

Plant Data Sheet

**Species (common name, Latin name)**

Coyote bush, coyote brush, baccharis, chaparral broom, dwarf baccharis

Baccharis pilularis

Range

Coyote bush occurs in the outer Coast Ranges from northern Baja California, Mexico, and San Diego County, California, north to Tillamook County, Oregon. The species also occurs in the Channel Islands and as isolated populations in the Cascade and Sierra Nevada foothills from Butte County to Tuolumne County, California.²

Climate, elevation

Coastal populations of the prostrate form of coyote bush experience moderate temperatures with summer fog, seaspray, and heavy onshore winds. Annual precipitation ranges from 9.8 to 17.7 inches (250-450 mm), with most falling between November and April. Inland populations, which occur up to 2,460 feet (750 m) (occasionally up to 4,920 feet (1500 m)), are exposed to colder winters and hotter summers. Annual precipitation in these habitats ranges from 12 to 30 inches (305-762 mm).²

Elevation ranges from 0 to 2461 ft (0 to 750 m), but sometimes reaches 4921 ft (1500 m). The Washington population ranges from 10 to 400 ft (3 to 122 m) in elevation.²

Local occurrence (where, how common)

Coyote brush is known in Washington from only one site in the southwestern part of the state.²

Habitat preferences

Coyote brush can be found on sea cliffs and bluffs as well as sand dunes and thickets along the coast. It prefers open, dry sites and resides in dry forest and shrub habitats. In Washington, coyote brush grows in two habitats. One habitat is comprised of basalt sea cliffs with south-southwestern exposure. The second habitat is made up of recently accreted sand dunes below the sea cliffs. These areas are open and often among red alder trees.^{1,2}

Plant strategy type/successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)

Coyote bush is a shade-intolerant species. Along with other small-seeded coastal sage shrubs, it colonizes actively eroding or alluviating areas such as dunes and gravel bars. Exposed mineral soil gives coyote bush an advantage over perennial grasses and chaparral shrubs. Coyote bush's successional status varies with habitat type. In California grasslands, it is a late seral species that invades and increases in the absence of fire or grazing. Coyote bush is a common dominant in coastal sage scrub, but because seedling growth is poor in shade, coyote bush does not

regenerate under a closed shrub canopy.²

Associated species

Common associates include sitka spruce (*Picea sitchensis*), salmon berry (*Rubus spectabilis*), sword fern (*Polystichum munitum*) salal (*Gaultheria shallon*), pacific reed grass (*Calamagrostis nutkaensis*), red fescue (*Festuca rubra*), brome fescue (*Vulpia bromoides*), velvet grass (*Holcus lanatus*), stone-crop (*Sedum spathulifolium*), and oceanbluff bluegrass (*Poa unilateralis*), American dunegrass (*Leymus mollis*), velvet grass (*Holcus lanatus*), lodgepole pine (*Pinus contorta* ssp. *contorta*), European beachgrass (*Ammophila arenaria*), sweet vernal grass (*Anthoxanthum odoratum*), and red alder (*Alnus rubra*).^{1,2}

May be collected as: (seed, layered, divisions, etc.)

Seed.²

Collection restrictions or guidelines

Seed can be collected with a cloth and is best if dried in a warm ventilated room or in sun without wind. Sometimes the pappus is removed before planting. In nurseries, seeds are sown in fall or early spring using sandy soil or a vermiculite, perlite, and sphagnum moss mix.²

Seed germination (needs dormancy breaking?)

Coyote bush seed germinates well on mineral soil and has no stratification or temperature requirement.²

Seed life (can be stored, short shelf-life, long shelf-life)

Seed may be stored.²

Recommended seed storage conditions

After drying, seed can be stored in a sealed refrigerated container.²

Propagation recommendations (plant seeds, vegetative parts, cuttings, etc.)

It can be established from seed or bare root plantings.²

Soil or medium requirements (inoculum necessary?)

Coyote bush occurs on a range of soil types but is best adapted to medium- to coarse-textured soils.²

Installation form (form, potential for successful outcomes, cost)

Restoration projects where coyote bush is planted from containers are most successful in the long term if a sex ratio of 1:5 (males to females) is used. Cost is relatively inexpensive.²

Recommended planting density

Root growth rates are very fast (average of 10 times faster than shoot growth) so plants should be planted fairly spread apart.²

Care requirements after installed (water weekly, water once etc.)

Does not require much water, but regular watering will increase its resistance to fire.²

Normal rate of growth or spread; lifespan

Coyote bush seed is generally dispersed from October to January. Germination occurs after late fall or early winter rains. Coyote bush growth is slow until about March, when root and shoot growth rates increase with warmer temperatures and spring rains. Growth slows with declining soil moisture in late May. Plants flower from July to

October, and fruit ripens from September to November. Rains in September typically allow a high rate of leaf addition. Seasonal development is slightly later in inland than in coastal populations.²

Sources cited

¹Hansen, W. Native Plants of the Northwest. <http://www.nwplants.com>. May 10, 2006

² USDA Forest Service. *Fire Effects Information System*. <http://www.fs.fed.us>. May 10, 2006

Data compiled by (student name and date)

Patrick Keegan, May 10, 2006