

AMENDMENTS TO APPENDICES I AND II OF THE CONVENTION

OTHER PROPOSALS

A. PROPOSAL

Transfer of *Dendrobium cruentum* from Appendix II to Appendix I.

B. PROPONENT

Thailand.

C. SUPPORTING STATEMENT

1. Taxonomy

- 1.1 Division : Spermatophyta
- 1.2 Class : Monocotyledoneae
- 1.3 Order : Orchidales
- 1.4 Family : Orchidaceae
- 1.5 Genus : *Dendrobium*
- 1.6 Specific epithet : *cruentum* Rchb.f.

2. Biological Data

- 2.1 Distribution : Endemic to peninsular Thailand, mostly on islands. Probably introduced to Myanmar.
- 2.2 Population : Scattered, rare. Recent estimated population was approximately a few thousand plants with continuing decline.
- 2.3 Habitat : The species mostly thrives on upper branches of Paper bark tree (*Melaleuca leucadendra* var. *minor*) in low elevation open forests. Only a few plants can be attached to a single tree since the plant on a larger branch dropped to the ground with the peel-off bark. It used to be found in the forest at 0 - 200 metres above sea level. It had been sighted from Ranong down south as far as Satul, a little farther north of Malaysia (Figure 1) (Holtum, 1964; Kamemoto and Sagarik, 1975; Seidenfaden, 1985). In the recent years, the acreage of the low elevation forest has been depleted due to deforestation and water pollution from prawn farmings. Thus, a preliminary survey indicated that the present population was approximately a few thousand plants scattered over a number of islands. The species is now extremely rare on the peninsular.

3. Trade Data

3.1 Nation Utilization and Legal Internation Trade : This peculiar *Dendrobium cruentum* has a unusual flower form and color. It blooms continuously throughout the year. Also, it can grow fairly well in glass house of orchidists in temperate zone, but it will die after a couple of years. Thus, the species has been in a demand of both Thai and foreign orchid- fanciers. Due to the drastic decline of

population size, artificial propagation of this species through seed germination has been encouraged. At present, a couple nurseries do grow the plant from flask seedling. For legal international trade, about 800 - 1,800 plants per year has been export with the CITES permit since 1990 (table 1). Majority of the species has been exported to Japan and USA. These two importer started to order the artificial propagated specimen in 1993. It was noted that Thailand exported the artificial propagated plants more than the wild collected plant in 1993. However, the trend was reversed in 1994 due to unavailability of the artificially propagated specimens.

Table 1. The number of *Dendrobium cruentum* exported from Thailand and its major destinations.

Year	Total (Wild / Artificial)	Top Importer ^{1/} (Wild / Artificial)		
		1 st	2 nd	3 rd
1990	798 (798/0)	Japan (447/0)	Dutch (169/0)	USA (135/0)
1991	1,622 (1,602/20)	Japan (1,044/0)	USA (389/0)	Dutch (96/0)
1992	1,729 (1,606/123)	Japan (845/0)	USA (451/0)	Taiwan (150/0)
1993	1,039 (347/692)	Japan (269/321)	USA (13/151)	France (2/120)
1994 ^{2/}	1,181 (818/363)	Japan (347/267)	USA (442/1)	German (6/89)

^{1/} Ranked by total plant imported

^{2/} January to May

3.2 Artificial Propagation Considerations : The species can be grown from both seeds and micropropagation plantlets. To date, there has been no clone that multiplied through cloning. The difficulty in raising deflasked seedling leads to high cost of production. It is known that only 2 nurseries in Thailand and 1 nursery in Hawaii artificially propagated the species in a small number. Currently, no nursery in Thailand germinates the seed of the species.

3.3 Illegal Trade : The species can be found both inside and outside of National Parks and Forest Reserves. This make it difficult to enforce the Forest Act B.E. 2484. The ability to grow as an indoor potted plant with a unique flower form leads to higher demand from aboard than local. It is believe that majority of exported specimen may be obtain illegally from the wild. However, it is impossible to prove in court.

4. Protection Status

4.1 National : The species is protected by Forest Act B.E. 2484. The law prohibits the collection of wild specimen from National Parks and Forest Reserves. Cultivation of over 20 plants of this species needs an official permit under this law. Moreover, trade of any specimen controlled by this law need prior approval. To obtain a permit, one must follow a strict guideline which ensures the survival of the species in its habitat. Those who break the law will face a jail term of 1 year and/or US \$ 400 fine. To control the export of wild collected specimen, it can be done only if it agrees with CITES regulation. At present, Thailand can not stop the trend of extinction of *Dendrobium cruentum* from an international trade by issuing its own law. The extinction of this species will soon be reported if it is not included in CITES appendix

I. 4.2 International : This dendrobium, as a member of Orchidaceae, is included in CITES appendix II. The trade of wild collected plants is allowed.

4.3 Additional Protection Needs : If the international trade of wild collected specimen of this species can be stopped, it will greatly assist Thailand to conserve this threaten orchid in its own habitat.

5. Information On Similar Species

5.1 Similarity in appearance : The genus *Dendrobium* is one of the largest genera in the family *Orchidaceae*. The genus is divided into several sections. *Dendrobium cruentum* is one of 30-35 members of the section *Formosae* (Benth. & Hk.f.) Hk.f. All member of this section can be easily distinguished by the presence of short black hair on leaves, leaf sheath, bract at the base of peduncle and the young shoot. The peculiar traits of *D. cruentum* that make it easy to be recognized are the slim pseudobulb of not taller than 30 centimetres, the narrow lanceolate leaves and large bracts at the base of peduncle which cover most of peduncle even after the flower drops. If the flower is attached, no one can misidentify this species. (see attached figures of some *Formosae* dendrobiums of Thailand)

6. Comment from Countries of Origin :

Thailand is the only country of origin that is a member party of CITES.

7. Addition Remarks :

None.

8. References :

- Anonymous. 1993. Annual Report 1992. CITES Thailand. Plant Introduction and Conservation of wild Flora Sub - Division, Agricultural Regulatory Division, Department of Agriculture, Ministry of Agriculture and Cooperatives, Bangkok.
- Holtum, R.E. 1964. Flora of Malaya. Vol. I. Orchids. Government Printing Office, Singapore.
- Kamemoto, H. and R. Sagarik. 1975. Beautiful Thai Orchid Species. The Orchid Society of Thailand, Bangkok.
- Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. 1993. Trade Statistics for the year 1990. CITES, Geneva.
- Seidenfaden, G. 1985. Orchid genera in Thailand XII *Dendrobium* SW. Opera Bot. 83: 1 - 296.

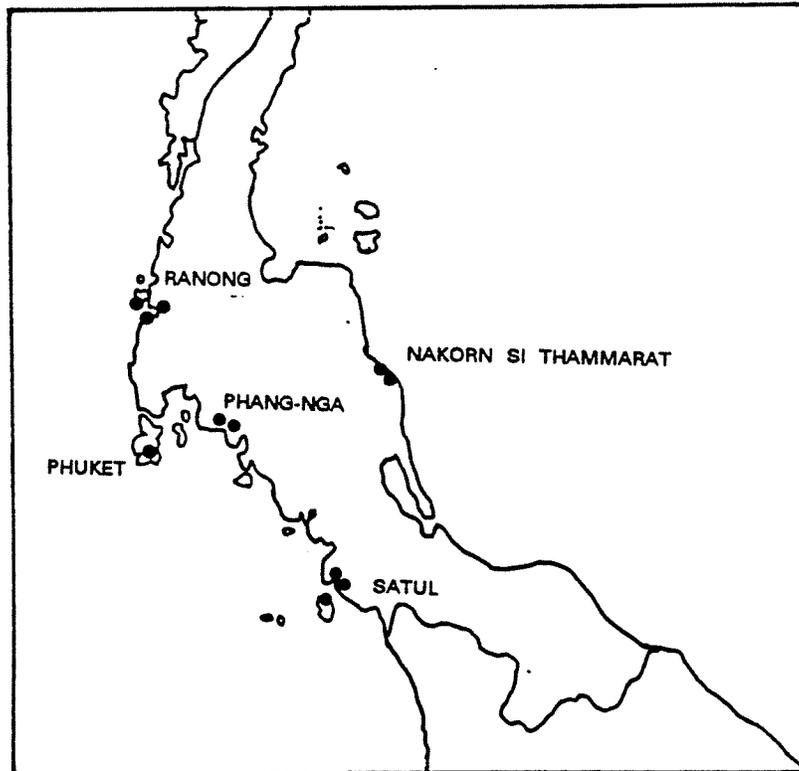
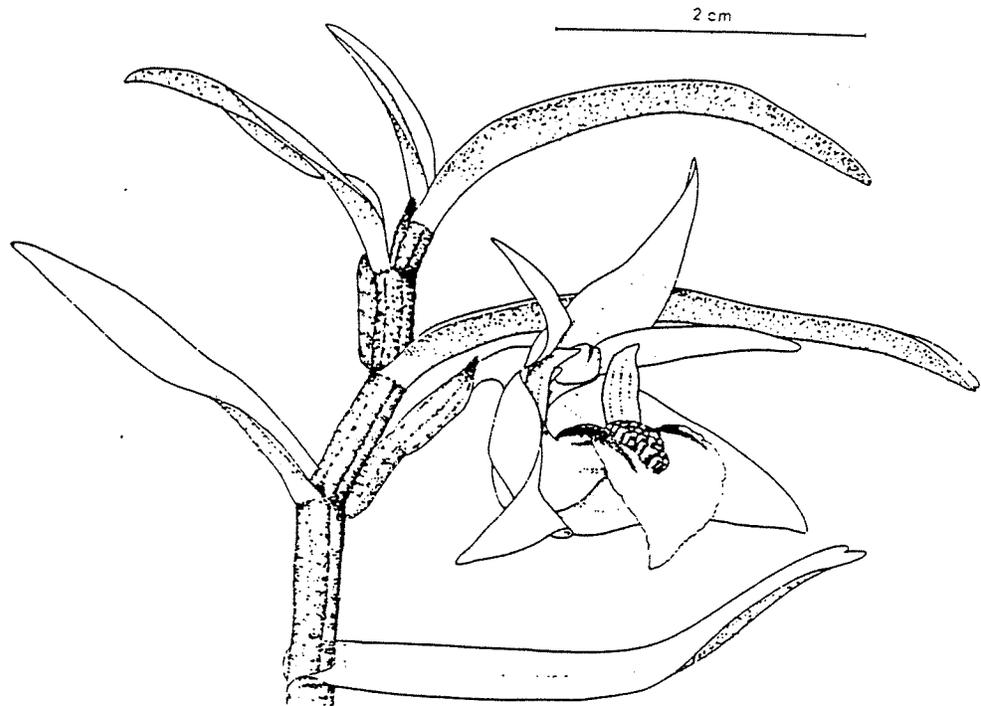
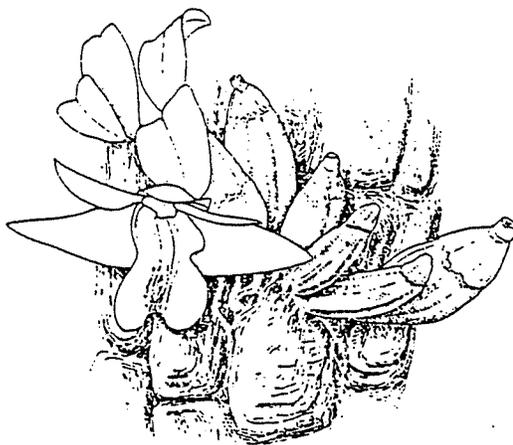


Figure 1. Distribution of *Dendrobium cruentum* Rchb. f.

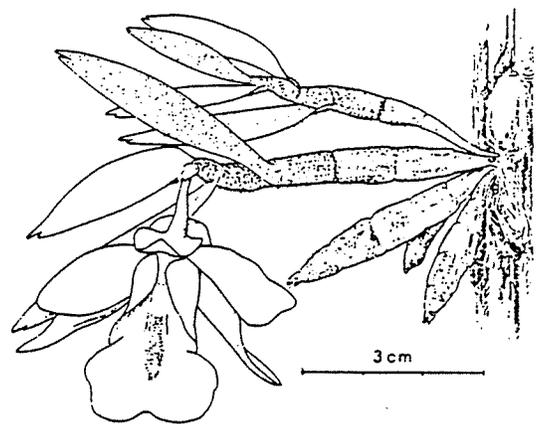
Section Formosae (Benth. & Hk. f.) Hk.f.



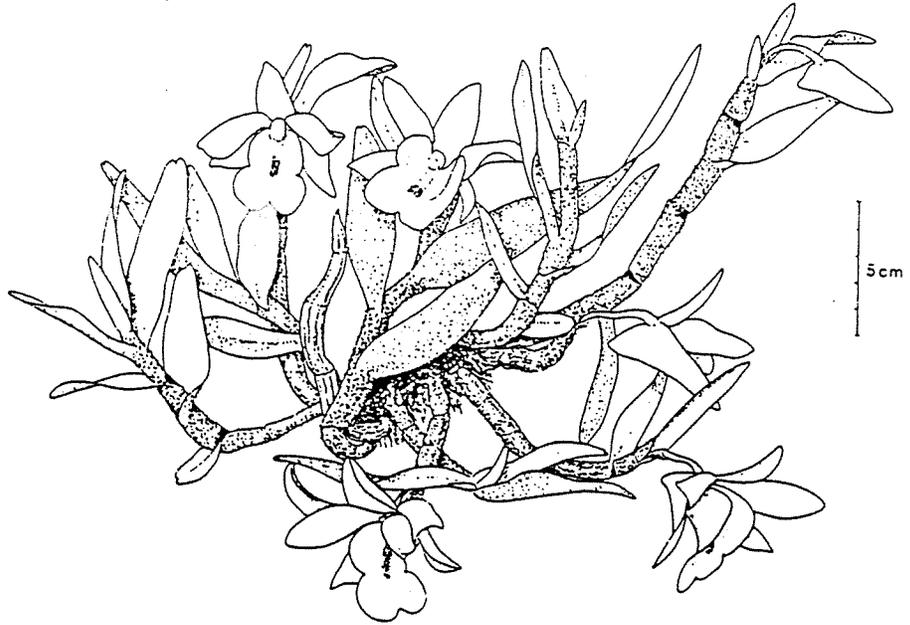
Dendrobium cruentum Rchb. f.



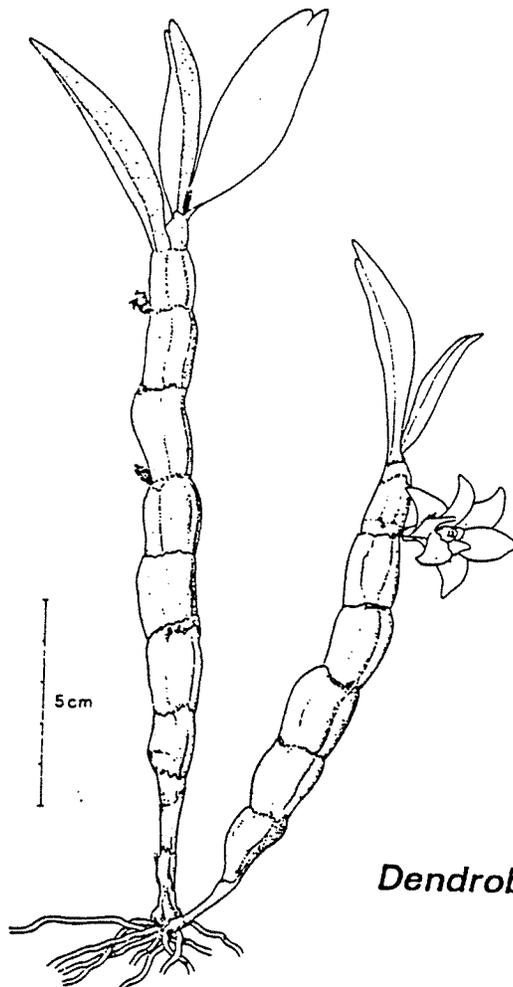
Dendrobium bellatulum Rolfe.



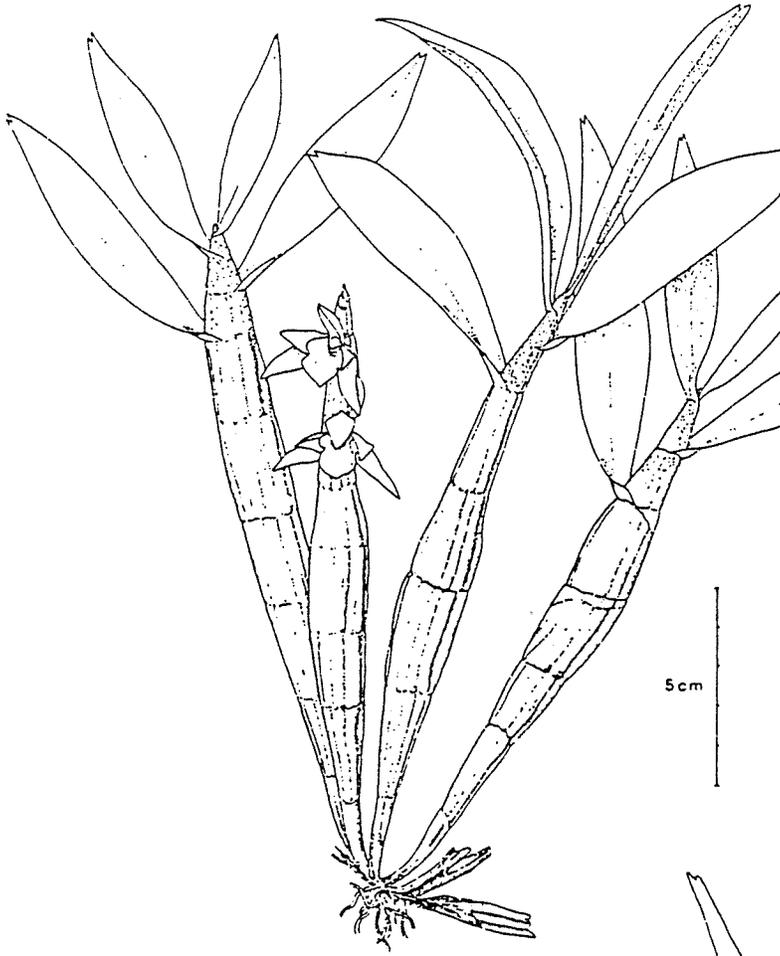
Dendrobium christyanum Rchb. f.



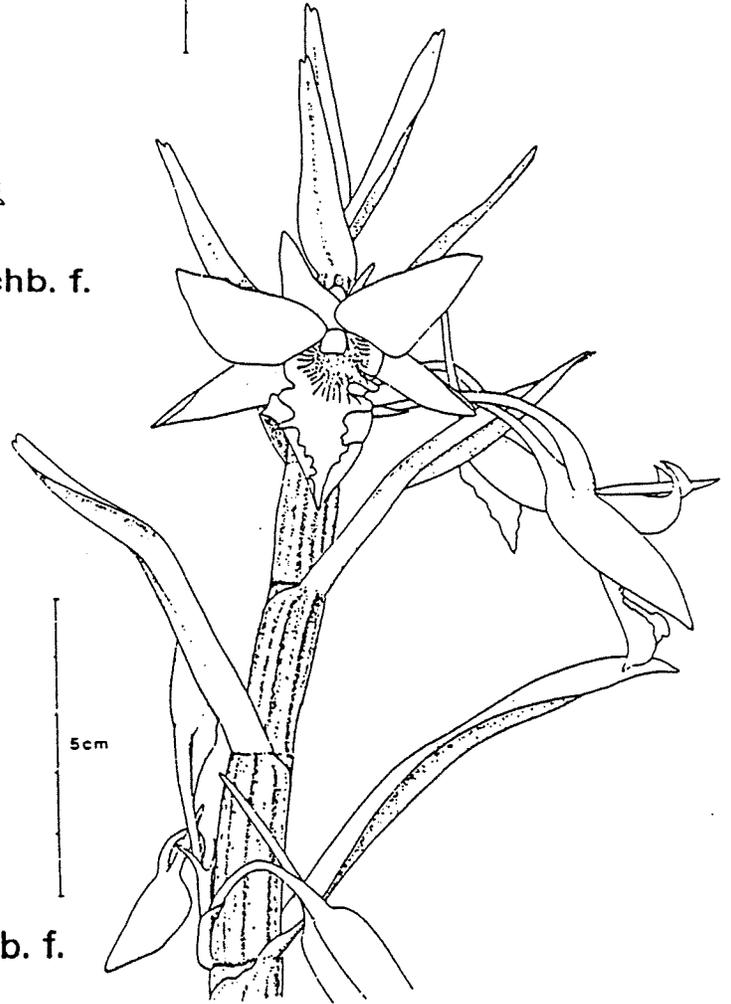
Dendrobium fuerstenbergianum Schltr.



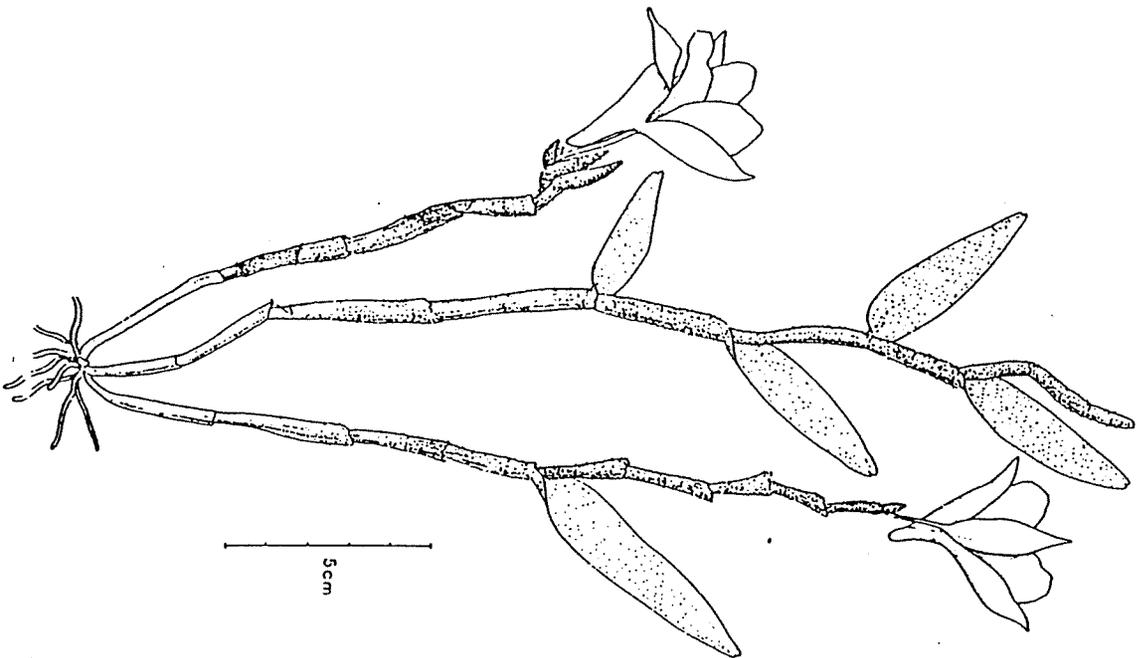
Dendrobium scabrilingue Lindl.



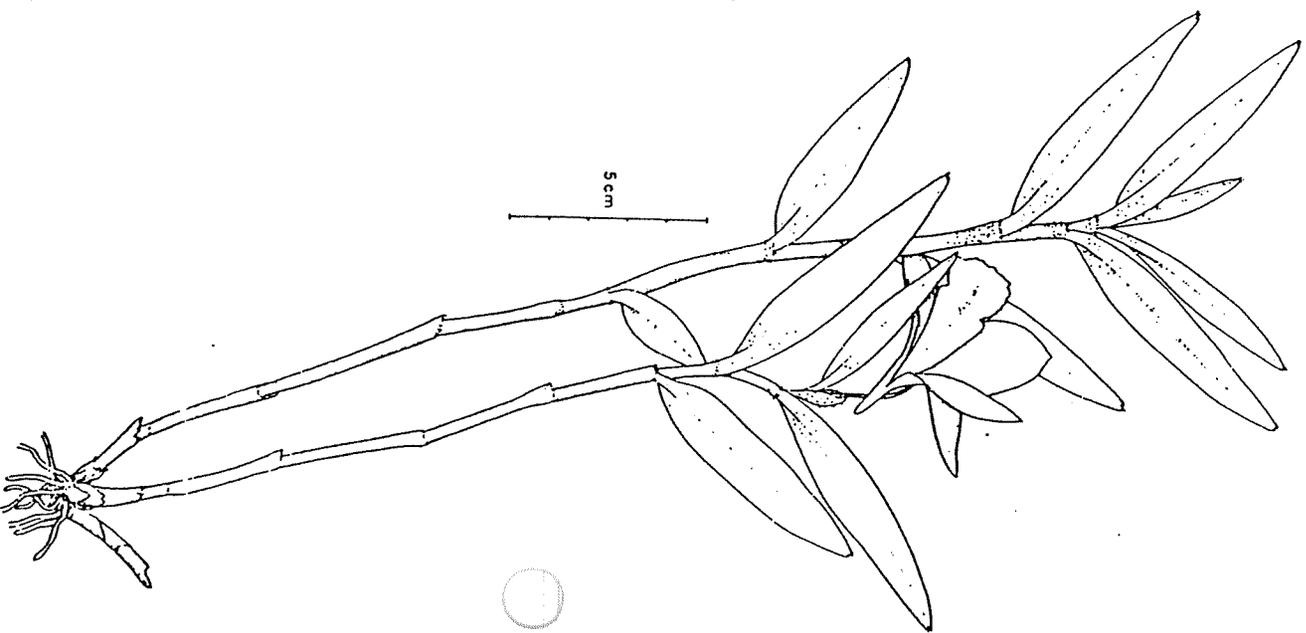
Dendrobium trigonopus Rchb. f.



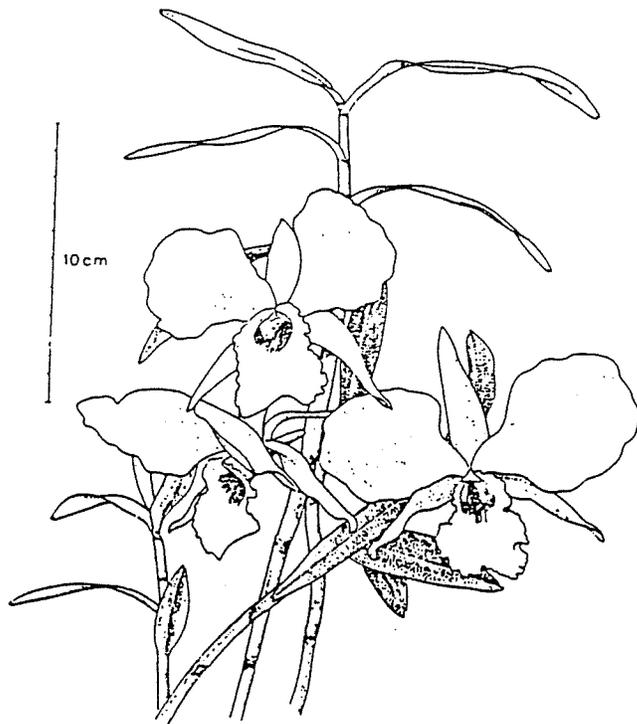
Dendrobium draconis Rchb. f.



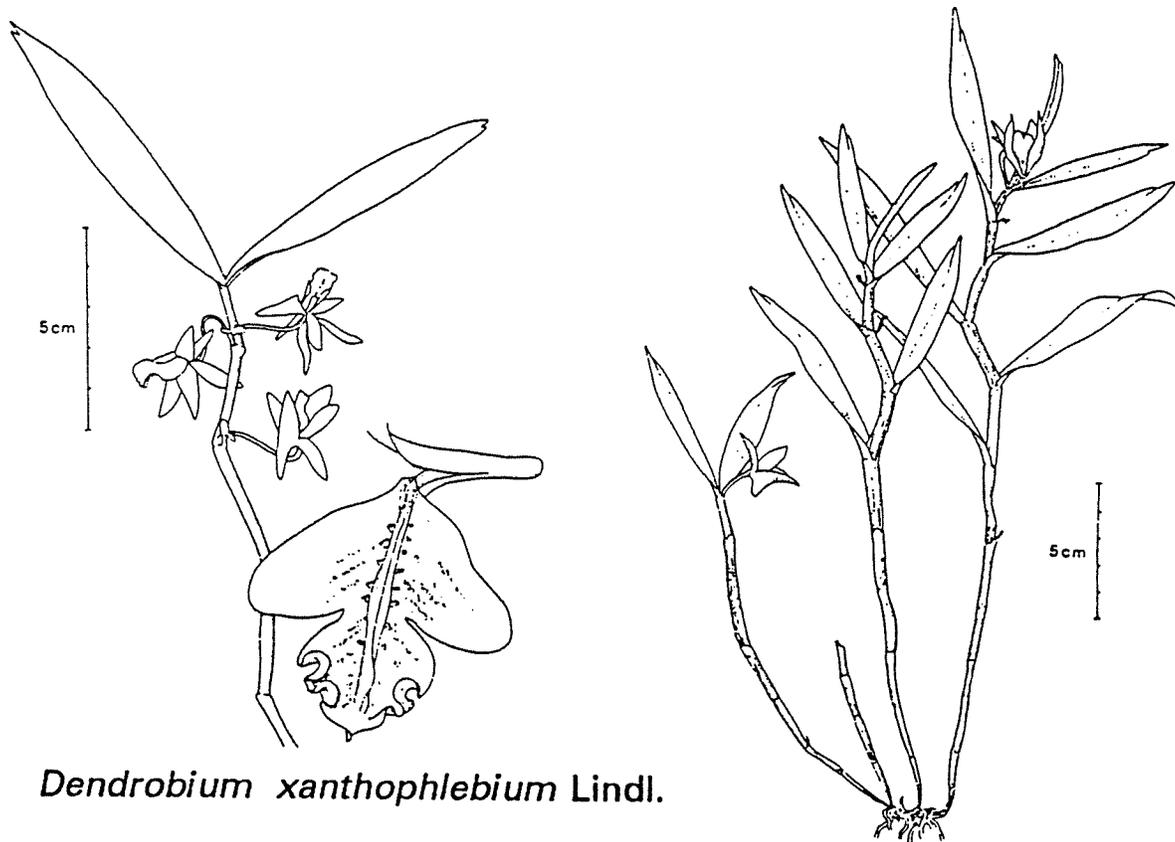
Dendrobium multilineatum Kerr.



Dendrobium wattii (Hk. f.) Rchb.



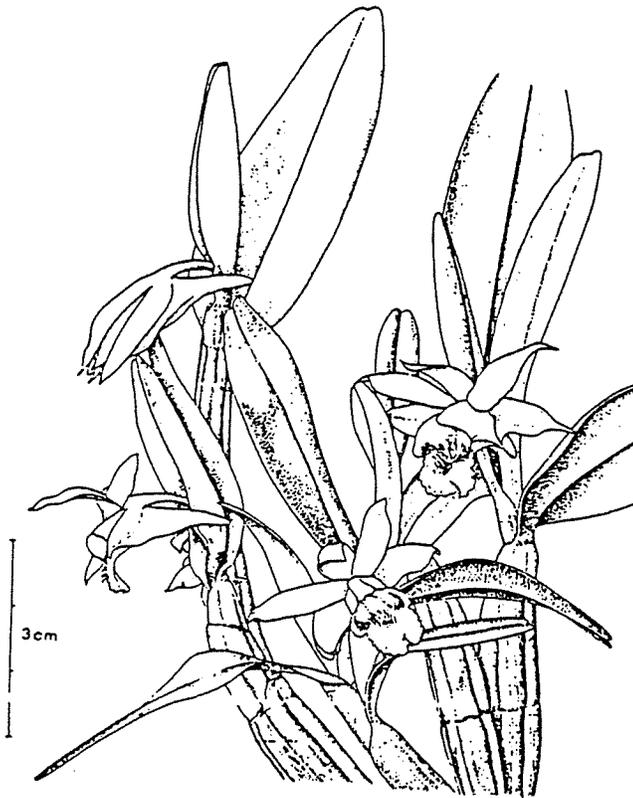
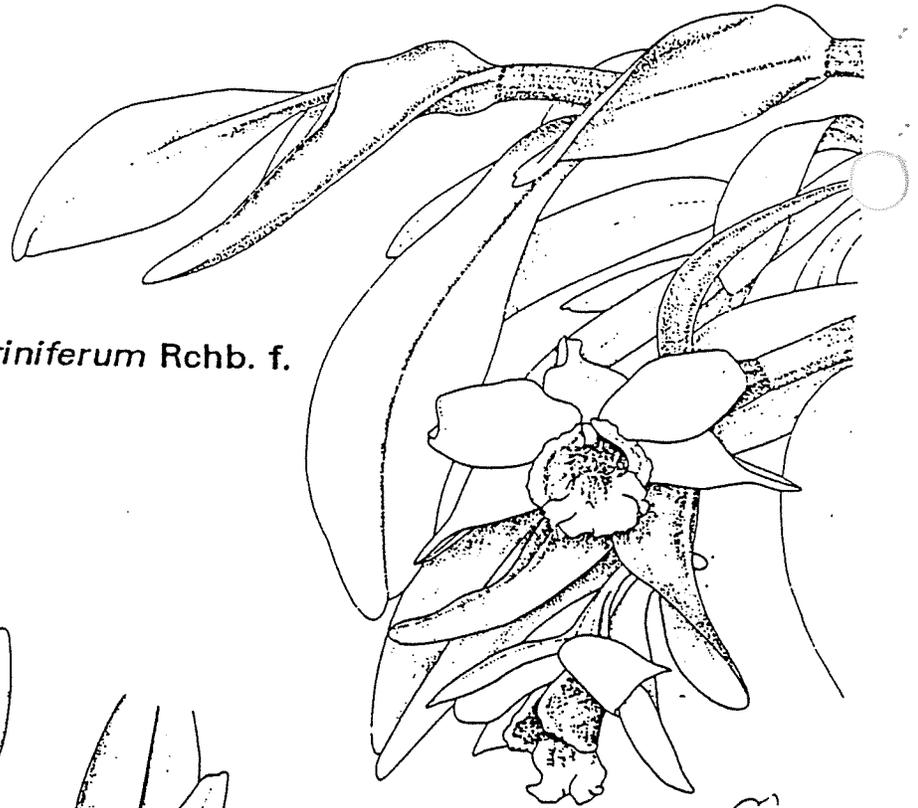
Dendrobium infundibulum Lindl.



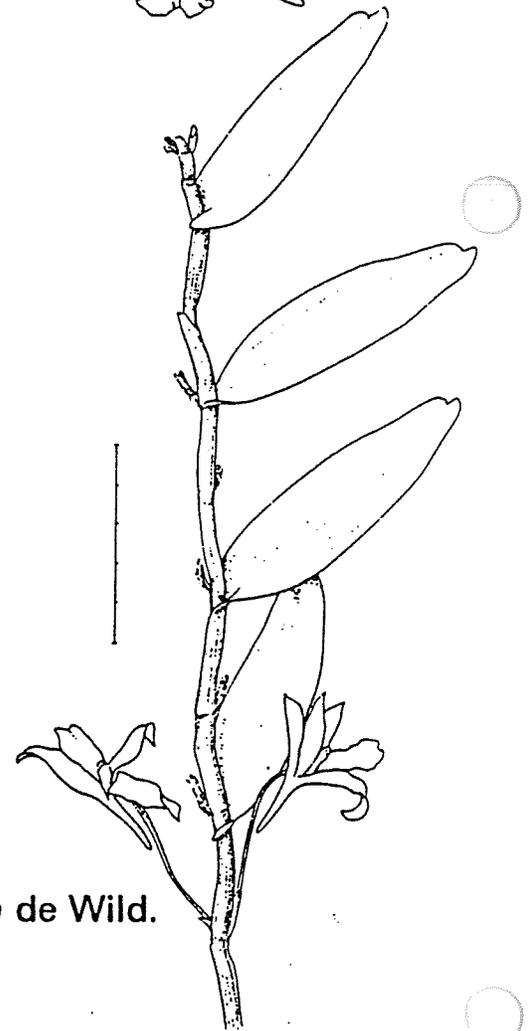
Dendrobium xanthophlebium Lindl.

Dendrobium sutepense Rolfe ex Downie.

Dendrobium cariniferum Rchb. f.



Dendrobium williamsonii Day & Rchb. f.



Dendrobium ochraceum de Wild.