Photo by Greening Australia

Bulbine bulbosa

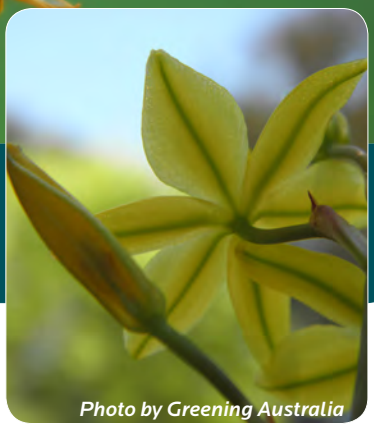


Photo by Greening Australia

Synonyms: *Anthericum bulbosum, Bulbinopsis bulbosa*

Common names: Bulbine Lily, Golden Lily, Native Leek, Native Onion, Wild Onion, Yellow Onion Weed, Leek Lily

Family: Liliaceae

Similar species: *Bulbine glauca* (Rock Lily), *Bulbine vagans* (Bulbine Lily), *Tricoryne elatior* (Yellow Rush Lily), *Hypoxis hygrometrica* (Golden Weathergrass)

Conservation status: Not listed as there are no known threats.

Description

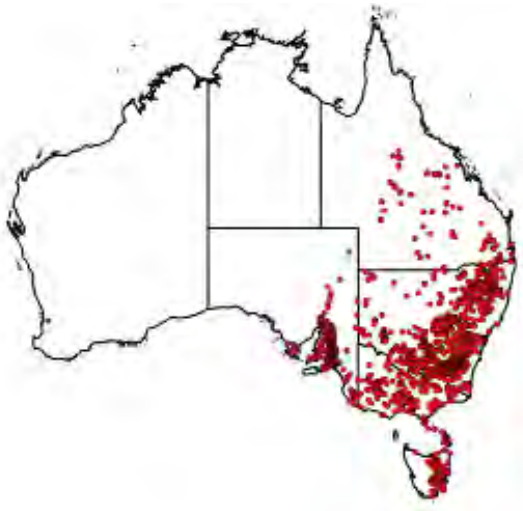
Bulbine bulbosa is an erect tufted herb, from 20 to 75 cm tall.

Corm: subterranean stem from 7 to 25 cm long, and up to 23 mm diameter. It is the organ of the plant from which the stems, leaves and flowers are produced and in which the plant food reserves are stored. Short fleshy roots also protrude from this corm.

Stem: simple, erect, succulent, leafless, lengthens as the flowers ripen.

Leaves: basal, hollow, narrow, cylindrical, channeled, 20-40 cm long, green-grey. The leaves don't persist after flowering.

Distribution



Map from Australia's Virtual Herbarium: http://avh.chah.org.au/

Ecology

Habit	Perennial herb.
Growth period	Growth starts after autumn rain and until mid-summer if sufficient moisture is available. After flowering, the plant dies down to underground tuber and re-shoots in autumn. With frequent watering, new growth can continually be produced.
Life expectancy	Unknown.
Habitat	Open woodlands, grasslands, saltbush plains and sclerophyll forests; often abundant amongst rocks. Persists only on less disturbed sites and tends to occur in relatively dense localised patches.
Site tolerance	Moist areas, with protection from strong wind. Can grow with very little sun throughout the year.
Soil tolerance	Found on a wide range of soil types, frequent on clays and on rich and well-drained soils. Often associated with water-retentive soils or soils which are seasonally inundated (e.g. swamps).
Drought tolerance	Sensitive.
Frost tolerance	Hardy.
Fire tolerance	Tolerant. Fire retardant plant.
Grazing tolerance	Threatened if grazed during spring and summer.
Pests	Snails and slugs.

Reproduction

Flowers

Bright yellow alternating flowers with 6 'petals', 10-15 mm long, 20 mm wide. Up to 50 flowers can be borne by long upright stalks, at the top of the stem. The flowers are not all open at once. They are often fragrant.

Flowering occurs from September to March, throughout the distribution.

Fruit: capsules

Spherical, three-celled capsule of about 6 mm diameter and 3-6 mm long. The fruits are found at the base of the flowering stem. They split longitudinally at maturity and produce 1 to 13 seeds.

Seeds

0.8 to 2 mm long, cream when unripe and dark-brown when ripe. There are approximately 500 seeds per gram.

Germination requirements

No pre-treatment is required for germination. Seeds germinate readily in 2 to 8 weeks. Try germinating at temperatures around 16°C as hotter temperatures prevent germination.

Genetic seed viability

Possible chromosomal differences are unknown for *Bulbine bulbosa* at present.

How to grow the species in a Seed Production Area (SPA)

Seed collection and storage

Collect the seeds from late November to late December. Monitor closely as seeds are shed from the capsule 3 to 14 days after maturity.

Harvest the stalks by hand or with secateurs when the papery capsules turn brown and brittle, the seeds are dark-brown and the stems have changed from orange brown to light brown. Place the stems upside-down inside large paper bags and dry until the capsules have opened. Thresh lightly to extract the seeds from the capsules and sieve clean.

When stored in appropriate conditions, seeds retain viability for several years; according to germination tests done at the National Seed Bank, 95% of 23-year-old seeds stored in a freezer germinated whereas when stored in a cold room at 4°C no seed germinated. The seeds should be dried down to 5-6% seed moisture content and then be stored in a freezer.

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Propagation

B. bulbosa can be propagated from seed or division.

Sow seeds in autumn, 2 to 3 months after collection. The seeds can be directly sown into pots or sown in trays with a thin layer of vermiculite or potting mix on top. They can also be hand-broadcast at revegetation sites.

Clumps can be divided successfully in autumn, after the flowering cycle. After division, store the new individuals in dry conditions until the following spring when they can be planted. After propagation, watering can be increased to encourage new growth.

The space between plants should be between 15 and 20 cm.

Growth at the SPA

The plants are best maintained with regular watering from spring to early summer.

To encourage growth, the plants can be fertilised with slow-release fertiliser and seaweed fertiliser in spring. Seaweed fertiliser can also be combined with a water-soluble fertiliser and applied during establishment.

Photo by Greening Australia

Uses

- **Horticulture:** very attractive ornamental for containers, rockeries, cottage and montane gardens. The plants can grow in limited spaces such as window boxes, small containers, tiny rock pockets, courtyards or other small-scale gardens. Plant in clumps for better effect. Trim off spent leaves to encourage new growth.
- **Bush tucker:** once the leaves had died back, the corm was roasted and eaten by Aboriginal people all year round. It would take a few years for the corm to mature. The corms of *B. bulbosa* are said to be the sweetest of the lily and lily-like plants, it is nutritious and rich in calcium and iron. The process of harvesting by Aboriginal women with digging sticks prepared the site for the germination of seeds for next season's crop. This soil disturbance also prepared the site for the germination of associated plants such as *Microseris lanceolata* (Yam Daisy).
- **Fodder:** acceptable to stock and may be particularly used in dry winters. However, the plants are reputedly toxic to stock if grazed in large quantity (suspected of causing severe scouring, collapse and death in cattle, horses and sheep) but there is no scientific evidence of toxicity (Everist, 1974).
- **Widlife value:** the plant provides nectar to insects such as butterflies.

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Internet links

Australian National Botanic Gardens: http://www.anbg.gov.au/gnp/interns-2003/bulbine-bulbosa.html

PlantNET - National Herbarium of New South Wales: http://plantnet.rbgsyd.nsw.gov.au/

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