

# SEED GERMINATION DATA SHEET

## 6. THE LILY FAMILY (LILIACEAE)

### Identification/Diversity

This large family includes a diversity of herbs and climbers with annual or evergreen aerial shoots and rhizomes, bulbs or corms. The definition of Liliaceae used here is in accordance with the Flora of Victoria Vol.2 which includes some species formerly in the Amaryllidaceae family. With experience, it is possible to identify a plant at least to genus level by the shape and size of the leaves, which are often basal. However, flower form, size and colour are the most important features to use when present in spring.

Although most lilies are bisexual, some are unisexual eg. *Wurmbea latifolia*. The family includes some significant weeds such as Bridal Creeper (*Asparagus asparagoides*), Onion Weed (*Asphodelus fistulosus*) and Agapanthus (*Agapanthus praecox*).

### Distribution

The family is distributed throughout the state with some species being widely distributed e.g. *Dianella revoluta* and others more localised e.g. *Tricoryne tenella*.

### Fruit type

There are two basic fruit types :

- 1) fleshy fruits eg. *Dianella*
- 2) capsules eg. *Burchardia*, *Arthropodium*, *Bulbine* and *Caesia*

### Seed collection

Seed can be collected by hand mostly from December to January. Capsular species release seed readily when dry. (Care needs to be taken with fleshy fruited species as the fruit can rot through paper collection bags). The fleshy fruit can then be soaked in water for several days until fermentation occurs. This may promote germination (except for *Dianella tasmanica* and *D. longifolia*) and enables the seed to be easily cleaned. Cleaning can be carried out by washing the fermented mixture through a sieve. In addition, *Dianella revoluta* may also respond to smoke treatment.

Some species have an after-ripening period in which the seed matures after collection and therefore it is best to store the seed for a few months before sowing (see table).



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## Propagation

For many species (*Dianella* spp. probably being an exception) it is generally best to sow the seed in autumn to avoid high summer temperatures or a controlled temperature glasshouse operating between 10 and 20°C could be used.

Botanical Name	Common Name	Seed Collection Period	Approx time for total germination (days)	Typical number germinants per gram	Notes
<i>Arthropodium minus</i>	Small Vanilla-lily	Jan- Feb	35	32	Store 2-3 months before sowing. High temperatures inhibit germination.
<i>Arthropodium strictum</i>	Chocolate-lily	Jan-Feb	71	354	Store 2-3 months before sowing. High temperatures inhibit germination.
<i>Astelia alpina</i>	Silver Astelia	Summer	6 months	?	Remove flesh and sow fresh.
<i>Bulbine bulbosa</i>	Yellow Bulbine-lily	Dec-Jan	35	165	Store 2-3 months before sowing. High temperatures inhibit germination.
<i>Bulbine glauca</i>	Bluish Bulbine-lily	Nov-Dec	71	293	As for <i>B. bulbosa</i>
<i>Burchardia umbellata</i>	Milkmaids	Dec-Jan	71	572	Store 2-3 months and sow in autumn. Even higher germination rates may be achieved if seed is smoked.
<i>Caesia</i> spp.	Grass-lily	Summer	Approx 90	High	Sow seed in autumn.
<i>Calostemma</i> spp.	Garland Lily	Summer	?	High	Germinates quickly.
<i>Chamaescilla corymbosa</i>	Blue Stars	Summer	42	High	Germination rate higher between 10-20°C
<i>Dianella longifolia</i>	Pale Flax-lily	Jan-Feb	129	52	Germinates well with or without fermentation.
<i>Dianella revoluta</i>	Black-anther Flax-lily	Dec-Jan	91	66	Seed should be smoked.
<i>Dianella tasmanica</i>	Tasman Flax-lily	Jan-Feb	83	127	Germinates well without fermentation
<i>Hypoxis</i> spp.	Yellow Stars	Summer	28 - 42	High	Germination rate higher between 10- 20°C
<i>Laxmannia</i> spp.	Wire Lily	Summer	?	?	Data required for Victorian species.
<i>Stypandra glauca</i>	Nodding Blue-Lily	Summer	?	?	Propagation method from seed to be determined
<i>Thelionema caespitosum</i>	Blue Grass-lily	Summer	?	?	Propagation method from seed to be determined
<i>Thysanotus patersonii</i> <i>T. tuberosus.</i>	Fringe-lily	Summer	28 - 42	High	Some non-Victorian species are more difficult to propagate
<i>Tricoryne elatior</i>	Yellow Rush-lily	Jan-Feb	?	?	Propagation method from seed to be determined. Smoking the seed has no effect.
<i>Wurmbea dioica</i>	Early Nancy	Summer	35	High	Sow seed in autumn.

References used to help compile this table include: Ralph, Murray (1997) Growing Australian Native Plants from Seed, Bushland Horticulture publication and Jason Stewart pers. Comm.

\* Germination times may be decreased if a lower day temperature is used than that specified for the germination cabinet.