

(1166) Proposal to conserve *Clausena pentaphylla* DC. (*Rutaceae*) with a conserved typeJean-François Molino¹

- (1166) *Clausena pentaphylla* DC., Prodr. 1: 538. Jan (med.) 1824 [*Rut.*], *nom. cons. prop.*
 Type: India, Uttar Pradesh, Kanpur (as Cawnpore), *Roxburgh 2484* (BM), *typ. cons. prop.*

Since Oliver's work on "the Natural Order *Aurantiaceae*" (in J. Proc. Linn. Soc., Bot. 5, Suppl. 2: 30. 1861), *Clausena pentaphylla* DC. (Prodr. 1: 538. 1824) has been universally but erroneously considered as a new combination based on *Amyris pentaphylla* Roxb. ([Hort. Bengal.: 28. 1814, *nom. nud.*], Fl. Ind., ed. 1832, 2: 247. 1832) from N.W. India, and cited as *C. pentaphylla* "(Roxb.)" DC. This is patently wrong, if only because Roxburgh's name was not validly published before 1832, long after the Candollean name. *A. pentaphylla* Roxb. was lectotypified by Tanaka (in J. Bot. 68: 228. 1930) by the Roxburgh specimen here proposed as the conserved type of *C. pentaphylla* DC.

The protologue of *Clausena pentaphylla* did not mention *Amyris pentaphylla* but cited "*Limonia pentaphylla* herb. Lamb. non Roxb." [See Brizicky (in J. Arnold Arbor. 18: 91. 1962) for a discussion of *Limonia pentaphylla* sensu Roxb. (Pl. Coromandel 1: 60, t. 84. 1798 & Fl. Ind. ed. 1832, 2: 382. 1832) non Retz. (Observ. Bot. 5: 24. 1788).] The undoubted holotype of *C. pentaphylla* is thus a Roxburghian specimen from India (G-DC) received by Candolle in 1816 from Lambert and labelled in Candolle's hand as "Inde. Roxburgh. m[isit]. Lambert. 1816". The oldest label, in Roxburgh's hand, reads "*Limonia pentagyna* R." This specimen belongs to *Protium serratum* (Wall. ex Colebr.). Engl. (*Burseraceae*), and is likely a duplicate of the specimen (BM) cited by Swart (in Rec. Trav. Bot. Néerl. 39: 257. 1942) as "W. Roxburgh, India, *Limonia pentagyna* Roxb. Chitreka", probably "collected from the tree in the Bot. Gard. at Calcutta mentioned by Roxburgh". Roxburgh (Hort. Bengal.: 32. 1814; Fl. Ind. ed. 1832, 2: 382. 1832) cited "chitreka" as the Telinga (language of Andhra Pradesh) name for "*Limonia pentagyna*", and it still is the vernacular name of *Protium serratum* according to Gamble (Fl. Madras 1: 171. 1915) and Swart (l.c.: 256). It is evident that Candolle (1) misread Roxburgh's label name, "*Limonia pentagyna*", as "*Limonia pentaphylla*" and (2) misidentified, like Roxburgh, the burseraceous material as rutaceous.

Unfortunately *Clausena pentaphylla* antedates *Bursera serrata* Wall. ex Colebr. (in Trans. Linn. Soc. London 15: 361. 1827). Unaware of the new options provided by the *Tokyo Code*, I created a *nomen novum* for the rutaceous *Amyris pentaphylla*, which needed a name in *Clausena* to replace *C. pentaphylla* that no longer pertained to the *Rutaceae*: *C. kanpurensis* Molino (in Bull. Mus. Natl. Hist. Nat., B, Adansonia 16(1): 117. 1994). I was about to publish a new combination in *Protium*, based on

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C. pentaphylla DC., to replace *Protium serratum*. All this was done reluctantly, since both names, *P. serratum* and *C. pentaphylla*, are in general use in pertinent floras and taxonomic works, e.g.:

- *Protium serratum* (*Burseraceae*), ranging from the Eastern Ghats of India into S.E. Asia: Engler & Prantl, Nat. Pflanzenfam. 3(4): 237. 1896; Guillaumin in Lecomte, Fl. Indo-Chine 1: 722. 1911; Gamble, Fl. Madras 1: 171. 1915; Craib, Fl. Siam. 1: 247. 1926; Lam in Bull. Jard. Bot. Buitenzorg 3: 321. 1932; Swart, op. cit. 1942; Leenhouts in Blumea 7: 155. 1952; Bor, Man. Ind. For. Bot.: 250. 1953; Deb, Fl. Tripura 1: 444. 1981; Ellis, Fl. Nallamalais 1: 88. 1987.
- *Clausena pentaphylla* (*Rutaceae*), growing on the upper Gangetic Plain of India: Engler & Prantl, Nat. Pflanzenfam. 3(4): 188. 1896; Duthie, Fl. Gangetic Plain 1(1): 138. 1903; Haines, Bot. Bihar Orissa 2: 171. 1921; Tanaka, op. cit. 1930; Tanaka in J. Indian Bot. Soc. 16: 231. 1937; Swingle in Webber & Batchelor, Citrus Ind. 1: 170. 1944; Press in Hara & Williams, Enum. Fl. Pl. Nepal 2: 81. 1979. Furthermore, this medicinal plant plays a role in traditional North Indian pharmacopoeia (Watt, Dict. Econ. Prod. India, 2: 359. 1899; Haines, op. cit.).

The present proposal aims both at restoring the name *Clausena pentaphylla* to its historic sense and avoid a new combination for what is known as *Protium serratum*, thus ensuring stability for both. The only change is in the author citation of the former, Roxburgh being dropped as a parenthetical author. Indeed, the synonymous *Amyris pentaphylla* will change its author citation from “Roxb.” to “(DC.) Roxb.”, since the proposed conserved type of *C. pentaphylla* is the same as the lectotype of *A. pentaphylla*. There are two further combinations directly based on *A. pentaphylla*: *Polycyema pentaphyllum* (Roxb.) Voigt (Hort. Suburb. Calcutt.: 141. 1845) and *Gallesioa pentaphylla* (Roxb.) M. Roem. (Fam. Nat. Syn. Monogr. 1: 45. 1846): the parenthetical author citation in both will also change from “(Roxb.)” to “(DC.)” if this proposal is approved.

One might consider, as an alternative, conservation of *Clausena pentaphylla* (Roxb.) Oliv. against *C. pentaphylla* DC. The result would be the same with respect to maintenance of the names, but the proposed action appears to be preferable for two reasons: (1) *C. pentaphylla* has always been attributed to Candolle, even by Oliver himself, and changing from *C. pentaphylla* (Roxb.) DC. to *C. pentaphylla* DC. is less disturbing than changing to *C. pentaphylla* (Roxb.) Oliv.; and (2) it would stabilize this name from the earliest possible date, 1824 (vs. 1861 under the second option).

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