

**ON THE LECTOTYPIFICTION OF *SOLIDAGO LATERIFLORA* L.,
THE BASIONYM OF *SYMPHYOTRICHUM LATERIFLORUM*
(ASTERACEAE: ASTEREAE)**

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ABSTRACT

The lectotypification of *Solidago lateriflora* L. with LINN 998.6, a specimen of *Solidago altissima* L. proposed by Reveal and Jarvis (2009), is rejected in favor of a new lectotypification with LINN 998.9, a specimen that is *Symphytotrichum lateriflorum* (L.) Löve and Löve sensu North American authors.

Symphytotrichum lateriflorum (L.) Löve & Löve is the widely used name for a common eastern North American species of woodland/woodland margin aster. The species epithet was first published by Linnaeus (1753) as *Solidago lateriflora*. Britton (1889) published the combination *Aster lateriflorus* (L.) Britton, which was used in floras and taxonomic treatments covering eastern North America for more than 100 years (e.g. Britton and Brown 1898; Wiegand 1928; Fernald 1950; Cronquist 1968; Jones 1980; Cronquist 1980; Gleason and Cronquist 1991). When it was recognized that the majority of North American asters were not phylogenetically closely related to the Eurasian asters but belonged in a separate genus *Symphytotrichum* Nees, more recent floras used the Löve & Löve combination (e.g. Nesom 1994; Semple et al. 2002; Brouillet et al. 2006; Weakley et al. 2024 and in multiple local floras not listed here).

Unfortunately, *Solidago lateriflora* was lectotypified by Reveal and Jarvis (2009) with a specimen (LINN 998.6) that is clearly a member of the species *Solidago altissima* L. Thus, either the use of the basionym *Solidago lateriflora* must be abandoned or the lectotypification must be rejected in favor of a revised lectotypification that is based on a specimen that is in fact an aster.

I propose that the name *Solidago lateriflora* L. be lectotypified by LINN 998.9, which is the same species of aster that North American botanists have been treating as *Aster lateriflorus* and *Symphytotrichum lateriflorum* for more than 130 years. LINN 998.9 is an aster — the letter “K” appears to have been written on the bottom of the sheet. Asa Gray annotated the specimen “Est *Aster miser.*, Torr. & Gray/ i.e. *Aster diffusus* Ait. AG”. *Aster miser* L. was the misapplied name used by Torrey and A. Gray (1841) in the first Flora North America and *Aster diffusus* Ait. was used by Gray (1884). Thus, Asa Gray recognized that LINN 998.9 was a specimen of North American aster and not a specimen of a species of *Solidago*, but Gray’s annotation cannot be taken as a lectotypification because the concept had not been formalized at the time Gray annotated the specimen prior to 1882 and Gray did not state that he was selecting a lectotype.

Two Linnaean names have been candidates for the correct basionym for the aster species under consideration here. First is *Aster miser* L. with the following entry in Species Plantarum on p. 877:

“miser” on the right margin

27. ASTER floribus ovatis, disco radiis longiore. Aster ericoides, meliotii agriae umbone, Dill. eltb. 40. t. 35. f.39.

Habitat in America septentionalis.

This name was typified (Gray 1882) by "Aster ericoides, Meliloti agrariae umbone" in Dillenius, Hort. Eltham., 1: 39, t. 35, f. 39, 1732 and was noted to be an image of *Aster dumosus* L. The use of the name *Aster miser* in Torrey and Gray (1941) is thus a misapplication of the Linnaean name, which Gray recognized as indicated by his annotation on LINN 998.9, and he used the next published valid applicable name *Aster diffusus* Ait., treated here as a later synonym for the names based on the basionym *Solidago lateriflora*. The Linnaean typification project lists Herb. Sherard No. 1780 (OXF) as a topotype for *Aster miser* L. (<https://data.nhm.ac.uk/dataset/the-linnaean-plant-name-typification-project/resource/ec9ffe8-f7f4-4dcd-9471-641c4922d956/record/21717>).

The second name under consideration is *Solidago lateriflora* L. with the following entry in Species Plantarum on p. 879.

“lateriflora” on the right margin [the first letter “a” is printed with a damaged letter]

4. *Solidago paniculae corymbosa*: racemis recurvis adscendentibus, caule inferne romoso floriferoque.

Habitat in America Septentrionali. Kalm.

Planta *S. canadensis* dimidio minor. Folia non serrata, molliora, sed uno alternove dente interdum notata. Flories & omnia ut in praecedentibus, at caulis inframeidium Romos emittit simplices, caule paulo breviores, apices corymbosos; nullos vero ramos inter corymbum terminalem caulis & medium seu romos, quod in hac singulare.”

Translation: *Solidago* paniculate clusters of flowers corymbose, racemes recurved, ascending, lower stem rose colored.

Habitat in North America. Collector: Kalm.

Plants less than half *S. canadensis* [in height]. Leaves not serrate, softer, sometimes with one tooth. Flowers and everything as before [*S. altissima*], but the below mid stems send forth the simple “romos”, stems a little shorter, tips corymbose; but no branches between the terminal inflorescence of the stem and the middle or branches, in this particular case.

It is clear that Linnaeus viewed *S. lateriflora* as similar to *S. canadensis* and *S. altissima* but that it was a much shorter plant with much less serrate leaves. The species epithet refers to the flowers being borne on the lateral branches of the inflorescence. Although not very definitive, the description given by Linnaeus does fit LINN 998.9, the specimen that Asa Gray recognized in his annotation as being the same as *A. diffusus* Ait., a later synonym belonging under the basionym *S. lateriflorus* L, i.e., *Symphyotrichum lateriflorum* (L.) Löve & Löve.

Lectotypification of *Solidago lateriflora* was proposed by Reveal and Jarvis (2009), who inappropriately selected LINN 998.6, a specimen of *Solidago altissima* L., a binomial as annotated on LINN 998.6 decades ago. Reveal and Jarvis (2009) referred to statements in Jarvis (2007 p. 863), who noted *Solidago lateriflora* “currently appears to be untypified,” gave the current name (at the time) as *Aster lateriflora* (L.) Britt., and noted that Gray (1882) used the name *Aster diffusus* Ait., cited Wiegand (1928), and that Hoffman (in Feddes Repert 107: 183. 1996) had indicated that LINN 998.6 and LINN 998.7 were possible type elements. Thus, the first lectotypification of *Solidago lateriflora* by Reveal and Jarvis (2009) appears to be an arbitrary selection of LINN 998.6 without explanation or justification.

LINN 998.7 is also a possible choice for lectotype of *Solidago lateriflora* and someone has written “lateriflora S” at the bottom of the sheet in ink and someone else has written in pencil “latifolia ???/vide Sp. Pl.” The specimen has broad leaves with many serrations and the upper stem and inflorescence is missing. LINN 998.7 is a specimen of *Solidago flexicaulis* L and does not fit well with the protologue description of *Solidago lateriflora* noted above. This is not an appropriate choice for lectotype of *Solidago lateriflora*.

The only non-arbitrary LINN-specimen option for a lectotype of a species of aster among the *Solidago* collections is 998.9, because it is an aster not a goldenrod, thus an appropriate lectotype for the basionym of *Symphyotrichum lateriflorum* (L.) Löve & Löve.

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