

Cymbidium orchid culture- in the Riverina region of NSW

Cymbidiums are one of the most widely grown orchid species in the world. They are regarded as one of the easiest orchids to grow in cool winter climates such as the Riverina region of southern NSW. They can grow outside with protection from frosts and some protection from the summer sun.

Cymbidiums are native to tropical and subtropical Asia with about 52 species being identified (1, 2). A further three species are native to northern and eastern Australia.



The three Australian natives are;

Cymbidium suave, which grows from the NSW south coast to the Atherton Tablelands in far north Queensland and has canes rather than pseudobulbs that continue to grow and flower for a number of years (9). It requires a considerable amount of sunshine and is the coolest growing of the 3 Australian natives (9).

Cymbidium madidum grows from northern NSW to Cape York in north Queensland. It grows in trees and fallen logs and prefers a more humid environment (9).

Cymbidium canaliculatum grows in the Kimberly region in northwest WA, the Northern Territory, Queensland and down to the Hunter River region of NSW. It has ovoid pseudobulbs up to 15cm long and grows in rotting crevasses in trees and prefers a drier habitat (9).

Australian native cymbidiums however have very small flowers and need to be bred with other species to achieve spectacular pendulous flowers. Australian native Cymbidiums and particularly *C. madidum*, need more protection from cold nights than many of the hybrids, and may need additional heat to flower well (1).

Many of the original Cymbidium species have been crossed to form complex hybrids to create more vigorous plants and a wider range of colours and flower shapes.

There are two basic types of Cymbidiums, those with upright flower racemes (stems) and those that are pendulous, the later are usually grown in hanging baskets or pots to better display the flowers. Plants vary in size from short and compact to large and spreading.

Cymbidium hybrids can also be grouped on the basis of flower size with miniature under 6 cm, intermediate (6-9 cm) and standard (over 9 cm) flower sizes. Flowers are long lasting and can last over 2 months for a whole raceme. Cut about 10mm from the base of the spike each week and change the water to maximize the life of cut flowers (8).

Cymbidiums do not have a rest period and should be kept moist and grown vigorously all year round (2, 8). Hybrids can flower at most times of the year although the peak flowering period is winter and spring (1).



Cymbidium devonianum
'Paradisia' AM/OSCOV
CC/OSCOV

Temperature requirements

Plants will tolerate the typical temperatures experienced in the Riverina providing they are given protection from frosts in winter and direct sun during the hottest part of the year.

Shade cloth will not give sufficient protection from severe frost and they require a plastic or polycarbonate roof to provide some protection or be located against a brick heat retaining wall (7). An enclosed plastic greenhouse or glasshouse is thought to give about 2-3°C extra protection (7). Additional heat is usually required if temperatures are expected below -4°C, particularly if they are in spike. Flowers do not tolerate the same range of temperatures as plants do and should be kept within a temperature range of 5-25°C (8). They will stop actively growing once temperatures exceed 27°C.



Generally they do not require additional cooling or heating although they do best if grown in a shade house or under a north facing verandah where conditions are less variable (4).

They will tolerate temperatures up to 42°C and down to 0°C provided they are protected from frost. Plants will need additional watering or misting on very hot days. Most hybrid varieties need a nighttime temperature drop of at least 10°C in summer evenings to initiate flowering (2). Such a temperature drop is readily achieved in southern NSW.

Light

They need to receive sunlight for most of the day if they are to flower well and as much sun as possible without burning their leaves (1, 8). Growing under a 40% shade cloth is considered optimum in the Riverina except in winter when they will take full sun (5). Plants need to be a pale green colour if they are to flower well (1). If the leaves are dark green they are probably not receiving sufficient sunlight. The leaves will burn if they receive direct sun in the middle of the day in summer. They can be grown under a tree that provides light shade once the risk of frost is past. Your hand should cast a light shadow when passed over the plant (4).

Humidity and air movement

Maintaining high humidity is not as important with cymbidiums as other species and misting sprays are generally not required except on extremely hot days with temperatures greater than 40°C. Having a damp floor to the greenhouse would be advantageous in hot weather.

Water

The watering regime will vary with the potting mix and weather conditions. In the Riverina region in summer, where humidity is low and temperatures commonly reach 35-38°C or more, it is recommended to water the plants every 2-3 days so that water runs out the bottom or daily in very hot weather (4, 8). In winter, watering once every 7-14 days or longer may be sufficient and preferably on sunny days. Cymbidiums must be given sufficient water to prevent the pseudobulbs shriveling, as they cannot be rehydrated. Shriveled bulbs may not produce flower shoots. Plants also need more water when in flower as water loss is greater (4). Avoid wetting the flowers as this may mark them.

In very cold weather with risks of frosts keep plants drier than normal (7).

It is best to water in the morning so plants are dry by the evening, particularly in winter (8). Don't water the leaves in the heat of the day in summer.

If leaves develop dark brown tips this could be a sign of overwatering or poor drainage.

Potting medium

Cymbidiums are vigorous growers and need frequent repotting as they expand and fill their pots. They should be repotted as soon as they finish flowering or in March before cold weather commences (8) and not in hot weather.



As they have fairly coarse roots they should be grown in a coarse orchid potting mix that allows good drainage and aeration. Mixes vary with watering regime but a typical mix in this region is 60% 8-18mm bark mixed with 40% perlite or scoria to allow air to permeate the mix. Small seedlings require a finer mix with 5-10mm bark (4). With a well draining open mix it is more difficult to over water plants.

Normal nursery shaped pots are used rather than the squat pots preferred by other orchid species. To promote good drainage the bottom 5cm of the pot can be filled with lumps of polystyrene or coarse gravel and the potting mix of bark and perlite placed on top.

When repotting, place compost up to the lower third of the bulbs which ensures roots stay moist. When re-potting a small plant it may be best just to pot-on into a larger pot and just add compost around the side of the pot without disturbing the roots (8).

What ever mix is used, water should drain freely from the pot when watered.

Cymbidiums flower best when the roots fill the pot so they should not be over-potted (1). Larger plants tend to flower better and when subdividing a minimum of one old back bulb and at least two bulbs with leaves plus a new growth or lead must be present if the plants are to flower next year. Keep plants as large as possible when dividing (4).

Plants should be kept off the ground to prevent slaters and worms entering the pot and decomposing the potting mix.

Fertilizers

Cymbidiums are regarded as heavy feeders as they can produce a large amount of growth (1). The regular application of half strength soluble fertilizer is recommended every week from September to May (4). The use of fertilizers with a lower nitrogen content and higher phosphorus and potassium content just prior to flower spike formation in late summer-early autumn is recommended to promote flower spikes rather than excessive vegetative growth.

An alternative strategy is the application of a slow release pelleted fertilizer twice per year in spring and again in mid summer.

A teaspoon of dolomite lime per plant is recommended twice per year to provide the correct pH and a good supply of magnesium (1). The optimum pH for most cymbidiums is about 5.5-6.5 and lime should be added if the mix becomes too acid as acidity will cause loss of roots (6). The exception to this is the Australian native *Cymbidium suave* from north

Queensland which is reported to prefer a more acid pH around 4 to 5 (and lime or dolomite lime should not be applied to this species.

Epson salts (MgSO₄) twice a year is also recommended for additional Mg.

Hybrids

Species cymbidiums (those that occur naturally in the wild) are not as widely grown, most people choosing to grow hybrids which are less demanding in their requirements and have a greater variety of colours and flower shapes.

The three Australian native species have smaller flowers and pendulous racemes with up to 50 flowers on each (see picture below). They are mostly grown in hanging baskets or suspended pots. A fuller description of the species and varieties can be found in the excellent books by Fraser *et al.* (2013) (1) and ABC Australian Gardening Flora book (2005) listed below (2).

If Cymbidiums fail to flower it can be due to (1) the plant being too small, seedlings can take 5 years to flower (2) the plant is in too large a pot for the size of the plant (3) too much N fertilizer is encouraging vegetative growth in preference to flower spikes, it may respond to additional K and P fertilizer (4) the plant is in too much shade and not receiving sufficient light in late summer and autumn.

A detailed Cymbidium growing guide for southern Australian climates is also published on the web by the Australian Orchid Nursery (4) and The Orchid Societies Council of Victoria (see below).



Further reading and acknowledgements

The information in this guide is based on local grower experiences and the references cited below.

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. Cymbidium growing guide by the Australian Orchid Nursery.
<http://www.australianorchids.com.au/pages/growing-cymbidiums>
5. Cymbidiums for beginners. The Orchid Societies Council of Victoria.
<http://www.oscov.asn.au/articles/cymbegin.htm>
6. Married to Cymbidiums by John Kenter.
<http://www.oscov.asn.au/articles/cymmarr.htm>
7. Cymbidiums and frost. <http://www.oscov.asn.au/articles3/cymfrost.htm>
8. Cymbidium culture by Julian Coker.
<http://www.oscov.asn.au/articles4/cymculture.html>

9. The Australian Species Cymbidiums by Frances and Julian Coker.
<http://www.oscov.asn.au/articles6/auscyms.html>
10. Are pH checks necessary? St. Augustine Orchid Society.
<http://staugorchidsociety.org/PDF/ArepHChecksNecessarybyHarryMcElroy.pdf>

Your comments and suggestions on this guide are welcome.
Email your comments to dearconsultingservices@gmail.com

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