

(2623–2624) Proposals to reject the names *Littorella flexuosa* and *L. subg. Xamotris* (*Plantaginaceae*)

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(2623) *Littorella flexuosa* Raf., New Fl. 4: 12. 1838 (sero) [Angiosp.: *Plantagin.*], nom. utique rej. prop.
Typus: non designatus.

(2624) *Littorella* subg. *Xamotris* Raf., New Fl. 4: 12. 1838 (sero) [Angiosp.: *Plantagin.*], nom. utique rej. prop.
Typus: *L. flexuosa* Raf.

Constantine Samuel Rafinesque (1783–1840) was a polymath regarded as brilliant, but also erratic and eccentric. He published ca. 6700 plant binomials, many of which have priority over names in current usage (Boewe, Rafinesque Anthology. 2005). Unfortunately, most of his once enormous herbarium is lost (Stuckey in Taxon 20: 443–459. 1971), thus leaving most of his published names without any original material for typification purposes.

Our nomenclatural revision of *Littorella* P.J. Bergius has evidenced that the only species name that Rafinesque published in the genus (*L. flexuosa* Raf., New Fl. 4: 12–13. 1838) is most probably not a *Littorella*, but rather a species of *Plantago* L. This species was published in volume 4 of his *New flora and botany of North America* that could not have been published before late 1838, despite the date, 1836, given on the title page of this volume of the work (Barnhart in Torrey 7: 177–182. 1907).

Rafinesque published *L. flexuosa* with a short morphological description (“Scapose, leaves cespitose linear obtuse falcate smooth, base wooly, entire or with a few scattered gashes, uninerve; scapes shorter flexuose racemose pauciflore” and, perhaps taken from an annotation by Thomas Nuttall, from whom he received material as an unnamed *Plantago*, “annual, leaves 1 or 2 inches long narrow, scapes with 5 to 7 flowers on long pedicels, calix lanceolate acute, segments of corolla linear acute, 3 or 4 as in *Littorella*, some flowers geminate”). The provenance was indicated as Alabama and Arkansas, south-eastern U.S.A., which was later confirmed in Rafinesque (Autik. Bot. 1: 10. 1840).

No original material for *L. flexuosa* could be located, as is the case with most names published by Rafinesque. Furthermore, the morphological description included in the protologue is too ambiguous to ascertain its identity, although it is enough to rule out that this name refers to a *Littorella* species; this is further supported by the fact that there is no evidence of the occurrence of any *Littorella* species in the south-eastern U.S.A., and by Rafinesque’s mention in the protologue of *L. flexuosa* that Nuttall deemed the species an unknown *Plantago*. It should be noted that *Littorella* is sometimes subsumed within *Plantago* (e.g., Linnaeus, Sp. Pl.: 112–116. 1753; Rahn in Bot. J. Linn. Soc. 120: 145–198. 1996; Rønsted & al. in Bot. J. Linn. Soc. 139: 323–338. 2002).

Careful consideration of the information given in the protologue of *L. flexuosa* on its morphology and distribution indicates that this name most probably refers to a dwarf form of either *P. wrightiana* Decne. (in Candolle, Prodr. 13(1): 712. 1852) or *P. aristata* Michx. (Fl. Bor.-Amer. 1: 95. 1803), both belonging to *P. ser. Gnaphaloides* Rahn (see Rahn

in Bot. Tidsskr. 73: 137–154. 1979). Considering that *L. flexuosa* pre-dates *P. wrightiana* by 14 years, the former is a potentially disruptive name, which could threaten a well-established species name, causing a disadvantageous nomenclatural change. This would be undesirable especially because of the uncertainties involving *L. flexuosa* due to the lack of original material. It should be noted that IPNI lists a name “*P. flexuosa* Gaud. ex Rapin”, but this name was not validly published because Rapin (in Mém. Soc. Linn. Paris 6: 457. 1827) listed “*Pl. flexuosa* GAUD.” in the synonymy of “[*P. lanceolata*] e. Sericea”, which was itself intended as a new combination for *P. sericea* Waldst. & Kit., which is however an illegitimate later homonym of *P. sericea* Ruiz & Pav.; therefore, Rapin’s name is that of a new taxon: *P. lanceolata* var. *sericea* Rapin (Art. 6.11, 7.4 and 58.1 of the ICN, McNeill & al. in Regnum Veg. 154. 2012). This means that there would be no impediment to the transfer of *L. flexuosa* to *Plantago* as a new combination.

Rafinesque assigned *Littorella flexuosa* to *L. subg. Xamotris* Raf. (New Fl. 4: 12. 1838), for which he provided the following diagnosis: “calix unequal, imbricate segments of inner [sic] perig. or corolla also unequal. Habit scapes racemose without bracts”. The indication of unequal sepals and petals is enough to rule out the possibility that *L. flexuosa* refers to a species in *P. sect. Micropsyllum* Decne. (see Pilger in Engler, Pflanzenr. IV. 269 (Heft 102): 39–40, 67–75. 1937; Bassett in Canad. J. Bot. 44: 467–479. 1966). Considering that the identity of *L. flexuosa*, which is the original type of *L. subg. Xamotris*, most probably is that of a species in *Plantago* ser. *Gnaphaloides*, which is itself included in *P. subg. Psyllium* (Mill.) Harms & Reiche (in Engler & Prantl, Nat. Pflanzenfam. IV(3b): 373. 1895), *L. subg. Xamotris* would have priority as the correct name for this subgenus on transference to *Plantago*. This change would be most undesirable because *P. subg. Psyllium* has been universally accepted in the literature since its publication in 1895 (except for the very few cases where *Psyllium* Mill. was accepted as a separate genus from *Plantago*), whereas we could not find any mention of *Littorella* subg. *Xamotris* in the literature other than when originally described.

Considering all of the above, and with the objective of promoting nomenclatural stability in accordance to Art. 56.1, we believe that the best course of action would be to reject outright the names *Littorella flexuosa* and *L. subg. Xamotris*. Acceptance of this proposal would allow the continued use of the name *Plantago* subg. *Psyllium* in its current sense, and would prevent the possibility that a new combination for *L. flexuosa* in *Plantago* would become the correct name for the currently accepted *P. wrightiana*. Rejection of this proposal would mean that a new combination in *Plantago* for *L. subg. Xamotris* would have to replace *P. subg. Psyllium* as the correct name for this taxon, and that the name *P. wrightiana* could be threatened by *L. flexuosa*.

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