



Checker Lily or Mission Bells (*Fritillaria affinis (lanceolata) var. affinis*)

There are 21 species and 3 subspecies of the genus *Fritillaria* in the United States and Canada. Chocolate lily is a variable species that can grow up to 3 feet in height. The lower leaves are in whorls, while the uppermost are in an alternate arrangement with nodding flowers. The color ranges from brownish purple mottled yellow to pale yellowish green mottled purple. [\[1\]](#)

It is the coloring of the flowers and its nodding form that gives rise to its two common names: Checker Lily and Mission Bells. Traditionally the roots were cooked and eaten, or dried for future use by the Okanagan, Shuswap, and Thompson. [\[2\]](#)

Range

British Columbia to California, both sides of the Cascades in Washington, but west of the Cascades in Oregon, east in British Columbia to northern Idaho [\[3\]](#)

Climate, elevation

Located on moderately moist to dry sites. Climatic zones can vary from less than 18 inches of annual precipitation up to 60 inches in wetter climatic zones. [\[4\]](#) Chocolate lily can grow at elevations near sea level to above 5,000 feet.²

Local occurrence

Chocolate lily is a very wide-ranging species. Although it can grow in woodland environments, it is more often found in open grasslands in northern and southern portions of the Puget Lowland and the adjacent

Georgia Depression of B.C.⁴

Habitat preferences

Open prairies, grassy bluffs and open woodlands (particularly oak woodlands)²

Plant strategy

All species are perennial, but most are herbaceous (not having a woody stem) and die back, after flowering or fruiting.² Bulbs are likely stimulated by moderate amounts of soil disturbance.

Associated species

Roemer's fescue (*Festuca idahoensis* var. *roemer*), danthonia (*Danthonia californica*), common camas (*Camassia quamash*), white fawn lily (*Erythronium oregonum*) and shooting star (*Dodecatheon* spp.)⁴

Collect as seed

Collection restrictions

Collect no more than 2% of the stand. Do not collect in consecutive years or when there has been a poor crop season. The easiest way to find seed is to mark where you found plants with flowers, while they're in bloom so that you can find the seed pods later in the season. Pods are usually brown and dry and difficult to find in grassland. Seedpods ripen facing down, making seed collection timing difficult. [\[5\]](#) Collect individual seeds in paper envelopes, making sure corners of envelope are sealed with tape. This will prevent small seeds from falling out of corner holes.

Seed cleaning and germination requirements

Separate the seeds from pods. Fine chaff can be removed by winnowing. While shaking the seeds in a bowl, blow over them.⁵ Seeds require cold stratification for three months before sowing. [\[6\]](#)

Seed life

Lily seeds can last up to 7 years, if stored correctly.⁵

Recommended seed storage conditions

Let seeds dry out where there is good air circulation. If storing for long periods of time store seeds in cold storage at or below 10% moisture.

Propagation recommendations

Sow seeds in the fall during moist warm conditions. Prepare clean flats using soil mix described below. Add enough moisture to wet the soil mix but do not saturate it. Spread seeds evenly, covering seeds with 1/8" of soil mix. Put flats in the same environmental conditions that they will grow in, similar to where you harvested the seed.⁵ Not all seeds germinate the first year. Seed flats may show no seedlings for up to six months. On emerging, the seedlings rapidly send their bulblets down to the bottom of the pot. Hold young plants until the dormant period (fall) of the second year before planting.⁶ Be sure to move flats or pots to shade or cover with shade cloth in the summer.

Soil or medium requirements

Mix 1:1 peat and vermiculite (5 gallon buckets) to about 8.5 oz of Osmocote for propagation.⁵ Chocolate lily requires good drainage so add sharp sand or gravel to the planting hole along with humus-rich soil.⁶

Installation form

Bulbs may be big enough to plant after two years (though they will likely not be flowering size).⁵

Recommended planting density

Chocolate lilies may go dormant for a year or two after flowering and produce only a single basal leaf. To ensure some bulbs flower every year, plant them in multiples.

Care requirements after installation

Water every two weeks, from March until hot weather occurs. Most bulbs dislike high soil temperatures and moisture at the same time. Soil eventually dries out and bulbs go dormant sometime around August.⁵

Normal rate of growth or spread

Bulbs grow very slow and you may not see a bloom for several years (2-3 years) after planting.

Data compiled by Amy Lambert, May 14, 2003

[1] Natural Heritage Program, www.natureserve.org

[2] <http://www.cwnp.org/photopgs/fdoc/fraffinis.html>

[3] Pojar, Jim and Andy MacKinnon, 1994. Plants of the Pacific Northwest Coast. Lone Pine Publishing, Vancouver, Canada

[4] Chappell, Chris 2000. Puget-Georgia-Willamette Ecoregion Herbaceous Balds and Bluffs. Unpublished data

[5] Far West Bulb Farm www.californianativebulbs.com

[6] Pettinger, A. and B. Costanzo 1996. Native Plants in the Coastal Garden. Timber Press, Portland, OR