Arizona Rare Plant Field Guide

A Collaboration of Agencies and Organizations

Echinocactus horizonthalonius var. nicholi
Nichol Turk's Head Cactus
ARIZONA
Rare Plant Field Guide

prepared by the
Arizona Rare Plant Committee

We are grateful to the
National Fish and Wildlife Foundation and the
Plant Conservation Alliance
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**Abutilon parishii**

**Habitat:** steep rocky slopes and canyon bottoms in desertsrub, semidesert grassland; 2,477 to 4,856 ft (755-1450 m) elevation.

**Range:** known from the Little Shipp, Superstition, Mineral, Dripping Springs, Picacho, Tortolita, Silverbell, Santa Catalina, Tucson, Rincon, Coyote, Santa Rita, and Tumacacori mountains, as well as four sites in Sonora, Mexico.
I leaves thick and velvety, dark green above, nearly white below
5-10 carpels topped with 1-2 mm points
5-10 mm
to 190 cm

diameter

fruits 7-8 mm high,
8-10 mm in

10 mm

10 mm

5-10 mm

15 cm

flowers light orange, 18-25 mm in diameter and open only in full sun, if at all

PIMA INDIAN MALLOW, PARISH INDIAN MALLOW
Abutilon parishii

Herbaceous perennial, stems up to 190 cm

Phenology: a relatively weak spring flowering is followed by a longer late summer-fall bloom.

Management Responsibility: USFS (Coronado NF, Tonto NF), NPS (Saguaro NP), BLM (Tucson Field Office, Safford Field Office), AZ State Land Dept, Pima County, private.

Notes: populations appear to be cyclical, dependent on rainfall. Between 1992 and 1998, six monitored populations declined 80 to 95%. Most growth occurs in summer, with little response to spring rains.

**Santa Cruz Striped Agave**  
*Agave parviflora*  
ssp. *parviflora*

**Perennial succulent**

- inflorescence spicate with stalk 10-25 dm tall
- flowers small, 14-17 mm long, greenish to pink, tepals 2-5 mm long
- leaves tapering abruptly towards apex, with tightly curled marginal fibers, 6-10 cm long
- rosettes small, 10-25 cm high

**Agavaceae (Agave Family)**

**Phenology:** flowering May to August.

**Management Responsibility:** USFS (Coronado NF), USFWS (Buenos Aires NWR), BLM (Tucson Field Office), AZ State Land Dept, private.

**Similar Species:** differs from *A. schottii* and *A. toumeyana* var. *bella* by its smaller, strict, abruptly tapered, and curly-fibered leaves, and small, cream-green-pinkish flowers with very small tepals

**Notes:** prone to collection; also in northern Mexico, as is *A. parviflora* ssp. *flexiflora*.

**Habitat:** open slopes of desert grassland and oak woodland, 3,600-4,600 ft (1095-1400 m)

**Range:** southern Arizona (Pima and Santa Cruz counties) into northern Mexico.

*Agave parviflora ssp. parviflora*
**Amoreuxia gonzalezii**

* ovary densely silky; fruit pendant, ellipsoidal, 4.5-6 cm long, and brown seeds, globose.

* flowers pale salmon with the lowermost anthers cream-colored and the upper anthers purple.

* leaf blades alternate, long-petioled, 3-6 cm wide, deeply 5-7 parted, dark green above, and paler with scattered dark brown spots and lines beneath.

* A gonzalezii

* A pinnatifida

**Bixaceae (Lipstick-tree Family)**

**Phenology:** dependent on mid-summer rains for flowering, July to September with flowers closing after midday; fruits late July to August, maturing September to October.

**Management Responsibility:** USFS (Coronado NF).

**Similar Species:** differs from *A. palmatifida*, a common and sympatric species, by its silky (vs. minutely hairy) ovary, ellipsoid (vs. globose) fruits, and globose (vs. kidney-shaped) seeds, the aril easily removed.

**Notes:** threats include road and building construction, cattle grazing. Collection in Cochise County misidentified, representing *A. palmatifida*.

Amoureuxia gonzalezii

Habitat: in Arizona, rocky limestone hillsides, 4,200-4,500 ft (1300-1400 m).

Range: in U.S., known only from two or three populations in Santa Rita Mountains; also found in northern Mexico.
Largest sedge found in AZ upper spikes are sessile, lower ones more or less strongly peduncled and erect round, densely caespitose culms 1-2 m tall staminate spikes 2 to 4, 3-12 cm long; pistillate spikes 3 to 6, 2.5-15 cm long large clumps with long leaves

Cyperaceae (Sedge Family)

**Phenology:** flowers late March through September.

**Management Responsibility:** USFS (Coronado & Tonto NF), DoD-US Army (Ft. Huachuca), AZ State Land Dept, NPS (Chiricahua NM), private.

**Synonym:** Carex ultra Bailey

**Notes:** this Carex has very long spiklets for a sedge.

**References:** Bailey, 1886. Kükenthal, 1909.
**Carex spissa var. ultra**

**Habitat:** saturated soil near or in perennial seeps, streams and springs, 2,500-6,000 ft (760-1830 m) elevation.

**Range:** has been found in the Santa Catalinas, Pima Co.; Atascosas, Santa Cruz Co.; Huachuca, Dragoon and Chiricahua mountains, Cochise Co.; and Yavapai Co., Arizona, extreme SW New Mexico and adjacent NE Sonora, Mexico. *C. spissa var. spissa*, is found in coastal southern CA and Baja California, Mexico.
**PIMA PINEAPPLE CACTUS**  
*Coryphantha scheeri*  
*Scheer's Strong-Spined Cory Cactus*  
*var. robustispina*

- Low growing, hemispherical cactus with protruding, radial tubercles, with groove on upper surface
- Rosette of 10 to 15 round spines with one stout, slightly curved central spine radiate from the tip of each tubercle
- Stem diameter varies from 5-21 cm and stem height from 5-46 cm
- Juveniles show 6 spines and lack a center spine
- Flowers creamy yellow
- Plants can be found as either single individuals or as multi-stemmed clusters

**Cactaceae (Cactus Family)**

**Phenology:** flowers July-August, soon after first monsoon rains; fruits in September.

**Management Responsibility:** Tohono O'odham Nation, AZ State Land Dept, private, BLM (Tucson Field Office), USFS (Coronado NF), USFWS (Buenos Aires NWR), BOR (Phoenix Area Office).

**Similar Species:** can be confused with juvenile Ferocactus; whose spines are flattened with transverse ridges.

**Notes:** populations show a downward trend across the plants range; nearly 38% of surveyed habitat has been developed or significantly modified beyond the point of restoration. Threats to the plant are: urbanization, mining, overgrazing and exotic grass (Lehmann lovegrass) encroachment. Listed Endangered, Notice of Review, October 25, 1993.

**Habitat:** alluvial bajadas in sandy/rocky loam types of soils and on slopes of <10% within desert grassland and Sonoran desert scrub at elevations of 2,800-3,500 ft (853-1066 m).

**Range:** Santa Cruz and Altar valleys, Santa Rita and Patagonia mountains; also found in Sonora, Mexico.
**NEEDLE-SPINED PINEAPPLE CACTUS**

**Echinomastus erectocentrus**

**var. erectocentrus**

Flowers are pink, 3.8-4.4 cm in diameter

Spines dense, obscuring surface of stems

Indentations between tubercles sharp and narrow; tubercles mammillate, 6 mm long vertically

Stems solitary, ovoid or somewhat cylindroid, 1-15 (37) cm long, 7.5-12 cm in diameter; ribs 15-21

Central spines 1 or 2, erect, dark tipped

Radial spines 11-15 aerole, 1.2-1.5 cm in diameter

Cactaceae (Cactus Family)

**Phenology:** blooms in April.

**Management Responsibility:** USFS (Coronado NF), BLM (Safford, Tucson Field Offices), AZ State Land Dept, private.

**Synonym:** Neolloydia erectocentrus (J.M.Coulter) L.D. Benson

**Reference:** Benson, 1982.
Habitat: alluvial fans usually associated with limestone in upper desert grasslands, elevation ranges from 3,000 to 4,300 ft (914-1310 m).

Range: southeastern Arizona to western Cochise County (Little Dragoon Mountains).
**BARTRAM STONECROP**

*Graptoetalum bartramii*

**Phenology:** flowering/fruiting period, September to February.

**Management Responsibility:** USFS (Coronado NF), BLM (Tucson Field Office), private.

**Synonyms:** appears as *Echeveria bartramii* in Kearney and Peebles.

**Similar Species:** in its longer, apiculate leaves, acute sepals, paniculate inflorescence, and fall phenology *G. bartramii* differs from *G. rusbyi* (the only other member of the genus in Arizona). The genus Graptopetalum differs in its red-flecked corollas from the genus *Echeveria*.

Graptopetalum bartramii

**Habitat:** sky island species growing on rocky outcrops along arroyos and canyons, often in shade and litter with Madrean evergreen woodland at 3,900-6,700 ft (1190-2040 m) elevation.

**Range:** Patagonia, Santa Rita, and Tumacacori mountains, Baboquivari and Rincon mountains, Chiricahua and Mule mountains.
**HUACHUCA WATER UMBEL**

*Lilaeopsis schaffneriana*

*var. recurva*

**Herbaceous, semi-aquatic to aquatic perennial**

- Umbels of 3-10 very small white flowers of less than 1 mm, borne at the base of the leaves
- Leaves terete in cross section, hollow, slender, usually 4-8 cm long, but can grow up to 22.5 cm long
- Wavy, yellowish green, slender leaves borne individually or in clusters along rhizomes

**Brassicaceae (Parsley/Carrot Family)**

**Phenology:** primarily reproducing vegetatively through rhizomes; flowering in June through August; ellipsoid fruits July through September.

**Management Responsibility:** BLM (Tucson Field Office), USFS (Coronado NF), DoD-US Army (Ft. Huachuca), FWS (San Bernardino NWR), AZ State Park Dept, private.

**Synonym:** *Lilaeopsis recurva* A.W. Hill

**Similar Species:** can be confused with various members of the spikerush (*Eleocharis*) genus, except that *Lilaeopsis* is hollow, with septa and the plants are somewhat sinuous.

**Notes:** sometimes referred to as Cienega False Rush. Extirpations have occurred from loss or degradation of aquatic habitat; numbers can be reduced by scouring floods; ongoing monitoring activities by BLM and the USFS (Coronado NF) and TNC.

**Habitat:**
shallow water, saturated soil near perennial seeps, springs and streams, 4,000-6,500 ft (1220-1982 m) elevation.

**Range:** Huachuca Mountains, Canelo Hills, headwaters of the Santa Cruz east to Black Draw, San Pedro; also found in Rio Sonora, Rio Bavispe, Sonora Mexico.

*Lilaecopsis schaffneriana var. recurva*
Inflorescence monoecious, with staminate flowers above and pistillate flowers below primary leaf lobes broadly lobed toward the apex.

Palmately compound leaves, 6-19 cm long (including petiole).

Parennial herb growing from underground tuber.

Petals absent.

Flowers July to August.

Management Responsibility: USFS (Coronado NF), possibly private.

Similar Species: differs from Jatropha macrorhiza by flowers with petals absent, leaves round-lobed and not toothed, and from M. angustiloba by its broad terminal leaf lobes.

Notes: possibly conspecific with M. chlorosticta by Wiggins (1964), and its difference from M. angustiloba is minimal.

**Manihot davisiae**

**Habitat:**
limestone slopes, 3,500-4,000 ft (1065-1220 m) elevation.

**Range:** Baboquivari Mountains, canyons in the Santa Rita Mountains, and Santa Catalina Mountains.
Box Canyon Muhly

*Muhlenbergia dubioides*

**Phenology:** flowering August through November.

**Management Responsibility:** USFS (Coronado NF), Tohono O'odham Nation.

**Synonym:** *Muhlenbergia palmeri* Vasey.

**Similar Species:** *Muhlenbergia rigens*, which is awnless. *M. dubioides* is distinguished by its scabrous awn 3-10 mm long.

**Notes:** known only from Arizona.

C. David Berube

**Habitat:** rocky slopes in grassland and oak woodland canyons and along stream courses, 2,800-6,000 ft (854-1829 m) elevation.

**Range:** Santa Catalina, Santa Rita, and Baboquivari mountains and Sycamore Canyon.
**Weeping Muhly**

*Muhlenbergia xerophila*

Densely tufted perennial

- Panicle open (except when mature) with spreading branches, often nodding, up to 50 cm long, to 5 cm wide, usually light brown or tinged with pink
- Spikelets about 4 mm long
- Glumes half as long as lemma
- Awn of lemma up to 35 mm long

- Stems to 90 cm; leaves up to 50 cm long, 1-1.5 mm wide

**Poaceae (Grass Family)**

**Phenology:** flowering August through November.

**Management Responsibility:** USFS (Coronado NF), Tohono O'odham Nation.

**Synonym:** *Muhlenbergia elongata* Scribn. ex Beal.

**Similar Species:** similar to *Muhlenbergia rigida*; *M. xerophila* is distinguished by its nodding habit, open panicle, and long awns on lemma.

**Notes:** known only from Arizona.

**Habitat:** oak woodland and riparian scrub, growing in seeps on bedrock on rocky slopes and cliffs in canyons, 3,520-6,000 ft (1073-1829 m) elevation.

**Range:** Santa Catalina, Rincon, Santa Rita, Tumacacori, and Baboquivari mountains and Sycamore Canyon.
**BEARDLESS CHINCH WEED**

*Pectis imberbis*

Perennial with a woody rootstock

Leaves thick, narrow, 1-5 cm long

Stems tall, to 120 cm high

Pappus of awns diffuse, open branching, yellow; turning reddish with age; and short scales

**Asteraceae (Sunflower Family)**

**Phenology:** flowering August through October.

**Management Responsibility:** USFS (Coronado NF), NPS (Coronado NM), possibly private.

**Similar Species:** differs from most other *Pectis* by its perennial nature with woody rootstock, and from the perennial *P. longipes* by its erect habit, lack of bristles at leaf bases, and pappus of awns and scales rather than bristles.

**Notes:** considered to be the rarest of all U.S. *Pectis*. Several locations on Coronado NF have not been seen since late 1970s. Small population range from 20-30 individuals to maximum of 100.

**Pectis imberbis**

**Habitat:** in open grassland and oak/grassland, 4,000-5,500 ft (1220-1680 m) elevation.

**Range:** Atascosa Mountains, Huachuca Mountains, Santa Rita Mountains, Canelo Hills, and Patagonia Mountains; also found in northern Sonora and Chihuahua.
TUMAMOCA GLOBEBERRY  
*Tumamoca macdouglii*

**Perennial vine to 1.5 m**
climbing into bushes

**flowers white,**
dioecious, to
3 mm

**stems annual,**
leaves dimorphic,
the
juvenile leaves almost entire,
the
older leaves 3-lobed, rounded in
outline, with clasping tendrils

**roots**
succulent

**tuberous**
(each tuber 5-12 cm long)
forming a

**short woody**
stem, to 15 cm long

**fruits 1-2 cm in diameter,**
round,

**berry-like,**
bright red at maturity,

**with 2-several oblong seeds**
7-8 mm long, and 3 mm across

**Cucurbitaceae (Melon/Gourd Family)**

**Phenology:** dormant during winter, early spring, flowers July-August,
fruits August-September.

**Management Responsibility:** BLM (Phoenix Field Office, Tucson Field
Office), NPS (Saguaro NP, Organ Pipe NM), Tohono O'odham Nation,
AZ State Land, Dept, USFS (Coronado NF), private.

**Habitat:** along arroyos and sandy washes, below 3,000 ft (915 m) in desert grassland, Sinaloan thornscrub, Sonoran Desert and upland Sonoran Desert.

**Range:** Tucson Mountains, Avra Valley, Puerto Blanco Mountains, Santa Catalina Mountains, Santa Cruz Valley, Vekol Valley, Santa Rosa Valley, Santa Rita Mountains, Silverbell Mountains; also found in Sonora and Sinaloa, Mexico.