

REVIEW OF  
***DENDROBIUM SPECIOSUM* Sm.**  
CONCLUDED

The comprehensive review published by S. C. Clemesha in our last issue (Vol. 6 No. 11) has already drawn both critical and favourable comments from a number of quarters. See "Letters to the Editor" and related comments by Mr Clemesha on page 273. In the article below, the author completes his review after studying photographs of the Type specimen of *D. speciosum* var. *bancroftianum*, which subsequently came to hand from Vienna via Kew. It is suggested that the two articles be read in conjunction.

Readers should note that the map showing distribution of varieties of *D. speciosum* (at p. 262) contains an error in drafting: the boundary line for var. *curvicaule* should extend south to -near Mackay- at least, as indicated in the article.

Being responsible for this error I should appreciate it if readers would amend their copies of the map with a line extending to the coast south of Mackay. - EDITOR

***Dendrobium speciosum* Sm.**  
**var. *bancroftianum* Reichb.f.**

by S.C. Clemesha

**Summary:**

The purpose of this paper is to establish the identity of *D. speciosum* Sm. var. *bancroftianum* Reichb.f. and to reduce it to a synonym of *D. x gracilosum* S.C. Clemesha. Some history of the variety is given.

*D. speciosum* Sm. var. *bancroftianum* Reichb.f., Gard. Chron. 15 (1881) 782. In The Orchadian Vol. 6, No. 11, p. 247 (March, 1981) I published "A Review of *Dendrobium speciosum*" which contains references and additional information. In that review I did not include *D. speciosum* var. *bancroftianum* because I had not seen the Type specimen or a photograph of it.

Mr J. Wood of the Royal Botanic Gardens, Kew, very kindly has obtained two photographs of the Type sheet of var. *bancroftianum* through a colleague of his who visited the Natural History Museum at Vienna, Austria, where the Type of this variety is held. I am very grateful to Mr Wood for arranging this for me. The photographs are shown here.

It can be seen from these photographs that only three sections of stem, which lack bases (fig. 1) and a watercoloured line drawing (fig. 2) are present. The handwriting on the drawing reads as follows:

"This is distinctive variety. It's flowers are much like those of the genuine plant but the petals are a trifle longer hence more antennate and the tip is lightest sulphur with a very few minute atoms of purple at (base) and the callus at the base is (orange) and darker yellow. The stem is even more slender than is *D. Hillii* HK. Leaves are very narrow in width.

It was sent by Dr Bancroft from Brisbane to Mr T. Christy his friend. *Den speciosum* (concolor) *Bancroftianum*."

Note: The words in brackets were difficult to read and they warrant the following comments:

The word interpreted as "base" appears more like "top" - perhaps referring to the top of Reichenbach's drawing of the labellum.

The word "orange" appears to be scored out but may be underlined. There are two tones of colouration in the drawing.

The word "concolor" is definitely scored out and replaced by "Bancroftianum" written below it.

Perhaps the main evidence that this is the Type specimen sheet is the close similarity between the handwritten notes and the description published by Reichb.f. in Gard. Chron. 15 (1881) 782 (see The Orchadian Vol. 6, No. 11, p. 257).

Below the stems the determination of *D. speciosum* is question-marked presumably by Reichenbach.

**Stems:**

Though no scale is present it is evident that the stems are very narrow compared to the width of the sheet. They are a good match for stems of *D. x gracilosum* (see other photographs of this hybrid in The Orchadian

6, 11 1.c.). Reichenbach's published description states ". . . the stem is even more slender than that of *Dendrobium hillii*, Hook. and that alone affords a good mark for distinction". That is true of *D. x gracilosum* compared to *D. speciosum* var. *hillii* Masters.

The drawing also matches *D. x gracilosum* in the following points.

#### **Floral Spur:**

In *D. x delicatum* the base of the sepals, column and labellum form a spur which curves downwards. In *D. x gracilosum* this often is present to a lesser degree but frequently it is absent. This is the case in Reichenbach's drawing.

#### **Sepals and Petals:**

The rather short, broad lateral sepals depicted are a characteristic of *D. x gracilosum*. They are quite different from those of *D. speciosum* var. *hillii*. In that plant they are long and narrow. The apices of the sepals and petals in the drawing are blunt as are those of *D. x gracilosum*. In *D. x delicatum* the sepal and petal apices are more pointed.

#### **Labellum:**

The labellum of *D. x delicatum* has a short, narrow basal portion. *D. x gracilosum* lacks this and so does Reichenbach's drawing. The particular labellum illustrated lacks markings except at the base.

*D. speciosum* var. *bancroftianum* was published earlier than var. *nitidum* F.M. Bail. and var. *gracillimum* Rupp. All represent the same taxon so the first-mentioned is the legitimate name for it in varietal rank. Artificially produced hybrids approach the naturally occurring population in most respects, supporting the conclusion that the taxon under discussion is a natural hybrid between *D. speciosum* and *D. gracilicaule* F. Muell. This is evident also because it is intermediate between the two species in its parts.

*D. x gracilosum* S.C. Clemesha is the only legitimate name for this hybrid in species rank, so *D. speciosum* var. *bancroftianum* and *D. speciosum* var. *hillii* forma *bancroftianum* (Reichb.f.) F.M. Bail should now be regarded as synonyms of it.

#### **Historical Aspects:**

The var. *bancroftianum* has not been well understood in the one hundred years since it was first published. The original description contains an apparent error. That is "...the petals are a trifle longer..." - (Reichenbach was making a comparison with var. *speciosum*). F.M. Bailey's descriptions of var. *bancroftianum* in Bot. Bull. 14, (1896) and Qld. Flora, 5 (1902) 1526 have another apparent error. That is "stems with the robust habit of *D. speciosum* var. *hillii*".

Karazlin, Pflanz. Heft 45 (1910) 270-271, identified var. *bancroftianum* with *D. x delicatum*. This is not surprising in view of the similarity between *D. X delicatum* and *D. X gracilosum*. It is likely that Kranzlin did not see the Type material since Reichenbach died in 1889. In his will he left his herbarium specimens to the Natural History Museum at Vienna on the condition that the sealed boxes not be opened for twenty-five years. This condition was kept so if Kranzlin saw the specimen it must have been before Reichenbach's death.

Rupp and Hunt, in Proc. Linn. Soc. N.S.W. Vol. 72, p. 6 (1948), rejected Kranzlin's conclusion because of Bailey's description of the stems and long, narrow sepals and petals.

*D. x gracilosum* and *D. x delicatum* can be difficult to distinguish from limited material. That is why the distinguishing features of *D. x gracilosum* shown on Reichenbach's Type sheet are pointed out here.

*The Orchadian*, Volume 6, No 12, June 1981

## **LETTERS TO THE EDITOR**

### ***Dendrobium speciosum* - Distribution of Varieties.**

Dear Sir,

In Steve Clemesha's recent review of *Dendrobium speciosum* (*Orchadian* Vol. 6, No. 11) he mentioned a recording by Rupp of *D. speciosum* var. *hillii* from Mangrove Mountain (west of Gosford, N.S.W.). I would like to mention here that Ian Slade of Peat's Ridge has a plant of *D. speciosum* var. *hillii* which originated from the Peat's Ridge basalt quarry before its habitat was destroyed by mining for the basalt. *D. speciosum* var. *hillii* can still occasionally be seen growing in the Wattagan Mountains west of Wyong.

The western hillside at the quarry site was once clothed in sub-tropical rainforest supported by rich soil derived from the basalt. Only remnants of this pocket of rainforest exist today, and few orchids can be seen.

According to Ian, there was once a wide variety of orchids present, including *Dendrobium speciosum* var. *hillii*, *D. gracilicaule*, *D. x gracilosum*, *D. teretifolium* and *D. aemulum*. The type variety of *D. speciosum* also abounds in the region. The quarry site could possibly be the most southerly limit of *D. x gracilosum*.

Another interesting orchid reported by Jan Slade to have once grown at the Peat's Ridge quarry site was *Sarcochilus ceciliae* which was said to have grown in exposed clefts in the basalt, according to one of the early quarry workers. Other sarcanthinae included *S. falcatus* (large flowered form), & *S. olivaceus*, *S. hillii*, *Plectorrhiza tridentata*, and *Papillilabium beckleri*. It is also possible then that the quarry site was the southern most limit for *S. ceciliae* although I don't know of any specimens to confirm the report.

I remember seeing plants of *D. speciosum* growing high up on trees at Minnamurra Falls which might have been var. *hillii*; perhaps other readers could confirm this?

Steve Clemesha also mentions the occurrence of *D. speciosum* var. *curvicaule* near Mackay and so I feel that modification of the published distribution map could be made as more information comes to hand, particularly from New Guinea and far north Queensland.

Norm Stockton

### Comments by Steve Clemesha

Dear Sir,

Don Blaxell (pars. comm.) has told me that there are plants of *D. speciosum* in the Bunya Mountains (Qld.) that look like plants of *D. speciosum* from near Sydney.

In my treatment of var. *grandiflorum* I pointed out that var. *speciosum* and var. *grandiflorum* resemble each other closely. I also pointed out the distinguishing features between them. The two varieties are isolated from each other as var. *hillii* grows between their ranges. I am quite certain that neither var. *speciosum* nor var. *grandiflorum* are found in northern N.S.W. - north of Bullahdelah. I have examined many living and pressed specimens of var. *hillii* within northern N.S.W. both in cultivation and the wild. This is the area where I have lived for the last five years. Furthermore my opinion that only var. *hillii* is found in northern N.S.W. is supported by Ted Gregory, Harry Klose and Sandy Anderson, all of whom have had greater experience of northern N.S.W. than I have.

If any gap is found in the distribution of *D. speciosum* it is in the dry barren stretch of coast between Rockhampton and Sarina (about 30km south of Mackay). I have seen plants of *D. speciosum* growing on a volcanic plug near Rockhampton and do not know if this particular central Queensland race extends much further north. There are some low ranges in the dry region south of Sarina where it is possible that *D. speciosum* could grow. The variety *curvicaule* could possibly extend south of Sarina where sizeable ranges exist with sufficient rainfall.

Norm Stockton's letter on the orchids of the Peat's Ridge basalt quarry area is interesting - particularly the reports of *D. x gracilosum* and *Sarcochilus ceciliae* from that area. I feel that specimens of these plants from this locality should be placed in the N.S.W. National Herbarium. As Rupp (Orch. N.S.W. p. 114) states that "*D. x gracillimum* appears to be restricted to areas north of the Hawkesbury River" it is likely that he knew of plants in the Peat's Ridge area.

The report of *D. speciosum* var. *hillii* from this area also is interesting if correct. In view of the specimen recorded by Rupp (Orch. N.S.W. p. 114) from Mangrove Mountain, it seems likely that the record could be correct. I would be most interested in examining a few flowers of the plants alleged to be var. *hillii* so that the record could be confirmed. The same applies to the reported Wattagan Mountains plant of var. *hillii*. I have examined flowers from cultivated plants of *D. speciosum* var. *speciosum* from both the Peat's Ridge and Wattagan areas. This is not to say that both varieties are not found in these areas as there are herbarium specimens of the two varieties from Bulahdelah in the N.S.W. National Herbarium. Probably they are from different habitats.

With regard to the Minnamurra Falls report, I would be interested to know why Norm Stockton considers the plants from there to be var. *hillii*. The implication seems to be that it is simply because they grew high on trees.

*D. speciosum* var. *speciosum*, var. *hillii*, var. *grandiflorum*, var. *curvicaule* and *D. x gracilosum* (and also many other orchids) all grow on both trees and rocks but trees inhabited by *D. speciosum* seem to be confined to rainforest areas.

Mr Howard Judd, the ranger in charge of the Minnamurra Falls reserve made a very thorough list of the flora of the Minnamurra Falls reserve and *D. speciosum* var. *hillii* is not included.

As I had heard other reports of var. *hillii* in the Illawarra region, I wrote to Mr Leo Cady about it. He said he had never heard of var. *hillii* being found on the N.S.W. south coast, and the furthest south record he knew was Mangrove Mountain.

I received a division of a plant of *D. speciosum* var. *speciosum* from near Cambewarra Mountain. Prior to being collected it grew on a tree. The underside of the clump was semi-circular and bore pieces of bark. A flower pressing of this clone is shown at p. 249 (specimen D) in *The Orchadian*, Vol. 6, No. 11.

The old idea that var. *hillii* always grows on trees and that var. *speciosum* grows only on rocks is a mistaken one. I have visited three areas west of Coffs Harbour where var. *hillii* grows on rock faces in open forest. In these localities no plants grow on trees.

Steve Clemesha

*The Orchadian*, Volume 6, No 12, June 1981