



Native Orchid Society of South Australia Inc.

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CULTURE OF SLOW MULTIPLYING (SM) TERRESTRIAL ORCHIDS

FLAGBEARER SPECIES: *Thelymitra nuda*

Diuris, *Pterostylis* and *Thelymitra*. They are more expensive because they have to be raised from seed in flasks. SMs are not so easy because there is less room for error. A few have a near zero increase rate and will fade away unless additional plants can be produced to make up for occasional losses from predators and disease.

GROWTH HABIT: Australian ground orchids follow an annual growth cycle comprising 6 – 8 months as growing plants under cool (5 – 20°C max, 0 – 14°C min) moist conditions and 4 – 6 months as dormant tubers in hot dry (18 – 42°C max, 12 – 30°C min) conditions. The new tuber is produced in winter – spring. Each tuber sends up a shoot to the surface in Autumn and leaves grow rapidly in late Autumn/early Winter as temperatures fall and the rains set in. *Pterostylis* leaves are usually the first to appear in March/April followed by *Diuris* and *Thelymitra* in April/May. Sometime in October/November the leaves go yellow and then brown and dry as the days get longer, hotter and drier in late Spring.

LIGHT/SHADE: Australian terrestrial orchids are easy to grow. In Adelaide they thrive in a shadehouse of 50% shade cloth. Some species prefer heavy shade, others full sunlight, but most will adapt to a wide range of light intensity. Sun loving species (*Diuris*, *Thelymitra* & *Rufa* group *Pterostylis*) prefer a brighter location for good growth.

If the leaves and stems are weak and limp or if the leaf rosettes are drawn up to the light then the shading is too dense and the amount of light should be increased. The spring flowering species like higher light intensities at flowering time and flowers may have pale colours if placed in heavy shade, even temporarily, when flowers are just starting to open.

In very cold areas an unheated glasshouse may be required for frost protection although light frosts do not worry the majority of species.

AIR MOVEMENT/HUMIDITY: All species like good air movement and will not thrive in a stuffy humid atmosphere especially if temperatures are high.

WATERING: The soil should be kept moist at all times during active growth by watering gently if there is no rain. Hand watering is especially necessary in spring as soil in pots dries out more rapidly than in the garden. Watering must be done slowly so that the mat of needles on the surface of the pot is not disturbed. Slugs and snails love these plants and must be kept under control. Raising the pots off the ground on galvanised steel benching is very effective in controlling these pests.

After the leaves have turned yellow, let the pot dry out completely to dry up the old roots and tubers otherwise they may turn into a soggy mouldy mess and rot may destroy the adjacent new tubers.

POLLINATION/SEEDCOLLECTING: Flowering plants are hand pollinated and the seed collected just before the pods split open and the dust-like seed blows away. The seed is sprinkled on pots of mother plants at Easter or flaked.

REPOTTING: Repot every second year in half new mix. Repotting is normally done between November and January. The best results are obtained if the tubers are repotted in half fresh soil mix each second year. A suitable soil mix is 40% loam, 50% sand and 10% organic matter with a little blood and bone fertiliser added. A 5 mm sieve is a useful tool for separating tubers from soil. Replant the dormant tubers with the tops 20 mm deep. Cover the soil surface with a mulch of sheoak needles, chopped to 20 – 50 mm lengths, to prevent soil erosion & aerate under the leaves.

INCREASING PLANT NUMBERS: The pull-off-the-tuber method can be used with some *diuris* and *Pterostylis* species to double plant numbers annually. The pots can be knocked out and the tubers examined in Summer without harm.

SUMMER CARE: Keep the pots shaded and allow the pots to dry out between light waterings until mid-February when they should be set out in their growing positions and watered a little more often. The tubers of some species will rot if kept wet during the dormant period, others will produce plants prematurely which are then attacked by pests such as thrip and red spider and fungal diseases in the warm weather.

FERTILIZING: SMs will benefit from weak applications of folia feed in the **early** growth stages.

OTHER CULTURE NOTES:

- FAST MULTIPLYING TERRESTRIALS
- FUNGUS DEPENDENT TERRESTRIAL

NB: IT IS ILLEGAL TO TAKE PLANTS FROM THE WILD

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