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Gymnosporia thyrsiflora comb. nov. (Celastraceae), a correct name to replace *G. graciliramula* from southwest China

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In 'Flora of China', the combination '*Gymnosporia graciliramula* (S. J. Pei & Y. H. Li) Q. R. Liu & Funston' was proposed, but this name was not validly published in 2008 because the presumed basionym *Maytenus graciliramula* S. J. Pei & Y. H. Li was not published in 1979 as stated, but in 1981, contrary to Article 33.4 of ICBN. Meanwhile, two older names, *M. thyrsiflora* S. J. Pei & Y. H. Li and *M. pseudoracemosa* S. J. Pei & Y. H. Li, were listed as synonyms in conflict with article 52.3 of ICBN. In this article, we propose a new combination *G. thyrsiflora* (S. J. Pei & Y. H. Li) W. B. Yu & D. Z. Li that is the correct name when *G. thyrsiflora*, *M. pseudoracemosa* and *M. graciliramula* are treated as a single species in *Gymnosporia*.

The genus *Gymnosporia* was first established by Hooker (1862) on the basis of *Celastrus* sect. *Gymnosporia* Wight and Arnott. In the last century, nevertheless, several taxonomists suggested that *Gymnosporia* should be congeneric with *Maytenus* Molina *s.l.* (Pei and Li 1981a, Jordaan and van Wyk 1999). However, recently the genus *Gymnosporia* was reinstated as distinct from *Maytenus* s.s. based on comparative analyses of morphological characters and molecular sequences (Jordaan and van Wyk 1999, Simmons and Hedin 1999, Simmons et al. 2001a, 2001b, 2008). Meanwhile, McKenna et al. (2011) stated that the current circumscription of *Gymnosporia* included the Old World *Gymnosporia* and *Putterlickia* Endl., and the New World species of *Gymnosporia* were transferred to a new genus *Haydenia* M. P. Simmons.

Previously, Chinese taxonomists treated *Gymnosporia* as included in *Maytenus* s.l. (Pei and Li 1981a, Cheng et al. 1999, Qin et al. 2008). During the revision of *Maytenus* s.l. from Yunnan, Pei and Li (1979) described ten new taxa, including *M. graciliramula*, *M. thyrsiflora* and *M. pseudoracemosa*. However, the name *M. graciliramula* was not validly published because of two collections simultaneously designated as type (Article 40.1 and 40.2). *Maytenus graciliramula* became validated later (Pei and Li 1981b). In the Chinese edition of 'Flora Reipublicae Popularis Sinicae', Cheng et al. (1999) adopted *Maytenus* sect. *Gymnosporia* (Wight & Arnott) C. Y. Cheng, and they accepted *M. thyrsiflora* and treated *M. pseudoracemosa* and *M. graciliramula* as its synonyms. According to Article 11.5, this synonymization established priority of the name *M. thyrsiflora* over the name *M. pseudoracemosa*. During the preparation of the updated and English edition of 'Flora of China', Liu and Funston (2008) recognized *Gymnosporia* as a distinct genus with three new combinations proposed. Unfortunately, their intended combination '*G. graciliramula* (S. J. Pei & Y. H. Li) Q. R. Liu & Funston' was not validly published, because they only provided a full and direct referece to the publication in 1979 contrary to Article 41.1 of ICBN (McNeill et al. 2012). Meanwhile, Liu and Funston (2008) listed two older names, *M. thyrsiflora* and *M. pseudoracemosa*, as synonyms of their '*G. graciliramula*' but without full and direct references to the places of their valid publication, therefore not making the intended new combination validly published even as a superfluous replacement name. The new combination *G. thyrsiflora* (S. J. Pei & Y. H. Li) W. B. Yu & D. Z. Li proposed herein becomes the correct name when *G. thyrsiflora*, *M. pseudoracemosa* and *M. graciliramula* are united in *Gymnosporia*.

Gymnosporia thyrsiflora (S. J. Pei & Y. H. Li) W. B. Yu & D. Z. Li comb. nov.

Basionym: *Maytenus thyrsiflora* S. J. Pei & Y. H. Li in Res. Bull. Trop. Plants 13 (1979, p. 13).

Type: China. Yunnan: Shuangjiang, 24 Jul 1977, J. H. Zhang and Y. Cheng 11054 (holotype: HITBC 081516!, isotypes: HITBC 081517!, 081518!).

Taxonomic synonyms: *Maytenus graciliramula* S. J. Pei & Y. H. Li (1981, pp. 242–243); '*Maytenus graciliramula* S. J. Pei & Y. H. Li' (1979, p. 13), not validly published (Article 40.1 and 40.2); '*Gymnosporia graciliramula* (S. J. Pei & Y. H. Li) Q. R. Liu and Funston' (2008, p. 476), not validly published (Article 41.1).

Type: China. Yunnan: Linchang, 19 Jul 1977, J. H. Zhang and Y. Cheng 11050 (holotype: HITBC 081504!).

– *Maytenus pseudoracemosa* S. J. Pei & Y. H. Li (1979, p. 12).

Type: China. Yunnan: Mengla, 23 May 1976, G. D. Tao 9113 (holotype: HITBC 081511!, isotype: HITBC 081512!).

Gymnosporia thyrsiflora is endemic to southwest China (southern Yunnan and western Guangxi). It occurs on open dry slopes with mixed shrubs along riversides at altitudes between 400 and 1500 m a.s.l. Morphologically, *G. thyrsiflora* belongs to *G.* sect. *Tenuispinae* in accordance with Jordaan and van Wyk (2006). This species is distinguished from the other Chinese *Gymnosporia* in having axillary and slender thorns on young branches and sturdy thorns on old branches, narrowly obovate and papery leaves, 3-valved red–brown capsules, and a white cupulate aril covering the base of seeds.

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