



# The Plant Press

## THE ARIZONA NATIVE PLANT SOCIETY

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### PLANTS FOR THE SHADE

Do you have a shady place where it's tough to get plants to grow? Have those Mesquites that were mere sticks a few years ago matured into a dense canopy of green that has left the ground under those branches nothing more than barren soil? That's the problem that one of our readers has and she passed that question on to the *Plant Press* editor via the reader survey conducted last fall. She had planted several mesquites and over time they had created a dense shade that prevented almost anything from growing underneath. She wanted to know what natives might survive in this shady situation.

#### Types of Shade

Before discussing specific plants, it might be helpful to briefly discuss "types of shade". For example, a single mesquite may not necessarily create a "no growth plant zone", but depending on type, a group of mesquites can create a dense shade canopy. On the other extreme are the Palo Verdes which provide a more filtered shade. These are only two examples of the large number of trees, both native and non-native, that fall at different ends of the "shade density" spectrum and everywhere in between. This makes it important that you select plants for the shade based on the density of the canopy of your trees.

When considering shade, also think about time of day. Is the area under the tree shaded all day or does the shade move with the sun. If you don't have all day shade, plant the shade lovers where they will get afternoon shade. Plant sun lovers where you lose the shade in the afternoon.

The different types of shade create micro-climates. Temperatures are generally lower in the shade and because of transpiration, humidity may be slightly higher. Although it might be assumed that there may be more soil moisture available that may not always be the case. Unless there is supplemental irrigation, the tree providing the shade may be sucking up all the available moisture. Do some investigating - if supplemental irrigation is not available, plan on providing it for whatever you plant.

#### Natives

Although many plants prefer some occasional shade this time of year, there are very few desert natives that do well in the dense shade. Kent Newland, Phoenix Chapter President, provided three suggestions - Yellow Columbine (*Aquilegia chrysantha*), Red Mint (*Stachys coccinea*), and Coral Bells (*Heuchera sanguinea*). These are readily available and Kent has had good luck using all three.

Another possibility are the penstemons, *P. parryi* & *P. eatonii*, do well with some filtered afternoon shade that keeps them from becoming stressed. This is particularly important where they generally rely on natural rainfall to provide moisture once established.

#### Non-Natives

Although your preference may be to plant natives, your choices expand significantly if you consider non-natives. There are a number of plants available so it's a matter of personal preference and understanding of your planting environment. (Shade - Continued on Page 6)

**DON'T MISS THE ANNUAL MEETING ANNOUNCEMENT - PAGE 7**

# PLANTS OF HOSPITAL FLAT, TREASURE PARK AND BIG CREEK - PINALENO MOUNTAINS

by Nancy Stallcup and Steve McLaughlin

The Arizona Native Plant Society has conducted field trips annually to Hospital Flat and nearby locations for almost 10 years. Hospital Flat in the Pinaleno Mountains is at an elevation of approximately 9,000 feet. Big Creek is the stream which drains both Hospital Flat and Treasure Park.

This list was prepared primarily to be a handy reference for ANPS members participating in these trips or visiting the Pinalenos on their own. It was compiled from our field notes and from herbarium records; it is not intended to provide a complete flora for the region. In particular, the records for grasses *Poaceae* and sedges *Cyperaceae* are likely to be incomplete. The list also concentrates mostly on the meadow areas and the riparian area along Big Creek and probably does not include all the species that might be encountered in the adjacent mixed conifer forest.

## Ferns

*Athyrium filix-femina*,  
*Cystopteris fragilis*,  
*Pteridium aquilinum*,

Southern lady fern.  
Fragile bladder fern.  
Western bracken.

## *Pinaceae* (Pine Family)

*Abies concolor*,  
*Picea engelmannii*,  
*Pinus ponderosa*,  
*Pinus strobiformis*,  
*Pseudotsuga menziesii*,

White fir - large tree.  
Engelmann spruce - large tree.  
Ponderosa pine - large tree.  
Southwestern white pine - large tree.  
Douglas fir - large tree.

## *Apiaceae Umbelliferae*, (Parsley Family)

*Berula erecta*,  
*Conioselinum scopulorum*,  
*Heracleum lanatum*,  
*Ligusticum porteri*,  
*Pseudocymopterus montanus*,

Water parsnip - white-flowered herb.  
Hemlock parsley - white-flowered herb.  
Cow parsnip - tall white-flowered herb.  
Chuchupate - white-flowered herb.  
Mountain parsley - yellow-flowered herb.

## *Asteraceae Compositae*, (Sunflower Family)

*Achillea millefolium*,  
*Agoseris aurantiacum*,  
*Antennaria parvifolia*,  
*Artemisia dracunculoides*,  
*Bahia dissecta*,  
*Brickellia grandiflora*,  
*Cirsium parryi*,  
*Cirsium wheeleri*,  
*Dugaldia hoopesii* *Helenium hoopesii*,  
*Erigeron arizonica* (incl. *E. rusbyi*),  
*Erigeron formosissimus*,  
*Erigeron heliographis*,  
*Erigeron oreophilus*,  
*Erigeron superbus*,  
*Eupatorium bigelovii*,  
*Eupatorium rothrockii*,  
*Gnaphalium grayi*,

Yarrow - white-flowered herb.  
Mountain dandelion - orange-flowered herb.  
Pussy toes - small white-flowered herb.  
Wormwood - tall straw-flowered herb.  
Yellow ragweed - yellow-flowered herb.  
Large-flowered thoroughwort - white-flowered herb.  
Thistle - tall yellow-flowered herb.  
Thistle - red-flowered herb.  
Western sneezeweed - tall yellow-flowered herb.  
Arizona fleabane - white-flowered herb.  
Showy fleabane - white-flowered herb.  
Heliograph Peak fleabane - small white-flowered herb.  
Fleabane - white-flowered herb.  
Fleabane - tall white-flowered herb.  
Thoroughwort - white-flowered herb.  
Thoroughwort - white-flowered herb.  
Cudweed - white-flowered herb.

*Helianthella quinquenervis*,  
*Rudbeckia laciniata*,  
*Senecio bigelovii*,  
*Solidago wrightii*,  
*Sonchus* sp.,  
*Tragopogon dubius*,  
*Viguiera multiflora*,

Five-veined sunflower - yellow-flowered herb.  
Cut-leaf coneflower - tall yellow-flowered herb.  
Groundsel - yellow-flowered herb.  
Goldenrod - yellow-flowered herb.  
Sow thistle - yellow-flowered herb.  
Salsify - yellow-flowered herb.  
Golden eye - yellow-flowered herb.

**Betulaceae (Birch Family)**

*Alnus tenuifolia*,

Thin-leaf alder - small tree.

**Boraginaceae (Forget-me-not Family)**

*Mertensia franciscana*,

Mountain bluebell - blue-flowered herb.

**Brassicaceae Cruciferae, (Mustard Family)**

*Draba belleriana*,  
*Draba petrophila*,  
*Erysimum capitatum*,  
*Nasturtium officinale*,  
*Rorippa microtites*,

Rock cress - small yellow-flowered herb.  
Rock cress - small yellow-flowered herb.  
Western wallflower - orange-flowered herb.  
Watercress, white-flowered herb.  
Yellow cress - yellow-flowered herb.

**Campanulaceae (Bellflower Family)**

*Campanula rotundifolia*,  
*Lobelia cardinalis*,

Bluebell - blue-flowered herb.  
Cardinal flower - red-flowered herb.

**Caryophyllaceae (Pink Family)**

*Arenaria lanuginosa*,  
*Cerastium nutans*,  
*Silene laciniata*,  
*Silene scouleri*,  
*Stellaria longipes*,

Sandwort - small white-flowered herb.  
Chickweed - white-flowered herb.  
Mexican campion - red-flowered herb.  
Catchfly - white to pinkish-flowered herb.  
Starwort - small white-flowered herb.

**Commelinaceae (Spiderwort Family)**

*Commelina dianthifolia*,

Day flower - blue-flowered herb.

**Cyperaceae (Sedge Family)**

*Carex festivella*,  
*Carex foenea*,  
*Carex interior*,  
*Carex meadii*,  
*Carex stipata*,  
*Carex wootoni*,  
*Cyperus fendlerianus*,  
*Scirpus microcarpus*,

Sedge.  
Sedge.  
Sedge.  
Sedge.  
Sedge.  
Sedge.  
Flat sedge.  
Bulrush.

**Ericaceae (Heath Family)**

*Chimaphila umbellata*,

Pipsissewa - low woody white-flowered herb.

*Euphorbiaceae*

*Euphorbia incisa* var. *mollis*,

Spurge, green-flowered herb.

*Fabaceae Leguminosae*, (Pea Family)

*Lathyrus graminifolius*,

Grass-leaved peavine - white-flowered herb.

*Melilotus alba*,

White sweet clover - tall white-flowered herb.

*Thermopsis rhombifolia* var. *montana*,

Golden pea - yellow-flowered herb.

*Trifolium pinetorum*,

Clover - reddish purple-flowered herb.

*Vicia americana*,

American vetch - pink-flowered herb.

*Vicia pulchella*,

Vetch - white-flowered herb.

*Gentianaceae* (Gentian Family)

*Gentianella amarella*,

Little gentian - white or pinkish-purple-flowered herb.

*Gentianopsis thermalis*,

Western fringed gentian - blue-flowered herb.

*Halenia recurva*,

Spurred gentian - yellow-flowered herb.

*Swertia radiata*,

Green gentian - large whitish green-flowered herb.

*Geraniaceae* (Geranium Family)

*Geranium caespitosum*,

Crane's bill or wild geranium - pink-flowered herb.

*Geranium eremophilum*,

Crane's bill or wild geranium - pink-flowered herb.

*Geranium richardsonii*,

Crane's bill or wild geranium - white-flowered herb.

*Grossulariaceae* (Currant Family)

*Ribes pinetorum*,

Orange gooseberry - reddish yellow-flowered shrub.

*Hypericaceae* (St. John's Wort Family)

*Hypericum anagalloides*,

Tinker's penny - very small yellow-flowered herb.

*Hypericum formosum*,

St. John's wort - yellow-flowered herb.

*Juncaceae* (Rush Family)

*Juncus longistylis*,

Rush.

*Iridaceae* (Iris Family)

*Sisyrinchium longipes*,

Yellow-eyed grass - yellow-flowered herb.

*Lamiaceae Labiatae*, (Mint Family)

*Agastache pallidiflora*,

Giant hyssop - pink-flowered herb.

*Hedeoma hyssopifolium*,

Mock pennyroyal - blue-flowered herb.

*Monarda austromontana*,

Bee balm - white-flowered herb.

*Prunella vulgaris*,

Self heal - purple-flowered herb.

*Salvia arizonica*,

Arizona sage - violet-flowered herb.

*Liliaceae* (Lily Family)

*Veratrum californicum*,

California corn lily - tall white or greenish-flowered herb.

**Linaceae (Flax Family)**

*Linum lewisii*,

Lewis blue flax - blue-flowered herb.

**Onagraceae (Evening Primrose Family)**

*Epilobium angustifolium*,

Fireweed - pink-flowered herb.

*Epilobium ciliatum*,

Willow weed - white-flowered herb.

*Oenothera hookeri*,

Evening primrose - tall yellow-flowered herb.

*Oenothera laciniata*,

Evening primrose - white-flowered herb.

**Orchidaceae (Orchid Family)**

*Malaxis soulei*,

Mountain malaxis - small white-flowered herb.

*Platanthera sparsiflora* *Habenaria sparsiflora*,

Bog orchid - green-flowered orchid.

*Platanthera stricta* *Habenaria saccata*,

Bog orchid - green-flowered herb.

*Spiranthes romanzoffiana*,

Hooded ladies tresses - white-flowered herb.

**Poaceae (Graminae, Grass Family)**

*Agrostis scabra*,

Bentgrass.

*Calamagrostis canadensis*,

Reed grass.

*Danthonia californica*,

California oatgrass.

*Deschampsia caespitosa*,

Tufted hairgrass.

*Festuca sororia*,

Fescue.

*Glyceria elata*,

Manna grass.

*Muhlenbergia andina*,

Muhly.

*Muhlenbergia virescens*,

Screwleaf muhly.

*Muhlenbergia wolffii*,

Annual muhly.

*Poa pratensis*,

Kentucky bluegrass.

*Sitanion hystrix*,

Bottlebrush squirrel tail.

**Polemoniaceae (Phlox Family)**

*Ipomopsis aggregata*,

Sky rocket gilia - red-flowered herb.

*Polemonium foliosissimum*,

Jacob's ladder - yellow-flowered herb.

**Polygonaceae (Buckwheat Family)**

*Polygonum bistortoides*,

Western bistort - white-flowered herb.

*Rumex acetosella*,

Sheep sorrel - small red-flowered herb.

*Rumex crispus*,

Dock - tall greenish-flowered herb.

*Rumex orthoneurus*,

Blumer's dock - tall greenish-flowered herb.

**Primulaceae (Primrose Family)**

*Androsace septentrionalis*,

Rock jasmine - small white-flowered herb.

*Dodecatheon dentatum* ssp. *ellisiae*,

Shooting star - white-flowered herb.

*Dodecatheon pulchellum*,

Shooting star - pink-flowered herb.

**Ranunculaceae (Buttercup Family)**

*Aquilegia chrysantha*,

Yellow columbine - yellow-flowered herb.

*Caltha leptocephalo*,

Marsh marigold - white-flowered herb.

**Rosaceae (Rose Family)**

*Agrimonia striata*,  
*Geum macrophyllum*,  
*Holodiscus dumosus*,  
*Potentilla hippiana*,  
*Potentilla thurberi*,  
*Rubus strigosus*,

Agrimony - yellow-flowered herb.  
Big-leaf avens - yellow-flowered herb.  
Rock spiraea - cream-flowered shrub.  
Cinquefoil - yellow-flowered shrub.  
Cinquefoil - scarlet-flowered shrub.  
Raspberry - white-flowered shrub.

**Salicaceae (Willow Family)**

*Populus tremuloides*,

Aspen - large tree.

**Saxifragaceae (Saxifrage Family)**

*Heuchera versicolor*,

Alum root - white to pink-flowered herb.

**Scrophulariaceae (Figwort Family)**

*Castilleja austromontana*,  
*Mimulus cardinalis*,  
*Mimulus guttatus*,  
*Pedicularis grayi*,  
*Penstemon barbatus*,  
*Penstemon deaveri* P. *virgatus*,  
*Veronica peregrina*,

Indian paint brush - red-flowered herb.  
Red monkey flower - red-flowered herb.  
Yellow monkey flower - yellow-flowered herb.  
Towering lousewort - tall yellowish green-flowered herb.  
Red beard tongue - red-flowered herb.  
Beard tongue - lavender-flowered herb.  
Speedwell - pale blue-flowered herb.

**Urticaceae (Nettle Family)**

*Urtica dioica* ssp. *gracilis*,

Nettle, green-flowered herb.

**Valerianaceae (Valerian Family)**

*Valeriana edulis*,

Valerian - tall yellowish-flowered herb.

**Verbenaceae (Verbena Family)**

*Glandularia bipinnatifida* *Verbena bipinnatifida*,

Verbena - carmine-flowered herb.

**Violaceae (Violet Family)**

*Viola canadensis*,

Canadian violet - white-flowered herb.

(Shade - Continued from Page 1)

**Planting**

One word when planting - caution. Remember the tree that is providing the shade has an extensive root system and any digging you do will probably disturb a portion of the root system. When choosing plants - think small. The smaller the plant, the smaller the root system and the less area that needs to be disturbed. The last thing you want to do is seriously damage the tree's root system.

**Resources**

There are lots of resources. Go to the library or a book store and check out the many books available dealing with landscaping and plants. If you live near a botanical garden, stop by and look at what they have planted in the shade and ask questions - they want to provide you with answers. Stop at a plant nursery that specializes in native plants and get some ideas. Talk to other people with similar "problems" and get ideas from them. And if all else fails, and you have the time and persistence, trial and error may be the approach you take. (DPB)

## ANPS 1995 ANNUAL MEETING

September 29, October 1, Gila River at Safford

This year's meeting will focus, naturally enough, on the plants of the upper Gila River and its watershed. Talks currently being planned encompass prehistoric agriculture in the Safford area, fire history of the Pinalenos, forestry issues, exotic plants and traditional Apache plant use. If you have additional speaker suggestions, contact Virginia Wellford (327-8191).

Saturday's camp site will offer us a chance to soak in a hot spring. Sunday's field trips include a tour of the Gila Box, a watercourse rehabilitation project on San Simon Wash or a visit to Tripp Canyon in the Pinalenos. If you can help with field trip planning, call Julia Fonseca (792-2690). Registration will be mailed in July by Nancy and Larry Stalkup (378-1169).

## CONSERVATION UPDATE

by Julia Fonseca

On April 7, Congress passed the Timber Salvage Rider which would suspend all federal environmental laws, double the rate and logging on National Forests and cost taxpayers 0.5 to 2 billion dollars in subsidies and environmental damage. The justification? A "forest health crisis" of bugs, fire and disease. This hoax will result in needless damage to forests, particularly in Arizona's remnant ponderosa and spruce-fir forests. President Clinton will decide. Call (202) 496-1111 to express your concern.

Also critical: see the recent alert mailed to ANPS members regarding the Endangered Species Act. Write those letters now to keep our nation's strongest environmental law intact!

Coronado National Forest is proposing to extend grazing permits which would expire this year for an additional 10 years. If you have a special place in the Coronado that is being grazed, you'd better check with your local district ranger to see what's up.

Some good news: up to \$10 million in grants for protection of perennial streams and restoration of riparian habitat will be made available through the Water Protection Fund. Grant applications will be made available through Tricia McCraw, Arizona Department of Water Resources.

## CALL FOR GRANT PROPOSALS - ARIZONA NATIVE PLANT SOCIETY

### 1995 Publication Grants Program

The Arizona Native Plant Society has available through its Publication Fund \$3,000 for assisting with the funding of publications or communications-related projects during the 1995 grant cycle. The grant program is open to individuals, groups or organizations. Individual membership in the Arizona Native Plant Society is not required, nor does it preclude application. Proposals from ANPS chapters or committees are not eligible for this program and should be submitted to the Publications Committee for consideration separately.

The deadline for proposal submission is September 15, 1995. Awards will be made on a competitive basis by the Publications Committee of the ANPS and will be announced by November 15, 1995. The total funding available is \$3,000 and may be awarded as one or more grants.

Proposals should consist of a brief (one or two pages) summary outlining:

- the project's subject, audience and relevance to the Purpose of the ANPS: "To increase awareness and appreciation of Arizona's native plants, to work towards protection and restoration of native plants and their habitats and to promote the use of low water use landscaping, with emphasis on the use of native plants."
- the applicant's background and a statement of qualifications or resume.

Proposals should be submitted by September 15, 1995 to:

Arizona Native Plant Society  
1995 Publication Grants Program  
Box 41206 Sun Station  
Tucson, Arizona 85717

## SECOND SOUTHWESTERN RARE & ENDANGERED PLANT CONFERENCE

September 11 - 14, 1995 - Flagstaff, Arizona

Papers will be presented by a number of authors from Arizona, Colorado, New Mexico, and Texas.

Contact: Dr. Joyce Maschinski (602) 774-1441

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