

SEED CAPSULE MATURITY

by Australian Orchid Foundation

Estimating the ripening time of a seed capsule is a difficult task. Many an amateur and professional hybridisers have had the disappointment of finding the seed capsule of that desired cross split and its contents scattered to the wind.

There are many factors that come into play regarding the ripening of a seed capsule e.g. time of the year, weather conditions during maturation of the capsule, the fertility of a cross etc.

After fertilisation, seed development can be gauged by the swelling and ripening of the developing seed capsule which may take a few weeks or occasionally as long as a year or more, depending on the genus. As a seed capsule ripens it changes colour from green to yellow or brown then splits to release the seed into the air. It is recommended that when the seed capsule begins to yellow at one end, it is ripe for harvesting and sending to the seed bank.

If you are unsure of how much time is left before the capsule will split, try tying tissue paper or an empty tea bag over the capsule a few weeks beforehand and examine it from day to day.

Below is a list of the expected time for ripening of seed capsules. This is an approximate guide only and may be of assistance to new growers.

GENUS TIME REQUIRED FOR RIPENING

Ascocentrum	150-170 days
Laelia	140-160 days
Phalaenopsis	130-140 days
Bulbophyllum	80-120 days
Leptotes	120-140 days
Phragmipedium	180-190 days
Cattleya	160-180 days
Masdevallia	100-110 days
Pleurothallis	45-50 days
Cymbidium	250-30 days
Maxillaria	130-150 days
Renanthera	180-200 days
Dendrobium	160-180 days
Miltonia	145-160 days
Sarcochilus	200-210 days
Encyclia	160-180 days
Oncidium	100-130 days
Restrepia	50-80 days
Epidendrum	130-145 days
Paphiopedilum	150-170 days
Sophranitis	100-120 days

THE WORLD'S RAREST ORCHIDS

by Barry Woods

Orchids have become one of the most widely collected and cultivated flowers. They're vibrant and beautiful and always draw a lot of attention at shows and garden events.

A huge number of species have been collected from nature for trade, most often on the black market, for large sums of money. This has devastated orchids in their natural habitats around the world with many now extinct in the wild or in such few numbers as to be classed rare and endangered. Compounding this is the destruction of native habitats, human activity, and climate change.

Some of the orchids listed below are quite common in cultivation, with flasks of line bred cultivars far superior to their wild cousins readily available. Nevertheless, orchids continue to be collected illegally in the wild. All native plants in Australia, including all our native orchids, are protected by law and are illegal to collect without appropriate licencing. Australian orchid nurseries, Australian Native Orchid Societies (ANOS clubs) and members of Maroochydore Orchid Society have vastly superior cultivars of all the Australian orchids that are suitable for cultivation.

According to www.rarest.org, the rarest orchids in the world are:

PAPHIOPEDILUM FAIRRIEANUM

Current estimates for this orchid are fewer than 50. It's found in the Eastern Himalayas to Assam, India and is listed as critically endangered. Like many of the rare orchids, the beauty of the Fairrie's Paphiopedilum is the major cause of its critically endangered status. The Fairrie's Paphiopedilum has vibrant purple and white petals and yellow-green markings and is one of the most popularly cultivated orchids around the world. In the past, the Fairrie's Paphiopedilum was found in Bhutan as well as India. Today, the only surviving population of Fairrie's Paphiopedilum is in the eastern Himalayas to Assam. The Fairrie's Paphiopedilum went extinct in Bhutan not long after it was first discovered in 1904.

WESTERN UNDERGROUND ORCHID

There are fewer than 50 of these remaining in the wild. Located in Western Australia, its scientific name is *Rhizanthella gardneri*, and it's listed as critically endangered.

As its name suggest, it spends its entire life underground and even blooms underground. It really is one of the most unique flowers in the world. It has no green parts by way of stems or leaves and does not photosynthesize. This Western Australian orchid obtains all of its nutrients from a fungus that grows on the roots of the broom bush. To get an exact count on the population is a task in itself as it often takes many hours of digging to find just one Western Underground Orchid.

VIETNAMESE PAPHIOPEDILUM

Paphiopedilum vietnamense is listed as critically endangered with fewer than 50 in the wild, although some believe it may already be extinct. Its range is limited to Thai Nguyen Province in northern Vietnam. Although it may already be extinct in the wild, it's still widely grown by orchid collectors around the world. Like most orchids, both the rare ones on this list and species with stronger numbers, the Vietnamese *Paphiopedilum* is over harvested in the wild.

HAWAIIAN BOG ORCHID

The Hawaiian Bog Orchid, or *Peristylus holochila* is critically endangered. The last count in 2011 found 30 plants across 3 islands. The biggest threat to this orchid has been destruction of habitat by humans, domestic and feral animals, and invasive plants.

In recent years, conservationists have been growing Hawaiian Bog Orchid seedlings and re-planting them in the wild. Conservationists hope that the seedlings can survive long term and stabilise the population.

ZEUXINE ROLFIANA

The rarest orchid in the world is *Zeuxine rolfiana* with an estimated total of around 18 specimens remaining in the wild. It is native to Mount Harriet, South Andaman island, India.

Zeuxine rolfiana was rediscovered in the wild in 2010 after only being known from records from over 121 years ago. While finding the actual plants is significant, unfortunately, researchers only found approximately 18 sterile plants. With so few individuals left and no sign that the remaining plants will reproduce, the *Zeuxine rolfiana* is the rarest orchid in the world.

The team of researchers from 2010 did collect three specimens of this orchid and brought them back to the Botanical Garden of St Joseph's College in Kozhikode, Kerala, India. The orchid did end up flowering at the gardens but died not long after. The habitat of the *Zeuxine rolfiana* is threatened by extensive construction in the area.



The Western Underground Orchid or *Rhyzanthella gardneri* comes out for sexy time only (photo by Jean and Fred Hort)



Peristylus holochila seedlings



Zeuxine rolfiana



Paphiopedilum fairrieianum (photo by Rakeshkdogra)