

NOTES ON THE LIGNEOUS PLANTS DESCRIBED BY LEVEILLE FROM EASTERN ASIA¹

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LABIATAE

Leucosceptrum sinense Hemsley in Jour. Linn. Soc. Bot. **26**: 310 (1890). — Léveillé, Fl. Kouy-Tchéou, 209 (1914). — Dunn in Not. Bot. Gard. Edinburgh. **8**: 171 (1913); **6**: 192 (1915).

Elsholtzia Cavaleriei Léveillé & Vaniot in Fedde, Rep. Spec. Nov. **8**: 424 (1910).

Leucosceptrum Bodinieri Léveillé in op. cit. **9**: 224 (1911).

CHINA. K w e i c h o u : environs de Tsin-gay, au bord d'une rivière, *E. Bodinier*, no. 2709, Sept. 20, 1899 "sous -arbrisseau, fl. roses" (syntype of *Elsholtzia Cavaleriei*; photo. in A. A.); environs de Touchan, *J. Cavalerie* in herb. *Bodinier*, no. 2710, Sept. 1899 (syntype of *Elsholtzia Cavaleriei*; photo. in A. A.).

The name *Elsholtzia Cavaleriei* was changed by Léveillé to *Leucosceptrum Bodinieri* and later the two type specimens were enumerated by him in his Flore du Kouy-Tschéou under *L. sinense* without citation of synonymy, the reduction being based on identifications made by Dunn, to whom Léveillé had sent material of his Labiatae for revision, as it appears from a note in Léveillé's Flore du Kouy-Tchéou p. 203 under Labiacées which reads "(D. Dunn revisit)."

Leucosceptrum plectranthoideum (Lévl.) Marquand in Kew Bull. Misc. Inform. **1930**: 207.

Buddleia plectranthoidea Léveillé, Cat. Pl. Yun-Nan, 171 (1916).

CHINA. Y u n n a n : pâtures des montagnes à Pé-long-tsin, 3200 m., *E. E. Maire*, Nov. 1912 (holotype of *Buddleia plectranthoidea*; merotype in A. A.).

This species seems nearest to *L. sinense* Hemsl. but can be at once distinguished by the shorter inflorescence, the yellowish closer tomentum of the calyx and the bracts, and the shorter elliptic or ovate-elliptic to oblong-elliptic leaves reticulate beneath and tomentulose above.

Colquhounia Seguini Vaniot in Bull. Acad. Intern. Géog. Bot. **14**: 165 (1904). — Rehder in Sargent, Pl. Wilson. **3**: 380 (1916). —

¹Continued from Vol. **15**: 326; for preceding parts see Vol. **10**: 108–132, 164–196; **12**: 275–281; **13**: 299–332; **14**: 223–252; **15**: 1–27, 117.

Léveillé, Cat. Ill. Seu-Tchouen, 92, pl. 44 (1918). — P'ei, Verben. China in Mem. Sci. Soc. China, 1 (no. 3) : 180 (1932).

Colquhounia elegans Wall. var. *pauciflora* Prain in Jour. As. Soc. Beng. 62: 38 (1893). — Dunn in Not. Bot. Gard. Edinb. 6: 179 (1915).

Caryopteris fluminis Léveillé, Sert. Yunn. 3 (1916); Cat. Pl. Yun-Nan, 298 (1917). — P'ei, Verben. China in Mem. Sci. Soc. China, 1 (no. 3) : 180 (1932).

CHINA. K w e i c h o u : environs de Ou-la-gay (Tchin-lin), *J. Seguin* in herb. *Bodinier*, no. 2237, March 1898 "longues tiges sous-ligneuses, lianeuses" (syntype of *C. Seguni*; photo. in A. A.); rives du fleuve Bleu, alt. 450 m., *E. E. Maire*, June 1912, "petit arbuste, feuilles persistantes, fleurs roses" (holotype of *Caryopteris fluminis*; photo. in A. A.). Y u n n a n : environs de My-tsao, *Fr. Ducloux*, no. 110, March 4, 1897, "long tiges s'enlaçant aux arbres et buissons, fleurs coccinées, 4 graines ailées" (syntype of *C. Seguni*; photo. in A. A.).

By Dunn (l. c.) this species was referred to *C. elegans* var. *pauciflora* Prain, but as I pointed out in 1916 (l. c.) this variety is best considered a distinct species which becomes *C. Seguni* Vaniot.

Micromeria biflora Benthams, Labiat. 378 (1834). — Dunn in Not. Bot. Gard. Edinb. 6: 157 (1915). — Léveillé, Fl. Kouy-Tchéou, 210 (1914); Cat. Pl. Yun-Nan, 138 (1916).

Thymus Cavaleriei Léveillé in Fedde, Rep. Spec. Nov. 11: 298 (1912).

CHINA. K w e i c h o u : Tin-lan, montagnes sablonneuses, *J. Cavalerie*, no. 3778, "blanc-rose" (syntype of *Thymus Cavaleriei*; photo. in A. A.). Y u n n a n : Pan-pien-kai, pâturages des coteaux calcaires, alt. 2550 m., *E. E. Maire*, Sept. 1911 "Thymus vivace, étalé, fl. roses" (syntype of *Thymus Cavaleriei*; photo. in A. A.).

Elsholtzia rugulosa Hemsley in Jour. Linn. Soc. 26: 278 (1890). — Léveillé, Fl. Kouy-Tchéou, 208 (1914); Cat. Pl. Yun-Nan, 138 (1916). — Dunn in Not. Bot. Gard. Edinb. 6: 149 (1915).

Elsholtzia Labordei Vaniot in Bull. Acad. Intern. Géog. Bot. 14: 177 (1904).

CHINA. K w e i c h o u : environs de Tsin-gay, à Tchao-see, abonde dans la mont. et bord de routes, *J. Laborde* in herb. *Bodinier*, no. 2711, Sept. 7, 1899 "fleurs d'un bleu très pâle" (holotype of *E. Labordei*; photo. in A. A.).

Elsholtzia fruticosa (D. Don) Rehder in Sargent, Pl. Wilson. 3: 381 (1916).

Elsholtzia polystachya Benthams, Labiat. 116 (1832). — Dunn in Not.

Bot. Gard. Edinb. 8: 161 (1913); 6: 149 (1915). — Lévillé, Fl. Kouy-Tchéou, 208 (1914); Cat. Pl. Yun-nan, 138 (1916).

Elsholtzia tristis Lévillé in Fedde, Rep. Spec. Nov. 8: 424 (1910).

Elsholtzia Dielsii Lévillé in op. cit. 9: 441 (1911).

Elsholtzia Souliei Lévillé in op. cit. 9: 248, non p. 218 (1911).

CHINA. Szechuan: Ta-tsien-lu, *J. A. Soulié*, nos. 781 and 1023, in 1893 (syntypes of *E. Dielsii* [*E. Souliei* Lévl. p. 248, non p. 218]; photos. in A. A.). Kweichou: environs de Kouy-yang, mont du Collège, *E. Bodinier*, no. 1944, Nov. 3, 1897, "tige 1 m., fleurs blanches" (holotype of *E. tristis*, photo. in A. A.).

Elsholtzia ochroleuca Dunn in Not. Bot. Gard. Edinb. 8: 161 (1913).

Elsholtzia lampradena Lévillé in Bull. Géog. Bot. 25: 25 (1915); Cat. Pl. Yun-Nan, 137 (1916). — **Synon. nov.**

CHINA. Yunnan: pâturages des collines à Tong-tchouan, alt. 2600 m., *E. E. Maire*, Sept. 1912 "arbrisseau rameux, haut 0.40 m., fleurs blanches en épis dressés" (holotype of *E. lampradena*; photo. in A. A.).

Elsholtzia lampradena has been identified with *E. ochroleuca* according to a note on the type specimen.

Pogostemon glaber Benth in Wallich, Pl. As. Rar. 1: 31 (1830). — Lévillé, Cat. Pl. Yun-Nan, 143 (1916).

Caryopteris Esquirolii Lévillé in Fedde, Rep. Spec. Nov. 9: 449 (1911); Fl. Kouy-Tchéou, 440 (1915). — **Synon. nov.**

CHINA. Kweichou: Tchou-ly, alt. 900 m., *J. Esquirol*, no. 2053, March 1, 1910, "fl. blanche, labelle rose" (holotype of *Caryopteris Esquirolii*; merotype in A. A.).

Pogostemon glaber has not yet been recorded from Kweichou, as far as I know, but it is known from Yunnan.

Plectranthus ternifolius Don, Prodr. Fl. Nepal. 117 (1825). — Lévillé, Fl. Kouy-Tchéou 214 (1914); Cat. Pl. Yun-Nan 143 (1916). — Dunn in Not. Bot. Gard. Edinb. 6: 138 (1915).

Elsholtzia Lychnitis Lévillé & Vaniot in Fedde, Rep. Spec. Nov. 8: 425 (1910).

Teucrium Esquirolii Lévillé in Bull. Géog. Bot. 22: 236 (1912).

CHINA. Kweichou: Tchen-lin-tchéou, route de Lo-pie à Oula-gay, *L. Martin* in herb. *Bodinier*, no. 1937, Oct. 9, 1899, "tige de 1.50 m. de haut, fleur blanches, ou blanc-bleuâtre" (syntype of *Elsholtzia Lychnitis*; photo. in A. A.); route de Tou-tchéou à Pien-yang, *J. Cavalerie*, no. 2573, Nov. 1905 (syntype of *E. Lychnitis*; photo. in A. A.); coteaux de Lo-fou, *J. Esquirol*, no. 2576, Nov. 1910 (holotype of *Teucrium Esquirolii*; ex Lévillé).

Of *Teucrium Esquirolii* I have seen no specimen, but Lévillé enumerates it in 1916 (Cat. Pl. Yun-Nan, 143) as a synonym of *Plectranthus ternifolius*, probably on identification by S. T. Dunn, though Dunn does not cite it in 1915. It does not appear in the Flore du Kouy-Tchéou. *Plectranthus ternifolius* should probably not be classed as a ligneous plant, though Hooker describes it in his Flora of British India (4: 621) as a bush 3-5 ft. high.

Plectranthus coetsa Hamilton ex Don, Prodr. Fl. Nepal. 117 (1825). — Lévillé, Cat. Pl. Yun-Nan, 141 (1916).

Plectranthus Mairei Lévillé, Cat. Pl. Yun-Nan, 141 (1916), pro synon. *P. coetsa* Ham.

CHINA. Y u n n a n : pâturages des mont. derrière Tong-tchouan, 2700 m., *E. E. Maire*, Oct. (1912-13), "plante annuelle très-rameuse, fl. rouge vif" (type of *P. Mairei*; photo. in A. A.); haies, plaine de Tchéhay, 2550 m., *E. E. Maire*, Sept. [1912-13], "plante vivace, tumescente, en touffes, haut 1.40 m." (in herb. Lévillé with *P. Mairei*; photo. in A. A.).

Plectranthus Mairei is apparently an unpublished name and is cited only as a synonym of *P. coetsa* (l. c.). On Mairei's specimen from Tong-tchouan the name *Plectranthus Mairei* appears in Lévillé's handwriting; the specimen from Tchéhay is without any name, but placed in the cover of *P. Mairei*.

The majority of Labiatae described by Lévillé are herbaceous and most of them have been examined by S. T. Dunn. He published his identifications in his Notes on Chinese Labiatae (in Not. Bot. Gard. Edinb. 8: 153-171. 1913) and in his Key to the Labiatae of China (op. cit. 6: 127-208. 1915). The identifications and reductions made by Dunn were accepted by Lévillé and incorporated in his Flore du Kouy-Tchéou (p. 203-217) and in his Catalogue des plantes de Yun-Nan (p. 136-149).

SOLANACEAE

Solanum aculeatissimum Jacquin, Coll. 1: 100 (1786); Ic. Rar. 1: t. 41 (1781-86). — Merrill in Contr. Arnold Arb. 8: 149 (1934).

Solanum Bodinieri Lévillé & Vaniot in Bull. Soc. Bot. France, 55: 206 (1908).

Solanum Cavaleriei Lévillé & Vaniot, l. c. 207 (1908). — **Synon. nov.**

CHINA. H o n g k o n g : plage sablonneuse de l'île Verte, *E. Bodinier*, July 31, 1895 (holotype of *S. Bodinieri*; photo. in A. A.). K w e i c h o u : Ly-po-hien, *J. Cavalerie* in herb. *Bodinier*, no. 2722, Aug. 10, 1899 (holotype of *S. Cavaleriei*; photo. in A. A.).

Solanum Bodinieri represents a glabrescent form of this very variable

species, while *S. Cavaleriei* is much more pubescent throughout. *Solanum Bodinieri* has been identified with *S. aculeatissimum* by Merrill (l. c.).

SCROPHULARIACEAE

Brandisia racemosa Hemsley in Kew Bull. Misc. Inform. 1895: 114.

Deutzia funebris Léveillé, Sert. Yunn. 1 (1916). — Cat. Pl. Yun-Nan, 296 (1917). — **Synon. nov.**

CHINA. K w e i c h o u : rives du fleuve Bleu à Kiang-pien, alt. 350 m., *E. E. Maire*, Aug. 1913, "arbuste un peu grimpant; fl. roses" (holotype of *Deutzia funebris*; merotype in A. A.).

BIGNONIACEAE

Incarvillea Delavayi Bureau & Franchet in Jour. de Bot. 5: 138. (1891).

Tecoma Mairei Léveillé, Cat. Pl. Yun-Nan, 20 (1916). — **Synon. nov.**

CHINA. Y u n n a n : rochers sous brousse, mont. de Pe-long-tsin, alt. 3200 m., *E. E. Maire*, May 1911, "plante vivace, fl. roses grandes" (holotype of *Tecoma Mairei*; photo. in A. A.).

Though this is an herbaceous species, I am including it in this enumeration, because Léveillé has described it under the ligneous genus *Tecoma*.

ACANTHACEAE

Phlogacanthus pubinervis T. Anderson in Jour. Linn. Soc. Bot. 9: 508 (1867). — Léveillé, Cat. Pl. Yun-Nan, 6 (1915).

Aeschynanthus Dunnii Léveillé in Fedde, Rep. Spec. Nov. 9: 453 (1911); Fl. Kouy-Tchéou, 180 (1914). — **Synon. nov.**

Lonicera Menelii Léveillé, Fl. Kouy-Tchéou, 63 (1914). — **Synon. nov.**

CHINA. K w e i c h o u : without precise locality, *J. Esquirol*, no. 737, "fleur rougeâtre" (syntype of *Aeschynanthus Dunnii*; photo. in A. A.); Lo-fou, *J. Cavalerie*, no. 3475, March 1909 "couleur jaunâtre" (syntype of *Aeschynanthus Dunnii*, in fruit; photo. in A. A.); Thing-mei, 1100 m., *J. Esquirol*, no. 3540, Dec. 2, 1913 (holotype of *Lonicera Menelii*; merotype in A. A.).

Cystacanthus yangtsekiangensis (Lévl.), comb. nov.

Strobilanthes yangtsekiangensis Léveillé, Cat. Pl. Yun-Nan, 7 (1915).

CHINA. Y u n n a n : rives du fleuve Bleu, alt. 400 m., *E. E. Maire*, May 1912, "plante sous-ligneuse en touffes dressées, fl. bleues" (syntype of *Strobilanthes yangtsekiangensis*, photo. in A. A.); rives du fleuve Bleu à Ta-tchai, alt. 450 m., "plante vivace, sous-ligneuse, en touffes, fl. roses" (syntype of *S. yangtsekiangensis*; photo. in A. A.).

This species is very near *C. yunnanensis* W. W. Sm., but is easily distinguished by the closer and finer pubescence of the young branchlets, the inflorescence and the calyx, and by the numerous lateral 2-6-flowered inflorescences along last year's branches. To *C. yangtsekiangensis* apparently belong Rock 8049 from Yunnan, between Tangyueh and Likiangfu, and Schneider 671 from southern Szechuan, between Mo-so-ying and Kung-mu-ying.

RUBIACEAE

Oldenlandia Bodinieri (Lévl.) Chun in Sunyatsenia, 1: 310 (1934).

Hedyotis Bodinieri Léveillé in Fedde, Rep. Spec. Nov. 11: 64 (1912).

CHINA. K w a n g t u n g : Tay-mo-chan, sommet de la mont., 3500 ft., *E. Bodinier*, no. 1158, May 7, 1895, "petit sous-arbrisseau croissant dans les rocailles, fleurs blanches" (holotype; photo. in A. A.).

I have not been able to identify this plant with any described species.

Oldenlandia macrostemon (Hook. & Arn.) Kuntze, Rev. Gen. 1: 292 (1891). — Pitard in Lecomte, Fl. Gén. Indo-Chine, 3: 138 (1922).

Hedyotis macrostemon Hooker & Arnott, Bot. Beechey Voy. 192 (1841). — Léveillé, Cat. Pl. Yun-Nan, 245 (1917).

Hedyotis Esquirolii Léveillé in Fedde, Rep. Spec. Nov. 13: 176 (1914); Fl. Kouy-Tchéou, 367 (1915). — **Synon. nov.**

Oldenlandia Esquirolii (Lévl.) Chun in Sunyatsenia, 1: 310 (1934).

CHINA. K w e i c h o u : without precise locality, *J. Esquirol* (holotype of *H. Esquirolii*; photo. in A. A.).

Ophiorrhiza japonica Blume, Bijdr. 978 (1826).

Ophiorrhiza Cavaleriei Léveillé in Fedde, Rep. Spec. Nov. 13: 177 (1914).

Ophiorrhiza Labordei Léveillé l. c. (1914); Fl. Kouy-Tchéou, 370 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : district de Tsin-gay, rocailles, bois à Kao-tchay, *J. Laborde* in herb. *Bodinier*, May 15, 1898 (holotype of *O. Labordei*; photo. in A. A.); without locality, *J. Cavalerie* (holotype of *O. Cavaleriei*; ex Léveillé).

Ophiorrhiza Cavaleriei is cited by Léveillé in his Flore du Kouy-Tchéou as a synonym of *O. Labordei*, but Cavalerie's specimen is not cited, only Laborde's specimen from Tsin-gay. Cavalerie's specimen I have not seen.

Ophiorrhiza cantoniensis Hance in Ann. Sci. Nat. sér. 4, 18: 222 (1862). — Léveillé, Fl. Kouy-Tchéou, 370 (1915).

Ophiorrhiza Seguii Léveillé in Fedde, Rep. Spec. Nov. 13: 177 (1914). — **Synon. nov.**

Ophiorrhiza violaceo-flammea Lévillé in Bull. Géog. Bot. 25: 47 (1915); Cat. Pl. Yun-Nan, 247 (1917). — **Synon. nov.**

CHINA. K w e i c h o u : environs de Gan-pin, croissant dans les rocaillies, les trous entre des rochers, *E. Bodinier*, no. 1549, April 29, 1897, "fleurs blanches" (holotype of *O. Seguini*, photo. in A. A.). Y u n n a n : vallée de Li-tse-pin, 2700 m., *E. E. Maire*, April 1912, "sous-arbrisseau toujours vert, fl. violettes" (holotype of *O. violaceo-flammea*; photo. in A. A.).

Ophiorrhiza Seguini is not mentioned by Lévillé in his Flore du Kouy-Tchéou, but its type is enumerated, together with another specimen, under *O. cantoniensis*, which shows that Lévillé had reduced it to *O. cantoniensis*. The color of the flowers on the specimen of *O. violaceo-flammea* said to be violet does not look at all different from the color of flowers of *O. japonica*.

Ophiorrhiza cantoniensis is closely related to *O. japonica* Bl., but it may be distinguished by its oblong leaves attenuate at the base and quite glabrous, broadest at or above the middle, while *O. japonica* has shorter generally ovate or oblong leaves less attenuate or even nearly rounded at base and puberulous on the midrib beneath.

Wendlandia ligustrina Wallich, Num. List. 6272 (1832), in part, nom. nud. — Don, Gen. Syst. 2: 518 (1834). — Lévillé, Cat. Pl. Yun-Nan, 242 (1917). — Cowan in Not. Bot. Gard. Edinb. 16: 242 (1932); 18: 183 (1934).

Luculia gratissima Sw. sensu Lévillé, Fl. Kouy-Tchéou, 368 (1915), non Sweet (1826).

CHINA. K w e i c h o u : bords du Hoa-kiang, *L. Martin* in herb. *Bodinier*, no. 2563, Feb. 18, 1899, "petit arbuste, fleurs blanches" (photo. in A. A.).

This collection extends the range of *W. ligustrina* into Kweichou. Martin's specimen was identified with *W. ligustrina* by J. M. Cowan according to a note on the specimen.

Wendlandia salicifolia Franchet in herb. ex Castello in Jour. de Bot. 9: 208 (1895). — Cowan in Not. Bot. Gard. Edinb. 16: 244 (1932).

Ligustrum Thea Lévillé & Dunn in Fedde, Rep. Spec. Nov. 10: 147 (1911). — Lévillé, Fl. Kouy-Tchéou, 295 (1914).

CHINA. K w e i c h o u : without precise locality, *J. Esquirol*, no. 327, Dec. 16, 1904, "sous-arbrisseau des bords du fleuve, submergé aux grandes eaux; les feuilles donnent une infusion theiforme assez employée; fleur blanc-rose" (holotype of *Ligustrum Thea*; photo. in A. A.); without precise locality, *J. Esquirol*, no. 239 (cited in Fl. Kouy-Tchéou; photo. in A. A.).

Ligustrum Thea was first referred to *W. salicifolia* by Cowan in his "The Genus *Wendlandia*" (op. cit. 233-316).

Wendlandia Cavaleriei Lévillé in Fedde, Rep. Spec. Nov. **10**: 434 (1912); Fl. Kouy-Tchéou, 373 (1915). — Cowan in Not. Bot. Gard. Edinb. **16**: 263 (1932).

Wendlandia Feddei Lévillé in Fedde, Rep. Spec. Nov. **10**: 434 (1912); Fl. Kouy-Tchéou, 373 (1915).

CHINA. K w e i c h o u : Lo-fou, *J. Cavalerie*, no. 3297, April 1907, "fleurs blanches" (holotype of *W. Cavaleriei*; merotype in A. A.); route de Pin-fa à Lo-fou, *J. Cavalerie*, no. 2732, April 4, 1906 (holotype of *W. Feddei*; photo. and merotype in A. A.).

Wendlandia uvariifolia Hance subsp. **Dunniana** (Lévl.) Cowan in Not. Bot. Gard. Edinb. **16**: 287 (1932); **18**: 185 (1934).

Wendlandia Dunniana Lévillé in Fedde, Rep. Spec. Nov. **10**: 434 (1912); Fl. Kouy-Tchéou, 373 (1915).

CHINA. K w e i c h o u : Lo-fou, *J. Cavalerie*, no. 3476, March 1908 (holotype of *W. Dunniana*; merotype in A. A.).

Wendlandia longidens (Hance) Hutchinson in Sargent, Pl. Wilson. **3**: 392 (1916). — Cowan in Not. Bot. Gard. Edinb. **16**: 301 (1932).

CHINA. Y u n n a n : à mi-mont de Siao-ho, alt. 2800 m., *E. E. Maire*, [1911-14] "arbuste buissonnant, fl. roses" (in herb. Lévillé sub *Leptodermis Mairei*; duplicate in A. A.).

In the herbarium Lévillé there were in the cover of *Leptodermis Mairei* three specimens collected by Maire, of which two belonged to *L. Mairei* which was identified by Dr. H. Winkler as *L. pilosa* (Franch.) Diels var. *glabrescens* H. Winkl., while the third was not a *Leptodermis*, but represents the species cited above. From the Szechuan and Hupeh specimens before me it differs slightly in the smaller leaves not exceeding 14 mm. and somewhat more densely pubescent on both sides; the flowers also are slightly smaller and are rose-colored according to the collector, while Wilson under his numbers 3756 (Veitch Coll.) and 2359 gives the color of the flowers as white. Possibly the specimen cited by Cowan (l. c.) as Maire, no. 326, without locality, is of the same collection as the specimen cited above.

Emmenopterys Henryi Oliver in Hooker's Icon. **19**: t. 1823 (1889).

Mussaenda Cavaleriei Lévillé in Fedde, Rep. Spec. Nov. **13**: 178 (1914); Fl. Kouy-Tchéou, 368 (1915). — Hutchinson in Sargent, Pl. Wilson. **3**: 397 (1916). — **Synon. nov.**

Mussaenda Mairei Lévillé in Bull. Géog. Bot. **25**: 47 (1915); Cat. Pl. Yun-Nan, 247 (1917). — **Synon. nov.**

CHINA. K w e i c h o u : sur des rochers à Touan-po près Pin-yue (Pin-ue), *J. Cavalerie*, no. 2481, Aug. 10, 1905, "petit arbre à fl. blanches" (holotype of *Mussaenda Cavaleriei*; merotype in A. A.). Y u n n a n : vallée de Long-ky, 700 m., *E. E. Maire*, July 1912, "arbre moyen, fl. blanches" (holotype of *Mussaenda Mairei*; merotype in A. A.).

Adina racemosa Miquel, Cat. Mus. Bot. Lugd.-Bat. 1: 44 (Fl. Jap.) (1870).

Cornus Esquirolii Léveillé in Fedde, Rep. Spec. Nov. 13: 257 (1914); Fl. Kouy-Tchéou, 116 (1914). — **Synon. nov.**

CHINA. K w e i c h o u : rivière, Tong-tchéou, *J. Esquirol*, no. 407, June 1905 (holotype of *Cornus Esquirolii*; photo. in A. A.).

Uncaria scandens (Sm.) Hutchinson in Sargent, Pl. Wilson. 3: 406 (1916). — Léveillé, Cat. Pl. Yun-Nan, 248 (1917).

Cephalanthus Cavaleriei Léveillé in Fedde, Rep. Spec. Nov. 10: 434 (1912); Fl. Kouy-Tchéou, 365 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : Ma-jo, *J. Cavalerie*, no. 3015, May and Nov. 1908 (holotype of *Cephalanthus Cavaleriei*; merotype in A. A.).

Besides the flowering specimen described by Léveillé there is a fruiting specimen under the same number in his herbarium which is probably the specimen collected in November. This specimen apparently represents *U. rhynchophylla* (Miq.) Miq. which is of wide distribution in Eastern Asia, but to my knowledge has not been previously collected in western China.

Neonauclea Navillei (Lévl.), comb. nov.

Cephalanthus Navillei Léveillé, Fl. Kouy-Tchéou, 365 (1915).

CHINA. K w e i c h o u : ruisseau qui monte à Kiao-miay, alt. 800 m., *J. Esquirol*, no. 3631, June 5, 1913, "arbre, 6 m." (holotype of *Cephalanthus Navillei*; merotype in A. A.).

This species is very similar to *N. Griffithii* (Hook. f.) Merr. but easily distinguished by ternate heads on a rather slender peduncle about 3 cm. long, the slender pedicels being 3–4 cm. long with scars of bractlets near the middle. The leaves are identical with those of specimens of *N. Griffithii* from Yunnan (Henry, nos. 12676 and 12880) which are in flower while Esquirol's specimen is in fruit.

Mussaenda Esquirolii Léveillé, Fl. Kouy-Tchéou, 369 (1915).

Mussaenda Wilsonii Hutchinson in Sargent, Pl. Wilson. 3: 393 (1916). — **Synon. nov.**

CHINA. K w e i c h o u : forêts de Tong-tchéou, 1400 m., *J. Esquirol*, no. 3264, June 22, 1912 "couleur jaune pâle" (holotype of *M.*

Esquirolii; photo. in A. A.). H u p e h : Chang-lo-hsien, ravines, 650 m., *E. H. Wilson*, Arn. Arb. Exp. no. 3265, June 1907 "bracts white, flowers yellow" (holotype of *M. Wilsonii* in A. A.).

The name *Mussaenda Esquirolii* does not appear on the original specimen, but an unpublished name under another genus with the same specific epithet in Lévillé's hand. The specimen differs from the type of *M. Wilsonii* in the more conspicuous pubescence of the veins and veinlets of the under side of the leaf, but this may be due to the younger state of the leaves.

Mussaenda pubescens Aiton f., Hort. Kew ed. 2, 1: 372 (1810).

Mussaenda Bodinieri Lévillé in Bull. Soc. Bot. France, 55: 59 (1908); Cat. Pl. Yun-Nan, 246 (1917). — Hutchinson in Sargent. Pl. Wilson. 3: 396 (1916). — **Synon. nov.**

CHINA. K w a n g t u n g : pied du Tay-mo-chan (Taiman-san), commun dans les haies près des villages, *E. Bodinier*, no. 1159, May 6, 1895, "arbrisseau à branches sarmenteuses, fleurs blanches; diffère des autres *Mussaenda* de l'absence de grande bractée florale" (holotype of *M. Bodinieri*; photo. in A. A.).

In *Mussaenda pubescens* the enlarged calyx-lobe is sometimes much reduced in size or entirely absent. I find it entirely absent in Hongkong Herb. 2784, J. B. Norton 1475, and H. H. Chung 3391 from Fukien, and in R. C. Ching 5433 and 5435 from Kwangsi. The locality given by Lévillé as Cay-mo-chan is apparently a misprint for Tay-mo-chan as it is clearly spelled on Bodinier's label; the same locality appears on English maps as Taimau-san.

Tarennia mollissima (Hook. & Arn.) Merrill in Philipp. Jour. Sci. Bot. 13: 160 (1918). — Metcalf in Jour. Arnold Arb. 13: 29 (1932).

Ehretia Esquirolii Lévillé, Fl. Kouy-Tchéou, 54 (1914), non Lévillé (1913).

CHINA. K w e i c h o u : route de Tong-tchéou, 1200 m., *J. Esquirol*, no. 3775, June 1912 (holotype of *Ehretia Esquirolii* of 1914: photo. in A. A.).

The name *Ehretia Esquirolii* (in Fedde, Rep. Spec. Nov. 12: 335. 1913) had been given by Lévillé to another specimen collected by Esquirol at about the same time and at the same locality and numbered 3214. This specimen cannot be found in the Lévillé herbarium and was probably identified by Lévillé with another plant and the name used again for Esquirol 3775. The number 3775 seems to have been a mixture, for Lévillé enumerates in his Flore du Kouy-Tchéou the same number under *Ehretia Dunniana*, *E. Esquirolii* and *E. macrophylla*; under the last named as 3775 p.p. and without locality.

Tarenna incerta Koorders & Valeton in Meded. Lands Plantent. 59: 268 (Bijdr. Boomsort. Java, 8) (1902). — Merrill in Philipp. Jour. Sci. 17: 469 (1920).

Tarenna zeylanica Koorders & Valeton, l. c. 82 (1902); non Gaertn.

? *Webera pallida* Franchet ex Brandis, Ind. Trees, 378 (1906).

Webera Cavaleriei Léveillé in Fedde, Rep. Spec. Nov. 9: 323 (1911); Fl. Kouy-Tchéou, 372 (1915).

Webera Henryi Léveillé, Sert. Yunnan. 1 (May 1916); Cat. Pl. Yunnan, 296 (1917).

Tarenna pallida (Franch.) Hutchinson in Sargent, Pl. Wilson. 3: 410 (Aug. 1916).

CHINA. K w e i c h o u : Pin-fa, *J. Cavalerie*, no. 2342, June 8, 1905, "petit arbre" (holotype of *Webera Cavaleriei*; photo. in A. A.). Y u n n a n : Szemao, *A. Henry*, no. 11923A (holotype of *Webera Henryi*; photo. in A. A.).

The type of *Webera Cavaleriei* consists only of a year-old branch with a few leaves and a small fragment of an inflorescence with very young fruits. It differs somewhat from the type of *W. Henryi* in the manifestly truncate calyx without any indication of teeth, though in the latter specimen perfectly truncate calyces occasionally occur. The type of *W. Henryi* agrees exactly with Henry no. 10686 which was identified by Hutchinson with *Tarenna pallida* together with Henry, nos. 11923, 11923c and 11923f.

Tarenna incerta seems to be somewhat variable in the number of ovules. Koorders & Valeton state that there are two or sometimes only one ovule in each locule and refer to a tree in the garden which had in all flowers only one ovule in each cell. In the one ovary of *Webera Cavaleriei* which I examined I also found only one ovule in each cell. Merrill (l. c.) states that the usual number of seeds in each fruit is apparently two. Brandis (l. c.), however, describes the fruit of *W. pallida* as having 4–6 seeds. Two fruits examined of Henry 11923f had 1 and 3 seeds each. It, therefore, seems somewhat doubtful if *Webera pallida* Franch. of which I have not seen the type really belongs to *T. incerta*.

Gardenia jasminoides Ellis in Philos. Trans. 51(2): 935, t. 25 (1761).

Gardenia florida Linnaeus, Spec. Pl. ed. 2, p. 305, 1679 (1762). — Léveillé, Fl. Kouy-Tchéou, 366 (1915); Cat. Pl. Yunnan, 245 (1917).

Gardenia Schlechteri Léveillé in Fedde, Rep. Spec. Nov. 10: 146 (1911); Fl. Kouy-Tchéou, 366 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : without precise locality, *J. Esquirol*, no.

777, April 1905, "arbre, fl. blanche" (holotype of *G. Schlechteri*; merotype in A. A.).

Esquirol no. 777 represents a rather small-flowered form, but otherwise it does not differ from *G. jasminoides*.

Varneria augusta L. (in Amoen. Acad. 4: 136, 1759) upon which Merrill based the new combination *G. augusta*, is a nomen nudum. The oldest available specific epithet is *jasminoides*, though *florida* has been generally adopted.

Ixora Henryi Léveillé in Fedde, Rep. Spec. Nov. 13: 178 (1914); Fl. Kouy-Tchéou, 367 (1915); Cat. Pl. Yun-Nan, 245 (1917). — Pitard in Lecomte, Fl. Gén. Indo-Chine, 3: 324 (1924). — Chun in Sunyatsenia, 1: 306 (1934).

CHINA. K w e i c h o u : Lo-fou, *J. Cavalerie*, no. 3496, March 1909 (syntype; merotype in A. A.). Y u n n a n : Szemao, s. mountain forests, 5000 ft., *A. Henry*, no. 11637A, "shrub 5 ft., red flowers" (syntype; photo. and isotype in A. A.).

Here also belong Henry nos. 10407 and 10407 A-C from Mengtze and 11637 and 11637A-D from Szemao, Yunnan.

Psychotria Henryi Léveillé in Fedde, Rep. Spec. Nov. 13: 179 (1914). — Hutchinson in Sargent, Pl. Wilson. 3: 415 (1916).

CHINA. Y u n n a n : Szemao, s. e. mountains, 4000 ft., *A. Henry*, no. 12146D, "shrub 4 ft., red fruit" (holotype; photo. and isotype in A. A.).

Psychotria rubra (Lour.) Poirét, Encycl. Méth. Suppl. 4: 597 (1816).

Psychotria elliptica Ker in Bot. Reg. 8: t. 607 (1822); non H. & B. ex Roem. & Schult. (1819).

Psychotria Esquirolii Léveillé in Fedde, Rep. Spec. Nov. 10: 435 (1912); Fl. Kouy-Tchéou, 371 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : Ouang-mou, *J. Esquirol*, no. 119, June 1904 "fl. blanchâtre" (holotype of *P. Esquirolii*; photo. in A. A.).

This species has apparently not yet been recorded from western China, but seems common in southeastern China west to Kwangsi.

Psychotria Prainii Léveillé in Fedde, Rep. Spec. Nov. 9: 324 (1911); Fl. Kouy-Tchéou, 371 (1915).

CHINA. K w e i c h o u : Ouang-mou, *J. Esquirol*, 76 (holotype; photo. in A. A.); Héou-hay-tse, *J. Esquirol*, no. 860, June 1906, "fl. blanche" (enumerated in Fl. Kouy-tchéou; photo. and merotype in A. A.).

This species resembles in its capitate sessile or subsessile inflorescence *P. morindoides* Hutchins., but the inflorescence, branchlets and leaves beneath are covered with a ferrugineous pubescence similar to that of *P. pilifera* Hutchins., though shorter; besides it differs from *P. pilifera* in the sessile inflorescence, the smaller more coriaceous leaves glabrous above and in the short petioles.

Lasianthus Hookeri Clarke ex Hooker, f., Fl. Brit. Ind. **3**: 184 (1880). — Lévillé, Cat. Pl. Yun-Nan, 246 (1917).

Lasianthus Dunniana Lévillé in Fedde, Rep. Spec. Nov. **11**: 64 (1912); Fl. Kouy-Tchéou, 368 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : Lo-fou, *J. Cavalerie*, no. 3459, Oct. 1908 (holotype of *L. Dunniana*; photo. and merotype in A. A.).

Lévillé's description of the species is taken from a note on the type specimen which reads "aff. *L. trichophlebus* Hemsley, sed margine foliorum dense ciliata distincta," and is signed S. T. D(unn). It agrees exactly with Yunnan specimens referred by Hutchinson to *L. Hookeri* (in Sargent, Pl. Wilson. **3**: 402. 1916).

Lasianthus Biermanni King ex Hooker f., Fl. Brit. Ind. **3**: 190 (1880). — Lévillé, Cat. Pl. Yun-Nan, 246 (1917).

Lasianthus Esquirolii Lévillé in Fedde, Rep. Spec. Nov. **11**: 295 (1912); Fl. Kouy-Tchéou, 368 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : without precise locality, *J. Esquirol*, no. 648 (holotype of *L. Esquirolii*; photo. in A. A.).

Esquirol's specimen agrees well with Henry no. 11148, identified by Hutchinson with *L. Biermanni* (in Sargent, Pl. Wilson. **3**: 402. 1916).

Lasianthus Labordei (Lévl.) Rehder in Jour. Arnold Arb. **13**: 340 (1932).

Canthium Labordei Lévillé in Fedde, Rep. Spec. Nov. **13**: 178 (1914); Fl. Kouy-Tchéou, 384 (1915).

CHINA. K w e i c h o u : district de Tsin-gay, mont. de Kao-tchay, penchant escarpé des montagnes, *J. Laborde* in herb. *Bodinier*, no. 2109, March 7, 1898, "arbuste" (holotype of *Canthium Labordei*; photo. in A. A.).

Lasianthus Hartii Franchet in Bull. Soc. Bot. France, **46**: 209 (1899).

Canthium Dunnianum Lévillé in Fedde, Rep. Spec. Nov. **9**: 324 (1911); Fl. Kouy-Tchéou, 364 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : without precise locality, *J. Esquirol* (holotype of *Canthium Dunnianum*; photo. in A. A.); Pin-fa, mon-

tagnes, *J. Cavalerie*, no. 3226, May 20, 1907, "1 m. de h., fl. blanches" (cited in *Fl. Kouy-Tchéou*; merotype in A. A.).

In *Flore du Kouy-Tchéou* Lévillé cites only *Cavalerie*, no. 3226, which is in bloom, while the type, which is not cited, is a fruiting specimen.

This species is apparently related to *L. japonicus* Miq. from which it differs in the glabrous branchlets, glabrous calyx and glabrous or nearly glabrous leaves, and to *L. longicauda* Hook. f. from which it differs in the more coriaceous leaves with the veinlets less prominent beneath and in the five corolla-lobes being densely bearded inside up to the tip. The only flowering specimen of *L. longicauda* I have seen is Henry no. 10633 which has a 4-lobed corolla; this agrees with Hooker's original description of the flowers as "usually 4-merous." The flowers are also 4-merous in *Lasianthus Labordei*.

***Lasianthus* spec.**

Canthium Cavaleriei Lévillé in Fedde, Rep. Spec. Nov. 10: 434 (1912); *Fl. Kouy-Tchéou*, 364 (1915).

CHINA. K w e i c h o u : Ma-jo, *J. Cavalerie*, no. 3350 (holotype of *Canthium Cavaleriei*; photo. and merotype in A. A.).

This species I am unable to identify with any species of *Lasianthus* and in the absence of flowers an exact determination is not possible. It can not be a *Canthium*, since the fruit is a several-seeded berry.

***Paederia scandens* (Lour.) Merrill in Contr. Arnold Arb. 8: 163 (1934).**

Paederia foetida Thunberg in Nov. Act. Soc. Sci. Upsal. 4: 32 (1783); *Fl. Jap.* 106 (1784). — Lévillé, *Fl. Kouy-Tchéou*, 376 (1915). — Non Linnaeus (1767).

Paederia tomentosa Blume, Bijdr. 963 (1826).

Paederia chinensis Hance in Jour. Bot. 16: 228 (1878).

Paederia Esquirolii Lévillé in Fedde, Rep. Spec. Nov. 10: 146 (1911).

Paederia Dunniana Lévillé, l. c. (1911).

Paederia Mairei Lévillé in Fedde, Rep. Spec. Nov. 13: 179 (1914).

Paederia tomentosa Bl. var. *Mairei* (Lévl.) Lévillé, Cat. Pl. Yun-Nan, 247 (1917). — **Synon. nov.**

CHINA. K w e i c h o u : Ky-che-ten, *J. Esquirol*, no. 184, Aug. 1904 (holotype of *P. Esquirolii*; photo. in A. A.); without precise locality, *J. Esquirol*, no. 775, April 1905, "fleur à gorge rouge" (holotype of *P. Dunniana*; photo. in A. A.). Y u n n a n : broussailles des collines à Siao-ou-long, 2550 m., *E. E. Maire*, July 1911, "arbuste grim pant, odeur fétide, fl. roses" (holotype of *P. Mairei*; photo. in A. A.).

The specimens cited above represent the typical glabrous form of

P. scandens; *Paederia Esquirolii* and *P. Dunniana* have narrow generally oblong leaves cuneate at base, while *P. Mairei* has larger and broader generally ovate leaves rounded to truncate at base.

This species which is the most widely distributed of the genus has been generally called *P. tomentosa* Bl. which is described by Blume as having the leaves tomentose beneath. I have seen no specimens from the type region, but as long as I have no evidence to the contrary, I accept *P. tomentosa* Bl. as a synonym of *P. scandens*, representing the form with leaves pubescent beneath which occasionally occurs also in China.

***Paederia Wallichii* Hooker f., Fl. Brit. Ind. 3: 196 (1881).**

Paederia tomentosa Bl. var. *purpureo-caerulea* Léveillé & Vaniot in Bull. Soc. Bot. France, 55: 59 (1908).

Paederia Bodinieri Léveillé, Fl. Kouy-Tchéou, 371 (1915); non Léveillé (1914). — **Synon. nov.**

Cynanchum yunnanense Léveillé, Cat. Pl. Yun-Nan, 13 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : environs de Hoang-ko-chou, rochers, etc., *J. Seguin* in herb. *Bodinier*, no. 2501, Sept. 8, 1898, "liane grimpante, fleurs, atro-pourpre, avec bordure bleu-rouge, inodore" (holotype of *P. tomentosa* var. *purpureo-coerulea* and *P. Bodinieri*; photo. and merotype in A. A.). Y u n n a n : brousse des montagnes à Tcha-ho, alt. 2800 m., *E. E. Maire*, Nov. 1911, "arbuste grimpant, tomenteux, fl. violettes"; rives du fleuve Bleu à Siao-ho, 400 m., *E. E. Maire*, July 1912 "arbuste grimpant, feuil. blanches, velues en dessous" (syntypes of *Cynanchum yunnanense*; photos. in A. A.).

Paederia Bodinieri was described by Léveillé without reference to his earlier *P. tomentosa* var. *purpureo-caerulea*, but it is based on the same specimen which bears only the name var. *purpureo-caerulea* in Léveillé's hand. The name is a later homonym of his earlier *P. Bodinieri* (in Fedde, Rep. Spec. Nov. 13: 179. 1914) which he referred the same year to *Marlea* as *M. Cavaleriei* and which turns out to be identical with *Gardneria multiflora* Mak. (see Jour. Arnold Arb. 15: 309). *Cynanchum yunnanense* is not different from Seguin's specimen except that it has shorter inflorescences.

The specimens enumerated above are identical with Henry's nos. 9126 and 12442 and, judging from the description, seemed conspecific with *P. Wallichii* Hook. f. I am indebted to Sir Arthur W. Hill for a comparison of the Henry numbers with the type specimens of *P. Wallichii* in the Kew Herbarium; he writes me that Mr. C. E. C. Fischer reports on these specimens as follows: "the only difference between these numbers and the type of *P. Wallichii* Hook. f. that I can see is that the basal

lobes of the leaves are rather more rounded and the sinus slightly deeper and also the buds rather shorter. I doubt that this would suffice for even a variety." With the material at hand *P. Wallichii* Hook. f. may be characterized by cordate to subcordate leaves densely scabrid above with setulose appressed hairs somewhat bulbous at base and densely villous-pubescent or tomentose beneath, and by the lateral branches of the inflorescence bearing one or several capitate flower clusters. In the capitate or subcapitate flowers it resembles *P. microcephala* Pierre from which it differs in the short calyx-teeth and in the dense pubescence of the leaves.

Paederia Cavaleriei Lévillé in Fedde, Rep. Spec. Nov. **13**: 179 (1914).

Paederia tomentosa Bl. ex Lévillé, Fl. Kouy-Tchéou, 371 (1915). — Non Blume (1826).

CHINA. K w e i c h o u : bois des montagnes, *J. Cavalerie*, no. 2058, Aug. 1904, "plante très puante" (holotype of *P. Cavaleriei*; photo. in A. A.).

This species is similar to the preceding, but differs in the long hirsute ferrugineous pubescence of the branches, the petiole and the inflorescence, in the petiole being 7.5–8 cm. long and in the 1–1.5 mm. long fairly straight hairs thinly covering the underside of the leaves, but dense on the midrib and veins, also in the glabrous narrower calyx-teeth. According to the original description it resembles *P. pilifera* Hook. f. in the long pubescence, but Pitard (in Lecomte, Fl. Gén. Indo-Chine, **3**: 412) describes the leaves as very tomentose beneath, the calyx-tube as very tomentose and the petiole as 1–2.5 cm. long.

A specimen collected in Kweichou at Sanhoa by W. Y. Chun (no. 6301) agrees in the pubescence of the stem and the leaf and in the thin texture of the leaf very well with *P. Cavaleriei*, but the lateral branches of the inflorescence end in cincinnate cymes, as is the rule in *P. scandens*, and not in subcapitate or capitate cymes, characteristic of this and the preceding species.

Leptodermis Potanini Batalin in Act. Hort. Petrop. **14**: 319 (1898). — H. Winkler in Fedde, Rep. Spec. Nov. **18**: 152 (1922).

Leptodermis Esquirolii Lévillé in Fedde, Rep. Spec. Nov. **9**: 324 (1911); **13**: 179 (1914); Fl. Kouy-Tchéou 368 (1915); Cat. Fl. Yun-Nan, 246 (1917).

CHINA. K w e i c h o u : Hin-y-fou, *J. Cavalerie*, no. 3930, July 1912 (cited in Fl. Kouy-Tchéou; duplicate in A. A.). Y u n n a n : Ouan-tse, *J. Esquirol*, no. 1503, May 22, 1909 "blanche à l'intérieur, rouge à l'extérieur" (holotype of *L. Esquirolii*; photo. in A. A.).

Léveillé published *L. Esquirolii* a second time in 1914, but with a briefer description, both based on Esquirol no. 1503 which is a flowering specimen. Cavalerie no. 3930 from Kweichou is a fruiting specimen and owing to its fully developed broader leaves looks somewhat different, but apparently belongs to this species. *Leptodermis Esquirolii* was first identified with *L. Potanini* by H. Winkler (l. c.).

Leptodermis Potanini var. **glauca** (Diels) H. Winkler in Fedde, Rep. Spec. Nov. 18: 153 (1922).

Leptodermis motsouensis Léveillé in Bull. Géog. Bot. 25: 47 (1915); Cat. Pl. Yun-Nan, 246 (1917). — **Synon. nov.**

CHINA. Y u n n a n : collines arides de Mo-tsou, 800 m., *E. E. Maire*, May 1912, "sous-arbrisseau en touffes, fl. blanches" (holotype of *L. motsouensis*; merotype in A. A.).

The identification of *L. motsouensis* with *L. Potanini* var. *glauca* was communicated to me by Dr. H. Winkler in a recent letter as were the identifications of the following species of *Leptodermis*.

Leptodermis Potanini var. **tomentosa** H. Winkler in Fedde, Rep. Spec. Nov. 18: 153 (1922).

Leptodermis tongchouanensis Léveillé in Bull. Géog. Bot. 25: 47 (1915); Cat. Pl. Yun-Nan, 246 (1917), "*tongtchouanensis*" — **Synon. nov.**

CHINA. Y u n n a n : rochers des coteaux autour de Tong-tchouan, 2550 m., *E. E. Maire*, May 1912, "arbrisseau, feuilles velues blanchâtres, fl. blanches soyeuses" (holotype of *L. tongchouanensis*; merotype in A. A.).

Leptodermis pilosa (Franch) Diels var. **glabrescens** H. Winkler in Fedde, Rep. Spec. Nov. 18: 160 (1922).

Leptodermis Mairei Léveillé in Fedde, Rep. Spec. Nov. 13: 179 (1914); Cat. Pl. Yun-Nan, 246 (1917). — **Synon. nov.**

CHINA. Y u n n a n : plaine de Long-tang, 2500 m., *E. E. Maire*, Aug. 1912, "arbuste non grimpant, en touffes, fl. violet" (holotype of *L. Mairei*; merotype in A. A.); haies, plaine de Tong-tchouan, 2500 m., *E. E. Maire*, in 1912 "arbuste buissonnant, écorce blanche, fl. roses" (in herb. Léveillé in cover of *L. Mairei*; duplicate in A. A.).

Only the specimen from Long-tang bears the name *L. Mairei* in Léveillé's hand. As Maire no. 21 Winkler (l. c.) enumerates under his *L. pilosa* var. *glabrescens* a specimen apparently of the same collection as Léveillé's type of *L. Mairei*.

Another specimen "à mi-mont de Siao-ho, 2800 m." in herb. Léveillé under *L. Mairei* belongs to *Wendlandia longidens* (Hance) Hutch. (see p 318.).

Leptodermis oblonga Bunge in Mém. Sav. Etr. Acad. Sci. St. Pétersb. **2**: 108 (Enum. Pl. Chin. Bor. 34) (1833).

Leptodermis Chaneti Léveillé in Bull. Géog. Bot. **25**: 47 (1915).

CHINA. H o p e i : montagnes de Ping-chan, *L. Chanet*, no. 538 bis, Aug. 1910; without precise locality, *L. Chanet*, no. 574, June 1904 (syn-types of *L. Chaneti*; merotypes in A. A.).

Prismatomeris Henryi (Lévl.), comb. nov.

Canthium Henryi Léveillé in Fedde, Rep. Spec. Nov. **13**: 178 (1914); Cat. Pl. Yun-Nan, 245 (1917). — **Synon. nov.**

Prismatomeris brevipes Hutchinson in Sargent, Pl. Wilson. **3**: 413 (1916). — Léveillé, Cat. Pl. Yun-Nan, 247 (1917). — **Synon. nov.**

CHINA. Y u n n a n : Meng-tse, S. E. mountains, 5000 ft., *A. Henry*, no. 9040F, "shrub 6 ft., fruit red" (holotype of *Canthium Henryi*; photo. in A. A.; paratype of *P. brevipes*; isotype in A. A.).

There is also an isotype of the holotype of *P. brevipes*, Henry 9040E, in the herbarium of the Arnold Arboretum and of another paratype, Henry 9040D.

CAPRIFOLIACEAE

Sambucus javanica Bl. var. **Argyi** (Lévl.), var. nov.

Sambucus Argyi Léveillé in Bull. Géog. Bot. **24**(no. 3301): 292 (1914); in Mem. Acad. Ci. Arts Barcelona, ser. 3, **12**: 545 (Cat. Pl. Kiang-Sou, 5) (1916).

CHINA. K i a n g s u : Ka-se-dao, trouvé venant de Tou-ka-dou, *Ch. d'Argy* [1848-66] (holotype of *S. Argyi*; photo. in A. A.); Sê-hom, (jardin), *Ch. d'Argy* [1848-66] "fruit rouge" (with *S. Argyi* in herb. Léveillé; photo. in A. A.).

This variety differs from the type in the shorter and comparatively broader more coarsely serrate leaflets, the lateral ones ovate-oblong to oblong (5×1.8), the terminal elliptic or elliptic-obovate (6×3), and slightly scaberrulous on the veins.

Sambucus Argyi was first referred to *S. javanica* by H. K. Airy-Shaw according to a note on the specimens.

Viburnum erubescens Wallich, Pl. As. Rar. **2**: 29, t. 143 (1830). — Léveillé, Cat. Pl. Yun-Nan, 28 (1916).

Viburnum botryoideum Léveillé, Cat. Pl. Yun-Nan, 28 (1915). — **Synon. nov.**

CHINA. Y u n n a n : rochers, brousse de Kiao-me-ti, 3100 m., *E. E. Maire*, May 1913, "arbuste, fleurs roses" (holotype of *V. botryoideum*; merotype in A. A.).

Viburnum oliganthum Batalin in Act. Hort. Petrop. **13**: 372 (1894).

Viburnum Stapfianum Léveillé in Fedde, Rep. Spec. Nov. 9: 443 (1911); Fl. Kouy-Tchéou, 66 (1914). — **Synon. nov.**

CHINA. K w e i c h o u : Ma-jo, *J. Cavalerie*, no. 3002, May 1908, "petit arbre, fleurs roses" (holotype of *V. Stapfianum*; merotype in A. A.).

This species seems common in Szechuan; the specimen cited above is the first I have seen from outside of that province.

Viburnum sympodiale Graebner in Bot. Jahrb. 29: 587 (1901). — Rehder in Sargent, Trees & Shrubs, 2: 83, 108, t. 139 (1908).

Viburnum Martini Léveillé in Fedde, Rep. Spec. Nov. 9: 443 (1911); Fl. Kouy-Tchéou, 66 (1914). — **Synon. nov.**

CHINA. K w e i c h o u : Pin-fa, bois, rare, *J. Cavalerie*, no. 2272, April 4, 1905, "fl. blanches" (holotype of *V. Martini*; merotype in A. A.).

Viburnum Cavaleriei Léveillé in Fedde, Rep. Spec. Nov. 9: 442 (1911); Fl. Kouy-Tchéou, 66 (1914).

CHINA. K w e i c h o u : Pin-fa, montagnes, *J. Cavalerie*, no. 977, April 13, 1903, "h. 1 à 2 m., fl. blanches odorantes," (holotype; photo. and merotype in A. A.).

This species is closely related to *V. fallax* Graebn. and *V. chinchanense* Graebn. differing from the former in its coriaceous leaves rugulose and stellate pubescent above and from the latter in the glabrous ovaries and the leaves being sparingly stellate-pubescent and somewhat scabrid above. Both related species have been collected in Kweichou; *V. fallax* is represented in this herbarium from Kweichou by Steward, Chiao & Cheo 11, and *V. chinchanense* by Y. Tsiang 7419 and 9216 and also by another specimen, Tsiang 8424, which approaches *V. Rosthornii* Graebn. by its larger subcordate leaves sparingly stellate above.

Viburnum congestum Rehder in Sargent, Trees & Shrubs, 2: 111 (1907). — Léveillé, Cat. Pl. Yun-Nan, 28 (1915). — P'ei in Mem. Sci. Soc. China 1 (no. 3): 90 (Verben. China) (1932).

Hedyotis Mairei Léveillé in Fedde, Rep. Spec. Nov. 13: 176 (1914); Cat. Pl. Yun-Nan, 245 (1917). — **Synon. nov.**

Viburnum Mairei Léveillé, Cat. Pl. Yun-Nan, 28 (1915). — **Synon. nov.**

Premna Esquirolii Léveillé, Sert. Yunnan. 3 (1916); Cat. Pl. Yun-Nan, 298 (1917).

Oldenlandia Mairei (Lévl.) Chun in Sunyatsenia, 1: 314 (1934).

CHINA. Y u n n a n : brousse du plateau de Ta-hai-tse, alt. 3200 m., *E. E. Maire*, May (1912 or 1913), "grande arbuste, feuilles caduques, fl. blanches" (holotype of *Hedyotis Mairei*, named *H. yunnanensis*

on the label of the type specimen; photo. in A. A.); brousse au pied de Io-chan, 3200 m., *E. E. Maire*, May 1912, "arbuste haut 1.30 m.," (holotype of *V. Mairei*; merotype in A. A.); brousse des montagnes à Motsou, 800 m., *E. E. Maire*, May 1912, "arbuste, feuilles caduques, fl. blanches" (holotype of *Premna Esquirolii*; merotype in A. A.).

The three specimens cited above have the corolla tube somewhat shorter than in the type of *V. congestum*, the tube being only slightly longer than the lobes, but in the otherwise similar *V. utile* Hemsl. the tube is wide-campanulate and much shorter than the lobes. *Viburnum congestum* differs from *V. utile* also in the less dense grayish tomentum of the under side of the leaves, the individual hairs being distinguishable and usually have shorter rays, while in *V. utile* they are matted and the tomentum is whitish, brownish on the veins in young leaves. There are, however, specimens of *V. congestum* with a denser tomentum similar to that of *V. utile*. Geographically the two species seem to be well separated; *V. congestum* is common in Yunnan and extends into Kweichou and western Szechuan, while *V. utile* occurs in Hupeh and extends to eastern Szechuan.

***Viburnum cylindricum* Ham. var. *crassifolium* (Rehd.) Schneider** in Bot. Gaz. 64: 77 (1917).

Viburnum crassifolium, Rehder in Sargent, Trees & Shrubs, 2: 112 (1908). — Lévillé, Cat. Pl. Yun-Nan, 28 (1915).

Viburnum pinfaense Lévillé in Fedde, Rep. Spec. Nov. 9: 442 (1911); pro parte, quoad Cavalerie no. 1483; Fl. Kouy-Tchéou, 66 (1914). — **Synon. nov.**

CHINA. Kweichou: Pin-fa, bois, *J. Cavalerie*, no. 1483, Oct. 12, 1903 (syntype of *V. pinfaense*; merotype in A. A.).

This variety has been collected in Kweichou in three different localities by Y. Tsiang (nos. 4121, 7558 and 9137). The leaves of Cavalerie's specimen are unusually small and narrow.

Under *V. pinfaense* Lévillé describes two different plants, of which the fruiting specimen belongs here, while the flowering one belongs to *V. sempervirens* K. Koch.

***Viburnum ternatum* Rehder** in Sargent, Trees & Shrubs, 2: 37, 112 t. 117 (1907).

Viburnum Chaffanjonii Lévillé in Fedde, Rep. Spec. Nov. 9: 443 (1911); Fl. Kouy-Tchéou, 66 (1914). — **Synon. nov.**

CHINA. Kweichou: Pin-fa, bois presque à pic, *J. Cavalerie*, no. 3093, July 2, 1907 (holotype of *V. Chaffanjonii*; merotype in A. A.).

This very distinct species, differing in its ternate leaves from all other species, was known to me before only from Szechuan: banks of Min

River (Wilson 3736), Mt. Omei (W. P. Fang 2461, 2631, 3309, 3355 and F. T. Wang 23138), and Kuan-hsien (W. P. Fang 2021).

Viburnum Schneiderianum Handel-Mazzetti in Akad. Wiss. Wien Anzeig. 1925: 66 (Pl. Nov. Sin. Forts. 33: 4) (1925).

CHINA. Y u n n a n : rochers de Io-chan, alt. 3200 m., *E. E. Maire*, May (1911-13), "arbrisseau rampant, toujours vert," (in herb. Lévillé sub *Gaultheria crenulata*; duplicate in A. A.).

The specimen cited above was referred by Lévillé to *Gaultheria crenulata* Kurz and represents, at least partly, the plant enumerated under that name in his Cat. Pl. Yun-Nan, 86 (1916).

Viburnum sempervirens K. Koch, Hort. Dendr. 300 (1853). — Rehder in Sargent, Trees & Shrubs, 2: 95, 113, t. 145 (1908).

Viburnum pinfaense Lévillé in Fedde, Rep. Spec. Nov. 9: 442 (1911), pro parte, quoad specim. no. 1056; Fl. Kouy-Tchéou, 66 (1914). — **Synon. nov.**

CHINA. K w e i c h o u : Pin-fa, montagnes, *J. Cavalerie*, no. 1056, June 11, 1903 (syntype of *V. pinfaense*; merotype in A. A.).

This species seems to be rare in western China. I have seen it only from Pin-fa, Kweichou (Cavalerie 1056 and Y. Tsiang 6385), and from Szemao, Yunnan (Henry 12753).

Viburnum foetidum Wallich, Pl. As. Rar. 1: 49, t. 61 (1830). — Lévillé, Cat. Pl. Yun-Nan, 28 (1915). — P'ei in Mem. Sci. Soc. China, 1, no. 3: 90 (Verben. China) (1932).

Viburnum ajugifolium Lévillé in Fedde, Rep. Spec. Nov. 9: 441 (1911); Fl. Kouy-Tchéou, 65 (1914). — **Synon. nov.**

Premna Valbrayi Lévillé, Sert. Yunnan. 4 (1916); Cat. Pl. Yun-Nan, 299 (1917).

CHINA. K w e i c h o u : environs de Kouy-yang, mont du Collège, c. dans les haies, bords des ruisseaux, *E. Bodinier*, no. 2231, May 18, 1898, "fl. blanches" (holotype of *V. ajugifolium*; merotype in A. A.). Y u n n a n : haies et brousses des montagnes, à Tong-tchouan, 2500-2700 m., *E. E. Maire*, July 1912, "arbuste grêle, feuell. caduques" (holotype of *Premna Valbrayi*; merotype in A. A.).

The two specimens cited above are similar to the form described as *V. ceanothoides* C. H. Wright.

Viburnum foetidum var. **rectangulatum** (Graebn.) Rehder in Sargent, Trees & Shrubs, 2: 114 (1908), "*rectangulum*."

Viburnum Touchanense Lévillé in Fedde, Rep. Spec. Nov. 9: 442 (1911); Fl. Kouy-Tchéou, 66 (1914). — **Synon. nov.**

Hedyotis yunnanensis Léveillé in Fedde, Rep. Spec. Nov. 13: 176 (1914); Cat. Pl. Yun-Nan, 245 (1917). — **Synon. nov.**

Oldenlandia yunnanensis (Lévl.) Chun in Sunyatsenia, 1: 310 (1934).

CHINA. K w e i c h o u : environs de Tou-chan, bord de la route, *J. Cavalerie*, no. 2192, July 5, 1897, "arbrisseau aux fleurs odorantes" (holotype of *V. Touchanense*; merotype in A. A.). Y u n n a n : broussailles des collines à Long-ky, alt. 700 m., *E. E. Maire*, June 1911, "arbuste à feuilles caduques, fl. blanches" (holotype of *Hedyotis yunnanensis*; photo. in A. A.).

Viburnum setigerum Hance in Jour. Bot. 20: 261 (1882). — Rehder in Jour. Arnold Arb. 12: 77 (1931).

Viburnum theiferum Rehder in Sargent, Trees & Shrubs, 2: 45, 113, t. 121 (1907).

Viburnum Bodinieri Léveillé in Fedde, Rep. Spec. Nov. 9: 442 (1911); Fl. Kouy-Tchéou, 65 (1914).

CHINA. K w e i c h o u : environs de Kouy-yang, bois de Kin-lin-chan, *E. Bodinier*, no. 2193, April 14, 1898, "arbuste, fl. blanches" (syntype of *V. Bodinieri*; merotype in A. A.); Pin-fa, bois ombreux, *J. Cavalerie*, no. 1285, May, 1903, "fl. blanches, odorantes" (syntype of *V. Bodinieri*; photo. in A. A.).

Viburnum Bodinieri was identified with *V. setigerum* by the writer and the identification published in 1931 (l. c.). The species has been collected in Kweichou also by Y. Tsiang near Tsunyi (no. 5318) and on the Yun-fu-shan near Pin-fa (no. 5510) and near Tuyun (5942).

Viburnum corylifolium Hooker f. & Thomson in Jour. Linn. Soc. 2: 174 (1858).

Viburnum Dunnianum Léveillé in Fedde, Rep. Spec. Nov. 9: 442 (1911); Fl. Kouy-Tchéou, 66 (1914). — **Synon. nov.**

Viburnum barbigerum Léveillé, Fl. Kouy-Tchéou, 65 (1914). — **Synon. nov.**

CHINA. K w e i c h o u : route de Pin-yue à Kouy-yang, bords d'une rivière, *L. Martin* in herb. *Bodinier*, no. 2598, May 13, 1899, "grand arbuste, fl. blanches"; environs de Kouy-yang, mont du Collège, *J. Chaffanjon*, May 1, 1898, "arbuste, fl. blanches"; route de Pin-fa à Oug-lan, *J. Cavalerie*, Aug. 1908 "fruite rouge" (syntypes of *V. Dunnianum*; photos. of Martin's and Cavalerie's specimens, merotype of Chaffanjon's specimen in A. A.); Pin-fa, bois de hautes montagnes, *J. Cavalerie*, no. 1742, Aug. 1904 (holotype of *V. barbigerum*; merotype in A. A.).

Viburnum barbigerum agrees in all its characters with the other specimens cited, but the fruits are strikingly different in being densely covered with long setose hairs. I suspect, however, that this development

of hairs is abnormal, since I have found a few other specimens of *Viburnum* namely R. C. Ching nos. 2826 and 2952 of *V. ichangense* (Hemsl.) Rehd. from Anhwei with some of the fruits densely covered with similar, though somewhat shorter, hairs, while the rest of the fruits was perfectly normal and glabrous.

Viburnum corylifolium is perhaps only a variety of *V. dilatatum* Thbg. differing chiefly in the long spreading hairs of the young branchlets, inflorescence and petioles, while in *V. dilatatum* these parts are covered by a short and close stellate tomentum. *Viburnum corylifolium* has been collected in Kweichou also by Y. Tsiang (no. 5779) near Tu-yun and by Steward, Chiao and Cheo, (no. 583) on Niu-tu-shan; *V. dilatatum* was collected by Y. Tsiang (no. 6270) on Yao-ren-shan, Sanhoa.

Viburnum erosum Thbg. var. ***Taquetii*** (Lévl.) Rehder in Sargent, Pl. Wilson. 1: 311 (1912). — Nakai in Nakai & Koidzumi, Trees & Shrubs Jap. ed. 2, 1: 609 (1927). — Makino & Nemoto, Fl. Jap. ed. 2, p. 1146 (1931).

Viburnum Taquetii Léveillé in Fedde, Rep. Spec. Nov. 9: 443 (1911).

Viburnum erosum var. *punctatum* Franchet & Savatier ex Nakai, Fl. Sylv. Kor. 11: 42, t. 12 c. d (1921) quoad synonym. *V. Taquetii* Lévl., vix Franch. & Sav.

CHINA. K o r e a : Quelpaert, in silvis Yengsil, 1000 m., *E. Taquet*, no. 4281, Aug. 12, 1910 (holotype of *V. Taquetii*; photo. and isotype in A. A.).

This peculiar variety chiefly characterized by the narrow leaves partly with two basal lobes near the base has been collected in Quelpaert also by E. H. Wilson (no. 9406). Nakai in 1921 (l. c.) referred it to *V. erosum* var. *punctatum* Franch. & Sav., but that variety represents apparently the plant with broader leaves densely stellate-pubescent above which seems to be the most widely distributed form. The glabrous or glabrescent form, var. *laeve* Franch. & Sav., which seems much rarer must be considered the typical form, since Thunberg (Fl. Jap. 124) describes the leaves as glabrous.

Dipelta yunnanensis Franchet in Rev. Hort. 1891: 246, fig. 62. — Léveillé, Cat. Pl. Yunnan, 27 (1915).

Cavaleriella Dunniana Léveillé, Fl. Kouy-Tchéou, 61 (1914). —

Synon. nov.

CHINA. K w e i c h o u : hautes montagnes, Long-ly, *J. Cavalerie*, no. 3023, May 1908 (holotype of *Cavaleriella Dunniana*; merotype in A. A.).

The leaves are pilose on the midrib and veins beneath, also the young branchlets and the inflorescence are pilose.

Abelia verticillata Lévillé, Fl. Kouy-Tchéou, 61 (1914).

CHINA. K w e i c h o u : Pin-fa, ruisseau du sud, *J. Cavalerie*, no. 497, Sept. 1912, "fl. blanche-violette-pourprée" (holotype; photo. in A. A.).

This species appears to be closely related to *A. uniflora* R. Br. and *A. Graebneriana* Rehd., but differs from both in the pilose branches and in the ovary being pilose with rather long white hairs; it also differs from the former in the ciliate leaves and from the latter in the subcoriaceous leaves not bearded in the axils and without hairs alongside the midrib and the base of the lateral veins. On one of the branches of the type specimen the leaves are in whorls of threes, from which the specific epithet is derived, but the other branch has opposite leaves; branches with ternate leaves are also occasionally found in *A. uniflora* and in other species, e. g. in Wilson no. 747 of *A. parvifolia* Hemsl.

Abelia Schumannii (Graebn.) Rehder in Sargent, Pl. Wilson. 1: 121 (1911). — Lévillé, Cat. Pl. Yun-Nan, 26 (1915).

Strobilanthesis deutziaefolius Lévillé in Fedde, Rep. Spec. Nov. 12: 20 (1913).

Abelia deutziaefolia (Lévl.) Lévillé, Fl. Kouy-Tchéou, 60 (1914). — **Synon. nov.**

Strobilanthes deutziaefolia, Lévillé, l. c. (1914), pro synonym.

Abeliae deutziaefoliae. — Ind. Kew. Suppl. 4: 252 (1921).

Abelia Mairei Lévillé, Cat. Pl. Yun-Nan, 26 (1915). — **Synon. nov.**

CHINA. K w e i c h o u : sous bois, *J. Esquirol*, no. 466, June 1905, "sous-arbrisseau, fl. blanches, panachées de rose," (holotype of *Strobilanthesis deutziaefolius*; merotype in A. A.). Y u n n a n : rochers des collines à Siao-ou-long, 2250 m., *E. E. Maire*, June 1912, "arbuste délicat, buissonnant, haut 0.80 m., fl. roses (holotype of *A. Mairei*; merotype in A. A.).

The leaves of Esquirol's no. 466 are rather large being up to 3.5 cm. long and resemble somewhat those of *A. Graebneriana* Rehd., though scarcely acuminate, but the branchlets are pubescent.

Abelia myrtilloides Rehder in Sargent, Pl. Wilson. 1: 120 (1911).

Strobilanthesis hypericifolius Lévillé in Fedde, Rep. Spec. Nov. 12: 20 (1913), "*hypercifolia*."

Abelia Bodinieri Lévillé, Fl. Kouy-Tchéou, 61 (1914) pro synonym. *A. parvifoliae*.

Abelia parvifolia Hemsl. sec. Lévillé, Fl. Kouy-Tchéou, 61 (1914), saltem quoad specim. Bodinier, no. 1607, vix Hemsley.

Strobilanthes hypericifolia Lévillé, l. c. (1914), pro synonym. *A. parvifoliae*. — Ind. Kew. Suppl. 5: 252 (1921).

CHINA. K w e i c h o u : mont de Lou-tsong-koan, 1500 m., Kien-

lin-shan ça at là dans les montagnes rocailleuses, *E. Bodinier*, no. 1607, June 1, 1897 and June 19, 1899, "petit arbuste à jolies fleurs roses" (syntypes of *Strobilanthes hypericifolius*; photo. and merotype in A. A.).

Léveillé cites in his *Flore du Kouy-Tchéou* (l. c.) under *A. parvifolia* as synonyms besides *Strobilanthes hypericifolia* the unpublished name *A. Bodinieri*; both names appear on the labels of the type sheet of Bodinier no. 1607. The two specimens on the type sheet are somewhat intermediate between *A. myrtilloides* and *A. parvifolia* Hemsl., but in the oblong-elliptic or oblong-ovate shape of the leaves glabrous above and nearly so beneath they seem closer to the former, only in the glandular under surface they approach *A. parvifolia* which typically has ovate leaves of thicker texture pilose and glandular on both surfaces. A form very similar to Bodinier's specimen was collected near Kwei-yang, Kweichou, by Handel-Mazzetti, (no. 10477) who determined it as "*A. parvifolia* Hemsl. trans. ad *A. myrtilloides* Rehd."

Abelia Cavaleriei Léveillé, *Fl. Kouy-Tchéou*, 60 (1914).

CHINA. K w e i c h o u : sud de Tin-fan, mont. rocheuses, *J. Cavalerie*, no. 1909, Oct. 1904, "fl. blanches" (holotype; merotype in A. A.).

This is a very distinct species on account of its subcoriaceous leaves which recall those of *Ligustrum strongylophyllum* Hemsl. The species is apparently nearest *A. chinensis* R. Br., but is readily distinguished by the subcoriaceous perfectly glabrous quite entire leaves broadly ovate to orbicular-ovate, 1–2 cm. long, rounded or broadly cuneate at base, obtuse or rounded and apiculate at the apex. The branchlets and the many flowered terminal inflorescence are minutely puberulous. The specimen is in fruit but according to the collector the flowers are white.

Lonicera tangutica Maximowicz in Bull. Acad. Sci. St. Pétersb. **24**: 48 (1877); in Mém. Biol. **10**: 75 (1877).

Lonicera Rocheri Léveillé in Bull. Géog. Bot. **24**(no. 301): 289 (1914); Cat. Pl. Yun-Nan, 27 (1915). — **Synon. nov.**

CHINA. Y u n n a n : brousse de Lan-mou-kiao, 3000 m., *E. E. Maire*, May 1912, "arbuste en touffes; fl. jaunes" (holotype of *L. Rocheri*; merotype in A. A.).

The species cited above differs somewhat from typical *L. tangutica* in the linear-lanceolate somewhat leafy bracts about twice as long as ovary, in the anthers being exerted about one-half and in the less slender corolla-tube, but in its other characters it agrees with this species.

Lonicera ligustrina Wallich in Roxburgh, *Fl. Ind. ed. 2*, **2**: 179 (1824). — Léveillé, Cat. Pl. Yun-Nan, 27 (1915).

Lonicera missionis Léveillé, Fl. Kouy-Tchéou, 63 (1914), pro parte, quoad specim. "Esquirol (May 10, 1906), Chaffanjon no. 2215"; Cat. Pl. Yun-Nan, 27 (1915).

CHINA. K w e i c h o u : environs de Kouy-yang, mont. du Collège, à la cascade, *J. Chaffanjon* in herb. *Bodinier*, no. 2215, April 14, 1898, "arbuste" (syntype of *L. missionis*; photo. in A. A.); mont du Collège, grotte, *J. Esquirol*, May 10, 1906 "fl. blanches" (syntype of *L. missionis*; merotype in A. A.). Y u n n a n : sous bois de couteaux à Long-ky, 700 m., *E. E. Maire*, "arbuste toujours vert, fl. blanches," (in herb. Léveillé under *L. missionis*; duplicate in A. A.).

This species has been collected in Kweichou also by W. Tsiang (nos. 4580, 5972, 7640) and by Steward, Chiao & Cheo (no. 244).

Lonicera pileata Oliver in Hooker, Icon. Pl. 16: t. 1585 (1887). — Léveillé, Cat. Pl. Yun-Nan, 27 (1915).

Lonicera missionis Léveillé, Fl. Kouy-Tchéou, 63 (1914) pro parte, quoad specimen "Laborde 2502"; Cat. Pl. Yun-Nan, 27 (1915). —

Synon. nov.

Lonicera buxifolia Léveillé, Fl. Kouy-Tchéou, 63 (1914); Cat. Ill. Seu-Tchouen, t. 11 (1918) MS. — **Synon. nov.**

CHINA. K w e i c h o u : environs de Tsin-gay à Kia-la-tchong, *J. Laborde* in herb. *Bodinier*, no. 2502, Nov. 1898 "les fruits sont des jolies perles bleu-tendre, pulpeuses" (syntype of *L. missionis*; photo. in A. A.); environs de Kouy-yang, mont du Collège, rochers de la cascade, au bords de l'eau, *J. Chaffanjon* in herb. *Bodinier*, no. 2169, April 12, 1898, "fl. jaunâtres" (syntype of *L. buxifolia*; photo. in A. A.); grotte du Collège, 1350 m., *J. Esquirol*, no. 2069, April 1910, "blanche" (syntype of *L. buxifolia*; photo. in A. A.); Pin-fa, ruisseaux, *J. Cavalerie*, no. 1319, April 9, 1902, "fl. blanche" (in herb. Léveillé under *L. buxifolia*; photo. in A. A.).

This species has been collected in Kweichou also by Y. Tsiang (nos. 4529, 4562, 7937) and by Steward, Chiao & Cheo (no. 803); the last named specimen is approaching in the shape of its leaves f. *linearis* Rehd. The specimens named *L. buxifolia* by Léveillé differ from typical *L. pileata* in their rather small leaves. The two species, *L. ligustrina* and *L. pileata*, are closely related and connected by intermediate forms in regard to shape of the corolla and of the leaves and to pubescence. Without flowers *L. ligustrina* may be distinguished by the leaves being generally ovate, rounded at base, acuminate, and with the midrib more or less impressed above at least toward the base and strigose, while *L. pileata* has generally elliptic to oblong leaves, narrowed at base, obtuse to acute at apex, with the midrib distinctly elevated above and glabrous. In regard to shape and pubescence of the leaves *L. nitida* Wils. seems

intermediate between the two, but the leaves are much smaller and usually broader, generally ovate, but not acuminate. *Lonicera virgulatorum* W. W. Sm. is very close to *L. ligustrina* and chiefly distinguished by the shape of the corolla.

Lonicera fragilis Léveillé in Fedde, Rep. Spec. Nov. 13: 337 (1914); Cat. Pl. Yun-Nan, 37 (1915).

CHINA. Y u n n a n : vallée de Li-tse-pin, 2800 m., *E. E. Maire*, April 1913, "arbuste cassant, haut de 1.20 m., fl. roses" (holotype; merotype in A. A.).

Frutex metralis ramis hornotinis sparse setosis vel glabris; gemma terminalis interdum evoluta perulis duabus exterioribus et 4-6 interioribus. Folia nondum plane evoluta, elliptico-oblonga, acuminata, basi cuneata, utrinque hirsuta, glandulis sparsis intermixtis, margine ciliata et stipitato-glandulosa. Flores praecoces in axillis bractearum ad basin ramulorum; pedunculi brevissimi glabri; bracteae late ovatae, 8-10 mm. longae, irregulariter eroso-denticulatae, basin versus ciliatae et sparsissime stipitato-glandulosae, apicem versus glabrae, ceterum extus intusque glaberrimae; ovaria subglobosa, glabra; calyx ovario circiter duplo longior, latus et plicatus, dentibus carnosulis inaequalibus 1.5-3 mm. longis, late ovatis apice rotundatis margine irregulariter erosulis glabris; corolla rosea (ex collectore), infundibuliformis, tubo 7-8 mm. longo basi manifeste gibboso supra paullo ampliato extus basi excepta sparse setoso-hirsuta, intus a medio ad faucem villosa-hirsuta, lobis late ovatis apice rotundatis 3 mm. longis glabris; stamina medio tubo affixa, antheris 2.5 mm. longis faucem non attingentibus, filamentis glabris brevissimis; stylus medium tubum non superans, glaber.

As Léveillé's description is very brief and inaccurate particularly in regard to the calyx which he describes "calyce ciliato," apparently taking the bracts for the calyx, I have given above a more complete description. The species seems nearest to *L. nubigena* Rehd., from which it chiefly differs in the bracts being quite glabrous except ciliate toward the base, in the large calyx, in the corolla being sparingly setose-hirsute outside, not short-pubescent and glandular, in the hirsute pubescence at the mouth with the anthers much below the mouth, not just reaching the mouth as in *L. nubigena*, and in the glabrous style.

Lonicera lanceolata Wallich in Roxburgh, Fl. Ind. ed. 2, 2: 177 (1824). — Léveillé, Cat. Pl. Yun-Nan, 27 (1915).

Lonicera acrophila Léveillé in Bull. Géog. Bot. 24(no. 301): 289 (1914); Cat. Pl. Yun-Nan, 27 (1915). — **Synon. nov.**

CHINA. Y u n n a n : haut plateau de Je-ma-tchouan, 3200 m.,

E. E. Maire, July 1912, "arbre moyen, fl. roses" (holotype of *L. acrophila*; merotype in A. A.).

According to Maire this is a medium-sized tree, but by most collectors it is described as a shrub, 4–8 ft. tall.

Lonicera Koehneana Rehder in Sargent, *Trees & Shrubs*, 1: 41, t. 21 (1902). — Lévillé, *Cat. Pl. Yun-Nan*, 27 (1915).

Lonicera gynopogon Lévillé in Bull. Géog. Bot. 24 (no. 301): 289 (1914); *Cat. Pl. Yun-Nan*, 27 (1915). — **Synon. nov.**

CHINA. Y u n n a n : brousse derrière Tong-tchouan, alt. 2550 m., *E. E. Maire*, May 1912, "Lonicera non grimpant, rameaux courts et grêles, fl. blanc-jaune" (holotype of *L. gynopogon*; photo. in A. A.); haies, plaine de Tong-tchouan, alt. 2500 m., *E. E. Maire*, May [1912], "fl. de Lonicera, mi-blanche, mi-jaune" (in herb. Lévillé under *L. gynopogon*; photo in A. A.); haies de Tchéou-kia-tse-tang, alt. 2500 m., *E. E. Maire*, "arbuste buissonnante, haut 2 m., feuilles molles, velues et blanches en dessous, fl. mi-blanches, mi-jaunes, inodores" (in herb. Lévillé under *L. gynopogon*; duplicate in A. A.).

Specimens from the same locality and partly apparently of the same collection have been distributed by the Arnold Arboretum under Maire, no. 142 and no. 286.

Lonicera Pampaninii Lévillé in Fedde, *Rep. Spec. Nov.* 10: 145 (1911); Fl. Kouy-Tchéou, 64 (1914); *Cat. Pl. Yun-Nan*, 27 (1915).

Lonicera Henryi var. *setuligera* W. W. Smith in Not. Bot. Gard. Edinb. 10: 47 (1917).

CHINA. K w e i c h o u : mont de Lou-tsong-koan, Tsin-gay, rocaïles à Ché-tiou-tchay, Gan-pin, buissons et rochers de la montagne, *L. Martin* in herb. *Bodinier*, no. 1623, June 10, 1897 and June 27, 1899, "fleurs jaunes" (syntypes; merotype in A. A.).

This species is similar to *L. Henryi* Hemsl., but is easily distinguished by the slenderer corolla-tube densely clothed with reflexed yellowish hairs; in the subsessile or sessile flowers with subulate pilose bracts exceeding the pilose calyx-lobes; the leaves which closely resemble those of *L. Henryi* are pilose on the midrib above and below otherwise glabrous even on the margin.

This species has been collected in Kweichou also by Y. Tsiang near Tsun-yi and Pin-fa; nos. 5277 and 5377; also Steward, Chiao & Cheo no. 271 from Tsun-yi is probably the same, but it has no flowers.

Lonicera macrantha Sprengel, *Syst. Veg.* 4²: 82 (1827). — Lévillé, Fl. Kouy-Tchéou, 63 (1915).

Lonicera Guillonii Lévillé & Vaniot, in Bull. Soc. Bot. France, 51: cxliv (1904).

CHINA. K w e i c h o u : Pin-fa, *J. Cavalerie*, no. 1015, May 28, 1903, "fl. blanches et jaunes au vieillissant, sans odeur" (holotype of *L. Guillonii*; photo. in A. A.).

Cavalerie no. 1015 is cited by Lévêillé in his Flore du Kouy-Tchéou under *L. macrantha* (l. c.), but the name *L. Guillonii* is not mentioned. The specimen differs somewhat from typical *L. macrantha* in the shorter and slighter pubescence of the branches and in the scarcely ciliate leaves.

Lonicera Esquirolii Lévêillé, Fl. Kouy-Tchéou, 63 (1914).

CHINA. K w e i c h o u : without locality, *J. Esquirol*, no. 889, June 1903, "fl. jaunes après floraison" (holotype; photo. and merotype in A. A.).

This species seems most nearly related to *L. ferruginea* Rehd., but is easily distinguished by the shorter, not hirsute pubescence and the glabrous ovary. From *L. inodora* W. W. Sm. it differs in the glabrous style, the glandular pubescence of the corolla, the sessile or subsessile inflorescence and in the setulose pubescence extending over the whole under surface of the leaf.

Lonicera japonica Thunberg, Fl. Jap. 89 (1784). — Lévêillé, Cat. Pl. Yun-Nan, 27 (1915); in Mem. Acad. Ci. Art. Barcelona, ser. 3, 12: 545 (Cat. Pl. Kiang-Sou, 5) (1916).

Lonicera Fauriei Lévêillé & Vaniot in Fedde, Rep. Spec. Nov. 5: 100 (1908). — **Synon. nov.**

JAPAN. N i p p o n : in littore Shiogama, *U. Faurie*, no. 6823, Oct. 1905 (holotype of *L. Fauriei*; photo. and merotype in A. A.).

Lévêillé compares his species with *L. bracteolaris* Boiss. & Buhse and describes the fruit as having 3 persistent hairy styles; he apparently mistook for styles the sepals which in one of the fruits appear to be only three, the other two not being clearly visible.

Lonicera yunnanensis Franchet in Jour. de Bot. 10: 310 (1896).

Lonicera Mairei Lévêillé in Bull. Bot. Géog. 24: 289 (1914). — **Synon. nov.**

CHINA. Y u n n a n : collines herbeuses autour de Tong-tchouan, alt. 2550 m., *E. E. Maire*, fl. blanc-jaunâtre" (holotype of *L. Mairei*; merotype in A. A.).

The branches of Maire's specimen are apparently from different plants; one has the leaves quite glabrous beneath as in the type of *L. yunnanensis*, while in the other they are slightly pubescent beneath and are referable to var. *tenuis* Rehd., but there is no difference in the size of the leaves.

COMPOSITAE

Pertya Bodinieri Vaniot in Bull. Acad. Intern. Géog. Bot. **12**: 116 (1903). — Beauverd in Bull. Soc. Bot. Genève, sér. 2, **1**: 386, fig. 6 (1909). — Lévillé, Cat. Pl. Yun-Nan, 47 (1915).

CHINA. Y u n n a n : environs de Yunnan-fou, dans les ravines de la montagne, *E. Bodinier*, no. 10, Jan. 27, 1897, "tiges sous-ligneuses, de 0.6–1 m., fl. roses" (holotype; merotype [from herb. Lévillé] and photo. of isotype [in herb. Paris] in A. A.).

Though this is not one of Lévillé's species I have included it here, since the type is in the herb. Lévillé.

Pertya Esquirolii Lévillé (in Bull. Géog. Bot. **24**: 251 (1914); Fl. Kouy-Tchéou, 100 (1914) from Kweichou, based on Esquirol no. 3633 is an herbaceous plant and belongs to *Ainslea*; it seems very near or identical with *A. rubrifolia* Franch. which I have not seen.

(To be continued)

HERBARIUM, ARNOLD ARBORETUM,
HARVARD UNIVERSITY.



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