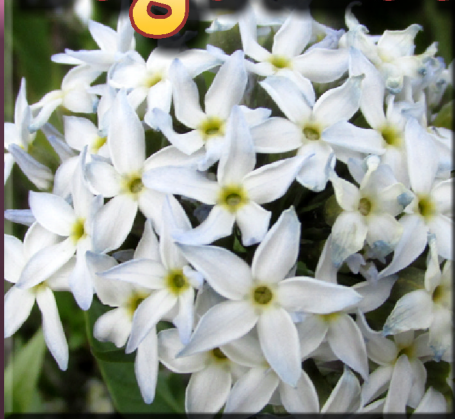


GENTIANALES

(Gentianalids)

Dogbanes



Jessamines



(not native to the Mojave)

Gentians



Loganids



(not native to the Mojave)

Bedstraws



(not native to the Mojave)

Family **APOCYNACEAE** (Amsonias)

Woolly Bluestar (*Amsonia tomentosa*)



dense shrub

Xmas Tree Pass; NV



erect stems

Xmas Tree Pass; NV



April

Christmas Tree Pass; CalNevAri, NV



5 linear lobes

Xmas Tree Pass; NV



pointed, ovate leaves

Xmas Tree Pass; NV

- Flowers:** tubular; cyme inflorescence; terminal, round clusters; 5 lobes, greenish yellow throat; white; 1"
Stems: erect, suffrutescent; few to many; slight to highly branched; glabrous to woolly; blue green; 24"
Leaves: lanceolate to ovate; entire; alternate; glabrous to tomentose; gray green to blue green; to 1.25"
Blooms: March to June
Range: southwestern US; northern Mexico
Habitat: dry, sandy to gravelly; desert scrub, plains, washes, etc.; Lower to Upper Sonoran Life Zones

Notes:

uncommon; annual/perennial; grows to 2' in dry habitats from w TX west to the Mojave Desert, south into Chihuahua, MEX, at elevations up to 5,000'; pinkish buds, purplish bracts; pod-like follicular fruit constricted between elliptical seeds; aka **Gray Amsonia**; 2 subspecies; traditionally used as a topical poultice to treat various ailments

Mojave presence: native

Comments:

While common locally with sufficient precipitation, bluestars are nonetheless rather uncommon, especially in the Mojave Desert. The specimens shown here presented themselves during a superbloom in Christmas Tree Pass along Spirit Mountain near the small desert community of CalNevAri, Nevada, in April of 2017.

Family APOCYNACEAE (Milkweeds)

Rush Milkweed (*Asclepias subulata*)



dam sweet home

Hoover Dam; LMNRA; NV



long seed pod

Hoover Dam; LMNRA; NV



August

Hoover Dam; Lake Mead NRA; NV



tall crown

Hoover Dam; LMNRA; NV



tarantula hawk

welcomed visitor

Hoover Dam; LMNRA; NV

- Flowers:** hooded; umbel inflorescence; 5 recurvant petals, 5-pronged crown; greenish yellow; ~1"
Stems: erect/ascending; numerous; branched towards tip; glabrous to slightly hairy; whitish green; to 5'
Leaves: narrow linear; entire; opposite; ephemeral, mostly leafless; whitish green; 2"
Blooms: April to December
Range: Mojave and Sonoran Deserts
Habitat: dry, gravelly; desert scrub, washes, slopes, etc.; Lower Sonoran Life Zone

Notes:

common; herbaceous perennial; grows up to 5' tall and nearly as wide in the desert southwest US south into Baja and nw MEX at elevations up to 3,000'; produces a milky sap; dehiscent, 3-4" light green pod fruit bearing small brown seeds with long white pappi; aka **Ajamete**, **Skeleton Milkweed**; attracts a variety of insects; traditionally used for various medical applications (laxative, cathartic, emetic, etc.)

Mojave presence: native

Comments:

Milkweed flowers are unique in their morphology, thus easily recognizable. This species, shown here at Hoover Dam in July of 2018, has petals that fold completely back against the stem, revealing 5 tall hoods that form a crown (upper right). The pods split open when ripe (left), releasing plentiful seeds with long white pappi (right) that enable the seeds to be carried and spread

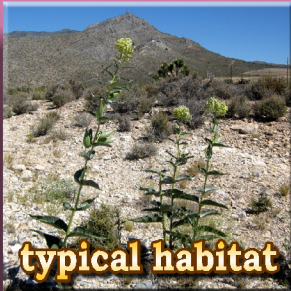
Gn3

by the wind.



Family APOCYNACEAE (Milkweeds)

Desert Milkweed (*Asclepias erosa*)



typical habitat

Clark Mountain Range; CA



large seed pods

Clark Mountain Range; CA



Clark Mountain Range; Mojave Natural Preserve; CA



flower crown

Clark Mountain Range; CA



large, ovate leaves

Clark Mountain Range; CA

- Flowers:** hooded; umbel inflorescence; 5 slightly folded petals, 5-pronged crown; cream white; ~1"
Stems: erect, stout; singular; unbranched; glabrous to hairy; whitish green; 3"
Leaves: ovate to lanceolate; entire to wrinkled; opposite; upcurved, sessile; gray green; 5"
Blooms: April to July
Range: desert southwest US; Baja, Mexico
Habitat: dry, sandy to gravelly; open disturbed areas, washes, etc.; Lower to Upper Sonoran Life Zones

Notes:

common locally; herbaceous perennial; grows to 3' in the deserts of the southwest US from AZ west to CA, south into Baja, MEX, at elevations up to 5,000'; produces a milky sap; large light green **pod** fruit; important food and habitat plant for **Monarch** butterflies; sap was roasted to be used as a chewing gum by native peoples

Mojave presence: native

Comments:

The 5-pronged crowns with tubular, cuplike hoods (upper right) of all milkweed flowers are quite distinctive, which makes for easy identification of the genus in the field. The petals on this species are not folded far back like those of the **Rush Milkweed** (previous page). However, the most readily observable differences between the two species is their growth forms and leaves . . . shrubby with very narrow linear (grass-like) leaves on the Rush, versus single stem with large, broad leaves on the Desert variety, shown here in July of 2016 at Clark Mountain, 60 miles southwest of Las Vegas, Nevada.

Family APOCYNACEAE (Milkweeds)

Horsetail Milkweed (*Asclepias subverticillata*)



tangled growth

South Rim; Grand Cyn NP



carpenter bee

welcomed guest

South Rim; Grand Cyn NP



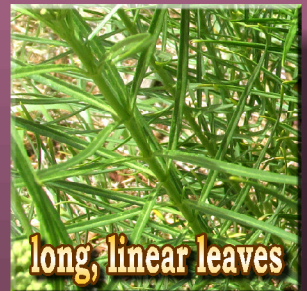
July

Bright Angel Lodge; South Rim; GCNP; AZ



star-shaped crowns

South Rim; Grand Cyn NP



long, linear leaves

South Rim; Grand Cyn NP

- Flowers:** star-like; **solitary**; umbel inflor.; 5 green white upcurled petals, short 5-prong crown; white; .5"
- Stems:** erect, spreading; numerous; branched/unbranched; glabrous to **pubescent**; **green**; 40"
- Leaves:** narrow linear; entire; whorled (3-4 per node); sessile; **green**; to 5"
- Blooms:** May/June to September
- Range:** central to southwestern US; northern Mexico
- Habitat:** sandy to gravelly; roadsides, grasslands, woodlands; Lower Sonoran to Transition Life Zones

Notes:

common; herbaceous perennial; grows to about 4' in the western US from KS west to NV, south from ID to n MEX at elevations of 3,000 to 8,000'; produces a milky sap; 2-4" **pod** fruit bearing **seeds** with long **pappi**; aka **Whorled Milkweed**, **Poison Milkweed**, etc.; important nectar source for numerous insects, especially pollinators (such as wasps, carpenter bees, etc.); traditionally used as a gynecological aid to increase milk production; roots, buds, unripe pods eaten raw; pod fibers used to weave clothing; toxic to livestock

Mojave presence: native

Comments:

Though widespread, this species is rather rare in the Mojave Desert, thus not readily confused with other milkweeds in the region. The 3 to 4 leaves whorled around the nodes of the stem are characteristic of the species. Notice the upcurved tips of the flower petals on this specimen at Bright Angel Lodge on the South Rim in the **Grand Canyon National Park** in July of 2017.

Family APOCYNACEAE (Milkweeds)

Narrow-Leaf Milkweed (*Asclepias fascicularis*)



wispy growth

South Rim; Grand Cyn NP



July

South Rim; Grand Canyon NP; AZ



petals and crown

South Rim; Grand Cyn NP



sphinx moth

important host

South Rim; Grand Cyn NP



grass-like leaves

South Rim; Grand Cyn NP

- Flowers:** star-like; axillary/terminal umbel; often paired; 5 reflexed petals, 5-prong crown; green white; .3"
Stems: erect/ascending; suffrutescent, numerous, thin; slightly branched; mostly glabrous; green; to 36"
Leaves: narrow linear; entire; whorled (3-6 per node), short pedicel; glabrous; green; to 5"
Blooms: May to October
Range: western US; Baja, Mexico
Habitat: variable substrates; desert scrub to montane woodlands; Lower Sonoran to Transition Life Zones

Notes:

common; perennial; grows to 3' as a grassy shrub in the western US south into Baja, MEX, at elevations up to ~7,000'; smooth, slender, upright, 3-5" pod fruit bearing many 2.5" seeds with silky pappi; aka Mexican Whorled Milkweed; important host plant for numerous insects, especially the Monarch Butterfly *Danaus plexippus*

Mojave presence: native

Comments:

Like the Horsetail Milkweed, this species is also uncommon to rare in the Mojave. The specimens shown here made themselves at home in the high elevations of the Grand Canyon National Park in July of 2017. When found sharing the same habitat, these two species can be easily confused. Note the leaf whorls; though both plants bear long, grass-like, linear leaves, the Horsetail usually shows three to four encircling the stem, while the Narrow-Leaf has up to six.

Family APOCYNACEAE (Oleanders)

Oleander (*Nerium oleander*)



shrubby growth

Furnace Creek; DVNP



June

Boulder City; Clark County; Nevada



dense panicle

Dolan Springs, AZ



branched stems

South Rim; Grand Cyn NP



lanceolate leaves

Dolan Springs, AZ

- Flowers:** tubular; clustered panicle; 5-lobed corolla; sweet aromatic; white, pink, red; 2"
- Stems:** erect/ascending; singular trunk to shrubby; densely branched; green; 72"+
- Leaves:** narrow lanceolate; entire; paired or whorled (2-3); thick, pale central vein; green; to 8"
- Blooms:** April to October; year-round in some locations
- Range:** native to the Mediterranean Basin; cultivated world wide
- Habitat:** variable substrates; moist/riparian areas (urban, wetlands, etc); Lower Sonoran Life Zone

Notes:

common; perennial; grows in tropical to sub-tropical habitats to 20' world wide; narrow, 2-9" **folliculate** fruit bearing many hairy **seeds**; aka **Rosebay**; many varieties; all parts of the plant contain poisonous compounds (e.g. cardiac glycosides, saponins, oleandroside, etc.), thus unpalatable to humans and most animals; imported as a fast-growing windbreak and ornamental for landscaping in urban areas; host plant to several butterfly and moth species and their larvae; the large, showy flowers attract insects that are required for pollination, but offer no nectar in return

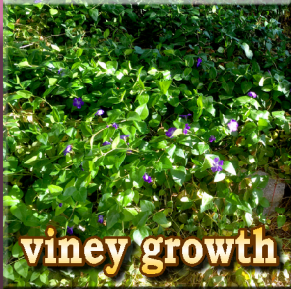
Mojave presence: introduced/naturalized

Comments:

Oleanders are so common as a decorative plant in urban areas of the Mojave region that it is inevitable that their seeds will be dispersed by wind and water, thereby eventually propagating in the wild. Thus this plant is commonly encountered in riparian areas of the desert, such as oases, wetlands, and drainage culverts. Because of its highly toxic nature, this is one plant that requires recognition!

Family APOCYNACEAE (Periwinkles)

Bigleaf Periwinkle (*Vinca major*)



viney growth

Mountain Springs, NV



April

Mountain Springs Pass; Potosi Mountain; NV



axial flowers

Mountain Springs, NV



glabrous stems

Mountain Springs, NV



broad leaves

Mountain Springs, NV

- Flowers:** perfect; solitary, axillary; 5-lobed wavy corolla, white at base and throat; lavender to violet; 2"
- Stems:** prostrate, spreading; numerous; rooting along stems; glabrous; green; 36"
- Leaves:** ovate to lanceolate; entire, ciliate edges; opposite; glossy with 1" hairy petiole; green; 2"
- Blooms:** April to May (September in some locations)
- Range:** native to Eurasia; introduced and cultivated world wide
- Habitat:** moist soils; riparian areas (streams, springs etc.), woodlands, etc.; Lower Sonoran Life Zone

Notes:

common; herbaceous perennial; grows as a vine to 3' long, 1' tall in temperate riparian environments at elevations up to ~4,000'; dehiscent, slender, cylindrical, 2" fruit bearing 3-5 seeds; aka **Greater Periwinkle**, **Big Periwinkle**, **Blue Periwinkle**, etc.; 2 subspecies; introduced from Eurasia for ornamental groundcover in the 1700s

Mojave presence: introduced/naturalized

Comments:

Periwinkle is rare in the Mojave where it occasionally escapes cultivation. It will only be found in riparian areas (springs, streams, wetlands, etc.). The specimen shown here in Mountain Springs Pass near Potosi Mountain in April of 2017 is the only one I have encountered.

Family GENTIANACEAE (Centauries)

Spring-Loving Centaury (*Zeltnera namatophila*)



rare plant

Ash Meadows NWR; NV



tangled growth

Ash Meadows NWR; NV



October

Ash Meadows NWR; Nye County; NV



linear, sessile leaves

Ash Meadows NWR; NV



smooth stems

Ash Meadows NWR; NV

- Flowers:** salverform; cyme inflor; 5-lobed, exerted stamen, yellow anthers, yellowish throat; **pink**; .5"
- Stems:** erect; few to many; highly branched; tangled, shrubby; glabrous; **green**; 24"
- Leaves:** linear to lanceolate; entire; opposite; sessile; **green**; ~2"
- Blooms:** July to October
- Range:** restricted to limited range in southern Nevada
- Habitat:** wet, alkaline soils; desert wetlands, meadows, seeps, springs; Lower Sonoran Life Zone

Notes:

rare; herbaceous annual or short-lived perennial; grows to about 2' in the Mojave Desert of the sw US; formerly in the genus *Centaurium*; **capsule** fruit containing up to 50 tiny seeds; **calyx** adpressed to the corolla; can self fertilize, but also pollinated by bees, wasps, butterflies, etc.

Mojave presence: endemic; rare

Comments:

This centaury is **endemic** to the **Ash Meadows National Wildlife Refuge** in Nye County, NV, east of Death Valley. The photos were taken from the main boardwalk behind the visitor's center in September of 2019 and October of 2020.

Family **GENTIANACEAE** (Centauries)

Arizona Centaury (*Zeltnera arizonica*)



mingled habit

Peach Springs, AZ



erect stems

Peach Springs, AZ



June

Diamond Creek Road; Peach Springs, AZ



open cyme panicle

Peach Springs, AZ



sessile leaves

Peach Springs, AZ

- Flowers:** salverform; cyme inflorescence; 5-lobed, exserted stamen, yellow anthers, white throat; pink; 1"
Stems: erect; few to many; lightly branched; glabrous; green; 20"
Leaves: lanceolate to oblong; entire; opposite; sessile, glabrous; green; 1-3"
Blooms: March to November
Range: southwestern US; to central Mexico
Habitat: damp, alkaline soils; riparian areas (springs, streams, etc.); Lower to Upper Sonoran Life Zones

Notes:

rare; herbaceous annual or biennial; variable appearance and growth from one region to another; grows to about 1.5' in the sw US from s CA east to s TX, south to c MEX at elevations from 150-6,000"; formerly in the genus *Centaurium*; .4" bi-valved, oblong, smooth capsule fruit containing many tiny, ovoid, seeds; calyx lobes adpressed to the corolla, separate to base

Mojave presence: native; rare

Comments:

This centaury is not common in the Mojave. The specimens shown here in June of 2024 along Diamond Creek Road near Peach Springs, AZ, on the Hualapai Reservation, are the only ones I have encountered so far. Expect to find them only in riparian areas, such as wetlands, streams, mountain springs, etc., within the region.

Family GENTIANACEAE (Green Gentians)

Desert Swertia (*Frasera albomarginata*)



spindly growth

Potosi Mtn; Clark Co.; NV



singular stem

Potosi Mtn; Clark Co.; NV



Boy Scout Road; Potosi Mountain; NV



open panicle

Potosi Mtn; Clark Co.; NV



white-edged leaves

Potosi Mtn; Clark Co.; NV

- Flowers:** radial; open panicle; 4 petals, bi-lobed nectar glands; white with spots, green patches; 1"
- Stems:** erect; singular to a few; branched; glabrous; **green**; 24"
- Leaves:** linear to lanceolate; entire; basal and whorled/opposite; deeply curled, white edges; **green**; 3.5"
- Blooms:** April to July or August
- Range:** southwestern US
- Habitat:** dry, gravelly; grasslands, woodlands, etc.; Upper Sonoran to Transition Life Zones

Notes:

uncommon; herbaceous perennial; grows up to 2' in the arid sw US from w NM/w CO east to e CA at elevations of 4,500 to 7,000'; aka **Desert Elkweed**, **Desert Green Gentian**, **Desert Frasera**, **White-Margined Swertia**, etc.; possible subspecies; **monocarpic** (blooms once, then dies; attracts various insects for pollination)

Mojave presence: native

Comments:

Though this plant grows in the Mojave region, don't look for it in the desert itself. Despite its name, desert swertia is strictly a higher elevation species. I encountered the specimens above blooming near Boy Scout Road along the east flank of Potosi Mountain, about 20 miles southeast of Las Vegas, NV, in July of 2019. Thus far, these are the only pics I've gotten of this unusual and uncommon plant.