

Dioecious Plants



Dioecious plants have male (**staminate**) and female (**pistillate**) flowers existing on separate and distinct individuals, thus the presence of a plant of the opposite sex is necessary for fertilization to occur. While this arrangement ensures genetic robustness of the species, there are disadvantages that the plants must overcome. First, since they cannot self fertilize, they must rely on out-sourced helpers (insects, birds, mammals, even wind) to get the job done, a risk that is intimately dependant on the well being of the pollinating species (many of which are plant specific) and their direction of foraging (male to female)! Secondly, only 50% of the individual plants (i.e. female) in the population contribute to seed production (unlike monoecious and bisexual plants). At least in this regard, a single male plant can fertilize many nearby female plants.

Family ASTERACEAE (Baccharises)

Desert Baccharis (*Baccharis sergiloides*)



dense bush

Corn Creek; Desert NWR; NV



tangle of angular stems

Corn Creek; Desert NWR; NV



female

October

Corn Creek; Desert NWR; Clark County; NV



hosting a paper wasp

Corn Creek; Desert NWR; NV



blooming male plant

Corn Creek; Desert NWR; NV

- Flowers:** discoid; sessile; open, short-branched panicle; ~.1" **male** (staminate): white to yellow, 24-33/head
female (carpellate): white, 15-30/head
- Stems:** erect; branched; smooth, glabrous, angular, nearly leafless; evergreen; resinous; 6'
- Leaves:** oval to spatulate*; entire to irregular toothed; alternate; sessile; cauline, deciduous; to 1.25"
- Blooms:** June to October
- Range:** native to sw US (CA, NV, UT, AZ), nw MEX (Sonora, Baja)
- Habitat:** moist areas in dry deserts (washes, canyons, streambeds, etc); Lower to Upper Sonoran Life Zones

Notes:

common; perennial; evergreen shrub with branched, fastigate (curving upward) stems; grows to 10' tall, 6' wide at elevations of ~2,200 - 5,000' in desert scrub to pinyon-juniper woodlands throughout the sw US and nw Mex; flower heads enclosed in glandular, sticky layer of pinkish **phyllaries** about an inch long; glabrous, ribbed **cypsela** with bristly **pappus** .125 to .25"; aka **Waterweed**; dioecious, i.e. **staminate** (stamen; pollen-producing male structure) and **carpellate** (carpel; ovule-producing female structure) flowers occur on separate plants; host to numerous insects

(* wider than leaves on **Broom Baccharis** {**Baccharis sarothroides**})

Mojave presence: native; year-round

As Di2

Family ASTERACEAE (Baccharises)

Broom Baccharis (*Baccharis sarothroides*)



dense bush

Clark Co. Wetlands Park; LV, NV



male

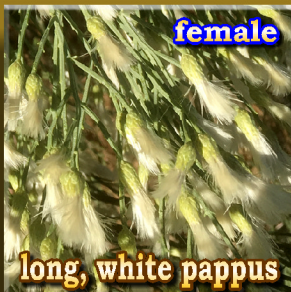
November

Bear's Best GC; Las Vegas, NV



linear, alternate leaves

Clark Co. Wetlands Park; LV, NV



female

long, white pappus

Bear's Best GC; Las Vegas, NV



fluffy female plant

Bear's Best GC; Las Vegas, NV

- Flowers:** discoid; dense panicles; .25 - .58" **male** (staminate): cream yellow, 24-33/head
female (carpellate): white, 15-30/head
- Stems:** erect; woody, branching; angular; glabrous, broom-like; almost leafless; resinous; 6' or more
- Leaves:** linear*, elliptical; entire; alternate; sparse, sessile, deciduous, resinous; to ~1"
- Blooms:** September to November
- Range:** native to sw US, MEX
- Habitat:** desert washes, fields, roadsides, urban areas, etc.; Lower to Upper Sonoran Life Zones

Notes:

common; perennial shrub; grows to 10' at elevations of ~1,000 to 6,000' from CA east to sw TX, and NV/UT south through most of MEX; outer **phyllaries** broadly ovate (~1"), inner ones linear (~.3"); white, 10-ribbed **cypsela** (.1") with long, feathery, white **pappus** (.5"); aka **Greasewood**, **Groundsel**, **Desertbroom**, **Rosinbush**, etc.; dioecious, i.e. male and female flowers occur on separate plants; provides abundant food for numerous insects that in turn provide food for birds and other predators; used by indigenous peoples as brooms, thatching for homes, and as an infusion to treat coughs and stomachaches

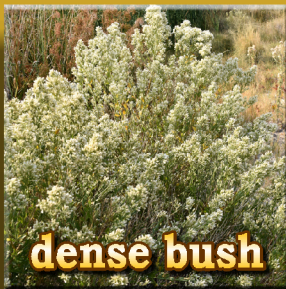
(* narrower than leaves on **Desert Baccharis** {*Baccharis sergiloides*}, otherwise difficult to distinguish)

Mojave presence: native; year-round

As Di3

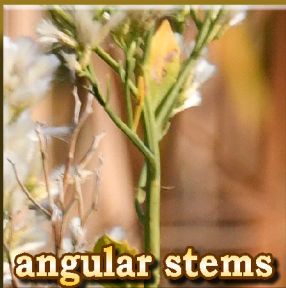
Family ASTERACEAE (Baccharises)

Emory's Baccharis (*Baccharis emoryi*)



dense bush

Ash Meadows NWR; NV



angular stems

Ash Meadows NWR; NV



October

Ash Meadows NWR; Amargosea Valley; Nye Co.; NV



female

fluffy white pappus

Ash Meadows NWR; NV



short, toothed leaves

Ash Meadows NWR; NV

- Flowers:** discoid; panicles of up to 200 heads; **male** (staminate): cream white, 20-25/head; 0.2"
female (carpellate): cream white, 25-30/head, 0.16"
- Stems:** erect; branched; angular (5 ridges); glabrous, woody; 3 - 9'
- Leaves:** linear (upper) to oblomg/oblanceolate; entire to toothed (1-3); alternate; stress-deciduous; 1-4"*
- Blooms:** May to November
- Range:** sw US; n MEX
- Habitat:** sandy/gravelly soils; washes, moist canyons, etc.; Lower to Upper Sonoran Life Zones

Notes:

uncommon; perennial; upright evergreen shrub grows to 9' in creosote bush scrub to pinyon-juniper woodlands below 6,000' in sw US from CA east to TX, south to n MEX; gland-dotted, green to reddish **phyllaries**: (f) 0.36", 6-seriate, ovate (inner), linear (outer), (m) 0.24", 5-seriate; glabrous, 0.08" **cypsela**; silky white, 0.48" **pappi**; aka **Seepwillow**, **Willow Baccharis** (not related to true willows); dioecious, i.e. **staminate** (stamen; pollen-producing male structure) and **carpellate** (carpel; ovule-producing female structure) flowers occur on separate plants; used as a wildland hedge or screen, for making baskets, as a fuelwood, etc.

(* longer leaves than *Baccharis sergiloides* and *Baccharis sarothroides*, otherwise difficult to distinguish)

Mojave presence: native; year-round

Family ASTERACEAE (Pussytoes)

Rosy Pussytoes (*Antennaria rosea*)



evergreen mat

Valley of Fire SP; Clark Co.; NV



oblanceolate stem leaves

Valley of Fire SP; Clark Co.; NV

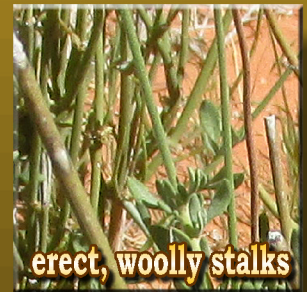


April



appears like kitten's toes

Valley of Fire SP; Clark Co.; NV



erect, woolly stalks

Valley of Fire SP; Clark Co.; NV

- Flowers:** staminate/pistillate; 1" clusters; tufts of white bristles lined with **rose-pink** bracts
- Stems:** rhizome; slender, whitish green, erect shoots; woolly; 2 - 12"
- Leaves:** oblanceolate; entire; **basal:** rosette, **cauline:** alternate; woolly, whitish green; to ~1.5"
- Blooms:** May to August
- Range:** NA through most of CAN and western US from Great Plains west to CA
- Habitat:** dry to wet, open areas, meadows, woodlands, etc.; Lower Sonoran to Transition Life Zones

Notes:

common; herbaceous perennial; widespread, morphologically diverse plant forming evergreen mats with stalks that grow to ~1.5'; native to NA throughout CAN and w US at low to high (9,000') elevations (sagebrush to pine woodlands); dioecious, i.e. **staminate** (male) and **pistillate** (female) flowers occur on separate plants; though fertile seeds can be produced by pollination from nearby male plants, most are apomitic (produced without sexual recombination), and colonies (mainly female) are usually **clones** of a single parent with individuals connected to each other by rhizomes; wide, pointy, usually rose-colored **phyllaries** (also white, yellow, brown); .08" (2mm) **achene**; .24" (6mm) **pappus**; cluster of flowers atop stalks give appearance of the toes of a kitten, thus the source of the plant's common name; 4 subspecies; hosts black, bristly caterpillars of the **American Lady** butterfly (*Vanessa virginiensis*)

Mojave presence: native; uncommon

As Di5