Phalaenopsis orchid culture- in the Riverina region of NSW

The Moth orchid

Phalaenopsis (pronounced fal-ee-nop-sis) orchids are one of the most widely sold orchids in retail outlets in Australia and overseas.

They can be grown outside in a greenhouse in warmer Queensland and northern NSW coastal climates but are not suited to growing outside in a shade house in the Riverina as winters are too cold and summers too dry and hot. They can, however, be successfully and easily grown in a heated glasshouse or in a humid location indoors on a windowsill in a bathroom, kitchen or well lit area. They make ideal house plants (3) and are easily grown indoors where they can live for up to 7 years.

There are about 65 species in the genus and are found in tropical rainforests of Asia from southern India, China, Philippines to New Guinea and Cape York in northern Australia (2). The only Australian species is *Phalaenopsis rosenstromii* (1). They are epiphytes and lithophytes (3).

Flowers are long lasting and they can flower at any time of the year and may flower several times in a year (3). Flower spikes should only be cut off once they turn brown. If spikes remain green, more flowers can be produced (2). However if you want to produce larger flowers, the spike should be cut off at the base to allow the plant to rebuild its reserves and encourage larger flowers next year (1). If the green flower spike is cut 2 or 3 live nodes from the base, a second or third flowering can occur (9).

There are some exceptions, however, and phalaenopsis with *violacia*, *amboninsis* or *corn-cervi* in their parentage should **not** have their flower spike cut while green (8). These plants only produce blooms at the end of the spike and flower sequentially on the same spike for a very long time. These spikes should only be cut if the plants become unruly (8).

Spikes grow towards the light so adjust the plant to have the flower pointing in the desired direction. Don't move the plant once the spike forms as it will become bent.

Plants do not grow very large and leaves are usually shed at the base as they grow new ones (3). It is important that the plant continues to make new leaves at the same time as flowering. If too many leaves are shed, flowering spikes should be cut off until it has at least 3 or 4 leaves before it is allowed to produce flowers again (3).

Many hybrids are available and more recently smaller hybrids have been produced.

Temperature requirements

Plants require a warm humid environment and are ideal plants for indoors as they like a temperature range of 15-30°C and require very little light. Temperatures must be maintained above 15°C year round, but a slightly cooler temperature of 12°C at night for a period of about 3 weeks in late autumn, early winter is necessary to initiate flowers

for the following spring (1,7). The suggested maximum temperature is 35°C (6) above which plants will stop growing and flowers my drop.

Overheating the plants in winter will cause bud drop and plants should not be located close to a heater that dries the air.

Light

They require very little light and if grown in a glasshouse they need 70-85% shade cloth (5, 7). No shadow should be present when a hand is placed over the plant which is equivalent to about 1000 to 1500 fc (7).

If grown indoors they prefer indirect light from an east-facing window (5) similar to conditions suitable for African violets. A northerly window location is suitable providing there is no direct sun and a light curtain filters the light (7). If leaves are dark green they may need more light, but if they are red tinged or yellow they are getting too much light (4). Plants may not flower if getting insufficient light.

Humidity and air movement

They prefer high humidity and if grown in a humid glasshouse require a fan running continuously day and night (1). Humidity should be maintained at 60-80% (5,7) as they have no pseudobulb to store moisture. Misting frequently in hot weather or in winter can help raise humidity. Only mist in the morning so leaves are dry by evening (7).

To maintain high humidity in summer some growers suggest placing the pots in a foam container which has about 2 cm water in it, but keep the pot above the water using either a layer of stones or an inverted tray (7).

Water

Generally they should only be watered once a week if indoors and as little as once a fortnight in winter (1) but in very hot weather or in a glasshouse they can be watered every 2 to 3 days. Allow plants to almost dry out before watering (5). Preferably water in the morning so the plants are not wet overnight to prevent fungal diseases (7). Regular misting of the leaves is beneficial, particularly if the air is dry due to hot weather or a heater. If grown in sphagnum moss, water when the moss is almost dry. Do not let the water accumulate in the crown of the plant as this can cause bacterial and fungal problems (1). Plants must be kept uniformly moist but not over wet. It is preferable to use non-treated water that is not too cold. Roots will rot if plants are kept too wet (7).

Leaves should be wiped with a damp cloth to remove dust.

Potting medium

They can be grown in sphagnum moss or in a mix of small bark and pearlite (2). Plants grown in sphagnum moss can suffer root rot if the moss is too compacted and there is insufficient aeration (8). Ensure the moss is light and fluffy when new plants are purchased, if not repot with either new fresh moss or use a small bark, moss and pearlite mix (8).

They grow well in clear plastic pots. If clear pots are used the roots are more likely to stay in the pot as the roots

photosynthesise and are green when allowed exposure to light (1). Terra cotta pots are suitable in very humid situations where plants do not dry out too quickly (9).

Plants should be repotted when either the potting mix has degraded or they have outgrown the pot. They usually need repotting every two or three years in spring or after flowering has finished (5). Plants grown in sphagnum moss may need repotting each year as it degrades more quickly (5).

Dead or shrivelled roots should be cut off but any live aerial roots that are outside the pot should be left outside the pot (3). Plants should be kept in the shade for 2 to 3 weeks and not given much water after repotting.

They are best grown in small pots about 10cm in diameter.

Fertilizers

A dilute (half to quarter strength) high nitrogen fertilizer is recommended fortnightly during most of the year but from winter a low nitrogen fertilizer with higher potassium and phosphorus content is recommended (1). If growing condition are cool then fertilizing once a month is sufficient (7).

Pests and diseases

Mealy bug is the most common problem and periodic spraying with eco-oil will help control them (5). If plants are subject to bacterial rot cut off the affected part of the leaf and treat with Manozeb or Thiram (9). If plants are suffering from root rot, cut off affected roots, treat with a fungicide and use a coarser potting mix to improve air flow over the roots (9).

Further reading and acknowledgements

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

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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 to plants that may occur.