

SEGO LILY

Calochortus nuttallii Torr. & A. Gray

Plant Symbol = CANU3

Common Names: sego lily, sego-lily, mariposa lily

Description

General: Lily Family (Liliaceae). Sego lily is a perennial native forb that grows 10-20 inches high. It grows from a small egg-shaped bulb, 3/8 to 1 inch in diameter, with a membranous coat. The stem is slender, usually unbranched, and bears 2 to 4 simple, linear, narrow leaves, 7-10 inches long. Flowers are very showy, tulip-like, about 3 inches across with 3 petals and 3 sepals. Petals are white, occasionally tinged with lilac or pink, and yellow near the base. There are glands at the base of each petal which are bearded with slender hairs. There is a brownish-purple spot or band above each gland. Sego lilies bloom May-July depending on elevation, and the above ground portion of the plant dries up shortly after blooming. The fruit is an erect, 3-sectioned capsule that splits open to reveal yellowish flat seeds (Hitchcock & Cronquist, 1973; Cronquist et al., 1977).



Sego lily. Photo by Mary Wolf



Sego lily. Photo by Cassandra Skinner, hosted by the USDA-NRCS PLANTS Database.

Distribution: Sego lily occurs in high desert country throughout the Rocky Mountain states, the Great Basin, and the western Great Plains (USDA-NRCS, 2021). For current distribution, consult the Plant Profile page for this species on the PLANTS Web site.

Habitat: Sego lily is found in brushy or grassy slopes in dry areas, typically within open sagebrush country and open ponderosa pine or pinyon-juniper forests. Its elevation range is from 2,300 to 10,000 ft above sea level.

Adaptation

Sego lily is adapted to dry, well-drained soils. It blooms early in the season and then the aboveground parts dry up, avoiding high summer temperatures and drought. Associated plants include sagebrush (the *Artemisia tridentata* complex), death camas (*Zigadenus* spp.), lupines (*Lupinus* spp.), pinyon pine (*Pinus edulis*, *Pinus monophylla*), juniper (*Juniperus* spp.), and ponderosa pine (*Pinus ponderosa*).

Uses

Wildlife: The bulbs are eaten by rodents. A similar species, sagebrush mariposa lily (*C. macrocarpus*) is a documented food source for juvenile sage grouse (Klebenow & Gray, 1968); the authors use “sego lily” as the common name of *C. macrocarpus*.

Warning: Death camas (*Zigadenus* sp.) is toxic and can be confused with sego lily in the absence of flowers. Be sure of your identification of sego lily bulbs before eating them.

Ethnobotany

The English word “sego” comes from similar words for the plant in various Numic (Great Basin) languages. Many Native American tribes around the Great Basin and surrounding areas including the Washoe, Owens Valley Paiute, Western

Shoshone, Northern Shoshone, Eastern Shoshone, Goshute (Gosiute), Utah Southern Paiute, and Northern Ute harvested and ate the pleasant-tasting bulbs of sego lily (Fowler, 1986). Segolily bulbs were a common food in the Northern Paiute, Northern Shoshone, and Bannock culture areas of Idaho (Steward, 1938). The Northern Paiute dug the bulbs in the spring and ate them raw or roasted. Surplus bulbs were cached in pits lined with cattail leaves or grass (Fowler, 1990). Segolily bulbs were also dried for storage. The dried bulbs were ground and cooked into soup or porridge (Fowler, 1989). Goshute (Gosiute) and Ute people of Utah and Nevada dried the bulbs to preserve them for winter use (Chamberlin, 1909; Chamberlin, 1911). The Navajo also ate segolily bulbs and relied on them in times of food scarcity (Lynch, 1986). The Havasupai of the Grand Canyon harvested the bulbs and ate them with bread (Weber & Seaman, 1985). Various other *Calochortus* species were used by Native Americans as well.

Native Americans taught Mormon pioneers to use the bulb for food during times of food shortage. This led to the designation of segolily as the official state flower of Utah (USU, 2021).

Status

Threatened or Endangered: No

Wetland Indicator: UPL

Weedy or Invasive: No

Please consult the PLANTS Web site (<http://plants.usda.gov/>) and your state's Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

Planting Guidelines

Seed requires cold-moist stratification to germinate. Blanke et al. (2011) planted seeds in a flat which was placed outdoors over winter (Colorado). The seeds underwent natural stratification and began to germinate in late May. The Aberdeen Plant Materials Center used a similar technique, planting seeds in peat pellets left outside for 90 days (November-February). Pellets were then brought into the greenhouse (75-85 °C), where seeds began to germinate. Seeds can also be cold-moist stratified artificially (40-60 days at 36 °C) and then transplanted into containers (Blanke et al., 2011).

Management

Germinating seedlings should be kept moist. Plants should be grown in soil that is dry from mid-summer to late fall (wildflower.org, 2008). Bulbs reach maturity in 3 to 5 years (wildflower.org, 2008).

Pests and Potential Problems

Protect the growing bulbs from burrowing rodents such as gophers.

Environmental Concerns

None known.

Seeds and Plant Production

Segolily reproduces by seed. Collect seed when the capsules are dry and beginning to open. There are approximately 190,000 seeds/lb (Hassell et al., 1996).

Segolily is extremely difficult to grow from transplanted bulbs. Collected bulbs are not likely to survive transplanting (Hitchcock & Cronquist, 1973).

Cultivars, Improved, and Selected Materials

There are currently no selected materials of *Calochortus nuttallii*. Other species of *Calochortus* are available on the commercial market.

Literature Cited

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Sego lily seedlings in greenhouse. Note seed coats still attached to cotyledons. Photo by Mary Wolf.

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Citation

Wolf, M., & Tilley, D. (2021). Plant Guide for sego lily (*Calochortus nuttallii*). USDA-Natural Resources Conservation Service, Aberdeen Plant Materials Center. Aberdeen, ID.

[Published June 2021](#)

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