

CATALOGUE OF THE NAMES PUBLISHED BY HECTOR LÉVEILLÉ: IX [COMPOSITAE]

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ABSTRACT. The taxa described by Léveillé belonging to the family *Compositae* are evaluated. There are eight new combinations and two new names: *Ainsliaea latifolia* (D. Don) Sch. Bip. var. *obovata* (Franch.) Grierson & Lauener, *Boltonia integrifolia* (Turcz. ex DC.) Lauener, *Dendranthema littorale* (Maekawa) Tzvel. subsp. *coreana* (Lévl. & Van.) Lauener, *Gynura nudibasis* (Lévl. & Van.) Lauener & Ferguson, *Heteropappus altaicus* (Willd.) Novopokr. var. *millefolius* (Van.) Grierson & Lauener, *Heteropappus hispidus* (Thunb.) Less. var. *ursinus* (Lévl.) Grierson & Lauener, *Ligularia lankongensis* (Franch.) Hand.-Mazz. var. *minor* Lauener & Ferguson, *Prenanthes cavaleriei* (Lévl.) Stebbins ex Lauener. *Senecio faberi* Hemsl. var. *discoideus* Lauener & Ferguson, *Youngia blinii* (Lévl.) Lauener.

INTRODUCTION

This paper, which is devoted entirely to the *Compositae*, follows the same basic format as those previously published and listed below* but instead of listing the genera alphabetically throughout they are listed within the tribes according to the order in Bentham & Hooker's *Genera Plantarum*. An index to the genera giving the running number of the first species in each genus is given at the end.

The two tribes *Senecioneae* and *Cardueae* were written up in collaboration with Dr D. K. Ferguson** of the Department of Botany, University of Antwerp. My colleague Mr D. McKean assisted in the work and preparation of the tribes *Vernonieae*, *Eupatorieae* and part of *Astereae*, and also prepared a card index of all the Léveilléan taxa of *Compositae*. The genera concerned are listed below.

With Dr D. K. Ferguson: *Cacalia*, *Cirsium*, *Cremanthodium*, *Emilia*, *Gynura*, *Hemistepta*, *Ligularia*, *Petasites*, *Railliardia*, *Saussurea*, *Senecio*, *Serratula*.

With Mr D. McKean: *Adenostemma*, *Boltonia*, *Cyathocline*, *Dichrocephala*, *Eupatorium*, *Myriactis*, *Rhynchospermum*, *Solidago*, *Vernonia*.

The genus *Artemisia* was prepared jointly with Dr J. Cullen, Edinburgh.

It should be pointed out that by the nature of this Catalogue, the nomenclature expressed in it is not intended to be definitive or decisive but rather an assessment of the appropriate genus and synonymy of the taxa described by Léveillé. Although personal opinions have been expressed, some nomenclature has been dictated by present practice, or by the literature, some by the arrangement of the genera in the herbarium.

* Part I, *Notes R.B.G. Edinb.* 23:573-596 (1961); II, 24:73-78 (1962); III, 26:333-346 (1966); IV, 27:1-10 (1966); V, 27:265-292 (1967); VI, 30:239-294 (1970); VII, 31:397-435 (1972); VIII, 32:93-116 (1972).

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Approximately 342 Lévilléan taxa and names have been examined and over 1800 specimens of Compositae in the Lévillé herbarium have been checked or named. As usual, all specimens cited have been examined unless otherwise stated.

An analysis of the taxa shows that only 30, or about 8.6%, remain as good taxa and are unchanged in this Catalogue. Another 30 epithets (8.6%) have been retained either in another rank or in a different genus. A further 29 names (8.6%) include transfers of existing species to another genus by Lévillé, e.g. *Cnicus* to *Cirsium*, and also some *nomina nuda*. Two taxa were described by Lévillé in Dipsacaceous genera.

The remaining 251 taxa or names have been relegated to synonymy. Of these, 138 (about 40.3%) remain in the same genus and 113 (about 33%) have been sunk under other genera. However, as far as Lévilléan taxa are concerned, this latter category does include transfers between segregate genera such as *Crepis*/*Ixeris*/*Youngia* or *Cremanthodium*/*Gynura*/*Cacalia*/*Senecio*/*Ligularia*.

Of the total number of taxa and names, therefore, about 17% are unchanged or retained whilst 83% have been disposed of in synonymy or otherwise.

VERNONIEAE

1009. *Vernonia arbor* Lévl. in Fedde, Rep. Sp. Nov. 11:304 (1912) & Fl. Kouy-Tchéou 109 (1914); Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920); Rehder in Journ. Arn. Arb. 18:277 (1937).

Vernonia papillosa auct. non Franch.; Rehder in Journ. Arn. Arb. 18:251 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:21 (1969).

In a note on the type specimen, *V. arbor* was doubtfully referred to *V. papillosa* by Gagnepain but in his paper he regarded *V. arbor* as a distinct species, a view supported by Rehder.

Following the usual practice in the Catalogue, details of type specimens are not cited here when they have appeared in Rehder's work, as is the case with *V. papillosa*.

1010. *Vernonia arborea* Buch.-Ham.; Gagnepain in Bull. Soc. Bot. Fr. 67:364 (1920); Rehder in Journ. Arn. Arb. 18:250, 276 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:17 (1969).

V. vanioti Lévl. in Fedde, Rep. Sp. Nov. 12:531 (1913) & Cat. Pl. Yunnan 56 (1916); Cat. Ill. Pl. Seu-Tchouen f. 21 (1918) sub *V. vaniotiana* Lévl.—*nom. nud.*

1011. *Vernonia cinerea* (L.) Less. in Linnaea 4:291 (1829); Lévl., Fl. Kouy-Tchéou 109 (1914); Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920); Chang in Sunyatsenia 3:275 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:18 (1969).

Blumea esquirolii Lévl. & Van. in Fedde, Rep. Sp. Nov. 7:22 (1909); Randeria in Blumea 10:297 (1960).

CHINA. Kweichow, Lo-fou, iv 1907, *Cavalerie* 3304 (holo. *B. esquirolii*, E).

1012. *Vernonia extensa* DC., Prodr. 5:33 (1836); Gagnepain in Bull. Soc. Bot. Fr. 67:364 (1920); Rehder in Journ. Arn. Arb. 18:252, 277 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:19 (1969).

Conyza extensa Wall., Cat. 3016 (1831)—*nom. nud.*

Vernonia subarborea Van. in Bull. Acad. Géog. Bot. 12:126 (1903); Lévl., Fl. Kouy-Tchéou 109 (1914).

CHINA. Kweichow, Montée du torrent de Koan-lin, sous-arbrisseau de 2.50 m, fleurs rosées, 14 ii 1899, *Martin & Bodinier* 2568 (holo. *V. subarborea*, E).

1013. *Vernonia saligna* DC.; Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920); Rehder in Journ. Arn. Arb. 18:251, 277 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:22 (1969).

V. martini Van. in Bull. Acad. Géog. Bot. 12:124 (1903); Lévl., Fl. Kouy-Tchéou 109 (1914).

V. seguini Van. in Bull. Acad. Géog. Bot. 12:241 (1903); Lévl., Fl. Kou-Tchéou 109 (1914).

Aster coriaceifolius Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:358 (1910); Lévl., Fl. Kouy-Tchéou 86 (1914); Chang in Sunyatsenia 3:275 (1937) pro syn. sub *Vernonia aspera* (Roxb.) Buch.-Ham.; Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:608 (1937) pro syn. sub *V. clivorum* Hance; S.Y. Hu in Quart. Journ. Taiwan Mus. 22:17 (1969) pro syn. sub *V. aspera*.

CHINA. Kweichow, *sine loc.*, *Cavalerie* s.n. (holo. *A. coriaceifolius*, E).

The type of *A. coriaceifolius* was first redetermined as *V. aspera* by Chang, and then by Handel-Mazzetti as "Potius *Vernonia clivorum* Hce. (nisi sp. propria)", a species found in Canton and Burma. There seems no doubt, however, that it belongs to *V. saligna*.

1014. *Vernonia silhetensis* (DC.) Hand.-Mazz., Symb. Sin. 7:1084 (1936) & in Notizbl. Bot. Gart. Berlin 13:608 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:22 (1969).

Decaneurum silhetense DC., Prodr. 5:67 (1836).

Vernonia bracteata [Wall., Cat. 2921 (1831) ex] C.B. Cl., Comp. Ind. 17 (1876); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:17 (1969).

Serratula darrisii Lévl. in Fedde, Rep. Sp. Nov. 11:305 (1912) & Fl. Kouy-Tchéou 107 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:153 (1968).

CHINA. Kweichow, ouest de Lo-fou, 9 xi 1905, *Cavalerie* s.n. (syntype *S. darrisii*, E); sommets de Hongkon, fleur violette, 28 viii 1911, *Esquirol* 2737 (syntype *S. darrisii*, E).

1015. *Vernonia volkameriifolia* DC., Prodr. 5:32 (1836); Franch. in Bull. Soc. Bot. Fr. 67:363 (1920); Rehder in Journ. Arn. Arb. 18:251, 276 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:23 (1969).

Conyza volkameriifolium Wall., Cat. 3001 (1831)—*nom. nud.*

Vernonia esquirolii Lévl. in Fedde, Rep. Sp. Nov. 11:304 (1912)—non Van. (1907).

V. leveillei Fedde ex Lévl., Fl. Kouy-Tchéou 109 (1914).

EUPATORIEAE

1016. *Adenostemma lavenia* (L.) O. Ktze., Rev. Gen. Pl. 304 (1891).

Verbesina lavenia L., Sp. Pl. 902 (1753).

Adenostemma viscosum Forst., Char. Gen. Pl. 90, t.45 (1776); Lévl., Fl. Kouy-Tchéou 82 (1914).

Siegesbeckia esquirolii Lévl. in Fedde, Rep. Sp. Nov. 8:59 (1910); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:157 (1968).

CHINA. Kweichow, Le Ouen-Mou, *Esquirol* 936 (holo. *S. esquirolii*, E).

Ageratum sandwicense Lévl. in Fedde, Rep. Sp. Nov. 11:63 (1912).

HAWAIIAN (SANDWICH) ISLANDS. Maui, Haleakala, viii 1909, *Faurie* 940 (typus n.v.).

In his Monograph of the Genus *Ageratum* (Ann. Miss. Bot. Gard. 58:6-88, 1971) under "Excluded Names", Johnson said "*Ageratum sandwicense* Lévl. is excluded because of its capillary pappus, but its proper disposition needs study. A type, *Faurie* 940 was seen (P) in 1966".

1017. *Eupatorium heterophyllum* DC., Prodr. 5:180 (1836); Hand.-Mazz. in Acta Hort. Gotoburg. 12:203 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:257 (1966).

E. mairei Lévl. in Bull. Acad. Géog. Bot. 25:14 (1915) & Cat. Pl. Yunnan 44 (1915).

E. japonicum Thunb. var. *heterophyllum* Lévl., Cat. Pl. Yunnan 44 (1915)—*nom. nud.*

CHINA. Yunnan, sine loc., pâturages des monts., partout, 2000-2800 m, plante vivace en touffes, fl. blanc ou vineux, vii 1912, *E. E. Maire* s.n. (syntype *E. mairei*, E); coteaux de Kin-tchong-chan, 2550 m, vivace en touffes dressées, fl. blanc-rosé, en corymbes, vii 1912, *E. E. Maire* s.n. (syntype *E. mairei*, E); pâturages des coteaux et mont. à Tong-tchouan, 2500-3000 m, plante vivace en touffes, haut 1-1.50 m, fl. blanc—ou vineux en corymbe, vii 1912, *E. E. Maire* s.n. (syntype *E. mairei*, E).

If a lectotype is desired, the first specimen cited would be most appropriate.

Léveillé probably intended his var. *heterophyllum* as a reduction of the species to varietal rank.

ASTEREAE

1018. *Solidago virgaurea* L. var. *leiocarpa* (Benth.) A. Gray in Mem. Am. Acad. n.s. 6, 1:395 (1857); Nakai in Bull. Nat. Sci. Mus. Tokyo, No. 31:119 (1952); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:161 (1968).

Amphirhapis leiocarpa Benth. in Hook. Lond. Journ. Bot. 1:488 (1842).

Solidago virgaurea L. var. *taquetii* Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:141 (1910); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:398 (1937) pro syn. sub *S. japonica* Kitamura; Hara, Enum. Spermi.

Jap. 2:260 (1952) pro syn. sub *S. virgaurea* L. subsp. *asiatica* Kitamura.

KOREA. Quelpaert, in herbis Hioton, 22 viii 1908, *Taquet* 940 (holo. var. *taquetii*, E).

In considering that var. *taquetii* is a synonym of var. *leiocarpa*, we differ from Kitamura and Hara who placed it doubtfully under *S. japonica* and *S. virgaurea* subsp. *asiatica* respectively.

S. virgaurea L. var. *asiatica* Nakai and *S. virgaurea* L. subsp. *asiatica* (Nakai) Kitamura are both *nomina nuda* and if the taxon "*asiatica*" is to be separated from var. *leiocarpa* it must at present be called *S. japonica* Kitamura.

1019. *Dichrocephala benthamii* C.B. Cl., Comp. Ind. 36 (1876); Hand.-Mazz., Symb. Sin. 7:1088 (1936) and in Acta Hort. Gotoburg. 12:204 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:233 (1966).

D. bodinieri Van. in Bull. Acad. Géog. Bot. 12:242 (1903); Lévl. Fl. Kouy-Tchéou 93 (1914) & Cat. Pl. Yunnan 44 (1915).

D. amphiloba Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:59 (1910).

CHINA. Kweichow, environs de Kouy-yang, plaine et mont., 25 v 1898, Bodinier 2274 (holo. *D. bodinieri*, E); Kweichow, Tong-Tchang (Hoang-tsao fa) fleur blanchâtre, style jaune, vi 1909, Esquirol 1557 (holo. *D. amphiloba*, E).

1020. *Cyathocline lyrata* Cass. in Ann. Sci. Nat. ser. I, 17:420 (1829); Hand.-Mazz., Symb. Sin. 7:1088 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:231 (1966).

Dichrocephala minutiflora ["*minutifolia*"] Van. in Bull. Acad. Géog. Bot. 12:243 (1903); Lévl., Fl. Kouy-Tchéou 93 (1914) & Cat. Pl. Yunnan 44 (1915).

CHINA. Kweichow, bord du fleuve Hoa Kiang à Ouang-mou, belles fleurs bleues, odeur de camomille, xii 1897, Schotter & Bodinier s.n. (holo. *D. minutifolia*, E).

1021. *Myriactis nepalensis* Less. in Linnaea 6:128 (1831); Hand.-Mazz., Symb. Sin. 7:1088 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:289 (1967).

Dichrocephala leveillei Van. in Bull. Acad. Géog. Bot. 12:241 (1903).

Anisopappus candelabrum Lévl. in Fedde, Rep. Sp. Nov. 8:451 (1910); Chang in Sunyatsenia 3:277 (1937) pro syn. sub *Adenostemma lavenia* (L.) O. Ktze.; S.Y. Hu in Quart. Journ. Taiwan Mus. 18:92 (1965) pro syn. sub *Adenostemma lavenia*.

Myriactis candelabrum (Lévl.) Lévl. in Fedde, Rep. Sp. Nov. 11:303 (1912), Fl. Kouy-Tchéou 100 (1914) & Cat. Pl. Yunnan 47 (1915); Chang in Sunyatsenia 3:277 (1937) pro. syn. sub *Adenostemma lavenia*; S.Y. Hu in Quart. Journ. Taiwan Mus. 18:92 (1965) pro syn. sub *Adenostemma lavenia*.

CHINA. Kweichow, environs de Kouy-yang, mont. du coll. (Montée de N.D. de Liesse), 8 ix 1898, Bodinier 2475 (holo. *D. leveillei*, E); Kweichow, Pin-fa, xi 1907, Cavalerie 3698 (holo. *A. candelabrum*, E).

Léveillé cited the type of *Dichrocephala leveillei* Van. in his *Flore du Kouy-Tchéou* under *Myriactis candelabrum* but made no mention of Vaniot's species in synonymy.

1022. *Myriactis wallichii* Less. in *Linnaea* 6:129 (1831); S.Y. Hu in *Quart. Journ. Taiwan Mus.* 20:289 (1967).

Scabiosa mairei Lévl. in *Fedde, Rep. Sp. Nov.* 12:535 (1913) & *Cat. Pl.*

Yunnan 82 (1916); Lauener in *Notes R.B.G. Edinb.* 32:116 (1972).

CHINA. Yunnan, pâturages des monts. à Tong-tchouan, 2600-2700 m, composée annuelle, fl. blanches, ix 1912, *E. E. Maire* s.n. (holo. *S. mairei*, E).

1023. *Rhynchospermum verticillatum* Reinw. ex Bl., *Bijdr.* 15:902 (1826); Kitamura in *Mem. Coll. Sci. Kyoto Imp. Univ. ser. B*, 13:388 (1937); Hara, *Enum. Sperm. Jap.* 2:238 (1952); S.Y. Hu in *Quart. Journ. Taiwan Mus.* 20:311 (1967); Koyama, Ohashi & Fukuoka in *Mem. Nat. Sci. Mus. Tokyo* no. 3:327 (1970).

R. taquetii Lévl. in *Fedde, Rep. Sp. Nov.* 12:99 (1913).

KOREA. Quelpaert, in sepibus, 5 xi 1911, *Taquet* 5681 (holo. *R. taquetii*, E).

Although only one species with a wide distribution is generally recognised, there appear to be two definite groups within Chinese plants. No Malesian material has been seen, but in all the Japanese and Indian specimens at Edinburgh the achenes are pappose, as in Blume's original description. The Chinese specimens on the other hand divide into two groups—one with pappose achenes and the other without a pappus. The pappose group has a single capitulum whilst the other group has smaller congested capitula and eventually a much longer peduncle, and it is in this latter group that *R. taquetii* belongs.

Within these two major divisions of the species there are further variations and only further investigation and comparison with Malesian material can fully evaluate this species.

1024. *Heteropappus altaicus* (Willd.) Novopokr. var. ***millefolius*** (Van.) Grierson & Lauener, **comb. nov.**

Aster millefolius Van. in *Bull. Acad. Géog. Bot.* 12:496 (1903); Lévl. in *Bull. Acad. Géog. Bot.* 27:72 (1917); Chen in *Bull. Fan. Mem. Inst. Biol.* 5:44 (1934).

A. altaicus Willd. var. *millefolius* (Van.) Hand.-Mazz. in *Acta Hort. Gotoburg* 12:220 (1938); S.Y. Hu in *Quart. Journ. Taiwan Mus.* 18:275 (1965).

CHINA. Hopei, Peking, collines au Pe Keou, etc. près des trappistes, ix 1888, *Francois* in herb. Bodinier s.n. (holo. *Aster millefolius*, E).

1025. *Heteropappus hispidus* (Thunb.) Less., *Syn. Comp.* 189 (1832); Kitamura in *Mem. Coll. Sci. Kyoto Imp. Univ. ser. B*, 13:318 (1937); S.Y. Hu in *Quart. Journ. Taiwan Mus.* 19:288 (1966).

Aster hispidus Thunb., *Fl. Jap.* 315 (1784); Nakai. *Fl. Sylv. Kor.* 14:103 (1923) p.p. & in *Bull. Nat. Sci. Mus. Tokyo* no. 31:114 (1952).

- A. fusanensis* Lévl. & Van. in Bull. Acad. Géog. Bot. 20:139 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).
- A. rupicola* Van. & Lévl. in Bull. Acad. Géog. Bot. 20:142 (1909)—non Burgess (1906); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).
- A. depauperatus* Van. & Lévl. in Bull. Acad. Géog. Bot. 20:142 (1909)—non Fernald (1908); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:504 (1911); Nakai, Fl. Sylv. Kor. 14:103 (1923) pro. syn. sub *Aster altaicus* Willd.; Kitamura in Acta Phytotax. Geobot. 3:98 (1934) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:365 (1937) pro syn. sub *Aster ciliatus* Kitamura (1934)—? non *Aster ciliatus* (Turcz.) Hand.-Mazz. (1937); Tamamsch. in Fl. URSS 25:72 (1959) pro syn. sub *Heteropappus meyerendorffii* (Regel & Maack) Kom. & Alis.; S.Y. Hu in Quart. Journ. Taiwan Mus. 18:294 (1965) pro syn. sub *Aster meyerendorffii* (Regel & Maack) Voss.
- A. hayatae* Van. & Lévl. in Bull. Acad. Géog. Bot. 20:143 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911); Nakai, Fl. Sylv. Kor. 14:103 (1923) pro syn. sub *Aster altaicus* Willd.; Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:365 (1937); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952) pro parte?
- Heteropappus chejuensis* Kitamura in Acta Phytotax. Geobot. 3:172 (1934).
- H. rupicola* (Van. & Lévl.) Kitamura in Acta Phytotax. Geobot. 1:146 (1932) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:317, Pl. 33, f. 2 (1937).
- Aster uchiyamai* Nakai in Journ. Jap. Bot. 17:684 (1941) & in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952).
- A. chezuensis* (Kitamura) Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:113 (1952).

KOREA. In herbidis Fusan, 27 v 1906, *Faurie* 1051 (holo. *A. fusanensis*, E); Quelpaert, in petrosis littoris, 25 ix 1906, *Faurie* 1070 (holo. *A. rupicola*, E); Chemulpo, in herbidis, ix 1906, *Faurie* 1074 (holo. *A. depauperatus*, E); Quelpaert, in montibus, 1500 m, x 1906, *Faurie* 1076 (holo. *A. hayatae*, E).

The type specimens cited above have been examined and all quite clearly belong to *Heteropappus* on the distinctions laid down in Grierson's revision of *Aster* (Notes R.B.G. Edinb. 26:147-148, 1964). There does not seem to be any reason why *Aster hayatae* should be retained. *Aster rupicola* falls within the range of variation of *H. hispidus* and is treated as a synonym of this species rather than as a separate species of *Heteropappus*.

Aster depauperatus has been considered synonymous with *Heteropappus meyerendorffii* which is distinguished from *H. hispidus* on account of the uniform pappus reported for this species. Whilst we have seen no material of *H. meyerendorffii* it is clear that in *A. depauperatus* the pappus of the ray and disc flowers are of different lengths and thus conform with *H. hispidus*. It is interesting to note that *A. rupicola* and *A. depauperatus* were both redetermined by Chang as *Aster hispidus*.

Aster ursinus, which Kitamura quite erroneously placed in *Kalimeris indica*, is treated below as a variety of *H. hispidus* from which it is quite distinct by virtue of its denser hirsute indumentum.

1026. *Heteropappus hispidus* (Thunb.) Less. var. *ursinus* (Lévl.) Grierson & Lauener, comb. nov.

Aster ursinus Lévl. in Fedde, Rep. Sp. Nov. 12:100 (1913)—non Burgess (1903); Nakai in Bot. Mag. Tokyo 33:216 (1919) & Fl. Sylv. Kor. 14:104 (1923) pro syn. sub *Aster indicus* L.; Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:306 (1937) pro syn. sub *Kalimeris indica* (L.) Sch. Bip.

A. indicus L. var. *ursinus* (Lévl.) Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952).

KOREA. Quelpaert S, in humidis, i x 1911, *Taquet* 5675 (holo. *A. ursinus*, E).

1027. *Boltonia incisa* (Fisch.) Miquel in Ann. Mus. Bot. Lugd.-Bat. 2:170 (1866); Franch. & Sav., Enum. Pl. Jap. 1:225 (1875); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:288 (1965).

Aster incisus Fisch. in Mém. Soc. Imp. Nat. Mosc. 3:76 (1812); Nakai in Bot. Mag. Tokyo 33:214 (1919); Hara, Enum. Sperm. Jap. 2:131 (1952).

Asteromaea incisa (Fisch.) Koidz. in Bot. Mag. Tokyo 37:56 (1923) p.p.?

Kalimeris incisa (Fisch.) DC., Prodr. 5:258 (1836); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:309 (1937); Ohwi, Fl. Jap. (English ed.) 869 (1965).

Aster macrodon Lévl. & Van. in Bull. Acad. Géog. Bot. 20:141 (1909); Nakai, Fl. Sylv. Kor. 14:103 (1923) pro syn. sub *Aster hispidus* Thunb. & in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952).

KOREA. In herbidis Quelpaert, 25 ix 1906, *Faurie* 1071 (holo. *A. macrodon* E).

The combination *Boltonia incisa* is usually attributed to Bentham (Fl. Hongk. 175, 1861) but he did not definitely indicate this combination and under Article 33 of the *International Code* it was not validly published. Miquel appears to have been the first to validly publish this combination.

In maintaining *Boltonia* instead of *Asteromaea* and *Kalimeris*, we follow Grierson (Notes R.B.G. Edinb. 26:157, 1964).

1028. *Boltonia indica* (L.) Benth., Fl. Hongk. 174 (1861); Grierson in Notes R.B.G. Edinb. 26:158 (1964).

Aster indicus L., Sp. Pl. 876 (1753); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:289 (1965).

Asteromaea indica (L.) Bl., Bijdr. 902 (1826).

Kalimeris indica (L.) Sch. Bip. in Zoll. Syst. Verz. Ind. Archip. 125 (1854-55); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:306 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:10 (1967).

Martinia polymorpha Van. in Bull. Acad. Géog. Bot. 12:32, f. 11, 11 bis (1903) & 13:16 (1904).

CHINA. Kweichow, environs de Kouy-yang, champs en friche de la mont., fleurs bleues, 31 vii 1897, *Bodinier* 1739 (holo. *M. polymorpha*, E).

1029. *Boltonia integrifolia* (Turcz. ex DC.) Lauener, comb. nov.

Kalimeris integrifolia [Turcz. ex] DC., Prodr. 5:259 (1836); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:305 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:11 (1967).

- Asteromdea pekinensis* Hance in Ann. Sci. Nat. sér. 4, 15:225 (1861).
Boltonia pekinensis (Hance) Hance in Journ. Bot. 5:370 (1867).
Aster integrifolius (Turcz. ex DC.) Franch. in Mém. Soc. Sc. Nat. Cherbourg 24:224 (1882)—non Nutt. (1841).
A. holophyllus Hemsl. in Journ. Linn. Soc. 23:412 (1888).
Asteromdea integrifolia (Turcz. ex DC.) Loes. in Beih. Bot. Centralbl. 37, 2:189 (1920).
Aster pekinensis (Hance) Chen in Bull. Fan. Mem. Inst. Biol. 5:41 (May 1934); Kitagawa in Bot. Mag. Tokyo 48:917 (Dec. 1934).
A. franchetianus Lévl., Cat. Pl. Yunnan 40 (1915).

Léveillé's citation of *Aster franchetianus* was obviously intended as a *nomen novum* for *A. integrifolius* Franch.—non Nutt., but in any case the Yunnan specimen named "*A. integrifolius*" by Léveillé is *Boltonia indica* (L.) Benth.

1030. *Aster ageratoides* Turcz. in Bull. Soc. Nat. Mosc. 10, 7:154 (1837); Nakai, Fl. Sylv. Kor. 14:103 (1932); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:346 (1937); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:113 (1952); Hara, Enum. Sperm. Jap. 2:128 (1952).

A. quelpaertensis Van. & Lévl. in Bull. Acad. Géog. Bot. 20; 140 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).

KOREA. Quelpaert, in herbis, x 1906, *Faurie* 1041 (holo. *A. quelpaertensis*, E).

A. ageratoides is a widespread and complex Asiatic species with many Chinese and Japanese varieties. In his revision of the Himalayan *Asters*, Grierson (Notes R.B.G. Edinb. 26:98–105, 1964 & 28:227, 1968) restricted *A. ageratoides* to subsp. *ageratoides*, subsp. *trinervius* Grierson and subsp. *trinervius* var. *wattii* (C.B. Cl.) Grierson, whilst noting the confusion and overlapping of the numerous other infraspecific taxa.

In addition to *A. quelpaertensis*, Léveillé described a further three species in the "*ageratoides*" complex, *A. nigrescens*, *A. laticorymbus* and *A. blinii*, all of which were treated by Handel-Mazzetti under three separate varieties of *A. ageratoides*. Although it seems likely that these varieties should be merged under subsp. *ageratoides*, it would be invidious to do so here without consideration of all the other varieties. Since such a revision is outwith the scope or intention of this paper, I have followed Handel-Mazzetti's treatment of Léveillé's species.

1031. *Aster ageratoides* Turcz. var. *holophyllus* Maxim. in Mém. Acad. Sci. St. Pétersb. 9:144 (1859); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:271 (1965).

A. ageratoides Turcz. var. *heterophylla* Maxim. (sphalm. *holophyllus*) in Mém. Acad. Sci. St. Pétersb. 9:472 (1859)—*nom nud.*; Hand.-Mazz. in Acta Hort. Gotoburg. 12:213 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:271 (1965).

A. nigrescens Van. in Bull. Acad. Géog. Bot. 12:493 (1903); Lévl., Fl. Kouy-Tchéou 87 (1914).

CHINA. Kweichow, environs de Kouy-yang, à l'entrée de la grotte du Crapaud, fleurs blanches, 4 xi 1897, *Bodinier* 1909 bis (holo. *A. nigrescens* Van.).

In his paper, entitled "Primitiae Florae Amurensis", Maximowicz validly described *A. ageratoides* var. *holophyllus*. On page 472 in a supplement entitled "Index Florae Pekinensis", Maximowicz listed "*A. ageratoides* Turcz. var. *heterophylla* m." Handel-Mazzetti, assuming that "*holophyllus*" was an error for "*heterophylla*", adopted the latter epithet. Under the *International Code of Botanical Nomenclature*, however, the epithet "*holophyllus*" must stand.

1032. *Aster ageratoides* Turcz. var. *laticorymbus* (Van.) Hand.-Mazz. in Acta Hort. Gotoburg. 12:214 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:271 (1965).

A. laticorymbus Van. in Bull. Acad. Géog. Bot. 12:494 (1903); Lévl., Fl. Kouy-Tchéou 86 (1914).

CHINA. Kweichow, environs de Kouy-yang, mont. du Coll., bois de N.D. de Liesse, tiges 40–60 cm, fleurs blanches, 20 ix 1898, *Bodinier* 2473, (holo. *A. laticorymbus*, E).

1033. *Aster ageratoides* Turcz. var. *ovatus* (Franch. & Sav.) Hand.-Mazz. in Acta Hort. Gotoburg. 12:212 (1938).

A. ageratoides Turcz. subsp. *ovatus* (Franch. & Sav.) Kitamura in Journ. Jap. Bot. 12:647 (1936) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:351 (1937).

A. trinervius Roxb. var. *ovata* Franch. & Sav., Enum. Pl. Jap. 1:222 (1875).

A. blinii Lévl. in Fedde, Rep. Sp. Nov. 13:344 (1914) & Cat. Pl. Yunnan 38 (1915); Chang in Sunyatsenia 3:283 (1937) pro syn. sub *A. trinervius* Roxb.

CHINA. Yunnan, colline de Tchéou-Kia, 2550 m, sous bois, aster vivace à tige unique, feuill. grandes, fl. blanches (rare), xi 1913, *E. E. Maire* s.n. (holo. *A. blinii*, E).

1034. *Aster albescens* (DC.) Koehne, Deutsche Dendrol. 562 (1893); Hand.-Mazz. in Acta Hort. Gotoburg. 12:205 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:272 (1965).

Amphirhapis albescens DC., Prodr. 5:343 (1836).

Microglossa albescens (DC.) C.B. Cl., Comp. Ind. 59 (1876); Rehder in Journ. Arn. Arb. 18:252 (1937).

Aster cavaleriei Van. in Bull. Soc. Bot. Fr. 53:549 (1906); Lévl., Fl. Kouy-Tchéou 85 (1914) & Cat. Pl. Yunnan 40 (1915).

CHINA. Kweichow, Tien-sen-kiao, pentes de la riv., xi 1904, *Cavalerie* 1895 (holo. *A. cavaleriei*, E).

1035. *Aster asteroides* (DC.) O. Ktze. subsp. *costei* (Lévl.) Grierson in Notes R.B.G. Edinb. 26:136 (1964).

A. costei Lévl. in Bull. Acad. Géog. Bot. 25:14 (1915) & Cat. Pl. Yunnan 40 (1915); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:626 (1937) pro syn. sub *A. likiangensis* Franch.

A. likiangensis Franch. subsp. *costei* (Lévl.) Onno in Bibl. Bot. 106:72, t.3, f.2 (1932); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:292 (1965).

CHINA. Kweichow, pâtures du Io-chan, 3300 m, aster vivace, nain, fl. corolle bleue, centre brun sombre, viii 1912, *E. E. Maire* s.n. (holo. *A. costei*, E).

Geographical Note. All previous references to Io-chan have been referred to Yunnan as I had been unable to locate Io-chan and was unaware that Maire had crossed the Kweichow border. Many of Maire's localities are difficult to find. However, Sealy recognised that Io-chan "is probably Yaochan, 26° 43' N, 104° 13' E just south of Weining in Kweichow", not far from the Yunnanese border.

1036. *Aster brachytrichus* Franch. in Journ. de Bot. 10:372 (1896); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:621 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:278 (1965).

A. bodinieri Lévl. in Bull. Acad. Géog. Bot. 25:14 (1915) & Cat. Pl. Yunnan, 38 (1915).

CHINA. Yunnan, pâtures du h. plateau de Ta-hai, 3200 m, aster vivace, isolé, fl. bleues, vii 1912, *E. E. Maire* s.n. (syntype *A. bodinieri*, E); pâtures des pics derrière Tong-tchouan, 2700 m, aster vivace, nain isolé, fl. bleues, vi 1912, *E. E. Maire* s.n. (syntype *A. bodinieri*, E); Kweichow, plateau du Io-chan, 3400 m, aster vivace, nain, fl. bleues, vi 1912, *E. E. Maire* s.n. (syntype *A. bodinieri*, E).

1037. *Aster fastigiatus* Fisch. in Mém. Soc. Nat. Mosc. 3:74 (1812); Nakai, Fl. Sylv. Kor. 14:103 (1923); Kitamura in Acta Phytotax. Geobot. 3:172 (1934) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:336 (1937); Hand.-Mazz. in Acta Hort. Gotoburg. 12:209 (1938); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:436 (1939); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952); Hara, Enum. Sperm. Jap. 2:130 (1952); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:282 (1965); Ohwi, Fl. Jap. (English ed.) 873 (1965).

A. flabellum Van. in Bull. Acad. Géog. Bot. 12:492 (1903).

A. micranthus Van. & Lévl. in Bull. Acad. Géog. Bot. 20:140 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).

A. micranthus Van. & Lévl. var. *achilleiformis* Lévl. in Fedde, Rep. Sp. Nov. 8:449 (1910).

CHINA. Shantung (Chan tong), sur les collines derrière la ville de Tché-fou, 10 ix 1889, *Bodinier* s.n. (holo. *A. flabellum*, E).

KOREA. Chinnampo, in herbidis humidis, 2 ix 1906, *Faurie* 1077 (holo. *A. micranthus*, E); Quelpaert, in herbidis Taipyeng, viii 1909, *Taquet* 2987 (holo. *A. micranthus* var. *achilleiformis*, E).

1038. *Aster fuscescens* Bur. & Franch. in Journ. de Bot. 5:49 (1891); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:285 (1965); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:611 (1937).

A. doronicifolium Lévl. in Fedde, Rep. Sp. Nov. 12:283 (1913) & Cat. Pl. Yunnan 40 (1915).

CHINA. Yunnan, pâtures du haut plateau de Ta-hai, 3200 m, plante vivace, dressée, fl. bleues, vii 1912, *E. E. Maire* s.n. (holo. *A. doronicifolius*, E).

1039. *Aster gerlachii* Hance in Journ. Bot. 18:262 (1880); Hand.-Mazz., Symb. Sin. 7:1091 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:285 (1965).

A. curvatus Van. in Bull. Acad. Géog. Bot. 12:499 (1903); Lévl., Fl. Kouy-Tchéou 86 (1914).

CHINA. Kweichow, environs de Kouy-yang, bords de la rivière, à Niou vou tang, fleurs blanches, 18 xi 1897, *Bodinier* 1998 (holo. *A. curvatus*, E).

I have not seen any material of *A. gerlachii* and accept Handel-Mazzetti's identification.

1040. *Aster glehnii* Fr. Schmidt in Mém. Acad. Imp. Sci. St. Pétersb. ser. 7, 12:146 (1868); Kitamura in Acta Phytotax. Geobot. 3:172 (1934) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:330 (1937); Miyabe & Miyake, Fl. Saghal. 239 (1915); Hara, Enum. Sperm. Jap. 2:130 (1952); Tamamsch. in Fl. URSS 25: 91 (1959); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:286 (1965); Ohwi, Fl. Jap. (English ed.) 873 (1965).

A. korsakoviensis Lévl. & Van. in Fedde, Rep. Sp. Nov. 7:103 (1909). SACHALIN. In silvis Korsakov, ix 1908, *Faurie* 752 (holo. *A. korsakoviensis* E).

1041. *Aster maackii* Regel in Mém. Acad. Imp. Sci. St. Pétersb. ser. 7, 4:81 t.4, f.6-8 (1861); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:332 (1937); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:438 (1939); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952); Tamamsch. in Fl. URSS 25:93 (1959); Ohwi, Fl. Jap. (English ed.) 873 (1965).

A. horridifolius Van. & Lévl. in Bull. Acad. Géog. Bot. 20:141 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911); Kitamura in Acta Phytotax. Geobot. 3:172 (1934).

KOREA. In margine torrentium Coreae mediae, 3 ix 1901, *Faurie* 399 (holo. *A. horridifolius*, E).

1042. *Aster marchandii* Lévl. in Fedde, Rep. Sp. Nov. 11:306 (1912) & Fl. Kouy-Tchéou 87 (1914); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:612 (1937) descr. ampl.; S.Y. Hu in Quart. Journ. Taiwan Mus. 18:293 (1965). CHINA. Kweichow, Col de Hong Kouan—La Sou, fleur blanche, 28 viii 1911, *Esquirol* 2736 (holo. E).

1043. *Aster menelii* Lévl., Fl. Kouy-Tchéou 87 (1914); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:612 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:293 (1965).

CHINA. Kweichow, Gan chouen tchéou, blanche, vi 1910, *Cavalerie* 2066 (holo. E).

1044. *Aster oreophilus* Franch. in Journ. de Bot. 10:378 (1896); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:620 (1937) & in Acta Hort. Gotoburg. 12:221 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:296 (1965).

A. tricapitatus Van. in Bull. Acad. Géog. Bot. 12:493 (1903).

A. vanioti Lévl. in Fedde, Rep. Sp. Nov. 11:307 (1912) & Cat. Pl. Yunnan 40 (1915).

A. mairei Lévl. in Fedde, Rep. Sp. Nov. 11:307 (1912) & Cat. Pl. Yunnan 40 (1915).

CHINA. Yunnan, environs de Yun-nan-sen, dans la montagne, fleurs pourpre-violet, 3 xii 1896, *Bodinier* s.n. (holo. *A. tricapitatus* & *A. vanioti*, E); Tcheou-kia-tse-tong, 2550 m, sous bois à mi-mont, aster vivace, à tige unique, dressée (rare) fl. blanches, x 1911, *E. E. Maire* s.n. (holo. *A. mairei*, E).

1045. *Aster panduratus* Nees ex Walp. in Nov. Act. Acad. Leop. Carol. 19 (Suppl. 1):258 (1843); Hand.-Mazz. in Acta Hort. Gotoburg. 12:221 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:296 (1965).

A. fordii Hemsl. in Journ. Linn. Soc. (Bot.) 23:410 (1888); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:284 (1965).

A. candelabrum Van. in Bull. Acad. Géog. Bot. 12:498 (1903); Lévl., Cat. Ill. Pl. Seu-Tchouen pl. 16 (1918).

A. argyi Lévl. in Bull. Acad. Géog. Bot. 25:14 (1915) & in Mem. Real Acad. Ci. Artes Barcelona, ser. 3, 12:546 (1916).

CHINA. Kweichow, environs de Kouy-yang, c. sur les mont. du Collège, fleurs blanc-bleue, 30 viii 1897, *Martin & Bodinier* 1915 (holo. *A. candelabrum*, E); Kiangsu, Wou-si, Long-tse, *d'Argy* s.n. (holo. *A. argyi*, E).

Handel-Mazzetti re-identified both type specimens as *A. fordii*. He later put *A. fordii* into synonymy under *A. panduratus* but I have seen no material of the latter species.

1046. *Aster pycnophyllus* [Diels ex] W.W. Sm. in Notes R.B.G. Edinb. 8:332 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:297 (1965); Grierson in Notes R.B.G. Edinb. 26:112 (1964).

A. harrowianus Diels var. *pycnophyllus* Lévl., Cat. Pl. Yunnan 40 (1915).

No Léveillé type specimen is involved. As pointed out by Grierson (*l.c.*), Franchet's *A. pycnophyllus* was only a manuscript name.

1047. *Aster scaber* Thunb., Fl. Jap. 316 (1784); Kitamura in Acta Phytotax. Geobot. 3:172 (1934) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:359 (1937); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:438 (1939); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952).

A. komarovi Van. & Lévl. in Bull. Acad. Géog. Bot. 20:142 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).

KOREA. In silvis Quelpaert, x 1906, *Faurie* 1125 (holo. *A. komarovi*, E.).

1048. *Aster spathulifolius* Maxim. in Bull. Acad. Sci. St. Pétersb. 16:216 (1871); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:368 (1937) & in Acta Phytotax. Geobot. 3:171 (1934), 8:143 (1939); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952).

A. fauriei Van. & Lévl. in Bull. Acad. Géog. Bot. 20:139 (July 1909)—non *A. fauriei* Lévl. & Van. (May 1909).

A. feddei Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:168 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:504 (1911); Nakai, Fl. Sylv. Kor. 14:103 (1923) pro. syn. sub *Aster hispidus* Thunb.

Erigeron feddei (Lévl. & Van.) Botsch. in Not. Syst. Inst. Bot. URSS 16:389 (1954).

KOREA. Quelpaert, in rupibus littoris, x 1906, *Faurie* 1118 (holo. *A. fauriei* Van. & Lévl. & *A. feddei*, E).

A. fauriei Lévl. & Van. (May 1909) is *A. tataricus* var. *fauriei* (Lévl. & Van.) Kitamura.

1049. *Aster tataricus* L. f., Suppl. Pl. 373 (1781); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:333 (1937); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:438 (1939); Ohwi, Fl. Jap. (English ed.) 873 (1965).

A. nakaii Van. & Lévl. in Bull. Acad. Géog. Bot. 20:140 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).

A. tataricus L. f. var. *nakaii* (Van. & Lévl.) Kitamura, Comp. Nov. Jap. 20 (1931) & in Acta Phytotax. Geobot. 3:172 (1934); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952).

KOREA. Chinnampo, in herbidis, 1 ix 1906, *Faurie* 1072 (holo. *A. nakaii*, E).

1050. *Aster tataricus* L. f. var. *fauriei* (Lévl. & Van.) Kitamura, Comp. Nov. Jap. 19 (1931), in Acta Phytotax. Geobot. 3:171 (1934) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:334 (1937).

A. fauriei Lévl. & Van. in Fedde, Rep. Sp. Nov. 7:102 (May 1909)—non *A. fauriei* Van. & Lévl. (July 1909); Miyabe & Miyake, Fl. Saghal. 238 (1915); Tamamsch. in Fl. URSS 25:93 (1959).

SACHALIN. Korsakov, in collibus littoris, ix 1908, *Faurie* 754 (syntype *A. fauriei*, E); Mereya, in littore, 14 viii 1908, *Faurie* 753 (syntype *A. fauriei*, E).

1051. *Aster tripolium* L., Sp. Pl. 872 (1753); Nakai, Fl. Sylv. Kor. 14:105 (1923); Kitamura in Acta Phytotax. Geobot. 3:172 (1934) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:376 (1937); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:304 (1965).

A. chaneti Lévl. & Van. in Fedde, Rep. Sp. Nov. 7:103 (May 1909); Lévl. in Bull. Acad. Géog. Bot. 27:72 (1917); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:279 (1965).

A. macrolophus Van. & Lévl. in Bull. Acad. Géog. Bot. 20:141 (July 1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).

A. papposissimus Lévl. in Fedde, Rep. Sp. Nov. 8:282 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).

CHINA. Hopei, Tcheng-Ting-Fou, bord des fossés, 10 ix 1905, *Chanet* 135 (holo. *A. chaneti*, E).

KOREA. Chinnampo, in humidis littoris, 3 ix 1906, *Faurie* 1078 (holo. *A. macrolophus*, E); Quelpaert, in sepibus Hongno, cascade, x 1909, *Taquet* 2988 (holo. *A. papposissimus*, E).

REFERENCE FOR ASTER: Grierson, A. J. C. (1964). A revision of the Asters of the Himalayan area. *Notes R.B.G. Edinb.* 26:67-163.

1052. *Erigeron breviscapus* (Van.) Hand.-Mazz., *Symb. Sin.* 7:1093 (1936) & in *Acta Hort. Gotoburg.* 12:227 (1938); S.Y. Hu in *Quart. Journ. Taiwan Mus.* 19:250 (1966); Ling & Y. L. Chen in *Acta Phytotax. Sin.* 11:408 (1973).

Aster breviscapus Van. in *Bull. Acad. Géog. Bot.* 12:495 (1903).

Erigeron dielsii Lévl. in *Fedde, Rep. Sp. Nov.* 11:307 (1912) & *Cat. Pl. Yunnan* 44 (1915).

CHINA. Yunnan, environs de Yun-nan-sen, dans les herbages de la mont., fleurs-ligules bleues, 9 xi 1896, *Bodinier* 16 (holo. *A. breviscapus* & *E. dielsii*, E).

Léveillé's *E. dielsii* was merely a *nomen novum* for *A. breviscapus*.

Erigeron bellidioideus Benth. & Hook. var. *integrifolius* Franch. ex Lévl. and *E. multiradiatus* Benth. & Hook. f. var. *platyphyllus* Franch. ex Lévl., *Cat. Pl. Yunnan* 44 (1915) are both *nomina nuda*.

REFERENCE FOR ERIGERON: Ling, Y. & Chen, Y. L. (1973). Notulae de Genere *Erigeron* L. generibusque affinibus Florae Sinicae. *Acta Phytotax. Sin.* 11:399-430. [Includes *Psychrogeton* and *Brachyactis*].

1053. *Conyza blinii* Levl. in *Fedde, Rep. Sp. Nov.* 8:452 (1910) & *Cat. Pl. Yunnan* 43 (1915); Hand.-Mazz. in *Acta Hort. Gotoburg.* 12:228 (1938); S.Y. Hu in *Quart. Journ. Taiwan Mus.* 19:69 (1966).

C. dunniana Lévl., *Cat. Pl. Yunnan* 43 (1915); Hand.-Mazz. *Symb. Sin.* 7:1095 (1936).

CHINA. Kweichow, *sine loc.*, *Cavalerie* s.n. (holo. *C. blinii*, E).

C. dunniana Lévl. was a *nomen novum* for *C. pinnatifida* Dunn which is conspecific with *C. blinii* according to both Hu and Handel-Mazzetti. We have no material of *C. pinnatifida* Dunn. *C. pinnatifida* Franch. is also synonymous with *C. blinii*.

1054. *Conyza japonica* (Thunb.) DC., *Prodr.* 5:382 (1836); Gagnepain in *Bull. Soc. Bot. Fr.* 67:363 (1920).

Erigeron japonicum Thunb., *Fl. Jap.* 312 (1784); Less., *Syn. Comp.* 204 (1832).

Blumea globata Van. in *Bull. Acad. Géog. Bot.* 12:24 (1903); *Randeria* in *Blumea* 10:297 (1960); S.Y. Hu in *Quart. Journ. Taiwan Mus.* 18:323 (1965).

B. compactiflora Lévl. & Van. in *Fedde, Rep. Sp. Nov.* 8:401 (1910); Lévl., *Fl. Kouy-Tchéou* 89 (1914); *Randeria* in *Blumea* 10:298 (1960); S.Y. Hu in *Quart. Journ. Taiwan Mus.* 18:322 (1965).

CHINA. Yunnan, environs de Yun-nan-sen, c. dans les cultures, xi 1896, Bodinier 14D (holo. *B. globata*, E); Kweichow, environs de Ma-jo sur la droite, iii 1909, 20 iv 1908, *Cavalerie* 3690 (syntype *B. compactiflora*, E); Lo-fou, cultures, iv 1909, *Cavalerie* 3702 (syntype *B. compactiflora*, E).

The label for the original syntype of *Cavalerie* 3690 is attached to a sheet of *Cavalerie* 3709 which is *Conyza leucantha*, but the specimen from Lévillé's herbarium of *Cavalerie* 3690 is lost. However, there is a duplicate specimen of this number in the Edinburgh herbarium.

Lessing has always been accepted as the author of the combination *Conyza japonica* but it is not at all certain that this was his intention, and in any case such a combination was not validly published. Lessing, in fact, appears to be stating that *Erigeron japonicum* Thunb. is a synonym of *Conyza pinnatifida* (Thunb.) Less.—non Roxb.

De Candolle was probably the first author validly to publish *Conyza japonica*.

1055. *Conyza leucantha* (D. Don) Ludlow & Raven in Kew Bull. 17:71 (1963).

Erigeron leucanthum D. Don, Prodr. Fl. Nep. 171 (1825).

Conyza viscidula [Wall., Cat. 3006 (1831)—*nom. nud.* ex] DC., Prodr. 5:383 (1836); Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920); Chang in Sunyatsenia 3:284 (1937); Rehder in Journ. Arn. Arb. 18:252, 277 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:71 (1966).

Vernonia ampla Van. in Bull. Acad. Géog. Bot. 12:124 (1903); Lévl., Fl. Kouy-Tchéou 108 (1914).

Blumea conyzoides Lévl. & Van. in Fedde, Rep. Sp. Nov. 7:22 (1909); Lévl., Fl. Kouy-Tchéou 89 (1914); Merrill in Lingnan Sci. Journ. 15:428 (1936) pro syn. sub *Microglossa pyrifolia* (Lam.) O. Ktze.; Randeria in Blumea 10:298 (1960); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:286 (1967) pro syn. sub *Microglossa pyrifolia*.

CHINA. Kweichow, environs de Hoang-Ko-Chou, rocaïlles près de la cascade, fleurs bleu-violet, 11 ii 1899, Martin & Bodinier 2751 (holo. *V. ampla*, E); Lo fou, iv 1907, *Cavalerie* 3310 (holo. *B. conyzoides*, E).

1056. *Conyza stricta* Willd. var. *pinnatifida* Kitamura in Hara, Fl. E Himal. 337 (1966).

Erigeron pinnatifida D. Don, Prodr. Fl. Nep. 172 (1825)—non Thunb. (1800).

Conyza pinnatifida Roxb. in Fl. Ind. 3:430 (1832)—non Less. (1832).

Erigeron mairei Lévl. in Fedde, Rep. Sp. Nov. 11:307 (1912) & Cat. Pl. Yunnan 44 (1915); Hand.-Mazz., Symb. Sin. 7:1095 (1936) pro syn. sub *Conyza stricta*.

CHINA. Yunnan, terrains calcaires autour de La-Kou, 2400 m, plante annuelle, fl. jaunes, ix 1911, E. E. Maire s.n. (holo. *E. mairei*, E).

INULEAE

Blumea: for the four species placed by Vaniot as *Leveillea* and *Bileveillea* see end of genus.

1057. *Blumea alata* (D. Don) DC., Prodr. 5:488 (1836); Grierson in Ceylon Journ. Sci. 11:12 (1974).

Erigeron alatum D. Don, Prodr. Fl. Nep. 171 (1825).

Laggera alata (D. Don) Sch. Bip. ex Oliver in Trans. Linn. Soc. 29:94 (1873); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:33 (1967).

Inula exsiccata Lévl. in Fedde, Rep. Sp. Nov. 11:304 (1912) & Cat. Pl. Yunnan 46 (1915).

Triplostegia epilobiifolia Lévl. in Bull. Acad. Géog. Bot. 25:13 (1915) & Cat. Pl. Yunnan 82 (1916); Lauener in Notes R.B.G. Edinb. 32:116 (1972) pro syn. sub *Inula* cf. *exsiccata* Lévl.

CHINA. Yunnan, rives du fleuve Bleu à Siao-ho, 400 m, composée vivace toute velue, ses feuilles grisâtres semblent toujours desséchées, iii 1911, *E. E. Maire* s.n. (holo. *I. exsiccata*, E); collines ardues, pierreuses à La-Kou, composée vivace en touffes dressées, verdure sombre, fl. rose en pinceau sortant d'un calice pyramidal imbriqué, très rare, 2450 m, vi 1912, *E. E. Maire* s.n. (holo. *T. epilobiifolia*, E).

The specimen of *T. epilobiifolia*, which may well represent side shoots torn from a taller plant, is an abnormal one in that the stem is very narrowly winged and the inflorescence is more diffuse with longer peduncles than in typical *B. alata*. In addition, the outer phyllaries are broader and more foliaceous than usual.

1058. *Blumea clarkei* Hook. f., Fl. Brit. Ind., 3:267 (1882); Randeria in *Blumea* 10:252 (1960).

B. hongkongensis Van. in Bull. Acad. Géog. Bot. 12:22 (1903); Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920); Chang in Sunyatsenia 3:287 (1937); Check List of Hong Kong Plants 45 (1967).

CHINA. Hong Kong, bois de Bethanie, 28 xi 1894, 9 xii 1893, *Bodinier* 372 (holo. *B. hongkongensis*, E).

1059. *Blumea fistulosa* (Roxb.) Kurz in Journ. As. Soc. Beng. 46:187 (1877); Randeria in *Blumea* 10:256 (1960).

Conyza fistulosa Roxb., Fl. Ind. 3:429 (1832).

Blumea vaniotiana Lévl., Fl. Kouy-Tchéou, 89 (1914) in Clavi & Cat. III. Pl. Seu-Tchouen t.18 (1918); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:330 (1965).

Blumea vaniotiana was never described but validated in the key to *Blumea* in *Fl. Kouy-Tchéou*.

1060. *Blumea hieracifolia* (D. Don) DC. var. *hamiltonii* (DC.) C.B. Cl., Comp. Ind. 83 (1876); Randeria in *Blumea* 10:249 (1960).

B. hamiltonii DC., Prodr. 5:439 (1836).

B. cavaleriei Lévl. & Van. in Fedde, Rep. Sp. Nov. 7:22 (1909); Lévl., Fl. Kouy-Tchéou 89 (1914); Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920); Chang in *Sunyatsenia* 3:287 (1937) pro syn. sub *B. hieracifolia*; S.Y. Hu in Quart. Journ. Taiwan Mus. 18:324 (1965) pro syn. sub *B. hieracifolia*.

CHINA. Kweichow, Pin-fa, pelouses, 15 vi 1907, *Cavalerie* 3302 (holo. *B. cavaleriei*, E).

1061. *Blumea lacera* (Burm. f.) DC. in Wight, Contrib. Bot. Ind. 14 (1834) & Prodr. 5:436 (1836); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:258 (1937); Chang in *Sunyatsenia* 3:286 (1937); Randeria in *Blumea* 10:264 (1960); Grierson in Ceylon Journ. Sci. 11:13 (1974).

Conyza lacera Burm. f., Fl. Ind. 180, t.59, f.1 (1768).

Blumea subcapitata DC., Prodr. 5:439 (1836); Hand.-Mazz. in Acta Hort. Gotoburg. 12:228 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:330 (1965).

B. bodinieri Van. in Bull. Acad. Géog. Bot. 12:23 (1903); Lévl., Fl. Kouy-Tchéou 89 (1914) p.p. excl. *Esquirol* 3188, 3532.

B. duclouxii Van. in Bull. Acad. Géog. Bot. 12:25 (1903); Lévl., Cat. Pl. Yunnan 41 (1915); Randeria in *Blumea* 10:297 (1960).

Senecio velutinus Lévl. & Van. in Fedde, Rep. Sp. Nov. 6:331 (1909).

Blumea velutina (Lévl. & Van.) Lévl. in Fedde, Rep. Sp. Nov. 8:401 (1910); Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920); Randeria in *Blumea* 10:298 (1960).

Conyza velutina (Lévl. & Van.) Lévl. in Fedde, Rep. Sp. Nov. 11:307 (1912) & Fl. Kouy-Tchéou 92 (1914).

CHINA. Kweichow, entre Hin y fou et le Hao Kiang, talus des rizières, 20 iv 1897, *Bodinier* 1578 (holo. *Blumea bodinieri*, E); Yunnan, environs de Yunnan-sen, bords des rizières, plaine, 16 ii 1897, *Ducloux* s.n. (holo. *Blumea duclouxii*, E); Kweichow, Lo-fou, jaune, iv 1907, *Cavalerie* 3315 (holo. *Senecio velutinus*, E).

1062. *Blumea lanceolaria* (Roxb.) Druce, Rep. Bot. Exch. Club Brit. Isles 4:609 (1917); Rehder in Journ. Arn. Arb. 18:253 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:326 (1965); Randeria in *Blumea* 10:218 (1960); Grierson in Ceylon Journ. Sci. 11:13 (1974).

Conyza lanceolaria Roxb., Fl. Ind. 3:432 (1832).

Bileveillea (*Blumea*) *granulatifolia* Lévl. in Fedde, Rep. Sp. Nov. 8:49 (1910) & Fl. Kouy-Tchéou 87 (1914).

CHINA. Kweichow, Lo fou, jaune, iii 1909 *Cavalerie* 3708 (holo. *B. granulatifolia*, E).

1063. *Blumea martiniana* Van. in Bull. Acad. Géog. Bot. 12:26 (1903); Lévl., Fl. Kouy-Tchéou 90 (1914); Gagnepain in Bull. Soc. Bot. Fr. 67:66, 363 (1920); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:327 (1965); Randeria in *Blumea* 10:233 (1960).

CHINA. Kweichow, bords du Hoa-Kiang, tiges de 1 m 50, rare, 17 ii 1899, *Martin* & *Bodinier* 2567 (holo. E).

1064. *Blumea riparia* (Bl.) DC., Prodr. 5:444 (1836) sens. lat.

Leveillea martini Van. in Bull. Acad. Géog. Bot. 12:30, f.10 (1903); Lév., Fl. Kouy-Tchéou 87 (1914) pro syn. sub *Bilevillea chinensis* Van.; S.Y. Hu in Quart. Journ. Taiwan Mus. 18:327 (1965) pro syn. sub *Blumea martiniana* Van.

Bilevillea martini Van.; S.Y. Hu in Quart. Journ. Taiwan Mus. 18:320 (1965) nom. inval.

CHINA. Kweichow, montée du torrent de Koan lin, tiges lianeuses, fleurs blanc-violet, 14 ii 1899, *Martin & Bodinier* 2569 (holo. *L. martini*, E).

The type specimen of *Leveillea martini* is intermediate between *B. riparia* with small capitula 8–13 mm in diameter in many-headed panicles and *B. riparia* var. *megacephala* Randeria with fewer and larger capitula 14–18 mm in diameter. It is quite distinct from *Blumea martiniana*.

See remarks below regarding excluded taxa.

EXCLUDED TAXA OF BLUMEA

Vaniot transferred four species of *Blumea* to his new genus *Leveillea* Van.—non Decaisne (1841), in Bull. Acad. Géog. Bot. 13:16 (1904) as follows.

1. *Leveillea vestita* (DC.) Van. (Syn. *Blumea vestita* DC.) = *B. semivestita* DC. = *Blumea procera* DC.
2. *Leveillea procera* (DC.) Van. (Syn. *Blumea procera* DC.) = *B. procera* DC.
3. *Leveillea riparia* (Bl.) Van. (Syn. *Blumea riparia* (Bl.) DC.) = *B. riparia* (Bl.) DC.
4. *Leveillea chinensis* (L.) Van. = *Bilevillea chinensis* (L.) Lév., Fl. Kouy-Tchéou 87 (1914). (Syn. *Blumea chinensis* (L.) DC.) = *B. riparia* (Bl.) DC. and *B. riparia* var. *megacephala* Randeria. In Fl. Kouy-Tchéou, Lévillé cited four specimens under *Bilevillea chinensis*. One of them, *Martin & Bodinier* 2569 is the type of *Leveillea martini* (q.v. under *Blumea riparia*). The other three specimens belong to *B. riparia* var. *megacephala*.

Vaniot (Bull. Acad. Géog. Bot. 13, 326:1904) created the genus *Bilevillea* for *Leveillea* Van. but did not list the species of *Leveillea* again. Therefore *Leveillea vestita*, *L. procera* and *L. riparia* have no names under *Bilevillea*. However, in *Flore du Kouy-Tchéou*, Lévillé cites *Leveillea chinensis* as a basionym under *Bilevillea chinensis* and thus validates it.

REFERENCE FOR BLUMEA: Randeria, A. J. (1960). The composite genus *Blumea*, a taxonomic revision. *Blumea* 10:176–317.

1065. *Blumeopsis falcata* (D. Don) Merrill in Journ. Arn. Arb. 19:70 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:330 (1965).

Erigeron falcatus D. Don, Prodr. Fl. Nep. 172 (1825).

Blumea flava DC., Prodr. 5:439 (1836).

Blumea lecomtei Van. & Lévl. in Fedde, Rep. Sp. Nov. 4:331 (1907); Lévl., Fl. Kouy-Tchéou 89 (1914) pro. syn sub *Blumea flava* DC.

Blumeopsis flava (DC.) Gagnepain in Bull. Mus. Nat. Hist. Nat. Paris 26: 76 (1920) & in Bull. Soc. Bot. Fr. 67:363 (1920).

CHINA. Kweichow, ouest de Lo-fou, bord des chemins, xi 1905 *Cavalerie* 2725 (holo. *B. lecomtei*, E).

1066. *Leontopodium artemisiifolium* (Lévl.) Beauverd in Bull. Soc. Bot. Genève ser. 2, 5:142, f.1 (1913); Lévl., Cat. Pl. Yunnan 47, f.9 (1915); Hand.-Mazz. in Beih. Bot. Centralbl. 44, 2:59 (1928); Ling in Acta Phytotax. Sin. 10:170 (1965).

Gnaphalium artemisiifolium Lévl. in Fedde, Rep. Sp. Nov. 11:492 (1913). CHINA. Yunnan, pâturages des mont. sud de Tong-tchouan, 2600 m, *Leontopodium* noir, vivace, ix 1911, *E. E. Maire* s.n. (holo. E).

REFERENCES FOR *LEONTOPODIUM*: Beauverd, G. (1909). Nouvelles espèces eurasiatiques du genre *Leontopodium*. *Bull. Soc. Bot. Genève*, sér. 2, 1: 185-196; Genre *Leontopodium*, *l.c.* 364-376.

—(1912). Troisième étude complémentaire sur les *Leontopodium*, *l.c.* 4:12-40.

Handel-Mazzetti, H. (1928). Systematische Monographie der Gattung *Leontopodium*. *Beih. Bot. Centralbl.* 44, 2:1-178.

1067. *Anaphalis adnata* DC., Prodr. 6:274 (1838); Hand.-Mazz. in Acta Hort. Gotoburg. 12:240 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:104 (1965); Chen et al. in Acta Phytotax. Sin. 11:97 (1966); Kitamura in Acta Phytotax. Geobot. 23:6 (1968).

Gnaphalium adnatum Wall., Cat. 2948 (1831)—*nom. nud.*

G. sericeo-albidum Van. in Bull. Acad. Géog. Bot. 12:501 (1903).

G. esquirolii Lévl. in Fedde, Rep. Sp. Nov. 11:307 (1912).

Anaphalis esquirolii (Lévl.) Lévl. in Fedde, Rep. Sp. Nov. 12:189 (1913).

A. sericeo-albida (Van.) Lévl., Fl. Kouy-Tchéou 85 (1914) & Cat. Pl. Yunnan 38 (1915).

CHINA. Kweichow, environs de Kouy-yang, mont. du Collège, ix 1898, *Bodinier* s.n. (holo. *G. sericeo-albidum*, E); sommets de Ka-riang, étamines jaunes, 25 x 1911, *Esquirol* 2733 (holo. *G. esquirolii*, E).

1068. *Anaphalis bulleyana* (J. F. Jeffrey ex Diels) Chang in Sinensia 6:549 (1935); Hand.-Mazz., Symb. Sin. 7:1102 (1936) & in Acta Hort. Gotoburg. 12:249 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:105 (1965).

Pluchea bulleyana [J. F. Jeffrey ex] Diels in Notes R.B.G. Edinb. 5:183 (June 1912).

Conyza mollis Lévl. in Fedde, Rep. Sp. Nov. 11:304 (Nov. 1912) & Cat. Pl. Yunnan 43 (1915).

CHINA. Yunnan, des collines derrière Tong-tchouan, 2600 m, composée vivace, feuilles molles velues, pâturages, fl. jaunâtres, ix 1911, *E. E. Maire* s.n. (holo. *C. mollis*, E).

1069. *Anaphalis nepalensis* (Spreng.) Hand.-Mazz., Symb. Sin. 7:1099 (1936) & in Acta Hort. Gotoburg. 12:239 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:111 (1965); Chen et al. in Acta Phytotax. Sin. 11:96 (1966).

Elichrysum nepalense Spreng., Syst. Veg. ed. 16, 3:485 (1826).

Anaphalis mairei Lévl. in Bull. Acad. Géog. Bot. 25:13 (1915) & Cat. Pl. Yunnan 37 (1915).

A. mairei Lévl. var. *pulverulenta* Lévl. in Bull. Acad. Géog. Bot. 25:14 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:109 (1965).

CHINA. Kweichow, pâturages du mont. Io-chan, 3300 m, *Leontopodium* vivace, tout blanc, vii 1912, *E. E. Maire* s.n. (holo. *A. mairei*, E); Yunnan, pâtures des pics à Pé-long-tsin, 3200 m, composée vivace, toute velue et blanche, xi 1912, *E. E. Maire* s.n. (holo. var. *pulverulenta*, E).

1070. *Anaphalis sinica* Hance in Journ. Bot. 12:261 (1874) *sens. lat.*; Kitamura in Acta Phytotax. Geobot. 12:99 (1943); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:113 (1965).

Gnaphalium chanetii Lévl. in Fedde, Rep. Sp. Nov. 11:492 (1913).

Anaphalis chanetii (Lévl.) Lévl. in Fedde, Rep. Sp. Nov. 12:189 (1913) & in Bull. Acad. Géog. Bot. 27:72 (1917).

CHINA. Hopei (Pe-Tché-Ly), montagnes du Pin Chan, Hou-Hou-Chai, viii 1910, *Chanet* 529 (holo. *G. chanetii*, E).

A. sinica is a polymorphic species with several infraspecific categories. *A. chanetii* certainly belongs somewhere within this complex and has been placed by Ling under *A. sinica* var. *remota* Ling (Acta Phytotax. Sin. 11:103, 1966).

REFERENCE FOR ANAPHALIS: Chen, F. H., Ling, Y., Chen, Y. L., Shih, C., & Wang, W. (1966). De Genere *Anaphalis* DC. Familiae Compositarum e Florea Sinicae. *Acta Phytotax. Sin.* 11:91-112.

1071. *Gnaphalium japonicum* Thunb., Fl. Jap. 311 (1784); Rock in Fedde, Rep. Sp. Nov. 13:354 (1914); Sherff in Amer. Journ. Bot. 36:509 (1949).

Leontopodium japonicum Thunb. var. *sandwicense* Lévl. in Fedde, Rep. Sp. Nov. 10:121 (1911); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:222 (1937) pro syn. sub *G. involucratum* Forst. var. *ramosum* DC.; S.Y. Hu in Quart. Journ. Taiwan Mus. 19:275 (1966) pro syn. sub *G. involucratum* Forst. var. *ramosum* DC.

HAWAIIAN (SANDWICH) ISLANDS. Maui, Haleakala, viii 1909, *Faurie* 928 (syntype *L. japonicum* var. *sandwicense*—n.v.); Molokai, Kamolo, vi 1910, *Faurie* 930 (syntype *L. japonicum* var. *sandwicense*—n.v.).

Kitamura includes Hawaii in the distribution of *G. involucratum* var. *ramosum* and restricts *G. japonicum* to Japan and China. Sherff's paper on "The Genus *Gnaphalium* in The Hawaiian Islands", however, firmly indicates that the Hawaiian plant is *G. japonicum*, although he does not mention *G. involucratum*.

1072. *Inula nervosa* DC., Prodr. 5:471 (1836); Hand.-Mazz., Symb. Sin. 7:1107 (1936) & in Acta Hort. Gotoburg. 12:251 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:298 (1966).

Aster macilentus Van. in Bull. Acad. Géog. Bot. 12:497 (1903); Lév., Fl. Kouy-Tchéou 87 (1914) & Cat. Pl. Yunnan 40 (1915).

Inula esquirolii Lév. in Fedde, Rep. Sp. Nov. 11:306 (1912) & Fl. Kouy-Tchéou 97 (1914).

CHINA. Kweichow, environs de Gan-pin, dans la mont., fleurs blanches, 16 viii 1897, *Martin & Bodinier* 1914 (holo. *A. macilentus*, E); Lo-fou, route Pien-yang, fl. blanches, *Cavalerie* 2687 (syntype *I. esquirolii*, E); *sine loc.*, *Esquirol* 808 (syntype *I. esquirolii*, E); *sine loc.*, steppes et prairies, fleur blanche, vii 1911, *Esquirol* 2700 (syntype *I. esquirolii*, E).

Chinese material of *Inula nervosa* is closely related to *I. crassifolia* Coll. & Hemsl. from Burma.

1073. *Pentanema indicum* (L.) Ling var. *hypoleucum* (Hand.-Mazz.) Ling in Acta Phytotax. Sin. 10:179 (1965).

Aster lofouensis Lév. & Van. in Fedde, Rep. Sp. Nov. 8:281 (1910); Lév., Fl. Kouy-Tchéou 86 (1914) p.p.; Rehder in Journ. Arn. Arb. 18:252 (1937).

Inula indica L. var. *hypoleuca* Hand.-Mazz., Symb. Sin. 7:1107 (1936) & in Notizbl. Bot. Gart. Berlin 13:632 (1937); Rehder in Journ. Arn. Arb. 18:277 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:298 (1966).

CHINA. Kweichow, Lo-fou, iii 1907, *Cavalerie* s.n. (holo. *A. lofouensis*, E).

Chang named the above specimen as *Inula indica* L. var. *lofouensis* (Lév.) Chang but I have found no record of its publication.

1074. *Carpesium cernuum* L. var. *lanatum* [Thoms. ex] C.B. Cl., Comp. Ind. 130 (1876); Hook. f., Fl. Brit. Ind. 3:301 (1881); Hand.-Mazz. in Acta Hort. Gotoburg. 12:251 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:16 (1966).

C. verbascifolium Lév. in Fedde, Rep. Sp. Nov. 8:359 (1910), Fl. Kouy-Tchéou 91 (1914) & Cat. Pl. Yunnan 41, f.8 (1915).

CHINA. Kweichow, Pin-fa, bois des montagnes, 11 x 1905, *Cavalerie* 2525 (holo. *C. verbascifolium*, E).

Hook. f. has sometimes been cited as the authority for var. *lanatum* but it is quite clear that Hooker refers back to Clarke's publication of this variety.

1075. *Carpesium divaricatum* Sieb. & Zucc. in Abh. Bayer Akad. Wiss. Math.-Phys. Kl. 4, 3:187 (1846); Hara, Enum. Sperm. Jap. 2:154 (1952); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:275 (1937); Ohwi, Fl. Jap. (English ed.) 863 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:16 (1966).

C. erythrolepis Lév. in Fedde, Rep. Sp. Nov. 8:170 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:506 (1911).

KOREA. Quelpaert, in sylvis Hioton, 22 viii 1908, *Taquet* 976 (holo. *C. erythrolepis*, E).

1076. *Carpesium glossophyllum* Maxim. in Bull. Acad. Sci. St. Pétersb. 19: 475 (1874); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:270 (1937); Ohwi, Fl. Jap. (English ed.) 862 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:17 (1966).

C. hieracioides Lévl. in Fedde, Rep. Sp. Nov. 8:170 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:506 (1911).

KOREA. Quelpaert, in silvis Hallaisan, 800 m, 17 viii 1908, *Taquet* 978 (holo. *C. hieracioides*, E).

1077. *Carpesium triste* Maxim. in Bull. Acad. Sci. St. Pétersb. 19:479 (1874).

C. taquetii Lévl. in Fedde, Rep. Sp. Nov. 8:170 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:506 (1911); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:277 (1937) pro syn. sub *C. cernuum* L.; Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1: 442 (1939); Ohwi, Fl. Jap. (English ed.) 863 (1965) pro syn. sub *C. cernuum*; S.Y. Hu in Quart. Journ. Taiwan Mus. 19:16 (1966) pro syn. sub *C. cernuum*.

KOREA. Quelpaert, in silvis Hallaisan, Yengsil, 1000 m, 17 viii 1908, *Taquet* 975 (holo. *C. taquetii*, E).

Chang identified the type of *C. taquetii* correctly as *C. triste*. In this species the lower leaves abruptly narrow into a winged petiole, whereas the leaves of *C. cernuum* are gradually narrowed at the base.

HELIANTHEAE

1078. *Wedelia prostrata* Hemsl. in Journ. Linn. Soc. (Bot.) 23:434 (1888); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:259 (1942); Hara, Enum. Sperm. Jap. 278 (1952); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:27 (1969).

Verbesina prostrata Hook. & Arn., Bot. Beechey's Voy. 195 (1837)—non L. (1753).

Wollastonia prostrata (Hook. & Arn.) Hook. & Arn., Bot. Beechey's Voy. 265 (1838)—non DC. (1836).

Eclipta dentata Lévl. & Van. in Bull. Acad. Géog. Bot. 20:11 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:506 (1911).

KOREA. Quelpaert Est., repens in arenosis littoris, 10 ix 1908, *Taquet* 1038 (holo. *E. dentata*, E).

Hemsley's publication and use of *Wedelia prostrata* is valid under Article 72 of the *International Code of Nomenclature*, but "Hook. & Arn." in parenthesis must be omitted.

1079. *Lipochaeta succulenta* DC. var. *decurrens* (A. Gray) Sherff in Bot. Gaz. 95:86 (1933).

L. australis A. Gray var. *decurrens* A. Gray, Proc. Amer. Acad. 5:129 (1861).

L. variolosa Lévl. in Fedde, Rep. Sp. Nov. 10:122 (1911).

HAWAIIAN (SANDWICH) ISLANDS. Molokai, Wailau, vi 1910, *Faurie* 1008 (syntype *L. variolosa*—n.v.); Kauai, Wainiha, vi 1910, *Faurie* 1009 (syntype *L. variolosa*—n.v.).

1080. *Lipochaeta lobata* (Gaudich.) DC., Prodr. 5:611 (1836); Rock in Fedde, Rep. Sp. Nov. 13:354 (1914).

Verbesina lobata Gaudich. in Freyc., Voy. Bot. 464 (1829).

Lipochaeta fauriei Lévl. in Fedde, Rep. Sp. Nov. 10:122 (1911).

HAWAIIAN (SANDWICH) ISLANDS. Kauai, Holokele, iii 1910, *Faurie* 1012 (typus *L. fauriei*—n.v.).

In his paper on *Lipochaeta*, Sherff (Bot. Gaz. 95:80–103, 1933) discusses several species including many varieties of *L. lobata* but makes no mention of *L. fauriei*; neither does Degener in his *Flora Hawaiiensis*.

1081. *Helianthus tuberosus* L., Sp. Pl. 905 (1753).

Inula taquetii Lévl. in Fedde, Rep. Sp. Nov. 10:351 (1912).

KOREA. Quelpaert S., Pielto, 3 x 1910, *Taquet* 4318 (holo. *I. taquetii*, E).

This appears to be the first record of *H. tuberosus* in Korea.

1082. *Bidens asymmetrica* (Lévl.) Sherff in Bot. Gaz. 81:49 (1926), in Publ. Field Mus. Nat. Hist. Chicago (Bot.) 16:98, pl. 11, 12, figs. a–i (1937) & in Amer. Journ. Bot. 31:279 (1944); Degener, Fl. Hawaiiensis 5: Fam. 344 (1946).

Lipochaeta asymmetrica Lévl. in Fedde, Rep. Sp. Nov. 10:122 (1911); Rock in Fedde, Rep. Sp. Nov. 13:354 (1914) pro. syn. sub *Coreopsis* (*Campylothecha*) *macrocarpa* Hillebr. var. β Hillebr.

HAWAIIAN (SANDWICH) ISLANDS. Oahu, Kalihi, x 1909, *Faurie* 960 (types BM, G, P—n.v.).

According to Sherff specimens of *Faurie* 960 are to be found in "Hb. Brit., Hb. Del. (Delessert) and Hb. Par."

1083. *Bidens biternata* (Lour.) Merr. & Sherff in Bot. Gaz. 88:293 (1929); Sherff in Publ. Field Mus. Nat. Hist. Chicago (Bot.) 16:388, pl. 99 figs. a, c–m (1937); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:276 (1942); Hara, Enum. Sperm. Jap. 2:142 (1952); Ohwi, Fl. Jap. (English ed.) 901 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:315 (1965).

Coreopsis biternata Lour., Fl. Cochinch. 508 (1790), ed. 2, 622 (1793).

Bidens robertianifolia Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:140 (1910);

Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:506 (1911); Nakai in

Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1953) pro syn. sub *B. bipinnata* L.

KOREA. Quelpaert, in incultis Hongno, 23 ix 1908, *Taquet* 969 (holo. *B. robertianifolia* E, iso. B, G).

According to Sherff type specimens are also at Berlin and in the Delessert herbarium.

1084. *Bidens hillebrandiana* (Drake) Deg. ex Sherff in Bot. Gaz. 85:6 (1928); Sherff in Publ. Field Mus. Nat. Hist. Chicago (Bot.) 16:155, pl. 34 (1937).

Coreopsis hillebrandiana Drake, Illustr. Fl. Ins. Mar. Pacif. 209 (1890).

Campylotheca rutifolia Lévl. in Fedde, Rep. Sp. Nov. 10:123 (1911);

Rock in Fedde, Rep. Sp. Nov. 13:354 (1914) pro syn. sub *Coreopsis maviensis* Hillebr. var. β Hillebr.

HAWAIIAN (SANDWICH) ISLANDS. Molokai, Wailau, vi 1910, *Faurie* 931 (syntype *C. rutifolia* BM, P); 1909, *Faurie* 965 (syntype *C. rutifolia*, BM).

Léveillé cited "Molokai, Wailuku" as the locality for *Faurie* 931, but he probably meant Wailau. Wailuku is on Maui island.

1085. *Bidens tripartita* L., Sp. Pl. 831 (1753); Nakai in Journ. Jap. Bot. 15:2 (1939); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:271 (1942); Hara, Enum. Sperm. Jap. 2:144 (1952); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:114 (1952); Ohwi, Fl. Jap. (English ed.) 901: (1965).

B. taquetii Lévl. & Van. in Bull. Acad. Géog. Bot. 20:3 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:506 (1911); Sherff in Publ. Field Mus. Nat. Hist. Chicago (Bot.) 16:280 (1937) pro syn. sub *B. tripartita* var. *repens*.

KOREA. Quelpaert, in sylvis Hioton, 900 m, 18 ix 1908, *Taquet* 1035 (holo. *B. taquetii*, E, iso. B, K).

According to Sherff there are type specimens of *B. taquetii* at Berlin and Kew. Sherff discussed and placed *B. taquetii* and *B. minuscula* in synonymy under *B. tripartita* var. *repens*, but Japanese authors regard *B. taquetii* as belonging to the typical variety of *B. tripartita*.

1086. *Bidens tripartita* L. var. *repens* (D. Don) Sherff in Bot. Gaz. 81:45 (1926) & in Publ. Field Mus. Nat. Hist. Chicago (Bot.) 16:280 (1937) p.p.; Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:273 (1942); Hara, Enum. Sperm. Jap. 2:145 (1952); Ohwi, Fl. Jap. (English ed.) 901 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:320 (1965).

B. repens D. Don, Prodr. Fl. Nep. 180 (1825); Nakai in Journ. Jap. Bot. 15:2 (1939) & in Bull. Nat. Sci. Mus. Tokyo, no. 31:114 (1952).

B. minuscula Lévl. & Van. in Bull. Acad. Géog. Bot. 20:3 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:505 (1911).

KOREA. Quelpaert, Hallaisan, 1000 m, in herbidis humidis, 18 ix 1908, *Taquet* 1031 (holo. *B. minuscula*, E; iso. B, G, K, M).

According to Sherff there are type specimens of *B. minuscula* at Berlin, Hb. Delessert, Kew and Munich.

REFERENCE FOR BIDENS: Sherff, E. E. (1937). The Genus *Bidens*. Publ. Field Mus. Nat. Hist. Chicago (Bot.) 16:1-709.

1087. *Dubautia laxa* Hook. & Arn., Bot. Beechey's Voy. 87 (1832); Rock in Fedde, Rep. Sp. Nov. 13:353 (1914).

D. fauriei Lévl. in Fedde, Rep. Sp. Nov. 10:122 (1911).

HAWAIIAN (SANDWICH) ISLANDS. Maui, Wailuku, viii 1909, *Faurie* 920 (typus *D. fauriei*—n.v.).

Several varieties of *D. laxa* are dealt with by Degener in his *Flora Hawiienensis* but there is no mention of *D. fauriei*.

ANTHEMIDEAE

1088. *Dendranthema indicum* (L.) Des Moul. in Actes Soc. Linn. Bord. 20:562 (1855); Tzvel. in Fl. URSS 26:371 (1961).

Chrysanthemum indicum L., Sp. Pl. 889 (1753); Rehder in Journ. Arn. Arb. 18:253 (1937); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 15:367 (1940); Ohwi, Fl. Jap. (English ed.) 892 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:28 (1966).

C. indicum L. var. *coreanum* Lévl. in Fedde, Rep. Sp. Nov. 10:351 (1912). KOREA. Quelpaert, in littore Syckem, ii 1908, *Taquet* 4664 (holo. var. *coreanum*, E).

1089. *Dendranthema littorale* (Maekawa) Tzvel. subsp. *coreana* (Lévl. & Van.) Lauener, comb. nov.

Matricaria coreana Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:169 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911); Kitamura in Acta Phytotax. Geobot. 3:132 (1934) pro syn. sub *Chrysanthemum sibiricum* Fisch. & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 15:361 (1940) pro syn. sub *C. zawadskii* Herb.

Chrysanthemum coreanum (Lévl. & Van.) Nakai ex Mori, Enum. Pl. Cor. 352 (1922); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:115 (1952).

KOREA. Quelpaert, in herbidis, 1500 m, x 1906, *Faurie* 1106 (syntype, E); in sylvis Hallaisan, Yengsil, 1100 m, rara, 22 ix 1908, *Taquet* 966 (syntype, E); in cinere vulcani Hallaisan, 2000 m, rarum, 19 x 1908, *Taquet* 967 (syntype E).

C. coreanum is discussed by Tzvelev under *Dendranthema maximowiczii* (Kom.) Tzvel. (Fl. URSS 26: 380, 1961), but having examined part of a syntype and compared it with other species of *Dendranthema*, Professor Tzvelev has kindly informed me (in litt.) that he is of the opinion that *C. coreanum* is more similar to small specimens of *D. littorale* (Maekawa) Tzvel. from Sakhalin and the Kuril Islands. As neither of us has seen the type of *Chrysanthemum littorale*, I prefer to maintain the Korean plant as a distinct taxon, particularly as it would have priority over *D. littorale* at specific level.

Japanese botanists regard *Chrysanthemum littorale* as being synonymous with *C. weyrichii* (Maxim.) Miyabe.

I am grateful to Professor Tzvelev for his help in this matter.

- 1090. *Dendranthema nakdongense*** (Nakai) Tzvel. in Fl. URSS 26:375 (1961).
Chrysanthemum nakdongense Nakai in Bot. Mag. Tokyo 23:186 (1909) & in Journ. Coll. Sci. Univ. Tokyo 31:26, t.8 (1911); Hand.-Mazz. in Acta Hort. Gotoburg. 13:255 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:37 (1966).
C. zawadskii Herbach var. *latilobum* (Maxim.) Kitamura in Acta Phytotax. Geobot. 7:210 (1938) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 15:362 (1940).
C. chanetii Lévl. in Fedde, Rep. Sp. Nov. 9:450 (1911) & in Bull. Acad. Géog. Bot. 27:72 (1917).

CHINA. Hopei (Tché-Ly), montagne du Rui Yong, fleurs d'un beau rose plus ou moins foncé, plante très élégante, ix 1908, *Chanet* 422 (holo. *C. chanetii*, E).

- 1091. *Tanacetum myrianthum*** Franch. in Bull. Soc. Philom. Paris ser. 8, 3:144 (1891).

Tanacetum mairei Lévl. in Fedde, Rep. Sp. Nov. 12:284 (1913).

Chrysanthemum myrianthum (Franch.) Ling in Contr. Inst. Bot. Nat. Acad. Peiping 3:482 (1935); Hand.-Mazz. in Acta Hort. Gotoburg. 12:267 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:37 (1966).

Chrysanthemum mairei (Lévl.) Hand.-Mazz. in Acta Hort. Gotoburg. 12:267 (1938) descr. ampl.

CHINA. Yunnan, rives du fleuve Bleu à Siao-ho, 400 m, chrysanthème vivace, nain, feuilles blanches, fl. jaunes, xi 1912, *E. E. Maire* s.n. (holo. *T. mairei*, E).

Artemisia

Pampanini worked extensively on the genus *Artemisia* and made numerous infraspecific taxa at form and subform level as well as at varietal status. This is a genus of numerous variable species, and we have not always adhered to Pampanini's classification.

- 1092. *Artemisia argyi*** Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:138 (1910); Lévl. in Mem. Real Acad. Cienc. Artes Barcelona, ser. 3, 12:546 (1916); Pamp. in Nuov. Giorn. Bot. Ital. n.s. 36:450 (1929); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:423 (1939); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 15:412 (1940) & in Acta Phytotax. Geobot. 12:146 (1943); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:123 (1965).

CHINA. Kiangsu, Ka-nagi-Bon, *d'Argy* s.n. (holo. E).

- 1093. *Artemesia feddei*** Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:138 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:504 (1911); Pamp. in Nuov. Giorn. Bot. Ital. n.s. 34:660 (1927) p.p. pro syn. sub *A. japonica* Thunb. var. *japonica* Maxim. f. *typica* Nakai; Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:425 (1939); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 15:410 (1940) & in Acta Phytotax. Geobot. 12:145 (1943); Nakai in Bull.

Nat. Sci. Mus. Tokyo no 31:112 (1952); Hara, Enum. Sperm. Jap. 2:117 (1952); Ohwi, Fl. Jap. (English ed.) 896 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:133 (1965).

A. lavandulaefolia DC. var. *feddei* (Lévl. & Van.) Pamp. in Nuov. Giorn. Bot. Ital. n.s. 36:467 (1929) & 39:27 (1932); Hand.-Mazz., Symb. Sin. 7:1116 (1936).

KOREA. Quelpaert, in herbis Hongno, x 1908, *Taquet* 1005 (holo. E).

Pampanini cited *Taquet* 242 from Korea under *A. japonica* which is correct. This collection has been misnamed *A. feddei* by Lévillé, which probably misled Pampanini into putting this species into synonymy under *A. japonica* in 1927.

1094. *Artemisia igniaria* Maxim. var. *yunnanensis* (J. F. Jeffrey) Pamp. in Nuov. Giorn. Bot. Ital. n.s. 36:443 (1929).

A. yunnanensis J. F. Jeffrey in Notes R.B.G. Edinb. 5:187 (1912); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:269 (1965).

A. jeffreyana Lévl., Cat. Pl. Yunnan 38 (1915).

Lévillé intended *A. jeffreyana* as a *nomen novum* for *A. yunnanensis* J. F. Jeffrey (June 1912)—non *A. yunnanensis* Lévl. (Nov. 1912). No Lévillé type is involved.

1095. *Artemisia japonica* Thunb., Fl. Jap. 310 (1784).

A. tongtchouanensis Lévl. in Fedde, Rep. Sp. Nov. 11:304 (1912) & Cat. Pl. Yunnan 38 (1915).

A. japonica Thunb. var. *japonica* f. *eriopoda* Pamp. subf. *tongtchouanensis* (Lévl.) Pamp. in Nuov. Giorn. Bot. Ital. n.s. 34:664 (1927); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:234 (1965).

CHINA. Yunnan, sud de Tong-tchouan, 2550 m, pâtures des collines, genépi noir, vivace, x 1911, *E. E. Maire* s.n. (holo. *A. tongtchouanensis*, E).

1096. *Artemisia lactiflora* [Wall., Cat. 3304 (1831) nom. nud. ex] DC., Prodr. 6:115 (1838).

A. septemlobata Lévl. & Van. in Fedde, Rep. Sp. Nov. 7:22 (1909); Lévl., Fl. Kouy-Tchéou 84 (1914) & Cat. Ill. Pl. Seu-Tchouen, pl. 15 (1918).

A. lactiflora [Wall. ex] DC. f. *septemlobata* (Lévl.) Pamp. in Nuov. Giorn. Bot. Ital. n.s. 34:675 (1927); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:238 (1965).

CHINA. Kweichow, Ma-jo, 23 vii 1907, 8 ix 1907, *Cavalerie* 3318 (holo. *A. septemlobata*, E).

1097. *Artemisia lancea* Van. in Bull. Acad. Géog. Bot. 12:500 (1903); Lévl., Fl. Kouy-Tchéou 84 (1914).

A. lavandulaefolia DC. var. *lancea* (Van.) Pamp. in Nuov. Giorn. Bot. Ital. n.s. 36:469 (1929); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:240 (1965).

CHINA. Kweichow, environs de Gan-pin, bord de la route, 9 viii 1897, *Martin* in herb. *Bodinier* 1762 (holo. E).

1098. *Artemisia mairei* Lévl. in Fedde, Rep. Sp. Nov. 11:303 (1912) & Cat. Pl. Yunnan 38 (1915); Pamp. in Nuov. Giorn. Bot. Ital. n.s. 34:678 (1927); Hand.-Mazz., Symb. Sin. 7:1114 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:242 (1965).

CHINA. Yunnan, sud de Tong-tchouan, 2600 m, genépi blanc, vivace, pâturages des collines, ix 1911, *E. E. Maire* s.n. (holo. E).

1099. *Artemisia pleiocephala* Pamp. var. *pleiocephala* f. *yunnanensis* Pamp. in Nuov. Giorn. Bot. Ital. n.s. 36:447 (1929) & 39:30 (1932); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:249 (1965).

A. yunnanensis Lévl. in Fedde, Rep. Sp. Nov. 11:304 (Nov. 1912) & Cat.

Pl. Yunnan 38 (1915)—non *A. yunnanensis* J. F. Jeffrey (June 1912).

CHINA. Yunnan, plaine de Tong-tchouan, 2500 m, armoise vivace, ix 1911, *E. E. Maire* s.n. (holo. *A. yunnanensis*, E).

1100. *Artemisia santolinifolia* Turcz. ex Bess. in Nuov. Mém. Soc. Nat. Mosc. 3:87 (1834).

A. potentillaefolia Lévl. in Fedde, Rep. Sp. Nov. 11:303 (1912), Cat. Pl. Yunnan 38 (1915) & Ill. Pl. Seu-Tchouen pl. 14 (1918); Pamp. in Nuov. Giorn. Bot. Ital. n.s. 34:689 (1927) pro syn. sub *A. sacrorum* Ledeb. var. *minor* Ledeb. f. *discolor* Kom.; S.Y. Hu in Quart. Journ. Taiwan Mus. 18:254 (1965) pro syn. sub *A. sacrorum* var. *minor*; Kitagawa in Journ. Jap. Bot. 41:367 (1966) pro syn. sub *A. freyniana* (Pamp.) Krasch. f. *discolor* (Kom.) Kitagawa.

CHINA. Yunnan, Kin-tchong-chan, 2600 m, armoise vivace à feuillage argenté, ix 1911, *E. E. Maire* s.n. (holo. *A. potentillaefolia*, E).

In Fl. URSS 26:464 (1961), *A. sacrorum* Ledeb. is given as a synonym of *A. gmelinii* Web. ex Stechm. whilst the numerous infra-specific taxa of *A. sacrorum* are split between *A. gmelinii*, *A. santolinifolia* and *A. freyniana* (Pamp.) Krasch.

We have examined plates of *A. gmelinii* and *A. santolinifolia* in Ledeb., Ic. Pl. Fl. Ross. f.470 & 471 (1834), and *A. potentillaefolia* matches well with that of *A. santolinifolia*, and is here placed by us as a synonym of that species.

A. sacrorum subsp. *manshurica* Kitamura possibly also belongs to *A. santolinifolia*.

1101. *Artemisia selengensis* Turcz. var. *cannabifolia* (Lévl.) Pamp. in Nuov. Giorn. Bot. Ital. n.s. 36:475 (1929); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:258 (1965).

A. cannabifolia Lévl. in Fedde, Rep. Sp. Nov. 12:284 (1913) & Cat. Pl. Yunnan 38 (1915); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:113 (1952) pro syn. sub *A. selengensis* var. *integerrima* (Kom.) Nakai.

A. cannabifolia Lévl. var. *nigrescens* Lévl., Fl. Kouy-Tchéou 84 (1914)—nom. nud.

CHINA. Yunnan, plateau de Kan-i-tsen, 3000 m, armoise vivace en touffes, fl. grises, viii 1912, *E. E. Maire* s.n. (holo. *A. cannabifolia*, E).

1102. *Artemisia sieversiana* Willd., Sp. Pl. 3:1845 (1803) p.p.; Lév., Fl. Kouy-Tchéou 84 (1914).

Carpesium gigas Lév. & Van. in Fedde, Rep. Sp. Nov. 6:330 (1909); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:17 (1966).

CHINA. Kweichow, Pin-fa, jardin, pas vu sur la montagne, 2 ix 1907, *Cavalerie* 3317 (holo. *Carpesium gigas*, E).

Artemisia sieversiana Willd. var. *blinii* Lév., Cat. Pl. Yunnan 38 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:260 (1965).

The variety was validly described but no specimen was cited and none has been found bearing this name.

REFERENCES FOR ARTEMISIA

Kitamura, S. (1936). Les Armoises du Japon. *Acta Phytotax. Geobot.* 5:83-100.

— (1943). *Artemisia*. *l.c.* 12:135-154.

Léveillé, H. (1910). Clef des *Artemisia* chinois et coréens. *Bull. Soc. Bot. Fr.* 57:456-458.

Nakai, T. (1912). *Artemisiae Japonicae*. *Bot. Mag. Tokyo* 26:98-105.

Pampanini, R. (1923-1933). Contributo alla conoscenza dell' "*Artemisia verlotorum*" Lamotte. 1, *Bull. Soc. Bot. Ital.* 1923:76-89 (1923); *op. cit.* 2, *l.c.* 1925:188-189 (1925); *op. cit.* 3, *Nuov. Giorn. Bot. Ital.* n.s. 33:438-469 (1926); *op. cit.* 4, *l.c.* 34:171-181 (1927); *op. cit.* 5, *l.c.* 36:395-547 (1929); *op. cit.* 6, *l.c.* 37:262-267 (1930); *op. cit.* 7, *l.c.* 40:183-224 (1933).

— (1927-1932). Materiali per lo studio delle *Artemisie* asiatiche. 1, *Nuov. Giorn. Bot. Ital.* n.s. 34:632-713 (1927); *op. cit.* 2, *l.c.* 36:375-388 (1929); *op. cit.* 3, *l.c.* 39:19-35 (1932).

SENECIONEAE

1103. *Petasites tricholobus* Franch., Pl. David. 1:172 (1884); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:26 (1968).

P. mairei Lév. in Bull. Acad. Géog. Bot. 25:15 (1915) & Cat. Pl. Yunnan 47 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:297 (1967); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:26 (1968).

P. vaniotii Lév. in Bull. Acad. Géog. Bot. 25:15 (1915) & Cat. Pl. Yunnan 47 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:297 (1967); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:26 (1968).

CHINA. Yunnan, vallée humide de Ho-ki-keou, 3000 m, *Tussilago* vivace, longues racine blanches charnues tréchantes annuées, fl. blanches en Février, feuilles en Mars, *E. E. Maire* s.n. (syntype *P. mairei*, E); vallons humide des mont. derrière Tong-tchouan, 2700 m, plante vivace, genre *Tussilago* (rare fleurs blanches en capitules, feuilles grandes, velues, arrondies, poussant plus tard, iii 1912, *E. E. Maire* s.n. (syntype *P. mairei*, E); lagunes du plateau de Ta-hai-tse, 3200 m, *solidago* vivace, feuil. velues et blanches endessous, v 1912, *E. E. Maire* s.n. (holo. *P. vaniotii*, E).

P. mairei and *P. vaniotii* were first determined as *P. tricholobus* by Mattfeld in 1931.

1104. *Cremanthodium arnicoides* R. Good in Journ. Linn. Soc. (Bot.) 48:288 (1929); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:205 (1966).

Senecio arnicoides Wall., Cat. 3138 (1831)—*nom. nud.*

S. scytophyllus Diels in Notes R.B.G. Edinb. 5:193 (1912)—non H.B. & K. (1820).

S. dielsii Lévl., Cat. Pl. Yunnan 51 (1916)—non Müschler (1909).

Léveillé's *S. dielsii* was intended as a *nomen novum* for *S. scytophyllus*. No Léveillé type specimen is involved.

1105. *Cremanthodium hookeri* C.B. Cl., Comp. Ind. 169 (1876) subsp. *hookeri* f. *hookeri*.

C. hookeri C.B. Cl. subsp. *clarkei* R. Good f. *angustiligulatum* R. Good in Journ. Linn. Soc. (Bot.) 48:280 (1929) excl. syn. *Senecio feddei* Lévl.

Senecio saccoso-flabellatus Lévl. in Fedde, Rep. Sp. Nov. 11:283 (1913) & Cat. Pl. Yunnan 53 (1916); Hand.-Mazz. in Bot. Jahrb. 69:127 (1938) pro. syn. sub *Ligularia hookeri* (C.B. Cl.) Hand.-Mazz.

CHINA. Yunnan, pâturages, h. plateau de Ié-ma-tchouan, 3200 m, composée vivace, fl. jaunes, vii 1912, *E. E. Maire* s.n. (holo. *S. saccoso-flabellatus*, E).

1106. *Cremanthodium hookeri* C.B. Cl. subsp. *polycephalum* R. Good f. *regulare* R. Good. in Journ. Linn. Soc. (Bot.) 48:280 (1929).

Senecio calthaeifolius Hook. f., Fl. Brit. Ind. 3:350 (1881); Lévl., Fl. Kouy-Tchéou 104 (1914).

S. leveillei Van. in Bull. Acad. Géog. Bot. 11:346 (1902); Lévl., Fl. Kouy-Tchéou 105 (1914).

S. ficariaefolius Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:359 (1910); Hand.-Mazz. in Bot. Jahrb. 69:127 (1938) pro syn. sub *Ligularia hookeri* (C.B. Cl.) Hand.-Mazz. var. *polycephala* (R. Good) Hand.-Mazz.

S. feddei Lévl. in Fedde, Rep. Sp. Nov. 13:244 (1914) & Cat. Pl. Yunnan 51 (1916).

Ligularia leveillei (Van.) Hand.-Mazz., Symb. Sin. 7:1136 (1936) & in Bot. Jahrb. 69:128 (1938).

Senecillis leveillei (Van.) Kitamura in Acta Phytotax. Geobot. 8:88 (1939).

CHINA. Kweichow, environs de Gan-pin et Tsin-tchen, a.c. (assez commun) dans les herbages marécageux, les feuilles et l'aspect sont d'un *Ligularia*, mai je ne lui ai jamais vu de ligules partout où je l'ai rencontré, 4-13 ix 1897, Martin & Bodinier 1911 (holo. *S. leveillei*, E); Kweichow, Ma-jo, 14 xi 1907, Cavalerie 3366 (holo. *S. ficariaefolius*, E); Kweichow, sous bois humides du Io-chan, 3300 m, composée vivace, fl. jaunes, viii 1913, *E. E. Maire* s.n. (holo. *S. feddei*, E).

As pointed out by Good, *C. hookeri* is "the most complex and difficult group in the whole genus. It doubtless represents a junction of *Ligularia* and *Cremanthodium*". We have followed Good in referring this species to *Cremanthodium*, a view also held by Koyama.

Handel-Mazzetti divides the complex into *Ligularia hookeri*, *L. hookeri* var. *polycephala* and *L. leveillei*, but we are of the opinion that irrespective of

whether one regards "*hookeri*" as *Cremanthodium* or *Ligularia*, Good's treatment under *Cremanthodium* represents a more practical division of the variation.

We disagree with Good, however, in referring *S. feddei* to his subsp. *clarkei* as it clearly has more than 3 capitula and is therefore referable to subsp. *polycephalum*. It seems likely that Good did not see *S. feddei*, as material of it in the Edinburgh herbarium was not determined by him.

The type of *Cremanthodium hookeri*, (*Hooker* 16), is cited by Good under subsp. *clarkei* f. *angustiligulatum* and this is here corrected to *C. hookeri* subsp. *hookeri* f. *hookeri*.

1107. *Cremanthodium oblongatum* C.B. Cl., Comp. Ind. 168 (1876); R. Good in Journ. Linn. Soc. (Bot.) 48:287 (1929); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:212 (1966).

Senecio pirolaefolia Lévl. in Bull. Acad. Géog. Bot. 24:282 (1914) & Cat. Pl. Yunnan 53 (1916).

S. trichopoda Lévl. in Bull. Acad. Géog. Bot. 25:17 (1915) & Cat. Pl. Yunnan 55 (1916).

CHINA. Kweichow, pâtures du Io-chan, 3300 m, composée vivace, fl. jaunes, viii 1913, *E. E. Maire* s.n. (holo. *S. pirolaefolia*, E); Kweichow, flancs du Io-chan, 3300 m, composée vivace, fl. jaunes, vii 1912, *E. E. Maire* s.n. (holo. *S. trichopoda*, E).

In his monograph Good cites two "*Maire* s.n." specimens under Kansu instead of Kweichow.

REFERENCE FOR CREMANTHODIUM: Good, R. d'O. (1929). The taxonomy and geography of the Sino-Himalayan genus *Cremanthodium* Benth. Journ. Linn. Soc. (Bot.) 48:259-316.

1108. *Raillardia ciliolata* DC., Prodr. 6:441 (1838); Sherff in Bull. Bernice P. Bishop Mus. no. 135 (1935).

Raillardia ciliolata DC. var. *juniperoides* A. Gray in Proc. Amer. Acad. Arts & Sci. 5:133 (1862); Rock in Fedde, Rep. Sp. Nov. 13:353 (1914).

R. fauriei Lévl. in Fedde, Rep. Sp. Nov. 10:122 (1911).

HAWAIIAN (SANDWICH) ISLANDS. Hawaii, Maunakea, vii 1909, *Faurie* 1015 (typus *R. fauriei*—n.v.).

Rock placed *R. fauriei* as a synonym of *R. ciliolata* DC. var. *juniperoides* which Sherff in turn recognised as a synonym of the typical species.

I am indebted to Dr George Gillett for the references and information.

1109. *Gynura japonica* (Thunb.) Juel in Act. Hort. Berg. 1,3:86 (1891); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:176 (1942) p.p.; Hara, Enum. Spermi. Jap. 2:206 (1952) p.p.; S.Y. Hu in Quart. Journ. Taiwan Mus. 19:281 (1966) p.p.

Senecio japonicus Thunb., Fl. Jap. 315 (1784).

Gynura pinnatifida Van. in Bull. Acad. Géog. Bot. 12:489 (1903)—non DC.; Lévl., Fl. Kouy-Tchéou 97 (1914) sub *G. pinnatifida* DC.

G. vaniotii Lévl. in Bull. Acad. Géog. Bot. 24:284 (1914).

CHINA. Kweichow, environs de Gan pin, bords des torrents des *Ligularia*, tige 0.60 m à 0.80 m, belles fleurs jaune orange, 19 vi 1898, *Martin & Bodinier* 2380 (holo. *G. pinnatifida* Van. & *G. vaniotii* Lévl., E).

Mattfeld noted that the type of *G. pinnatifida* Van. and another specimen, *Maire* 356, represented a form of *G. pinnatifida* DC. with leaves having narrower laciniae and with smaller capitula. We believe that this form may merit varietal recognition.

Japanese botanists consider that *G. segetum* (Lour. ex) Merr. [syn. *G. pinnatifida* (Lour.) DC.] is synonymous with *G. japonica*. Hu, on the other hand, maintains them as separate species, with *G. vaniotii* as a synonym of *G. japonica*.

1110. *Gynura nudibasis* (Lévl. & Van.) Lauener & Ferguson, comb. nov.

Senecio nudibasis Lévl. & Van. in Fedde, Rep. Sp. Nov. 6:331 (1909).

Gynura dielsii Lévl. in Bull. Acad. Géog. Bot. 24:284 (1914) & Fl. Kouy-Tchéou 96 (1914).

G. pseudochina auct. non (L.) DC.; Hand.-Mazz. in Acta Hort. Gotoburg. 12:285 (1938).

CHINA. Kweichow, Lo-fou, rochers, jaune, iv 1907, *Cavalerie* 3312 (holo. *G. nudibasis*, E).

Although Handel-Mazzetti and Hu regarded *S. nudibasis* as synonymous with *G. pseudochina*, we prefer to retain it as a separate species on account of the presence of cauline leaves in *S. nudibasis* and their absence in *G. pseudochina*. In addition *G. nudibasis* has free auricles at the base of the petiole. There is insufficient authentic material of related species to be certain of the affinity of *G. nudibasis*.

It is interesting to note that Mattfeld (May 1931) determined the type as *G. nudibasis* but did not publish the combination.

A Kew duplicate also in Edinburgh is designated as *Cavalerie* 3312, i.e. an isotype of *G. nudibasis*. It is too incomplete for certain identification but probably belongs to the affinity of *Senecio campestris* and therefore presumably bears a transposed label.

1111. *Gynura ovalis* (Ker-Gawl.) DC. var. *pinnatifida* Hemsl. in Journ. Linn. Soc. (Bot.) 23:448 (1888).

G. hemsleyana Lévl. in Bull. Acad. Géog. Bot. 24:284 (1914).

G. ovalis (Ker-Gawl.) DC. var. *hemsleyana* (Lévl.), Lévl., Fl. Kouy-Tchéou 96 (1914).

G. hemsleyana was published by Léveillé as a *nomen novum* for *G. ovalis* var. *pinnatifida* Hemsl. to avoid confusion with *G. pinnatifida* DC. No Léveillé type specimen is involved. The specimen cited in *Flore du Kouy-Tcheou*, *Esquirol* 308, belongs to *G. pseudochina*.

1112. *Gynura procumbens* (Lour.) Merr., Enum. Philipp. Fl. Plants 3:618 (1923); Chang in Sunyatsenia 3:298 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:282 (1966); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:34 (1968).

Cacalia procumbens Lour., Fl. Cochinch. 485 (1790).

Gynura cavaleriei Lévl. in Bull. Acad. Géog. Bot. 24:284 (1914) & Fl.

Kouy-Tchéou 96 (1914).

CHINA. Kweichow, sur les fourrés en bas de Ta Rin, 900 m, jaune foncé (allongé sur tige 3-4 m), 8 iv 1912, *Esquirol* 3572 (holo. *G. cavaleriei*, E).

1113. *Gynura pseudochina* (L.) DC., Prodr. 6:299 (1838); Hand.-Mazz.. Symb. Sin. 7:1119 (1936); Chang in Sunyatsenia 3:299 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:283 (1966) p.p.; Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:34 (1968).

Senecio pseudochina L., Sp. Pl. 867 (1753).

S. crassipes Lévl. & Van. in Fedde, Rep. Sp. Nov. 6:331 (1909); Lévl.,

Fl. Kouy-Tchéou 96 (1914) pro. syn sub *Gynura bulbosa* Hook. & Arn.

Gynura bodinieri Lévl. in Bull. Acad. Géog. Bot. 24:283 (1914).

CHINA. Kweichow, Lo-fou, jaune, iv 1907, *Cavalerie* 3305 (holo. *S. crassipes*, E); Ouang-mou, lieux incultes, jaune, iii 1912, *Esquirol* 3563 (holo. *G. bodinieri*, E).

1114. *Emilia sonchifolia* (L.) DC. in Wight, Contr. Ind. Bot. 24 (1834) & Prodr. 6:302 (1838); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:158 (1969).

Cacalia sonchifolia L., Sp. Pl. 835 (1753).

Senecio sonchifolia (L.) Moench, Meth. Suppl. 231 (1803); Lévl., Fl.

Kouy-Tchéou 106 (1914) p.p. excl. *Cavalerie* 2195, 1294.

Gynura spermaptera Lévl. in Fedde, Rep. Sp. Nov. 11:306 (1912); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:284 (1966).

CHINA. Kweichow, Lo-fou, jardins, rouge, xi 1910, *Esquirol* 2570 (holo. *G. spermaptera*, E).

Cavalerie 2195 & 1294 are *Emilia prenanthoides* DC.

1115. *Senecio argunensis* Turcz. in Bull. Soc. Nat. Mosc. 20,2:18 (1847); Kitamura in Acta Phytotax. Geobot. 6:275 (1937) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:250 (1942); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:468 (1939); Nakai in Journ. Jap. Bot. 18:607 (1942) p.p.; Hara, Enum. Sperm. Jap. 2:253 (1952).

S. blinii Lévl. in Fedde, Rep. Sp. Nov. 8:138 (1910).

S. argunensis Turcz. var. *blinii* (Lévl.) Hand.-Mazz. in Notizbl. Bot. Gart.

Berlin 13:640 (1937) & in Acta Hort. Gotoburg. 12:288 (1938).

KOREA. In herbidis Chinnampo, ix 1906, *Faurie* 1120 (holo. *S. blinii*, E).

Faurie 1119, *Taquet* 215, 965 & 4316 also belong here. Kitamura cited *Faurie* 1119 as the type of *S. blinii* instead of *F.* 1120.

1116. *Senecio asperifolius* Franch. in Journ. de Bot. 10:414 (1896); Hand.-Mazz. in Acta Hort. Gotoburg. 12:288 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:34 (1968).

S. henrici Van. in Bull. Acad. Géog. Bot. 11:351 (1902).

S. lebrunei Lévl., l.c. 25:18 (1915), & Cat. Pl. Yunnan 52 (1916) & Cat. Ill. Pl. Seu-Tchouen Pl. 20** (1918).

CHINA. Yunnan, environs de Yunnan-sen, dans les herbages de la mont. où il est commun, fleurs jaunes, 17 xii 1896, *Bodinier* 15D (holo. *S. henrici*, E); Yunnan, terrains rocheux arides derrière La-kou, 2450 m, composée vivace rachitique mi-couchée, fl. jaunes, mai 1912, *E. E. Maire* s.n. (holo. *S. lebrunei*, E).

Senecio aucubiflorus Franch.? ex. Lévl., Cat. Pl. Yunnan 50 (1916)—*nom. nud.*

1117. *Senecio bodinieri* Van. in Bull. Acad. Géog. Bot. 11:348 (1902); Lévl., Fl. Kouy-Tchéou 104 (1914) & Cat. Ill. Pl. Seu-Tchouen Pl. 20* (1918); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:36 (1968).

S. bodinieri Van. var. *brevior* Van. in Bull. Acad. Géog. Bot. 11:348 (1902).

S. bodinieri Van. var. *elator* Van., l.c. 11:349 (1902).

S. bodinieri Van. var. *parcepilosa* Van., l.c. 11:349 (1902).

S. conferviferus Lévl., Fl. Kouy-Tchéou 104 (1914) in Clavi & Chang in Bull. Fan. Mem. Inst. 6:61 (1935).

CHINA. Kweichow, environs de Hoang-ko-chou, rochers humides de la Cascade, fleurs jaunes, 10 ii 1899, *Martin & Bodinier* 2572 (holo. *S. bodinieri* var. *brevior*, lecto *S. bodinieri*, E); environs de Kouy-yang, mont. du Collège, sur les rochers, au-dessous de la grande Cascade, 12 iv 1898, *Bodinier* 2197 (syntype var. *elator*, E). Yunnan, mont entre Se-tsong & Lo pin, pentes humides, suintant l'eau, ligules jaunes, 6 iv 1897, *Bodinier* 1513 (syntype var. *elator*, E). Kweichow, bords abruptes d'une rivière à une journée de Hin-y-hien, 11 iv 1897, *Bodinier* 1539 (holo. var. *parcepilosa*, E).

It is clear from labels on the specimens that Vaniot intended *Bodinier* 2572 as the type of "*Ligularia*" *bodinieri* and *Bodinier* 2197 as the type of "*Ligularia*" *confervifera*. In the event, these and other numbers were cited under *Senecio* (*Ligularia*) *bodinieri* or its varieties, and although Vaniot did not publish the name or describe *Senecio conferviferus*, Léveillé did so in the key to *Senecio* in his *Flore du Kouy-Tchéou*.

Senecio bulbilliferum Maxim. var. *subglaber* Franch. ex Lévl., Cat. Pl. Yunnan 50 (1916)—*nom. nud.*

No specimen was cited and none was found in the Léveillé herbarium bearing this name.

1118. *Senecio cavaleriei* Lévl. in Fedde, Rep. Sp. Nov. 12:537 (1913) & Fl. Kouy-Tchéou 104 (1914); Hand.-Mazz., Symb. Sin. 7:1128 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:40 (1968).

CHINA. Kweichow, Honang ko chou, pentes de la cascade, x 1911, *Cavalerie* 4003 (holo. E).

1119. *Senecio cinarifolius* Lévl. in Fedde, Rep. Sp. Nov. 12:283 (1913) & Cat. Pl. Yunnan 51 (1916); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:637 (1937) & S.Y. Hu in Quart. Journ. Taiwan Mus. 21:141 (1968) pro syn. sub *S. royleanus* DC.

CHINA. Yunnan, pâturages de Ié-ma-tchouan, 3200 m, grande composée vivace h. 1-20 m, fl. jaunes, viii 1912, *E. E. Maire* s.n. (holo. E).

1120. *Senecio duclouxii* Dunn in Journ. Linn. Soc. (Bot.) 35:504 (1903); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:638 (1937).

S. cichoriifolius Lévl. in Fedde, Rep. Sp. Nov. 13:344 (1914) & Cat. Pl. Yunnan 51 (1916).

CHINA. Yunnan, vallons de Mé-Che-I, 750 m, composée vivace en petites touffes, fl. jaunes, v 1913, *E. E. Maire* s.n. (holo. *S. cichoriifolius*, E).

1121. *Senecio faberi* Hemsl. var. *discoideus* Lauener & Ferguson, var. nov. A var. *fabero* capitulis discoideis nec radiatis differt.

S. milleflorus Lévl. in Bull. Acad. Géog. Bot. 24:290 (1914) & Cat. Pl. Yunnan 52 (1916); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:131 (1968).

CHINA. Yunnan, plateau de Ta hai, 3200 m, composée vivace, en touffes dressées, fleurs jaunes, hautes herbes, viii 1912, *E. E. Maire* s.n. (holo. *S. milleflorus* & *S. faberi* var. *discoideus*, E).

The type specimen is completely devoid of ligules. In all other specimens of *S. faberi* that we have seen, ligules are present, and we are therefore of the opinion that Lévillé's species merits varietal rank.

1122. *Senecio flammeus* [Turcz. ex] DC., Prodr. 6:362 (1838); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:640 (1937); Kitamura in Acta Phytotax. Geobot. 6:269 (1937) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:236 (1942); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:469 (1939); Hara, Enum. Sperm. Jap. 2:254 (1952); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:46 (1968).

S. longeligulatus Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:139 (1910); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:119 (1952).

KOREA. Quelpaert, in herbis Hallaisan, 12 viii 1908, *Taquet* 997 (holo. *S. longeligulatus*, E).

1123. *Senecio glumaceus* Dunn in Journ. Linn. Soc. (Bot.) 35:505 (1903). *Vernonia mairei* Lévl. in Fedde, Rep. Sp. Nov. 11:305 (1912) & Cat. Pl. Yunnan 56 (1916); Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920) pro syn. sub *Senecio dianthus* Franch.

CHINA. Yunnan, sur rochers des mont. derrière Tong-tchouan, 2600-2800 m, grande composée vivace, dressée, fl. blanches, ix 1911, *E. E. Maire* s.n. (holo. *V. mairei*, E).

The type specimen of *V. mairei* was first determined by Gagnepain (Bull. Soc. Bot. Fr. 67:363, 1920) as *S. dianthus* Franch. and later as *S. glumaceus* Dunn by Chang. Chang also named other Edinburgh material as *S. glumaceus*.

Handel-Mazzetti and Hu consider *S. glumaceus* and *S. paucinervis* Dunn to be synonyms of *S. erythropappus* Bur. & Franch. We have no authentic material of any of the species concerned but from the original descriptions and material at Edinburgh we consider that there must be at least some doubt as to whether *S. glumaceus* is conspecific with *S. erythropappus* and, indeed, whether *V. mairei* is synonymous with *S. glumaceus*. In the original description *S. glumaceus* is described as having only one flower per capitulum whereas our material labelled as such has (2-)3. This problem can only be resolved by examination of all the type material and we prefer at this stage to follow Chang's identifications.

1124. *Senecio graciliflorus* DC., Prodr. 6:365 (1838); Hand.-Mazz., Symb. Sin. 7:1126 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:47 (1968).

Cacalia graciliflora Wall., Cat. 3149 (1831)—*nom. nud.*

S. mairei Lévl. in Fedde, Rep. Sp. Nov. 12:283 (1913) & Cat. Pl. Yunnan 52 (1916).

CHINA. Yunnan, pâturages de Lo sue chan (plateau neigeux), 3400 m, composées vivace en petites touffes dressées. fl. jaunes, viii 1912, *E. E. Maire* s.n. (syntype *S. mairei*, E); Kweichow, rochers du Io-chan, 3300 m, composée vivace isolée, viii 1912, *E. E. Maire* s.n. (syntype *S. mairei*, E).

1125. *Senecio hoi* Dunn in Journ. Linn. Soc. (Bot.) 35:506 (1903); Rehder in Journ. Arn. Arb. 18:277 (1937); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:636 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:48 (1968).

Vernonia esquirolii Van. in Fedde, Rep. Sp. Nov. 4:331 (1907)—non Lévl. 1912; Lévl., Fl. Kouy-Tchéou 109 (1914); Gagnepain in Bull. Soc. Bot. Fr. 67:363 (1920) pro syn. sub *S. walkeri* Arnott; Rehder in Journ. Arn. Arb. 18:253 (1937) pro syn. sub *S. walkeri*; S.Y. Hu in Quart. Journ. Taiwan Mus. 21:150 (1968) pro syn. sub *S. walkeri*.

CHINA. Kweichow, sine loc., forêts, retombant du sommet des arbres, xii 1906, *Esquirol* 781 (holo. *V. esquirolii*, E)—cited in the protologue as *Esquirol* 581.

1126. *Senecio integrifolius* (L.) Clair. subsp. *fauriei* (Lévl. & Van.) Kitamura in Acta Phytotax. Geobot. 6:272 (1937) in nota, 9:37 (1940) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:240 (1942); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:142 (1969).

S. fauriei Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:139 (1910).

S. integrifolius (L.) Clair subsp. *kirilowii* (Turcz. ex DC.) Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:469 (1939).

KOREA. (Kangwon province) in monte des diamants, 20 vi 1906, *Faurie* 1097, 21 vi 1906, *Faurie* 1151 (syntypes *S. fauriei*, E).

Hara treats *S. fauriei* under *S. integrifolius* var. *spathulatus* (Miq.) Hara and Hu places it under *S. kirilowii* Turcz. ex DC. These are all synonymous with *S. integrifolius* subsp. *fauriei*.

The field note "in monte des diamants" occurs frequently in *Faurie* specimens. This refers to "Diamond Mountains" in Kangwon province in central Korea, near Kosong which is approximately 38° 36' N, 128° 21' E.

1127. *Senecio lonchophyllus* Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13: 640 (1937).

Gynura esquirolii Lévl. in Bull. Acad. Géog. Bot. 24:284 (1914) & Fl. Kouy-Tchéou 96 (1914)—non *S. esquirolii* Lévl. (1912).

Gynura hieracifolia Lévl. in Bull. Acad. Géog. Bot. 24:284 (1914) & Fl. Kouy-Tchéou 96 (1914)—non *S. hieracifolia* L.

CHINA. Kweichow, Trou de Ouan-ly, 1100 m, jaune, 20 iii 1912, *Esquirol* 3523 (holo. *G. esquirolii*, lecto. *S. lonchophyllus*, E); Kweichow, paroi du rocher au gué de Ta-ram, 800 m, jaune, 16 ii 1912, *Esquirol* 3524 (holo. *G. hieracifolia*, E).

Senecio esquirolii Lévl. (1912) is *S. nudicaulis* Buch.-Ham. ex D. Don. We have chosen *Esquirol* 3523 as the lectotype of *S. lonchophyllus*.

1128. *Senecio nagensium* C.B. Cl., in Journ. Linn. Soc. (Bot.) 25:39 (1889); Hand.-Mazz. in Acta Hort. Gotoburg. 12:287 (1938) sub *S. prionophyllus* Franch.

Pulicaria kouyangensis Van. in Bull. Acad. Géog. Bot. 12:490 (1903); Lévl., Fl. Kouy-Tchéou 101 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:308 (1967).

Imula vernoniiformis Lévl. in Fedde, Rep. Sp. Nov. 12:535 (1913) & Fl. Kouy-Tchéou 98 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:301 (1966).

Vernonia bodinieri Lévl., Fl. Kouy-Tchéou 98 (1914)—*nom. nud.* pro syn. sub *I. vernoniiformis*.

Imula kouyangensis Lévl., l.c. 101 (1914)—*nom. nud.* pro syn. sub *Pulicaria kouyangensis*.

CHINA. Kweichow, environs de Kouy-yang, dans les bois de la pagode de Kien-liu-chan, 13 xi 1897, *Bodinier* 1999 (holo. *P. kouyangensis*, E); Kweichow *sine loc.*, fleur jaune, commune, x-xi 1911, *Esquirol* 3176 (holo. *I. vernoniiformis*, E).

Handel-Mazzetti noted on the type of *I. vernoniiformis* that it was close to *S. nagensium* var. *lobbii* (Hook. f.) Craib (syn. *S. densiflorus* var. *lobbii* Hook. f.). We consider that the latter and *S. densiflorus* [Wall. ex] DC. are very closely related and may require further investigation, since some of the distinguishing characters seem to overlap.

1129. *Senecio nemorensis* L., Sp. Pl. 870 (1753) *s.l.*; Hand.-Mazz. in Acta Hort. Gotoburg. 12:286 (1938); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:245 (1942); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:132 (1968).

S. kematongensis Van. in Bull. Acad. Géog. Bot. 11:347 (1902); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:127 (1968).

S. ganpinensis Van. in Bull. Acad. Géog. Bot. 12:19 (1903); Lévl., Fl. Kouy-Tchéou 105 (1914).

CHINA. Kweichow, bords du ruisseau de Ke-ma-tong, mont. du Collège, tiges très rameuses, ligules jaunes, 21 vii 1897, *Bodinier* 1720 (holo. *S. kematongensis*, E); environs de Gan-pin, dans la mont. (He-che-teou) 11 vii 1897, *Martin & Bodinier* s.n. (holo. *S. ganpinensis*, E).

Cavalerie 3319 also belongs here. *S. ganpinensis* may perhaps be referred to *S. nemorensis* subsp. *fuchsii* (C. C. Gmelin) Čelak. on account of the narrower leaves.

1130. *Senecio nudicaulis* Buch.-Ham. ex D. Don, Prodr. Fl. Nep. 179 (1825); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:640 (1937).

S. rosulifer Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:359 (1910); Lévl., Fl. Kouy-Tchéou 106 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:141 (1968)—non *S. rosuliferus* Chang (1935).

S. esquirolii Lévl. in Fedde, Rep. Sp. Nov. 10:352 (1912) & Fl. Kouy-Tchéou 105 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:44 (1968). CHINA. Kweichow, Lo-fou, jaune, iv 1909, *Cavalerie* 3701 (syntype *S. rosulifer*, E), iv 1908, *Cavalerie* 3705 (syntype *S. rosulifer*, E); Kweichow, plateau de San-tou, 1000 m, jaune, I v 1910, *Esquirol* 2110 (holo. *S. esquirolii*, E).

On the labels belonging to the specimens Léveillé has written "*S. rosulifera*" and it appears in this form in the *Flore du Kouy-Tchéou*, but it is probable that Léveillé intended the epithet "*rosulifer*", i.e. rosette-bearing. Chang's epithet is not grammatically correct but in any case should be considered as a later homonym, and as such requires a new name.

S. rosulifer is a stouter taller plant than typical *S. nudicaulis* and may represent a distinct taxon.

1131. *Senecio oldhamianus* Maxim. in Bull. Acad. Sci. St. Pétersb. 16:219 (1871); Hand.-Mazz. in Acta Hort. Gotoburg. 12:291 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:134 (1968).

S. martini Van. in Bull. Acad. Géog. Bot. 11:346 (1902); Lévl., Fl. Kouy-Tchéou 106 (1914).

CHINA. Kweichow, route de Pin yue à Kouy-yang, bords d'une rivière, fleurs jaune, 13 v 1899, *Martin & Bodinier* 2599 (holo. *S. martini*, E).

1132. *Senecio pseudo-mairei* Lévl. in Fedde, Rep. Sp. Nov. 13:345 (June 1914) & Cat. Pl. Yunnan 53 (1916).

S. beauverdianus Lévl. in Bull. Acad. Géog. Bot. 24:289 (Dec. 1914) & Fl. Kouy-Tchéou 104 (1914); Hand.-Mazz., Symb. Sin. 7:1126 (1936) & S.Y. Hu in Quart. Journ. Taiwan Mus. 21:35 (1968) excl. *Lactuca beauverdiana* Lévl.

CHINA. Yunnan, rochers, mont. de Kiao-me-ti, 3100 m, senecio vivace en touffes—haut 1.20 m, fl. blanc-grisâtre, ix 1913, *E. E. Maire* s.n. (holo. *S. pseudo-mairei*, E); Kweichow, Rte. Pin-fa à Tou-yun, fl. jaunes, viii 1908, *Cavalerie* 3364 (holo. *S. beauverdianus*, E).

Both Handel-Mazzetti and Hu have placed *Lactuca beauverdiana* Lévl. & Van. in synonymy under *S. beauverdianus* but the former is a distinct species. The confusion probably arose because the type of *S. beauverdianus* bears an additional label in Léveillé's hand saying "*Lactuca beauverdiana* Lévl. & Van. nov. sp." but this label probably belongs to *Cavalerie* 3707, the type of *L. beauverdiana*.

S. pseudo-mairei was published in June 1914 and therefore has priority over *S. beauverdianus* of December 1914.

1133. *Senecio pseudosonchus* Van. in Bull. Acad. Géog. Bot. 11:349 (1902); Lévl., Fl. Kouy-Tchéou 106 (1914); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:640 (1937) pro syn. sub *S. subdentatus* (Bge.) Turcz.; Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:243 (1942); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:139 (1968).

S. pseudosonchus Van. var. *major* Van. in Bull. Acad. Géog. Bot. 11:350 (1902).

CHINA. Kweichow, près de Hin-y-fou, bord de la route, lit d'un ruisseau, capitules jaunes, 13 iv 1897, Bodinier s.n. (holo. *S. pseudosonchus*, E).

S. pseudosonchus var. *major* is based on a single specimen bearing two labels—Bodinier 1547 and Martin & Bodinier 2185—which Vaniot thought to be a larger form with more obviously toothed lower leaves and with the stem branching at the top.

Full synonymy of *S. pseudosonchus* is given by Kitamura and by Hu.

1134. *Senecio pseudosonchus* Van. var. *borealis* (Herder) S.Y. Hu in Quart. Journ. Taiwan Mus. 21:139 (1968).

Cineraria pratensis (Hoppe) DC. var. *borealis* Herder in Bull. Soc. Nat. Mosc. 40:441 (1867).

S. subdentatus (Bunge) Turcz. var. *borealis* (Herder) Cuf. in Fedde, Rep. Beih. 70:85 (1933).

Crepis chanetii Lévl. in Fedde, Rep. Sp. Nov. 11:306 (1912) & in Bull. Acad. Géog. Bot. 27:72 (1917); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:220 (1966).

CHINA. Hopei (Tché-Ly), fossés à Ting-Tchéou, iii-xi 1909, Chanet 439 (holo. *C. chanetii*, E).

The type of *C. chanetii* agrees well with Karo 28 & 182 cited by Cufodontis under his var. *borealis*. *S. subdentatus* (Bunge) Turcz. (1837) is a later homonym of *S. subdentatus* Ledeb. (1833).

S. spathiphyllus Franch. seems to be closely related to var. *borealis*.

1135. *Senecio spelaicolus* (Van.) Gagnepain in Bull. Soc. Bot. Fr. 67:364 (1920); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:636 (1937); Rehder in Journ. Arn. Arb. 18:277 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:145 (1968).

Vernonia spelaicola Van. in Bull. Acad. Geog. Bot. 12:123 (1903); Lévl., Fl. Kouy-Tchéou 109 (1914); Rehder in Journ. Arn. Arb. 18:253 (1937) pro syn. sub *S. walkeri* Arnott.

CHINA. Kweichow, environs de Hoang-ko-chou, fond d'une grande grotte, tiges lianeuses, fleurs blanches, 23 ii 1899, Martin & Bodinier 2570 p.p. (holo. E).

The type specimen consists of a mixed gathering. Only the floral dissections in the capsule represent, and agree with, the description of *V. spelaicola*. The specimen mounted on the Edinburgh sheet is *S. hoi* Dunn.

There has been a confusion of specimen labels as indicated by Gagnepain, by Rehder and by Handel-Mazzetti. Hu (Quart. Journ. Taiwan Mus. 21, 145, 150:1968) lists *V. spelaicola* not only under *S. spelaicolus* but also

under *S. walkeri*. The part of the type which is *S. hoi* was originally identified by Chang as *S. walkeri* (syn. *S. araneosus* DC.) but this is a misidentification. *S. walkeri* has completely glabrous leaves, whereas those of both *S. hoi* and *S. spelaicocolus* are felty-tomentose beneath.

1136. *Senecio stenocephalus* Maxim. in Bull. Acad. Sci. St. Pétersb. 16:218 (1871).

S. ligularia Hook. f. var. *stenocephalus* (Maxim.) Lévl., Cat. Pl. Yunnan 52 (1916).

No Léveillé type is involved. Although no basionym was cited it is apparent that Léveillé was making a new combination.

1137. *Senecio vaniotii* Lévl. in Fedde, Rep. Sp. Nov. 13:345 (1914) & Cat. Pl. Yunnan 55 (1916); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:149 (1968). CHINA. Yunnan, sur les rochers, mont. de Kiao-me-ti, *senecio* vivace, haut 1·10 m, fl. blanc jaunâtre, ix 1913, *E. E. Maire* s.n. (holo. E).

1138. *Senecio wightii* (Wight) Benth. in C.B. Cl., Comp. Ind. 197 (1876); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:150 (1968).

Doronicum wightii [DC. ex] Wight, Contr. Ind. Bot. 23 (1834).

Senecio saxatilis [Wall., Cat. 3131 (1831) ex] DC., Prodr. 6:367 (1838); Rehder in Journ. Arn. Arb. 18:253 (1937).

S. gentilianus Van. in Bull. Acad. Géog. Bot. 11:350 (1902); Lévl., Fl. Kouy-Tchéou 105 (1914).

Prenanthes graminifolia auct. non Van. & Lévl.; Lévl., Fl. Kouy-Tchéou 101 (1914).

CHINA. Kweichow, environs de Kouy-yang, dans les mont. à Lau-tsang-Koan, fleurs jaunes, viii 1897, *Bodinier* 1916 (holo. *S. gentilianus*, E).

The type of *Prenanthes graminifolia* Van. & Lévl., *Faurie* 437 from Korea, is *Hololeion maximowiczii* Kitamura var. *fauriei* (Van. & Lévl.) Kitamura (q.v. no. 1227).

REFERENCES FOR SENECIO

Cufodontis, G. (1933). Kritische Revision von *Senecio* Sectio Tephroseris. *Fedde, Rep. Beih.* 70:1-266.

Kitamura, S. (1937). Les *Senecio* du Japon. *Acta Phytotax. Geobot.* 6: 265-275.

1139. *Cacalia delphiniphylla* (Lévl.) Hand.-Mazz. in Notizbl. Bot. Gart. Berl. 13:635 (1937); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:169 (1969).

Senecio delphiniphyllus Lévl. in Bull. Acad. Géog. Bot. 25:18 (1915) & Cat. Pl. Yunnan 51 (1916) p.p.; S.Y. Hu in Quart. Journ. Taiwan Mus. 19:3 (1966) pro syn. sub *C. delphinifolia* Sieb. & Zucc.; l.c. 19:10 (1966) pro syn. sub. *C. zuccarinii* (Maxim.) Hand.-Mazz.

CHINA. Kweichow, rochers mi-mont. du Io-chan, 3200 m, composée vivace, fl. jaunes, viii 1912 *E. E. Maire* s.n. (lecto. *S. delphiniphyllus*, E).

There were three syntypes of *S. delphiniphyllus*, of which the other two belong to *Cacalia palmatisecta* and *C. tripteris* (q.v.). *C. zuccarinii* is a synonym of *C. delphinifolia*.

1140. *Cacalia farfarifolia* Sieb. & Zucc. in Abh. bayer. Akad. Wiss. Math.-Phys. Kl. 4:3:190 (1846).

Senecio petasitoides Lévl. in Fedde, Rep. Sp. Nov. 8:360 (1910) & Fl. Kouy-Tchéou 106 (1914); Hand.-Mazz. in Acta Hort. Gotoburg. 12:301 (1938) & S.Y. Hu in Quart. Journ. Taiwan Mus. 19:6 (1966) pro syn. sub *Cacalia longispica* Hand.-Mazz.

CHINA. Kweichow, Ma-jo, Long-ly, excroissance à l'aisselle des feuilles de la grosseur d'une noisette, 13 xi 1907, *Cavalerie* 3367 (holo. *S. petasitoides*, E).

1141. *Cacalia koulapensis* (Franch.) Hand.-Mazz., Symb. Sin. 7:1129 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:6 (1966); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:174 (1969).

Senecio koulapensis Franch. in Journ. de Bot. 8:356 (1894).

S. leclerei Lévl. in Bull. Acad. Géog. Bot. 25:18 (1915) & Cat. Pl. Yunnan 52 (1916); Hand.-Mazz., Symb. Sin. 7:1129 (1936) & S.Y. Hu in Quart. Journ. Taiwan Mus. 19:6 (1966) pro syn. sub *Cacalia latipes* (Franch.) Hand.-Mazz.

CHINA. Yunnan, rochers des mont. à Kiao-me-ti, 3100 m, composée vivace, haut 1 m, fl. jaunes, xi 1912, *E. E. Maire* s.n. (holo. *S. leclerei*, E).

1142. *Cacalia palmatisecta* (J.F. Jeffrey) Hand.-Mazz., Symb. Sin. 7:1128 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:7 (1966); Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:174 (1969).

Senecio palmatisectus J.F. Jeffrey in Notes R.B.G. Edinb. 9:128 (1916).

S. delphiniphyllus Lévl. in Bull. Acad. Géog. Bot. 25:18 (1915) & Cat. Pl. Yunnan 51 (1916) p.p. excl. lecto.

CHINA. Yunnan, pâturages de Ta-hai, 3200 m, composée vivace, fl. jaunes, viii 1912, *E. E. Maire* s.n. (syntype *S. delphiniphyllus*, E).

1143. *Cacalia tripteris* Hand.-Mazz. in Acta Hort. Gotoburg. 12:300 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:9 (1966).

Senecio delphiniphyllus Lévl. in Bull. Acad. Géog. Bot. 25:18 (1915) & Cat. Pl. Yunnan 51 (1916) p.p. excl. lecto.

CHINA. Yunnan, rochers des mont. à Lou-ngi-tsin, 3100 m, composée vivace, fl. jaunes, x 1912, *E. E. Maire* s.n. (syntype *S. delphiniphyllus*, E).

REFERENCE FOR *CACALIA*: Kitamura, S. (1938). Les *Cacalia* du Japon. *Acta Phytotax. Geobot.* 7:236-251.

1144. *Ligularia amplexicaulis* DC., Prodr. 6:314 (1838).

Senecio amplexicaulis Wall., Cat. 3139 (1831)—*nom. nud.*

S. jacksonii Lévl., Cat. Pl. Yunnan 51 (1916).

Léveillé's *S. jacksonii* was a *nomen novum* for *S. amplexicaulis* Wall.—non HBK. (1820). No Léveillé type specimen is involved.

1145. *Ligularia clivorum* Maxim. in Bull. Acad. Sci. St. Pétersb. 15:374 (1870); Hand.-Mazz. in Bot. Jahrb. 69:116 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:56 (1967).

Senecio labordei Van. in Bull. Acad. Géog. Bot. 11:345 (1902); Lév., Fl.

Kouy-Tchéou 105 (1914) p.p. excl. *Bodinier & Martin* 1682.

CHINA. Kweichow, environs de Tsin-gay, dans la mont., fleurons jaunes, 5 ix 1899, *Laborde & Bodinier* 2706 (holo. *S. labordei*, E).

Bodinier & Martin 1682 is *Ligularia hodgsonii* Hook. var. *sutchuenensis* (Franch.) Henry.

1146. *Ligularia franchetiana* (Lévl.) Hand.-Mazz., Symb. Sin. 7:1134 (1936) & in Bot. Jahrb. 69:111 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:59 (1967).

Senecio franchetianus Lévl. in Bull. Acad. Géog. Bot. 25:16 (1915) pro parte & Cat. Pl. Yunnan 51 (1916).

Senecillis franchetiana (Lévl.) Kitamura in Acta Phytotax. Geobot. 8:88 (1939).

CHINA. Kweichow, pâtures du Io-chan, 3300 m, composée vivace, fl. jaunes, viii 1912, *E. E. Maire* s.n. (lecto. E).

Two Maire collections, both from Io-chan, were named *Senecio franchetianus* by Léveillé. In the protologue, "pâturages sur le versant du Io-chan" relates to both specimens, but the month of only one of the specimens is given. The description of *S. franchetianus* also relates to both specimens, in particular "flores lutei" to the lectotype, but "petiolo latissime lacerate alato" obviously describes the other Io-chan syntype now excluded from *S. franchetianus*. The lectotype was effectively selected by Handel-Mazzetti by writing *Ligularia franchetiana* (Lévl.) Hand.-Mazz. on the sheet. On the excluded syntype he wrote "*Ligularia* sp. (non *franchetiana*)", but this syntype now appears to be a *Cacalia* which has not yet been identified.

1147. *Ligularia lankongensis* (Franch.) Hand.-Mazz. var. *minor* Lauener & Ferguson, var. nov.

A var. *lankongense* ligulis minoribus floribus discis paucioribus differt.

Senecio iochanense Lévl. in Bull. Acad. Géog. Bot. 25:17 (1915) pro parte & Cat. Pl. Yunnan 51 (1916); Hand.-Mazz. in Bot. Jahrb. 69:125 (1938) pro syn. sub *L. lankongensis*.

CHINA. Kweichow, sommet du Io-chan, 3400 m, composée vivace, fl. jaunes, *E. E. Maire* s.n. vi 1912 (lecto *S. iochanense*, holo. var. *minor*, E).

The combined field note given by Léveillé under *S. iochanense* covers three different collections from Io-chan. Only that cited above bears the name *S. iochanense* in Léveillé's hand and the description most closely fits the lectotype.

Whereas Handel-Mazzetti regarded the lectotype of *S. iochanense* as a synonym of *L. lankongensis* we prefer to recognise it as a distinct entity.

Examination of the capitula of both taxa shows that the ligules of var. *minor* are slightly shorter and narrower, $7-8 \times 2$ mm, than those of *L. lankongensis*, $10-14 \times 3-4.5$ mm. The bracts of var. *minor* are also slightly shorter. In var. *minor* the number of disc florets per capitulum is about 11-16, only half as many as in *L. lankongensis*.

The excluded syntypes of *S. iochanense* were determined by Chang as *Ligularia stenocephala* (Maxim.) Matsum. & Koidz. but they are referable to *L. wilsoniana* (Hemsl.) Greenm. q.v.

1148. *Ligularia lapathifolia* (Franch.) Hand.-Mazz., Symb. Sin. 7:1133 (1936) & in Bot. Jahrb. 69:107 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:64 (1967).

Senecio lapathifolius Franch. in Bull. Soc. Bot. Fr. 39:306 (1892).

S. tongtchouanensis Lévl. in Bull. Acad. Géog. Bot. 25:17 (1915) & Cat.

Pl. Yunnan 53 (1916).

CHINA. Yunnan, pâtures des mont. derrière Tong-tchouan, 2700 m, composée vivace, fl. jaunes, x 1912, *E. E. Maire* s.n. (holo. *S. tongtchouanensis*, E).

1149. *Ligularia mongolica* DC. var. *taquetii* (Lévl. & Van.) Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:50 (1968).

Senecio taquetii Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:139 (1910).

Ligularia taquetii (Lévl. & Van.) Nakai, Rep. Veg. Isl. Quelpaert 90 (1914), in Bot. Mag. Tokyo 31:124 (1917), Fl. Sylv. Kor. 14:116 (1923) & in Bull. Nat. Sci. Mus. Tokyo, no. 31:117 (1952); Kitamura in Acta Phytotax. Geobot. 9:117 (1940) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:188 (1942).

KOREA. Quelpaert, in Rang Kyangi, cultivé dans quelques jardins comme remède contre la gale, rare, vii 1908, *Taquet* 994 (holo. *S. taquetii*, E).

1150. *Ligularia nelumbifolia* (Bur. & Franch.) Hand.-Mazz. in Anz. Akad. Wiss. Wien math.-nat. Kl. 62:27 (1925) & in Bot. Jahrb. 69:112 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:66 (1967).

Senecio nelumbifolius Bur. & Franch. in Journ. de Bot. 5:74 (1891).

S. moisoni Lévl. in Bull. Acad. Géog. Bot. 25:16 (1915) & Cat. Pl. Yunnan 52 (1916).

CHINA. Yunnan, pâturages des plateaux à Ta-hai, 3200 m, grande composée vivace, fl. jaunes, vii 1912, *E. E. Maire* s.n. (holo. *S. moisoni*, E).

1151. *Ligularia sibirica* (L.) Cass. var. *araneosa* DC., Prodr. 6:315 (1838).

Senecio ligularia Hook. f. var. "*arenosa*" (DC.) Lévl., Cat. Pl. Yunnan 52 (1916).

1152. *Ligularia sibirica* (L.) Cass. var. *glaberrima* DC., Prodr. 6:315 (1838).

Senecio ligularia Hook. f. var. *glaberrima* (DC.) Lévl., Cat. Pl. Yunnan 52 (1916).

- 1153. *Ligularia sibirica* (L.) Cass. var. *vulgaris* DC., Prodr. 6:315 (1838).
Senecio ligularia Hook. f. var. *vulgaris* (DC.) Lévl., Cat. Pl. Yunnan 52 (1916).**

In the above three numbers no Léveillé types are involved. Although he did not cite basionyms it is apparent that these three varieties were intended as changes of existing taxa.

- 1154. *Ligularia splendens* (Lévl. & Van.) Nakai in Journ. Jap. Bot. 20:141 (1944) & in Bull. Nat. Sci. Mus. Tokyo no. 31:117 (1952) p.p.; Koyama in Mem. Fac. Sci. Kyoto Univ., Ser. Biol. 2:47 (1968) pro syn. sub *L. fischeri* (Ledeb.) Turcz.**

Senecio splendens Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:139 (1910);
Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 16:194 (1942)
pro syn. sub *L. fischeri*.

KOREA. Quelpaert, in sylvis Hallaisan, 600 m et supra, viii 1908, *Taquet* 995 (holo. E).

Ligularia splendens is part of the *L. fischeri*-*L. sibirica* complex in which *L. fischeri* has the pappus conspicuously shorter than the disc flower, whilst that of *L. sibirica* is equal to or slightly shorter than the disc flower. *L. splendens* is closer to *L. sibirica* in this respect but differs in the large ovate leafy bracts and the larger ligules. For this reason we follow Pojarkova (Fl. URSS 26, 803:1961) in retaining *L. splendens* as a separate species. Hu places *Senecio splendens* in synonymy under both *L. fischeri* and *L. sibirica* var. *araneosa*.

Japanese authors regard *L. splendens* as a synonym of *L. fischeri* whilst Pojarkova implies that Japanese and Korean specimens of *L. fischeri* belong to *L. splendens*.

We have examined material from Europe, China and the Himalaya which has been referred to *L. sibirica* and believe that Chinese specimens are probably *L. fischeri*. Koyama states that Himalayan "*L. sibirica*" is probably *L. fischeri*, but we find that specimens from this area exhibit a variation in relative lengths of pappus and disc flower.

Handel-Mazzetti, in his monograph of *Ligularia* (Bot. Jahrb. 69:137, 1938) treats *L. fischeri* as a synonym of *L. sibirica* var. *speciosa* (Schröd.) DC. *L. veitchiana* (Hemsl.) Greenm. is very close to *L. sibirica*, and, as Handel-Mazzetti says, difficult to separate in the herbarium. It seems apparent that a revision of this group is required.

- 1155. *Ligularia tongolensis* (Franch.) Hand.-Mazz., Symb. Sin. 7:1136 (1936) & in Bot. Jahrb. 69:109 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:74 (1967).**

Senecio tongolensis Franch. in Bull. Soc. Bot. Fr. 39:305 (1892).

S. monbeigii Lévl. in Bull. Acad. Géog. Bot. 25:17 (1915) & Cat. Pl. Yunnan 52 (1916).

CHINA. Yunnan, pâtures, plateau de Ta-hai, 3200 m, composée vivace, fl. jaunes, viii 1912, *E. E. Maire* s.n. (holo. *S. monbeigii*, E).

1156. *Ligularia vellearea* (Franch.) Hand.-Mazz. in Anz. Akad. Wiss. Wien, math.-nat. Kl. 62:12 (1925) & in Bot. Jahrb. 69:120 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:75 (1967).

Senecio velleareus Franch. in Bull. Soc. Bot. Fr. 39:299 (1892).

S. primulaefolius Lévl. in Bull. Acad. Géog. Bot. 24:290 (1914) & Cat.

Pl. Yunnan 53 (1916).

CHINA. Yunnan, plateau de Ta-hai, 3200 m, lieux humides, composée vivace, tige et feuilles velues, blanches endessous, vii 1912, *E.E. Maire* s.n. (syntype *S. primulaefolius*, E); pâtures du h. plateau de Ta-hai, 3200 m, composée vivace, fl. jaunes, vii 1912, *E. E. Maire* s.n. (syntype *S. primulaefolius*, E).

In Lévillé's protologue he cites "lieux humides et pâtures du haut plateau de Ta-hai" which is intended as a combined field note for two different collections, although only one of them is annotated "*S. primulaefolius*".

A duplicate of one of the syntypes is a mixed gathering comprising *Ligularia vellearea* and *L. lapathifolia*.

1157. *Ligularia wilsoniana* (Hemsl.) Greenm. in Bailey, Stand. Cycl. Hort. 6: 3153 (1917); Hand.Mazz. in Bot. Jahrb. 69:138 (1938).

Senecio iochanense Lévl. in Bull. Acad. Géog. Bot. 25:17 (1915) pro parte & Cat. Pl. Yunnan 51 (1916).

CHINA. Kweichow, brousse du Io-chan (montagne neigeuse), 3300 m, composée vivace, grande feuilles arrondies, fl. jaunes, viii 1912, *E. E. Maire* s.n. (syntype *S. iochanense*, E); pâtures du Io-chan, 3300 m, composée vivace, fl. jaunes, viii 1912, *E. E. Maire* s.n. (syntype *S. iochanense*, E).

We have seen no authentic material of *Ligularia wilsoniana* and we are grateful to Mr C. Jeffrey of Kew for checking one of the syntypes against this species. Mr Jeffrey observes that the Lévillé specimen has a denser inflorescence with shorter pedicels and slightly coarser leaf-teeth.

The third syntype of *S. iochanense* was referred to under *Ligularia lankongensis* var. *minor*.

REFERENCES FOR LIGULARIA

Nakai, T. (1917). *Ligularia Coreana*. Bot. Mag. Tokyo 31:121-127.

Handel-Mazzetti, H. (1938). Die chinesischen Arten der Gattung *Ligularia*. Bot. Jahrb. 69:95-142.

1158. *Cirsium arvense* (L.) Scop., Fl. Carn. ed. 2,2:126 (1772); Rock in Fedde, Rep. Sp. Nov. 13:354 (1914).

Serratula arvensis L., Sp. Pl. 820 (1753).

Cnicus hawaiiensis Lévl. in Fedde, Rep. Sp. Nov. 10:122 (1911).

Cirsium hawaiiense (Lévl.) Lévl. in Fedde, Rep. Sp. Nov. 12:189 (1913).

HAWAIIAN (SANDWICH) ISLANDS. Hawaii, Maunakea, 2000 m, vii 1909, *Faurie* 963 (typus *C. hawaiiensis*—n.v.).

1159. *Cirsium cavaleriei* (Lévl.) Lévl. in Fedde, Rep. Sp. Nov. 12:189 (1913); Lévl., Fl. Kouy-Tchéou 91 (1914) p.p. pro syn. sub *Cirsium cerberus* (Van.) Lévl.; S.Y. Hu in Quart. Journ. Taiwan Mus. 19:52 (1966).

Cnicus cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 11:496 (1913).
CHINA. Kweichow, Gan-pin, vi 1910, *Cavalerie* 3828 (holo. E).

1160. *Cirsium cerberus* (Van.) Lévl. in Fedde, Rep. Sp. Nov. 12:189 (1913); Lévl., Fl. Kouy-Tchéou 91 (1914) & Cat. Pl. Yunnan 41 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:52 (1966).

Cnicus cerberus Van. in Bull. Acad. Géog. Bot. 12:120 (1903).
CHINA. Kweichow, environs de Gan-pin, dans les herbages, marécageux, capitules pourpres-violet, 29 iv 1897, *Bodinier* 1553 (holo. E).

Petrak noted on the type sheet that *C. cerberus* belonged to the species aggregate of the variable *Cirsium japonicum*. We keep it separate also on account of the slightly broader, more ciliate phyllaries and the narrower closely-spaced leaf-lobes.

1161. *Cirsium eriophoroides* (Hook. f.) Petrak in Bibl. Bot. 78:9 (1912) in obs.; Lévl., Cat. Pl. Yunnan 41 (1915), '*eriophoroideum*'.

[*Cnicus eriophoroides* Hook. f., Fl. Brit. Ind. 3:363 (1881).

Léveillé's combination of *C. eriophoroideum* was preceded by that of Petrak's; no Léveillé type specimen is involved.

1162. *Cirsium forrestii* (Diels) Lévl., Cat. Pl. Yunnan 41 (1915).

Cnicus forrestii Diels in Notes R.B.G. Edinb. 5:196 (1912).

A combination in which no Léveillé type specimen is involved.

1163. *Cirsium griseum* Lévl. in Fedde, Rep. Sp. Nov. 12:284 (1913) & Cat. Pl. Yunnan 41 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:55 (1966).

Cnicus mairei Lévl. in Fedde, Rep. Sp. Nov. 11:307 (1912).

Cirsium mairei (Lévl.) Lévl. in Fedde, Rep. Sp. Nov. 12:189 (1913) & Cat. Pl. Yunnan 41 (1915)—non Halacsy (1908); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:61 (1966).

C. botryodes Petr. in Anz. Akad. Wiss. Wien, math.-nat. Kl. 63:109 (1926) & in Hand.-Mazz., Symb. Sin. 7:1169 (1936).

CHINA. Yunnan, cultures des plateaux à Tong-tchouan, 2700 m, chardon annuel, fl. blanc grisâtre, penchées, vii 1912, *E. E. Maire* s.n. (holo. *C. griseum*, E); cultures des plateaux derrière Tong-tchouan, 2700 m, chardon annuel, fl. rose, ix 1911, *E. E. Maire* s.n. (holo. *C. mairei*, E).

Petrak determined some Edinburgh specimens, the holotype of *C. mairei* and an isotype of *C. griseum*, as *C. botryodes* but *C. griseum* is the earliest name. We have not seen *Handel-Mazzetti* 3436, the type of *C. botryodes*.

1164. *Cirsium japonicum* DC., Prodr. 6:640 (1838); Chang in Sunyatsenia 3: 301 (1937).

Cnicus bodinieri Van. in Bull. Acad. Géog. Bot. 12:121 (1903).

C. taquetii Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:168 (1910); Kitamura *Cirsium* Nov. Orient.-Asiat. 12 (1931) & in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:63 (1937) pro syn. sub *Cirsium maackii* Maxim. var. *nakaianum* (Lévl. & Van.) Nakai.

Cirsium taquetii (Lévl. & Van.) Nakai in Bot. Mag. Tokyo 26:373 (1912); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:446 (1939) pro syn. sub *C. maackii* var. *nakaianum*.

C. bodinieri (Van.) Lévl. in Fedde, Rep. Sp. Nov. 12:189 (1913) & Fl. Kouy-Tchéou 91 (1914); Petrak in Hand.-Mazz., Symb. Sin. 7:1165 (1936); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:52 (1966).

C. maackii Maxim. var. *taquetii* (Lévl. & Van.) Nakai, Fl. Sylv. Kor. 14:109 (1923) & in Bull. Nat. Sci. Mus. Tokyo no. 31:115 (1952).

CHINA. Kweichow, environs de Kouy-Yang, mont. du collège, capitules pourpres, 29 v 1898, *Bodinier* 2288 (holo. *C. bodinieri*, E).

KOREA. Quelpaert, in herbidis Moktpyang, 20 viii 1908, *Taquet* 1022 (holo. *C. taquetii*, E).

Although Petrak considered *C. bodinieri* to be very similar to *C. japonicum*, he was unwilling to consider them conspecific because of the absence of roots on the specimen of *C. bodinieri*. However, we consider *C. bodinieri* to be synonymous with *C. japonicum*.

We have transferred *C. taquetii* from *C. japonicum* var. *nakaianum* to *C. japonicum*, as var. *nakaianum* seems to be distinct on account of its very branched stem and narrower leaf lobes. Petrak noted on the type specimen of *C. taquetii* that he considered it to be a small form of *C. nakaianum* with an unbranched one-flowered stem.

1165. *Cirsium japonicum* DC. var. *nakaianum* (Lévl. & Van.) Kitamura, *Cirsium* Nov. Orient.-Asiat. 12 (1931) excl. *C. taquetii* Lévl. & Van. & in Mem. Coll. Sci. Univ. Kyoto, ser. B, 24:44 (1957).

Cnicus nakaianus Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:168 (1910).

Cirsium nakaianum (Lévl. & Van.) Nakai in Bot. Mag. Tokyo 26:378 (1912) excl. specim.

C. maackii Maxim. var. *nakaianum* (Lévl. & Van.) Nakai, Fl. Sylv. Kor. 14:109 (1923) & in Bull. Nat. Sci. Mus. Tokyo no. 31:115 (1952); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:63 (1937) p.p.; Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:446 (1939) p.p.

KOREA. Quelpaert, in herbidis Hongno, 22 viii 1908, *Taquet* 1020 (holo. E).

The specimens cited by Nakai under *Cirsium nakaianum* do not belong to it. *Taquet* 220 is *C. lineare* var. *univervium* and *Faurie* 387 (not seen) is cited by Kitamura under *C. chinense* var. *laushanense*.

1166. *Cirsium kamschaticum* Ledeb. ex DC., Prodr. 6:644 (1838); Ohwi in Acta Phytotax. Geobot. 1:117 (1932); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:42 (1937); Hara, Enum. Sperm. Jap. 2:176 (1952).

Cirsium korsakoviense Lévl. & Van. in Fedde, Rep. Sp. Nov. 7:102 (1909).

Cnicus korsakoviensis (Lévl. & Van.) Lévl. & Van. in Fedde, Rep. Sp.

Nov. 8:168 (1910); Nakai in Bot. Mag. Tokyo 26:362 (1912) pro syn.

sub *Cirsium weyrichii* Maxim.; Miyabe & Miyake, Fl. Saghal. 274 (1915)

pro syn. sub. *C. weyrichii*.

SACHALIN. In sylvis Korsakof, viii 1908, Faurie 745, 746 (syntype *C. korsakoviense*, E).

Recent Japanese authors regard *C. weyrichii* as synonymous with *C. kamschaticum*, whilst the *Flora URSS* (28:63, 1963) separates these two species on the basis of leaf difference and phyllary length. We have seen no authentic material of *C. weyrichii*.

1167. *Cirsium leducii* (Franch.) Lévl., Cat. Pl. Yunnan 41 (1915).

Cnicus leduci Franch. in Journ. de Bot. 11:23 (1897).

A combination in which no Léveillé type specimen is involved.

Cirsium lineare (Maxim.) Lévl. in Mem. Real Acad. Cienc. Artes Barcelona ser. 3, 12:546 (1916).

Léveillé cited the above in his *Catalogue of Plants of Kiangsu* but did not give a basionym. It is not known what he intended but in any case his combination was preceded by *C. lineare* (Thunb.) Sch. Bip.

1168. *Cirsium lineare* (Thunb.) Sch. Bip. var. ***uninervium*** (Lévl. & Van.) Petr. in Fedde, Rep. Sp. Nov. 43:280 (1938); Kitamura in Acta Phytotax. Geobot. 10:17 (1941) pro syn. sub *C. chinense* (DC.) Gardn. & Champ.

Cnicus uninervius Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:169 (1910);

Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo, 31:506 (1911); S.Y. Hu

in Quart. Journ. Taiwan Mus. 19:53 (1966), pro syn. sub *Cirsium*

chinense.

Cirsium uninervium (Lévl. & Van.) Nakai, Fl. Sylv. Kor. 14:110 (1923) &

in Bull. Nat. Sci. Mus. Tokyo no. 31:116 (1952); Kitamura, *Cirsium*

Nov. Orient.-Asiat. 4 (1931) & in Mem. Coll. Sci. Kyoto Imp. Univ.

ser. B, 13:86 (1937) pro syn. sub *C. chinense*; Kitagawa in Rep. Inst.

Sci. Res. Manch. 3, App. 1:447 (1939); Kitagawa in Journ. Jap. Bot.

25:42 (1950) pro syn. sub *Cirsium oreithales* Hance; Kitamura in Mem.

Coll. Sci. Univ. Kyoto ser. B, 24:45 (1957) pro syn. sub *Cirsium lineare*

var. *laushanense* Kitamura f. *vestitum* Kitamura; S.Y. Hu in Quart.

Journ. Taiwan Mus. 19:59 (1966) pro syn. sub *C. lineare* var. *laushanense*

f. *vestitum* & 19:64 (1966) pro. sp. propr.

KOREA. Quelpaert, in herbidis Hannon, 27 ix 1908, Taquet 1021 (holo. E).

The mass of nomenclature concerning var. *uninervium* and many other taxa revolves on the various concepts of *C. chinense* and *C. lineare*.

Kitamura in 1937 distinguished them on the basis of the leaves being mostly entire in *C. lineare* and irregularly pinnatifid or incised in *C. chinense* and regarded "*uninervium*" as synonymous with *C. chinense*.

In 1938 Petrak stated that he found so many intermediates between *C. chinense* and *C. lineare* that he felt obliged to unite the two species and made many infraspecific taxa under *C. lineare*, including var. *uninervium*.

In his "*Additions and Corrections*" to "*Compositae Japonicae*" in 1957, Kitamura corrected *C. chinense* sensu Kitamura to *C. lineare* var. *laushanense* and *C. uninervius* to *C. lineare* var. *laushanense* f. *vestitum*.

Without dealing with the problem in depth, we feel unable to form a decisive opinion and have followed Petrak, as it would be unrealistic to change his nomenclature without also considering all the other taxa involved.

1169. *Cirsium provostii* Franch. var. *monocephalum* (Van.) Petr. in Fedde, Rep. Sp. Nov. 44:52 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:62 (1966).

Cnicus monocephalus Van. in Bull. Acad. Géog. Bot. 12:122 (1903).

Cirsium monocephalum (Van.) Lévl., in Fedde, Rep. Sp. Nov. 12:189 (1913),

Fl. Kouy-Tchéou 92 (1914) & Cat. Pl. Yunnan 41 (1915).

CHINA. Kweichow, environs de Kouy-yang, assez commun, plaine et mont. (Le tse pa), capitules blancs, légèrement bleués, 5 xi 1897, Bodinier 1953 (holo. E).

1170. *Cirsium rhinoceros* (Lévl. & Van.) Nakai in Bot. Mag. Tokyo 26:364 (1912), Fl. Sylv. Kor. 14:110 (1923) & in Bull. Nat. Sci. Mus. Tokyo no. 31: 116 (1952); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:83 (1937).

Cnicus rhinoceros Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:168 (1910);

Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo no. 31:506 (1911).

KOREA. Quelpaert, in herbis Hallaisan, 1000 m et supra, 18 ix 1908, Taquet 1019 (holo. E).

1171. *Cirsium taliensis* (J. F. Jeffrey) Lévl., Cat. Pl. Yunnan 43 (1915).

Cnicus taliensis J. F. Jeffrey in Notes R.B.G. Edinb. 5:196 (1912).

A new combination in which no Lévillé type specimen is involved.

REFERENCES FOR CIRSIUM

Nakai, T. (1912). De *Cirsio Japonico* et Coreano. *Bot. Mag. Tokyo* 26: 351-383.

Kitamura, S. (1934). Les Cirses de l'Asie orientale. *Acta Phytotax. Geobot.* 3:1-8.

1172. *Saussurea bodinieri* Lévl. in Bull. Acad. Géog. Bot. 25:19 (1915) & Cat. Pl. Yunnan, 49 (1916); Hand.-Mazz. in Acta Hort. Gotoburg. 12:331 (1938); Sealy in Bot. Mag. 172:t.317 (1958); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:253 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:316 (1967); Kitamura in Acta Phytotax. Geobot. 24:3 (1969).

CHINA. Kweichow, sommet du Io-chan, 3400 m, composée vivace, feuil. molles velues blanches endessous, fl. violet sombre, viii 1912, *E. E. Maire* s.n. (holo. E).

As Lipschitz remarks, *S. bodinieri* is part of a complex of species requiring revision. This includes *S. leontodontoides* and *S. kansuensis* which we have examined and find very close to *S. bodinieri* but which other authors have retained.

1173. *Saussurea centiloba* Hand.-Mazz. in Anz. Akad. Wiss. Wien, math.-nat. Kl. 57:144 (1920) & Symb. Sin. 7:1158 (1936); Anthony in Notes R.B.G. Edinb. 18:205 (1934); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:264 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:318 (1967).

S. vanioti Lévl. in Bull. Acad. Géog. Bot. 25:19 (1915)—non Lévl. (1910) & Cat. Pl. Yunnan 50 (1916).

S. leveillei Chen in Bull. Fan. Mem. Inst. Biol. 6:93 (1935).

CHINA. Yunnan, pâtures, plateau de Ié-ma-tchouan, 3200 m, composée cinérocephale vivace, fl. violet sombre, vii 1912, *E. E. Maire* s.n. [holo. *S. vaniotii* Lévl. (1915)—non (1910), E].

1174. *Saussurea chinampoensis* Lévl. & Van. in Bull. Acad. Géog. Bot. 20:145 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:508 (1911); Kitamura in Acta Phytotax. Geobot. 4:4 (1935) & in Mem. Coll. Sci. Imp. Univ. Tokyo, ser. B, 13:147 (1937); Chen in Bull. Fan. Mem. Inst. Biol. 6:90 (1935); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:118 (1952); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:255 (1965).

KOREA. In herbidis humidis secus mare Chinnampo, 3 ix 1906, *Faurie* 1080 (holo. E).

1175. *Saussurea conyzoides* Hemsl. in Journ. Linn. Soc. (Bot.) 29:309 (1892); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:263 (1965).

S. oppositicolor Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:359 (1910); Lévl., Fl. Kouy-Tchéou 103 (1914); Chen in Bull. Fan. Mem. Inst. Biol. 6:91 (1935) pro syn. sub *S. rosthornii* Diels var. *sessilifolia* Diels.

S. rosthornii Diels var. *oppositicolor* (Lévl. & Van.) Chen ex Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:645 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:11 (1968).

CHINA. Kweichow, Rte. Pin-fa-Tou-yun, bois, viii 1908, *Cavalerie* 3357 (holo. *S. oppositicolor*, E).

Chen first identified *S. oppositicolor* and *S. leclerei* Lévl. (q.v. no. 1182) with *S. rosthornii* var. *sessilifolia* but later changed them in the herbarium to *S. rosthornii* var. *oppositicolor* (Lévl. & Van.) Chen, a combination which Handel-Mazzetti published.

Lipschitz on the other hand, has equated *S. oppositicolor* with *S. conyzoides* having seen the types of both species. He stated that he had not seen the type specimen of *S. rosthornii* but appears to think it synonymous with *S. conyzoides*.

Lipschitz distinguishes *S. leclerei* from *S. conyzoides* (incl. *S. oppositicolor*) on the basis of leaf form and texture and its more broadly-winged, decurrent petioles.

We have seen material only of *S. oppositicolor* and *S. leclerei*. Not having seen *S. rosthornii*, *S. rosthornii* var. *sessilifolia* nor *S. conyzoides* we do not know the variation involved and follow Lipschitz. Nevertheless, we feel that *S. oppositicolor* and *S. leclerei* are possibly conspecific.

1176. *Saussurea cordifolia* Hemsl. in Journ. Linn. Soc. (Bot.) 29:310 (1892); Chen in Bull. Fan. Mem. Inst. Biol. 6:90 (1935); Hand.-Mazz., Symb. Sin. 7:1149 (1936); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:254 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:320 (1967).

S. cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 8:401 (1910) & Fl. Kouy-Tchéou 102 (1914).

CHINA. Kweichow, *sine loc.*, fleur du milieu d'un beau pourpre noir-violet, viii 1908, *Cavalerie* 2976 (holo. *S. cavaleriei*, E).

Léveillé wrongly cited the month of collection as October.

S. cordifolia Hemsl. somewhat resembles Edinburgh material of *S. caudata* Franch.

1177. *Saussurea deltoidea* (DC.) C.B. Cl., Comp. Ind. 235 (1867); Chen in Bull. Fan. Mem. Inst. Biol. 6:90 (1935); Hand.-Mazz. in Acta Hort. Gotoburg. 12:319 (1938); Kitamura in Acta Phytotax. Geobot. 19:13 (1961); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:258 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:321 (1967).

Cnicus deltoides Wall., Cat. 2894 (1831)—*nom. nud.*

C. niveus Wall., Cat. 2898 (1831)—*nom. nud.*

Aploaxis deltoidea DC., Prodr. 6:541 (1838).

A. nivea DC., l.c.

Saussurea deltoidea var. *nivea* (DC.) C.B. Cl., Comp. Ind. 236 (1876); Hook. f., Fl. Brit. Ind. 3:375 (1881); Chen in Bull. Fan. Mem. Inst. Biol. 6:91 (1935).

S. deltoidea var. *polycephala* C.B. Cl., Comp. Ind. 236 (1876); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:321 (1967).

S. radiata Franch. in Journ. de Bot. 2:356 (1888); Hand.-Mazz., Symb. Sin. 7:1146 (1936).

S. crispa Van. in Bull. Acad. Géog. Bot. 12:21 (1903); Lévl., Fl. Kouy-Tchéou 102 (1914); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:256 (1965); Kitamura in Acta Phytotax. Geobot. 24:3 (1969); Hara in (Fl. E Himal. 2) Univ. Mus. Univ. Tokyo Bull. 2:140 (1971).

S. kouytcheensis Lévl. in Fedde, Rep. Sp. Nov. 8:452 (1910), Fl. Kouy-Tchéou 102 (1914) & Cat. Pl. Yunnan 49 (1916).

S. cirsium Lévl. in Fedde, Rep. Sp. Nov. 12:284 (1913) & Cat. Pl. Yunnan 49 (1916).

CHINA. Kweichow, environs de Kouy-Yang, mont. du Collège, ix 1898, Chaffanjon & Bodinier 2487 (holo. *S. crispa*, E); *sine loc.*, Esquirol s.n. (holo. *S. kouytcheensis*, E); Yunnan, pâturages des vallées derrière Tong-tchouan, 2600 m, grande composée vivace, haut 1.50 m, fl. blanc-grisâtre, E. E. Maire s.n. (holo. *S. cirsium*, E).

Lipschitz indicated a Maire specimen from Tong-tchouan, bearing the name *Saussurea kouytcheensis* in Léveillé's hand, as the type of *S. kouytcheensis*. However, the type is an Esquirol specimen from Kweichow without locality.

Of the three Léveillé species concerned, Chen put *S. cirsiium* and *S. kouytcheensis* under *S. deltoidea* and *S. crispa* under *S. deltoidea* var. *nivea*. Hu differed in placing *S. crispa* and *S. deltoidea* var. *nivea* under *S. deltoidea* var. *polycephala*.

Lipschitz, on the other hand, retained *S. crispa* as a separate species with *S. cirsiium* in synonymy and equated *S. kouytcheensis* with *S. deltoidea*. He separated *S. deltoidea* and *S. crispa* on the size of the capitula and the denseness of the inflorescence. Hara and Kitamura also retained *S. crispa* as distinct from *S. deltoidea*. Lipschitz and Kitamura put *S. deltoidea* var. *polycephala* and var. *nivea* in synonymy under *S. crispa*.

We have examined type specimens of *Cnicus (Aplotaxis) niveus* and *Cnicus (Aplotaxis) deltoideus* together with the three Léveillé/Vaniot types and many other Chinese and Indian specimens. Whilst some distinct characters may be discernible in the type specimens, e.g. leaf and phyllary indumentum and leaf colour, there is considerable overlap over a whole range of material.

Further synonymy may be found in the literature cited above but whereas most authors have embraced all the entities involved within two taxa, we consider it better to recognise only one polymorphic species.

1178. *Saussurea gracilis* Maxim. in Bull. Acad. Sci. St. Pétersb. 19:518 (1874); Nakai in Bot. Mag. Tokyo 45:514 (1931); Chen in Bull. Fan. Mem. Inst. Biol. 6:89 (1935); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13: 162 (1937); Hara, Enum. Sperm. Jap. 2:241 (1952); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:118 (1952); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:253 (1965); Ohwi, Fl. Jap. (English ed.) 915 (1965).

S. bicolor Lévl. & Van. in Bull. Acad. Géog. Bot. 20:145 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:508 (1911).

KOREA. In petrosis montium Quelpaert, x 1906, *Faurie* 1084 (syntype *S. bicolor*, E); in rupibus Mokpo, xi 1906, *Faurie* 1103 (syntype *S. bicolor*, E); in petrosis montium Fusan, 18 v 1906, *Faurie* 1093 (syntype *S. bicolor*, E).

1179. *Saussurea hieracioides* Hook. f., Fl. Brit. Ind. 3:371 (1881); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:261 (1965).

S. villosa Franch. in Journ. de Bot. 2:353 (1888); Anthony in Notes R.B.G. Edinb. 18:215 (1934); Chen in Bull. Fan. Mem. Inst. Biol. 6:92 (1935); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:21 (1968).

S. leveilleana Maire ex Lévl. in Bull. Acad. Géog. Bot. 25:19 (1915); Lévl., Cat. Pl. Yunnan 49 (1916).

CHINA: Yunnan, pâtures, haut plateau de Ié-ma-tchouan, 3200 m, *Swertia* vivace toute ciliée, fl. bleu violacé, viii 1912, *E. E. Maire* s.n. (holo. *S. leveilleana*, E).

Léveillé wrongly cited the month of collection as October 1912.

1180. *Saussurea japonica* (Thunb.) DC. in Ann. Mus. Nat. d'Hist. Nat. Paris 16:203 (1810) & Prodr. 6:536 (1838); Kitamura in Acta Phytotax. Geobot. 4:3 (1935); Hara, Enum. Sperm. Jap. 2:241 (1952); Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:146 (1937); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:263 (1965); Ohwi, Fl. Jap. (English ed.) 914 (1965).

Serratula japonica Thunb., Fl. Jap. 305 (1784).

Saussurea taquetii Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:169 (1910);

Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:508 (1911) & in Bot.

Mag. Tokyo 29:208 (1915); Chen in Bull. Fan Mem. Inst. Biol. 6:93 (1935) pro syn. sub *S. intermedia* Turcz.

Saussurea taquetii Lévl. & Van. var. *paniculata* Lévl. & Van. in Fedde,

Rep. Sp. Nov. 8:169 (1910); Nakai in Journ. Coll. Sci. Imp. Univ.

Tokyo 31:508 (1911).

KOREA. Quelapaert, in herbis littoris Tchyoung-Tchyeng-Koan, 10 ix 1908, *Taquet* 1015 (holo. *S. taquetii*, E); in herbis Sampangsan, x 1908, *Taquet* 1016 (holo. var. *paniculata*, E).

In his study of Chinese *Saussurea*, Chen (p. 93) said that *S. taquetii* was exactly identical with the widespread *S. intermedia* Turcz. All other authors ascribe it to *S. japonica*. However, the scarious apical appendage on the phyllaries of Korean specimens appears to be narrower than that of Japanese specimens. We have not seen any authentic material of *S. intermedia*, and many Edinburgh sheets under this name have been redetermined by Lipschitz as *S. japonica*.

1181. *Saussurea lanuginosa* Van. in Bull. Acad. Géog. Bot. 12:20 (1903); Lévl., Fl. Kouy-Tchéou 102 (1914); Chen in Bull. Fan. Mem. Inst. Biol. 6:89 (1935); Hand.-Mazz., Symb. Sin. 7:1151 (1936) & in Acta Hort. Gotoburg. 12:312 (1938); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:259 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:335 (1967).

S. caeruleo-violacea Lévl. in Fedde, Rep. Sp. Nov. 13:175 (1914) & Fl.

Kouy-Tchéou 102 (1914) & Cat. Pl. Yunnan 49 (1916).

CHINA. Kweichow, district de Gan-pin, à Pa-tsiao Ken, fleurs violet très foncé, 25 x 1898, *Martin & Bodinier* s.n. (holo. *S. lanuginosa*, E); Gan-chouan, htes. montagnes, fl. bleu-violet, *Cavalerie* 3896 (holo. *S. caeruleo-violacea* E).

Lipschitz indicated on the types of *S. lanuginosa* and *S. caeruleo-violacea* that they were synonymous with *S. chetchozensis* Franch. However, in his paper on Lévillé's *Saussurea* he did not mention *S. chetchozensis*. As we have not seen any material of Franchet's species we have not referred Lévillé's species to it.

1182. *Saussurea leclerei* Lévl. in Bull. Acad. Géog. Bot. 25:18 (1915) & Cat. Pl. Yunnan 49 (1916); Chen in Bull. Fan. Mem. Inst. Biol. 6:91 (1935) pro syn. sub *S. rosthornii* Diels var. *sessilifolia* Diels; Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:259 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:11 (1968) pro syn. sub *S. rosthornii* var. *sessilifolia*.

CHINA. Yunnan, haut sommets de Ié-ma-tchouan, 3250 m, *Centaurea vivace* en touffes, haut 1m, fl. violettes, viii 1912, *E. E. Maire* s.n. (holo. E).

For discussion see *S. conyzoides* (no. 1175).

1183. *Saussurea leucoma* Diels in Notes R.B.G. Edinb. 5:197 (1912); Chen in Bull. Fan. Mem. Inst. Biol. 6:91 (1935); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:258 (1965).

S. gossypiphora sensu Franch. in Journ. de Bot. 2:359 (1888)—non Don (1825).

S. franchetiana Lévl., Cat. Pl. Yunnan 49 (1916)—*nom. nov.* for *S. gossypiphora* sensu Franch.

No Léveillé type specimen is involved in *S. franchetiana*.

1184. *Saussurea maximowiczii* Herd. var. *triceps* (Lévl. & Van.) Kitamura in Mem. Coll. Sci. Kyoto Imp. Univ. ser. B, 13:199 (1937); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:264 (1965).

S. triceps Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:169 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:508 (1911); Nakai in Bot. Mag. Tokyo 29:202 (1915) pro syn. sub *S. maximowiczii*; Chen in Bull. Fan. Mem. Inst. Biol. 6:93 (1935) pro syn. sub *Serratula koreana* Iljin.

KOREA. Quelpaert, in herbidis Hallaisan, Yengsil, 1000 m, 17 viii 1908. *Taquet* 1017 (holo. E).

1185. *Saussurea merinoi* Lévl. in Bull. Acad. Géog. Bot. 25:19 (1915) & Cat. Pl. Yunnan 49 (1916); Chen in Bull. Fan. Mem. Inst. Biol. 6:92 (1935); Hand.-Mazz. Symb. Sin. 7:1148 (1936); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:263 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:338 (1967).

CHINA. Yunnan, pâturages du plateau de Ié-ma-tchouan, 3250 m, *Centaurea vivace* en touffes dressées, fl. violettes, viii 1912, *E. E. Maire* s.n. (holo. E).

In his study of Chinese *Saussurea*, Chen retained *S. merinoi* noting that it resembled *S. auriculata* Hemsl. (non Franch.). Later Chen determined the holotype as "*S. otophylla* Diels var. *merinoi* (Lévl.) Chen" but did not publish this combination.

In 1964 Lipschitz made a note on the type specimen that, contrary to Chen's opinion, he regarded *S. merinoi* as a good species distinct from "*S. macrota* Franch. (1894) = *S. auriculata* Hemsl. 1892—non Franch. 1888 = *S. hemsleyana* Hand.-Mazz. (1937) = *S. otophylla* Diels (1905)". In his paper a year later he further remarked that *S. merinoi* was near *S. dolichopoda* Diels (incl. *S. wilsoniana* Hand.-Mazz.), but omitted any reference to *S. otophylla* Diels.

Handel-Mazzetti, too, related *S. merinoi* to *S. wilsoniana* in *Symbolae Sinicae*. *S. merinoi* also compares quite well with *S. peduncularis* Franch. except that the leaves of this species are decurrent.

S. merinoi, therefore, appears to be a "good" species. However, although we have not seen authentic specimens of *S. macrota* Franch. nor of *S.*

auriculata Hemsl., it is perhaps pertinent here to elucidate the synonymy of *S. auriculata* Hemsl., which, according to Lipschitz, is conspecific with *S. macrota* Franch.

S. macrota Franch. in Journ. de Bot. 8:343 (1894).

S. auriculata Hemsl. in Journ. Linn. Soc. (Bot.) 29:308 (1892)—non Franch. (1888).

S. otophylla Hemsl. in Journ. Linn. Soc. (Bot.) 36:514 (Dec. 1905)—non Diels (Nov. 1905)—*nom. nov.* for *S. auriculata* Hemsl.

S. hemsleyana Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:647 (1937)—*nom. nov.* for *S. auriculata* Hemsl. & *S. otophylla* Hemsl.—non Diels.

S. kitamurae S.Y. Hu in Quart. Journ. Taiwan Mus. 20:316 (1967) *nom. nov.* for *S. auriculata* Hemsl.

Although Handel-Mazzetti distinguished *S. otophylla* Diels from *S. otophylla* Hemsl. in his 1937 paper, they may possibly be synonymous, for three specimens determined by Chen as *S. auriculata* Hemsl. (*S. otophylla* Hemsl.) were cited by Handel-Mazzetti under *S. otophylla* Diels.

1186. *Saussurea peguensis* C.B. Cl., Comp. Ind. 235 (1876); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:260 (1965); Kitamura in Acta Phytotax. Geobot. 24:7 (1969).

S. phyllocephala Coll. & Hemsl. in Journ. Linn. Soc. (Bot.) 28:76 (1890); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:647 (1937).

S. leontopodium Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:59 (1910); Lévl., Fl. Kouy-Tchéou 103 (1914); Chen in Bull. Fan. Mem. Inst. Biol. 6:91 (1935); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:335 (1967).

CHINA. Kweichow, plaine basse de Hoâng tsào pá, i vii 1909, *Esquirol* 1580 (holo. *S. leontopodium*, E).

1187. *Saussurea subulata* C.B. Cl., Comp. Ind. 226 (1876); Chen in Bull. Fan. Mem. Inst. Biol. 6:91 (1935); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:653 (1937); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:256 (1965).

S. clarkeana Lévl., Cat. Pl. Yunnan 50 (1916) *in adnot.*

Léveillé followed Hooker in dividing the two specimens of *S. subulata* into this species and *S. werneroides* Sch. Bip. ex Hook. f., and suggested re-naming the *S. subulata* part as *S. clarkeana*, but this name is superfluous. Lipschitz regards *S. werneroides* as a synonym of *S. subulata*.

1188. *Saussurea yunnanensis* Franch. var. *integrifolia* Franch. in Journ. de Bot. 2:340 (1888); Anthony in Notes R.B.G. Edinb. 18:216 (1934); Chen in Bull. Fan. Mem. Inst. Biol. 6:92 (1935); Lipsch. in Novit. Syst. Pl. Vasc., Acad. Sci. URSS 1965:261 (1965); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:23 (1968).

S. vaginata Dunn in Journ. Linn. Soc. (Bot.) 35:510 (1903); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:650 (1937).

S. mairei Lévl. in Fedde, Rep. Sp. Nov. 11:493 (1913) & Cat. Pl. Yunnan 49 (1915); Hand.-Mazz., Symb. Sin 7:1158 (1936).

CHINA. Yunnan, montagne derrière Pan-long-se, 2500 m, composée vivace dressée, fl. violettes, ix 1911, *E. E. Maire* s.n. (holo. *S. mairei*, E).

When Franchet described *S. yunnanensis* he divided it into two varieties, var. *integrifolia* (syntypes *Delavay* 59, 609) and var. *runcinata* (syntypes *Delavay* 56, 491) and related it to *S. taraxacifolia* [Wall. ex] DC.

As Franchet did not typify his species it is necessary to refer one of the varieties to *S. yunnanensis* var. *yunnanensis*. Since he compared the species sens. lat. with *S. taraxacifolia* we would suggest the element under var. *runcinata* would be the most appropriate. This choice would also have the effect of reducing confusion because var. *integrifolia* has more widely been referred to in the literature, and could be retained as such.

REFERENCES FOR SAUSSUREA

- Chen, F. H. (1935-37). The study of Chinese Saussurea: 1, *Bull. Fdn. Mem. Inst. Biol. (Bot.)* 6:71-87 (1935); *op. cit.* 2, *l.c.* 6:88-95; *op. cit.* 3, *l.c.* 6:96-102; *op. cit.* 4, *l.c.* 8:119-128 (1937).
- Franchet, A. (1897). Les Saussurea du Japon. *Bull. Herb. Boiss.* 5:533-546.
- Kitamura, S. (1935). Les Saussurées du Japon. *Acta Phytotax. Geobot.* 4:1-14.
- Lipschitz, S. (1954). De Saussureis DC. *Notae. Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS.* 16:439-460.
- (1964). Ad cognitionem generis Saussurea. *Novit Syst. Pl. Vasc., Acad. Sci. URSS* 314-328.
- (1965). Revisio critica specierum generis Saussurea DC. (secundum specimina typica Leveillei, Vaniotii et Mairei). *l.c.* 252-265.
- (1966). Conspectus specierum subgeneris Eriocoryne (DC.) Hook. f. generis Saussurea DC. *l.c.* 203-229.
- (1967). A critical review of the subgenus Amphilaena (Stschegl.) Lipsch. of the genus Saussurea DC. *Bot. Zhurn.* 52:651-665.
- Nakai, T. (1915); Synopsis specierum Koreanarum generis Saussureae. *Bot. Mag. Tokyo* 29:189-210.
- (1931). Contributio ad cognitionem generis Saussureae Japonico-Koreanac. *l.c.* 45:513-524.
- 1189. Hemistepta lyrata** (Bunge) Bunge in Dorpat. Jahrb. Litt. 1:222 (1833); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:117 (1952).
- Cirsium lyratum* Bunge in Mém. Acad. Sci. St. Pétersb. Sav. Etrang. 2:110 (1833).
- Saussurea vaniotii* Lévl. in Fedde, Rep. Sp. Nov. 8:359 (1910)—non Lévl. (1915); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:508 (1911).
- S. affinis* Spreng. var. *conferta* Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:451 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911).
- KOREA. Quelpaert, in herbidis Taitpyeng, vii 1909, *Taquet* 2999 (holo. *S. vaniotii*, E); in herbidis Pohpani, vii 1909, *Taquet* 2998 (holo. var. *conferta*, E).
- 1190. Serratula chanetii** Lévl. in Fedde, Rep. Sp. Nov. 10:351 (1912); Hand.-Mazz., Symb. Sin. 7:1173 (1936) & in Acta Hort. Gotoburg. 12:346 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:153 (1968).
- CHINA. Hopei (Pé-Tché-Ly), Kiu-Yang, viii 1910, *Chanet* 551 (holo. E).

1191. *Serratula chinensis* S. Moore in Journ. Bot. 13:228 (1875); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:659 (1937).

Centaurea missionis Lévl. in Fedde, Rep. Sp. Nov. 8:451 (1910) & Fl. Kouy-Tchéou 91 (1914).

CHINA. Kweichow, *sine loc.*, *Cavalerie* s.n. (holo. *C. missionis*, E).

1192. *Serratula coronata* L., Sp. Pl. ed. 2:1144 (1763); Hand.-Mazz. in Notizbl. Bot. Gart. Berlin 13:659 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 21:153 (1968).

S. martini Van. in Bull. Acad. Géog. Bot. 12:21 (1903); Lévl., Fl. Kouy-Tchéou 107 (1914).

CHINA. Kweichow, route de Tsin-tchen à Gan-pin, assez commun dans la mont., capit. pourpres, 15 ix 1897, *Martin & Bodinier* 1923 (holo. *S. martinii*, E).

MUTISEAE

1193. *Ainsliaea cavaleriei* Lévl., Fl. Kouy-Tchéou 82 (1914) & Ill. Cat. Pl. Seu-Tchouen, t.13 (1918); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:95 (1965).

CHINA. Sud de Tin-fan, mont. pied de rochers, xi 1904, *Cavalerie* 1907 (holo. E).

1194. *Ainsliaea elegans* Hemsl. var. *tomentosa* Mattf. in Notizbl. Bot. Gart. Berlin 11:107 (1931); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:95 (1965).

Pertya esquirolii Lévl. in Bull. Acad. Géog. Bot. 24:251 (1914) & Fl. Kouy-Tchéou 100 (1914).

CHINA. Kweichow, Ta Pin et Than(?) lo, 1150 m, xii 1912, *Esquirol* 3633 (holo. *P. esquirolii* & *A. elegans* var. *tomentosa*, E).

1195. *Ainsliaea latifolia* (D. Don) Sch. Bip. in Pollichia 18-19:169 (1861).

A. pteropoda DC. var. *incana* Van. ex Lévl., Fl. Kouy-Tchéou 83 (1914) & Cat. Pl. Yunnan 37 (1915)—*nom. nud.*

Léveillé refers to var. *incana* Van. in Bull. Acad. Géog. Bot. 12: (1903) but there is no mention of it there. The specimen bearing the name *A. pteropoda* var. *incana*, *Cavalerie* 4004, is *A. latifolia*.

1196. *Ainsliaea latifolia* (D. Don) Sch. Bip. var. *nimborum* (Hand.-Mazz.) Kitamura in Acta Phytotax. Geobot. 19:14 (1961), 23:7 (1968).

A. hayatae Lévl., Cat. Pl. Yunnan 36 (1915)—*nom. nov.* for *A. elegans* Hayata 1908—non Hemsl. 1902.

A. reflexa Merrill var. *nimborum* Hand.-Mazz. in Anz. Akad. Wiss. Wien Math.-Nat. Kl. 63:5 (1926).

Léveillé's *A. hayatae* was preceded by *A. hayatae* Beauverd (1909) also a *nom. nov.* for *A. elegans* Hayata. They are all synonyms of var. *nimborum*.

1197. *Ainsliaea latifolia* (D. Don) Sch. Bip. var. *obovata* (Franch.) Grierson & Lauener, comb. nov.

A. pteropoda DC. var. *obovata* Franch. in Journ. de Bot. 2:69 (1888); Kitamura in Acta Phytotax. Geobot. 23:6 (1968) pro syn. sub *A. latifolia*.

A. spicata Van. in Bull. Acad. Géog. Bot. 12:117 (1903); Lévl., Cat. Pl. Yunnan 37 (1915); Hand.-Mazz. in Acta Hort. Gotoburg. 12:347 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:101 (1965).

CHINA. Yunnan, environs de Yun-nan-sen, talus au pied de la mont., feuilles sessiles, fleurs roses, 28 i 1897, Ducloux 9D (holo. *A. spicata*, E).

Although Kitamura regarded *A. pteropoda* var. *obovata* as synonymous with *A. latifolia* we are of the opinion that it should be retained at varietal rank. The leaves of typical *A. latifolia* are ovate with winged petioles and the spicate inflorescence consists of groups of generally 3-4 capitula, whereas the leaves of var. *obovata* are obovate and seldom with winged petioles and the inflorescence is sparser being made up of single, or groups of two but seldom more, capitula.

1198. *Ainsliaea mairei* Lévl. in Le Monde des Pl. 18:31 (1916); Hand.-Mazz. in Acta Hort. Gotoburg. 12:347 (1938) & S.Y. Hu in Quart. Journ. Taiwan Mus. 18:98 (1965) excl. syn. *A. pteropoda* var. *macrocephala* Mattf.

CHINA. Kweichow, pâtures du mont. Io-chan, 3200 m, *Ainsliaea* vivace, tomenteux, feuil. velues et blanches endessous, fl. roses, xi 1912, E. E. Maire s.n. (holo. E).

A. mairei is quite distinct from *A. pteropoda* var. *macrocephala* which has long winged petioles and a much broader leaf lamina. It could however, be possibly regarded as a variant of *A. latifolia* (syntype *A. pteropoda*).

1199. *Ainsliaea pertyoides* Franch. var. *pertyoides* f. *sparsiflora* (Van.) Beauverd in Bull. Soc. Bot. Genève sér. 2, 1:384 (1909).

A. sparsiflora Van. in Bull. Acad. Géog. Bot. 12:118 (1903); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:101 (1965).

A. pertyoides Franch. var. *sparsiflora* (Van.) Lévl., Cat. Pl. Yunnan 37 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:99 (1965).

CHINA. Yunnan, environs de Yun-nan-sen, bois de la pagode de He-long-tan, tiges sous ligneuses, feuilles vertes des 2 côtes, rare, 24 ii 1897, Bodinier 79 (holo. E).

1200. *Ainsliaea pertyoides* Franch. var. *albotomentosa* Beauverd f. *ovalifolia* (Van.) Beauverd in Bull. Soc. Bot. Genève, sér. 2, 1:384 (1909).

A. ovalifolia Van. in Bull. Acad. Géog. Bot. 12:119 (1903); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:99 (1965).

A. pteropoda DC. f. *ovalifolia* (Van.) Lévl., Cat. Pl. Yunnan 37 (1915).

CHINA. Yunnan, environs de Yun-nan-sen, bois de la pagode de He-long-tan, tiges sous ligneuses, feuilles blanches endessous, 24 ii 1897, Bodinier & Dr Deblene 78 (holo. *A. ovalifolia*—n.v.).

The holotype was collected in the same place as that of *A. sparsiflora*. Lévillé did not cite *A. ovalifolia* as the basionym for his f. *ovalifolia*, but the publication reference to the species was given. The holotype specimen of *A. ovalifolia* is not in the Lévillé herbarium at Edinburgh.

1201. *Ainsliaea yunnanensis* Franch. in Journ. de Bot. 2:70 (1888).

A. yunnanensis var. *macilentia* Van. ex Lévl., Fl. Kouy-Tchéou 83 (1914)—*nom. nud.*

The specimen cited in *Flore du Kouy-Tchéou*, Bodinier 1584, is probably *A. yunnanensis* but also approaches *A. latifolia* var. *obovata*.

REFERENCE FOR AINSLIAEA: Beauverd, G. (1909). Les espèces du genre *Ainsliaea*. *Bull. Soc. Bot. Genève sér. 2*, 1:376–385.

1202. *Pertya bodinieri* Van. in Bull. Acad. Géog. Bot. 12:116 (1903); Lévl., Cat. Pl. Yunnan 47 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:294 (1967); Rehder in Journ. Arn. Arb. 16:340 (1935); Beauverd in Bull. Soc. Bot. Genève, sér. 2, 1:386, f. 6 (1909).

CHINA. Yunnan, environs de Yun-nan-fou, dans les ravines de la mont., tiges sous-ligneuses, 0.60 à 1 m, fleurs roses, 27 i 1897, *Bodinier* 10D (holo. E).

REFERENCE FOR PERTYA: Beauverd, G. (1909). Les espèces du genre *Pertya*. *Bull. Soc. Bot. Genève sér. 2*, 1:385–388.

1203. *Gerbera anandria* (L.) Sch. Bip. in Flora 27:782 (1844); Beauverd in Bull. Soc. Bot. Genève, sér. 2, 2:44 (1910); Lévl., Fl. Kouy-Tchéou, 95 (1914). *Tussilago anandria* L., Sp. Pl. 865 (1753).

Gerbera cavaleriei Van. & Lévl. in Bull. Soc. Bot. Fr. 53:550 (1906); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:269 (1966).

G. bonatiana (Beauverd) Beauverd f. *cavaleriei* (Van. & Lévl.) Lévl., Cat. Pl. Yunnan 45 (1915).

CHINA. Kweichow, Pin-fa, hautes mont., rare, 20 vii 1904, *Cavalerie* 1778 (holo. *G. cavaleriei*, E).

REFERENCE FOR GERBERA: Beauverd, G. (1910). Les espèces asiatiques du genre *Gerbera*. *Bull. Soc. Bot. Genève sér. 2*, 2:38–49.

CICHORIEAE

1204. *Tolpis capensis* (L.) Sch. Bip. in Bonplandia 9:172 (1861); Jeffrey in Kew Bull. 18:432 (1966).

Hieracium capense L., [Pl. Afr. Rar. 17 (1760)] Amoen. Acad. 6:96 (1763);

H. Humb., Fl. Madagasc. & Com. Fam. 189e, Composées, 3:893 (1963).

H. madagascariense DC., Prodr. 7:218 (1838).

H. perrieri Lévl. in Le Monde des Pl. 19:15 (1918).

MADAGASCAR: Environs de Tiritriva, près Antisirabe, prairies vers 1800 m, v 1912, *H. Perrier de la Bâthie* 2803 (typus *H. perrieri*—n.v.).

Humbert cites *Perrier* 2803 under *H. capense* without mention of *H. perrieri*.

1205. *Picris divaricata* Van. in Bull. Acad. Géog. Bot. 12:28 (1903); Lévl., Cat. Pl. Yunnan 47 (1915); Hand.-Mazz., Symb. Sin. 7:1177 (1936) & in Acta Hort. Gotoburg. 12:349 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:298 (1967).

Hypochaeris mairei Lévl. in Bull. Acad. Géog. Bot. 24:290 (1914) & Cat. Pl. Yunnan 45 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:294 (1966).

CHINA. Yunnan, environs de Yun-nan-sen, abonde dans la plaine sur le bord des canaux, rizières, champs, fleurons jaunes, 24 iii 1897, *Bodinier* s.n. (holo. *P. divaricata*, E); Yunnan, commune en plaine et collines à Tong-tchouan, 2500 m, composée vivace toute ciliée, fl. jaunes, v, *E. E. Maire* s.n. (holo. *Hypochaeris mairei*, E).

1206. *Picris hieracioides* L. subsp. *japonica* (Thunb.) Krylov, Fl. Alt. 3:727 (1904) excl. syn. p.p.; Kitamura in Mem. Coll. Sci. Univ. Kyoto ser. B, 22:91 (1955).

P. japonica Thunb., Fl. Jap. 299 (1784); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:299 (1967).

P. hieracioides L. subsp. *japonica* (Thunb.) Hand.-Mazz., Symb. Sin. 7:1177 (1936), in Notizbl. Bot. Gart. Berlin 13:660 (1937) & in Acta Hort. Gotoburg. 12:349 (1938).

Aster esquirolii Lévl., Fl. Kouy-Tchéou 86 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 18:282 (1965).

Picris mairei Lévl. in Bull. Acad. Géog. Bot. 25:14 (1915) & Cat. Pl. Yunnan 47 (1915).

CHINA. Kweichow, Tong-tchéou, blanche, vi 1912, *Esquirol* 3609 (holo. *Aster esquirolii*, E); Yunnan, plaine de Tong-tchouan, 2500 m, bord des canaux, composée annuelle, tiges et feuilles tumescentes, fl. jaunes, vii 1912, *E. E. Maire* s.n. (holo. *Picris mairei*, E).

"*Senecio bulbosus* Hook. & Arn. = *Gynura*" was probably intended by Léveillé as a new combination for *Gynura bulbosa* (Lour.) Hook. & Arn. (syn. *Cacalia bulbosa* Lour.). The Yunnan specimen identified by Léveillé as *Senecio bulbosus*, presumably the basis of the record in Cat. Pl. Yunnan (50, 1916), is actually *Picris hieracioides* ssp. *japonica*.

1207. *Crepis bodinieri* Lévl. in Bull. Acad. Géog. Bot. 25:15 (1915) & Cat. Pl. Yunnan 43 (1915); Babcock in Univ. Calif. Publ. Bot. 22:638 (1947); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:220 (1966).

CHINA. Yunnan, collines calcaires, arides de Pi-ka-tong, 2550 m, composée lactucée presque depourvue de feuilles, fl. jaunes, v 1912, *E. E. Maire* s.n. (holo. E).

1208. *Crepis lignea* (Van.) Babcock in Univ. Calif. Publ. Bot. 22:644 (1947); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:225 (1966).

Lactuca (Mycelis?) lignea Van. in Bull. Acad. Géog. Bot. 12:318 (1903); Lévl., Fl. Kouy-Tchéou 99 (1914).

CHINA. Kweichow, entre Hin-y-fou et le fleuve Hoa-Kiang, cà et là dans les cultures, 19 iv 1897, *Bodinier* 1561 (holo. *L. lignea*, E).

1209. *Crepis napifera* (Franch.) Babcock in Univ. Calif. Publ. Bot. 22:629 (1947); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:227 (1966).

Lactuca napifera Franch. in Journ. de Bot. 9:292 (1895).

Prenanthes chaffanjonii Lévl. in Fedde, Rep. Sp. Nov. 11:305 (1912) & Fl. Kouy-Tchéou 101 (1914).

CHINA. Kweichow, route de Pe-gai-yu, fleur jaune, x 1911, *Esquirol* 2728 (syntype *P. chaffanjonii*, E); environs de Kouy-yang, mont. du collège, fleurs jaunes, ix 1898, *Chaffanjon in herb. Bodinier* 2468 (syntype *P. chaffanjonii*, E).

REFERENCE FOR CREPIS: Babcock, E. B. (1947). The Genus *Crepis*. Univ. Calif. Publ. Bot. 21:1-198, 22:199-1030.

1210. *Youngia blinii* (Lévl.) Lauener, comb. nov.

Crepis blinii Lévl. in Fedde, Rep. Sp. Nov. 13:345 (1914)—non Lévl. (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:220 (1966).

Faberia blinii (Lévl.) Lévl. in Bull. Acad. Géog. Bot. 24:252 (1914), Cat. Pl. Yunnan 44 (1915) & Cat. Ill. Pl. Seu-Tchouen, f. 20 (1918); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:261 (1966).

Crepis setigera [Scott ex] W.W. Sm. in Notes R.B.G. Edinb. 8:333 (1915).

Youngia setigera (Scott ex W.W. Sm.) Babcock & Stebbins in Univ. Calif. Publ. Bot. 18:227, f.1 (1943).

CHINA. Yunnan, pâtures des collines derrière Tcha-ho, 2600 m, x 1913, *E. E. Maire* s.n. (holo. *Youngia blinii*, E).

Apart from the word "collines" instead of "mont.", one of the syntypes of *C. setigera* is probably a duplicate of the holotype of *C. blinii*.

1211. *Youngia chelidoniifolia* (Makino) Kitamura in Acta Phytotax, Geobot. 11:128 (1942) & in Mem. Coll. Sci. Univ. Kyoto ser. B, 22:121 (1955).

Lacuta (Ixeris) chelidoniifolia Makino in Bot. Mag. Tokyo 12:47 (1898);

Ling in Contr. Inst. Bot. Nat. Acad. Peiping 3:194 (1935).

Paraixeris chelidoniifolia (Makino) Nakai in Bot. Mag. Tokyo 34:156 (1920).

Lactuca senecio Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:140 (1910) p.p. quoad *Faurie* 425; Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911) p.p.

KOREA. *Sine loc.*, in petrosis montium, ix 1901, *Faurie* 425 (syntype *L. senecio* E).

The other syntype of *L. senecio* is *Youngia sonchifolia*, q.v.

1212. *Youngia erythrocarpa* (Van.) Babcock & Stebbins in Publ. Carnegie Inst. Wash, no. 484:102 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:31 (1969).

Lactuca (Ixeris) erythrocarpa Van. in Bull. Acad. Géog. Bot. 12:319 (1903); Lévl., Fl. Kouy-Tchéou 99 (1914).

CHINA. Kweichow, Kouy-yang, commun sur murs des jardins rocailles, 15 vi 1899, *Bodinier* 2621 (holo. E).

1213. *Youngia fusca* (Babcock) Babcock & Stebbins in Publ. Carnegie Inst. Wash. no. 484:76 (1937).

Crepis blinii Lévl. in Bull. Acad. Géog. Bot. 25:15 (1915) & Cat. Pl. Yunnan 43 (1915)—non. *C. blinii* Lévl. (1914).

C. fusca Babcock in Univ. Calif. Publ. Bot. 14:327 (1928).

CHINA. Yunnan, rochers sous bois à Tchéou-kia-tse-tong, 2550 m, composée lactucée vivace, fl. jaunes, v 1912, *E. E. Maire* s.n. (holo. *C. blinii*, E).

When Babcock determined the specimen cited above as *Y. fusca* he did not realise it was a type specimen of *C. blinii* Lévl. (1915)—non (1914).

On the specimen Stebbins wrote "The type of *Crepis blinii* is in the De Lessert Herb. and is a *Hieracium*". But both holotypes of *C. blinii* 1914 and 1915 belong to *Youngia*. *C. blinii* (1914) is *Youngia blinii* (Lévl.) Lauener, q.v.

1214. *Youngia japonica* (L.) DC., Prodr. 7:194 (1838); Babcock & Stebbins in Publ. Carnegie Inst. Wash. no. 484:95, f.28 a-j (1937); Kitamura in Mem. Coll. Sci. Univ. Kyoto, ser. B, 22:117 (1955); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:121 (1952).

Prenanthes japonica L., Mant. 107 (1767).

Crepis japonica (L.) Benth., Fl. Hongk. 194 (1861); Nakai in Bot. Mag. Tokyo 34:158 (1920).

Lactuca taquetii Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:140 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911).

L. taraxacum Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:141 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911).

Crepis taquetii (Lévl. & Van.) Lévl. in Fedde, Rep. Sp. Nov. 11:307 (1912).

KOREA. Quelpaert, in herbis Hongno, x 1908, *Taquet* 1059 (holo. *L. taquetii*, E); in agris Hongno, x 1908, *Taquet* 1042 (holo. *L. taraxacum*, E).

1215. *Youngia japonica* (L.) DC. subsp. *elstonii* (Hochr.) Babcock & Stebbins in Publ. Carnegie Inst. Wash. no. 484:98, f.29 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:33 (1969).

Crepis japonica (L.) Benth. var. *elstonii* Hochr. in Candollea 5:340 (1934).

Lactuca (Mycelis) pseudosenecio Van. in Bull. Acad. Géog. Bot. 12:320, 489 (1903).

CHINA. Yunnan, environs de Yunnan-sen, sur les murs, les talus, plaine, 7 ii 1897, *Ducloux* 68 (holo. *L. pseudosenecio*, E).

The holotype of *L. pseudosenecio* is a poor specimen with immature flowers, but seems to belong here.

1216. *Youngia mairei* (Lévl.) Babcock & Stebbins in Publ. Carnegie Inst. Wash. no. 484:77, f.21 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 22:34 (1969).

Crepis mairei Lévl. in Fedde, Rep. Sp. Nov. 12:531 (1913) & Cat. Pl. Yunnan 43 (1915).

CHINA. Yunnan, rochers des mont. derrière Tong-tchouan, 2600 m, composée lactucée annuelle, fl. jaunes, vi 1912, *E. E. Maire* s.n. (holo. E).

1217. *Youngia sonchifolia* (Bunge) Maxim. in Mém. Acad. Imp. Sci. St. Pétersb. 9:180 (1859); Kitamura in Acta Phytotax. Geobot. 11:129 (1942) & in Mem. Coll. Sci. Univ. Kyoto, ser. B, 22:123 (1955).

Prenanthes sonchifolia Bunge, Enum. Pl. Chin. bor. 40 (1833)—non Willd. (1803).

Ixeris sonchifolia (Bunge) Hance in Journ. Linn. Soc. (Bot.) 13:108 (1873);

Nakai in Bot. Mag. Tokyo 34:154 (1920) as *I. sonchifolia* (Bunge) Nakai.

Lactuca senecio Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:140 (1910) p.p. quoad Taquet 1046; Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911) p.p.

Ixeris denticulata (Houtt.) Nakai subsp. *sonchifolia* (Maxim.) Stebbins in Journ. Bot. 75:48 (1937).

KOREA. Quelpaert, in arenosis Hallaisan, 1800 m, ix 1908, Taquet 1046 (syntype *L. senecio*, E).

The other syntype of *L. senecio* is *Youngia chelidoniifolia*, q.v.

1218. *Ixeris chinensis* (Thunb.) Kitagawa in Bot. Mag. Tokyo 48:113 (1934); Kitamura in Bot. Mag. Tokyo 49:282 (1935) & in Mem. Coll. Sci. Univ. Kyoto, ser. B, 23:113 (1956).

Prenanthes chinensis Thunb. Fl. Jap. 310 (1784) p.p.

Lactuca rubrolutea Van. in Bull. Acad. Géog. Bot. 12:317 (1903); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:27 (1967).

CHINA. Hopei, Peking, parc imperial de Pan-chan, bord des eaux, fleurs jaunes, veinées de rougeâtre, v 1889, Bodinier s.n. (holo. *L. rubrolutea*, E).

Nakai (Bot. Mag. Tokyo 34:152, 1920) did not cite the basionym of *Ixeris chinensis* in 1920 and the first valid publication appears to be that of Kitagawa in 1934.

Ixeris chinensis has not been listed in *Index Kewensis*.

1219. *Ixeris chinensis* (Thunb.) Kitagawa subsp. *strigosa* (Lévl. & Van.) Kitamura in Bot. Mag. Tokyo 49:283 (1935) & in Mem. Coll. Sci. Univ. Kyoto, ser. B, 23:114 (1956); Hara, Enum. Sperm. Jap. 2:213 (1952).

Lactuca strigosa Lévl. & Van. in Bull. Acad. Géog. Bot. 20:144 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911); Nakai in Bot. Mag. Tokyo 34:158 (1920) pro syn. sub *Ixeris debilis* A. Gray.

Ixeris chinensis (Thunb.) Kitagawa var. *strigosa* (Lévl. & Van.) Ohwi in Bull. Nat. Sci. Mus. Tokyo no. 33:90 (1953) & Fl. Jap. (English ed.) 928 (1965).

I. chinensis (Thunb.) Kitagawa subsp. *versicolor* (Fisch. ex Link) Kitamura f. *strigosa* (Lévl. & Van.) Kitagawa in Journ. Jap. Bot. 36:244 (1961).

Ixeridium strigosum (Lévl. & Van.) Tzvel. in Fl. URSS 29:390 (1964).

KOREA. In monte des diamants, 20 vi 1906, Faurie 1139 (holo. E).

1220. *Ixeris chinensis* (Thunb.) Kitagawa subsp. *versicolor* (Fisch. ex Link) Kitamura in Bot. Mag. Tokyo 49:283 (1935) & in Acta Phytotax. Geobot. 9:114 (1940) & in Mem. Coll. Sci. Kyoto Univ. ser. B, 23:115 (1956); Kitagawa in Rep. Inst. Sci. Res. Manch. 3, App. 1:453 (1939).

- Lagoseris versicolor* [Fisch. ex] Link, Enum. Pl. Hort. Berol 2:289 (1882).
Lactuca (*Chorisma*) *crepidioides* Van. in Bull. Acad. Géog. Bot. 12:244 (1903); Kitamura in Mem. Coll. Sci. Univ. Kyoto ser. B, 23:116 (1956) pro syn. sub *Ixeris dentata* (Thunb.) Nakai.
Crepis pseudovirens Lévl. in Fedde, Rep. Sp. Nov. 11:306 (1912) & Cat. Pl. Yunnan 43 (1915); Babcock in Univ. Calif. Publ. Bot. 22:925 (1947) as *Ixeris* sp.
C. taraxacifolia Thuill. var. *vanioti* Lévl. in Fedde, Rep. Sp. Nov. 11:306 (1912).
Lactuca hallaisanensis Lévl. in Fedde, Rep. Sp. Nov. 12:100 (1913); Nakai in Bot. Mag. Tokyo 40:575 (1926) & 48:113 (1934) pro syn. sub *Ixeris japonica* (Burm.) Nakai; Ling in Contr. Inst. Bot. Nat. Acad. Peiping 3:190 (1935) pro syn. sub *Lactuca debilis* (Thunb.) Benth. ex Maxim.; S.Y. Hu in Quart. Journ. Taiwan Mus. 20:17 (1967) pro syn. sub *L. debilis*.
Crepis vaniotti Lévl. in Bull. Acad. Géog. Bot. 27:72 (1917)—*nom. nud.*
Ixeris chinensis (Thunb.) Kitagawa subsp. *hallaisanensis* (Lévl.) Kitagawa in Journ. Jap. Bot. 36:244 (1961).
Ixeridium gramineum (Fisch.) Tzvel. in Fl. URSS 29:391 (1964).
 CHINA. Yunnan, environs de Yun-nan-sen, commun sur les berges des canaux rizières, fl. jaune, iii 1897, *Bodinier* s.n. (holo. *L. crepidioides*, E); collines et plaine à Tong-tchouan, 2500 m, composée lactucée vivace, fl. jaunes, iii 1911, *E. E. Maire* s.n. (holo. *C. pseudovirens*, E). Hopei, (Pé-Tché-Li), *sine loc.* 1904, *Chanet* 531, (holo. *C. taraxacifolia* var. *vanioti*, E).
 KOREA. Quelpaert, in sylvis Hallaisan, 800 m, vii 1908, *Taquet* 1041 (holo. *L. hallaisanensis*, E).

There are differing treatments of the *Ixeris chinensis* complex. Tzvelev maintains *I. chinensis* and the two subspecies *versicolor* and *strigosa* as three distinct species under his genus *Ixeridium*.

Ohwi's *Flora of Japan* has *L. strigosa* as a variety of *I. chinensis*, Kitagawa as a form of subsp. *versicolor* and Kitamura as a subspecies of *I. chinensis*. *L. hallaisanensis* is synonymous with subsp. *versicolor* according to Kitamura whilst Kitagawa has it as a separate subspecies of *I. chinensis*.

Three Léveilléan taxa, *Lactuca crepidioides*, *Crepis pseudovirens* and *C. taraxacifolia* var. *vanioti* are added to the synonymy of subsp. *versicolor*. In following Kitamura's treatment I do so out of convenience rather than taxonomic opinion.

1221. *Ixeris gracilis* (DC.) Stebbins in Journ. Bot. (Lond.) 75:50 (1937); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:4 (1967).

Lactuca gracilis DC., Prodr. 7:140 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:20 (1967).

L. beauverdiana Lévl. in Fedde, Rep. Sp. Nov. 8:450 (1910) & Fl. Kouy-Tchéou 98 (1914).

CHINA. Kweichow, *sine loc.*, fl. jaune, vi 1908, *Cavalerie* 3707 (holo. *L. beauverdiana*, E).

See remarks under *Senecio pseudo-mairei* Lévl. (Syn. *S. beauverdianus* Lévl.).

1222. *Ixeris polycephala* Cass. in Dict. Sci. Nat. 24:50 (1822); Kitamura in Bot. Mag. Tokyo 49:289 (1939) & in Mem. Coll. Sci. Univ. Kyoto, ser. B, 23:106 (1956); Hara, Enum. Sperm. Jap. 2:217 (1952); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:120 (1952); Ohwi, Fl. Jap. (English ed.) 927 (1965).

Lactuca biauriculata Van. & Lévl. in Bull. Acad. Géog. Bot. 20:143 (1909);

Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:506 (1911).

Ixeris matsumurae (Makino) Nakai in Bot. Mag. Tokyo 34:153 (1920).

KOREA. In monte des diamants, 20 vi 1906, *Faurie* 1130 (holo. *L. biauriculata*, E).

1223. *Ixeris stebbinsiana* Hand.-Mazz. in Acta Hort. Gotoburg. 12:353 (1938); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:6 (1967).

Crepis stolonifera Lévl. in Fedde, Rep. Sp. Nov. 12:531 (1913), Cat. Pl.

Yunnan, 43 (1915) & Ill. Pl. Seu-Tchouen pl. 19 (1918)—non *Ixeris*

stolonifera A. Gray.

CHINA. Yunnan, berges des canaux, plaine de Tong-tchouan, 2500 m, composée annuelle, longs stolons en tout sens, fl. jaunes, v 1912, *E. E. Maire* s.n. (holo. *C. stolonifera* and *I. stebbinsiana*, E).

1224. *Ixeris stolonifera* A. Gray in Mem. Am. Acad. n.s. 6:396 (1859); Nakai in Bot. Mag. Tokyo 34:158 (1920); Kitamura in Mem. Coll. Sci. Univ. Kyoto, ser. B, 23:123 (1956).

Lactuca nummularifolia Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:421 (1910);

Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911).

KOREA. Quelpaert, in agris Hongno, 15 i 1910, *Taquet* 3521 (holo. *L. nummularifolia*, E).

REFERENCES FOR IXERIS

Kitagawa, M. (1961). *Journ. Jap. Bot.* 36:243–245.

Kitamura, S. (1935). *Ixerides Japonicae*. *Bot. Mag. Tokyo* 49:280–289.

Stebbins, G. L. (1937). Critical Notes on the Genus *Ixeris*. *Journ. Bot.* (Lond.) 75:43–51.

1225. *Crepidiastrum lanceolatum* (Houtt.) Nakai f. *pinnatilobum* (Maxim). Nakai in Bot. Mag. Tokyo 34:151 (1920); Kitamura in Mem. Coll. Sci. Univ. Kyoto, ser. B, 22:108 (1955); Ohwi, Fl. Jap. (English ed.) 926 (1965).

Lactuca quercus Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:140 (1910); Nakai

in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911).

Crepidiastrum quercus (Lévl. & Van.) Nakai in Bot. Mag. Tokyo 34:152

(1920), Fl. Sylv. Kor. 14:111 (1923) & in Bull. Nat. Sci. Mus. Tokyo no. 31:120 (1952).

Ixeris quercus (Lévl. & Van.) Stebbins in Journ. Bot. (Lond.) 75:46 (1937).

KOREA. Quelpaert, in littore Hamtok, 10 ix 1908, *Taquet* 1043 (holo. *L. quercus*, E).

Stebbins was firmly of the opinion that Nakai's genera *Crepidiastrum* and *Paraixeris* should be merged with *Ixeris*, and reduced them to subgeneric level. Kitamura placed *Paraixeris* in *Youngia* but retained *Crepidiastrum*. The latter genus is also retained here to conform with current Japanese taxonomy.

Although the achenes on the type specimen are immature they can be seen to be beakless as in *Crepidiastrum* and the habit also is typical of that genus. Both Kitamura and Ohwi place *L. quercus* in synonymy under *f. pinnatilobum*.

1226. *Hieracium umbellatum* L., Sp. Pl. 804 (1753).

H. sinense Van. in Bull. Acad. Géog. Bot. 12:502 (1903); Lév., Fl. Kouy-Tchéou 97 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:292 (1966). CHINA. Kweichow, environs de Tou-chan, fleurs jaunes, vii 1899, *Cavalerie in herb. Bodinier* 2664 (holo. *H. sinense*, E).

1227. *Hololeion maximowiczii* Kitamura var. *fauriei* (Van. & Lév.) Kitamura in Acta Phytotax. Geobot. 10:304 (1941) & in Mem. Coll. Sci. Univ. Kyoto, ser. B, 23:159 (1956).

Prenanthes fauriei Van. & Lév. in Bull. Acad. Géog. Bot. 20:144 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911); Dunn in Journ. Linn. Soc. (Bot.) 39:480 (1911).

P. graminifolia Van. & Lév. in Bull. Acad. Géog. Bot. 20:144 (1909); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911); Dunn in Journ. Linn. Soc. (Bot.) 39:480 (1911).

Hieracium fauriei (Van. & Lév.) Kitamura in Acta Phytotax. Geobot. 10:225 (1941).

KOREA. In herbidis humidis Chemulpo, 20 ix 1906, *Faurie* 1129 (holo. *P. fauriei*, E); Chemulpo, 28 ix 1901, *Faurie* 437 (holo. *P. graminifolia*, E).

1228. *Hypochoeris radicata* L., Sp. Pl. 811 (1753); Degener, Fl. Hawaiiensis 5: Fam. 344 (1952).

Crepis (Barkhaustia) molokaiensis Lév. in Fedde, Rep. Sp. Nov. 10:122 (1911) p.p.

HAWAIIAN (SANDWICH) ISLANDS. Molokai, Kamolo, 1000 m, vi 1910, *Faurie* 976 (syntype *C. molokaiensis*—n.v.).

There are two syntypes of *Crepis molokaiensis*, *Faurie* 974 and *Faurie* 976, both from the same locality.

Rock identified *Faurie* 974 as *Crepis japonica* (= *Youngia japonica*). In his *Flora Hawaiiensis*, Degener (5: Fam. 344:1950) placed *C. molokaiensis* as a synonym of *Youngia japonica* without reference to the type specimens. Later (l.c. 5: Fam. 344:1952) he placed *C. molokaiensis* as a synonym of *Hypochoeris radicata* L.

In his monograph of *Crepis* (Univ. Calif. Publ. Bot. 22, 924:1947) Babcock referred *C. molokaiensis* Lév. to *Hypochoeris glabra* having seen an unspecified type in Paris.

Léveillé's description of *C. molokaiensis* "caulibus multis ramosissimis nudis, multifloris" and "akaenio in rostrum 5 mm ipsi aequilongum" could refer to *Hypochoeris*, but not to *Youngia*.

It seems probable, therefore, that *Faurie* 974 represents *Youngia japonica* and *Faurie* 976 is *Hypochoeris radicata* (or *H. glabra*). However, as the description is applicable to *Hypochoeris*, *Crepis molokaiensis* is here placed under that genus.

1229. *Lactuca atropurpurea* Franch. in Journ. de Bot. 9:260 (1895).

L. grandiflora Franch. in Journ. de Bot. 9:368 (1895)—*nomen superfl.*

L. pseudosonchus Lévl. in Fedde, Rep. Sp. Nov. 13:345 (1914) & Cat. Pl.

Yunnan 46 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:26 (1967).

CHINA. Yunnan, rochers, mont. de Ta-ho, 2600 m, grand sonchus annuel. isolé, fl. bleues, x 1913, E. E. Maire s.n. (holo. *L. pseudosonchus*, E).

Franchet first published *L. atropurpurea* (p. 260) but later (l.c., p. 368) under "Errata" indicated that he wished the name to read *L. grandiflora*. In between (l.c., p. 294) he published another species as *Lactuca atropurpurea*, which is now *Dubydea atropurpurea* Stebbins (Journ. Bot. 75:51, 1937).

1230. *Lactuca indica* L., Mant. Pl. Alt. 278 (1771) *sens. lat.*; Merrill in Bot. Mag. Tokyo 51:192-196 (1937) & in Journ. Arn. Arb. 19:373 (1938); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:121 (1952); Kitamura in Mem. Coll. Sci. Univ. Kyoto ser. B, 23:136 (1956); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:22 (1967).

L. brevirostris Champ. in Hook., Journ. Bot. Kew Gard. Misc. 4:237 (1852).

L. squarrosa Miq. in Ann. Mus. Bot. Lugd.-Bat. 2:189 (1866).

L. laciniata (Houtt.) Makino in Bot. Mag. Tokyo 17:88 (1903); Nakai in Bot. Mag. Tokyo 34:158 (1920).

L. hoatiensis Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:449 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911).

L. cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 8:450 (1910), Fl. Kouy-Tchéou 99 (1914) & Cat. Pl. Yunnan 46 (1915).

L. kouyangensis Lévl. in Fedde, Rep. Sp. Nov. 8:450 (1910); Lévl., Fl. Kouy-Tchéou 99 (1914) p.p. pro syn. sub *L. elata* Hemsl.; S.Y. Hu in Quart. Journ. Taiwan Mus. 20:23 (1967).

KOREA. Quelpaert, Hoatien, haut 1 m, viii 1909, Taquet 3010 (holo. *L. hoatiensis*, E).

CHINA. Kweichow, mont. entre Ma-jo et Long-ly, fl. jaune, 5 ix 1907. *Cavalerie* 2908 (holo. *L. cavaleriei*, E); Kouy-Yang, assez rare, 28 x 1907, *Cavalerie* 3706 p.p. (holo. *L. kouyangensis*, E).

The other collections of *Cavalerie* 3706 belong to *L. raddeana* var. *elata* (q.v.).

Merrill (1937) maintained a broad view of the synonymy of *L. indica*. Hara on the other hand (Bot. Mag. Tokyo 52:122, 1938) stated that the *L. indica* group could be divided into two forms, the Japanese *L. squarrosa* Miq. with the beak of the achene 1 mm long or more whilst the achene beak of true *L. indica* is about 0.7 mm long. Merrill (1938) asserted that this "was a very slight character on which to base a specific distinction" and again relegated *L. squarrosa* to synonymy under *L. indica*.

Later, Hara (Enum. Sperm. Jap. 2:220, 1952) made the new combination *L. indica* var. *laciniata* (O. Ktze.) Hara (syn. *L. squarrosa*) and this is maintained in Ohwi's *Flora of Japan*.

With regard to Lévillé's species, the achene beaks of *L. cavaleriei* are at least 1 mm long, *L. kouyangensis* c. 0.5-0.6 mm long and *L. hoatiensis* c. 0.7 mm long.

The leaves of *L. kouyangensis* are laciniate and this species may belong to one of the forms of *L. indica* mentioned by Kitamura (1956).

1231. *Lactuca raddeana* Maxim. in Bull. Acad. Sci. St. Pétersb. 19:526 (1874); Nakai in Bot. Mag. Tokyo 34:158 (1920); Ling in Contr. Inst. Bot. Nat. Acad. Peiping 3:188 (1935); Hara, Enum. Sperm. Jap. 2:220 (1952); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:26 (1967).

L. nakaiana Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:141 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:507 (1911); Nakai in Bot. Mag. Tokyo 34:158 (1920) pro syn. sub. *Prenanthes ochroleuca* Hemsl.

L. alliariaefolia Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:141 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:506 (1911); Ling in Contr. Inst. Bot. Nat. Acad. Peiping 3:187 (1935); Nakai in Bull. Nat. Sci. Mus. Tokyo no. 31:121 (1952) pro syn. sub. *L. triangulata* Maxim.

L. (Prenanthes) vanioti Lévl. in Fedde, Rep. Sp. Nov. 12:100 (1913).

KOREA. Quelpaert, in sylvis Mokan, 800 m, 18 ix 1908, *Taquet* 1056 (holo. *L. nakaiana*, E); Quelpaert, in sylvis Hallaisan Yengtsil, 1200 m, 17 viii 1908, *Taquet* 1049 (holo. *L. alliariaefolia*, E); Quelpaert, in sepibus, viii 1911, *Taquet* 5720 (holo. *L. vanioti*, E).

1232. *Lactuca raddeana* Maxim. var. *elata* (Hemsl.) Kitamura in Journ. Jap. Bot. 21:52 (1947).

L. elata Hemsl. in Journ. Linn. Soc. (Bot.) 23:481 (1888).

L. sonchus Lévl. & Van. in Fedde, Rep. Sp. Nov. 8:449 (1910); Lévl., Fl. Kouy-Tchéou 100 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:27 (1967).

Prenanthes hieracifolia Lévl. in Fedde, Rep. Sp. Nov. 11:305 (1912) & Fl. Kouy-Tchéou 101 (1914).

CHINA. Kweichow, route Pin-fa—Kouy-yang, vi 1906, *Cavalerie* 3706 p.p. (holo. *L. sonchus*, E); Kweichow, *sine loc.*, steppes et prairies, viii-ix 1911, *Esquirol* 2722 (holo. *P. hieracifolia*, E).

The other collections of *Cavalerie* 3706 belong to *L. indica* (q.v.).

1233. *Lactuca sororia* Miq. in Ann. Mus. Bot. Lugd.-Bat. 2:189 (1866).

L. diversifolia Van. in Bull. Acad. Géog. Bot. 12:245 (1903); Lévl., Fl. Kouy-Tchéou 99 (1914) p.p. & Cat. Pl. Yunnan 46 (1915); Hand.-Mazz., Symb. Sin. 7:1185 (1936) pro syn. sub *Prenanthes brunoniana* Wall. var. *raphanifolia* (DC.) Hook. f.

L. thirionni Lévl. in Fedde, Rep. Sp. Nov. 11:306 (1912); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:30 (1967).

Prenanthes diversifolia (Van.) Chang in Bull. Fan. Mem. Inst. Biol. 5:321 (1934)—non Ledeb. (1826).

CHINA. Kweichow, environs de Kouy-yang, bois de Kien-lin-chan, fleurs roses, tiges et feuilles très variables de hauteurs et forme, 7 vii 1898, *Bodinier* 2400 (syntype *L. diversifolia*, E); environs de Tou-Chan, vi 1898, *Cavalerie* même numéro (syntype *L. diversifolia*—n.v.); Ra-Ouai-Ho, 600 m, violette, 15 v 1910, *Esquirol* 2126 (holo. *L. thirionni*, E).

Léveillé cited several collections under *L. diversifolia* in his *Flore du Kouy-Tchéou*, but of these *Cavalerie* 1170 & 2543 & *Esquirol* 563 belong to *Prenanthes henryi* Dunn. *Cavalerie* 531 which is also *P. henryi*, was not cited by Léveillé but was the only specimen cited by Chang under his *P. diversifolia*. This may be the collection which made Handel-Mazzetti place *L. diversifolia* under *P. brunoniana* var. *raphanifolia*.

1234. *Lactuca tatarica* (L.) C. A. Meyer, Verz. Pflanz. Cauc. 56 (1831); Hand.-Mazz. in Acta Hort. Gotoburg. 12:352 (1938); Kitamura in Acta Phytotax. Geobot. 8:145 (1939); Babcock in Univ. Calif. Publ. Bot. 22:920 (1947); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:29 (1967).

Sonchus tataricus L., Mant. Pl. Alt. 572 (1771).

Lactuca multipes Lévl. & Van. in Fedde, Rep. Sp. Nov. 6:331 (1909); Lévl., Fl. Kouy-Tchéou 99 (1914) as *L. multiceps*; S.Y. Hu in Quart. Journ. Taiwan Mus. 20:25 (1967).

Crepis charbonnelii Lévl. in Fedde, Rep. Sp. Nov. 12:100 (1913) & in Bull. Acad. Géog. Bot. 27:72 (1917).

CHINA. Kweichow, Lo-Fou, iv 1907, *Cavalerie* 3303 (holo. *L. multiceps*, E); Hopei (Tché-Ly), Ting-Tchéou, terres basses, v 1909, *Chanet* 408 (holo. *C. charbonnelii*, E).

REFERENCE FOR LACTUCA: Chang, C. C. (1934). Contributio ad cognitionem generis Lactucae Sinicae. *Contrib. Biol. Lab. Sci. Soc. China* 9:127-133.

1235. *Cicerbita bonatii* Beauverd in Bull. Soc. Bot. Genève sér. 2,2:126 (1910).

Lactuca bonatii (Beauverd) Lévl. in Cat. Pl. Yunnan 46 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:15 (1967).

Léveillé did not fully cite the basionym but he presumably intended the transfer of *C. bonatii* to *Lactuca*. No Léveillé type was involved.

1236. *Cicerbita cyanea* (Don) Beauverd var. *teniana* Beauverd in Bull. Soc. Bot. Genève sér. 2,2:134 (1910).

Lactuca saligna L. var. *teniana* (Beauverd) Lévl., Cat. Pl. Yunnan 46 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:27 (1967).

Léveillé more or less cited the basionym but no Léveillé type was involved.

REFERENCE FOR CICERBITA: Beauverd, G. (1910). Le genre *Cicerbita*. *Bull. Soc. Bot. Genève sér. 2,2:99-144*.

1237. *Prenanthes blinii* (Lévl.) Kitagawa in Journ. Jap. Bot. 45:125 (1970).

Lactuca (Prenanthes) blinii Lévl. in Fedde, Rep. Sp. Nov. 12:100 (1913); Nakai in Bot. Mag. Tokyo 34:158 (1920) pro syn. sub *Prenanthes nipponica* Makino.

Nabalus ochroleuca Maxim. in Bull. Acad. Sci. St. Pétersb. 15:376 (1870).

Prenanthes ochroleuca (Maxim.) Hemsl. in Journ. Linn. Soc. (Bot.) 23:486 (1888); Kitamura in Mem. Coll. Sci. Univ. Kyoto, ser. B, 23:153 (1956) —non Rafin. (1824).

P. maximowiczii Kirp. in Fl. URSS 29:269, t.23, f.9 (1964).

KOREA. Quelpaert, S. O. Hoatien, viii 1911, *Taquet* 5718 (holo. *Lactuca blinii*, E).

Kitamura's combination under *P. blinii* was preceded by that of Kitagawa.

1238. *Prenanthes cavaleriei* (Lévl.) Stebbins ex Lauener, comb. nov.

Faberia cavaleriei Lévl. in Bull. Acad. Géog. Bot. 24:252 (1914) & Fl. Kouy-Tchéou 95 (1914); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:261 (1966).

CHINA. Kweichow, Yang-kia-tchong, route Pin-fa—Tou-yun, fl. bleu viol., 23 vii 1905, *Cavalerie* 2449 (holo. E).

The type specimen was first determined by G. L. Stebbins as *P. cavaleriei* but never published.

1239. *Prenanthes macilentus* Van. & Lévl. in Bull. Soc. Bot. Fr. 53:550 (1906); Lévl., Fl. Kouy-Tchéou 101 (1914); Dunn in Journ. Linn. Soc. (Bot.) 39:480 (1911); S.Y. Hu in Quart. Journ. Taiwan Mus. 20:303 (1967).

CHINA. Kweichow, Pin-fa, h. mont., 13 xi 1903, *Cavalerie* 1575 (holo. E).

1240. *Prenanthes sinensis* (Hemsl.) Stebbins ex Babcock in Univ. Calif. Publ. Bot. 22:631 (1947).

Faberia sinensis Hemsl. in Journ. Linn. Soc. (Bot.) 23:479 (1888) & in Hook., Ic. Pl. 19:t.1815 (1889); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:262 (1966).

Crepis hieracium Lévl., in Fedde Rep. Sp. Nov. 13:345 (1914).

Faberia hieracium (Lévl.) Lévl. in Bull. Acad. Géog. Bot. 24:252 (1914) & Cat. Pl. Yunnan 45 (1915); S.Y. Hu in Quart. Journ. Taiwan Mus. 19:262 (1966).

CHINA. Yunnan, rochers mont. de Tcha-ho, 2600 m, vivace, fleurs oranges, xi 1913, *E. E. Maire* s.n. (holo. *Crepis hieracium*, E).

According to the list of excluded names in Babcock's work on the genus *Crepis*, the type of *C. hieracium* could not be found at Edinburgh and he suggested it might be a *Hieracium* or *Youngia*. The type, however, is at Edinburgh and matches *Prenanthes sinensis*.

1241. *Sonchus brachyotus* DC., Prodr. 7:186 (1838); Boulos in Bot. Notiser 126:182 (1973).

S. fauriei Lévl. in Fedde, Rep. Sp. Nov. 7:102 (1909); Miyabe & Miyake, Fl. Saghal. 267 (1915) pro syn. sub *Senecio pseudo-arnica* Less.; Kitamura in Acta Phytotax. Geobot. 6:275 (1937) pro syn. sub *S. pseudo-arnica*; S.Y. Hu in Quart. Journ. Taiwan Mus. 21:138 (1968) pro syn. sub *S. pseudo-arnica*.

S. taquetii Lévl. in Fedde, Rep. Sp. Nov. 8:141 (1910); Nakai in Journ. Coll. Sci. Imp. Univ. Tokyo 31:508 (1911).

S. cavaleriei Lévl. in Fedde, Rep. Sp. Nov. 8:451 (1910).

S. arvensis auct. non L.; Lévl., Fl. Kouy-Tchéou 108 (1914).

S. arvensis L. subsp. *brachyotus* (DC.) Kitamura in Mem. Coll. Sci. Univ. Kyoto, ser. B, 23:148 (1956).

SACHALIN. In arena littoris Soriofka, 2 ix 1908, *Faurie* 732 (holo. *S. fauriei*, E).

KOREA. Quelpaert, in littore Henksatong, 14 ix 1908, *Faurie* 1045 (holo. *S. taquetii*, E).

CHINA. Kweichow, Pin-fa, jardins, fl. jaune, *Cavalerie* 3308 (holo. *S. cavaleriei*, E).

There are two specimens of *Cavalerie* 3308. One is cited by Lévillé in his *Flore du Kouy-Tchéou* under *Sonchus arvensis* without mention of *S. cavaleriei*, the other under *Picris hieracioides* L. (*P. japonica* Thunb.). Both specimens belong to *Sonchus brachyotus*.

1242. *Sonchus oleraceus* L., Sp. Pl. 794 (1753); Lév., Cat. Pl. Yunnan 55 (1916); Boulos in Bot. Notiser 126:155 (1973).

S. mairei Lév. in Fedde, Rep. Sp. Nov. 12:284 (1913)—non Lév. (1915);

S.Y. Hu in Quart. Journ. Taiwan Mus. 20:35 (1967) pro syn. sub *Launaea sarmentosa* (Willd.) Merrill.

CHINA. Yunnan, plaine de Tong-tchouan, 2500 m, terres cultivées, sonchus annuel, fl. jaunes, v 1912, *E. E. Maire* s.n. (holo. *S. mairei*, E).

Hu confused the collections of the two Lévillé species of *S. mairei*. See remarks under *Launaea procumbens* (no. 1244).

1243. *Sonchus wightianus* DC., Prodr. 7:187 (1838); Boulos in Bot. Notiser 126:185 (1973).

S. picris Lév. & Van. in Fedde, Rep. Sp. Nov. 8:451 (1910) & Fl. Kouy-Tchéou 108 (1914).

S. arvensis auct. non L.; Chang in Bull. Fan. Mem. Inst. Biol. 5:319 (1934).

CHINA. Kweichow, Lo-pou, fl. jaunes, iv 1907, *Cavalerie* 3704 (holo. *S. picris*, E).

REFERENCE FOR SONCHUS: Boulos, L. (1973). Révision systématique du genre *Sonchus* L. s.l. Bot. Notiser 126:155–196.

1244. *Launaea procumbens* (Roxb.) Ramayya & Rajagopal in Kew Bull. 23:465 (1969).

Prenanthes procumbens Roxb., Fl. Ind. 3:404 (1832).

Microrhynchus fallax Jaub. & Spach, Ill. Pl. Or. 3:106, t.276 (1848).

Zollikoferia fallax (Jaub. & Spach) Boiss., Fl. Or. 3:824 (1875).

Launaea fallax (Jaub. & Spach) O. Kuntze, Rev. Gen. 1:350 (1891);

Muschler, Man. Fl. Egypt 2:1060 (1912).

Sonchus mairei Lév. in Bull. Acad. Géog. Bot. 25:16 (1915) & Cat. Pl. Yunnan 55 (1916)—non *S. mairei* Lév. (1913).

Paramicrorhynchus procumbens (Roxb.) Kirp. in Fl. URSS 29:237 (1964).

Sonchus lakouensis S.Y. Hu in Quart. Journ. Taiwan Mus. 21:164 (1968).

CHINA. Yunnan, collines calcaires de La-Kou, 2400 m, *sonchus* vivace. feuilles en rosettes à la base, fl. jaunes sur tiges penchées, v 1912, *E. E. Maire* s.n. (syntype *S. mairei*, E); tertres arides, pierreux derrière La Kou, 2400 m, *sonchus* vivace, tiges rampantes, fl. jaunes, v 1912, *E. E. Maire* s.n. (syntype *S. mairei*, E); coteaux arides, derrière La Kou, 2450 m, *sonchus* vivace, feuillée à la base, tiges florales étalées, fl. jaunes, v 1912, *E. E. Maire* s.n. (syntype *S. mairei*, E).

From Léveillé's protologue of *Sonchus mairei*, it would seem that the combined field note referred to all three collections.

Chang (Sunyatsenia 3:302, 1937) confused *S. mairei* Lévl. (1913) and *S. mairei* Lévl. (1915) and placed the wrong *S. mairei* (1913) as a synonym of *Launaea sarmentosa* (Willd.) Merr. S.Y. Hu (Quart. Journ. Taiwan Mus. 20,35:1967) did likewise. *S. mairei* Lévl. (1913) from Tong-tchouan is *Sonchus oleraceus* L. (q.v., no. 1242).

S. lakouensis was a *nomen novum* for *S. mairei* Lévl. (1915). Hu also confused the two species of *S. mairei* and placed *S. mairei* (1913) in *Launaea* and *S. mairei* (1915) in *Sonchus*.

This appears to be the first record of *L. procumbens* in China, although the collections cited by Handel-Mazzetti under *L. nudicaulis* (Notizbl. Bot. Gart. Berlin 13:660, 1937), *Hand.-Mazz.* 5017 from Yunnan, and *Schneider* 512 from Szechuan, may in fact belong to *L. procumbens*. Handel-Mazzetti noted that these two specimens represented the first record of *L. nudicaulis* in China.

Scorzonera

In *Flore du Kouy-Tchéou* 103 (1914), Léveillé cited a Bodinier specimen under *Scorzonera radiata* var. *linearifolia*. Chang (Bull. Fan. Mem. Inst. Biol. 5:319, 1934) took this to be an undescribed variety of Léveillé's and placed it as a *syn. nov.* under *S. macrosperma* (C. A. Meyer) Turcz., citing *Cavalerie* 2794.

S. Y. Hu (Quart. Journ. Taiwan Mus. 21. 28. 1968) also referred to var. *linearifolia* Lévl. under *S. macrosperma*.

However, it was not Léveillé's intention to create this variety as he was referring to *S. radiata* var. *linearifolia* DC., Prodr. 7:122 (1838) based on Bunge, *Enum. Pl. Chin.* n. 331.

The Bodinier and *Cavalerie* specimens are *S. albicaulis* Bunge (syn. *S. macrosperma*).

REFERENCE FOR SCORZONERA: Nakai. T. (1937). *Scorzonera* from Manchuria & Korea. *Rep. Inst. Sci. Res. Manch.* 1:163-174.

REFERENCES

Apart from the references cited after some of the genera in this paper, the following general works of Compositae have been used extensively. Although the list is not complete it is hoped it will form a useful summary for students of Asiatic Compositae.

- CHANG, C. C. (1934-36). Contributions to the knowledge of the Compositae of China. I, *Bull. Fan. Mem. Inst. Biol. (Bot.)* 5:319-323 (1934); *op. cit.* 2, l.c. 7:153-164 (1936).
- (1935). Compositae Novae Sinensis. *Bull. Fan. Mem. Inst. Biol. (Bot.)* 6:43-69.
- (1937). An enumeration of Hainan Compositae. *Sunyatsenia* 3:270-304.
- CHEN, F. H. (1934). A preliminary study of the Compositae in Hopei Province. *Bull. Fan. Mem. Inst. Biol. (Bot.)* 5:31-109.
- FRANCHET, M. A. (1892). Les genres *Ligularia*, *Senecillis*, *Cremanthodium*, et leurs espèces dans l'Asie centrale et orientale. *Bull. Soc. Bot. France* 39:279-307.
- HANDEL-MAZZETTI, H. (1936). *Symbolae Sinicae* 7:1084-1186.
- (1937). Neue und bemerkenswerte chinesische Compositen, besonders aus dem Berliner Herbar. *Notizbl. Bot. Gart. Berlin* 13:607-661.
- (1938). Plantae Sinenses, Compositae. *Acta Hort. Gotoburg.* 12:203-259.
- HU, S. Y. (1965-69). The Compositae of China: I, *Quart. Journ. Taiwan Mus.* 18:1-136 (1965); *op. cit.* 2, l.c. 18:233-333; *op. cit.* 3, l.c. 19:1-73 (1966); *op. cit.* 4, l.c. 19:203-301; *op. cit.* 5, l.c. 20:1-77 (1967); *op. cit.* 6, l.c. 20:283-339; *op. cit.* 7, l.c. 21:1-52 (1968); *op. cit.* 8, l.c. 21:127-179; *op. cit.* 9, l.c. 22:1-56 (1969).
- KITAMURA, S. (1931-34). Compositae Novae Japonicae: I, Separate Pamphlet 1-29 (1931); 2, *Acta Phytotax. Geobot.* 1:56-60 (1932); *op. cit.* 3, l.c. 1:145-155; *op. cit.* 4, l.c. 2:37-51 (1933); *op. cit.* 5, l.c. 2:118-129; *op. cit.* 6, l.c. 2:171-188; *op. cit.* 7, l.c. 3:97-111 (1934); *op. cit.* 8, l.c. 3:128-145.
- (1932-41). Compositae of Formosa: I, *Acta Phytotax. Geobot.* 1:277-296 (1932); *op. cit.* 2, l.c. 4:149-157 (1935); *op. cit.* 3, l.c. 6:79-88 (1937); *op. cit.* 4, l.c. 9:28-38 (1940); *op. cit.* 5, l.c. 10:15-37 (1941).
- (1935-57). Compositae Japonicae: I, *Mem. Coll. Sci. Kyoto Imp. Univ.* ser. B, 13:1-421 (1937); *op. cit.* 2, l.c. 15:285-446 (1940); *op. cit.* 3, l.c. 16:155-292 (1942); *op. cit.* 4, *Mem. Coll. Sci. Univ. Kyoto*, ser. B, 22:77-126 (1955); *op. cit.* 5, l.c. 23:105-168 (1956); *op. cit.* 6, l.c. 24:1-79 (1957).
- (1936-42). Expositiones Plantarum Novarum Orientali-Asiaticarum: I, *Acta Phytotax. Geobot.* 5:243-249 (1936); *op. cit.* 2, l.c. 6:20-23 (1937); *op. cit.* 3, l.c. 7:63-71 (1938); *op. cit.* 4, l.c. 8:75-90 (1939); *op. cit.* 5, l.c. 9:111-118 (1940); *op. cit.* 6, l.c. 10:172-174 (1941); *op. cit.* 7, l.c. 11:120-133 (1942); *op. cit.* 8, l.c. 11:266-271.
- (1943). Compositae Manshuricae, Mongolicae, China borealiumque. *Acta Phytotax. Geobot.* 12:125-154.
- (1961). Supplementa et emendanda ad Compositas Japonicas II. *Acta Phytotax. Geobot.* 19:12-17.
- (1968-69). Compositae of SE Asia & Himalayas: I, *Acta Phytotax. Geobot.* 23:1-19 (1968); *op. cit.* 2, l.c. 23:65-81; *op. cit.* 3, l.c. 23:129-152 (1969); *op. cit.* 4, l.c. 24:1-27.
- KOYAMA, H. (1967-69). Taxonomic studies on the tribe Senecioneae of eastern Asia. *Mem. Coll. Sci. Univ. Kyoto, Ser. B. (Biol.)* 33:181-209 (1967); *op. cit.*, *Mem. Fac. Sci. Kyoto Univ.*, Ser. Biol. 2:19-60 (1968); *op. cit.*, l.c. 2:137-183 (1969).
- LING, Y. (1934-35). Les Composées chinoises de l'herbier de l'Academie de Peiping. *Contr. Inst. Bot. Nat. Acad. Peiping* 2:453-537 (1934); *op. cit.*, l.c. 3:133-220 (1935).

- (1937). *Compositae sinenses novae vel minus cognitae. Contr. Inst. Bot. Nat. Acad. Peiping* 5:1-30.
- (1965). *Genera nova vel minus cognita Familiae Compositarum. Acta Phytotax. Sin.* 10:75-90, 91-102, 283-289.
- (1965a). *Notulae de nonnullis generibus tribus Inulearum familiae Compositarum Florae Sinicae. Acta Phytotax. Sin.* 10:167-181.
- MATSUMURA, J. & KOIDZUMI, G. (1910). *Synopsis Composacearum Nikkoensis. Bot. Mag. Tokyo* 24:85-98, 115-123, 147-155, 159-165.
- NAKAI, T. (1920). *Notulae ad plantas Japoniae et Koreae XXIII. Bot. Mag. Tokyo* 34:147-158.
- (1923). *Fl. Sylv. Kor.* 14:97-132.
- STEBBINS, G. L. (1953). *A new classification of the tribe Cichorieae, family Compositae. Madroño* 12:65-80.

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<i>Myriactis</i>	1021	<i>Solidago</i>	1018
<i>Pentanema</i>	1073	<i>Sonchus</i>	1241
<i>Pertya</i>	1202	<i>Tanacetum</i>	1091
<i>Petasites</i>	1103	<i>Tolpis</i>	1204
<i>Picris</i>	1205	<i>Vernonia</i>	1009
<i>Prenanthes</i>	1237	<i>Wedelia</i>	1078
<i>Raillardia</i>	1108	<i>Youngia</i>	1210