Miltonia orchid culture in the Riverina region of NSW

- *the Brazilian Miltonias*


Miltonia clowesii

There are about 9 *Miltonia* species and 8 natural hybrids which all originate from south-eastern Brazil, except for *Miltonia flavescens* which is also found in north-east Argentina. All are epiphytes.

A number of *Miltonia* of will grow well in a protected shade-house with a solid roof in the Riverina. Most originate from highland rainforests at 200 to 1500m (6). The best-known species is *Miltonia spectabilis* which comes from mountainous regions of Brazil.

The pansy orchids belonging to the *Miltonopsis* genus from Columbia were previously part of the *Miltonia* genus but are now grouped separately (6). *Miltonia* plants have a less rounded or filled flower while *Miltonopsis* have a pansy like appearance. *Miltonias* prefer warmer conditions than *Miltonopsis.*

Plants mostly flower from January-March but vary with species (4). One or two flower spikes can develop from each growth (6). There are many hybrids. Hybrids made with either *Miltonia* or *Miltonopsis* species are all grouped under the name *Miltonia* (4).

Temperature requirements

They are regarded as very temperature tolerant. Some species and many hybrids will grow and flower without heat in a protected shade-house in the Riverina (see cultivars section below) while others will require some heat to flower. They are regarded as intermediate growers preferring a daytime temperature of 21-26°C and night temperatures of 6-8°C (6). However they will tolerate temperatures as high as 42°C for short periods providing they are well watered, humidity is high and solar radiation is reduced with additional shading.

They will tolerate temperatures as low as 2-3°C for short periods but must be protected from frost. Plants will be better able to tolerate low night temperatures if day temperatures are considerably warmer. Plants flower best when night temperatures don't fall below 16°C (9).

Very high or low temperatures beyond the optimum range will slow their growth and may reduce flowering.

When spikes develop and when they are in flower, plants should be kept away from heat and dry air as the flowers will not last as long if exposed. Flowers last about 6 weeks on the plant but they do not last well if cut (5).

Light

Miltonias like medium to low levels of light (1500-3000fc) but no direct sunlight (6, 9). The leaves will burn if light is too intense and they may require more shading in mid summer (5). Normally 50-60% shade-cloth is best for cooler months but up to 70-80% is required in summer in the Riverina region.

If leaves are dark green they most likely require more light but if they are reddish or yellowish-green they may require less light. A slight pinkish tinge to the leaves indicate they are receiving the correct amount of light (9). It can be difficult to give them the right amount of bright light to encourage flowering without producing yellow leaves.

Flower colour often improves if moved to lower light after buds develop (9).

Humidity and air movement

The optimum humidity is 50-80% (9) but they will tolerate humidity as low as 20% providing they are kept moist. In very hot weather misting and standing plants on gravel filled trays containing water assists in maintaining humidity. Low humidity or uneven watering will stress the plants and may produce accordion pleats in the leaves. However leaf pleating can also be genetic in some plants and beyond the grower's control.

Water

Plants should be kept uniformly moist but not over wet and not allowed to dry out (5). They should also be kept well drained. Although they have a rest period after flowering, they must still be kept moist, but not wet, even during winter (2).

It is important to water plants in the morning so they can be dry by the evening, particularly in winter (4). Avoid watering plants on cold overcast days. A roof over the shade-house is necessary to keep plants drier during cold weather in winter. They need a drier winter rest period after flowering, but not too dry.

Plants will develop accordion pleats in new leaves if they become too dry. Small black freckles on the leaves indicate they have become too hot or dry.

Potting medium

Plants need to be kept uniformly moist in summer and this is more easily achieved when plants are gown in squat pots but they can also be grown on a slab (2). A medium size bark with added perlite makes a good potting mix. The mix must be open and airy but still hold a good amount of water. Some Melbourne growers add a little chopped sphagnum moss to the mix to aid moisture retention.

It is recommended to repot every one or two years into a slightly larger pot (5). Place plants to one side of the pot so there is room for the new pseudobulbs to grow. Plants should be repotted after flowering once the new growth is starting to appear.

Fertilizers

They should be fertilized from spring to early autumn when growing but not over winter. They need a dilute soluble fertilizer about every 2 months.

Intergeneric hybrids

Miltonias have been crossed with many other genera to form hybrids (6). These include;

- *Bakerara* (Brassia x Miltonia x Oncidium x Odontoglossum)
- *Beallara* (Brassia x Cochlioda x Miltonia x Odontoglossum)
- *Burrageara* (Cochlioda x Miltonia x Oncidium x Odontoglossum)
- *Colmanara* (Odontoglossum x Miltonia x Oncidium)
- *Degarmoara* (Brassia x Miltonia x Odontoglossum)
- *Goodaleara* (Brassia x Cochlioda x Miltonia x Oncidium x Odontoglossum)
- *Vulystekeara* (Cochlioda x Miltonia x Odontoglossum)
- *Withnerara* (Aspasia x Miltonia x Oncidium x Odontoglossum).

The growing conditions of hybrid genera vary depending on the parents but are often tolerant of a wider range of conditions than Miltonia itself.

Miltonias for the Riverina region of NSW

Miltonia spectabilis and *M. regnellii* come from cooler elevated regions of Brazil and so should both be suitable for growing in an unheated shade-house in the Riverina (4). Many of the intergeneric *Miltonia* hybrids containing the cool growing genus *Odontoglossum* in the cross would also be tolerant of low temperatures. Hybrids tend to be more vigorous and easier to grow than species.


Miltonia regnelii

The Santa Barbara Orchid Estate web site (see web site below) lists a number of Miltonias that tolerate temperatures down to 0C that should grow well in a shade-house in the Riverina (7).

Miltonia flavescens, M. candida and *M. clowesii* all require additional heat over winter if they are to flower in the Riverina based on growers experience in Melbourne (4).

Further reading

1. Growing Orchids in cool climate Australia (2nd edn) by MJ Fraser, J Wright, W Ferris (2013).
2. Gardening Australia Flora's Orchids. ABC Books (2005).
3. Orchids, A practical handbook. By B and W Rittershausen (2001).
4. The Brazilian Miltonias by Brian Milligan. http://www.oscov.asn.au/articles3/miltbrazil.htm
5. Carter and Holmes Orchids. Orchid Care. http://www.carterandholmes.com/miltoncare.html

6. Orchid Care Tips. http://www.orchid-care-tips.com/miltonia-orchids.html
7. Santa Barbara Orchid Estate. Brazilian Miltonias. http://sborchid.com/sboe_collection.php?collection_genus=Botanicals&collection_short_name=Miltonias&collection_name=Brazilian%20Miltonias
8. Wikipedia. Miltonia. https://en.wikipedia.org/wiki/Miltonia
9. Charles and Margaret Baker. Miltonia culture. http://www.orchidculture.com/COD/FREE/Miltonia_Art.html

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