

Cooktown orchid (*Dendrobium phalaenopsis*) growing in the Riverina region of NSW - now also known as *Vappodes phalaenopsis*

- a hard-cane

This orchid is native to the coastal rainforests of Cape York in far north Queensland and is the floral emblem of the state (3). The Cooktown orchid was originally known as *Dendrobium bigibbum* but was renamed to *D. phalaenopsis* and more recently to *Vappodes phalaenopsis* (1). It is called a 'hard-cane' species as distinct from the cooler growing 'soft-cane' dendrobiums of Asia. 'Hard-caness' are evergreen unlike 'soft-caness' that are semi deciduous.



Plants grow to 80 cm height with flowering canes up to 40cm long (3, 5). It flowers in autumn although hybrids can flower at other times. Flowers are typically purple, pale lilac or occasionally white. When hybridized with other species a brighter range of colours are possible. Flower spikes can have up to 20 flowers and can last up to 3 months or a couple of weeks when cut (3).

Although found in high rainfall tropical regions it is not a rainforest plant and is typically found in exposed situations on tree trucks in Savannah woodland (3). It is now regarded as rare in many of its natural environments due to clearing and commercial collection (5).

The three best known species of *Vappodes* are *V. phalaenopsis* (syn *D. superbum*), *V. bigibba* (syn *D. bigibbum*) and *V. lithocola* (syn *D. compactum*). All are epiphytes or lithophytes. They are regarded as difficult to grow in cultivation with *Vappodes phalaenopsis* being slightly easier (1).

The Cooktown orchid can be easily grown outdoors as far south as Brisbane and in protected areas along the NSW coast south to Nowra but in inland areas with cold winters it must be grown in a glasshouse or as houseplant. Intergeneric hybrids with *D. speciosum* however are more tolerant of cold and may be grown in a well-protected shade-house.



Temperature requirements.

Dendrobium phalaenopsis is regarded as a glasshouse plant in the inland regions of southern NSW that experience cold winters. Optimum daytime temperatures are between 22°C and 30°C and night temperatures of 15 to 18°C (1). They prefer a 10°C difference between day and night temperatures. When hybridized with cool growing species it may be more tolerant of cooler conditions and may be grown in a shade-house but is probably still best grown with additional heat during winter.

In its natural environment temperatures rarely fall below 15°C in the cool season and therefore this is likely to be its preferred minimum (1).

Light

They prefer bright light (>3000 fc) with perhaps 30-50% shade in summer although additional shade-cloth may be required in summer to reduce the heat load (4).

Humidity and air movement

They need good air movement and humidity during the growing season but need lower humidity in winter. Daytime humidity in summer should be between 50 and 80%.

Misting is beneficial during very hot periods or when humidity is low. Fans can be used if air movement is not adequate, particularly on very hot days.

Water

The natural environment of these plants has two distinct seasons, a hot humid wet season and a cooler dry season lasting 2 to 3 months (4). They should therefore receive frequent or daily watering during the summer months but a dry spell with infrequent, if any, watering over winter during the rest period (1,4).

The watering frequency depends on how they are being grown, on slabs, in baskets or pots, the potting medium and weather conditions. Daily watering may be required in very hot weather in summer but this can be reduced when the weather is cooler (April-August) to once per week or fortnight (4).

Misting and under bench watering to raise humidity in summer is advisable to prevent leaf drop (4).

During cooler weather, water in the early morning on sunny days so plant leaves are dry by the evening and avoid watering altogether on cold overcast days (4). In summer avoid watering during the heat of the day as water laying in new growths can encourage bacterial disease (4) although this is not a problem if humidity is low.

Potting medium

D. phalaenopsis do well in wooden baskets, hollow limbs, suspended on slabs or in shallow pots. As epiphytes they prefer to grow on slabs (1). Plants in pots should be grown in a well-drained, medium to coarse bark potting mixture. Some growers use a mix of 70% bark and 30% coarse perlite (4). Plants should be repotted once they have finished flowering and new growth is starting to appear.

Fertilizers

Liquid low N fertilizers should be applied at quarter to half strength regularly during the growing season (September to December), about every one to two weeks (4). No fertilizer should be applied while the plants are dormant. Fertilizer improves the number and size of flowers (3).

Keikis

There are number of reasons why plants may produce a lot of keikis or aerial growths. Possible causes include if roots are damaged, they receive too much water or fertilizer



during their winter rest period, particularly nitrogen fertilizer, or are in too much shade. Keikis can be removed and potted once they have developed roots with green tips, preferably once roots are at least 6 cm long. Plants produce keikis at the expense of flowers so it is not something to be encouraged.

Sprays

The saint Augustine Orchid Society (7) web site advises that copper sprays should **not** be used on dendrobiums for the control of bacterial diseases.

Varieties for the Riverina region of NSW

For a detailed list of the best varieties for cool growing conditions experienced in the Riverina region of NSW refer to the excellent books, "Growing Orchids in Cool Climate Australia" (1) and the "Australian Gardening Flora's Orchids" (2) listed in the references below.

Intergeneric hybrids

Primary hybrids containing tropical *D. phalaenopsis* in the parentage crossed with dendrobiums such as *D. speciosum* are referred to as warm/cool or 'Tropicool' dendrobiums (1). These can be grown in a protected shade-house in cool environments depending on how warm they are over winter. They can produce multiple flower spikes per bulb (6) and flower more quickly as the bulb does not need to mature for a year before flowering (6). They can flower from February to October (6). Brian Milligan suggests "Anne's Rainbow Surprise" and "Jonathons Glory" as surviving in a cool shade-house in Melbourne.



Acknowledgements and further reading:

This fact sheet has drawn on information by local growers and the references listed 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. Cooktown Orchids. Floral emblems of Australia.
<http://www.anbg.gov.au/emblems/qld.emblem.html>
4. Cedarvale Orchids. The Cooktown Orchid.
http://www.cedarvaleorchids.com/html/cooktown_orchid.asp
5. Vappodes phalaenopsis. https://en.wikipedia.org/wiki/Vappodes_phalaenopsis
6. Elanbee orchids. Growing Tropicool Dendrobiums.
<http://members.optusnet.com.au/bdobson/Growing%20Tropicool%20Dendrobiums.html>
7. St Augustine Orchid Society. Orchid pests and diseases.
<http://staugorchidsociety.org/culturepests-diseases.htm>

Updated 15/11/2015

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