

The *Dendrobium speciosum* Complex

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This article was written by Len Field before the current name changes for the *Dendrobium speciosum* complex. I have kept the article as Len wrote it and placed the new names for those interested at the end. "The orchids and places they grow are still the same, only their name has changed." Once again I would like to thank Len for his work and hope that you all enjoy reading this article.

***Dendrobium speciosum* var. *speciosum* Smith 1804**

Common names the 'Rock Lily' or 'Rock Orchid'

Named from the Latin *speciosus* meaning showy or beautiful by Sir James Smith who received a plant from Surgeon General J White who found it at Port Jackson and this plant is now at the Herbarium of the Linnean Society of London. Further plants were sent to Kew Gardens in 1823 by Cunningham.

Found in a large area from Bulahdelah in N.S.W. down to the Cann River in Victoria. It also ranges West of the Great Divide to the Mudgee area and I have seen them growing near Ulan under very harsh conditions. The harsh conditions of these western areas take a toll on the plants as all the plants I saw growing there were small and stunted in comparison to the more Eastern types, but to be able to survive anyway under these conditions attests to the hardiness of this orchid.

Found nearly always growing on rocks (lithophyte) and seldom on trees, but when epiphytic they tend to be high up in the canopy in open forests. On the rocks and cliff faces it can form gigantic clumps which can become a remarkable sight when in flower. It has a large range of habitats ranging from sea level to high mountain tops. They used to be a common sight growing on the rock faces just above sea level with salt spray on them at Pulbah Island and the Wangi Wangi Peninsular several years ago. While it does not like deep shade, it is not uncommon to find them in very deep shady ravine. It does prefer the high sandstone cliffs where it is exposed to the harsh elements and gets little or no shade. I have noticed that when it grows high up on these high cliff faces there is usually a cool updraft of air and it likes to grow with a north east exposure to make full use of the winter sun. In its southern habitat it is only found as a lithophyte but otherwise both the Victorian and N.S.W. types are similar.

This is one of Australia's largest *Dendrobiums* and one of the world's showiest orchids. The large pseudobulbs which can be straight, or curved, can grow to over 60 cm tall but are usually less and taper from a diameter of 5-7 cm at the base and reduce to about 3 cm at the first leaf, these leaves, which number 2-5 are large and have a leathery feel about them, can stay on the plant for up to twelve years. The huge clumps that these pseudobulbs rise from do not have aerial roots like its more northern relations, *Dendrobium speciosum* var. *hillii* and *grandiflorum*, but the roots tend to form a dense matted bed for the plant as it spreads across the sandstone rock.

Flowers. One of the nicer things about being in the bush on a warm sunny day is the aroma of a large clump of 'rock lilies'; this aroma can travel for some distance from the clump. This aroma is not there on a dull day or nighttime. Flower stems are erect, long and either straight or slightly arching with very long racemes and flowers can number up to seventy or more on each inflorescence, but usually number less. However, the larger the number of flowers on each stem tends to make them individually smaller whereas when there are only a few flowers present they tend to be larger. Flowers are also more spaced apart than similar species and are thick textured and about 2.5 cm in diameter but on some clones can be much larger. Colour ranges from white, cream, to strong yellow, with a white labellum spotted and veined with red or purple. Flowers can remain open for up to 2-3 weeks in August to October. A large minus for this plant is that flowering can take up to ten years from seedling, but is usually less.

Culture. This is one of the easiest orchids to grow and can be grown in the garden, tied on to a tree, or stump, or on a rock, wherever it is placed it will usually prosper. The preferred method is in a pot, with a coarse mix and as it is such a vigorous grower it will often need repotting as it outgrows its existing pot. If mounted it will require more watering but wherever it is grown it needs watering well in Summer and allowed to dry out in the Autumn and Winter months to promote flower growth for the next season. A regular fertiliser during the growing months and after flowering would be very beneficial. Good light is also essential and it will withstand full sun even during the summer months within reason. Minimum temperature should be kept above 0 degrees, if possible. A natural hybrid is *Dendrobium* X *kestevenii*.

***Dendrobium speciosum* var. *hillii* Clements**

Previously known as *Dendrobium speciosum* Smith var. *hillii* Anon 1877.

The name *hillii* was named after Walter Hill Superintendent and Botanist at the Brisbane Botanical gardens who sent the type plants to Kew Gardens.

Found in an area from the northern side of the Hunter Valley although I have seen them much further south than this growing in the Wattagon Mountains and Central coast area of N.S.W. up to south east Queensland where they mingle with and are replaced by *Dendrobium speciosum* var. *grandiflorum* in the Brisbane, Nambour area.

Growing in moist forests and rainforests where it is common on rock faces (lithophytic) and trees (epiphytic) but does favour growing on trees in rainforests. On these rainforest trees it can form huge untidy clumps up to two or three metres in size, these clumps can become so large that they will break the trees and come crashing to the ground. It has large aerial roots similar to *Dendrobium rex* that are good for catching litter where the plant can benefit from the nutrients contained in this debris. Differing from *Dendrobium speciosum* by having longer, un-tapered cylindrical pseudobulbs that are contracted near the base, also it grows in damper and shaded localities than the former. These pseudobulbs can be up to one metre tall with long narrow leaves that are thinner in texture and narrower in width than most other species of this complex. These tall canes allow the plant to reach from its shadier environment to get more light.

Flowers. Flowers are usually white to cream and can slightly yellow with age. Although smaller than *Dendrobium speciosum* var. *speciosum* they are similar in shape but do not open quite as wide. While these flowers are smaller they are more crowded with more inflorescences per pseudobulb than the other species, but are otherwise very similar and can be up to 3 cm in diameter, the labellum bordered with purple inside and out. Flowering time is similar to *Dendrobium speciosum* (August to October).

Although uncommon, hybrids do occur where it crosses with *Dendrobium kingianum* to form *Dendrobium* X *delicatum* and also crosses with *Dendrobium gracilicaule* to form *Dendrobium* X *gracillimum*.

Culture. Similar to *Dendrobium speciosum* var. *speciosum* with a little less light and slightly more watering during hot summer months. It is a very easy plant to grow and can be a very showy plant when grown into specimen size. It can be grown in a pot with a very coarse mix and also it will readily adapt if tied to a tree or placed in a garden rockery. It will not withstand the direct sun as well as *Dendrobium speciosum* but is still a very hardy and rewarding plant to grow and should prove no difficulty to most growers.

***Dendrobium speciosum* var. *grandiflorum* Clements**

Previously known as *Dendrobium speciosum* (Smith) var. *grandiflorum* Bailey 1896

Common name 'The King Orchid' or the 'Golden King Orchid' The name of *grandiflorum* is from the Latin *grandis* meaning stately and *florum* referring to the large flowers on this species.

Found in Central and South Eastern Queensland from the Darling Downs and across to just north of Brisbane. In this area the cut off point with *Dendrobium speciosum* var. *hillii* is abrupt and the plants do not readily intermingle. The northern range is near the Gladstone area. My personal observations are that these boundaries need much more clarification as I have found both *grandiflorum* and *curvicaule* growing in areas that according to recognised boundaries they should not exist in. The type plant was found at Eumundii in 1894.

A large and showy plant similar to *Dendrobium speciosum* var. *hillii* in growth habits and along with *Dendrobium speciosum* one of the worlds most spectacular orchids. Although growth habits are similar to *hillii* it is a stronger and more vigorous grower and taller than *Dendrobium speciosum* var. *speciosum*. It can be both epiphytic or lithophytic but does prefer an epiphytic existence in the higher ranges where it can be found in shady situations in rainforests, but from my own observations, it does prefer the slightly more open forests where it can grow to a huge size high up in the canopy and like *hillii* these plants can become so heavy that the tree cannot support them and they will fall to the ground and rot on the forest floor. The pseudobulbs are un-tapered, or have just a slight taper and can grow up to 60 cm long with leaves up to 30 cm long and 15 cm wide that are slender and similar to *hillii*, but are longer, wider and thicker in texture. These leaves are again smaller than *Dendrobium speciosum* var. *speciosum*. The comparisons between the three plants are apparent when they are in flower. *Dendrobium speciosum* var. *grandiflorum* flowers are usually larger, brighter yellow, and more regular in flowering each year, which the other two species are not.

Flowers. The flowers are usually bright deep yellow with white forms very unusual. The labellum is heavily marked with deep mauve to blue. This labellum is larger than on *Dendrobium speciosum* var. *hillii* but smaller

than *Dendrobium speciosum* var. *speciosum*. While the flowers are usually larger they do tend to bunch on the inflorescence more so than the other similar species and are less crowded on the inflorescence than *Dendrobium speciosum* var. *hillii*, but more crowded than *Dendrobium speciosum*. Flowering period is from August to October and flowers open wide and flat on a bright warm sunny day but are not so widely opening when the weather is cool and cloudy.

Culture. Would be similar to the other species but with perhaps a little more shade than *Dendrobium speciosum*.

Dendrobium speciosum* var. *curvicaule (Bailey) Jones and Clements

Previously named *Dendrobium speciosum* (Smith) var. *curvicaule* Bailey

Also named *Dendrobium speciosum* (Smith) var. *capricornicum* Clemesha 1982. The name *capricornicum* is considered by some as invalid. (refer G Walsh article The Orchadian Vol13 No.5 'A Bit About the Rock Orchids')

Named from the Latin *Cur(vus)* meaning arched , bent or crooked and *caulis* a stem or a stalk. A reference to the shape of the pseudobulb.

Found mainly in Central Eastern Queensland and west to Canarvon Gorge and northward to an area between Cairns and Cooktown, but its most northern extent is unclear. I have seen it growing in great numbers on the eastern side of the Atherton Tablelands from Tully Falls to north of Mareeba and in the south growing in the same area as *Dendrobium rex*. Much further work needs to be done to clarify the true extent of the range of this orchid.

The type plant was first collected by Robert Brown on Lady Elliott Island and was named from a plant growing in cultivation at Bowen Park, Queensland. While it closely resembles and is related to *Dendrobium pedunculatum*, a plant it used to be confused with, more so than any of the other similar complex species, it does differ in both flower and pseudobulb shape. It can be found growing as either a lithophyte or an epiphyte and by my own observations, it does favour a lithophytic existence. While I have seen it growing on trees on the eastern seaboard, it does prefer the high cliff faces of the interior where it can spread over these rock faces growing to huge clumps only rivalled by *Dendrobium speciosum* further south and for harsh growing conditions by both *Dendrobium speciosum* in the south and *Dendrobium pedunculatum* in the north.

The pseudobulb is usually curved but can be straight, with either a slight taper, or no taper at all and differs in shape to the other similar species by having a slightly flattened cane instead of round and is broadest at the middle. This pseudobulb is also very variable in length and can grow up to 1 m in length, but are usually much shorter with the more southern plants that used to be known as variety *capricornicum* much shorter again, being as short as 150 mm on some flowering size plants. Leaves tend to be broader for their length than other similar species and have a hard leathery feel about them.

Flowers. Flowering period is from early August to October with some inland forms flowering earlier, with flowers lasting up to fifteen days. These flowers are not as big as *Dendrobium speciosum* or *Dendrobium rex* but are more the size of *Dendrobium tarberi* being about 30mm in diameter. Spike habit is similar to *Dendrobium speciosum*. Colours are variable with white the most common and from my own observations in the Southern Tropic of Capricorn area, they tend to be white and as one travels west a yellow colour on some becomes apparent. Travelling north to around Mackay and Euengella they become more cream and some I saw near Tully had an off white colour and opened poorly. I wish to point out that these are my own observations only and may not be indicative of the species on the whole. The labellum has reddish marks and the sepals are short and broad.

In the northern areas it can cross with *Dendrobium jonesii* to form *Dendrobium* X *rupiosum*. It also crosses with *Dendrobium gracilicaule* to form the natural hybrid *Dendrobium* X *gracillimum*.

Although *Dendrobium curvicaule* var. *capricornicum* is no longer a recognized variety the variance between this southern form and the plants from the northern areas in shape, size and colour etc. is great and after spending much time studying this orchid in the wild I feel that there is considerable work that needs to be done which could keep botanists busy for some time.

Culture. This is an easy orchid to grow and can be grown on either slab or in pots. I prefer pot growth and use a very coarse treated pine bark, knowing from where the plant originated from would be an advantage as I have seen them growing in heavy shade, in thick rain forest on the Atherton Tablelands, and in very wet conditions in the coastal lowlands, then through open dry sclerophyll forests and onto hot dry arid areas in the interior west of Rockhampton where they can form large colonies on exposed cliff faces in full sun. While this harsh

environment does take a toll they do survive and continue to grow, a testimony to the hardiness of this orchid. If grown the same as *Dendrobium speciosum* it should create no problems.

Dendrobium speciosum* var. *pedunculatum (Clemesha) Jones and Clements

Previously named *Dendrobium speciosum* Smith var. *pedunculatum* Clemesha 1981
Also was known as *Dendrobium compactum*.

The name *pedunculatum* is in reference to its peduncle or flower stalk, which is a feature of this orchid with its long and rigid growth. Common name is the 'Dwarf Rock Orchid'

The type plant was cultivated at Coffs Harbour in 1980 and was collected from Bones Knob near Atherton by Bruce Gray.

It does have a close relationship with *Dendrobium curvicaule* and is found growing on the western slopes of the great divide on the Evelyn, Atherton and Windsor Tablelands in an area from the Palmer River in the north to the Herbert River in the south. This is a unique growing habit as it is the only *speciosum* type orchid that has no affinity to the coastal regions but prefers an existence on the hot dry western slopes growing as a lithophyte. In these hot dry areas, it favours the open forests where it grows on exposed rock and cliff faces safe from forest fires, but can still receive strong sunlight. Another favourite growing area is on cliffs at the side of watercourses. This is a dwarf growing species and this is one a natural way of compensating for the moisture loss due to the harsh growing environment. I have noticed when grown at home in more favourable conditions the plant does tend to grow larger than in nature.

Leaves are glossy and have a hard, leathery feel, are very erect and in proportion to the small plant size. Pseudobulbs are small about 150 mm tall but can even flower on smaller size plants, these pseudobulbs are very thick at the base and taper to a narrow apex but can also be very erect and reddish in colour.

Flowers. The flowers are very fleshy white to cream and while I have never seen them some claim they have seen yellow blooms in the wild. These flowers are small, up to 25 mm in diameter, although in proportion to plant size they are quite reasonable. The labellum is flecked with mauve to blue markings and is larger than both sepals and petals. The inflorescence is stiff, erect and single but on some very healthy plants there can be two, but this is extremely rare. These flowers have short broad segments, are sweet scented and flower in July to August in nature, but can vary in cultivation and can be long lasting up to fifteen days. The opening is variable with some opening poorly, others open very flat.

Culture. This is a very desirable plant to grow with its conical, dwarf growing size, and reasonable sized flowers in proportion to plant size. It is ideally suited to pot culture and as it is a native to the monsoon area watering should be tailored to suit. Water well in the summer months to keep the humidity high, and very little in the winter months to allow the plant to dry out. These are sun loving orchids so would need to be hung up high in the shade house to receive as much sun as possible. Even though they are a native of the tropics, low temperatures within reason are acceptable, as their home is on the western slopes of the high altitudes of the tablelands and at times it can become extremely cold in these areas.

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