Phytotaxa 170 (4): 278–282
www.mapress.com/phytotaxa/

Article

ISSN 1179-3155 (print edition)
PHYTOTAXA
ISSN 1179-3163 (online edition)

http://dx.doi.org/10.11646/phytotaxa.170.4.5

Eight new names and lectotypification of six names in Lamianae (asterids I) for the *Flora of China*

YI-FAN DUAN[1] & LI-BING ZHANG[2*]

[1]*International Cultivar Registration Center for Osmanthus, Nanjing Forestry University, Nanjing, Jiangsu, 210037, P. R. China*
[2]*Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A. and Chengdu Institute of Biology, Chinese Academy of Sciences, P.O. Box 416, Chengdu, Sichuan 610041, P. R. China*
[*]*Author for correspondence: Libing.Zhang@mobot.org*

Abstract

In this paper, eight replacement names for eight later homonyms are proposed, in three families of Lamianae: Boraginaceae: *Eritrichium axilliflorum* (nom. nov.), *E. lianyongshanii* (nom. nov.), *E. wangwencaii* (nom. nov.), Solanaceae: *Lycianthes tibetica* (nom. nov.), *Solanum brevipedunculata* (nom. nov.); and Verbenaceae: *Callicarpa tenuiflora* (nom. nov.), *Premna cordiformis* (nom. nov.), and *P. emarginata* (nom. nov.). In addition, six names in Lamianae are lectotypified: *Cynoctonum wilfordii* Maximowicz (Apocynaceae: Asclepiadoideae), *Omphalodes chekiangensis* Migo (Boraginaceae), *Sinojohnstonia chekiangensis* (Franchet) W.T. Wang (Boraginaceae), *Lycianthes solitaria* C.Y.Wu & A.M.Lu (Solanaceae), *Solanum barbisetum* Nees var. *griffithii* Prain (Solanaceae) and *Premna laevigata* C.Y.Wu (Verbenaceae).

Key words: Lamianae, later homonyms, lectotypification, new names

Introduction

China has more species of vascular plants than any country on the planet except Brazil and Colombia. China's diversity of vascular plants represents 8–12% of the world diversity of vascular plants depending on estimates of the species numbers of vascular plants of the world (ca. 422,000 spp., Govaerts 2001; Bramwell 2002; ca. 260,000 spp., Thorne 2002; ca. 268,000, Palmer *et al.* 2004; 253,300 spp, Thorne & Reveal 2007). As the largest finished floristic project, *Flora of China* documents 31,362 species of vascular plants in 3,328 genera and 312 families, of which 2,129 species are ferns and lycophytes, 237 are gymnosperms, and 28,995 are angiosperms (Wu *et al.* 2013). In an effort to update *Flora of China* online version (www.efloras.org/flora_page.aspx?flora_id=2), we discovered that eight names in the Lamianae (or asterids I) included in *Flora of China* vols. 15–17 are later homonyms. We lectotypify six names and note two isonyms.

The *International Code of Nomenclature for Algae, Fungi and Plants* (McNeill et al. 2012) states that after 1 January 1958 a new name at the rank of genus or below is not valid unless a type is indicated (Art. 40.1). Our examination of type material has shown that for several of the following names a type was indicated but a holotype was not designated or, when type material was sought, it proved to be two or more specimens, not a single specimen as required by Art. 8 and defined in Art. 9.1. In the majority of cases reported here, Art. 40.2 is operative so that each of the names is validly published (see Art. 40, Ex. 2) but a lectotype, from among the syntypes, is hereby designated.

Taxonomy

Apocynaceae (Asclepiadoideae)

1. *Cynanchum wilfordii* (Maximowicz) J.D. Hooker (1883: 25).

Basionym: *Cynoctonum wilfordii* Maximowicz (1876: 799).

Type:—JAPAN. Fruticetis circa Yokohama (ipse) et Yokoska, 1866, *P.A.L. Savatier n. 832* (lectotype P-00644829!, isolectotypes P-00644827!, P-00644828!, **here designated!**).

Paratype:—KOREA. Portu Chusan, 1859, *Wilford s.n.* (GH-00076306!, P-00644830!, S-G-1846!).

10. *Premna cordiformis* Li Bing Zhang & Yi F. Duan, ***nom. nov.***

Replaced synonym:—*Premna velutina* C.Y. Wu (1977: 428), ***nom. illeg.***, *non Premna velutina* Gürke (1895: 338).
Type:—CHINA. Yunnan, Longling, 1500 m, 14 Aug 1941, *Wang Qiwu (C. W. Wang) 89944* (holotype, KUN).

Etymology:—Latin, *cordiformis*, cordate-shape, referring to the cordate leaf blade of the species, one of its disgnostic characters (Chen & Gilbert 1994).

Distribution:—Mixed forests; ca. 1500 m. SW Yunnan (Chen & Gilbert 1994).

11. *Premna emarginata* Li Bing Zhang & Yi F. Duan, ***nom. nov.***

Replaced synonym:—*Premna laevigata* C.Y. Wu (1977: 440), ***nom. illeg.***, *non Premna laevigata* Miquel (1856: 895).
Type:—CHINA. Yunnan: Mengla, 27 Oct 1959, *Tsai Hse-tao 59-11098* (lectotype KUN-484508, isolectotype KUN-484510, **here designated!**).

Etymology:—Latin, *emarginata*, emarginate, referring to the emarginate lower lip of calyx of the species, one of its disgnostic characters (Chen & Gilbert 1994).

Distribution:—Mixed forests; 500–600 m. Mengla, Yunnan (Chen & Gilbert 1994).

Notes:—When *Premna laevigata* C.Y. Wu was published, the gathering *Tsai Hse-tao 59-11098* was cited in the protologue, but no specific herbarium sheet was designated as holotype. This gathering consists of at least two sheets at KUN. We here designate KUN-484508 as the lectotype.

Acknowlegements

We thank James L. Reveal for helpful comments, Meng Li, Ya-Long Qin, and Zong-Xin Ren for taking pictures of type specimens at KUN and NAS, and the Doctorate Fellowship Foundation of Nanjing Forestry University, the fellowship of the Priority Academic Program Development of Jiangsu High Education Institutions (PAPD), and the Postgraduate Innovation Project Foundation in Jiangsu, China (CXZZ12-0518) for their support to Y.-F.D.

References

Bramwell, D. (2002) How many plant species are there? *Plant Talk* 28: 32–34.

Chen, S.L. & Gilbert, M.G. (1994) Verbenaceae. Pp. 1–49 in: Wu, Z.-Y. & Raven, P.H. (eds.) *Flora of China*, vol. 17. Beijing: Science Press & St. Louis: Missouri Botanical Garden Press.

Franchet, A.R. (1887) Plantes Du Thibet Oriental. *Nouvelles archives du muséum d'histoire naturelle*, sér. 2, 10: 34–124.

Govaerts, R. (2001) How many species of seed plants are there? *Taxon* 50: 1085–1090. http://dx.doi.org/10.2307/1224723

Gürke, M. (1895) Verbenaceae. Pp. 337–342 in: Engler, A. (eds.) *Die Pflanzenwelt Ost-Afrika*s, vol. 2. Berlin: D. Reimer.

Hooker, J.D. (1883) *The Flora of British India*, vol. 4. London: L. Reeve, 780 pp.

Kuntze, C.E.O. (1891) *Revisio Generum Plantarum*, vol. 2. Leipzig: A. Felix, pp. 377–1011. http://dx.doi.org/10.5962/bhl.title.327

Li, B.-T., Gilbert, M.G. & Stevens, W.D. (1995) Asclepiadaceae. Pp. 189–270 in: Wu, Z.-Y. and Raven, P.H. (eds.) *Flora of China*, vol. 16. Beijing: Science Press & St. Louis: Missouri Botanical Garden Press.

Maximowicz, C.J. (1876) Diagnoses plantarum novarum asiaticarum. *Mélanges Biologiques Tirés du Bulletin (Physico-Mathématique de) l'Académie Impèriale des Sciences de St.-Pétersbourg* 9: 707–831.

McNeill, J., Barrie, F.R., Buck, W.R., Demoulin, V., Greuter, D.L., Hawksworth, D.L., Herendeen, P.S., Knapp, S., Marhold, K., Prado, J., Proud'Homme van Reine, W.F., Smith, J.F. & Wiersema, J.H. (eds.) (2012) International Code of Nomenclature for algae, fungi and plants (Melbourne Code): Adopted by the Eichteenth International Botanical Congress, Melbourne, Australia, July 2011. *Regnum Vegetabile* 154: 1–274.

Migo, H. (1942) New or noteworthy plants from China I. *Botanical Magazine* 56: 265–270.

Miquel, F.A.W. (1856) *Flora van Nederlandsch Indië*, vol. 2. Leipzig: Fried Fleischer, 1103 pp.

Nees von Esenbeck, C.G.D. (1837) Monograph of the East Indian Solaneae. *Transactions of the Linnean Society of London* 17: 37–77. http://dx.doi.org/10.1111/j.1095-8339.1834.tb00017.x

Palmer, J.D., Soltis, D.E. & Chase, M.W. (2004) The plant tree of life: An overview and some points of view. *American Journal of Botany* 91: 1437–1445. http://dx.doi.org/10.3732/ajb.91.10.1437

Philippi, R. A. (1891) Catalogus plantarum in itinere tarapacano lectarum. *Anales del Museo Nacional de Chile. Segunda Sección-Botánica* 8: 1–94.

Philippi, R. A. (1895) Plantas Nuevas Chilenas. *Anales de la Universidad de Chile* 90: 511–566.

Prain, D. (1896) Some additional Solanaceae. *Journal of the Asiatic Society of Bengal* 65: 541–543.

Qian, Y.-Y. (1991) Three new species of *Callicarpa* from Yunnan. *Guihaia* 11: 121–126.

Rusby, H.H. (1927) Descriptions of new genera and species of plants collected on the Mulford Biological Exploration of the Amazon Valley, 1921–1922. *Memoirs of The New York Botanical Garden* 7: 205–387.

Standley, P.C. (1927) New plants from Central America-VI. *Journal of the Washington Academy of Sciences* 17: 7–16.

Thorne, R.F. (2002) How many species of seed plants are there? *Taxon* 51: 511–512. http://dx.doi.org/10.2307/1554864

Thorne, R.F. & Reveal, J.L. (2007) An updated classification of the class Magnoliopsida ("Angiospermae"). *Botanical Review* 73: 67–181.

Torrey, J. (1857) Descriptions of plants collected along the route, by W.P.Blake, and at the mouth of the Gila. *Reports of explorations and surveys: to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean, made under the direction of the Secretary of War* 5: 359–367.

Wang, W.-T. (1984) Notulae de Boraginaceis Sinensibus. *Bulleton of Botanical Research* 4: 1–13.

Wang, W.-T., Lian, Y.-S., & Wang, J.-Q. (1980) New taxa of Boraginaceae from Xizang (Tibet). *Acta Phytotaxonomica Sinica* 18: 514–520.

Wu, C.-Y. (ed.) (1977) *Flora Yunnanica*, vol. 1, Beijing: Science Press, 870 pp.

Wu, C.-Y. & Huang, S.-C. (1978) Materiae and floram *Solanorum* et *Lycianthium* sinensium. *Acta Phytotaxonomica Sinica* 16: 72–80.

Wu, C.-Y., Raven, P.H. & Hong, D.-Y. (eds.) (2013) *Flora of China*, vol. 1. Beijing: Science Press & St. Louis: Missouri Botanical Garden Press, 254 pp.

Zhang, Z.-Y. (1983) Boraginaceae. Pp. 174–196 in: Instituto Botanico Boreali-Occidentali Academiae Sinicae (eds.), *Flora Tsinlingensis*, vol. 1, part 4. Beijing: Science Press.

Zhang, Z.-Y., Lu, A.-M. & D'Arcy, W.D. (1994) Solanaceae. Pp. 300–332 in: Wu, Z.Y. & Raven, P.H. (eds.) *Flora of China*, vol. 17. Beijing: Science Press & St. Louis: Missouri Botanical Garden Press.

Zhu, G.-L., Riedl, H. & Kamelin, R.V. (1995) Boraginaceae. Pp. 329–427 in: Wu, Z.-Y. & Raven, P.H. (eds.) *Flora of China*, vol. 16. Beijing: Science Press & St. Louis: Missouri Botanical Garden Press.