordinator	Marie Lynn Huncken

MEETINGS: Jan 8-- "**Native Orchids of Arizona**," presented by Ron Coleman; Feb. 12-- Mima Falk, ANPS Copresident and Regional Botanist in the Coronado National Forest, will present "**A Regional Botanist's Report;**" Mar. 12-- "**Arizona's Champion Native Trees**," presented by Bob Zahner, coordinator of the Arizona Register of Big Trees; Apr. 9--Peter Gierlach, aka the Reverend Petey Mesquitey, on "**How I Got Rich Growing Native Plants;**" May 14-- "**An Overview of Arid Regions of South America**," by David Brunner, Program Director of Friends of the Urban Forest, along with the Annual Spring Potluck which starts at 6 p.m.

FIELD TRIPS: Jan. 11-- **Sabino Springs Revegetation**, led by Lisa Harris, wildlife biologist and president of the Harris Environmental Group; Jan. 25-- **Plants for the Southwest Nursery** with owners Gene Joseph and Jane Evans; Feb. 15-17-- **Cabeza Prieta Wildlife Refuge** with the Huachuca Hiking Club; Mar. 8-9-- Organ Pipe National Monument, to be co-led by ANPS Copresident and NPS botanist Sue Rutman and Caroline Wilson, volunteer coordinator at the Desert Museum; Mar. 16-- **Yard Tours** at ANPS members' homes; Mar. 22-- **Sabino Canyon**, led by Joan Tedford, volunteer naturalist at the canyon; Apr. 5-- Antoinette Segade and Nancy Stallcup will lead a spring flower trip to **Lizard Lane** at the north end of the Dragoon Mts; Apr. 5-- **King's Canyon**, led by Dave Bertleson; Apr. 11-13-- **Galiuro Mts.** with the Huachuca Hiking Club; Apr. 19-- **Canelo Nature Preserve** with Peter Warren or Dave Gori of the Nature Conservancy; Apr. 26-- **Mendoza Canyon** and the BLM Coyote Mts. Wilderness Area, led by Peter Gierlach and Bob Zahner; May 3-- **Las Guias Mts.** in Buenos Aires National Wildlife Refuge, led by Steve McLaughlin of the U of A's Office of Arid Land Studies; May 10-- **Agua Caliente Park**, a nesting site for great horned owls, with naturalist Pinau Merlin; May 16-- **Saguaro National Park East** with Pinau Merlin.

Yuma Chapter

For information on the Yuma Chapter, contact Chapter President Pat Callahan, Rt. 1, Box 28M, Somerton, Az., 85350.

ARIZONA NATIVE PLANT SOCIETY BOARD OF DIRECTORS

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