

## Some Brief Notes on Taiwanese Orchids 1.

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**ABSTRACT:** Literature and herbarium studies of various Southeast Asian orchids have revealed a variety of noteworthy data pertinent to the flora of Taiwan. The following new combinations and names are proposed: *Gastrochilus linii*, *Oberonia pumila*, *O. seidenfadeniana* and *Papilionanthe taiwaniana*.

**KEY WORDS:** Orchidaceae, Taiwan, Brief notes.

The following researches are intended as supplementary to the second edition of the Flora of Taiwan (Editorial Committee of the Flora of Taiwan, 2000).

### **Ania** Lindl.

Turner (1992) accepted this genus as distinct from *Tainia* Blume but overlooked the generic record by Lin (1987) from Taiwan. Lin used the name *Ania hookeriana* (King & Pantl.) Tang & Wang ex Summerh., but according to Turner this is conspecific with *A. penangiana* (Hook. f.) Summerh.

**Ania penangiana** (Hook. f.) Summerh., Bot. Mag. 161: t. 9553, 1939.

Basionym: *Tainia penangiana* Hook. f., Fl. Brit. Ind. 5: 820, 1890.

Type: Malaya – Penang, *Maingay 1642* (holotype: K, isotype L.).

Distribution: Peninsula Malaysia; Thailand; NE India; Vietnam; China – Hainan; Taiwan.

Notes: Further synonymy can be found in Turner (1992). Ying (1990) sunk his own *Tainia taiwaniana* into *Tainia hookeriana* King & Pantl., but judging from the photograph he supplies of the former it differs from *Ania penangiana* in lacking a spur and therefore is properly placed in the genus *Tainia*. I am unable to identify *Tainia taiwaniana* with any of the species in Turner's 1992 monograph and thus accept it as a distinct species.

### **Appendicula** Blume.

Two species so far are found in Taiwan, one is the widespread *A. reflexa* Blume (Synonyms: *A. formosana* Hay. & *A. kotoensis* Hay), the other, *A. fenixii*, is restricted to small islands between Taiwan and the Philippines.

**Appendicula fenixii** (Ames) Schltr., Fedde Rep., Beih. 1: 336, 1912. Basionym: *Podochilus fenixii* Ames, Philipp. J. Sci., Bot. 6: 48, 1911.

Type: Philippines – Batanes Island, near summit Mt. Iraya, 8 June 1907, *Fenix BS 3794* (holotype AMES!).

*Appendicula terrestris* Fukuyama, Bot. Mag. Tokyo 50: 223, 1936. *syn. nov.*

Type: Taiwan – Lanyu (as Koto) Island, Mt. Omori - yama, 3 June 1934, *Fukuyama 4809* (holotype TAI).

Distribution: Taiwan – Lanyu Island; Philippines – Batan Island.

Occurrence: Philippines – Batan Island, Mt. Iraya, 915m, 2 June 1930, *Ramos BS 80794* (AMES).

Notes: Study of the type of this species and one later collection from the type locality show that it is the earlier name for *A. terrestris*. Valmayor (1984) records it from Luzon and the Catanduanes based on specimens in AMES which on examination have proven to belong elsewhere (e.g. some are *A. polyantha* Ames).

### **Bulbophyllum** Thouars.

To the species listed in the Flora of Taiwan ed. 2, volume 5 (FT2, 5) should be added *B. chitouense* Ying (Col. Illustr. FL. Taiwan 5: 591, Pl. 83-84, 1995 not seen), a very distinctive entity belonging to section *Sestochilus* (Breda) Benth. & Hook. f. Also, I believe *B. pingtungense* Ying should be accepted as separate from *B. wightii* Rchb. f. It differs from the latter in having a three-keeled lip, distinctly triangular columnwings apically rounded and abruptly bent column stelidia. Another species not in FT2, 5 is *B. fenghuangshanianum* Ying, which is dealt with below.

### **Bulbophyllum rubrolabellum** T. P. Lin, *Taiwania* 20, 2: 163, Pl. 2, 1975.

Type: Taiwan – Mt. Yangmei, 25 October 1972, *Lin 129* (holotype: TAI).

*Bulbophyllum fenghuangshanianum* Ying, Col. Illustr. Orch. Taiwan 2:113, 407, Pl.15, 1990. *syn.nov*

Type: Taiwan – Fenghuangshan, May 1987, *Ying s.n.* (holotype: NTUF).

Distribution: Taiwan.

Notes: The above synonymy is based on a comparison of published descriptions and illustrations.

### **Cheirostylis** Blume.

Seven species are listed in FT2, 5 to which I would add the plants treated as *Zeuxine tabiyahanensis* Hayata (see below). *Cheirostylis derchiensis* S. S. Ying is separate from *C. hungyehensis* Lin by its pubescent ovary and sepals. It is possible *C. derchiensis* is a peloric form of *C. liukiensis* Masamune which it closely resembles in habit, leaf colour and floral pubescence but the matter remains to be investigated. Further I consider *C. hungyehensis* a synonym of *C. clibborndyeri* and agree with L.A. Garay (mss.) that *C. inabai* Hayata is conspecific with *C. octodactyla* Ames.

### **Cheirostylis clibborndyeri** S. Y. Hu & Barretto, *Chung Chi J.* 13, 2: 15, fig., 1976.

Type: China – Hong Kong, Victoria Peak, 400m, 6 March 1973, *S. Y. Hu 13055* (holotype: K, isotypes AMES!, CUH, HK, PE).

*Cheirostylis hungyehensis* T. P. Lin, *Native Orchids Taiwan* 2:73, fig., Pl. 19-20, dis. fl.7, 1977. *syn. nov.* Type: Taiwan – Taitung County, Hung-yeh Village, 400m, coll. 12-12-1975, fl. 15-03-1976, *Young & Lu 5089* (holotype: TAIF).

Distribution: China – Hong Kong; Taiwan.

Occurrence: China – Hong Kong, Ma On Shan, Sai Kung side 7 April 1972, *Hu 11817* (AMES); Tai Mo Shan, 28 March 1970, *HU 9901*(AMES); Beacon Hill, 3 April 1970, *Hu 9901* (AMES).

Notes: As noted above I consider *C. hungyehensis* conspecific with this but exclude *C. derchiensis* from the synonymy.

**Cheirostylis octodactyla** Ames, Philipp. J. Sci., Bot. 2: 314, 1907.

Type: Philippines – Mindoro, Mt. Halcon, 2500m, 22 November 1906, *Merrill 5834* (holotype: AMES!).

*Cheirostylis inabai* Hayata, Ic. Plant. Formos. 4:108, fig. 56, 1914. Type: Taiwan – Rinkoho, 1525m, August 1911, *Inaba s.n.* (holotype: TI).

Distribution: Philippines; Taiwan.

Notes: An examination of the holotype of *C. octodactyla* confirms that L. A. Garay (mss.) is correct in considering *C. inabai* the same. Lin (1977) added *C. oligantha* Fukuy to the synonymy. *C. inabai* can be added as well.

**Cheirostylis tabiyahanensis** (Hayata) Pearce & Cribb, Edinb. J. Bot. 56, 2: 278, 1999.

Basionym: *Zeuxine tabiyahanensis* Hayata, Ic. Plant. Formos. 6: 89, 1916.

Type: Taiwan – Tabiyahanzan May 1916, *Hayata s.n.* (holotype: TI).

Distribution: Taiwan.

Notes: Leou in FT 2, 5 provides a full synonymy for this species under *Zeuxine*. The plant does not belong in *Zeuxine* due to the presence of sterile brachia on the column. It is related to *C. sherriffii* Pearce & Cribb from Bhutan and the peloric *C. merrillii* (Ames & Quis.) Ormd. from the Philippines.

**Cleisostoma paniculatum** (Ker-Gawl.) Garay. Bot. Mus. Leafl. 23, 4: 173, 1972.

Distribution: NE India; S China; Thailand; Vietnam; Taiwan.

Notes: Seidenfaden (1988) records *Renanthera coccinea* Lour. from Taiwan based on a fruiting, specimen in AMES (Oldham 557!). The collection does not match *Renanthera coccinea* in habit and appears to *Cleisostoma paniculatum*.

**Dendrobium catenatum** Lindl., Gen. Sp. Orch. Pl.: 84, 1830.

Type: China – icon *Reeves s. n.* lectotype RHS!)

Distribution: Japan; Taiwan; SE China.

Notes: This name is the earliest one available for the plants previously known as *D. stricklandianum* Rchb. f. and *D. tosaense* Makino. Typification and synonymy are discussed in Ormerod (2000).

**Dendrobium goldschmidtianum** Kraenzl., Repert. Spec. Nov. Regni Veg. 7: 40, 1909.

Type: Philippines or Formosa, July 1907, *hort. Goldschmidt-Essen s.n.* (holotype: HBG).

Distribution: Philippines; Taiwan.

Notes: This is an earlier name for *D. miyakei* Schltr. as shown by Christenson (1994).

**Eria japonica** Maxim., Bull. Acad. Sci. St.Petersb. 31: 103, 1887.

Type: Japan – cult. In Tokyo, *Maximowicz s. n.* (holotype: lost?)

Distribution: Japan, Taiwan.

Notes: *Denbrobium reptans* Franch. & Sav. 1879 is an illegitimate, later homonym of *D. reptans* (Sw.) Sw. 1800. *Eria japonica* is the next available and legitimate name, it also predates the combinations *Callista reptans* Kze. 1891 and *Eria reptans* Makino 1901.

**Gastrochilus linii** Ormerod, nom. nov.

Basionym: *Gastrochilus flavus* T. P. Lin, Native Orchids Taiwan 3: 95, fig., Pl 51, 1987 non (Hook. f.) Kuntze 1891.

Type: Taiwan – Wang Hsiang, 15 May 1978, *Young s.n.* (holotype: TAIF).

Distribution: Taiwan.

Notes: It is necessary to rename this species due to the earlier *G. flavus* (Hook. f.) Kuntze, a Burmese species now called *Sarcoglyphis flava* (Hook. f.) Garay.

**Oberonia** Lindl.

Two Taiwanese species referred to the genus *Hippeophyllum* Schltr. do not possess its floral structure and are merely rhizomatous *Oberonia*. *Hippeophyllum* differs from *Oberonia* in having liparoid flowers (i.e. a slender column with which the basally bicallose lip is subparallel).

**Oberonia pumila** (Fukuy. ex S. C. Chen & K. Y. Lang) S. S. Ying ex Ormerod, comb. nov.

Basionym: *Hippeophyllum pumilum* Fukuyama ex Chen & Lang, Acta Phytotax. Sin. 36, 1: 71, 1998.

Type: Taiwan – Hualien County, Taroko, 28-12-1931, *Suzuki s. n.* (holotype: TAI).

Distribution: Taiwan.

Notes: *Hippeophyllum pumilum* Fukuy. ex T. P. Lin was not validly published because Lin (1987) failed to designate a type. Consequently the combination *Oberonia pumila* (Fukuy. ex T. P. Lin) S. S. Ying is also invalid because it is based on a name that has no status under the International Code of Botanical (see Greuter *et al.*, ICBN 2000, Art. 12). Chen & Lang (1998) were the first to validate the name *Hippeophyllum pumilum* which is here transferred to *Oberonia*.

**Oberonia seidenfadenii** (H. J. Su) Ormerod, comb. nov.

Basionym: *Hippeophyllum seidenfadenii* H. J. Su, J. Expt. Forest. Natl. Taiwan Uni. 13, 3: 204, 1999.

Distribution: Taiwan.

Notes: I have not had access to the original publication of this species and therefore am unable to cite the type data.

**Papilionanthe** Schltr.

This genus of about ten species has been recorded from Sri Lanka, southern to northern India, and from southern China to Malaysia. The unexpected discovery of a species in Taiwan by S. S. Ying extends the distribution of the genus to the east.

**Papilionanthe taiwaniana** (Ying) Ormerod, comb. nov.

Basionym: *Vanda taiwaniana* Ying, Mem. Coll. Agric. Natl. Taiwan Uni. 29, 2: 65, fig. 8, Pl. 15-16, 1989.

Type: Taiwan – Sche-Tzou-Chi to Shi-men, near Hungchan, 26 December 1987, *Ying s. n.* (holotype: NTUF).

**Rhomboda** Lindl.

This genus was reinstated by Ormerod 1995 for a group of Goodyerinae characterized by resupinate flowers, the labellum with an external flange on each side of the hypochile, inside

the hypochile bearing only one gland each side basally with the median line of the lip bearing a raised semi-discooid grooved keel and a column with a short rostellum and two wings.

I erroneously transferred the Taiwanese *Hetaeria taiwaniana* Ying which was found by Ying (1990) to be a synonym of what is now called *Habenaria longiracema* Fukuy. *Rhomboda taiwaniana* (S. S. Ying) Ormerod (1995: 332) can be added also to the synonymy of the latter.

**Rhomboda tokioi** (Fukuy.) Ormerod, Austral. Orchid Rev. 63(4): 11, 1998.

Basionym: *Hetaeria tokioi* Fukuy., Bot. Mag. Tokyo 48: 434, 1934.

*Hetaeria cristata* Blume var. *tokioi* (Fukuy.) Ying, Col. Ill. Indigen. Orch. Taiwan 2: 468, 1977. Type: Taiwan – Taihoku Praef., near Urai, 09-1932, Suzuki – Tokio 4128 (Holotype: TI).

*Heteria cristata* auct. non Blume: Garay & Sweet, Orchid Ryukyu Isl.: 91, 1974; Lin, Native Orchid Taiwan 1: 204, fig., pl. 127-129, 1975; Leou, Fl. Taiwan ed. 2, 5: 926, fig. 394, 2000.

Distribution: Japan – (Kyushu, Yakushima, Ryukyus), Taiwan, China – (Hong Kong, Hainan), Vietnam.

Notes: The synonymy for I now find it necessary to include under this plant *Hetaeria cristata* var. *minor* Rendle, *Goodyera pogonorrhyncha* Hand.-Mazz and *Rhomboda pogonorrhyncha* (Hand.-Mazz.) Ormerod as taxonomic synonyms. Further there are several misidentifications where the plant has been confounded with *Hetaeria yakushimensis* Masam. (a rare Japanese endemic I have not seen), *Hetaeria pauciflora* Ridl. (in reference to Vietnamese records only) and *Hetaeria abbreviata* (Lindl.) Rchb. f. The last two species are now placed in *Rhomboda* whilst *Hetaeria yakushimensis* I now prefer to leave in *Hetaeria* until I can be examined material of it.

*Rhomboda cristata* differs from *R. tokioi* in having a labellum in which the internal appendages or glands are each large and circular whilst the median keel is also larger and fleshier. In *R. tokioi* the internal appendages are more or less oblong and the median keel is not so prominent.

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## 台灣蘭花簡記(一)

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### 摘 要

本文研究東南亞蘭科植物之文獻及標本，顯示有不少的台灣植物資料值得記述。文中提出金松蘭、小騎士蘭、密花小騎士蘭及台灣萬代蘭等學名之新組合及新學名。

關鍵詞：蘭科、台灣、簡記。

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