

## (2398) Proposal to conserve the name *Allium saxatile* M. Bieb., non Pall., with a conserved type (*Amaryllidaceae*)

Alexey P. Seregin<sup>1</sup> & Alexander N. Sennikov<sup>2</sup>

<sup>1</sup> Herbarium (MW), Department of Geobotany, Faculty of Biology, M.V. Lomonosov Moscow State University, 119991 Moscow, Russia

<sup>2</sup> Botanical Museum, Finnish Museum of Natural History, P.O. Box 7, 00014 University of Helsinki, Finland; and Herbarium,

Komarov Botanical Institute of Russian Academy of Sciences, Prof. Popov str. 2, 197376 St. Petersburg, Russia

Author for correspondence: Alexey Seregin, [botanik.seregin@gmail.com](mailto:botanik.seregin@gmail.com)

DOI <http://dx.doi.org/10.12705/646.20>

(2398) *Allium saxatile* M. Bieb., Tabl. Prov. Mer Casp.: 114. 1798 (*Angiosp.*: *Lil.* / *Amaryllid.*), nom. cons. prop.

Typus: Azerbaijan, İsmayılı District, vicinity of Lahıc, above the forest belt, 1800–2000 m, 3 Sep 1982, *Nikolaev 234* (LE), typ. cons. prop.

*Allium saxatile* M. Bieb. is the oldest and most widely accepted name in the group of closely related species belonging to *A.* sect. *Oreiprason* F. Herm. and is distributed from Italy to northwestern China. Described from Kurt-Bulak in Azerbaijan, this species includes the Caucasian plants with white or pale-pink tepals (Vvedensky in Komarov, Fl. URSS 4: 184. 1935; Kudryashova in

Takhtajan, Konspekt Fl. Kavkaza 2: 141. 2001; Seregin in Phytotaxa 42: 10. 2012).

The original collections of *A. saxatile* M. Bieb. were destroyed during the Russian Civil War in the 1920s (see Sennikov & Seregin in Taxon 64: 1298. 2015). In the absence of specimens, the name has to be typified by one of the illustrations in Gmelin (Fl. Sibir. 1: t. 16. 1747) which constitute the remaining original material. These illustrations are based on Siberian plants and belong to *A. stellerianum* Willd. (Sp. Pl. 2: 82. 1799) and *A. rubens* Schrad. ex Willd. (Enum. Pl.: 360. 1809). Later Bieberstein (Fl. Taur.-Caucas. 1: 264. 1808) compared *A. saxatile* with *A. stellerianum* and therefore excluded the Siberian elements by implication.

Besides the problems with the original material, the use of *A. saxatile* M. Bieb. is threatened by an obscure early homonym, recorded already in *Index Kewensis* but commonly overlooked, the superfluous and illegitimate *A. saxatile* Pall. The latter name was published by Peter Simon Pallas on the belief that this would have been a more apt substitute for his earlier *A. altaicum* Pall. Despite doubts that the name *A. saxatile* Pall. was validly published at its first appearance (Pallas, *Reise Russ. Reich.* 3: 293. 1776), the conditions of valid publication were certainly fulfilled in the letters of Johann Sievers posthumously edited and published by Pallas (*Neue Nord. Beytr. Phys. Geogr. Erd- Völkerbeschreib.* 7: 221. 1796). This work also predates Bieberstein's publication of *A. saxatile*, making the latter name an illegitimate later homonym.

Nearly all published sources of the 20th and 21st century that treated the Caucasian monocots used the name *A. saxatile* M. Bieb. correctly in its narrow sense (ca. 30 floras, guides, and check-lists). The most important standard floras are Vvedensky, l.c.; Grossheim, *Fl. Kavkaza*, ed. 2, 2: 128. 1940; Karjagin in Sosnowsky, *Fl. Azerbajdžana* 2: 140. 1952; Czerepanov, *Vasc. Pl. Russia Adjac. States*: 14. 1995; Kudryashova, l.c. 2001; Oganessian & Agababian in *Takhtajan, Fl. Armenii* 10: 303. 2001.

There are still some major revisions in which the *A. saxatile* complex is treated broadly. Being the oldest name, *A. saxatile* M. Bieb. is used to denote this group (including plants from Italy, the Balkan states, the Crimea, Eastern Europe, Siberia, Central Asia and China) as a species in the collective sense (Zahariadi in Nyárády, *Fl. Rep. Soc. Roman.* 11: 240. 1966; Privalova in Rubtzov, *Opred. Vyssh. Rast. Kryma*: 88. 1972; Omelczuk-Mjakushko in Fedorov, *Fl. Evrop. Chasti SSSR* 4: 273. 1979; Stearn in Tutin & al., *Fl. Europ.* 5: 54. 1980; Xu & Kamelin in Wu & Raven, *Fl. China* 24: 190. 2000; Assyov & al., *Consp. Bulg. Vasc. Fl.*, ed. 4: 60. 2012; Govaerts & al., *World Checklist* [<http://apps.kew.org/wcsp/>], 2005–2014).

With strict application of the rules, the Caucasian plants with white to pale-pink tepals (*A. saxatile* in current use, in the narrow sense) should be named *A. ruprechtii* Boiss. (*Fl. Orient.* 5: 264. 1882). This name change should be avoided because *A. ruprechtii* has a long tradition of misinterpretation. Some standard floras accepted both “*A. ruprechtii*” from the Western Caucasus and *A. saxatile* (= *A. ruprechtii* sensu typo) from the Central and Eastern Caucasus (Grossheim, *Fl. Kavkaza* 1: 208, 209. 1928; Flerov, *Spisok Rast. Severnogo Kavkaza Dagestana*: 103. 1938; Grossheim, l.c. 1940; Kossenko, *Opred. Vyssh. Rast. Severo-Zapadnogo Kavkaza Predkavkazya*: 524. 1970; Galushko, *Fl. Severnogo Kavkaza* 1: 163. 1978) until Kudryashova (in *Bot. Zhurn. (Moscow & Leningrad)* 73: 665–669.

1988) had correctly synonymized the two names, studying large collections from the locus classicus of *A. ruprechtii* (Tsey Gorge in North Ossetia, Russia). The molecular phylogeny (Seregin & al. in *Bot. J. Linn. Soc.* 178: 67–101. 2015) suggests that the Western Caucasian lineage (i.e., *A. ruprechtii* auct.) merits recognition as a separate species.

Recently, Seregin & al. (l.c.) discovered that *A. saxatile* and *A. globosum* M. Bieb., another traditionally accepted species of the same group, cannot be distinguished in the phylogenetic analysis (ITS and two plastid DNA regions) in spite of their different colours of tepals and different ecological preferences. They decided that the plants with different colours of flowers represent young lineages with incomplete sorting of molecular characters. These lineages should not be recognized as separate species, but separation of two infraspecific entities in this group is quite reasonable and can be achieved under the oldest species name in the most unambiguous way, leaving both morphotypes labelled by their traditional epithets. The two species have been synonymized under the name *A. saxatile* (Seregin & al., l.c.), and the due varietal name for *A. globosum* has been published elsewhere (Sennikov & Seregin, l.c.).

The continuous use of *A. saxatile* M. Bieb. in its usual sense is also essential because this name is the type of *A. sect. Oreiprason*. This section was traditionally recognized (Kamelin, *Florogenet. Anal. Estest. Fl. Gorn. Sred. Azii*: 239. 1973; Hanelt & al., *Gen. Allium: Tax. Probl. Genet. Resourc.*: 107–123. 1992) and successfully integrated into the recent molecular system of the genus (Friesen & al. in *Aliso* 22: 395. 2006; Li & al. in *Ann. Bot. (Oxford)* 106: 733. 2010). If the name *A. saxatile* M. Bieb. is not conserved with a new type, *A. sect. Oreiprason* should be transferred to the synonymy of *A. sect. Rhizirideum* G. Don ex W.D.J. Koch. This transfer will resurrect *A. sect. Petroprason* F. Herm., typified by the extremely specialized *A. obliquum* L.

Without conservation, *A. saxatile* M. Bieb. is reduced to the synonymy of *A. stellerianum* or *A. rubens*. Being illegitimate it cannot become the correct name for these species, but its loss will certainly disturb some accepted names in *Allium* at the level of section, species sensu lato and species sensu stricto. To avoid those unnecessary changes, due to the existence of a never-used and illegitimate earlier homonym and the unfortunate destruction of part of its original material, we propose to conserve the name *A. saxatile* M. Bieb. We are proposing as conserved type a specimen collected only 40 km from the original locality of *A. saxatile* at the same altitude, in order to preserve its original application and avoid any effect of geographical DNA variation.