

Building Block

***Dendrobium bigibbum* Lindl., Paxton's Fl. Gard. 3: 25 (1852).**

The Cooktown Orchid in Australia - The Two-Humped Dendrobium - The Mauve Butterfly Orchid

Synonyms

- *Callista bigibba* (Lindl.) Kuntze, Revis. Gen. Pl. 2: 654 (1891).
- *Vappodes bigibba* (Lindl.) M.A.Clem. & D.L.Jones, Orchadian 13: 492 (2002).

Dendrobium bigibbum was described by Lindley in 1852 following collection by Dr. John Thomson in 1849 from Mt. Adolphus Island, Australia, in the Torres Strait. Various taxonomic classifications and more than 40 different names were applied to the *Den. bigibbum* complex over the 125 years. (Adams 2019).

Over the years, the names of *Den. bigibbum*, *Den. phalaenopsis* and *Den. schroederianum* have been confused and are so closely linked and interwind that it was thought that they could probably never truly separated. (Bonnell 2018).

The result of field studies of *Dendrobium* sect. Phalaenanthe, including character frequency, morphometrics DNA sequencing and review of the history and type specimens, showed that there is a single species with four closely related varieties. *Den. bigibbum* var. *bigibbum*, *Den. bigibbum* var. *superbum* and *Den. bigibbum* var. *compactum* in northern Australia and *Den. bigibbum* var. *schroederianum* in Indonesia. (Adams 2019).

Regarding flowers characteristics *Den. bigibbum* var. *compactum* and *Den. bigibbum* var. *schroederianum* are similar *Den. bigibbum* to var. *superbum*, formerly known as *Den. phalaenopsis*. Flowers can be round to rectangular, spur usually larger than 8 mm. *Den. bigibbum* var. *bigibbum* flowers tend to be round, reflex significantly and have a spur usually less than 8 mm.

The Labellum of *Den. bigibbum* var. *superbum* had purple to white patch or hairs with a midlobe apex mainly curved.

Den. bigibbum var. *bigibbum*, cylindrical pseudobulbs, which can grow up to 48 inches (120 cm) long, but most often grow to about 16 – 24 inches (40 – 60 cm). The pseudobulbs are usually about 0.4 inches (1.0 cm) wide and have three to 12 leaves that are produced in two rows on the apical third of the stem. These leaves are 3 – 6 inches (8-15 cm) long and about 0.8 inches (2cm) wide. They often have a purplish tinge. The arched inflorescences can grow from 8 – 16 inches (20 – 40 cm) long and bear two to 20 large, long-lasting flowers. The inflorescences arise from nodes near the end of the canes, and these canes may or may not have leaves. It is possible for a cane to have several inflorescences at the same time.

The flowers are usually lilac-purple, but can occasionally be found as white, faintly blue or faintly pink and usually have a prominent white spot on the labellum.

Den. bigibbum var. *superbum*, the species was said to differ from *Den. bigibbum* var. *bigibbum* by the absence of recurving sepals and petals, absence of a cluster of white calli on the disc of the labellum and the drooping carriage of the flowers. As negative aspect there are larger plant and lacking color variety.

The cylindrical pseudobulbs are slightly longer and a little thicker and can grow 16 – 48 inches (40 – 122 cm) long. Pseudobulbs have three to 12 leaves that are produced in two rows on the upper third of the stem. They often have purplish margins. These leaves reach 4 – 6 inches (10 – 15 cm) long and about 1.2 inches (3.5 cm) wide. The arched inflorescences can grow from 8 to 12 inches (20 – 40 cm) long and bear two to 20 flowers. The flowers tend to be slightly larger, 1.4 - 2.8 inches (3.5 - 7 cm) and the petals are very broad. The petals are similar in length to the sepals. Unlike *Den. bigibbum* var. *bigibbum*, usually there is no white spot on the darker purple lip. The flowers are usually lilac purple, but can occasionally be found as white, faintly blue or faintly pink.

Den. bigibbum var. *compactum*, short stout, conical pseudobulbs which, like those of *Den. bigibbum* var. *superbum*, are green or purplish in color. The pseudobulbs can reach 20 inches (50 cm) high, the average is 4 – 4.7 inches (10 – 12 cm) high. They are leafy in the upper third and each pseudobulb has only three to five green leaves (unlike *Den. bigibbum* var. *superbum*, which has three to 12 leaves) that reach up to 4.7 inches (12 cm) long and an inch (2.5 cm) wide. Inflorescences are 4 – 12 inches (10 – 30 cm) long and carry one to eight flowers. The flowers are usually lilac-purple, but can occasionally be found as white, faintly blue or faintly pink. There is not white spot on the labellum. The sepals are narrow, while the petals are as broad as they are long. The flowers are similar than *superbum* but with a much shorter inflorescence.

The early hybrids had flat, rounded, mainly mauve flowers. Vacherot in 1926 produced *Den. Boisseyence*, *Den. Louis Bleriot* and *Den. Pompadour* and according to the new classification they breed with the *Dendrobium bigibbum* varieties.

According to OrchidWiz there are the massive 7,624 progenies registered using *Den. bigibbum* and the first hybrid is *Dendrobium Sibyl* (*Den. bigibbum* x *Den. linawianum*) registered by N.C. Cookson in 1893. Because *Dendrobium* got appealing characteristic for the market, most of the breeding done in Hawaii are focusing to orchids customers.

One significant old hybrid *Den. Pompadour* (*Den. Louis Bleriot* x *Den. superbiens*)

The vast majority of hybridizing activity took place after 1960 (Bonnell 2018) and the most awarded is *Den. Hickam Deb* (*Den. American Beauty* x *Den. Lady Fay*) in 1961. It has 17 AM and 10 HCC, AOS awards.



Dendrobium Hickam Deb 'Gigantic' AM | AOS (85 points)
Dendrobium American Beauty x *Dendrobium* Lady Fay

Section *Spatulata*, called antelope *Dendrobiums* due to their petals that look like the horns of an antelope. These long rigid narrow petals can add a broader and flat aspect to the progeny. Also, members of the *Spatulata* section improves substance and enhances color, especially using *Dendrobium tokai*. Also extends blooming time and enables a tight flower pattern, waxy texture and good vigor.

Dendrobium May Neal is a cross between *Den.* Hawaii (*Den. bigibbum* var. *superbum* x *Den. tokai*) and *Den. schulleri*. *Den. bigibbum* var. *superbum* enhance shape while the rest of the parents added new colors, green, yellow and orange to this group.

Photography by Lourens Grobler



Dendrobium gouldii, another important member of the *Spatulata* section can enhance color and produce dark progeny when its selfie, a very unique burgundy flower crossed with *Den. phalaenopsis* is *Den. Jaquelyn Thomas* (*Den. gouldii* x *Den. phalaenopsis*).



Photography by J.C. Uribe

Dendrobium Bandung White 'White Foam' AM/AOS (*Den. Nanae* x *Den. Lim Chong Min*), shows well proportional petals with a nice white color.



Photography by OWZ Lib

Members of Phalaenantha section are dominant when crossing with species from the section Latouria. Good qualities like better shape, spots, blushes, semi-alba and new colors are expected. However, fertility issues may occur, backcrossing a Latouria species with the intersectional cross will make fertile the progeny.

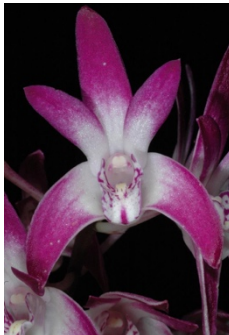
Roy Tokunawa consistently worked for several years to create a fertile Latouria – Phalaenantha tetraploid amphidiploid. *Dendrobium* Big Alex (*Den. bigibbum* x *Den. alexandrae*) as tetraploid yields lots of seed and the progeny is very uniform, this technic opened a great opportunity for breeding *Dendrobiums*.

Photography by Charlie Riner



Den. Big Alex 'Louisiana' HCC/AOS 75 points

When *Den. bigibbum* cross with members of the section Dendrocoryne, bring interesting colors to their progeny, like intense violet, cream, yellow or soft pink.



Den. Touch of Class 'Oskar' (*Den. Class* x *Den. Ray's Spot*)

Photography by A.O.C.

Den. Elegant Heart 'Tan Huang' AM/AOS (80 points)
(*Den. Peewee* x *Den. speciosum*)



Photography Arthur Pinkers

Finally, out a curiosity, Roy K. Fields reports crossing *Cattleya bowringiana* x *Den. phalaenopsis*, according to modern nomenclature should be *Guarianthe bowringiana* x *Den. bigibbum* var. *superbum*). The outcome is not what he expected but is it interesting to the frontier of intergeneric crosses can be.

References

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