

Masdevallia Orchid Growing in the Riverina region of NSW

The Flag Orchid

There are about 500 species in this genus which is native to Central and South America (1). They are mostly found in cloud forests in mountainous regions at altitudes up to 4000m with uniform growing conditions throughout the year. They have no pseudobulbs and store moisture in their roots and leaves (1). Peak flowering is in winter and spring (1). Flower colour and shape varies greatly but those with bright orange and red flowers are particularly striking. Most have single flowers and the sepals often have long or short tails.



They need a cool, humid and shaded environment throughout the year and in the Riverina they do best in a greenhouse that is cooled in summer. They are successfully grown in cooler more southern States such as Tasmania and in mountainous regions of Victoria (6).

Many hybrids have been developed and these are more vigorous and flower several times during the year. Masdevallias can be divided into 3 groups; the cool to cold growers, the intermediate growers and the warm growers (6).

They are attractive because of their compact growth habit and the mass of blooms they produce.

Temperature

Masdevallias like cool growing conditions from 5°C to 25°C (4). Ideally in winter they like a minimum of 10C in and a maximum of 13C. In summer the optimum range is 13 to 20C (6). In summer they need to be shaded and it may be necessary to provide cooling. The temperature should not exceed 25°C and temperatures consistently above 30°C will weaken the plants and they may drop their leaves (2). They will take higher temperatures near 40C for short periods providing humidity is kept high (6). Some plants from cold regions will grow outside in the Melbourne climate but mostly they need protection from frost (2). Some will tolerate temperatures down to zero but it is not desirable (5). While most will survive winter in a protected shade house others need a minimum temperature of about 7-10°C (2, 3) so some heating may be required. If temperatures are 8C or lower the air must be kept moving with fans (6). The cool to cold growers are relatively more difficult to grow in southern NSW, Vic and the intermediate growers are more readily grown (6). Hybrids are generally more tolerant of a wider range of temperatures than species (6). An evaporative cooler and frequent misting at 10 minute intervals to keep humidity around 70% will assist in ameliorating the effects of high temperature in summer (3, 6). Hot dry air must be avoided at all costs.



Light

They prefer to be mounted high in the shade house and will flower better if they receive plenty of light and leaves are pale green rather than dark green when in heavy shade (3). This is only practical in summer if humidity is kept high and the plants



cool. About 70-90% shade is recommended in summer and 25% shade to full sun in winter (5, 6). Plants may be placed low in the glasshouse over summer but must be given higher light levels in winter (6) for good flowering. Plants can be grown in indoors in bathrooms or kitchens if there is good indirect light (6) with a periodic spelling outside. Many growers use fans year round to provide good air movement (3) and assist cooling.

Watering and humidity

They will not tolerate dry conditions and should be kept moist but not soggy (2). Roots must be able to dry out slightly between watering (1). In hot weather they need daily watering but in spring and autumn weekly watering should suffice (3). Water in the morning so leaves can be dry by midday (5, 6).

They prefer high humidity in summer near 75-80% (2,3) and may need a humidifier in the Riverina over summer. They require daily watering in very hot weather (3) in the Riverina. It is preferable to provide a humid environment than keeping roots too wet as they are prone to rotting (3).

Wet the floor of the greenhouse in hot weather to raise humidity.



Masdevallia veitchiana

Potting medium

Some growers use chopped sphagnum moss mixed with polystyrene chips (3). Others use a pine bark, polystyrene and coarse perlite mix (3, 5). A mix of 5 parts bark, 5 parts perlite and 1 part fibrous, not fine, peat moss is recommended by a Victorian Masdevallia nursery (5). They can be grown in basket or net pots to assist drying or for *Dracula* types that send their flowers down through the mix (3). They can also be grown in pots or mounted. Deep skinny pots are preferred (6), do not overpot, smaller is best. Repotting annually is recommended to ensure sphagnum moss stays fresh. Do not bury the base of the plants (6).

Double potting is beneficial to keep the plant roots cool (5, 6). Repot in spring before temperatures rise or in autumn (6).

Hybrids and related species

A detailed description of the various *Masdevallias* species, hybrids and flower colours is given in the ABC Gardening Orchids Flora book (1).

Masdevallia veitchiana from Peru and its hybrids are suggested when starting as they are cool to cold growing with robust plants and produce large flowers (3). Also *M. infracta*, *M. rolfeana*, *M. maculata* and *M. davisii* are intermediate temperature growers and said to be more tolerant of a range of growing conditions (6).



Fertilizers

Dilute fertilizers throughout the year are suggested at about a quarter strength (3). Too much fertilizer will degrade the sphagnum moss. Do not use lime or dolomite lime on *Masdevallias* (6). Orchid Osmocote can be placed half way down the pot when repotting (12-15 grains/pot) then use seedweed fertilizer until plants are established (6).

Further reading and acknowledgements

The information in this guide has been gained from local growers and the publications below.

1. ABC Gardening: Flora's Orchids: the orchid bible. ABC Books.
2. Masdevallias are blooming by Brian Milligan. <http://www.oscov.asn.au/articles/masd1.htm>
3. How I grow my masdevallias by Brendan Larkin.
<http://www.oscov.asn.au/articles3/masd.htm>
4. Cultural notes: How to grow masdevallias. <http://www.oscov.asn.au/articles2/cultmasd.htm>
5. Mt Beenak Orchids. <https://mtbeenakorchids.com.au/about/growing-instructions/>
6. Masdevallia culture in Australia by Clive Halls. (2010). Australian Orchid Review Vol. 55 (1).

Your comments and suggestions on cultural guide are welcome.

Email your comments to dearconsultingservices@gmail.com

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