

(1993) Proposal to conserve the name *Alyssum montanum* (Cruciferae) with a conserved type

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(1993) *Alyssum montanum* L., Sp. Pl.: 650. 1 Mai 1753 [*Dicot.*: *Cruc.*], nom. cons. prop.

Typus: Switzerland, Baseland, S of Basel, Aesch, below the castle ruin Pfeffingen, 47°27.175'N, 07°35.649'E, 390 m, 13 Apr 2008, T. Brodtbeck, K. Marhold & J. Zozomová-Lihová 95BAS/24 (SAV), typ. cons. prop.

Alyssum montanum L. is the type of the generic name *Alyssum* L. (Britton & Brown, *Illustr. Fl. N. U.S.* ed. 2, 2: 154. 1913; Green in Sprague & al., *Nom. Prop. Brit. Bot.*: 171. 1929; Dudley in J. Arnold *Arbor.* 45: 358. 1964). This name has usually been applied to a perennial species found throughout most of Europe (except Scandinavia and the British Isles), scattered in its easternmost parts (Ukraine, Russia) and extending to North Africa (Jalas & al., *Atlas Fl. Eur.* 11: 41–43. 1996; Maire, *Fl. Afrique Nord* 13: 220–224. 1967). Nevertheless, the circumscription of this species and its infraspecific classification are still controversial, especially in southern Europe where it comes into contact with several putatively related taxa such as *A. repens* Baumg., *A. diffusum* Ten., *A. scardicum* Wettst. and *A. reiseri* Velen. The whole polyploid species complex *A. montanum*–*A. repens* is now a subject of intensive study (Španiel & al., in prep.). Recently, we have found that the concept of *A. montanum* by Linnaeus (Sp. Pl.: 650. 1753) comprises two different and unrelated taxonomic entities belonging to two different sections of the genus, and that the current use of the

name, even in its widest sense, is in conflict with the lectotype specimen chosen by Dudley (l.c.).

The phrase name for this species in *Species Plantarum*, *ALYSSUM ramulis suffruticosis diffusis, foliis punctato echinatis* is referred to and taken directly from *Hortus upsaliensis* (1748: 185), where Linnaeus reported its occurrence as “Habitat forte in Sibiria, mihi enim enata inter plantas ex seminibus Sibiricis”. This is in accordance with the likely origin of the specimen LINN 828.12 that was chosen by Dudley (l.c.) as the lectotype of *A. montanum*. The specimen bears Linnaeus’s inscription “2 *montanum*” at the bottom of the sheet, which is considered to be a strong evidence that the specimen was in Linnaeus’s hands before 1753. On the reverse of the sheet there is an inscription “*Alyssum fruticosum* / *Alyssum serpyllifolium* Amm / e Sibiria & Horto upsal.” which directly connects the specimen with the account in *Hortus upsaliensis*. “Amm” refers to Johann Amman (1707–1741), a Swiss botanist and at that time the director of the Botanical Garden in St. Petersburg (Russia), who had access to and distributed seeds of plants from Siberia. Morphologically, the specimen LINN 828.12 clearly represents a taxon occurring predominantly in Siberia, which is currently referred to as *A. obovatum* (C.A. Mey.) Turcz. (Kotov in Fedorov, *Fl. Evr. Chasti SSSR* 4: 82. 1979; Berkutenko in Kharkevich, *Sosud. Rast. Sovetskogo Dal'nego Vostoka* 3: 106–107. 1988; Rybinskaya in Malyshev & Peshkova, *Fl. Sibiri* 7: 105. 1994). The type specimen of this name is deposited in

LE (German in *Novosti Sist. Vyssh. Rast.* 37: 252. 2005) and was consulted by us. The following characters of the specimen LINN 828.12 point to this species: the obovate-spathulate shape of leaves and flowering stem corymbosely branched in upper part. *Alyssum obovatum* belongs to *A. sect. Odontarrhena* (C.A. Mey.) W.D.J. Koch (Dudley, l.c.: 369), which is in accordance with the presence of the compound inflorescence typical for this section.

The other specimen in LINN, bearing the above-mentioned phrase name from *Hortus upsaliensis* on the reverse of the sheet (LINN 828.14), bears neither the *Species Plantarum* number of *A. montanum* “2” (there is only a fragment of the number on the bottom of the sheet) nor the epithet “*montanum*” and therefore it is not likely that it was in Linnaeus’s hands before 1753. According to the inscription “Allion.”, it is most likely that it was received from Allioni at a later date (although the exact year 1757, cited by Dudley, l.c.: 358, is likely based on misinterpretation of the information given in Savage, *Linnean Herbarium*, 1945). This specimen can be referred to as *A. diffusum*, occurring in Italy (Španiel & al., in prep.).

The only item in the protologue of *A. montanum* that includes a reference to an illustration, and would therefore be eligible for the choice of lectotype, is *Thlaspi montanum luteum* of Bauhin & al., *Historia plantarum universalis* (2: 928–929. 1651). The illustration (Bauhin & al., l.c.: 929) corresponds well with the current understanding of the name *A. montanum* in local and European floras and identification keys (e.g., Hess & al., *Fl. Schweiz* 2: 169. 1970; Ball & Dudley in Tutin & al., *Fl. Eur.*, ed. 2, 1: 365. 1993; Jalas & al., l.c.). In the accompanying text, Bauhin & al. referred to the locality close to Basel (castle Birseck near Arlesheim) in Switzerland. This is in accordance with the statement in the protologue of *A. montanum* indicating its distribution area as “Habitat in Helvetia”. We ascertained that the plants occurring in the vicinity of the city of Basel (Aesch, below the castle ruin Pfeffingen) are diploid and correspond well with the current concept of *A. montanum*, even in its narrow sense. The locality Birseck near Basel is also mentioned by Linnaeus for *ALYSSUM foliis lanceolatis obtusis incanis, caulibus procumbentibus, radice perenni* in *Hortus Cliffortianus* (1738: 332), the other synonym that is referred to in the protologue of *A. montanum*. This phrase name is identical with the entry in Van Royen’s *Florae leydensis prodrromus* (1740: 331), which is also referred to in the protologue of *A. montanum*. *Alyssum montanum* in the sense of European literature and following Dudley’s account and his typification of the genus (l.c.: 358) belongs to *Alyssum sect. Alyssum*.

It is notable that the “Habitat” statement in the protologue of *A. montanum* reflects only the references to Bauhin & al. (l.c.) and Linnaeus (1738), and there is no reference whatsoever to the occurrence in Siberia referred to by Linnaeus (1748). It seems, however, that failing to reflect the distribution of all of the original material is not uncommon in Linnaean protologues (see also Anderberg & al. in *Taxon* 59: 981. 2010).

It is unclear why Dudley (l.c.: 358) choose as lectotype of *A. montanum* a specimen belonging to *A. obovatum* most likely coming from Siberia, and not the illustration, which is in accordance with the concept of the species as established by the botanical tradition (e.g., Willdenow, *Sp. Pl.*, ed. 4, 3/1: 466. 1800 and the recent sources cited above). Dudley only hypothesised that the specimen came from somewhere else in Russia and not necessarily from Siberia as understood today. Nevertheless, Russian floras (e.g., Busch in Komarov, *Fl. SSSR* 8: 348. 1939; Kotov in Fedorov, *Fl. Evr. Chasti SSSR* 4: 82–83. 1979) report only *A. gmelinii* Jord. & Fourr. (\equiv *A. montanum* subsp. *gmelinii* (Jord. & Fourr.) Hegi & Em. Schmid) from *A. montanum* in its wide sense.

Maintaining the lectotype chosen by Dudley would result in name changes that would be highly disruptive and confusing. It would mean adopting the name *A. montanum* for the widespread Asian taxon currently known as *A. obovatum*, which is contrary to all literature sources from that area. The other consequence of accepting Dudley’s choice of lectotype of *A. montanum* would be the change of the names of two major sections of the genus, namely *Alyssum* L. sect. *Alyssum* and *A. sect. Odontarrhena* (C.A. Mey.) W.D.J. Koch, to which the current lectotype of the generic name belongs. *Alyssum sect. Odontarrhena* is well defined morphologically and is also supported by molecular data (Warwick & al. in *Botany* 86: 315–336. 2008). As the genus *Alyssum* as currently circumscribed is not monophyletic, it cannot be excluded that in future a separate genus *Odontarrhena* C.A. Mey. will be re-established. In that case, the name change would have consequences of a rather wide impact.

In accordance with the Art. 57.1 of the ICBN that states “a name that has been widely and persistently used for a taxon or taxa not including its type is not to be used in a sense that conflicts with current usage unless and until a proposal to deal with it under Art. 14.1 or 56.1 has been submitted and rejected” we propose here the conservation of the name *A. montanum* with a conserved type that reflects current usage of the name. As the illustration in Bauhin & al. (l.c.), although almost certainly of this species, is not of a quality suitable for precise application of the name, we propose a specimen from a locality close to Basel, nearby the locus classicus of Bauhin and others, comprising plants with known ploidy level, details of morphological features (e.g., indumentum) and cpDNA haplotypes.

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