



Article

Lectotypification of *Galanthus krasnovii* A.P.Khokhr. (Amaryllidaceae)Nina Y. Stepanova^{1*} and Sergey A. Poluektov²¹ Tsitsin Main Botanical Garden of Russian Academy of Sciences, Botanicheskaya St. 4, Moscow, 127276, RussiaEmail: ny_stepanova@mail.ru² Educational Centre of Child Development «Germes», Uchinskaja Str., 10, Moscow, 127411, RussiaEmail: biom@yandex.ru

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Abstract

Galanthus krasnovii was described by A.P.Khokhrjakov (1963: 140) from the plants collected by him in Adzhariya and Abkhazia. Most of the original material was deposited in the Herbarium of Tsitsin Main Botanical Garden RAS (MHA). During work on the revision and digitization of the authentic herbarium specimens deposited in this herbarium, two samples of *Galanthus krasnovii* corresponding to the type quoted in the protologue were found. Since the collection consists of two duplicates, one of them was designated as the lectotype, in accordance with Art. 40.2, Note 1, Ex. 3 of the Shenzhen Code (Turland *et al.*, 2018).

Keywords: *Galanthus krasnovii*, lectotypification, nomenclature.**Introduction**

The herbarium of the Tsitsin Main Botanical Garden RAS (herbarium C-code - MHA according to Triers, 2013) is relatively young. It was founded in 1958, and the collection now has about 600,000 sheets of vascular plants and more than 65,500 samples of bryophytes. As in many herbaria of Russia, there is a special collection of type specimens in MHA, which is comparatively small, numbering about 1,700 authentic samples in all categories. Recently, we have begun work on the revision of this collection for digitization and creation of a database.

During work with the collection of authentic specimens in Liliaceae s.l., in order to determine the categories of type specimens according to the International Code of Nomenclature of Algae, Fungi and Plants (ICN, Turland *et al.*, 2018), we found that two herbarium specimens of *Galanthus krasnovii* A.P.Khokhr. (Khokhrjakov, 1963: 140) have labels identical to those of the type quoted by the author of this taxon in the protologue. Neither of them contains any author's remarks, so it is not clear which of the specimens is the holotype. Since both duplicates belong to the same gathering, it is necessary, according to the Shenzhen

Code (Turland *et al.*, 2018, Art. 9.11-9.12 and Art. 40.2, Note 1, Ex.3), to designate one of them as the lectotype.

Further confusion was created by Davis who, while publishing a treatment for the genus *Galanthus* (Davis, 1999), erroneously cited two different gatherings as type: "Type: Adzhariya ASSR, between Chakhaty [Chakvistavi] and Khino [Khalo], in the river gorge of Kintrishi [Kintrish], beech-box wood, 3 V 1959, Khokhrjakov s.n. (holotype MHA!; isotype LE!, K! [label reads: Chakva district, gorge of river Chakvy between Khalo and Chakvistavi, 3 V 1959, Khokhrjakov s.n.])" which were cited by Khokhrjakov in the protologue separately as: "Typus: Adzharia, distr. Czakva, in angustis fluminis Czakvae inter Chalo et Czakvistavi. 3/V 1959. Ipse legi. In herbario Horti botanici principalis conservatur. Paratypi: Adzharia, in angustis fl. Kintrisch inter Czachaty et Chino 13/IV 1959. Ipse legi".

Thus, here we make lectotypification of the name *Galanthus krasnovii* in accordance with Art. 9.11-9.12 and Art. 40.2, Note 1, Ex.3 of the Shenzhen Code (Turland *et al.*, 2018).

Materials and methods

The original material known to us consists of 26 specimens stored in five herbaria – K, L, MHA, MW and TBI (herbarium codes are cited according to Thiers, 2013). Mostly they are Khokhrjakov's collections from Adzhariya and Abkhazia (Georgia). Seven of them have labels with text matching the citation of the type in the protologue (K!, L!, MHA!, MW!) and nine correspond to the descriptions of paratypes (L!, MHA! MW!, TBI). There are ten more specimens (MHA!) collected at the same time and in the same localities as the type and paratypes mentioned by Khokhrjakov in the original publication, but the texts of their labels have some differences from the protologue. Nevertheless, all of them have the author's determinations and remarks that allow us to consider them the original material. Khokhrjakov (1963) indicated the place of the type deposition as the MHA. As already mentioned above, there are two specimens in MHA that completely correspond to the protologue. One of them, MHA0032695, has 3 plants at different stages of development (young vegetative, flowering and with immature fruit) and a straightened flower on one sheet (Fig. 1), while the second specimen, MHA0032696, is one mature flowering plant (Fig. 2). The former one of these specimens, MHA0032695, as the most representative of the features specified in the original description, we are choosing here as the lectotype.



Figure 1. Lectotype of *Galanthus krasnovii* A.P.Khokhr.

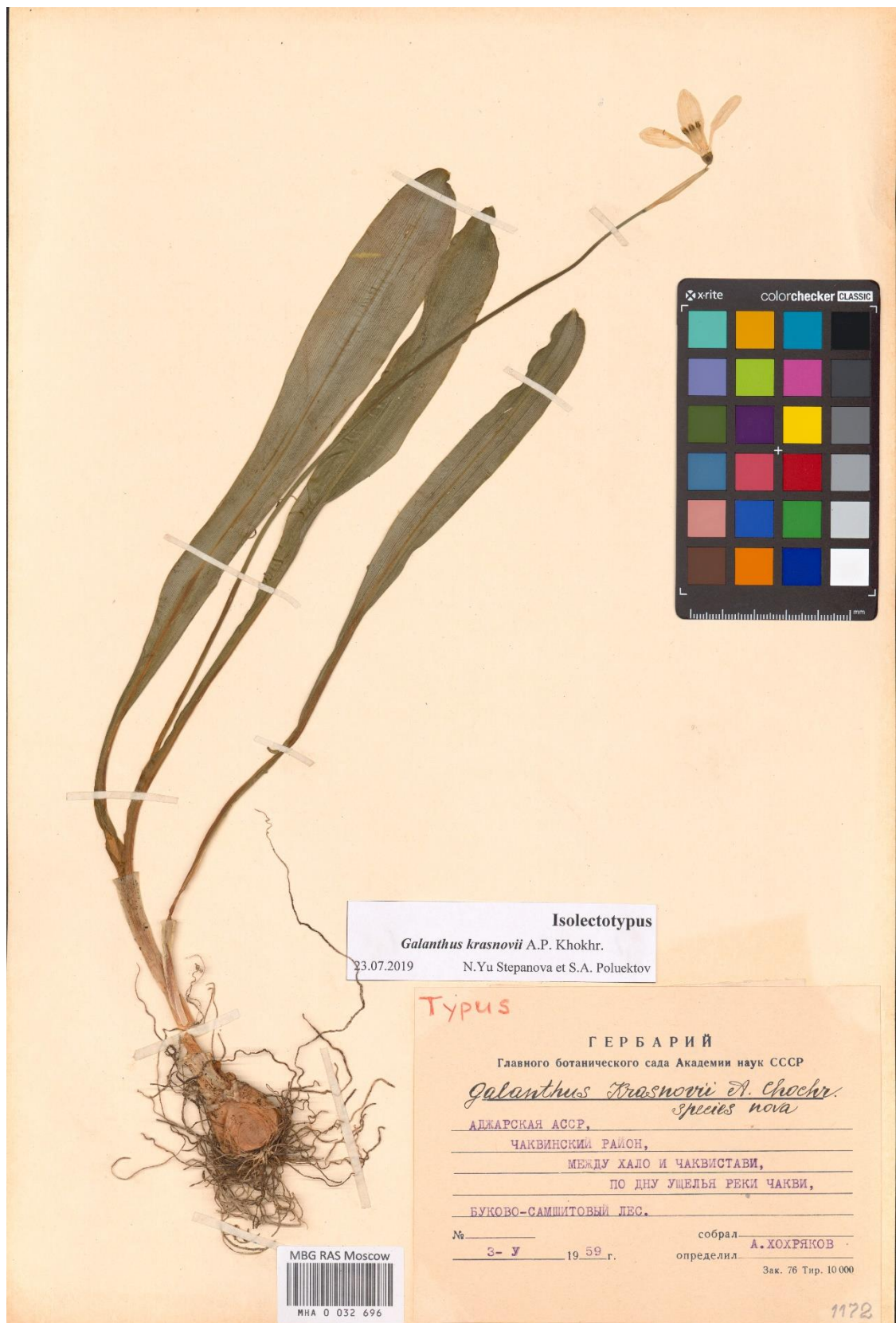


Figure 2. Isolectotype of *Galanthus krasnovii* A.P.Khokhr.

Typification of the name

Galanthus krasnovii A.P.Khokhr.

Bull. Soc. Nat. Mosc., Biol. n. s., 68 (Livr. 4): 140. 1963

Lectotypus (designated here):— “Adzhar ASSR, Chakvinsky District, between Khalo and Chakvistavi, at bottom of Chakva [Chakvistskali] River Gorge, beech-boxwood forest. 3 V 1959. *A.Khokhrjakov s.n.*” [Original in Russian] – MHA0032695! isolectotypi: MHA0032696!; K000464020!; LE01053057!, LE01053058!, LE01053059!; MW0591749!

Paratypi [MHA(2), LE(1); MW(3)]:—Adzhar ASSR, between Chakhaty and Khino, in Kintrishi River Gorge, beech-boxwood forest, 3. V.1959. *A.Khokhrjakov s.n.* [Original in Russian] – MHA0032697! ("Holotype, 1994, A. P. Davis, University of Reading, UK" in sched.); MHA0032698!; LE01053060!; MW0591750!, MW0591751!, MW0591752!

Protologue citation:—"Adzhariya, distr. Chakva, in angustiis fluminis Chakvae inter Chalo et Chakvistavi, 3/V.1959. Ipse legi. In herbario Horti botanici principalis conservatur (MHA). — Adzhar ASSR, Chakvinsky stream, Chakva River Gorge, between Khalo and Chakvistavi, 3/V.1959. Stored in the Herbarium of the Main Botanical Garden. [Original in Russian] — Paratypi: Adzhariya, in angustiis fl. Kintrisch inter Chachaty et Chino 13/IV.1959. Ipse legi. Abhasia, in angustiis fl. Psirtskha, Novyi Afon, 5/III.1961. Ipse legi. — Adzhariya, in Kintrish River Gorge, between Chakhaty and Khino, 13/IV.1959; Abkhazia, in Psirtskha River Gorge near Novyi Afon [Akhali Atoni], 5/III.1961" [Original in Russian].

It should be noted that in the Latin part of the protologue, the author gave the administrative region as ‘distr. Czakva’ (actually this district does not exist, the collection place refers to Kobuletsky area), and in the Russian part of the protologue, ‘Chakvinsky stream’ is given instead. On the field labels written by A. P. Khokhryakov the geography of the collection is indicated by one word ‘Chakva’.

Original material:—"Adzhar ASSR, vicinity of Batumi, Chakva River Gorge. 3/V.1959, leg. & det. A.Khokhrjakov (MHA0032932!); ibid. Chakva River Gorge between Khino and Chakvistavi. 3.V.1959, idem (MHA0032927!); ibid., Kobuletsky district, Chakvistavi River Gorge, wet meadow. 3.V.1959, idem (MHA0032928!, MHA0032929!, MHA0032930!, MHA0032931!); ibid., Kintrish River Gorge, village Chakhaty, wet slope. 13.04.1959, idem (MHA0032925!, MHA0032926!); ibid., village Chakhaty, jungle of boxwood. 21.04.1959, idem (MHA0032924!); ibid., between Chakhaty and Khino, at bottom of Kintrishi River Gorge, boxwood forest. 21.04.1959, idem (MHA0032699!)" [Original in Russian].

All samples cited here as original material are stored in the Caucasus Section of the MHA herbarium.

Furthermore, A.P.Khokhrjakov later decided on one of the cited paratypes of *G. krasnovii* ("Abkhazia, in Psirtskha River Gorge near Novyi Afon, 5/III. 1961") to be a new infraspecific taxon, i.e. *G. krasnovii* subsp. *maculatus*.

Galanthus krasnovii A.P.Khokhr. subsp. *maculatus* A.P.Khokhr.

Bull. Princ. Bot. Gard. Acad. Sci. URSS 62: 60. 1966

Neotypus: (designated here):— "Abkhazia, Novyi Afon. 5/III. 1961, A.Khokhrjakov s.n.

[Original in Russian] (sub nom. *Galanthus krasnovii* A.P.Khokhr., on the field label –

'*Galanthus krasnovii* var. *minus* m.')

 – MHA0032851!

Protologue citation:—"Abchasia, angustia fluminis Pschirzcha. Legit A.Khokhrjakov 5.03.1961".

The only herbarium specimen known to us and marked by Khokhrjakov as an infraspecific taxon of *G. krasnovii* from the region cited in the protologue is the specimen MHA0032851 annotated as *G. krasnovii* var. *minus* m. (Fig. 3). The date on the field label is the same as the date given in the protologue of *G. krasnovii* subsp. *maculatus*. The description of the latter suits the plant mounted on the herbarium sheet with the name *G. krasnovii* var. *minus* m., and the words in the description of *G. krasnovii* subsp. *maculatus* 'planta minima' correspond to the epithet of *G. krasnovii* var. *minus*. All of the above led us to speculate that originally Khokhrjakov planned to describe a new variety of *G. krasnovii* (evident by the written note on the field label) under the name '*G. krasnovii* var. *minus* m.', but later he published it as a subspecies and under a different name – *G. krasnovii* subsp. *maculatus*. As the locality given in the protologue differs from that on the label on the herbarium specimen, it must be not the only specimen seen by the author of the taxon, and, furthermore, the name *G. krasnovii* subsp. *maculatus* does not appear on the sheet. We therefore designate the specimen MHA0032851 as the neotype here.

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Figure 3. Neotype of *Galanthus krasnovii* A.P. Khokhr. subsp. *maculatus* A.P. Khokhr.

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