

The Taxonomic Position of *Dendrolobium cumingianum* Benth. (Leguminosae-Papilionoideae: Desmodieae)

Hiroyoshi Ohashi^(1, 2)

(Manuscript received 7 May 1997; accepted 18 May 1997)

ABSTRACT: *Dendrolobium cumingianum* Benth. is a distinct species, although it has been treated as a synonym of *Dendr. umbellatum* (L.) Benth. Key to both species, and nomenclature and description of *Dendr. cumingianum* are presented.

KEY WORDS: *Dendrolobium cumingianum*, Leguminosae, Philippines.

INTRODUCTION

When Bentham (1852) described *Dendrolobium cumingianum* Benth., four species were recognized as members of this genus. Other three are *Dendr. umbellatum*, *Dendr. cephalotes* and *Dendr. australe*, but the second species is now regarded as a synonym of *Dendr. triangulare* and the last one is also synonym of *Dendr. umbellatum*. Accordingly, when it was described, *Dendr. cumingianum* was actually compared by Bentham with *Dendr. triangulare* and *Dendr. umbellatum*. In the original description, the species is described on the basis of the specimen, *Cuming 1454*, as follows: "*fruticosum, sericeo-pubescent v. glabrescens, ramulis tenuibus, foliis (raro 9 lin. longis) ovalibus obtusissimis, pedicellis calyce brevioribus, alis carina paullo brevioribus, leguminis villosi articulis latitudine sua vix longioribus*".

Merrill (1910) regarded *Dendrolobium* as a section of *Desmodium*. He noted that *Desmodium cumingianum* is "manifestly allied to *D. umbellatum*", because, according to the key to these species on page 78, "umbels axillary and leaflets broad at the apex, round, obtuse or very obscurely and broadly acuminate", but distinguished both by the size of leaflets, *i. e.*, 1-1.8 cm long in *D. cumingianum* against 5-10 cm long in *D. umbellatum*.

Van Meeuwen (1962), however, treated *Desmodium cumingianum* (Benth.) Benth. as a synonym of *D. umbellatum* (L.) DC. She considered that the smaller leaflets of *D. cumingianum* is "perhaps due to the fact that it does not grow on the seashore". Ohashi (1973), treated them under *Dendrolobium*, followed her circumscription and regarded *D. cumingianum* as a synonym of *D. umbellatum*, although suggested a doubt about the treatment by van Meeuwen.

1. Biological Institute, Graduate School of Science, Tohoku University, Sendai, 980-77 Japan.

2. Corresponding author.

MATERIALS AND METHOD

Herbarium specimens in A, BM, CAL, K, L, MO, TUS and UPS were examined in this study. *Dendrolobium umbellatum* have been observed in natural habitat in Luzon in the Philippines in 1993 and Taiwan in 1993. Herbarium acronyms are followed those in Holmgren et al. (1990).

RESULTS

After examining many specimens of *Dendrolobium cumingianum*, I convinced that this species is distinct from *Dendr. umbellatum*. It differs from the latter by leaves, calyx, and pods as shown in the following key.

Key to *Dendrolobium cumingianum* and *Dendr. umbellatum*

1. Terminal leaflets shorter than 3 cm; leaflets glabrous on upper surfaces. Calyx about 6 mm long; tube about 3.5 mm long; the lowest lobes longer than the lateral ones, lateral ones about 2 mm long. Pods 2-3-jointed; articles about 5 mm long, about 4 mm wide *Dendr. cumingianum*
1. Terminal leaflets longer than 5 cm; leaflets appressed sericeous on upper surfaces. Calyx 4-5 mm long; tube 2-2.5 mm long; the lowest lobe almost equal to the lateral lobes, lateral ones 2.5-3 mm long. Pods 3-5(-8)-jointed; articles (5-)7-10 mm long, 4-6 mm wide *Dendr. umbellatum*

Dendrolobium cumingianum Benth. in Miq., Pl. Jungh. 216 & 218. 1852; Schindl. in Repert. Spec. Nov. Regni Veg. 20: 278. 1924. Type: Insulae Philippinae. Prov. Batangas. *Cuming 1454* (K-holotype and isotype). 克氏木山蚂蝗 Fig. 1

Desmodium cumingianum (Benth.) Benth. ex F. Vill., Nov. App. 61 (1880); Benth. in Benth. & Hook. f., Gen. Pl. 1(2): 519. 1865; Merr. in Philip. J. Sci. 5: Bot. 80. 1910.

Desmodium umbellatum auct. non (L.) DC.: Meeuwen in Reinwardtia 6: 263. 1962, p. p., incl. syn. *Dendr. cumingianum* & *Desm. cumingianum*.

Dendrolobium umbellatum auct. non (L.) Benth.: Ohashi in Ginkgoana 1: 82. 1973, p.p., incl. syn. *Dendr. cumingianum* & *Desm. cumingianum*.

Shrub; branches terete, densely pubescent on young parts, glabrescent after one year old. Leaves 3-foliolate. Stipules connate below half along opposite side of leaves, ciliate, puberulent on outer surfaces. Petioles 10-12 mm long, densely pubescent. Terminal leaflets elliptic, 15-27 mm long, 12-17 mm wide, narrowed to both ends, acute at apex, glabrous above, appressed pubescent below; lateral nerves 6-7, inconspicuous, looped within margin; petiolules 4-6 mm long; stipels persistent, filiform, 2-3 mm long. Lateral leaflets sessile, a little smaller than the terminal one. Inflorescences terminal and axillary; umbels racemose on terminal ones, terminal ones 4-8 cm long. Peduncles of the umbel about 10 mm long; bracts deciduous, each one flower at the axil; pedicels 2-3 mm long, densely spreading pubescent; bracteoles persistent, ovate, about 2 mm long. Flowers 12-13 mm long. Calyx about 6 mm long, densely appressed straight pubescent outside; tube about 3.5 mm long; the lowest lobes 2.5 mm long, longer than the lateral ones, lateral ones ovate, about 2 mm long. Standard broadly obovate, about 10 mm long, 6-7 mm wide, emarginate at apex; wings about 10 mm long; keels 11-12 mm long, longer and broader than the wings. Pods sessile, 2-3-jointed,

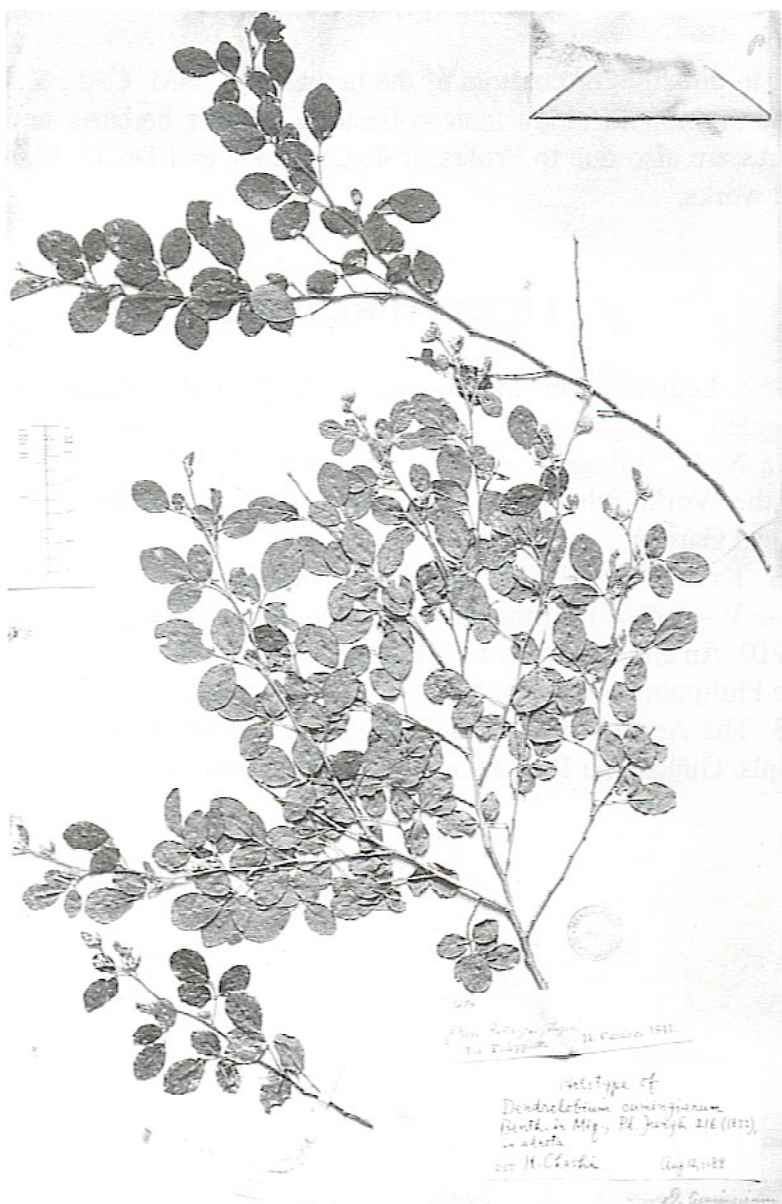


Fig. 1. Holotype of *Dendrolobium cumingianum* Benth. Luzon. *Cuming 1454* (K).

easily separable at the node, 10-15 mm long, about 4 mm wide; articles about 5 mm long, turgid at mature, pubescent with appressed minute hairs (0.2-0.3 mm long) but glabrescent on seeds in mature; pericarp thick (about 1 mm thick), corky. Seeds transversely elliptic, 4 mm wide (parallel with the long axis of hilum) and 3 mm long (cross the long axis of hilum), about 0.3 mm thick; hilum about 0.5 mm long.

Distribution: Malesia: endemic to the Philippines (Luzon).

Luzon: Batangas. *Cuming 1454* (K Holotype, photo in A, TUS; Isotype K, BM, UPS). *M. Ramos BS22341* (A, CAL, K, MO); *Ridsdale 1857* (A, L, TUS), *1857A* (A, L, TUS).

ACKNOWLEDGEMENT

I am grateful to directors or curators of the herbaria: A, BM, CAL, K, L, MO, TUS and UPS for their permission to study their collection in their herbaria and/or loan of their specimens. Thanks are also due to Professor T.-C. Huang and Dr. D. Madlid for their kind help for my field works.

LITERATURE CITED

- Bentham, G. 1852. Leguminosae. In: Miquel, F. A. W. (ed.), *Plantae Junghuhnianae*. pp 205-269. Leiden.
- Holmgren, P. K., N. H. Holmgren and L. C. Barnett. 1990. *Index Herbarium*. Part I: The Herbaria of the World. 8th edition. International Association for Plant Taxonomy. New York Botanical Garden, New York.
- Meeuwen, M. S. Knaap van. 1962. Preliminary revisions of some genera of Malaysian Papilionaceae V - A census of the genus *Desmodium*. *Reinwardtia* **6**: 239-276.
- Merrill, E. D. 1910. An enumeration of Philippine Leguminosae, with keys to the genera and species. *The Philippine Journal of Science, C. Botany*. **5**: 95-136.
- Ohashi, H. 1973. *The Asiatic Species of Desmodium and Its Allied Genera (Leguminosae)*. 318 pp., 76 pls. Ginkgoana 1. Academia Scientific Book, Inc., Tokyo.

克氏木山螞蝗之分類位置(豆科—蝶形花亞科：山螞蝗族)

大橋廣好^(1,2)

(收稿日期：1997年5月7日；接受日期：1997年5月18日)

摘 要

克氏木山螞蝗(*Dendrolobium cumingianum* Benth.)雖曾被處理為白木蘇花(*Dend. umbellatum*)之異名，但兩者之間是可區別的。本文提供檢索表以區別兩者，並描述克氏木山螞蝗及其相關之命名處理。

關鍵詞：克氏木山螞蝗、豆科、菲律賓。

1. 東北大學大學院理學研究科生物學教室，仙台市 980-77，日本。

2. 通訊聯絡員。