

## Miltoniopsis orchid culture in the Riverina region of NSW

### - the Pansy orchid

There are 6 *Miltoniopsis* (pronounced mil-ton-ee-OP-sis) species (10) and about 2000 hybrids with this species (1,10). Once grouped with Miltonias, they are more closely related to Odontoglossums (1). Miltonias usually have two leaves on each pseudobulb whereas miltoniopsis have only one leaf (8, 10). Miltoniopsis also have flatter pseudobulbs (8). Three species are responsible for most of the hybrids, *Miltoniopsis vexillaria*, *M. roezlii*, and *M. phalaenopsis* (9).



Miltoniopsis Mount Mazama  
‘Crater Lake’

This epiphytic species requires cool conditions and low light year round (1). They are distributed from Costa Rica, Equator, and Columbia through to Peru and found in very wet cloud forests from 500 to 2000m (3). Miltonias in contrast come mainly from Brazil and prefer slightly warmer growing conditions.

The thin bluish green eaves are relatively fragile and require careful handling (1) and can scorch and bruise easily.

The pansy like flowers come in a wide range of colours from white through to pinks and yellow and have butterfly shaped mask in the centre (4). Pseudobulbs usually produce 2 flower spikes with 3 to 10 flowers and they can flower twice a year in early summer and autumn (4). Flowers can have a delicate fragrance (4). Flowers are long lasting and will last for up to 5 weeks or more (6) but are very short lived if cut (10).

### Temperature requirements

They prefer cooler temperatures similar to Odontoglossums within the range of 6-25°C (6) but will tolerate a much wider range of temperature for short periods. The ideal temperature for growth and flowering is 10-25°C (6, 10) similar to paphiopedilums (7). They should be kept drier if temperatures are at the low end of the range (7). They do not like higher temperatures above 25°C and humidity should be increased and light reduced to help them tolerate higher temperatures and prevent them becoming over stressed (7,8). The higher the humidity the greater their heat tolerance (8).

### Light

Miltoniopsis like medium to low levels of light (900-1500 fc) similar to mottled-leaf Paphiopedilums but slightly higher than Phalaenopsis (5,8, 10) and no direct sunlight (5, 7). They can tolerate more light in winter up to 1800fc (10). Light green leaves indicate plants are receiving sufficient light, but pale or yellow leaves indicate too much light (8) and dark green lush eaves insufficient light (10). The leaves will burn if light is too intense and they may require more shading in mid summer. Normally 50-60% shade-cloth is best for cooler months but up



*Miltoniopsis vexillaria*

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.

### **Humidity and air movement**

They require high humidity and prefer to be grown in close proximity to other plants to provide humid conditions (4). The optimum humidity is 70-80% (8, 10) but they will tolerate humidity as low as 20% for short periods providing they are kept moist. In very hot weather misting and standing plants on gravel filled trays containing water assists in maintaining humidity. The higher the temperature the higher the humidity needs to be (10). They are used to growing in treetops so need good air movement (10) which helps prevent fungal diseases.

### **Water**

They need abundant water year round (3) but should be kept slightly drier in colder weather (7). Plant leaves should be dry by nightfall or fungal problems may occur (10).

Creases or accordion pleating of the leaves is a sign of under-watering (7, 10).

### **Potting medium**

They have relatively fine roots and therefore like a fine bark growing well-drained and open medium (4, 6). Plants need to be kept uniformly moist in summer. They should be repotted **each year** as they don't like decomposing compost (5,7). If new leaves crinkle and older leaves yellow and fall off this is a sign the potting mix has degraded (10).

A mix of 70% bark and 30% perlite is suggested (6) with some growers suggesting the addition of charcoal (7). Some sphagnum moss can be added to the mix to retain moisture but the pots should still drain freely. Woody Carlson recommends 6 parts fine bark, 2 parts perlite, 1 part coarse peat moss and one part charcoal (10).

Repotting is best in spring after flowering when new growths are about 8-10 cm tall or in autumn when new growths are half mature (6, 7, 10). Remove all leafless bulbs and dead roots. All cuts and damage should be dusted with sulphur to lessen the risk of fungal disease (10). Don't water for 1 day after repotting to allow the sulphur to dry.

They need to be kept evenly moist but if potting medium is constantly wet the roots will rot (7, 10).

Pots should not be too large, just sufficient to contain the roots (7) and potting-on to the next size pot is best. Larger plants perform best. Smaller pots in relation to the plant size helps prevent over watering (7).

If root rot is a problem this is usually a result of insufficient drainage and lack of openness of the potting medium.



Miltoniopsis Darkness  
"Red gable"



## Fertilizers

They should be fertilized from spring to early autumn when growing but not over winter. They need a **dilute** soluble fertilizer about every 1-2 months. Leach pots regularly with water to remove excess salts. High phosphorus, low nitrogen fertilizers (10-20-10 or 10-30-20) prior to flower initiation helps promote flowering (10).

Epson salts every two months (half teaspoon per 4 litres) is beneficial if the fertilizer does not have a high Mg content to increase flowering and improve cold tolerance (10).

## Insect and pest control

Malathion can be used to control sucking insects but care should be taken when using oil-based insecticides as the delicate thin leaves can be damaged (7).

## Intergeneric hybrids

- Odontonia (Oda.) = Miltoniopsis\* x Odontoglossum
- Miltassia (Mtssa.) = Miltoniopsis\* x Brassia
- Miltonidium (Mtdm.)= Miltoniopsis\* x Oncidium

\*Miltoniopsis is often called Miltonia when used as a parent in a hybrid. Miltoniopsis cultivars and flower colour are described in detail in the publications listed below (2, 4).



## Further reading and acknowledgments

The information in this guide is based on local grower experience and the sources cited below. Reference 10 is particularly detailed.

1. Growing Orchids in Cool Climate Australia (2<sup>nd</sup> edn) by MJ Fraser, J Wright, W Ferris (2013).
2. Gardening Australia Flora's Orchids. ABC Books (2005).
3. What Orchid is that? (1992). Weldon Publishing. Edited by A. Pridgeon.
4. Orchids, A practical handbook. By B and W Rittershausen (2001).
5. Miltonia (Miltoniopsis) culture. Carter and Holmes Orchids.  
<http://carterandholmes.com/miltonicare.html>
6. Miltonia (Miltoniopsis) and Odontoglossum Cultural Notes. Collectors Corner.  
<http://www.collectorscorner.com.au/Orchids/Miltoniainfo.htm>
7. Colombian-type Miltonia (Miltoniopsis) culture. American Orchid Society.  
<https://www.aos.org/Default.aspx?id=466>
8. Miltoniopsis. Everything Orchids. <http://everything-orchids.com/types-of-orchids/miltoniopsis>
9. Care instructions for Miltoniopsis by J. Riopelle.  
<http://www.akatsukaorchid.com/store/pg/32-Miltonia-Care.aspx>
10. Culture of the genus Miltoniopsis by W Carlson. [http://www.robert-bedard.com/orchids/miltoniopsis\\_culture.html](http://www.robert-bedard.com/orchids/miltoniopsis_culture.html)

Updated 13/12/15

These notes are intended as a guide only and are composed from available information and local experience. The Wagga Wagga Orchid Society and its members are not responsible for any loss or damage.