

## An Enumeration of Chinese *Desmodium* and Its Allied Genera (Leguminosae)

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Six genera and 50 species including 12 subspecies and 6 varieties are recognized as the native species and infraspecific taxa of *Desmodium* and its allied genera of China; i.e., *Codariocalyx* 2 species, *Dendrolobium* 5 species, *Desmodium* 36 species (containing 12 subspecies and 6 varieties), *Dicerma* 1 species, *Phyllodium* 4 species, and *Tadehagi* 2 species. References for recent illustrations of these taxa based on Chinese plants are cited after their names. Distribution areas are shown for every taxon endemic to China and for that occurring in narrow areas in China. Introduced species are excluded. New ranks for the following four taxa are proposed; *Desm. elegans* subsp. *wolohoense* (Schindler) H. Ohashi, *Desm. elegans* f. *albiflorum* (P. C. Li) H. Ohashi, *Desm. podocarpum* subsp. *szechuenense* (Craib) H. Ohashi, and *Tadehagi pseudotriquetrum* (DC.) H. Ohashi. Recently described two new Chinese taxa, *Desmodium cordifoliolatum* P. C. Li and *Desm. pendenticarpum* C. Z. Gao et Q. R. Lai, are treated as identical with *Desm. gangeticum* (L.) DC. and *Desm. strigillosum* Schindler, respectively. *Dendrolobium rugosum* (Prain) Schindler and *Desmodium strigillosum* Schindler are new to the flora of China.

This paper aims to enumerate all the native species and infraspecific taxa belonging to *Desmodium* and its allied genera in China in order to produce a base for further exploration of flora of China. China is used for geographical sense in this paper. We have no knowledge on what taxa of these genera occur in China, because no recent floristic surveys on this area have been made since Forbes and Hemsley (1887). For this purpose, I have been examined specimens of these genera in the herbaria A, CAL, E, IBSC, K, KYO, KUN, L, TAI, TI, TNS, and TUS (Herbarium abbreviations see Holmgren et al. 1990), and have made botanical expeditions in Taiwan since 1982, Hongkong in 1977, Yunnan in 1988 and 1994, Hainan in 1993, and Guangdong, Hunan and Guangxi in 1994. This paper is a result of accumulation of knowledge through these researches.

The circumscription of genera adopted here is in the same concept proposed by Ohashi (1973) and Ohashi et al. (1981), and the following six genera are recognized in China, i.e., *Codariocalyx*, *Dendrolobium*, *Desmodium*, *Dicerma*, *Phyllodium*, and *Tadehagi*.

The only comprehensive record for Chinese *Desmodium* and its allied genera was done by Forbes and Hemsley (1887). They summarized 25 species under *Desmodium* in the sense of Bentham (1865), but four species among them are not *Desmodium* but *Lespedeza* (1 sp.), *Pycnospora* (2 spp.) and *Uraria* (1 sp.), respectively (Schindler 1928). The remaining 21 species are distributed under the present generic concept as follows; *Codariocalyx* 1 species, *Dendrolobium* 2 species, *Desmodium* 15 species, *Phyllodium* 2 species, and *Tadehagi* 1 species. Later Hemsley (1905)

added 11 species of *Desmodium* to their "Enumeration", of which seven were recognized as species at the moment. Totally, therefore, 28 species were recorded from China about a century ago.

Local flora of *Desmodium* in China was compiled first by Benthams (1861) for Hongkong. He recognized 8 species, but they are classified, according to the Ohashi's system, into *Desmodium* (5 species), *Tadehagi* (1 species), and *Phyllodium* (2 species). Contributions to the Chinese *Desmodium* and its allied genera by Chinese botanists have been done mainly in their exploration of regional floras in China. Although these genera are not published yet in the series, Flora Reipublicae Popularis Sinicae, they have been treated in a number of regional floras in recent China. Among them *Desmodium* and allies were explored in Hainan (Chun and Chang 1965), Yunnan (C. Y. Wu 1984), Xizang (C. Y. Wu 1985), Hengduan Mountains (Wang 1993) and the islands and reefs of Hainan and Guangdong (T. L. Wu 1994). Independently, these genera of Taiwan has been worked out by Ohashi et al. (1984, 1988, etc.) and Huang and Ohashi (1993) as a part of the Flora of Taiwan 2nd edition.

Introduced species are not treated in this paper, though some are growing commonly in open places, along roads, or in parks. Examples are *Desmodium scorpiurus* (Sw.) Desv. and *Desm. intortum* (DC.) Urb. in Taiwan.

In the following list, genera are arranged in the alphabetical order, and species are arranged in the alphabetical order of their specific epithets within genera, and infraspecific taxa are listed in the same way as the species after the type taxa within each species. Synonyms used in recent Chinese regional floras are cited between square brackets. References of recent important contribution for the taxa and illustrations based on the Chinese plant are cited in each taxon when it is available. More detailed synonyms and bibliography before 1970 are found in

Ohashi (1973).

Distribution is shown for the species and infra-specific taxa endemic to China or having narrow areas in China by enumerating the provinces of China, Hongkong or Taiwan, but is not mentioned for those taxon widely distributed in China. The endemic taxon is indicated, for example, as "endemic to Yunnan". It means that the taxon is endemic to Yunnan. When a taxon has narrow areas within China, it is shown only by provinces. This means that its distribution is confined to the provinces in China also other countries outside China, though they are not mentioned. For example, distribution of *Desm. repandum* is indicated as Yunnan in this paper: but this species is distributed in Africa and widely in Asia, but found only in Yunnan in China.

#### CODARIOCALYX

**Codariocalyx** Hassk.: H. Ohashi in *Ginkgoana* **1**: 40 (1973); *Adv. Leg. Syst.* **1**: 299 (1981).

1. *C. gyroides* (DC.) Hassk. [= *Desmodium gyroides* DC.: *Icon. Corm. Sin.* **2**: f. 2637].

2. *C. motorius* (Houtt.) H. Ohashi: *Fl. Taiwan* 2nd ed. **3**: pl. 99 [= *Desm. gyrans* (L.f.) DC.: *Icon. Corm. Sin.* **2**: f. 2638; *Desm. motorium* (Houtt.) Merr.].

#### DENDROLOBIUM

**Dendrolobium** (Wight et Arn.) Benth.: H. Ohashi in *Ginkgoana* **1**: 50 (1973); *Adv. Leg. Syst.* **1**: 299 (1981).

1. *Dend. dispernum* (Hayata) Schindler: *Fl. Taiwan* 2nd ed. **3**: pl. 115: endemic to Taiwan.

2. *Dend. lanceolatum* (Dunn) Schindler [= *Desm. dunnii* Merr.: *Icon. Corm. Sin.* **2**: f. 2619]: Hainan.

3. *Dend. rugosum* (Prain) Schindler: H. Ohashi in *Ginkgoana* **1**: 72 (1973): Yunnan (KUN). New to the flora of China, previously known in Burma, Thailand, and Laos.

4. *Dend. triangulare* (Retz.) Schindler: *Fl. Taiwan* 2nd ed. **3**: pl. 116 [= *Desm. triangulare* (Retz.) Merr.]:

Icon. Corm. Sin. 2: f. 2618].

5. *Dend. umbellatum* (L.) Benth.: Fl. Taiwan 2nd ed. 3: pl. 117.

## DESMODIUM

**Desmodium** Desv.: H. Ohashi in Ginkgoana 1: 87 (1973); Adv. Leg. Syst. 1: 299 (1981) [= *Podocarpium* (Benth.) Yang et Huang in Bull. Bot. Lab. NE. Forest Inst. 4: 4 (1979)].

1. *Desm. amethystinum* Dunn: Yunnan.

2. *Desm. caudatum* (Thunb. ex. Murray) DC.: Icon. Corm. Sin. 2: f. 2622; Fl. Taiwan 3: pl. 572 [= *Catenaria caudata* (Thunb. ex Murray) Schindler: Li in Vasc. Pl. Hengduan Mts. 1: 982 (1993)].

3. *Desm. concinnum* DC.: Yunnan.

4. *Desm. densum* (C. Chen et X. J. Cui) H. Ohashi [= *Podocarpium fallax* var. *densum* C. Chen et X. J. Cui]; endemic to Yunnan.

5. *Desm. dichotomum* (Willd.) DC.: Yunnan.

6. *Desm. diffusum* DC.: H. Ohashi in Hara, Origin Evolution Divers. Pl. and Pl. Commun. 186 (1985); H. Ohashi et al. in Sci. Rep. Tohoku Univ. 4th ser. (Biol.) 39: 215 (1988) [= *Desm. laxiflorum* auct. non DC.: Forbes et Hemsley in J. Linn. Soc. Bot. 23: 173 (1887); H. Ohashi in Ginkgoana 1: 101 (1973), p.p.: Fl. Taiwan 2nd ed. 3: pl. 123; = *Desm. unibotryosum* C. Chen et X. J. Cui in Acta Bot. Yunnan. 9: 307 (1987)].

This species had been confused with *Desm. laxiflorum*. The most recent illustration of this species is published erroneously under this name in Flora of Taiwan 2nd edition (1993).

7. *Desm. duclouxii* Pamp. [= *P. duclouxii* (Pamp.) Yang et Huang]; Yunnan.

a. var. *duclouxii*.

b. var. *henryi* (Schindler) H. Ohashi: Yunnan.

8. *Desm. elegans* DC.

i. subsp. *elegans*.

a. var. *elegans* [= *Desm. esquirolii* Lévl.: Icon. Corm. Sin. 2: f. 2626].

aa. f. *elegans*.

ab. f. *albiflorum* (P. C. Li) H. Ohashi, **stat. nov.** [= *Desm. elegans* var. *albiflorum* P. C. Li in Fl. Xizangica 2: 892 (1985)].

b. var. *handelii* (Schindler) H. Ohashi: endemic to Yunnan.

ii. subsp. *callianthum* (Franch.) H. Ohashi [= *Desm. elegans* var. *callianthum* (Franch.) P. C. Li in Fl. Xizangica 2: 891 (1985)]; endemic to Yunnan and Sichuan.

iii. subsp. *wolohoense* (Schindler) H. Ohashi, **stat. nov.** [= *Desm. wolohoense* Schindler in Fedde Rep. 21: 1 (1925); = *Desm. elegans* var. *wolohoense* (Schindler) H. Ohashi]; endemic to Yunnan and Sichuan.

This is a geographically separated, very rare subspecies of *Desm. elegans*.

9. *Desm. gangeticum* (L.) DC.: Icon. Corm. Sin. 2: f. 2628; Fl. Taiwan 2nd ed. 3: pl. 121 [= *Desm. cordifoliolatum* P. C. Li in Acta Bot. Yunnan. 11: 301 (1989), **syn. nov.** Type. China. Sichuan: Dechang. Inst. Medic. Sichuan 843 (PE)].

10. *Desm. gracillimum* Hemsl.: Fl. Taiwan 3: pl. 574; H. Ohashi in Hara, Origin Evolution Divers. Pl. and Pl. Commun. 183 (1985); H. Ohashi et al. in Sci. Rep. Tohoku Univ. 4th ser. (Biol.) 39: 60, fig. 2 (1985): endemic to Taiwan.

11. *Desm. griffithianum* Benth.: Yunnan and Sichuan.

12. *Desm. heterocarpon* (L.) DC.: H. Ohashi in J. Jpn. Bot. 66: 17 (1991).

i. subsp. *heterocarpon*: Icon. Corm. Sin. 2: f. 2627.

a. var. *heterocarpon*.

b. var. *strigosum* van Meeuwen.

ii. subsp. *angustifolium* H. Ohashi in Ginkgoana 1: 212 (1973) [= *Desm. reticulatum* Champ. ex Benth.; = *Desm. polycarpum* var. *angustifolium* Craib, nom. nud.]; Yunnan, Hainan, Guangdong, and Hongkong.

iii. subsp. *ovalifolium* (Prain) H. Ohashi in J.

Jpn. Bot. 66: 21 (1991) [= *Desm. ovalifolium* Wall. ex Merr.].

13. *Desm. heterophyllum* (Willd.) DC.: Guangxi, Guangdong, Hainan, Fujian, and Taiwan.

14. *Desm. laxiflorum* DC.: Icon. Corm. Sin. 2: f. 2623; H. Ohashi in Hara, Origin Evolution Divers. Pl. and Pl. Commun. 178 (1985).

15. *Desm. laxum* DC.: [= *P. laxum* (DC.) Yang et Huang].

i. subsp. *laxum*.

ii. subsp. *falfolium* H. Ohashi: endemic to Hunan.

iii. subsp. *laterale* (Schindler) H. Ohashi [= *Desm. hainanesis* Isely; = *P. laxum* var. *laterale* (Schindler) Yang et Huang]: Guangxi, Hainan, Guangdong, and Taiwan.

iv. subsp. *lateraxum* H. Ohashi: endemic to Guizhou.

v. subsp. *leptopus* (A. Gray ex Benth.) H. Ohashi: Fl. Taiwan 2nd ed. 3: pl. 124 [= *P. leptopus* (A. Gray ex Benth.) Yang et Huang]: Yunnan, Guangxi, Xizang, Hainan, Guangdong, and Taiwan.

16. *Desm. megaphyllum* Zoll.: Yunnan.

17. *Desm. menglaense* (C. Chen et X. J. Cui) H. Ohashi [= *P. menglaense* C. Chen et X. J. Cui]: endemic to Yunnan.

18. *Desm. microphyllum* (Thunb. ex Murray) DC.: Icon. Corm. Sin. 2: f. 2631; Fl. Taiwan 2nd ed. 3: pl. 125.

19. *Desm. multiflorum* DC.: Fl. Taiwan 3: pl. 575 [*Desm. sambuense* (D. Don) DC.: Icon. Corm. Sin. 2: f. 2625].

20. *Desm. oblatum* Baker ex Kurz: H. Ohashi in Fl. Camb. Laos Vietn. 27: 101 (1994) [= *Desm. renifolium* var. *oblatum* (Baker ex Kurz) H. Ohashi]: Yunnan.

21. *Desm. oblongum* Wall. ex Benth.: Yunnan.

22. *Desm. oldhamii* Oliver: Icon. Corm. Sin. 2: f. 2633 [= *P. oldhamii* (Oliver) Yang et Huang]: Fujian, Guangxi, Guangdong, Hubei, Hunan, Jiangxi, Jiangsu, Jilin, Shaanxi, Sichuan, and Zhejiang. Recorded dis-

tribution of this species in Taiwan by Ohashi (1973) is excluded, because the voucher specimen of *Desm. oldhamii* from Taiwan seems to be erroneous. The record from Taiwan was based on a specimen, Henry s.n. (CAL), and was reported with a question mark for correctness of the locality of the specimen in Ohashi (1973).

23. *Desm. podocarpum* DC. [= *Podocarpium podocarpum* (DC.) Yang et Huang].

i. subsp. *podocarpum*; Fl. Taiwan 2nd ed. 3: pl. 126.

ii. subsp. *fallax* (Schindler) H. Ohashi [= *Desm. fallax* Schindler: Icon. Corm. Sin. 2: f. 2636; = *P. podocarpum* var. *fallax* (Schindler) Yang et Huang; = *P. fallax* (Schindler) C. Chen et X. J. Cui].

iii. subsp. *oxyphyllum* (DC.) H. Ohashi [= *P. podocarpum* var. *oxyphyllum* (DC.) Yang et Huang].

a. var. *oxyphyllum*: Fl. Taiwan 2nd ed. 3: pl. 127; [*Desm. racemosum* (Thunb. ex Murray) DC.: Icon. Corm. Sin. 2: f. 2634].

b. var. *mandshuricum* Maxim.

iv. subsp. *szechuenense* (Craib) H. Ohashi, **stat. nov.** [= *Desm. podocarpum* var. *szechuenense* Craib in Sargent, Pl. Wilson. 2: 104 (1914); H. Ohashi in Ginkgoana 1: 153 (1973); = *Desm. szechuenense* (Craib) Schindler: Icon. Corm. Sin. 2: f. 2635; = *P. podocarpum* var. *szechuenense* (Craib) Yang et Huang]: endemic to Yunnan, Sichuan, Guizhou, Hunan, Hubei, and Shaanxi.

Fruiting pedicels of *Desm. podocarpum* subsp. *szechuenense* are usually longer than those of subsp. *oxyphyllum* (about 5 mm long against 4 mm long or less in the latter). Based on differences in morphology, habitat, and distribution between the two subspecies, the new status for subsp. *szechuenense* is thought to be appropriate in comparison with other subspecies within *Desm. podocarpum*.

24. *Desm. praestans* Forrest [= *Desm. yunnanense* subsp. *praestans* (Forrest) H. Ohashi]: endemic to Yunnan and Sichuan.

25. *Desm. renifolium* (L.) Schindler: Yunnan, Hainan, and Taiwan.

26. *Desm. repandum* (Vahl) DC. [= *P. repandum* (Vahl) Yang et Huang]: Yunnan.

27. *Desm. rubrum* (Lour.) DC.: Hainan and Guangdong.

28. *Desm. sequax* Wall.: Fl. Taiwan 2nd ed. 3: pl. 129 [*Desm. sinuatum* (Miq.) Bl. ex Baker: Icon. Corm. Sin. 2: f. 2624].

29. *Desm. stenophyllum* Pamp.: Li in Vascular Pl. Hengduan Mts. 1: 982 (1993) [= *Desm. elegans* subsp. *stenophyllum* (Pamp.) H. Ohashi]: endemic to Yunnan.

This species is rare and endemic to Yunnan, and similar to *Desmodium elegans* which grows commonly in temperate regions and is distributed widely from Afghanistan, NW. India, Himalayas to Central China. The characteristic features of this species are narrowly lanceolate or lanceolate leaflets and glabrous pods. Judging from the labels of specimens of *Desm. stenophyllum* so far examined, the plant seems to grow by streams. It must be a rheophyte, and supposed to be evolved from *Desm. elegans*.

30. *Desm. strigillosum* Schindler [= *Desm. pendenticarpum* C. Z. Gao et Q. R. Lai in Bull. Bot. Res. 9 (4): 41 (1989), **syn. nov.** Lectotype (here designated); China. Guangxi: Nanning, hillside, alt. 110 m. Q. R. Lai 78556 (Herb. Guangxi Inst. Trad. Med. Pharm. Consev.): Guangxi. New to the flora of China.

This species has been known to occur in Burma, Laos, Cambodia and Vietnam (Ohashi 1973). *Desmodium pendenticarpum*, described from Nanning in Guangxi, southern China, is identical with *Desm. strigillosum*. As two type specimens are designated by the authors, one of them, Q. R. Lai 78556 which was designated as *typus fructus*, is selected as the lectotype here.

31. *Desm. styracifolium* (Osbeck) Merr.: Icon. Corm. Sin. 2: f. 2630: Yunnan, Guangxi, Sichuan, and Hainan.

32. *Desm. triflorum* (L.) DC.: Icon. Corm. Sin. 2: f. 2632: Fl. Taiwan 2nd ed. 3: pl. 130.

33. *Desm. velutinum* (Willd.) DC.

i. subsp. *velutinum*: Icon. Corm. Sin. 2: f. 2629; Fl. Taiwan 3: pl. 579.

ii. subsp. *longibracteatum* (Schindler) H. Ohashi: Yunnan and Guizhou.

34. *Desm. williamsii* H. Ohashi: Fl. Xizang 2: f. 301 [= *P. williamsii* (H. Ohashi) Yang et Huang; = *Desm. williamsii* subsp. *magnibracteatum* H. Ohashi; = *Desm. williamsii* var. *magnibracteatum* (H. Ohashi) P. C. Li, Vasc. Pl. Hengduan Mts. 1: 985 (1993)]: Yunnan and Sichuan.

35. *Desm. yunnanense* Franch.: endemic to Yunnan and Sichuan.

a. var. *yunnanense*.

b. var. *rockii* (Schindler) Yang et Huang [= *Desm. rockii* Schindler: H. Ohashi in Hara, Fl. East. Himalaya 2: 301 (1971)]: endemic to Yunnan and Sichuan.

36. *Desm. zonatum* Miq.: Yunnan, Guangxi, Hainan, Guizhou, and Taiwan.

## DICERMA

*Dicerma* DC.: H. Ohashi in Ginkgoana 1: 251 (1973); Adv. Leg. Syst. 1: 299 (1981).

1. *Dic. biarticulatum* (L.) DC. [= *Desm. biarticulatum* (L.) F.v. Muell.]: Hainan.

## PHYLLODIUM

*Phyllodium* Desv.: H. Ohashi in Ginkgoana 1: 260 (1973); Adv. Leg. Syst. 1: 299 (1981).

1. *P. elegans* (Lour.) Desv. [= *Desm. elegans* (Lour.) Benth. (1861), non DC. (1825); = *Desm. blandum* van Meeuwen]: Guangxi, Hainan, Guangdong, Fujian, and Hongkong.

2. *P. kurzianum* (O. Kuntze) H. Ohashi [= *P. kurzii* (Craib) Chun]: Yunnan, Guangxi and Hainan [Voucher specimen: HAINAN Sanya City: Licai; west slope of Fujiangling, alt. 250–380 m., Tateishi, Xing, Nemoto

and Ye 1025004 (TUS and IBSC)].

In China, this species was recorded first by Chun in 1940 from Guangxi Province; the second was done by Ohashi (1973) from Yunnan; and this is the third from China but first from Hainan.

3. *P. longipes* (Craib) Schindler: Yunnan, Guangxi, Hainan, and Guangdong.

4. *P. pulchellum* (L.) Desv.: Fl. Taiwan 3: pl. 627 [= *Desm. pulchellum* (L.) Benth.: Icon. Corm. Sin. 2: f. 2620].

### TADEHAGI

**Tadehagi** H. Ohashi in *Ginkgoana* 1: 280 (1973); *Adv. Leg. Syst.* 1: 299 (1981).

1. *T. pseudotriquetrum* (DC.) H. Ohashi, **stat. nov.** [= *Desm. pseudotriquetrum* DC. in *Ann. Sci. Nat. Paris* 4: 100 (1825); = *Pteroloma pseudotriquetrum* (DC.) Schindler; = *Desm. triquetrum* subsp. *pseudotriquetrum* (DC.) Prain; = *Pteroloma triquetrum* subsp. *pseudotriquetrum* (DC.) H. Ohashi; = *T. triquetrum* subsp. *pseudotriquetrum* (DC.) H. Ohashi: Fl. Taiwan 3: pl. 650]; Yunnan, Sichuan, Guangxi, and Taiwan.

This and the following species are allopatric in distribution. Morphological differences between the two species seem to be sufficient for separation in the specific status.

2. *T. triquetrum* (L.) H. Ohashi [= *Desm. triquetrum* (L.) DC.: Icon. Corm. Sin. 2: f. 2621]; Yunnan, Guangxi, Hainan, Guangdong, Fujian, and Hongkong.

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### References

- Bentham G. 1861. *Flora Hongkongensis*. London. (*Desmodium* pp. 82–85).
- Chun W. Y. 1940. Additions to the flora of Kwangtung and south-eastern China III. *Sunyatsenia* 4: 169–271.
- Chun W. Y. and Chang C. C. 1965. *Flora Hainanica* vol. 2, 470+26 pp. Science Press, Peking. (*Desmodium* pp. 270–281).
- Cui X. J., Chen C. and Wu C. Y. 1987. New taxa of the genus *Podocarpium* and a new name of *Desmodium*. *Acta Bot. Yunnan.* 9: 305–308.
- Forbes F. B. and Hemsley W. B. 1886–88. An enumeration of all the plants known from China proper, Formosa, Hainan, Corea, the Luchu Archipelago, and the island of Hongkong, together with their distribution and synonymy. *J. Linn. Soc. Bot.* 23: 1–521. (1887. *Desmodium* pp. 171–177).
- Hemsley W. B. 1905. List of the genera and species discovered in China since the publication of the various parts of the "Enumeration," from 1886 to March 1904, alphabetically arranged. *J. Linn. Soc. Bot.* 36: 451–530.
- Holmgren P. K., Holmgren N. H. and Barnett L. C. 1990. *Index Herbariorum*, 8th ed. *Regnum Vegetabile* v. 120. New York Botanical Garden, New York, U.S.A.
- Huang T. C. and Ohashi H. 1993. Leguminosae. In: *Flora of Taiwan*, second edition. vol. 3: 160–396. National Taiwan University, Taipei.
- Ohashi H. 1973. The Asiatic Species of *Desmodium* and Its Allied Genera (Leguminosae). *Ginkgoana* 1, 318 pp. Academia Sci. Book Inc., Tokyo.
- 1985. Specific diversity in *Desmodium* subgenus *Desmodium* (Leguminosae). In: Hara H. (ed.) *Origin and Evolution of Diversity in Plant and Plant Communities*. pp. 176–187. Academia Sci. Book. Inc., Tokyo.
- 1991. Taxonomic studies in *Desmodium heterocarpon* (L.) DC. (Leguminosae). *J. Jpn. Bot.* 66: 14–25.
- 1994. *Desmodium*. In: Dy Phon, P., Ohashi, H. et Vidal, J. E. *Legumineuses–Desmodiées. Flore du Cambodge du Laos et du Vietnam* 27. pp. 62–142. Museum National d'Histoire Naturelle, Laboratoire de Phanerogamie, Paris.
- 1995a. The taxonomic position of two taxa of *Podocarpium* (Leguminosae) from China. *J. Jpn. Bot.* 70: in press.
- 1995b. Two new subspecies of *Desmodium laxum* (Leguminosae) from China. *J. Jpn. Bot.* 70: in press.
- , Nemoto T, Endo Y. and Huang T. C. 1985. Taxo-

- onomic studies on the Leguminosae of Taiwan II. Sci. Rep. Tohoku Univ. 4th ser. (Biol.) **39**: 53–66.
- , Polhill R. M. and Schubert B. G. 1981. Desmodieae. In: Polhill R. M. and Raven P. H. (eds.), *Advances in Legume Systematics. Part 1*, pp. 292–300. Royal Botanic Gardens, Kew, England.
- , Tateishi Y., Huang T. C. and Chen T. T. 1984. Taxonomic studies on the Leguminosae of Taiwan I. Sci. Rep. Tohoku Univ. 4th ser. (Biol.) **38**: 277–334.
- , ———, Nemoto T. and Endo Y. 1988. Taxonomic studies on the Leguminosae of Taiwan III. Sci. Rep. Tohoku Univ., 4th ser. (Biol.) **39**: 191–248.
- Schindler A. K. 1928. Die Desmodiinen in der botanischen Literatur nach Linne. Fedde, Rep. Beih. **49**: 1–371.
- Wang W. T. (ed.) 1993. *Vascular plants of the Hengduan Mountains. vol. 1*, Science Press. (in Chinese).
- Wu C. Y. (ed.) 1984. *Index florum Yunnanensis. vol. 1*, 1072 pp. People's Publishing House, Yunnan. (in Chinese).
- (ed.) 1985. *Flora Xizangica. vol. 2*. 956 pp. (in Chinese).
- Wu T. L. (ed.) 1994. *A checklist of flowering plants of islands and reefs of Hainan and Guangdong Province*. 334 pp. Science Press. (in Chinese).
- Yang Y. C. and Huang P. H. 1979. *Podocarpium* (Benth.) Yang et Huang – Genus novum familiae Leguminosarum. Bull. Bot. Lab. North-East. Forest. Inst. **4**: 1–15. (in Chinese).

### 大橋広好：中国のヌスビトハギ属とその近縁属（マメ科）の種類

ヌスビトハギ属とその近縁属に属する中国（中国大陆と台湾などを含む沿岸諸島の地域をここでは中国と呼ぶ）の種、亜種および変種について全体を再検討した結果、6属50種12亜種5変種を認めることができた。中国のフロラに新たに加わったものは *Dendrolobium rugosum* (Prain) Schindler および *Desmodium strigillosum* Schindler であった。約100年前に Forbes and Hemsley (1887) が、ここでいう中国に加えて朝鮮半島と琉球列島までを含む地域の植物目録を作り上げ、後に Hemsley (1905) が一部を追加しているが、この中に含まれるヌスビトハギ属とその近縁属を整理してまとめてみると、当時は合計5属28種が知られていた。

今日では約2倍に増加したことになる。

今回の結果の内訳はヌスビトハギ属（36種12亜種5変種）、マイハギ属（2種）、ナハキハギ属（5種）、ウチワツナギ属（4種）、タデハギ属（2種）、および *Dicerma* 属（1種）であった。

本文中のリストでは、各分類群の正名を挙げ、次に中国国内の地方フロラや図鑑で使われているその分類群のシノニムをカッコ内に併記した。また、中国の材料で描かれたその種類の代表的な図の文献を加えた。中国の固有種と中国内で狭い範囲に分布の限られている種については省単位で、その分布域を示した。