

(2546–2547) Proposals to reject the name *Solanum rubrum* and to conserve the name *S. alatum* with a conserved type (*Solanaceae*)

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The members of the Moreloid clade of *Solanum* (the black nightshades sensu Särkinen & al. in Taxon 64: 945–958. 2015) have long been considered difficult, and with many European taxa at many ranks, are nomenclaturally complex (e.g., Edmonds in Bot. J. Linn. Soc. 89: 165–170. 1984). As part of a revision of the Old World taxa in this group, we have encountered two names that have priority over names in current use, and whose uptake would cause considerable confusion in an already complex group. The actions proposed here will stabilise nomenclature for species of the Moreloid clade of *Solanum*, and prevent use of these destabilising names in the future.

(2546) *Solanum rubrum* L., Syst. Nat., ed. 12, 2: 173. 15–31 Oct 1767
[*Angiosp.*: *Solan.*], nom. utique rej. prop.
Typus: non designatus.

Solanum rubrum was described by Linnaeus (l.c. 1767) citing no specimen, literature reference or place of origin. No material annotated with this name exists in the Linnaean collections in the Linnean Society of London (LINN), Uppsala (UPS) or Stockholm (S). The protologue is extremely brief, mentioning almost no characters that would allow identification. Edmonds (in Bot. J. Linn. Soc. 78: 219. 1979) regarded *S. rubrum* L. as a “nomen dubium”, because “it is not possible to say to what species it refers”; her treatment was followed by Jarvis (Order Out of Chaos: 861–862. 2007). Philip Miller described *S. rubrum* Mill. a year later (Miller, Gard. Dict., ed. 8: *Solanum* no. 4. 1768), but did not cite the Linnaean species, so it is assumed he was coining a new name that is regarded as a synonym of *S. villosum* Mill. (Edmonds, l.c. 1979: 219).

Subsequent use of the epithet “*rubrum*” for species in the Moreloid clade has been based on Miller’s epithet (Aiton, Hort. Kew. 1: 234. 1789; Dunal, Hist. Nat. Solanum: 155. 1813; Roxburgh, Fl. Ind. 2: 216. 1820; Nees van Esenbeck in Trans. Linn. Soc. London 17: 39. 1837; Dunal in Candolle, Prodr. 13(1): 57. 1852). The Linnaean epithet has not been used, nor was it even registered in Dunal’s (l.c. 1852) global treatment of *Solanum* in Candolle’s *Prodromus*.

It is likely that *S. rubrum* L. corresponds to the taxon now called *S. villosum* Mill., and if it were to be brought into use, would have

priority over that name. Rejection of *S. rubrum* L. would preserve usage of *S. villosum* and stabilise nomenclature in this complex.

(2547) *Solanum alatum* Moench, Methodus: 474. 4 Mai 1794
[*Angiosp.*: *Solan.*], nom. cons. prop.
Typus: Pakistan, Balochistan, Quetta, 38 km E Gumbaz (30°02’N, 69°00’E), 1050 m, 17 May 1965, fl, fr, *Rechinger 29684* (W No. 1972-0017910), typ. cons. prop.

The name *Solanum alatum* Moench (as a species or in various infraspecific combinations) was long in use for plants from eastern Europe with yellowish orange fruits now generally considered to belong to *S. villosum* Mill. The protologue describes a plant with pale red berries, and cites “*Solanum nigrum Virginicum* Linn.” Moench’s herbarium is not extant, and he cited no specimens in the protologue, nor did he cite a geographical locality.

Schönbeck-Temesy (in Rechinger, Fl. Iranica 100: 11. 1972) cited “Typus: Planta culta, B” as the type of *S. alatum*, but although she included the word “typus”, we do not consider her neotypification to be effective because a single specimen or gathering at B is not “clearly indicated by direct citation” (Art. 7.10), and the lack of an exclamation mark (“!”) following the herbarium code suggests she was not citing a particular specimen, but rather indicating the type was from a cultivated specimen and likely to be at B. Elsewhere in the work (e.g., Schönbeck-Temesy, l.c.: 8 – “Typus: RECHINGER 3630, W!”) she consistently indicated types (and other specimens) she had seen with the exclamation mark.

Edmonds (l.c. 1979: 215) later effectively typified this name with an illustration (Dillenius, l.c.) and cited a specimen in OXF (as *Herb. Dillenius 443*), that she later (Edmonds in Fl. Trop. E. Africa Solan.: 132. 2012) designated as an epitype. This material corresponds to that cited by Linnaeus (Sp. Pl.: 186. 1753) in the protologue of *S. nigrum* var. *virginicum* L., but Moench did not cite *Hortus Elthamensis* directly and so Edmonds’s action is better considered appropriate neotypification. In the taxonomic treatment and later in the text, Edmonds (l.c. 1979: 215) placed *S. alatum* in the synonymy of *S. villosum*, citing its

possession of red berries stating (l.c. 1979: 219) that “the Linnean synonym must be considered an error and disregarded”. This treatment of *S. alatum* in the text is in direct contradiction with its neotypification and later epitypification.

Because Edmonds’s (l.c. 1979) neotypification of *S. alatum* is not in serious conflict with the protologue (see Art. 9.19), it cannot be superseded and, therefore, neither can the epitypification. Subsequent treatment of *S. alatum*, however, both in Eurasia and North America has been either as a synonym of *S. villosum* (e.g., Marzell in Hegi, Ill. Fl. Mitt.-Eur. 5(4): 2594. 1927; Edmonds, l.c. 1979: 215; Zhang & D’Arcy in Wu & Raven, Fl. China 17: 318. 1994; Stace, New Fl. Brit. Isles: 576. 2010) or as a distinct taxon (at specific or infraspecific rank) with reddish orange or yellow berries (e.g., Small, Man. S.E. Fl.: 1114. 1933; Yamakazi in Hara, Fl. E. Himalaya 2: 118. 1971; Schönbeck-Temesy, l.c.; Hawkes & Edmonds in Tutin & al., Fl. Eur. 3: 198. 1972; Chater in Hara & al., Enum. Fl. Pl. Nepal 3: 111. 1982; Brandes, *Solanum villosum* ssp. *alatum*. 2004 (http://www.ruderal-vegetation.de/epub/solanum_alatum.pdf). Consequently the understanding of *S. alatum* as a Eurasian taxon with reddish orange or yellow berries with no stone cells (sclerids) is firmly established. The name *S. alatum* is also occasionally used in the medical literature (e.g., Lin & al. in Amer. J. Chin. Med. 28: 105–114. 2000) in the same sense.

The specimen designated by Edmonds (l.c. 2012) as the epitype (as *Herb. Dillenius 443*, OXF) is a plant of the North American endemic species now known as *S. emulans* Raf. (previously as *S. ptycanthum* Dunal), with black berries containing numerous stone cells (sclerids). *Solanum emulans* has had numerous name changes and has long been confused with *S. americanum* Mill. (Schilling in

Syst. Bot. 6: 172–185. 1981), with the current name only recently being established (e.g., Bohs in Fl. N. Amer., in press).

Because long standing usage of the name *S. alatum* in Europe is for plants with reddish orange or yellow fruits with no stone cells, use of the name *S. alatum* for the native black-berried North American plants would cause considerable confusion both in Europe and in North America, in part because *S. villosum* is adventive in the United States (e.g., Steyermark, Fl. Missouri: 1312. 1963; Fernald, Gray’s Man. Bot., ed. 8: 1253. 1950; Bohs, l.c.).

Rejection of this name to eliminate confusion due to Edmonds’s neo- and epitypification (l.c. 1979, l.c. 2012) is also a possibility, but since taxonomic opinions as to the distinctness of the various geographical elements of the widespread and variable taxon today known as *S. villosum* differ, and, were elements currently recognised as *S. villosum* subsp. *puniceum* (Kirschl.) Edmonds to be recognised as the species level, *S. alatum* would be the oldest name, we consider conservation with a conserved type the more stabilising solution.

Since no specific locality was mentioned in the protologue of *S. alatum*, no preference can be assigned to a particular location when proposing a type specimen for conservation. The specimen from north-central Pakistan near the Afghanistan border here proposed as the conserved type was cited in Schönbeck-Temesy (l.c.), where *S. alatum* was treated as a distinct species, and has both flowers and fruits. Conservation of *S. alatum* Moench with the conserved type proposed here that corresponds to the Eurasian concept of this species with red or yellow-red fruits will stabilise usage and avoid future confusion in the floras of Europe, Asia and North America.