

A PROVISIONAL CHECKLIST OF THE ORCHIDS OF GUIZHOU PROVINCE, CHINA

ZHANHUO TSI

Institute of Botany, Academia Sinica, Beijing, China¹
Mercer Fellow, Arnold Arboretum, Harvard University, Cambridge, Massachusetts

ABSTRACT. Guizhou² is situated in south central China, lying between 103°43' and 109°30'E longitude and 24°50' and 29°10'N latitude. The province covers an area of approximately 174,000 square kilometers and has a complex topography and varied climate. The diversity of habitats and the equable climate in Guizhou has resulted in a flora comparable in richness and diversity to Yunnan, Sichuan and Guangxi. In the *Flora of Guizhou*, the Orchidaceae form one of the largest groups of plants, as the family does in the flora of China. The orchids of Guizhou, however, are poorly known and no comprehensive assessment of their diversity has been compiled. This paper was prepared using collections in the Arnold Arboretum Herbarium (A), Oakes Ames Orchid Herbarium (AMES), the Gray Herbarium (GH), and the herbaria of the Institute of Botany in Beijing (PE), the Institute of Biology of Guizhou (HGAS), the Institute of Traditional Chinese Medicine, Guizhou (GZTM), the New York Botanical Garden (NY) and the U.S.A. National Herbarium (US). The checklist is also based on field work in Guizhou and reports in literature housed in the libraries of the above institutions. This paper is an account of all known species of Orchidaceae in Guizhou Province, China based on the material found both in herbaria and literature. Guizhou contains 194 species and 2 varieties of orchids belonging to 69 genera distributed among 25 subtribes and two subfamilies. Of them 63 species are new records for Guizhou indicated in the text by an asterisk (*); three previously accepted species are reduced to synonyms. The checklist will serve as a basis for further exploration in the province and will also be useful in preparing the treatments for the Orchidaceae for the forthcoming *Flora of Guizhou* and *Flora Republicae Popularis Sinicae*.

THE ORCHIDS OF GUIZHOU PROVINCE

- **Acampe rigida* (Buch.-Ham. ex J.E.Sm.) P.F.Hunt, Kew Bull. 24:98. 1970.
Aerides rigida Buch.-Ham. ex J.E.Sm., Cyclopaedia 39. 1819.
Vanda multiflora Lindl., Coll. Bot. 8: t. 38. 1826.
Acampe multiflora (Lindl.) Lindl., Fol. Orchid. 4:1. 1853.

Luodian Xian: *Y.T.Chang & C.S.Chang* 563 (PE). Guangdong, Hongkong (type of *V. multiflora*), Hainan, Guangxi, Yunnan; widespread from Africa (Madagascar) through Sri Lanka, NW Himalaya, Nepal (type) to NE India, south-eastwards through Indochina to Malaysia.

More synonyms have been proposed by earlier authors. I have here only listed Chinese synonyms referring this species.

- **Aerides rosea* Lindl. & Paxt., Paxton's Fl. Gard. 2:109, t. 60. 1852.

Anlong Xian: *Y. T. Chang & C. S. Chang* 3858 (HGAS, PE). Guangxi, Yunnan; NE India (type), Burma, Thailand, Laos, Vietnam.

**Amitostigma gracile* (Bl.) Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:93. 1919.

Mitostigma gracile Bl., Mus. Bot. 2:190. 1856.

Jiangkou Xian, Fanjingshan: Sino-Amer. *Guizhou Bot. Exped.* 382 (HGAS). Kaili Xian: *Qiannan Team* 2192 (HGAS, PE). Widely distributed from the north to the south of Mainland China; Japan (type), Korea.

A. *hemipilioides* (Finet) Tang & Wang, Bull. Fan. Mem. Inst. Biol. Bot. 7:5. 1936.

Gymnadenia hemipilioides Finet, Rev. Gén. Bot. 13:515. Pl. 16. 1901.

Pingba Xian (Ganpin): *Bodinier & Martin* 1612 (type, P). Without precise locality: *Cavalerie* 3024A (P).

Androcorys ophioglossoides Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:53. 1919.

Guizhou (without precise locality): *Esquirol* (type, B). Shaanxi.

**Anoectochilus elwesii* (C.B.Clarke ex Hook.f.) King & Pantl., Ann. Roy. Bot. Gard. (Calcutta) 8:297. 1898.

Odontochilus elwesii C.B.Clarke ex Hook.f., Fl. Brit. India 6:100. 1894.

Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped.* 15 (HGAS), 406 (A, HGAS). Rongjiang Xian: *Qiannan Team* 2952 (PE), Z. P. Jien et

¹ Corresponding Address.

² The province name "Guizhou" has been spelled by different authors as "Ghuizhou," "Kweitshou," "Kouytcheau" and "Kweichou" in earlier publications.

al. 51698 (HGAS). Anlong Xian: *sin.-coll.* 1322 (HGAS). Sichuan (fide Seidenfaden); Sikkim, Bhutan, NE India (type), Burma, Thailand, Vietnam.

****A. moulmeinensis*** (Parish & Rchb.f.) Seidenf., Bot. Tidsskr. 66:307. 1971.

Etaeria moulmeinensis Parish & Rchb.f., Trans. Linn. Soc. London 30:142. 1874.

Anoectochilus multiflorus Rolfe ex Downie, Bull. Misc. Inform.: 412. 1925.

Odontochilus multiflorus (Rolfe ex Downie) Tang et Wang, Bull. Fan. Mem. Inst. Biol. 7:7. 1936.

O. moulmeinensis (Parish & Rchb.f.) Tang & Wang, Acta Phytotax. Sin. 1:70. 1951.

Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped.* 301, 576 (A, HGAS, PE). Yunnan; Burma (type, K), Thailand (type of *Anoectochilus multiflorus*).

****Anthogonium gracile*** Lindl., Gen. Sp. Orchid. Pl.:425. 1840.

A. corydaloides Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:66. 1919.

Xingren Xian: *Y. T. Chang & C. S. Chang* 8507 (PE). Guangxi, Yunnan (type of *A. corydaloides*), Xizang; Nepal (type), Sikkim, Bhutan, Burma, Thailand, Laos, Vietnam.

The flower color is variable even in the same population.

****Arundina graminifolia*** (D.Don) Hochr., Bull. New York Bot. Gard. 6:270. 1910.

Bletia graminifolia D.Don. Prodr. Fl. Nepal: 29. 1825.

Arundina chinensis Bl., Bijdr.: 402. 1825.

A. bambusifolia Lindl., Gen. Sp. Orchid. Pl.: 125. 1832.

A. stenopetala Gagnep., Bull. Soc. Bot. France 79:32. 1932.

Limodorum graminifolium (D.Don) Ham. ex Hook.f., Fl. Brit. India 5:857. 1890.

Xinyi Xian: *C. S. Chang et al.* 8531 (HGAS). Xingren Xian: *Y. T. Chang* 7858 (PE), *Anshun Team* 551 (PE), *Guizhou Team* 18531 (PE).

Rongjiang Xian: *Z. P. Jien et al.* 51523 (PE). Lu-

odian Xian: *Y. Tsiang* 7240 (PE). Dushaon Xian:

Libo Team 1100 (PE). Longli Xian: *Cavalerie*

3986 (P). Without precise locality: *Hand.-Mazz.*

10834 (W). Zhejiang, Jiangxi, Fujian, Taiwan,

Hunan, Guangdong, Hongkong, Hainan, Gu-

angxi, Sichuan, Yunnan; from Sri Lanka through

Nepal (types of *B. graminifolium*, *L. graminifolium* and *A. bambusifolia*) to NE India and Ja-

pan (Ryukyu), southeastwards through Vietnam

(type of *A. stenopetala*), Cambodia to Indonesia

and Tahiti.

This is an extremely polymorphous species.

****Bletilla formosana*** (Hayata) Schltr., Feddes Repert. Spec. Nov. Regni Veg. 10:256. 1911.

Bletia formosana Hayata, Mat. Fl. Formos.: 323. 1911.

Weining Xian: *Bijie Team* 223 (PE). Libo Xian: *Libo Team* 1119 (PE, HGAS). Wengan Xian: *Libo Team* 2075 (PE). Anlong Xian: *Guizhou Team* 3314, 5168, 4245 (PE), *Y. T. Chang & C. S. Chang* 3103, 5863 (PE). Xingren Xian: *Guizhou Team* 6763 (PE). S. loc.: *Cavalerie* 120 (P) *M. Reauvrais* 82a (NY). Shaanxi, Taiwan (type), Guangxi, Sichuan, Yunnan.

****B. ochracea*** Schltr., Feddes Repert. Spec. Nov. Regni Veg. 12:105. 1913.

Wuchuan Xian: *P. C. Tsoong* 656 (PE). Kaili Xian: *Qiannan Team* 1253 (HGAS, PE). Leishan Xian: *Z. P. Jien et al.* 50036 (HGAS). Pingtang Xian: *s. coll.* 241, 326 (HGAS). Shaanxi, Gansu, Hunan, Hubei, Sichuan, Yunnan (type).

B. striata (Thunb.) Rchb.f., Bot. Zeitung (Berlin). 36:75. 1878.

Limodorum striatum Thunb., Fl. Jap.: 28. 1784.

Kaili Xian: *Y. T. Chang & C. S. Chang* 1175 (PE). Zheng'an Xian: *P. C. Tsoong* 570 (PE). Jiangkou Xian, Fanjingshan: *Sino-Amer. Guizhou Bot. Exped.* 733 (HGAS, PE). Hebei, Shaanxi, Gansu, Henan, Hunan, Anhui, Zhejiang, Jiangxi, Fujian, Guangdong, Guangxi, Sichuan, Yunnan; Japan (type), Korea.

B. yunnanensis Schltr., Feddes Repert. Spec. Nov. Regni Veg. 19:343. 1922.

Anlong Xian: *C. S. Chang et al.* 5314 (HGAS). Without precise locality: *Hand.-Mazz.* 10670 (W). Shaanxi, Taiwan, Guangxi, Sichuan, Yunnan (type).

Brachycorythis galeandra (Rchb.f.) Summerh., Kew Bull.:241. 1955.

Plantanthera galeandra Rchb.f., Linnaea 25: 226. 1852.

P. championi Lindl., J. Bot. 7:37. 1855.

Phyllocephalum championi (Lindl.) Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:119. 1919.

Ph. galeandra (Rchb.f.) Hand.-Mazz., Akad. Wiss. Wien Sitzungsber., Math.-Naturwiss. Kl., Abt. 1, 62:253. 1925.

Anlong Xian: *Guizhou Team* 4943, 5995 (PE). Xingyi Xian: *Guizhou Team* 6536 (PE). E. Guizhou: *Hand.-Mazz.* 10790, 10812 (W). Taiwan, Hunan, Guangdong, Hongkong (types of *Platanthera galeandra* and *P. championi*), Guangxi; W Himalaya, Nepal, Burma, Vietnam.

B. henryi (Schltr.) Summerh., Kew Bull.:238. 1955.

Phyllumphax henryi Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:119. 1919.

Lofou Xian: *Cavalerie* 3414 (K). Rongjiang Xian: s. coll. 74-823 (HGAS). Dushan Xiam: *Libo Team* 1093 (HGAS). Yunnan (type); Burma, Thailand.

***Bulbophyllum amplifolium** (Rolfe) N.P.Balak. & S.Chowdhury, Bull. Bot. Surv. India 9: 89, fig. 14. 1967.

Cirrhopetalum amplifolium Rolfe, Notes Roy. Bot. Gard. Edinburgh 36:21, t. 10. 1913.

Huishui Xian: s. coll. et s. n. Yunnan (type), Xizang; Bhutan, NE India, Burma.

B. andersonii (Hook.f.) J.J.Sm., Bull. Jard. Bot. Buitenzorg ser. 2, 8:22. 1912.

Cirrhopetalum andersonii Hook.f., Fl. Brit. India 5:777. 1890.

Xiangyi Xian: *Anshun Team* 837 (PE). Huishui Xian: s. loc., s. coll. 73-191 (SCBI). Without precise locality: S. W. Teng 4004 (PE). Guangxi, Sichuan, Yunnan; Sikkim (type), NE India, Burma, Vietnam.

B. kwangtungense Schltr., Feddes Repert. Spec. Nov. Regni Veg. 19:381. 1924.

Rongjiang Xian: *Qianna Team* 3414 (HGAS. PE). Zhejiang, Jiangxi, Fujian, Hubei, Hunan, Guangdong (type), Guangxi, Yunnan.

***B. sp.**

Jiangkou Xian, Fanjingshan: Sino-Amer. Guizhou Bot. Exped. 298 (HGAS, PE).

From the one or two capsules on short peduncle, it appears likely that this collection should be placed in *B. inconspicuum* Maxim., a species occurring in Japan.

***Bulleyia yunnanensis** Schltr., Notes Roy. Bot. Gard. Edinburgh 24:108, t. 82. 1912.

Luodian Xian: s. coll. 476 (HGAS). Yunnan (type).

***Calanthe alismaefolia** Lindl., Fol. Orchid. Calanthe: 8. 1854.

C. nigropuncticulata Fukuyama, Bot. Mag. (Tokyo) 48:437. 1934.

Rongjiang Xian: s. coll. 74-759, 74-812 (HGAS). Taiwan (type of *C. nigropuncticulata*), Hubei, Sichuan, Yunnan, Xizang; Sikkim (type), NE India, Japan.

***C. arcuata** Rolfe, Bull. Misc. Inform.:196. 1896.

C. caudatilabella Hayata, Icon. Pl. Formosan. 4: 66, t. 13. 1914. syn. nov.

Guizhou Xian: s. loc., s. coll. et s. n. Shanxi,

Gansu, Taiwan (type of *S. caudatilabella*), Hubei (type), Yunnan.

I have studied the type specimen of *C. arcuata* and the specimens of *C. caudatilabella* from Taiwan and believe they are identical.

C. davidii Franch., Nouv. Arch. Mus. Hist. Nat., ser. 2, 10:85. 1888.

C. ensifolia Rolfe, Bull. Misc. Inform.: 197. 1896.

C. matsudai Hayata, Icon. Pl. Formosan. 9:112, fig. 38-39. 1920.

Songtao Xian: *Quianbei Team* 1509 (PE).

Huangping Xian: *Qianna Team* 2572 (PE). Du-yun Xian: Y. Tsing 5770 (PE). Jiangkou Xian: *Sino-British Guizhou Bot. Exped. F.* (PE). Ping-fa Xian: S. W. Teng 880. Anshun (Ganchouen) Xian: *Cavalerie* 7466, 7468 (P). Without precise locality: *Guizhou Team* 3048 (PE). Shaanxi, Gansu, Taiwan (type of *C. matsudai*), Hubei, Hunan, Sichuan (type), Yunnan, Xizang.

This is an extremely polymorphous species; its flower color and shape of lip are variable.

C. discolor Lindl., Sert. Orchid.: t. 9. 1838.

C. esquirolii Schltr., Feddes Repert. Spec. Nov. Regni Veg. 12:108. 1913.

C. cheniana Hand.-Mazz., Oesterr. Bot. Z. 85: 228, fig. 1. 1936.

Guanling Xian: S. W. Teng 1715 (PE). Guiyang Xian: *Qianna Team* 014 (PE). S. loc.: *Esquierol 2016, 2066* (type of *C. esquirolii*, B), s. coll. 33 (GZTM). Rongjiang Xian: *Guizhou Medicinal Herbs Team* 67 (GZTM). Zunyi Xian: D. P. Cao 001 (GZTM). Jiangsu (type of *C. cheniana*), Hubei, Guangdong; Japan (type).

***C. fargesii** Finet, Bull. Soc. Bot. France 45: 434, t. 9 (fig. 1-8). 1899.

Nayong Xian: *Bijie Team* 522 (PE). Gansu, Sichuan (type).

C. hamata Hand.-Mazz., Symb. Sin. 7:1357. 1936.

Leishan Xian: P. Z. Jian et al. 50321 (HGAS), *Qiannan Team* 889 (HGAS, PE). Kaili Xian: *Qiannan Team* 1415, 1886 (PE). Yinjiang Xian: *Qianbei Team* 439 (PE). Leishan Xian: P. Z. Jian et al. 50431 (HGAS). Anhui, Zhejiang, Jiangxi, Fujian (type of *C. hamata*), Hunan, Hubei, Guangdong, Guangxi, Sichuan, Yunnan.

C. mannii Hook.f., Fl. Brit. India 5:850. 1890.

C. pusilla Finet, Bull. Soc. Bot. France 46:346, t.10. 1899.

Anshun Xian: *Cavalerie* 4055 (type of *C. pusilla*, P), S. W. Teng 90131 (AMES, SCBI). Jiangxi, Hubei, Guangxi, Sichuan, Yunnan, Xizang; India (type), Nepal, Sikkim, Bhutan.

- C. odora** Griff., Not. Pl. Asiat. 3:365. 1851.
C. angusta Lindl., Fol. Orchid. Calanthe: 7. 1854. Syn. nov.
C. angusta Lindl. var. *laeta* Hand.-Mazz., Akad. Wiss. Wien Sitzungsber., Math.-Naturwiss. Kl., Abt. 1, 58:95. 1921. Syn. nov.
C. shweliensis W.W.Sm., Notes Roy. Bot. Gard. Edinburgh 13:193. 1921. Syn. nov.

Anlong Xian: *Guizhou Team* 5271 (HGAS, PE). Dushan Xiam: *Libo Team* 1096 (HGAS, PE). Loudian Xian: *Cavalerie* 3413 (K). S. loc.: *Hand.-Mazz.* 10707 (type of *C. angusta* var. *laeta*), 10780 (W). Guangxi, Yunnan (type of *C. shweliensis*); Sikkim, Bhutan, Bengal, NE India (types of *C. odora* and *C. angusta*), Burma, Vietnam, Cambodia, Thailand.

The species differs from *C. triplicata* in subtruncate petals at the apices and in the shorter spur. After comparing their original descriptions and type specimens, I believe they should be conspecific.

- ***C. petelotiana** Gagnep., Bull. Soc. Bot. France 79:163. 1932.
Chishui Xian: *S. Q. Chang* 10 (GZTM). Yunnan; Vietnam (type).
C. reflexa (Kuntze) Maxim., Bull. Acad. Imp. Sci. Saint-Pétersbourg 18:68. 1873.
Alismorchis reflexa Kuntze, Rev. Gén. Pl. 2:650. 1891.
Calanthe similis Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:68. 1919.

Rongjiang Xian: *Qianna Team* 2978, 3175 (HGAS, PE). Anlong Xian: *s. coll.* 1314 (HGAS). Jiangkou Xian, Fanjingsha: *Sino-Amer. Guizhou Bot. Exped.* s. n. (PE). Anhui, Zhejiang, Jiangxi, Taiwan, Hunan, Hubei, Guangdong, Guangxi, Sichuan, Yunnan (type of *C. similis*); Japan (type), Korea.

- C. sacculata** Schltr., Feddes Repert. Spec. Nov. Regni Veg. 67:241. 1919.

Luodian Xian: *Esquirol* (type, B).

- C. tricarinata** Lindl., Gen. Sp. Orchid. Pl.:252. 1833.
C. megalopha Franch., Nouv. Arch. Mus. Hist. Nat., ser. 2, 10:85. 1888.
C. undulata Schltr., Notes Roy. Bot. Gard. Edinburgh 5:110, t. 84. 1912.
C. lamellata Hayata, Icon. Pl. Formosan. 4:70, fig. 33. 1914.

Yinjing Xian: *S. C. Chang et al.* 40616 (HGAS), *Qiannan Team* 379,779 (HGAS, PE). Kaili Xian: *Qiannan Team* 1886 (PE), 594 (HGAS, PE), *Qianbei Team* 434, 2084 (PE). Shaanxi, Gansu, Taiwan (type of *C. lamellata*), Hubei, Sichuan, Yunnan (types of *C. megalopha*

and *C. undulata*), Xizang; Kashmir, Nepal (type), Sikkim, Bhutan, NE India.

- ***C. trifida** Tang & Wang, Acta Phytotax. Sin. 1:45. 1951.

Jiangkou Xian: *S. C. Chang et al.* 400498 (HGAS). Yinjiang Xian: *S. C. Chang* 401370 (HGAS). Yunnan (type, PE).

- C. triplicata** (Willemet) Ames, Philipp. J. Sci. 2:326. 1907.
Orchis triplicata Willemet, Ann. Bot. (Usteri) 18:52. 1796.

Kaiyang Xian: *Cavalerie* 3362 (K, P). Luodian Xian: *Cavalerie* 7545 (K, P). Anlong Xian: *s. coll.* 1214 (HGAS). Wangmo Xian: *s. coll.* 972 (HGAS). Fujian, Taiwan, Guangdong, Hainan, Guangxi, Yunnan; widespread in India, Japan, Philippines, Indochina, Indonesia (type), Australia and the Pacific Islands.

- ***C. tsoogiana** Tang & Wang, Acta Phytotax. Sin. 1:88. 1951.

Guiyang (Lou Tsong-kouan): *Esquirol* 2010 (P). Zhenfeng Xian: *Cavalerie*, s. n. (P). Without precise locality: *Cavalerie* 7464 (K). Zhejiang (type, PE).

- C. tsoogiana** Tang & Wang var. *guizhouensis* Tsi, Acta Phytotax. Sin. 23(5):386. 1985.

Jiangkou Xian: *C. S. Chang et al.* 400104 (HGAS, PE). S. loc.: *S. W. Teng* 90131 (type, PE; isotype, A).

- Cephalanthera erecta** (Thunb.) Bl., Coll. Orchid. 188, t.65. 1859.

Serapias erecta Thunb., Fl. Jap. 27. 1784.

Leishan Xian: *Qiannan Team* 975 (PE). Without precise locality: *Cavalerie* 3848 (P). Shandong, Hubei, Sichuan, Yunnan, Japan (type), Korea.

- C. falcata** (Thunb.) Bl., Coll. Orchid. 187, t. 68, fig. 1. 1858.

Serapias falcata Thunb., Fl. Jap. 28. 1784.

Kaili Xian: *Qiannan Team* 1034 (HGAS, PE). Jiangkou Xian: *J. M. Chenet et al.* 120 (GZTM), *C. S. Chang* 401827, 401829, 400759 (HGAS, PE). Leishan Xian: *Z. P. Jien et al.* 50710 (HGAS). Henan, Jiangsu, Anhui, Zhejiang, Hubei, Hunan, Sichuan; Japan (type), Korea.

- ***C. longifolia** (L.) Fritsch., Oesterr. Bot. Z. 38: 81. 1888.

Serapias helleborine L. var. *longifolia* L., Sp. Pl. 950. 1753.

Anshun Xian: *S. W. Teng* 190 (PE). Leishan Xian: *Z. P. Jien et al.* 50710 (PE). Shaanxi, Gansu, Henan, Sichuan, Yunnan, Xizang; wide-

spread in SW, C & E Asia, Euro-Sib., Mediterranean area and Europe (type). Described from Europe (Hb. Linn. 1057/4, photo).

****Chamaegastrodia poilanei*** (Gagnep.) Seidenf. & A.N.Rao, Nordic J. Bot. 14(3):297. 1994.
Evrardia poilanei Gagnep., Bull. Mus. Hist. Nat. (Paris), ser. 2, 4(5):596. 1932.

Luodian Xian: *C. S. Chang et al.* 291 (HGAS). Yunnan, Xizang; Japan, Vietnam (type), Thailand.

Cheirostylis chinensis Rolfe, Ann. Bot. (London) 9:158. 1895.

C. josephi Schltr., Feddes Repert. Spec. Nov. Regni Veg. 17:65. 1921.

Suiyang Xian: *Cavalerie* 4349 (K). Xingyi Xian: *Cavalerie* 7564 (K). Huishui Xian: *Esquirrol* 2114 (P). S. loc.: *Esquirrol* 3206 (type of *C. josephi*, B). Taiwan (type), Hongkong.

C. yunnanensis Rolfe, Bull. Misc. Inform.: 201. 1896.

Luodian Xian: *Qianna Team* 314, 347, 681 (PE). Guangdong, Hainan, Guangxi, Yunnan (type).

Cleisostoma fuerstenbergianum Kraenzl., Feddes Repert. Spec. Nov. Regni Veg. 7:39. 1908.

Sarcanthus flagellaris Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:76. 1919.

Saccolabium flagelliformis Rolfe ex Downie, Bull. Misc. Inform.: 393. 1925.

Cleisostoma flagelliforme (Rolfe ex Downie) Garay, Bot. Mus. Leafl. 23(4):171. 1972; Tsi, Icon. Corm. Sin. 5:761. 1976 (excl. Hainan specimens).

Xingyi Xian: *Guizhou Team* 6999 (HGAS, PE). Luodian Xian: *s. coll.* 710 (HGAS). Yunnan (type of *S. flagellaris*); Vietnam, Laos, Thailand (types of *C. fuerstenbergianum* and *S. flagelliformis*).

****C. paniculatum*** (Ker Gawl.) Garay, Bot. Mus. Leafl. 23(4):73. 1972.

Aerides paniculata Ker Gawl., Bot. Reg. 3: t. 220. 1817.

Cleisostoma formosanum Hance, J. Bot. 20:359. 1882.

Sarcanthus fuscomaculatus Hayata, Icon. Pl. Formosan. 4:94, fig. 48. 1914.

Jiangkou Xian: Sino-Amer. Guizhou Bot. Exped. s. n. (PE). Taiwan (types of *S. formosanum* and *S. fuscomaculatus*), Fujian, Guangdong, Hainan, Guangxi, Sichuan, Yunnan; NE India, Thailand. Type from China (without precise locality).

C. rostratum (Lindl.) Garay, Bot. Mus. Leafl. 23(4):174. 1972.

Sarcanthus rostratus Lindl., Coll. Bot. 8: t. 39. 1826.

Cleisostoma fordii Hance, J. Bot. 14:45. 1876. *Sarcanthus fordii* (Hance) Rolfe, J. Linn. Soc., Bot. 366:37. 1903.

Luodian Xian: *Qiannan Team* 787 (HGAS, PE). Hainan, Hongkong (types of *S. rostratus* and *C. fordii*), Guangxi, Yunnan; Vietnam, Laos, Thailand.

****C. williamsonii*** (Rchb.f.) Garay, Bot. Mus. Leafl. 23(4):176. 1972.

Sarcanthus williamsonii Rchb.f., Gard. Chron.: 674. 1865.

S. hongkongensis Rolfe, Bull. Misc. Inform.: 198. 1898.

S. elongatus Rolfe, loc. cit.: 36. 1903.

Cleisostoma elongatum (Rolfe) Garay, Bot. Mus. Leafl. 23(4):172. 1972.

Ceheng Xian: Z. Y. Cao 878 (PE). Guangdong, Hongkong (type of *S. hongkongensis*), Hainan (type of *S. elongatus*), Guangxi, Yunnan; Bhutan, NE India (type of *C. williamsonii*), Burma, Vietnam, Thailand, Malaysia, Indonesia.

****Coelogyne flaccida*** Lindl., Gen. Sp. Orchid. Pl.: 39. 1830.

C. esquirolei Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:60. 1919.

Luodian Xian: *Cavalerie* 3418 (type of *C. esquirolei*, B). S. loc.: *Libo Team* 1072 (HGAS). Yunnan; Nepal (type), NE India, Burma, Laos.

Collabium formosanum Hayata, J. Coll. Sci. Imp. Univ. Tokyo 30:31. 1911.

Tainia chapaensis Gagnep., Bull. Mus. Hist. Nat. (Paris), ser. 2, 4:707. 1932.

T. delavayi Gagnep. loc. cit. 4:708. 1932.

Chrysoglossum chapaense (Gagnep.) Tang & Wang, Acta Phytotax. Sin. 1:38. 1955.

Ch. delavayi (Gagnep.) Tang & Wang, loc. cit. *Collabiopsis formosanum* (Hayata) S.S.Ying, Coloured Ill. Ind. Orch. Taiwan 1:112. 1977.

Jiangkou Xian, Fanjingshan: Sino-Amer. *Guizhou Bot. Exped.* s. n. (PE); *Sino-British Guizhou Bot. Exped.* 0123 (PE). Taiwan (type), Hubei, Guangdong, Guangxi, Yunnan (type of *T. delavayi*); Vietnam (type *T. chapaensis*).

Cremastra appendiculata (D.Don) Makino, Bot. Mag. (Tokyo), 18:24. 1904.

Cymbidium appendiculatum D.Don, Prodr. Fl. Nepal.:36. 1825.

Cremastra wallichiana Lindl., Gen. Sp. Orchid. Pl.:173. 1832.

C. mitrata A.Gray, Mem. Amer. Acad. Arts, n. ser. 6:411. 1859.

C. triloba Hayata, Icon. Pl. Formosan. 2:135. 1912.

Anlong Xian: *Y. T. Chang & C. S. Chang* 2874 (HGAS, PE), 2972 (PE). Kaili Xian: *Qian-nan Team* 1329 (HGAS, PE), 1739 (PE). Zunyi Xian: *Qianbei Team* 281 (PE). Leishan Xian: *Qiannan Team* 890 (PE). Puding Xian: *S. W. Teng* 338 (PE). Shiqian Xian: *s. coll.* 75 (HGAS). Guiding Xian: *Qiannan Team* 138 (HGAS). Without precise locality: *Cavaleria* 3361 (P). Shaanxi, Shanxi, Gansu, Zhejiang, Taiwan (type of *C. triloba*), Guangdong, Sichuan, Yunnan; Nepal (types of *C.appendiculatum* and *C. wallichiana*), Sikkim, Thailand, Japan (type of *C. mitrata*), Korea.

This is a polymorphous species.

Cymbidium bicolor Lindl., Gen. Sp. Orchid. Pl.: 164. 1833.

C. flaccidum Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:267. 1919.

C. pendulum sensu Tsi, Icon. Corm. Sin. 5: 745, t. 8319. 1976, non (Roxb.) Sw.

Anlong Xian: *Guizhou Team* 3267 (HGAS, PE). Without precise locality: *Esquirol* 2728 (type of *C. flaccidum*, B). S. W. Guizhou: *Hand.-Mazz* 10280 (W). Yunnan; Vietnam, Thailand, Philippines, Malaysia, Indonesia, Sri Lanka (type), India.

**C. cyperifolium* Lindl., Gen. Sp. Orchid. Pl.: 163. 1833. Dushan Xian: *Libo Team* 1702, 2074 (PE). Anlong Xian: *Guizhou Team* 4382 (PE). Xingyi Xian: *Anshan Team* 487 (PE). Guangxi, Yunnan; Nepal, Bhutan, NE India (type), Burma, Thailand, Cambodia, Philippines.

C. ensifolium (L.) Sw., Nova Acta Regiae Soc. Sci. Upsal. 6:77. 1799.

Epidendrum ensifolium L., Sp. Pl.: ed. 1:954. 1753.

Wengan Xian: *Libo Team* 2074 (PE). Fujian, Taiwan, Guangdong (type), Hongkong, Yunnan; from Japan (Ryukyu) through Indochina, Thailand, Philippines, Indonesia to New Guinea, from Sri Lanka to S India.

Additional taxa have been referred by some authors to this species as synonyms which I have not been able to confirm.

**C. erythraeum* Lindl., J. Proc. Linn. Soc., Bot. 3:30. 1859.

C. longifolium sensu Lindl., Gen. Sp. Orchid. Pl.:163. 1833.

Anlong Xian: *Guizhou Team* 4382 (PE). Xingyi Xian: *Anshum Team* 487 (PE). Sichuan,

Yunnan, Xizang; Nepal, Sikkim (type), Bhutan, NE India, Burma.

C. floribundum Lindl., Gen. Sp. Orchid. Pl.: 162. 1833.

Kaili Xian: *Qianna Team* 1659 (HGAS, PE), 1975 (HGAS, PE), 3945 (PE). Jiangkou Xian: *C. S. Chang et al.* 400260 (HGAS). Yinjiang Xian: *Z. P. Jien et al.* 30442 (HGAS, PE), 30109 (PE). Rongjiang Xian: *Qiannan Team* 2938 (HGAS, PE). Andhun Xian: *S. W. Teng* 146 (PE). Xingren Xian: *Guizhou Team* 6520, 8717 (PE). Luodian Xian: *Guizhou Team* 166 (HGAS, PE), *Qiannan Team* 209 (HGAS, PE). Anlong Xian: *Guizhou Team* 2979 (HGASS, PE). Dushan Xian: *Libo Team* 1352 (HGAS, PE). Fanjingshan: *Y. Tsiang* 7950 (PE), *Qianbei Team* 873 (HGAS, PE). Pingtang Xian: *s. coll.* 360 (HGAS). Pingba Xian: *s. coll.* 1975 (HGAS). Leishan Xian: *Z. P. Jien et al.* 50263 (HGAS). Taiwan, Guangdong, Sichuan, Yunnan.

The type is a Chinese drawing kept in Library of the Royal Horticultural Society of London.

C. goeringii (Rchb.f.) Rchb.f., Ann. Bot. Syst. 3:547. 1852.

C. virescens Lindl., Bot. Reg. 37: Misc. 1838. *Maxillaria goeringii* Rchb.f., Bot. Zeitung (Berlin) 3:334. 1845.

Cymbidium formosanum Hayata, J. Coll. Sci. Imp. Univ. Tokyo 30:335. 1911.

C. yunnanense Schltr., Repert, Spec. Nov. Regni Veg. Beih. 4:74. 1919.

C. serratum Schltr., loc. cit. 4:7. 1919.

Zunyi Xian: *Qianbei Team* 121 (PE). Luodian Xian: *Esquirol s. n.* (type of *C. serratum*, B). Jiangkou Xian, Fanjingshan: *Sino-Amer. Guizhou Bot. Exped.* 839 (HGAS). Shaanxi, Gansu, Henan, Jiangsu, Taiwan (type of *C. formosanum*), Zhejiang, Fujian, Hunan, Hubei, Sichuan, Yunnan (type of *C. yunnanense*); NE India, Japan (types of *M. goeringii* and *C. virescens*), Korea.

C. iridioides D.Don, Prodr. Fl. Nepal.: 36. 1824.

C. giganteum Lindl., Gen. Sp. Orchid. Pl.:163. 1832.

Ceheng Xian: *Y. Tsing* 9253 (PE). Sichuan, Yunnan, Xizang; Nepal (types of *C. iridioides* and *C. giganteum*), Sikkim, Bhutan, NE India, Burma.

**C. kanran* Makino, Bot. Mag. (Tokyo) 16:10. 1902.

Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped.* 2295 (HGAS), *Y. K. Li* 8282 (HGAS). Anlong Xian: *s. n. et loc.* (PE). Zhejiang, Fujian, Taiwan, Guangdong, Guangxi, Hunan, Sichuan, Yunnan; Japan (type), Korea.

Some authors have proposed more synonyms referring this species, but I have not here studied the entities of those synonyms.

C. lancifolium Hook.f., Exot. Fl. 1:51. 1823.
C. javanicum Bl., Bijdr. 8:380, t. 19. 1825.

Xingyi Xian: *Anshum Team* 846 (PE). Guangdong, Guangxi, Sichuan, Yunnan; widespread in Nepal (type), Sikkim, Bhutan, NE India, Burma, Thailand, Indochina, Japan, Philippines, Indonesia (type of *C. javanicum*) and New Guinea.

The coloration of the flowers and shape of the leaves are variable.

C. macrorhizone Lindl., Gen. Sp. Orchid. Pl.: 162. 1833.

Pingba Xian: *S. W. Teng* 11077 (PE). Without precise locality: *Cavalerie & Fortunat* 1217 (P). Sichuan, Yunnan; Pakistan, Kashmir (type), Himalayan Reg., NE India, Burma, Thailand, Laos and Japan (Ryukyu).

***C. wilsonii** (Rolfe ex Cook) Rolfe, Orchid Rev. 12:97. 1904.

C. giganteum Wall. ex Lindl. var. *wilsonii* Rolfe ex Cook, Garden (London) 65:158, 189. 1904.

Guizhou (without precise locality): *S. W. Teng* 1708 (PE). Yunnan (type).

Cypripedium henryi Rolfe, Bull. Misc. Inform.:211. 1892.

C. chinense Franch., J. Bot. (Morot) 8:282. 1894.

Guizhou (without precise locality): *Cavalerie* 2087 (P), *S. W. Teng* 90132 (AMES). Shaanxi, Gansu, Hubei (type), Sichuan (type of *C. chinense*).

C. japonicum Thunb., Fl. Jap.:30. 1784.

C. formosanum Hayata, Icon. Pl. Formosan. 6: 66, fig. 9. 1916.

C. cathayenum Chien, Contr. Biol. Lab. Chin. Assoc. Advancem. Sci., Sect. Bot. 6(3):23. 1930.

Yinjiang Xian: *Qianbei Team* 436, 405, 1787 (PE). Shaanxi, Gansu, Anhui, Zhejiang (type *C. cathayenum*), Jiangxi, Taiwan (type of *C. formosanum*), Hunan, Hubei, Sichuan; Japan (type).

C. tibeticum King ex Rolfe, J. Linn. Soc. 29: 341. 1893.

C. lanuginosum Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:38. 1919.

Pinfa (Pin-fou) Xian: *Esquirol*, Aug. 1902 (type of *C. lanuginosum*, B). Sichuan, Yunnan, SE Xizang (type); Sikkim.

A polymorphous species. Some authors have

referred *C. corrugatum* Franch., *C. pulchrum* Schltr., *C. calcicola* Schltr., *C. smithii* Schltr., *C. langrhoa* Costantin, and *C. szechenyiana* to this species.

Dendrobium aduncum Wall. ex Lindl., Bot. Reg. 28: Misc. 58. 1842.

D. hercoglossum auct. non Rchb.f.: S. Y. Hu, Gen. Orch. Hongkong 59, 122 (f-B). 1977.

Xingyi Xian: *J. M. Chen et al.* 201 (GZTM), *M. C. Wei & X. H. Lin* 135 (GZTM), Dushan Xian: *X. Q. Wu s. n.* (GZTM). Hunan, Guangdong, Hainan, Hongkong, Guangxi, Yunnan; Sikkim, Bhutan, NE India (type), Burma, Vietnam, Thailand.

D. chryseum Rolfe, Gard. Chron. 1:233. 1888.

D. clavatum Wall. ex Lindl., Paxt. Flow. Gard. 2:104, t. 189. 1851.

D. aurantiacum Rchb.f., Gard. Chron. ser. 3, 2: 98. 1887.

D. flaviflorum Hayata, J. Coll. Sci. Imp. Univ. Tokyo 30 (1):312. 1911.

D. tibeticum Schltr., Feddes Repert. Spec. Nov. Regni Veg. 17:68. 1921.

D. denneanum Kerr, J. Siam Soc., Nat. Hist. Suppl. 9:229. 1933.

Xingyi Xian: *Guizhou Team* 8216 (PE), *P. C. Tssoong* 1581 (PE); Guanling Xian: *S. W. Teng* 1684B (PE); Wangmo Xian: *Y. T. Chang & C. S. Chang* 1228 (PE). Huishui Xian: *J. M. Chen* 184 (GZTM), *M. C. We* 177 (GZTM), Anlong Xian: *s. coll.* 77 (HGAS). Taiwan (type of *D. flaviflorum*), Hainan, Guangxi, Sichuan, Yunnan (type of *D. tibeticum*); from India (Deccan) to NW Himalaya, eastwards through Nepal (type of *D. clavatum*), Sikkim, Bhutan to NE India (types of *D. aurantiacum* and *D. chryseum*), Burma, Vietnam, Laos (type of *D. denneanum*), Thailand.

D. crepidatum Lindl. & Paxt., Flow. Gard. 1: 63. 1850-51.

Xingyi Xian: *J. M. Chen et al.* 197 (GZTM). Yunnan; Nepal, Sikkim, NE India (type), Burma, Thailand, Laos.

D. devonianum Paxt., Paxton's Mag. Bot. 7: 169. 1840.

Xingyi Xian: *J. M. Chen et C. D. Li* 257, 258 (GZTM). Luodian Xian: *s. coll.* 117 (GZTM). Guangxi, Yunnan; Bhutan, NE India (type), Burma, Thailand.

D. fimbriatum Hook., Exot. Fl. 1:t. 71. 1823.

D. fimbriatum Hook. var. *oculatum* Hook., Bot. Mag. 71: t. 4160. 1845; Tsi, Icon. Corm. Sin. 5:701, t. 8231. 1976; Tsi, Acta Phytotax. Sin. 18(4):439. 1980, pro parte.

Luodian Xian: *M. C. Wei* 125, *M. C. Wei et C. D. Li* 119 (GZTM). Xingyi Xian: *s. coll.* 192 (GZTM). Dushan Xian: *S. Q. Yang* 73 (GZTM). Wangmo Xian: *C. S. Chang et al.* 1228 (HGAS). Guangxi, Yunnan; from India (Deccan) through NW Himalaya to Nepal (type), Sikkim, Bhutan, NE India, southeastwards through Burma, Thailand and Indochina to Malaysia.

D. hancockii Rolfe, J. Linn. Soc., Bot. 36:11. 1903.

D. odiosum Finet, Bull. Soc. Bot. France 50:372, t. 12 (fig. 1–10). 1903.

Wangmo Xian: *Y. T. Chan et C. S. Chan* 1331 (HGAS, PE). Anlong Xian: *s. coll.* 3570 (PE). Xingyi Xian: *Cavalerie s. n.*(P). Luodian Xian: *M. C. Wei* 688 (GZTM). Zhenfeng Xian: *J. M. Chen & C. D. Li* 165 (GZTM). Gansu, Hubei, Guangxi, Sichuan, Yunnan (types of *D. hancockii* and *D. odiosum*).

***D. henryi** Schltr., Feddes Repert. Spec. Nov. Regni Veg. 17:67. 1921.

Xingren Xian: *Y. T. Chang et C. S. Chang* 7967, 8278 (PE). Rongjiang Xian: *s. coll.* 74-754 (HGAS). Guangxi, Yunnan (type); Vietnam, Thailand.

D. hercoglossum Rchb.f., Gard. Chron. n. ser. 25:487. 1886.

D. wangii Tso, Sunyatsenia 1:138. 1933.

Ceheng Xian: *Z. Y. Cao* 955 (HGAS, PE). s. loc.: *P. C. Tsoung* 1412 (PE). Liping Xian: *Y. M. Ye et al. s. n.* (GZTM). Wangmo Xian: *s. coll.* 831 (HGAS). Xingyi Xian: *J. Mchen & C. D. Li* 200, 212 (GZTM). Jiangxi, Hunan, Guangdong (type of *D. wangii*), Hainan, Guangxi, Yunnan; Indochina, Thailand, Malaysia (type).

D. lindleyi Steud., Nomencl. Bot. ed. 2, 1:490. 1840; P. F. Hunt & Summerh., Kew Bull. 20:55. 1966.

D. aggregatum Roxb., Fl. Ind. ed. 1832:477. 1832, non Kunth (1815).

D. jenkinsii auct. non Lindl.: Tsi, Icon. Corm. Sin. 5:704 (quoad descr.), pro parte et t. 8237. 1976.

Ceheng Xian: *Z. Y. Cao* 1011 (HGAS, PE). Guangdong, Hainan, Guangxi; from India (Deccan) through Sikkim, Bhutan to NE India, southeastwards through Burma (type) and Thailand to Indochina.

D. loddigesii Rolfe, Gard. Chron. ser. 3, 2:155, 786. 1887.

D. loddigesii Rolfe var. *album* Tang & Wang, Acta Phytotax. Sin. 1:41, 81. 1951.

Xingxi Xian: Anshun Team 752 (HGAS, PE). Luodian Xian: *Qiannan Team* 892 (PE). s. loc.:

Y. T. Chang & C. S. Chang 1127 (PE), *M. C. Wei* 120 (GZTM). Guanling Xian: *S. W. Teng* 168A (PE). Guangdong (type), Hainan, Guangxi, Yunnan (type of *D. loddigesii* var. *album*).

D. lohohense Tang & Wang, Acta Phytotax. Sin. 1:41, 82. 1951.

Xingyi Xian: *Anshun Team* 695 (HGAS, PE), *M. C. Wei* 126 (GZTM). Yanhe Xian: *Qianbe Team* 2267 (HGAS, PE). Hubei, Hunan, Guangdong, Guangxi (type), Sichuan, Yunnan.

D. moniliforme (L.) Sw., Nova Acta Regiae Soc. Sci. Upsal. 6:85. 1799.

Epidendrum moniliforme L., Sp. Pl. ed. 1:954. 1753.

Fanjingshan: A. N. Steward, *C. Y. Chiao & H. C. Cheo* 674 (PE, NY), *Z. P. Jien et al.* 32247 (PE). Kaili Xian: *Qianbei Team* 2124, 1462 (HGAS, PE) *s. coll.* 254 (GZTM). Congjiang Xian: *Qiantung Team* 75-1139 (HGAS). Shaanxi, Gansu, Hunan, Zhejiang, Jiangxi, Taiwan, Guangdong, Guangxi, Yunnan; Japan (type), Korea.

D. nobile Lindl., Gen. Sp. Orchid. Pl.:79. 1830.

D. nobile Lindl. var. *formosanum* Rchb.f., Gard. Chron. n. ser. 19:432. 1883.

D. nobile var. *nobilius* Burbidge, Garden (London) 24:206, t. 104. 1883.

D. formosanum (Rchb.f.) Masam., Trop. Hort. 3: 32. 1933.

Chishui Xian: *S. Q. Chang et G. Q. Yang* 20, *M. C. Wei* 163 (GZTM). Sandu Xian: *Qiannan Team* 90, 38 (HGAS). Taiwan (type of *D. formosanum*), Hubei, Hainan, Hongkong, Guangxi, Sichuan, Yunnan (type), Xizang; from Deccan (India) through Nepal, Sikkim, Bhutan, NE India to Thailand, Laos, Vietnam.

D. ochreatum Wall. ex Lindl., Bot. Reg. 21: sub. t. 1756. 1835.

D. chrysanthum auct. non Lindl.: Tsi, Icon. Corm. Sin. 5:699. 1976.

Xingyi Xian: *M. C. Wei* 649 (GZTM). Luodian Xian: *J. M. Chen et C. D. Li* 44 (GZTM); NE India (type), Burma, Thailand, Laos.

D. officinale Kimura & Migo, J. Shanghai Sci. Inst. 3, 3:122. 1936.

D. candidum auct. non Lindl.: Tsi, Icon. Corm. Sin. 5:696, t. 8222. 1976; Tsi, Acta Phytotax. Sin. 18(4):443. 1980.

Xingyi Xian: *M. C. Wei* 142, 166 (GZTM). Libo Xian: *J. M. Chen* 259 (GZTM). Dushan Xian: *X. Q. Wu s. n.*, *J. M. Chen & C. D. Li* 258 (GZTM). Xingyi Xian: *J. M. Chen & C. D. Li* 211, 134. (GZTM). Jiangkou Xian, Fanjingshan: *s. coll.* 16 (GZTM). Guangxi, Yunnan (type).

- D. wilsonii** Rolfe, Gard. Chron. ser. 3, 39:185. 1906.
- D. kwangtungense** Tso, Sunyatsenia 1:140. 1933.
- Zunti Xian: *Qianbei Team* 158 (HGAS, PE). Xishui Xian: *C. D. Li & M. C. Wei* 002 (GZTM). Jianhgkou Xian, Fanjingshan: *Sino-Amer. Guizhou Bot. Exped.* 409 (A, HGAS, PE). Fujian, Hubei, Hunan, Guangdong (type of *D. kwangtungense*), Guangxi, Sichuan (type), Yunnan.
- ***Diplomeris pulchella** D.Don, Prodr. Fl. Nepl.: 26. 1825.
- Xingyi Xian: *Y. T. Chang & C. S. Chang* 7134 (PE). Yunnan; NE India (type), Vietnam.
- ***Epigeneium amplum** (Lindl.) Summerh., Kew Bull. 13(2):260. 1957.
- Dendrobium amplum* Lindl., Wall. Pl. Asiat. Rar. 1:25, t. 29. 1830.
- Xingyi Xian: *C. D. Li et al.* 182 (GZTM). Guangxi, Yunnan; Nepal (type), Sikkim, Bhutan, Burma, Thailand, Vietnam.
- E. clemensis** Gagnep., Bull. Mus. Hist. Nat. Paris, ser. 2, 4:597. 1932.
- Fanjingshan: *s. coll.* 23144 (PE). Hainan, Yunnan; Vietnam (type).
- Epipactis helleborine** (L.) Crantz, Stirp. Austr. Fasc. ed. 2, 2(6):467. 1769.
- Serapias helleborine* L., Sp. Pl. ed. 1: 949. 1753; ed. 2, 1344. 1763.
- Epipactis squamulosa* Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:56. 1919.
- E. yunnanensis* Schltr. loc. cit. 4:57. 1919.
- Xiangyi Xian: *Anshan Team* 594 (HGAS, PE). Luodian Xian: *Esquirol* 1909 (type of *E. squamulosa*, B). Jilin, Liaoning, Nei Monggol, Hebei, Shanxi, Shaanxi, Ningxia, Honan, Sichuan, Yunnan (type of *E. yunnanensis*), Xizang; widespread in NW Africa, Europe (type), Siberia, Caucasus, Cyprus, W. Syria, Iraq, Iran, Afghanistan, Pakistan.
- Eria clausa** King & Pantl., J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 65(2):121. 1896.
- Libo Xian: recorded in the plant list of Libo in Guizhou (2: 189. 1985). Guangxi, Yunnan, Xizang; Himalayan Reg. (type).
- E. corneri** Rchb.f., Gard. Chron. 2: 106. 1878.
- Anlong Xian: *Y. T. Chang & C. S. Chang* 3311 (HGAS, PE). Guanling Xian: *S. W. Teng* 1719 (PE). Fujian, Taiwan (type), Guangdong, Hongkong, Guangxi, Yunnan; Laos, Vietnam, Cambodia, Thailand.
- ***E. graminifolia** Lindl., J. Linn. Soc. Bot. 3:54. 1850.
- Xishui Xian: *Bijie Team* 1660 (HGAS). Yunnan, Xizang; Nepal, Sikkim, Bhutan, NE India (type).
- ***E. pannea** Lindl., Bot. Reg. 28:64, Misc. 79. 1842.
- Xingyi Xian: *Anshun Team* 558 (PE). Hainan, Guangxi, Yunnan; Sikkim, Bhutan, Burma, Vietnam, Laos, Thailand, Malaysia, Singapore (type), Sumatra, Borneo.
- ***E. reptans** (Franch. & Sav.) Makino, Bot. Mag. (Tokyo) 15:128. 1901.
- Dendrobium reptans* Franch. & Sav., Enum. Pl. Jap. 2:510. 1879.
- Jiangkou Xian, Fanjingshan: *Sino-Amer. Guizhou Bot. Exped.* 531 (HGAS, PE). Anhui, Zhejiang, Fujian, Taiwan; Japan (type).
- Eulophia graminea** Lindl., Gen. Sp. Orchid. Pl.:182. 1833.
- E. sinensis* Miq., J. Bot. Néerl. 1:91. 1861.
- E. taiwanensis* Hayata, J. Coll. Sci. Imp. Univ. Tokyo 30:333. 1911.
- E. venusta* Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:72, 263. 1919.
- E. kitamurai* Masam., J. Soc. Trop. Agr. 4:102. 1932.
- E. taiwanensis* Hayata var. *kitamurai* Masam., Bot. Mag. (Tokyo) 46:773. 1932.
- E. gusukumai* Masam., Trans. Nat. Hist. Soc. Taiwan 24:208. 1934.
- E. segawai* Fukuyama, Bot. Mag. (Tokyo) 48: 437, fig. 1. 1934.
- E. campestris* auct., non Lindl.: Tsai, Icon. Sin. 5:740, t. 8309. 1976; Tang & Chen, Fl. Hainan. 4:24 excl. t. 1118. 1977.
- Luodian Xian: *Esquirol* 2752 (type of *E. venusta*, B; isotype, K), *Cavalerie* 3028 (NY). Taiwan (types of *E. taiwanensis*, *E. kitamurai* and *E. segawai*), Guangdong (type of *E. sinensis*), Hongkong, Yunnan; widespread from Sri Lanka and S India through Nepal, Sikkim to NE India, Japan, Burma, Thailand, Vietnam, Laos, Malaysia, Singapore (type), Indonesia.
- E. spectabilis** (Dennst.) Suresh, Regnum Veg. 119:300. 1988.
- Wolfia spectabilis* Dennst., Schluessel Hortus Malab. 38. 1818.
- Eulophia nuda* Lindl., Gen. Sp. Orchid. Pl.:180. 1833.
- Phaius steppiculus* Hand.-Mazz., Akad. Wiss. Wien Sitzungsber., Math.-Naturwiss. Kl., Abt. 1, 62:253. 1925.
- SW Guizhou: *Hand.-Mazz.* 10392 (type of *P.*

steppiculus, W). Jiangxi, Hainan, Yunnan; widespread from Sri Lanka and Deccan (India) through NW Himalaya, Nepal (type of *E. nuda*), Sikkim, Bhutan to NE India, southeastwards through Burma, Thailand, Indochina, the Philippines to Indonesia, New Guinea and Fiji.

This is a variable species. Its type is a drawing by Rheed in his *Hortus Malabaricus*, 1692.

**E. sp.*

Anlong Xian: *Y. T. Chang & C. S. Chang* 5904, 5992 (PE). Guangxi.

This species may be new. It is clearly distinguished from all others by its smaller flowers, different flower structure and in the smaller floral bracts.

Flickingeria albopurpurea Seidenf., Dansk Bot. Ark. 34(1):48. 1980.

Guizhou (without precise locality): *Simon* 16 (P), *Cavalerie* 3498 (P). Laos, Vietnam, Thailand (type).

F. fimbriata (Bl.) Hawkes, Orchid Weekly 2(46):454. 1961.

Desmotrichum fimbriatum Bl., Bijdr. 329. 1825.

Luodian Xian: *Cavalerie* 3428 (P). Xiangyi Xian: *Anshun Team* 542 (PE). Hainan, Yunnan; from Indochina, Thailand through the Philippines, Malaysia to Indonesia (type) and Borneo.

Galeola faberi Rolfe, Bull. Misc. Inform.: 200. 1896.

G. shweliensis W.W.Sm., Notes Roy. Bot. Gard. Edinburgh 13:204. 1921.

Wangmo Xian: *Y. T. Chang & C. S. Chang* 1073 (PE). Xifeng Xian: *S. W. Teng* 90470 (PE). Sichuan (type, K; isotype, NY), Yunnan.

G. lindleyana (Hook.f. & Thoms.) Rchb.f., Xen. Orch. 2:78. 1874.

Cyrtosia lindleyana Hook.f. & Thoms., Ill. Him-al. Plant.: t. 22. 1855.

Erythrorchis lindleyana (Hook.f. & Thoms.) Rchb.f., Bonplandia 5:37. 1857.

Anlong Xian: *Y. T. Chang & C. S. Chang* 4627, 3022 (P). Leishan Xian: *Z. P. Jien et al.* 50734 (PE). Kaili Xian: *Y. T. Chang & C. S. Chang* 1243 (PE). Fanjingshan: *Z. Y. Cao* 1140 (PE). Shaanxi, Hunan, Hubei, Guangdong, Guangxi, Sichuan, Yunnan; Sikkim, NE India (type).

This species is rather close to *Galeola faberi* Rolfe. Sometimes they grow in the same clump and have almost stout stems and fruit. It is easy to distinguish the species of genus *Erythrorchis* by the stout stem and fruit.

Gastrochilus nanus Tsi, J. Arnold Arbor. 70: 121. 1990.

Jiangkou Xian, Fanjingshan: *Sino-Amer. Guizhou Bot. Exped.* 407 (holotype, PE; isotype, A).

G. sinensis Tsi, Bull. Bot. Res., Harbin 9 (2): 23-24, fig. 2 (3-6). 1989.

Jiangkou Xian: *Z. P. Jien et al.* 32550 (PE).

***G. xuanenensis** Tsi, Acta Bot. Yunnan. 4(3): 269. 1982.

Jiangkou Xian, Fanjingshan: *Sino-Amer. Guizhou Bot. Exped.* 577 (A, HGAS, PE). Hubei (type).

Gastrodia elata Bl., Ann. Mus. Bot. Lugduno-Batavum 2:174. 1856.

G. mairei Schltr., Feddes Repert. Spec. Nov. Regni Veg. 12:105. 1913.

Yinjiang Xian: *s. coll. 1007* (HGAS). Leishan Xian: *Z. P. Jien et al.* 50759 (HGAS). Bijie Xian: *s. coll. 393* (HGAS). Jilin, Liaoning, Shaanxi, Gansu, Henan, Hubei, Sichuan, Yunnan (type of *G. mairei*), Xizang; India, Sikkim, Siberia, Korea, Japan (type).

Geodorum esquirolei Schltr., Feddes Repert. Spec. Nov. Regni Veg. 17:69. 1921.

Xingyi Xian: *Y. T. Chang & C. S. Chang* 8145 (PE). Luodian Xian: *Esquirol* 3275 (type of *G. esquirolei*, B).

G. euphrioides Schltr., loc. cit. 17:70. 1921.

Guizhou (Bords du fleuve a'Gouyrevu, 600 m, Dec. 1911): *Esquirol* 3169 (type, B).

***Goodyera biflora** (Lindl.) Hook.f., Fl. Brit. India 6:114. 1894.

Georchis biflora Lindl., Gen. Sp. Orchid. Pl.: 496. 1840.

G. pauciflora Schltr., Feddes Repert. Spec. Nov. Regni Veg. 12:106. 1913.

Yinjiang Xian: *s. coll. 797* (HGAS). Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped.* s. n. (PE). Shaanxi, Hubei, Hunan, Guangdong, Sichuan, Yunnan (type of *G. pauciflora*), Xizang; W Himalaya, Nepal (type).

G. henryi Rolfe, Bull. Misc. Inform.: 201. 1896.

Kaili Xian: *Qiannan Team* 3818 (HGAS, PE). Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped.* s. n. (PE). Hubei (type), Guangdong, Guangxi, Hubei (type), Sichuan, Yunnan; Japan, Korea.

***G. procera** (Ker Gawl.) Hook., Exot. Fl. 1: t. 39. 1823.

Neottia procera Ker Gawl., Bot. Reg. 8:1, t. 639. 1822.

Wangmo Xian: *Y. T. Chang & C. S. Chang* 2217 (PE). Luodian Xian: *Cavalerie* 3432 (P).

Chishui Xian: *s. coll. 15* (HGAS). Fujian, Taiwan, Guangdong, Hongkong, Hainan, Guangxi, Sichuan, Yunnan; widely distributed in Japan, Philippines, Indonesia, Sri Lanka, India, Nepal (type), Sikkim, Bhutan to Indochina.

G. repens (L.) R.Br. et W.T.Aiton, Hort. Kew. ed. 2, 5:198. 1813.

Satyrium repens L., Sp. Pl. ed. 1:945. 1753.

Goodyera chinensis Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:59. 1919.

Liping Xian: *J. M. Yuan* 643 (HGAS). Without precise locality: *Esquirol* (type of *G. chinensis*, B). Widely distributed in China, extending from temperate zone to subtropics and also widespread in the temperate regions of Asia, Europe and N America. Type specimen from Siberia.

G. schlechtendaliana Rchb.f., Linnaea 22:861. 1849.

G. kwangtungensis Tso, Sunyatsenia 134. 1933.

Fanjingshan: Z. P. Jien et al. 32269 (HGAS, PE), A. N. Steward, C. Y. Cheo and H. C. Cheo 427 (PE). Yinjiang Xian: 7735 (PE). Zunyi Xian: *Chuan-quian Team* 1530 (PE). Qingzhen Xian: S. W. Teng 1398 (PE). Guiding Xian: *Cavalerie* 7467A, 443 (P). Jiangkou Xian: Y. K. Li 8282, 8283 (HGAS). Zhejiang, Fujian, Taiwan, Hubei, Guangdong (type of *G. kwangtungensis*), Guangxi, Sichuan; from Sri Lanka through Nepal, Sikkim, Bhutan to NE India, Korea, Japan (type) and Indochina.

Habenaria aitchisonii Rchb.f., Trans. Linn. Soc. London, ser. 2, 3:113. 1888.

H. diceras Schltr., Notes Roy. Bot. Gard. Edinburgh 24:101. 1912.

Weining Xian: *Bijie Team* 104 (HGAS, PE). Without precise locality: *Bodinier* 2369 (P). Sichuan, Yunnan (type of *H. diceras*); India, Afghanistan, Kashmir, Nepal, Sikkim (type), Bhutan.

H. arietina Hook.f., Fl. Brit. India 6:138. 1886.

H. intermedia D.Don var. *arietina* (Hook.f.) Finet, Rev. Gén. Bot. 13:530. 1901.

Guizhou (without precise locality): *Bodinier* & *Cavalerie* 1642 (P). Nepal (type), Sikkim, NE India.

H. cavaleriei Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:47, 124. 1919.

Touchan Xian: *Cavalerie*, July 1899 (type, P). *Esquirol* 687, 921(B), *Hand.-Mazz.* 10706, 10750 (W).

H. ciliolaris Kraenzl., Bot. Jahrb. Syst. 16:169. 1892.

H. kweischuensis Schltr., Feddes Repert. Spec. Nov. Regni Veg. 17:26. 1921.

Xingyi Xian: *Anshum Team* 553 (PE). Ruisseau de Kiao Ta: *Esquirol* 3009 (type of *H. kweischuensis*, B). Fanjingshan: *Sino-Amer. Guizhou Bot. Exped.* 81, 300, 1231 (HGAS, PE). Zhejiang, Jiangxi, Taiwan, Hubei, Hunan, Guangdong, Hongkong (type, K), Guangxi, Sichuan, Yunnan; Vietnam.

H. davidii Franch., Nouv. Arch. Mus. Hist. Nat. ser. 2, 10:86. 1887.

H. chloropecten Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:47. 1919.

H. leucopecten Schltr., loc. cit. 4:130. 1919.

Weining Xian: *Bijie Team* 189 (HGAS, PE). Qingzhen Xian: S. W. Teng 720 (PE). Shibing Xian: *Qiannan Team* 2796 (HGAS, PE). Pigfa Pag-kin: *Esquirol* 497 (type of *H. chloropecten*, B). Without precise locality: *Esquirol*, June 1907 (type of *H. leucopecten*), *Bodinier* & *Martin* 1642 (P). Hubei, Hunan, Sichuan (type, P; isotype, K), Yunnan, Xizang.

H. delavayi Finet, Rev. Gén. Bot. 13:527. 1901.

H. yunnanensis Rolfe, J. Linn. Soc., Bot. 36:61. 1903.

Hungping Xian: *Qiannan Team* 2513 (HGAS, PE). Sichuan, Yunnan (types of *H. delavayi* and *H. yunnanensis*).

H. dentata (Sw.) Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:125. 1919.

Orchis dentata Sw., Kongl. Vetensk. Acad. Nya Handl. 21:207. 1800.

Habenaria miersiana Champ. ex Bentham, J. Bot. 7:37. 1855.

Cehenn Xian: Z. Y. Cao 654 (PE). Xingren Xian: *Guizhou Team* 8793 (PE). Rongjiang Xian: D. F. Huang et al. 1827 (HGAS). Without precise locality: S. W. Teng 90889 (A), *Bodinier* et al. 2523 (P). Anhui, Zhejiang, Jiangxi, Fujian, Taiwan, Hubei (type of *H. miersiana*), Hunan, Guangdong, Hongkong, Guangxi, Sichuan, Yunnan; from Himalayan Reg. through Thailand, Vietnam, Japan to Philippines and Malaysia. Type from E China.

This is a very variable species in the side lobes of the lip.

H. gnomifera Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:48, 128. 1919.

Guizhou (without precise locality): *Esquirol* (type, B).

H. limprichtii Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:50. 1919.

H. oligoschista Schltr., loc. cit. 4:51. 1919.

Guiding Xian: *Esquirol*, July 1902 (type of *H.*

oligoschista, B). Without precise locality: *S. W. Teng* 90704 (AMES). Hubei, Yunnan (type); Thailand, Vietnam.

H. linguella Lindl., Gen. Sp. Orchid. Pl.: 325. 1835.

Centrochilus gracilis Schauer, Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Cur. 19. Suppl. 1:435, t.113, fig. B. 1–2. 1843.

Habenaria endothrix Miq., J. Bot. Néerl. 1:92. 1861.

Dushan Xian: *Libo Team* 1093 (HGAS, PE). Guiyang: *Hand.-Mazz.* 10897 (W). Guangdong (types of *H. endothrix* and *C. gracilis*), Hainan, Hongkong (type, K), Guangxi, Yunnan; Vietnam.

H. petelotii Gagnep., Bull. Soc. Bot. France 78: 73. 1931.

H. pseudodenticulata Hand.-Mazz., Symb. Sin. 7:1334. 1936.

Kaili Xian: *Z. P. Jien et al.* 51017 (HGAS). Without precise locality: *Hand.-Mazz.* 10779 (type of *H. pseudodenticulata*, W). Anhui, Zhejiang, Jiangxi, Fujian, Hunan, Guangdong, Sichuan; Vietnam (type).

***H. platantheroides** Tang & Wang, Bull. Fan. Mem. Inst. Biol. 7:133. 1936.

Guizhou (without precise locality): *S. W. Teng* 91059 (AMES). Sichuan (type).

H. praetermissa Seidenf., Opera Bot. 114: 1992.

H. rhynchocarpa auct. non (Thwaites) Hook.f.: Finet 1901:532; Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:133. 1919.

Guizhou (without precise locality): *Bodinier & Seguin* 2522 (P). Vietnam (type).

H. rhodocheila Hance, Ann. Sci. Nat. Bot. 5: 243. 1866.

H. pusilla Rchb.f., Otia Bot. Hamburg. n. ser. 26:33. 1878.

H. militaris Rchb.f., Gard. Chron. n. ser. 26:518. 1886.

H. militaris Kraenzl., Bot. Jahrb. Syst. 16:203. 1892.

Rongjiang Xian: *Qiannan Team* 2887 (HGAS, PE). Without precise locality: *Bodinier & Cavalerie* 2744 (P). Jiangxi, Fujian, Guangdong (type), Guangxi; Cambodia (types of *H. pusilla* and *H. militaris*), Laos, Vietnam, Philippines, Malaysia.

H. rostellifera Rchb.f., Otia Bot. Hamburg. 2: 34. 1878.

Xingyi Xian: *Guizhou Team* 7791, 8309, 7744, 7219, 6549, (HGAS, PE). Anshun to Dal-

ou Puting: *S. W. Teng* 980 (PE). Without precise locality: *S. W. Teng* 91059 (AMES). Yunnan; Laos, Vietnam, Cambodia (type), Thailand, Malaysia.

***H. siamensis** Schltr., Feddes Repert. Spec. Nov. Regni Veg. 2:82. 1906.

Xingyi Xian: *Y. T. Chang & C. S. Chang* 8213 (PE). Thailand (type).

***Hemipilia amethystina** Rolfe, Orchid Rev. 4: 222. 1896.

Danzhai Xian: *Cavalerie & Fortunat* 2410 (P). Burma (type).

H. cruciata Finet, Bull. Soc. Bot. France 44: 421. t. 14. fig. H-P. 1897.

H. cordifolia Lindl. var. *yunnanensis* Finet, Rev. Gén. Bot. 13:510. 1901.

Duyun to Guiding Xian: *Hand.-Mazz.* 10671 (W). Taiwan, Sichuan, Yunnan (types of *H. cruciata* and *H. cordifolia* var. *yunnanensis*).

***H. flabellata** Bur. & Franch., J. Bot. 5:152. 1891.

H. flabellata var. *grandiflora* Finet, Rev. Gén. Bot. 13:511. 1901.

Kaili Xian: *Bijie Team* 222 (HGAS, PE). Sichuan (type, P), Yunnan (type of *H. flabellata* var. *grandiflora*).

H. limprichtii Schltr. ex Limpr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 12:331. 1922.

H. cordifolia var. *bifoliata* Finet, Rev. Gén. Bot. 13:509. 1901.

Qingzhen Xian: *S. W. Teng* 70704 (PE). Xingyi Xian: *Y. T. Chang & C. S. Chang* 7077, 7054 (PE), 7632 (HGAS, PE). Without precise locality: *S. W. Teng* 986 (PE), 90704 (AMES), *Bodinier & Chaffanjon* 2521 (type of *H. cordifolia* var. *bifoliata*, P). Yunnan (type).

***Herminium alaschanicum** Maxim., Bull. Acad. Imp. Sci. Saint-Pétersbourg 31:105. 1887.

H. altigenum Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 12:309. 1922.

Kaili Xian: s. coll. 252 (PE). Nei Mongol (type, K), Hebei, Shaanxi, Gansu, Qinghai, Sichuan, Yunnan, Xizang (type of *H. altigenum*).

H. lanceum (Thunb. ex Sw.) Vuijk, Blumea 11: 228. 1961.

Ophrys lancea Thunb. ex Sw., Kongl. Vetensk. Acad. Nya. Handl. 21:223. 1800.

Aceras longicurvis C.Wright, Mem. Amer. Acad. Arts, ser. 2, 6:411. 1858–59.

H. minutiflorum Schltr., Feddes Repert. Spec. Nov. Regni Veg. 19:373. 1924.

- H. longicurvis* (C.Wright) Tang & Wang, Acta Phytotax. Sin. 1:61. 1951.
- H. angustifolium* (Lindl.) Benth. ex Hook.f. var. *brevilabre* Tang et Wang, Acta Phytotax. Sin. 1:61. 1951.
- Anlong Xian: *Y. T. Chang & C. S. Chang* 5524 (PE). Weining Xian: *Bijie Team 11* (PE). Nayong Xian: *Bijie Team 545* (PE). Fanjingshan: *Qianbei Team 1147* (PE). Huangping Xian: *Qiannan Team 2444* (PE). Zunyi Xian: *Chuanqian Team 1198* (PE). Leishan Xian: *Z. P. Jien et al. 51023* (PE). Xifeng Xian: *S. W. Teng 90469* (PE). Qigzhen Xian: *S. W. Teng 648* (PE). Guiding Xian: *Cavalerie 2366* (P). Without precise locality: *Bodinier & Cavalerie 2206* (P). Shaanxi, Gansu, Henan, Jiangxi, Fujian, Taiwan, Hubei, Hunan, Guangdong (type of *H. minutiflorum*), Sichuan, Yunnan (type of *H. angustifolium* var. *brevilabre*), Xizang; from Kashmir through Nepal, Sikkim, NE India to Korea and Japan (type of *Aceras longicurvis*), from China southeastwards through Indochina, Philippines to Java (type).
- A widely distributed and very variable species.
- Ischnogyne mandarinorum** (Kraenzl.) Schltr., Feddes Repert. Spec. Nov. Regni Veg. 12: 106. 1913.
- Coelogyne mandarinorum* Kraenzl., Bot. Jahrb. Syst. 29: 269. 1900.
- Pleione mandarinorum* (Kraenzl.) Kraenzl., Pflanzenreich IV. 50 (Heft 32):128. 1907.
- Anshum Xian: *Cavalerie 3785* (K). Longli Xian: *Cavalerie 2924* (P). Shaanxi, Gansu, Sichuan (type, B).
- Liparis acuminata** Hook.f., Fl. Brit. India 5: 696. 1896.
- Guizhou (without precise locality): *Hand.-Mazz. 10400* (W). NE India (type).
- L. bootanensis** Griff., Not. Pl. Asiat. 3:278. 1851.
- Sandu Xian: *Y. K. Li & D. F. Huang 8474* (PE). Xingyi Xian: *Cavalerie 4429* (P). Taiwan, Fujian, Hongkong, Guangdong, Hainan, Guangxi, Sichuan, Yunnan; widespread in E Himalaya (type), NE India, Burma, Thailand, from Japan through Philippines to Malaysia and Java.
- L. bootanensis** Griff. var. **angustissima** S.C.Chen & K.Z.Lang, Acta Phytotax. Sin. 21(3):344. 1983.
- Zhenfeng Xian: *Y. Tsiang 4555* (PE). Guangxi (type, PE).
- L. distans** C.B.Clarke, J. Linn. Soc., Bot. 25:71. t. 29. 1889.
- L. yunnanensis* Rolfe, J. Linn. Soc., Bot. 36:8. 1903.
- L. oxyphylla* Schltr. Repert Spec. Nov. Regni Veg. Beih. 4:63 & 202. 1919.
- Xingyi Xian: *Y. Y. Chang & C. S. Chang* 7002 (PE). Guangxi, Yunnan (types of *L. yunnanensis* and *L. oxyphylla*); NE India (type), Laos, Vietnam.
- L. dunnii** Rolfe, J. Linn. Soc., Bot. 38:368. 1908.
- Kaili Xian: *Qiannan Team 1178* (HGAS, PE), 1630 (PE), *Z. Y. Cao 1866* (PE). Wudong Xian: *Z. P. Jien et al. 50417* (HGAS, PE). Shaanxi, Anhui, Zhejiang, Fujian (type), Hunan, Hubei; Korea, Japan.
- L. esquirolii** Schltr., Feddes Repert. Spec. Nov. Regni Veg. 12:108. 1913.
- Dushan Xian: *Libo Team 1366* (P). Without precise locality: *Esquiero 12092* (type, B).
- ***L. fargesii** Finet, Bull. Soc. Bot. France 4:340, t. 11, fig. 13–22. 1908.
- Guizhou (without precise locality): *Cavalerie s. n.* (P, PE). Shaanxi, Hubei, Sichuan (type).
- L. inaperta** Finet, Bull. Soc. Bot. France 4:341. t. 11, fig. 23–35. 1908.
- Kaili Xian: *Qiannan Team 1952* (HGAS, PE). Jiangkou Sian: *Z. P. Jien et al. 32579* (PE). Rongjiang Xian: *Qiannan Team 2958* (HGAS, PE). Guiyang Xian: *Chaffanjon & Bodinier 2546* (type, P). Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped. 578* (HGAS), *Sino-British Guizhou Bot. Exped. 120* (PE). Zhejiang, Jiangxi, Guangxi, Sichuan.
- L. japonica** (Miq.) Maxim., Bull. Acad. Imp. Sci. Saint-Pétersbourg 31:102. 1887.
- Microstylis japonica* Miq., Mus. Bot. 2:203. 1857.
- Qingzhen Xian: *S. W. Teng 381* (PE); Weinling Xian: *Bijie Team 203* (HGAS, PE). Yinjiang Xian: *Z. P. Jien et al. 30670* (HGAS, PE). Panxian Xian: *Anshun Team 886* (HGAS, PE). Dafang Xian: *Bijie Team 827* (PE). Shuicheng Xian: *Y. Tsiang 9199* (PE). Widely distributed in Heilongjiang, Jilin, Liaoning, Hebei, Shanxi, Shaanxi, Gansu, Henan, Hubei, Hunan, Sichuan, Yunnan, Xizang; Japan (type).
- L. nervosa** (Thunb.) Lindl., Gen. Sp. Orchid. Pl.: 26. 1830.
- Ophrys nervosa* Thunb., Fl. Jap.: 27. 1784.
- Malaxia odorata* Willd., Sp. Pl. (ed. 4):91. 1805.
- Liparis odorata* (Willd.) Lindl., Gen. Sp. Orchid. Pl.: 26. 1830.

L. formosana Rchb.f., Gard. Chron. n. ser. 13: 394. 1880.

L. bituberculata (Hook.) Lindl. var. *formosana* (Rchb.f.) Ridl., J. Linn. Soc., Bot. 22:263. 1886.

Qiangzhen Xian: *S. W. Teng* 787 (PE). Rongjing Xian: *Z. P. Jien et al.* 51642, 5259 (PE). Anlong Xian: *Y. T. Chang & C. S. Chang* 4238 (HGAS, PE). Xingren Xian: *Y. T. Chang & C. S. Chang* 7570 (PE). Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped.* 297 (HGAS). Jiangxi, Zhejiang, Fujian, Taiwan, Hubei, Hunan, Guangdong, Hongkong, Guangxi, Sichuan, Yunnan; widespread in humid regions of both Old World and New World Tropics and Subtropics. Type from Japan.

This is an extremely polymorphous species. Some authors have proposed more synonyms referring this species.

L. nigra Seidenf., Bot. Tidsskr. 65:129, fig. 19. 1970.

L. macrantha Rolfe ex Hemsley, Ann. Bot. (London) 9:156. 1895. nom. illeg.

Xiangyi Xian: *Guizhou Team* 6764 (HAGS, PE). Taiwan (type of *L. macrantha*), Guangdong, Hongkong, Guangxi; Thailand (type), Vietnam.

L. pauliana Hand.-Mazz., Akad. Wiss. Wien Sitzungsber. Math.-Naturwiss. Kl., Abt. 1, 58:65. 1921.

Kaili Xian: *Qiannan Team* 1178 (HAGS, PE), 630 (PE), *Z. Y. Cao* 1866 (PE). Wudong Xian: *Z. P. Jien et al.* 50417 (HAGS, PE). Anhui, Zhejiang, Hubei, Hunan (type), Guangdong, Guangxi.

****L. stricklandiana*** Rchb.f., Gard. Chron. n. ser. 8:232. 1880.

L. malleiformis W.W.Sm., Notes Roy. Bot. Gard. Edinburgh. 13:212. 1921.

Zhenfeng Xian: *Y. Tsang* 4606 (PE). Guangdong, Hongkong, Hainan, Guangxi, Yunnan (type of *L. malleiformis*); Sikkim, Bhutan, NE India (type), Vietnam.

Listera puberula Maxim., Bull. Acad. Imp. Sci. Saint-Pétersbourg 24:203. 1884.

Fanjingshan: *J. M. Chen* 156 (PE). Heilongjiang, Jilin, Qinghai, Shanxi, Gansu (type), Hebei.

****Luisia morsei*** Rolfe, J. Linn. Soc., Bot. 36:33. 1903.

Anlong Xian: *Y. T. Chang & C. S. Chang* 3861 (HGAS, PE). Liping Xian: *J. M. Chen* 143 (GZTM). Hainan, Guangxi (type, K), Yunnan; Laos, Vietnam, Thailand.

****Malaxis acuminata*** D.Don, Prodr. Fl. Nepal.: 29. 1825.

Microstylis pierrei Finet, Bull. Soc. Bot. France 59: 534, t. 12. 1907.

M. trigonocardia Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:62. 1919.

Xiangyi Xian: *Y. T. Chang & C. S. Chang* 6063 (PE). Sichuan (type of *M. trigonocardia*); NW Himalay, Nepal (type), Sikkim, NE India, Burma, Thailand, Laos, Vietnam, Philippines, Sumatra, Java (type of *M. pierrei*).

M. latifolia J.E.Sm., Cyclopaedia 3:22. 1819. Libo Xian: recorded in the plant list of Libo in Guizhou (2:189. 1985).

Fujian, Taiwan, Guangdong, Hongkong, Hainan, Guangxi, Yunnan; widely distributed in Japan (Ryukyu) through Indochina and Philippines to Indonesia and Australia, from Sri Lanka through India (Deccan) to Nepal (type) and NE India.

Neottianthe cucullata (L.) Schltr., Feddes Repert. Spec. Nov. Regni Veg. 16:292. 1919. *Orchis cucullata* L., Sp. Pl. ed. 1: 939. 1753.

Fanjingshan: *A. N. Steward, C. Y. Chiao and H. C. Cheo* 470 (PE). Shaanxi, Gansu, Henan, Anhui, Fujian, Hubei, Sichuan, Yunnan; Japan, Korea, Siberia (type), Europe.

****Nervilia aragoana*** Gaudich., Voy. Uranie 422: t. 35. 1829.

N. tibetensis Rolfe, Notes Roy. Bot. Gard. Edinburgh 8:128. 1913.

Dushan Xian: *Libo Team* 1706 (PE). Yunnan (type of *N. tibetensis*); Sri Lanka, NW Himalaya, Nepal, Sikkim, Bengal, Burma, Laos, Vietnam, Japan, Philippines, Indonesia, Australia, Guam (type).

****Oberonia japonica*** (Maxim.) Makino, Illustr. Fl. Jap. 1: t. 41. 1891.

Malaxis japonica Maxim., Bull. Acad. Imp. Sci. Saint-Pétersbourg 22:257. 1877.

Oberonia formosana Hayata, J. Coll. Sci. Univ. Tokyo 30:309. 1911.

Fanjingshan: *Z. P. Jien et al.* 33145 (PE). Zhejiang, Fujian, Taiwan (type of *O. formosana*); Japan (type).

O. myosurus Lindl., Gen. Sp. Orchid. Pl.: 16. 1830.

O. cavaleriei Finet, Bull. Soc. Bot. France 55: 334, t. 10. 1908.

Suiyang Xian: *Cavalerie* 4197 (K). Huishui Xian: *Cavalerie* 1904 (type of *O. cavaleriei*, P.). Sichuan, Yunnan, Xizang; W Himalaya, Nepal, Burma, Thailand.

- Otochilus lancilabius** Seidenf., Bot. Tidsskr. 71: 13, fig. 11. 1976.
 Xuayyi Xian: *C. Y. Deng D51485* (XIM). Yunnan; from NW Himalaya through Nepal, Sikkim (type), Bhutan, southeastwards to Indochina.
- O. porrectus** Lindl., Gen. Sp. Orchid. Pl. 36. 1830.
O. forrestii W.W.Sm., Notes Roy. Bot. Gard. Edinburgh 13:216. 1921.
- Xiangyi Xia: *C. Y. Deng D51542* (XIM). Yunnan (type of *O. forrestii*); NE India (type), Burma, Vietnam.
- Pachystoma pubescens** Bl., Bijdr.: 376, t. 29. 1825.
Apaturia chinensis Lindl., Gen. Sp. Orchid. Pl: 131. 1831.
Pachystoma chinense (Lindl.) Rchb.f., Bonplandia 3:251. 1855.
Pachychilus chinensis (Lindl.) Bl., Mus. Bot. 2: 173. 1856.
Pachystoma formosanum Schltr., Feddes Repert. Spec. Nov. Regni Veg. 4:245. 1919.
P. brevilabium Schltr., loc. cit. 17:69. 1921.
- Luodian Xian: *Qiannan Team 756* (PE), *Esquierol* June 1912 (type of *P. brevilabium*, B). Wangmo Xian: *Y. T. Chen & C. S. Chang 1567* (PE). Taiwan (type of *P. formosanum*), Guangdong (type of *A. chinensis*), Hongkong, Hainan, Yunnan; from Sri Lanka, Deccan (India) through NW Himalayan Reg. to NE India, southeastwards through Indochina (type), Malaysia, Indonesia and New Guinea. A widespread and variable species.
- Panisea tricallosa** Rolfe, Bull. Misc. Inform.: 148. 1901.
Sigmatogyne bia Kerr, J. Siam Soc., Nat. Hist. Suppl. 9:236. 1913.
Panisea cavaleriei Schltr., Feddes Repert. Spec. Nov. Regni Veg. 20:383. 1924.
P. bia (Kerr) Tang & Wang, Acta Phytotax. Sin. 1(1):79. 1951; Tsi, Icon. Corm. Sin. 5:689, t. 8208. 1976, pro parte.
P. unifolia Chen, Acta Bot. Yunnanica 2(3):304, fig. 1-2. 1980.
- Xiangyi Xian: *Cavalerie 4552* (type of *P. cavaleriei*, B; isotypes, AMES, P, PE). Hainan, Guangxi, Yunnan (type of *P. unifolia*); Sikkim, NE India (type), Thailand, Laos (type of *P. bia*), Vietnam.
- Paphiopedilum barbigerum** Tang & Wang, Bull. Fan Mem. Inst. Biol. 10:23. 1940.
 Guizhou (without precise locality): *Cavalerie & Fortunat 1794* (type, P; isotype, PE).
- P. emersonii** Koopowitz & Cribb, Orchid Advocate 12:86. 1986; Cribb, Gen. *Paphiopedilum*: 95. 1987.
 Guizhou (Hai Num): cultivated by E. W. Charles (holotype, K).
- P. hirsutissimum** (Lindl. ex Hook.) Stein, Orchideenb.: 470. 1892.
Cypripedium hirsutissimum Lindl. ex Hook., Bot. Mag. 83: t. 4990. 1857.
Paphiopedilum esquirolei Schltr., Feddes Repert. Spec. Nov. Regni Veg. 4:39. 86. 1919.
P. chiwuanum Tang & Wang, Acta Phytotax. Sin. 1:56. 1951.
- Xiangyi Xian: *Cavalerie 4460* (P, PE). Northeast Salofou, sur les roches, (June) 1912: *Esquierol 3277* (type of *P. esquirolei*, B). Guangxi, Yunnan (type of *P. chiwuanum*); NE India (type), Thailand, Vietnam.
- P. micranthum** Tang & Wang, Acta Phytotax. Sin. 1:25. 56. 1951.
- Wengan Xian: *J. Y. Hu s. n.* (GZTM). Luodian Xian: *S. Q. Luo et al. 20* (GZTM). Libo Xian: recorded in the plant list of Libo in Guizhou (2: 189. 1985.). Yunnan (type, P).
- Pecteilis susannae** (L.) Rafin., Fl. Tellur. 2:38. 1836.
Orchis susannae L., Sp. Pl. ed. 1:939. 1753.
Platanthera susannae (L.) Lindl., Gen. Sp. Orchid. Pl.: 295. 1835.
- Guanling Xian: *Cavalerie 4704*; Dushan Xian: *Libo Team 1092* (HGAS, PE). Jiangxi, Guangdong, Hongkong, Guangxi, Sichuan, Yunnan; Himalayan Reg., NE India, southeastwards through South China to Malaysia and Indonesia (type).
- ***Pelatantheria bicuspidata** (Rolle ex Downie) Tang & Wang, Acta Phytotax. Sin. 1:53, 101. 1951.
Sarcanthus bicuspidatus Rolfe ex Downie, Bull. Misc. Inform.: 391. 1925.
- Anlong Xian: *Y. T. Chang & C. S. Chang 5874* (PE). Yunnan; Thailand (type).
- Peristylus affinis** (D.Don) Seidenf., Dansk Bot. Ark. 31(8):48, fig. 23. 1977.
Habenaria affinis D.Don, Prodr. Fl. Nepal.: 25. 1825.
Peristylus sampsoni Hance, J. Bot. 6:371. 1868.
Habenaria sampsoni (Hance) Hance, J. Bot. 163. 1869.
H. cavaleriei Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:47. 1919.
- Xiangyi Xian: *Y. T. Chang & C. S. Chang 7059*, 6828 (PE). Anlong Xian: *Y. T. Chang &*

- C. S. Chang* 5855 (PE). Dushan Xian: *Cavalerie July 1899* (P); *Esquirol* 687, 92l (type of *H. cavaleriei*, B.). Guiding (Piafa) Xian: *Cavalerie 7467* (P). Without precise locality: *S. W. Teng* 90568 (AMES). Hubei, Guangdong (type of *P. sampsonii*), Sichuan, Yunnan; NW Himalaya, Nepal (lectotype), NE India, Thailand, Laos.
- P. densus* (Lindl.) Santapau & Kapadia, J. Bombay Nat. Hist. Soc. 57:128. 1960.
- Coeloglossum densum* Lindl., Gen. Sp. Orchid. Pl.: 302. 1832.
- Habenaria buchneroides* Schltr. Repert. Spec. Nov. Regni Veg. Beih. 4:46 & 123. 1919.
- Rongjiang Xian: *Z. P. Jien et al.* 51605 (PE). Leishan Xian: *Cavalerie & Bodinier* 2746 (P). Zhejiang, Fujian, Guangdong, Guangxi, Yunnan (type of *H. buchneroides*); Bengal (type), NE India, Burma, Vietnam, Thailand.
- P. forceps* Finet, Rev. Gén. Bot. 13:521, t. 16, fig. 1–6. 1901.
- Herminium forceps* (Finet) Schltr., Notes Roy. Bot. Gard. Edinburgh 24:97. 1912.
- Habenaria forceps* (Finet) Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:127. 1919.
- Herminium tsoongii* Tang & Wang, Contr. Inst. Bot. Natl. Acad. Peiping 2:134. 1934.
- Pingba Xian: *Martin & Bodinier* 1779 (P); Guiyang: *Bodinier* 2206 (P). Dushan Xian: *Cavalerie* 1779 (P). Wan Tzi-Puting: *S. W. Teng* 1009 (PE). Yunnan (types of *P. forceps* and *H. tsoongii*).
- P. goodyeroides* (D.Don) Lindl., Gen. Sp. Orchid. Pl.: 299. 1835.
- Habenaria goodyeroides* D.Don, Prodri. Fl. Neopal.: 25. 1825.
- H. goodyeroides* var. *formosana* Hayata, Icon. Pl. Formosan. 4:126, t. 22. 1914.
- H. hayataeana* Schltr., Feddes Repert. Spec. Nov. Regni Veg. 4:129. 1919.
- Xingyi Xian: *Anshun Team* 5528, *Y. T. Chang & C. S. Chang* 7258, 8144 (P). Luodian (Lofou) Xian: *Cavalerie* 7471 (P). E. Guizhou (without precise locality): *Hand.-Mazz.* 10906 (W). Taiwan (type of *H. hayataeana*), Hubei, Hunan, Guangdong, Sichuan, Yunnan; widespread from NW Himalaya through Nepal (type) to NE India, southeastwards through Indochina, Philippines to Indonesia and New Guinea.
- Phaius flavus* (Bl.) Lindl., Gen. Sp. Orchid. Pl.: 128. 1831.
- Limodorum flavum* Bl., Bijdr. 8:375. 1825.
- Bletia woodfordii* Hook., Bot. Mag. 54: t. 2719. 1827.
- Phaius maculatus* Lindl., Gen. Sp. Orchid. Pl.: 127. 1831.
- P. minor* Bl., Mus. Bot. 11:181. 1856.
- P. undulatomarginata* Hayata, Icon. Pl. Formosan. 4:59, fig. 27. 1914.
- P. somai* Hayata, loc. cit. 6:74. 1916.
- P. woodfordii* (Hook.) Merr., J. Arnold Arbor. 29:211. 1948.
- Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped. s. n.* (PE). Hy-meyiao (maybe Guanling): *Esquirol* 6654 (P). Libo Xian: *M. Z. Yang et al.* 810194 (HGAS). Jiangkou Xian, Fanjingshan: *Sino-Amer. Guizhou Bot. Exped. s. n.* (PE). Taiwan (types of *P. somai* and *P. undulatomarginata*), Fujian, Guangdong, Hainan, Sichuan, Yunnan, Xizang; widely distributed from Sri Lanka to Nepal (type of *P. maculatus*), Sikkim, Bhutan, NE India, Burma, Thailand, Indochina, Japan (type of *P. minor*), Philippines (type of *P. woodfordii*), Indonesia (type), Malaysia and New Guinea.
- **P. tankervilliae* (Banks ex L'Herit.) Bl., Mus. Bot. 2:177. 1858.
- Limodorum tankervilliae* Banks ex L'Herit., Sert. Angl.: 28, Jan. 1789.
- Phaius grandiflorus* Lour., Fl. Cochinch. 2:529. 1790.
- Luodian Xian: *s. coll.* 494 (HGAS). Fujian, Taiwan, Guangdong, Hongkong (type), Hainan, Yunnan; widespread in Sri Lanka, Himalayan Reg., NE India, Japan, Indochina, Malaysia, Indonesia, Australia and the Pacific Islands.
- There is a lot of synonyms given on the authority of earlier authors. I here have only listed Chinese synonyms referring this species.
- **Phalaenopsis hainanensis* Tang & Wang, Acta Phytotax. Sin. 7(1):47. 1974.
- Xingyi Xian: *C. D. Li* 157 (GZTM). Hainan (type), Yunnan.
- **Pholidota cantonensis* Rolfe, Bull. Misc. Inform.: 196. 1896.
- Libo Xian: *M. Z. Yang et al.* 810384 (HGAS). Jiangxi, Zhejiang, Fujian, Guangdong (type), Guangxi.
- P. chinensis* Lindl., J. Linn. Soc., Bot. 2:308. 1847.
- Coelogyné chinensis* (Lindl.) Rchb.f., Ann. Bot. Syst. 6:237. 1861.
- P. chinensis* Lindl., var. *cylindracea* Tang & Wang, Acta Phytotax. Sin. 1:177. 1951.
- Sandu Xian: *Y. K. Li. & D. F. Huang* 8472, 8477 (PE). Zhenfeng Xian: *Y. Tsang* 4619 (PE); Xingren Xian: *Y. T. Chang et C. S. Chang* 8355 (PE). Rongjiang Xian: *s. coll.* 74-755 (HGAS). Fujian, Hongkong (type, K). Hainan, Hunan, Guangxi (type of *P. chinensis* var. *cylindracea*), Yunnan; Vietnam.

- P. leveilleana** Schltr., Feddes Report. Spec. Nov. Regni Veg. 2:107. 1913.
- Dushan Xian: *Libo Team* 1072 (PE); Huishui (Tien-sey-Kao) Xian: *Esquirol* 2088 (type, B). Guangxi.
- P. missionariorum** Gagnep., Bull. Mus. Hist. Nat. (Paris), ser. 2, 3:145. 1931.
- Anshun Xian: *S. W. Teng* 073 (PE), *Cavalerie* 3793, 3987 (P). Without precise locality: 7470, 7529 (P). Pingba Xian: *L. Martin & E. Bodinier* 2579 (type, P). Yunnan.
- P. roseus** Schltr., Feddes Report. Spec. Nov. Regni. Veg. 12:107. 1913.
- Luodisn Xian: *Esquirol* 2047 (type, B). Duchen Xian: *Libo Team* 1353 (PE).
- ***P. wenshanica** Chen & Tsai, Bull. Bot. Res., Harbin. 8(1):7, fig. 1. 1988.
- Xiangyi Xian: *Y. T. Chang & C. S. Chang* 6518 (PE). Yunnan (type, PE).
- P. yunnanensis** Rolfe, J. Linn. Soc. Bot. 36:24. 1903.
- P. kouytcheensis* Gagnep., Bull. Mus. Hist. Nat. (Paris), ser. 2, 3:145. 1931.
- Anlong Xian: *Y. T. Chang & C. S. Chang* 2982, 5195 (HGAS), 5009 (HGAS, PE). Xingen Xian: *Anshun Team* 838 (HGAS, PE), *Y. T. Chang & C. S. Chang* 6697 (HGAS, PE). Rongjiang Xian: *Qiannan Team* 3419 (PE). Wuchuan Xian: *P. C. Tsoong* 633 (PE). Dushan Xian: *Libo Team* 1200 (HGAS, PE). Ceheng Xian: *Z. Y. Cao* 435 (HGAS, PE). Guidian Xian: *Cavalerie & Fortunat* 2338 (type of *P. kouytcheensis*, P.). Guiyang: *Labarde* 2524 (P). Yinjing Xian: *s. coll.* 611 (HGAS). Wegan Xian: *Libo Team* 2009, 2109 (HGAS). Chishui Xian: *Bijie Team* 12061 (HGAS). Sandu Xian: *Qiannan Team* 81 (HGAS). Libo Xian: *M. Z. Yang et al.* 810381 (HGAS). Guangxi, Yunnan (type, K).
- Platanthera japonica** (Thunb.) Lindl., Gen. Sp. Orchid. Pl.:290. 1835.
- Orchis japonica* Thunb., Fl. Jap. 26. 1784.
- Habenaria japonica* A.Gray, Mem. Amer. Acad. Arts, n. ser. 6:410. 1859.
- H. omeiensis* Rolfe, Bull. Misc. Inform.: 203. 1896.
- Platanthera manubriata* Kraenzl., Bot. Jahrb. Syst. 24:265. 1900.
- P. setchuenica* Kraenzl., loc. cit.
- P. omeiensis* (Rolfe) Schltr., Feddes Report. Spec. Nov. Regni Veg. Beih. 4:116. 1919.
- Kaili Xian: *Qiannan Team* 2040 (PE); Xingyi Xian: *Y. T. Chang & C. S. Chang* 6444 (PE). Zuonyi Xian: *Qiannan Team* 280 (PE). Fanjingshan: *Z. P. Jien et al.* 354 (HGAS, PE). Shaanxi, Gansu, Henan, Anhui, Zhejiang, Hubei, Hunan, Guangxi, Sichuan (types of *H. omeiensis*, *P. manubriata* and *P. setchuenica*), Yunnan; Japan (type), Korea.
- P. mandarinorum** Rchb.f., Linnaea 25:226. 1852.
- P. mandarinorum* Rchb.f. var. *ophryodes* Finet, Rev. Gén. Bot. 13:512. 1901.
- P. delavayi* Schltr., Feddes Report. Spec. Nov. Regni Veg. 4:281. 1911.
- P. minax* Schltr. ex Limpr., loc. cit. Beih. 12:336. 1922.
- P. winkleriana* Schltr., loc. cit. 12:335. 1922.
- Pan-chouen: *Cavalerie* 3916 (K). S. loc.: *Bodinier & Cavalerie* 1660 (P). *Cavalerie* 1907 (K). Fanjingshan: *Z. P. Jien et al.* 726 (HGAS, PE). Manchuria, Gansu (type of *P. winkleriana*), Shangdong, Jiangsu, Zhejiang, Fujian, Sichuan (types of *P. delavayi* and *P. minax*), Yunnan; Japan (type). This species may contain a lot of synonyms, but the above synonyms are restricted within China.
- P. minor** (Miq.) Rchb.f., Bot. Zeitung (Berlin) 36:75. 1878.
- P. japonica* A.Gray var. *minor* Miq., Ann. Mus. Bot. Lugduno-Batavum 2:207. 1865–66.
- Habenaria henryi* Rolfe, Bull. Misc. Inform.: 202. 1896.
- Platanthera henryi* (Rolfe) Kraenzl., Orchid. Gen. Sp. 1:632. 1899.
- P. henryi* Rolfe, J. Linn. Soc., Bot. 36: 55. 1903.
- Habenaria multibracteata* W.W.Sm., Notes Roy. Bot. Gard. Edinburgh 113:207. 1921.
- Xingyi Xian: *Cavaleria* 7718 (P). Nayong Xian: *Bijie Team* 690 (PE). Kaili Xian: *Z. P. Jien et al.* 51017 (PE). Manchuria, Zhejiang, Jiangxi, Fujian, Taiwan, Hubei (type of *H. henryi*), Guangdong, Hongkong, Sichuan, Yunnan (type of *H. multibracteata*); Japan (type), Korea.
- ***P. sinica** Tang & Wang, Acta Phytotax. Sin. 1: 59. 1951.
- Guizhou: *J. Chaffanjan et E. Bodinier* 2270 (P). Yunnan (type).
- P. uniformis** Tang & Wang, Bull. Fam. Mem. Inst. Biol. 10:31. 1940.
- Fanjingshan: *A. N. Steward, C. Y. Chiao & H. C. Cheo* 331 (type, NJU). Sichuan, Yunnan.
- The distinctive features of this species, such as the secund raceme, large stigma, long filiform staminodes lying parallel to the anther-cells and exceeding them in length, appear unlike any in the genus *Platanthera*. Perhaps further study might reveal that *P. uniformis* ought to be transferred to the genus *Diphylax*.

- Pleione bulbocodioides** (Franch.) Rolfe, Orchid Rev. 11:291. 1903.
Coelogyne bulbocodioides Franch., Nouv. Arch. Mus. Hist. Nat., ser 2, 10:84. 1888.
C. delavayi Rolfe, Bull. Misc. Inform.: 195. 1895.
C. henryi Rolfe, loc. cit.
P. mairei Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:61. 1919.
P. henryi (Rolfe) Schltr., loc. cit. 185. 1919.
P. fargesii Gagnep., Bull. Soc. Bot. France 78: 25. 1931.
- Panxian Xian: *Anshun Team* 1154 (HGAS, PE); Yinjiang Xian: *Qianbei Team* 681 (HGAS, PE). Nayug Xian: *Bijie Team* 521 (HGAS, PE). Hungping Xian: Z. Y. Cao 2673 (PE). Kaili Xian: *Qiannan Team* 2193 (HGAS, PE), 839, 923 (HGAS), Z. P. Jien et al. 51226 (HGAS). Guiding Xian: *Cavalerie* 7555 (P). Weining Xian: s. coll. 2540 (HGAS). Jiangkou Xian: C. S. Chang et al. 401558 (HGAS), 401699, 400472 (HGAS, PE). Rongjiang Xian: *Qiannan Team* 3395 (HGAS). Shaanxi, Gansu, Anhui, Zhejiang, Jiangxi, Fujian, Taiwan, Hubei, Hunan, Guangdong, Guangxi, Sichuan (types of *C. bulbocodioides*, *P. henryi* and *P. fargesii*), Yunnan (types of *C. delavayi* and *P. mairei*).
- P. hookeriana** (Lindl.) B.S.Williams, Orch. Grow. Man. ed. 6:548. 1885.
Coelogyne hookeriana Lindl., Fol. Orchid. 5:14. 1854.
Pleione laotica Kerr, J. Siam. Soc., Nat. Hist. Suppl. 9:235. 1933.
- Rongjiang Xian: *Qiannan Team* 3395 (PE). Leishan Xian: *Qiannan Team* 923 (PE). Hubei, Guangdong, Guangxi, Yunnan, Xizang; Nepal, Bhutan, NE India (type), Burma, Thailand, Laos (type of *P. laotica*).
- P. yunnanensis** (Rolfe) Rolfe, Orchid Rev. 11: 292. 1903.
Coelogyne yunnanensis Rolfe, J. Linn. Soc., Bot. 36: 23. 1903.
Pleione ganchuenensis Gagnep., Bull. Soc. Bot. France 36: 26. 1931.
P. chiwuana Tang et Wang, Acta Phytotax. Sin. 1: 78. 1951.
- Guiding Xian: *Cavalerie* 1702, 7529, 7553 (P); Anshun Xian: *Cavalerie* s. n. (type of *P. ganchuenensis*, P). Anlong Xian: Y. T. Chang & C. S. Chang 4716, 5696 (PE). Nayong Xian: *Bijie Team* 28 (PE). Pan Xian: Y. T. Chang & C. S. Chang 4716 (PE). Ziyun Xian: Y. T. Chang & C. S. Chang 929 (PE). Fanjingshan: *Qianbei Team* 411 (HGAS, PE), Z. P. Jien et al. 31306 (HGAS, PE). Leishan Xian: *Qiannan Team* 839 (HGAS, PE). Guiyang: S. W. Teng 90077 (PE).
- Kaili Xian: *Qiannan Team* 2103 (HGAS, PE). Sichuan, Yunnan (types of *C. yunnanensis* and *P. chiwuana*).
- Pogonia japonica** Rchb.f., Linnaea 25:228. 1852.
P. similis Bl., Coll. Orchid.: 148, t. 32. 1858.
P. parvula Schltr., Feddes Repert. Spec. Nov. Regni. Veg. Beih. 4:54 et 144. 1919.
P. kungii Tang & Wang, Contr. Inst. Bot. Natl. Acad. Peiping 2:51. 1934.
- Kaili Xian: *Qiannan Team* 1379 (HGAS, PE), Z. Y. Cao 1862 (PE), Z. P. Jien et al. 50177 (PE). Anlong Xian: Y. T. Chang & C. S. Chang 5692 (PE). Dushan Xian: J. Z. Yang 18 (GZTM). Qingshen Xian: S. W. Teng 1433 (PE). s. loc.: Esquirol, s. n. (type of *P. parvula*, B). Chishui Xian: s. coll. & s. n. Jiankou Xian: C. S. Chang et al. 400774, 400963 (PE). Jilin (type of *P. kungii*), Hubei, Sichuan, Yunnan; Japan (types of *P. japonica* and *P. similis*), Korea.
- ***Pomatocalpa spicata** Breda, Gen. Sp. Orchid. Asclep. t. 15. 1827; Seidenf., Opera Bot. 95:110. 1988.
- Cleisostoma wendlandorum* Rchb.f., Allg. Gartenzeitung 24, 28:218. 1855.
- Pomatocalpa wendlandorum* (Rchb.f.) J.J.Sm., Natuurw. Tijdschr. Ned.-Indië. 72:108. 1912.
- Xingren Xian: *Guizhou Team* 8093 (PE). Hainan; Sikkim, NE India, Burma, Thailand, Laos, Vietnam, Philippines, Malaysia, Indonesia (types of *P. spicata* and *C. wendlandorum*).
- ***Rhynchostylis retusa** (L.) Bl., Bijdr. t. 49. 1825.
- Epidendrum retusum* L., Sp. Pl. ed. 1: 953. 1753.
- Guizhou: s. loc. Y. T. Chang & C. S. Chang 5880 (PE). Yunnan; widespread from Sri Lanka and Deccan (India) to NW Himalaya, eastwards through Nepal, Sikkim (type), Bhutan to NE India, southeastwards through Burma, Thailand, Indochina, Philippines to Malaysia and Indonesia.
- ***Satyrium ciliatum** Lindl., Gen. Sp. Orchid. Pl.: 341. 1835.
- S. mairei* Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:137. 1919.
- S. tschanglii* Schltr., loc. cit. 4: 374. 1924.
- Wuchuan Xian: *P. C. Tsoong* 1747 (PE). Pan Xian: *Anshun Team* 1109 (HGAS, PE). Sichuan, Yunnan (types of *S. mairei* and *S. tschanglii*), Xizang; Nepal (type), Sikkim, Bhutan.
- ***S. nepalense** D.Don., Prodr. Fl. Nepal.: 26. 1825.
- S. henryi* Schltr., Feddes Repert. Spec. Nov. Regni Veg. Beih. 4:53, 137. 1919.

- Wuchuan Xian: *P. C. Tsoong* 1707 (PE). Yunnan (type of *S. henryi*). Nepal (type).
- ****Sedirea subparishii*** (Tsi) E.A.Christenson, Taxon 34(3):517. 1985.
Hygrochilus subparishii Tsi, Acta Bot. Yunnanica 4(3): 267. 1982.
- Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped.* 480 (PE). Songtao Xian: *Sino-Amer. Guizhou Bot. Exped. s. n.* (PE). Zhejiang (type, PE), Fujian, Hubei, Hunan, Guangdong, Sichuan.
- Spathoglottis pubescens*** Lindl., Gen. Sp. Orchid. Pl.: 120. 1831.
S. fortunei Lindl., Bot. Reg.: t. 19. 1845.
S. bennoni Hook.f., Fl. Brit. India 5:814. 1890.
- Ping-Chow Xian: *Y. Tsiang* 6810 (PE). Rongjiang Xian: *Z. P. Jien et al.* 51454 (HGAS, PE), *Qiannan Team* 3163 (PE). Xinjiang Xian: *Z. P. Jien et al.* 30647 (HGAS, PE). Kaili Xian: *Qiannan Team* 3922 (HGAS, PE). Anshuan Xian: *s. coll.* 479 (PE). Xingren Xian: *Y. T. Chang & C. S. Chang* 7792, 7513, 8383 (PE), 8505 (HGAS, PE). Pinpa (Pingba) Xian: *S. W. Teng* 935 (PE). Anlong Xian: *s. coll.* 1271 (HGAS). Fanjingshan: *Sino-Amer. Guizhou Bot. Exped.* 822, 1177, 1945 (HGAS, PE). Jiangxi, Fujian, Hunan, Guangdong, Hongkong (type of *S. fortunei*), Guangxi, Sichuan, Yunnan; Bengal (type), NE India, Burma (type of *C. bennoni*), Thailand, Vietnam, Laos, Cambodia.
- Spiranthes sinensis*** (Pers.) Ames, Orch. 2:53. 1908.
Neottia sinensis Pers., Syn. Pl. 2:511. 1807.
Spiranthes australis var. *sinensis* (Pers.) Gagnep., Fl. Indo-Chine 6(4):546. 1933.
- Kaili Xian: *Y. T. Chang & C. S. Chang* 1451 (PE), *Qianna Team* 1 916 (PE). Z. Y. Cao 1432 (PE). Leishan Xian: *Z. P. Jien et al.* 50854 (PE). Zhengyan Xian: *s. coll.* 3298 (PE); Qingzhen Xian: *S. W. Teng* 90370, 609, 691 (PE). Duyun Xian: *Y. Tsiang* 5914 (PE). Nayong Xian: *Bijie Team* 777 (HGAS, PE). Pan Xian: *Andhun Team* 1215 (PE). Anlong Xian: *Y. T. Chang & C. S. Chang* 4751 (HGAS, PE). Xiangren Xian: *Y. T. Chang & C. S. Chang* 7859 (PE); Fanjingshan: *Qianbei Team* 1147, 1134 (HGAS, PE). Guiding Xian: *Cavalerie* 63 (P). Jiangkou Xian: *C. S. Chang et al.* 402275 (HGAS). Chishui Xian: *s. coll.* 207 (HGAS). Widely distributed in the mainland of Asia, southeastwards to Australia and New Zealand.
- This is an extremely polymorphous species and above synonyms are only restricted within Chinese taxa.
- ****Tainia dunnii*** Rolfe, J. Linn. Soc., Bot. 38: 368. 1908.
- T. flabellilobata* Tso, Sunyatsenia 1: 144. 1933.
 Xifeng Xian: *s. loc. et s. n.* Zhejiang, Jiangxi, Hunan, Guangdong (type of *T. flabellilobata*), Hongkong (type), Guangxi, Sichuan.
- ****Thrixspermum japonicum*** (Miq.) Rchb.f., Bot. Zeitung (Berlin) 36:75. 1878.
Sarcochilus japonicus Miq., Prolus. Fl. Jap. 2: 138. 1866.
- Jiangkou Xian: *Sino-Amer. Guizhou Bot. Exped.* 1019 (PE); Songtao Xian: *Sino-Amer. Guizhou Bot. Exped.* 2340 (PE). Yinjiang Xian: *Sino-Amer. Guizhou Bot. Exped. s. n.* (PE). Guangdong, Sichuan; Japan (type).
- ****Thunia alba*** (Lindl.) Rchb.f., Bot. Zeitung (Berlin) 10:964. 1852.
Phaius albus Lindl., Wall. Pl. Asiat. Rar. 2:85, t. 198. 1831.
- Shuicheng Xian: *G. Z. Huang* 90 (GZTM). Yunnan; Nepal (type), Sikkim, Bhutan, NE India, Burma, Thailand, Vietnam.
- Uncifera acuminata*** Lindl., J. Linn. Soc., Bot. 3:40. 1859.
- Saccolabium lancifolium*** King & Pantl., J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 65:122. 1896.
- Duyun Xian: *Y. Tsiang* 5910 (PE). Sikkim (type of *S. lancifolium*), NE India (type).
- Vanda concolor*** Bl. ex Lindl., Fol. Orchid.: 3. 1853.
V. esquirolei Schltr., Feddes Repert. Spec. Nov. Regni Veg. 17:71. 1921.
- Guizhou (Chang-cou-may, April 1905): *Esquierol* 349 (type of *V. esquirolei*, B). Guangxi, Sichuan, Yunnan. Type from China (without precise locality).
- ****Vanilla siamensis*** Rolfe ex Downie, Bull. Misc. Inform.: 410. 1925.
- Luodian (Lofou) Xian: *Cavalerie* 3427 (P, PE). Thailand (type).

ACKNOWLEDGMENTS

I wish to especially thank Dr. David E. Boufford, Assistant Director of the Harvard University Herbaria, for the opportunity and facilities provided for me at HUH and for his help in reading my manuscript. I would like to thank Dr. Gustavo A. Romero, Research Associate and Curator of the Oakes Ames Orchid Herbarium (AMES), for his helpful suggestions concerning the manuscript. I am very grateful to Dr. Shiu Ying Hu (HUH), for her advice and the valuable reference materials she provided me in preparing this paper.

LITERATURE CITED

- AVERYANOV, L. V. 1990. Orchidaceae In Vascular Plants Synopsis of Vietnamese flora 1: 20–167. Nauka, Leningrad.
- BRAEM G. J. 1988. *Paphiopedilum* : A monograph of all tropical and subtropical Asiatic slipper-orchids. W. Germany.
- CHEN, S. C. AND Y. Z. XI. 1987. Chinese Cypripediums with a discussion on the classification of the genus. Proceedings of the 12th world orchid conference. Japan. pp. 141–146.
- CRIBB, P. 1987. The genus *Paphiopedilum*. Timber Press, London.
- . 1988. The genus *Pleione*. Timber Press, London.
- DUPUY, D. AND P. CRIBB. 1988. The genus *Cymbidium*. Timber Press, London.
- GARAY, L. A. AND H. R. SWEET. 1974. Orchids of Southern Ryukyu Islands. Botanical Museum, Harvard University, Cambridge.
- HANDEL-MAZZETTI. 1936. *Symbolae Sinicae* 7: 1323–1360.
- . 1937. Kleine Beitraege Zur Kenntnis der Flora von China VI. Oesterr. Bot. Z. 86: 302–303.
- HOOKER, J. D. 1889–90. Orchidaceae: In The Flora of British India. Vol. 5–6.
- HU, S. Y. 1971. The Orchidaceae of China. Quart. Journ. Taiwan Mus. 24:68–103.
- . 1971. The Orchidaceae of China II. ibid. 24: 182–255.
- . 1972. The Orchidaceae of China III. ibid 25: 40–67.
- . 1972. The Orchidaceae of China IV. ibid. 25: 199–230.
- . 1973. The Orchidaceae of China V. ibid. 26: 131–165.
- . 1973. The Orchidaceae of China VI. ibid. 26: 373–406.
- . 1974. The Orchidaceae of China VII. ibid. 27: 155–190.
- . 1974. The Orchidaceae of China VIII. ibid. 27: 419–467.
- . 1975. The Orchidaceae of China X. ibid. 28: 125–182.
- . 1976. The genera of Orchidaceae in Hongkong Illustrated. Chinese Univ. of Hongkong.
- KING, G. AND R. PANTLING. 1898. The Orchids of Sikkim Himalaya. Ann. Roy. Bot. Gard. Calcutta 8: 1–342.
- LANG, K. Y. AND Z. T. TSI. 1979. Orchidaceae : In *Iconographia Cormophytorum Sinicorum* 5: 602–722.
- LIN, T. P. 1975. Native Orchids of Taiwan I. 1–271. Taiwan.
- . 1977. ibid. II. 34–334. Taiwan.
- . 1987. ibid. III. 15–2922. Taiwan.
- LINDLEY, J. 1830–1840. The Genera and Species of Orchidaceous Plants. London.
- LIU, T. S. AND H. J. SU. 1978. Orchidaceae: In Flora of Taiwan 5: 859–1137. Taiwan.
- SCHLECHTER, R. 1919. *Sino-Japonicae Prodromus. Feddes Repert. Spec. Nov. Regni Veg. Beih.* 4: 1–219.
- SEIDENFADEN, G. 1976. Orchid Genera in Thailand IV: *Dansk Botanisk Arkiv* 31(1): 5–97.
- . 1977. Orchid Genera in Thailand V: ibid. 31(3): 7–141.
- . 1980. Orchid Genera in Thailand IX: ibid. 34(1): 9–82.
- . 1983. Orchid Genera in Thailand XI: *Opera Botanica* 72: 5–124.
- . 1985. Orchid Genera in Thailand XII: ibid. 83: 5–295.
- . 1986. Orchid Genera in Thailand XIII: ibid. 89: 7–216.
- . 1988. Orchid Genera in Thailand XIV: ibid. 95: 1–398.
- . 1992. The Orchids of Indochina: ibid. 114: 1–502.
- . 1995. Contributions to the orchid flora of Thailand XII: ibid. 124: 1–89.
- SEIDENFADEN, G. AND WOOD, J. J. 1992. The Orchids of Peninsular Malaysia and Singapore. Fredensborg.
- TANG, T. AND F. T. WANG. 1951. Contribution to the knowledge of eastern Asiatic Orchidaceae II. *Acta Phytotax. Sin.* 1: 23–102.
- . 1974. *Planta novae Orchidacearum Hainanensis. Acta Phytotax. Sin.* 12: 35–49.
- TSI, Z. H. 1980. A preliminary study of the orchid genus *Dendrobium* Sw. *Acta Phytotax. Sin.* 18(4): 427–449.