

## HARVEST BRODIAEA

### *Brodiaea coronaria* (Salisb.)

#### Engl.

Plant Symbol = BRCO3

Contributed By: USDA NRCS National Plant Data Center



Alfred Brousseau  
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#### Alternate Names

Indian potato, topoderos, walla

#### Uses

*Ethnobotanic:* Corms were gathered with a wooden digging stick and eaten by the Wiyot, Atsugewi, Miwok, Yana and other tribes of California. The Miwok dug the bulbs about the first of May when the shoots were just appearing above the ground. They cooked the corms in an earth oven. The Atsugewi boiled the corms in water and sometimes cooked them in an earth oven.

#### Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status and wetland indicator values.

#### Description

*General:* Lily Family (Liliaceae). This herbaceous perennial reproduces both by black seeds and brown fibrous-coated corms. The umbel-shaped inflorescence has 3 to 11 flowers--each flower is bell-shaped and the color varies from blue-purple, pink-purple to rose. The perianth lobes are ascending, 12-25 mm, with tips recurved. The fruit is an ovoid

capsule. The 3-5 basal leaves are linear and the scape is 5-25 cm tall.

#### Distribution

This plant was a greater California Central Valley plant at one time extending in vast numbers across the Sacramento and San Joaquin valleys. Due to overgrazing, farming, and urban development this plant is becoming rare. It is also found in northwestern California, the central and northern Sierra Nevada, the Cascade Range and British Columbia at an elevational range from 0 to 1600 m. The plant is found in multiple plant community types including valley grassland, foothill woodland, mixed conifer forests, and volcanic mesas.

#### Establishment

If possible, obtain the seed and corms from local sources near where they will be planted, to maintain genetic diversity of harvest brodiaea and for the best adaptation to local conditions. Some plant nurseries may label their corms and seeds according to geographic source. If planting flowering-size corms, they can be directly planted outside. Plant the corms in the fall in full sun. The less crowded the more the corms will offset. Plant them 2 to 4 inches apart and 4 inches deep. A well-drained soil that is light and loose will produce bigger corms. Water and weed the patch regularly and protect it from small and large mammals, insects, and birds. Keep the ground slightly damp. If given too much water the corms will rot. If it rains fairly regularly, don't water the area. When the leaves on the plants have turned yellow and dried up, stop watering. Allow the corms to summer bake. The plants should be well established after one year.

If planting seeds of harvest brodiaea, store the seeds in a paper sack until autumn. Plant the seeds before October 1st in a container and care for them for two years before out-planting. Plant the seeds in six-inch pots because the corms will pull themselves down to the depth they require. Plant about 100 seeds per pot. Place them on top of the soil and sprinkle a little soil over them and put one-quarter inch gravel on top. Set the pots in partial shade so they won't dry out so fast. They can be outside or in a hot house. The seed does not need to be stratified. Start watering the pots right away and keep them slightly damp. Fertilize the pots in late winter and early spring and protect the plants from birds and other animals. If the pots are outside, let the rains naturally water the pots and in a

drought year, supplement with hand watering. Stop watering as soon as the foliage of the plants turns yellow. Resume watering the next fall, if rains are insufficient. After the second year, separate the plants and transplant them two inches apart in the fall when the corms are dormant, and then water. Grow them for one or two more years or to bloom, repeating this cycle and then out-plant them in the autumn.

### Management

The area planted in harvest brodiaea will require regular weeding and the use of a very weak solution of fertilizer twice only during the active growth in the spring. The corms can be kept from overcrowding by thinning them every three years. This involves picking off the cormlets and replanting them elsewhere in the garden.

There are five major types of indigenous management activities conducted in California that were designed to ensure future corm production at traditional gathering sites: 1) conscious breaking off cormlets from the harvested parent corms and replanting them; 2) sparing whole plants; 3) harvesting the corms after plants have gone to seed and dumping the seeds in the hole; 4) burning areas; and 5) irrigation. Periodic digging and thinning of the corms, and popping off the cormlets and replanting them may enhance grass nut numbers and densities. Digging corms may in fact be a form of tillage, which will increase the size of the gathering tract, aerate the soil, lower weed competition, and prepare the seedbed to increase seed germination rates. If harvest brodiaea populations require periodic disturbance to maintain and increase their populations, then indigenous harvesting regimes if reenacted, may help maintain populations. At the very least--populations that become overcrowded and show reduced vigor should be divided and separated.

### Cultivars, Improved and Selected Materials (and area of origin)

BRCO3 is somewhat available from native plant nurseries within its range.

Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under "United States Government". The Natural Resources Conservation Service will be listed under the subheading "Department of Agriculture."

### References

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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