

**TYPIFICATION OF NAMES OF TWO VARIETIES
OF *GERANIUM PSEUDOSIBIRICUM* (GERANIACEAE) FROM EAST SIBERIA**

V.I. Troshkina, S.V. Ovchinnikova

Central Siberian Botanical Garden, SB RAS,

101, Zolotodolinskaya str., Novosibirsk, 630090, Russia; e-mail: vitroshkina@csbg.nsc.ru, sv-ovchin@yandex.ru

Typification of names was performed for two varieties of *Geranium pseudosibiricum* J. Mäyer – *G. pseudosibiricum* var. *uschkanense* (Popov) Peschkova and *G. pseudosibiricum* var. *subuschkanense* (Popov) Peschkova – described by M.G. Popov from the shores of Lake Baikal. Type specimens of the varieties are present in M.G. Popov Herbarium (NSK), their categories are indicated, data from protologues are cited, and notes are provided.

Key words: *Geraniaceae*, *Geranium pseudosibiricum*, typification, M.G. Popov Herbarium (NSK), Lake Baikal.

**ТИПИФИКАЦИЯ НАЗВАНИЙ ДВУХ РАЗНОВИДНОСТЕЙ
GERANIUM PSEUDOSIBIRICUM (GERANIACEAE) ИЗ ВОСТОЧНОЙ СИБИРИ**

В.И. Трошкина, С.В. Овчинникова

Центральный сибирский ботанический сад СО РАН,

630090, Новосибирск, ул. Золотодолинская, 101, Россия, e-mail: vitroshkina@csbg.nsc.ru, sv-ovchin@yandex.ru

Проведена типификация названий двух разновидностей вида *Geranium pseudosibiricum* J. Mäyer: *G. pseudosibiricum* var. *uschkanense* (Popov) Peschkova и *G. pseudosibiricum* var. *subuschkanense* (Popov) Peschkova, описанных М.Г. Поповым с побережий озера Байкал. Типовые образцы разновидностей выделены в Гербарии им. М.Г. Попова (NSK), указаны их категории, процитированы данные протологов, даны примечания.

Ключевые слова: *Geraniaceae*, *Geranium pseudosibiricum*, типификация, Гербарий им. М.Г. Попова (NSK), озеро Байкал.

This article is a part of a series of studies performed on the results of the research project “Isolation of authentic and type materials, digitalisation, and creation of a type specimen catalogue of the vascular plants kept at M.G. Popov Herbarium (NSK) of the Central Siberian Botanical Garden (CSBG) SB RAS” carried out by the staff of the Laboratory of Systematics of Higher Vascular Plants and Florogenetics, CSBG, SB RAS. History of the creation of M.G. Popov Herbarium and of its type collection has been described in detail previously (Han, 2016; Nikiforova, 2016; Ovchinnikova et al., 2016, 2018).

Since 1966, the Laboratory of Flora and Plant Resources headed by L.I. Malyshev had been a part of the Siberian Institute of Plant Physiology and Biochemistry (SIPPB), Siberian Branch of the USSR Academy of Sciences. During this period, the book “Synopsis of Flora of Lake Baikal Coast” was published (Popov, Busik, 1966), which was prepared by V.V. Busik by means of the data from field studies by M.G. Popov and his students on the basis of M.G. Popov Herbarium. At the end of the book, on pages 212–215, under

the subheading “Diagnoses plantarum novarum”, an archive manuscript by M.G. Popov, dated 1955, is presented, which provides descriptions of 49 new taxa and 4 new combinations (Popov, 1966). For each new taxon, a brief datasheet of a type specimen is provided, citing an exclusive location, year, and last name of the collector. In the preface of the book, it says that all the herbarium collections, including type specimens, are stored at M.G. Popov Herbarium. This statement is supported by documents and materials in the laboratory archive. In 1975, L.I. Malyshev compiled a typewritten catalogue of M.G. Popov Herbarium type specimens that includes 149 taxa. The catalogue lists all 49 new taxa described by Popov from the shores of Lake Baikal (Ovchinnikova et al., 2016).

The list of new taxa described by Popov included two varieties: *Geranium coeruleum* Patrin var. *uschkanense* Popov and *G. coeruleum* Patrin var. *subuschkanense* Popov. These varieties are homotypic synonyms of nomenclature combinations – *G. pseudosibiricum* J. Mäyer var. *uschkanense* (Popov) Peschkova and *G. pseudosibiricum* J. Mäyer var. *subuschkanense*



Гераний псевдосибирский J. Mayer
 var. *ushkanense* (Popov) Peschkova
 25.09.2014 Определила: Овчинникова С.В.
 Трощинкина В.И.

HOLOTYPUS

HOLOTYPUS
Geranium pseudosibiricum
 J. Mayer var. *ushkanense*
 (Popov) Peschkova 1996, Fl.
 Sibir. (Geraniac.-Cornac.) 10: 17
 S. Ovchinnikova, V. Troshkina,
 2014-10-25

№-49-74 ГЕРБАРИЙ
 Восточно-Сибирского филиала АН СССР
Geranium coeruleum var.
ushkanense
 Местонахождение Иркутская обл.
 оз. Байкал в г. Ушканский
 Собрал М.А. Голуб.
 14/VII 1952 г. Определил Голуб.
 Иркутск, Гор. тип. обл. упр. культуры — 2266—85

Fig. 1. Holotype of *Geranium coeruleum* Patrin var. *ushkanense* Popov (NSK 0000337).



Geranium pseudosibiricum G. Meyer
 var. *subushkanense* (Popov) Peschkova
 25.09. 2014 Определила: Овчинникова С. В.
 Трощкина В. И.

Сев.-зап. поб. Байдалкин
 мыс Саян-Марен
 Степной склон
 1/11 55 М. Попов, В. Трохов.
 Определ. М. Трохов

LECTOTYPUS
Geranium pseudosibiricum J.
 Mayer var. *subushkanense*
 (Popov) Peschkova 1996, Fl.
 Sibir. (Geraniac.-Cornac.) 10
 17
 S. Ovchinnikova, V.
 Troshkina, 2014-10-15

№ 49-61 Академия наук СССР, Сибирское отделение
 ГЕРБАРИЙ им. М. Г. ПОПОВА (г. Иркутск)
Geranium coeruleum
 var. *subushkanense* M. Pop. n. y.
 Местонахождение Северо-западн. поб. Байдал-
 мыс Саян-Марен
 Местобитание Степной склон
 1/11 1965 г. Собрал М. Трохов, В. Трохов
 № Определил М. Трохов

LECTOTYPUS

Зак. 275, г. 10000.

Fig. 2. Lectotype of *Geranium coeruleum* Patrin var. *subushkanense* Popov (NSK 0000334).

(Popov) Peshkova – that were proposed by G.A. Peshkova (1996). It should be noted that in Popov's spelling of the variety epithets, the letter "c" is omitted from "sch" (*ushkanense*), whereas Peshkova cites the epithet according to Latin language rules: *uschkanense*.

The typification was conducted here in accordance with the requirements of the International Code of Nomenclature for Algae, Fungi, and Plants (ICN) (Turland et al., 2018). For each specimen, a type specimen category is indicated, the original datasheet and protologue are cited, and notes are provided regarding the questions of nomenclature and systematics of the taxa under study.

Geranium coeruleum* Patrin var. *uschkanense Popov, 1966, in Popov and Busik, Synopsis of Flora of Lake Baikal Coast: 213, descr. ('*ushkanense*').

≡ *G. pseudosibiricum* J. Mäyer var. *uschkanense* (Popov) Peshkova, 1996, in Flora of Siberia, 10: 17.

Holotype: Buryatia Republic, Barguzin district, Irkutsk Oblast, Lake Baikal, Big Ushkan Island, 14 VII 1952, M.G. Popov, sub *Geranium coeruleum* var. *ushkanense* M. Pop., descr. M.G. Popov' (NSK 0000337) (Fig. 1).

According to the protologue: "Lacus Baical, insula Boljschoj Uschkanij, 1952, M. Popov, I. Andreeva".

Notes. For the first time, the author provided a Russian description of the variety in "Flora of Central Siberia" (Popov, 1957), remarking on the especially large size of the plant itself and of its parts (the flower, peduncles, and leaves) and the absence of glandular pubescence. In Popov's opinion, this variety had formed as a result of crossing with *G. albiflorum* Ledeb. Popov provides *G. pseudosibiricum* as a synonym for the species *G. coeruleum* Patrin, stating that this is hardly the species J. Mäyer ("auct. vix J. Mey") (Popov, 1957: 397). V.V. Busik in "Synopsis of Flora of Lake Baikal Coast" (Popov, Busik, 1966) writes that this is an especially large-flowered taxon, hybrid *G. coeruleum* × *G. albiflorum* Ledeb. E.G. Bobrov (1949), D.A. Webb, I.K. Ferguson (1967), N.N. Tsvelev (1996), and G.A. Peshkova (1996) designated *G. coeruleum* as a synonym of *G. pseudosibiricum* J. Mäyer, stating that *G. coeruleum* plants are *G. pseudosibiricum* with pistillary flowers. After the statements by the above authors, we agree with this opinion because there are reports of gynodioecy regarding species of the genus *Geranium* (Peshkova, 1996; Troshkina, 2015, 2016). In "Flora of Siberia", G.A. Peshkova (1996) correctly proposes a new nomenclature combination *G. pseudosi-*

biricum J. Mäyer var. *uschkanense* (Popov) Peshkova. The only specimen of this variety is stored at NSK, and its datasheet almost exactly matches the protologue, and the drawing in "Synopsis of Flora of Lake Baikal Coast" was prepared using this specimen; therefore, according to articles 8.1 and 9.1 of ICN (Turland et al., 2018), it should be considered a holotype.

Administratively, Ushkan Islands are affiliated with the Barguzin district of the Buryatia Republic, not with Irkutsk Oblast, as originally indicated in the holotype datasheet.

Geranium coeruleum* Patrin var. *subuschkanense Popov, 1966, in Popov and Busik, Synopsis of Flora of Lake Baikal Coast: 213, descr. ('*subuschkanense*').

≡ *G. pseudosibiricum* J. Mäyer var. *subuschkanense* (Popov) Peshkova, 1996, in Flora of Siberia, 10: 17.

Lectotype (Ovchinnikova, Troshkina, designated here) et isolectotype: Irkutsk Oblast, "northwestern shore of Baikal, cape Sagan-Maryan, steppe slope, N-49-61, 1 VII 1955, M. Popov, V. Prochorov sub *Geranium coeruleum* var. *subuschkanense* M. Pop. n. v., descr. M.G. Popov" (NSK 0000334, isolectotype NSK 0000335) (Fig. 2).

According to the protologue: "Lacus Bajcal, promontorium Sagan-Marjan, 1955, M. Popov, V. Prochorov".

Notes. Variety *Geranium coeruleum* Patrin var. *subuschkanense* Popov is distinguished by the authors (Popov, Busik, 1966) from var. *uschkanense* by smaller sizes of all parts of the plant. Additionally, we note the presence of glandular indumentum on peduncles, which is absent in specimens of var. *uschkanense*. Two herbarial sheets with identical datasheets are stored in the NSK herbarium. According to articles 9.3, 9.11 and 9.12 of ICN (Turland et al., 2018), one of them is designated by us as a lectotype, and the other is an isolectotype.

Acknowledgements. This work was done within the framework of project CSBG AAAA-A17-117012610055-3 "Biological diversity of agamous organisms (algae, fungi, and lichens) and vascular plants in the geospace of biotic and abiotic factors, and assessment of their role in aquatic and terrestrial ecosystems of Northern Asia" with partial support from the Russian Foundation for Basic Research within project No. 15-29-02429. The study involved material from the Bioresource Collection of CSBG SB RAS, unique scientific unit "Herbarium of Higher Vascular Plants, Lichens, and Fungi" (NS, NSK), No. USU 440537.

REFERENCES

Han I.V. Taxa of Asteraceae, Euphorbiaceae and Scrophulariaceae in collection of types of M.G. Popov Herbarium (NSK) // Rastitel'nyj mir Aziatskoj Rossii. 2016. 3(23):41–54.

Nikiforova O.D. The type specimens of the taxa of *Hedysarum*, *Vicia*, and *Trifolium* (Fabaceae) in collections of the M.G. Popov Herbarium (NSK) // Systematic notes on the materials of P.N. Krylov

- Herbarium of TSU. 2016. 113:26–36. DOI: 10.17223/20764103.113.2
- Ovchinnikova S.V., Nikiforova O.D., Doronkin V.M. et al.** Type specimens of the taxa of Poaceae family in collection of M.G. Popov Herbarium (NSK) // *Rastitel'nyj mir Aziatskoj Rossii*. 2016. 1(21):48–64.
- Ovchinnikova S.V., Pinzhenina E.A.** Type specimens of names of the taxa of genera *Astragalus* and *Oxytropis* (Fabaceae) in collection of M.G. Popov Herbarium // *Rastitel'nyj mir Aziatskoj Rossii*. 2018. 4 (32):37–50. DOI: 10.21782/RMAR1995-2449-2018-4(37-50)
- Peshkova G.A.** Genus *Geranium* // *Flora of Siberia*. Vol. 10. Geraniaceae–Cornaceae. Novosibirsk, 1996. P. 8–22. (In Russ.).
- Popov M.G.** *Geranium* L. // *Flora of Middle Siberia [Flora Sredney Sibiri]*. Moscow; Leningrad, 1957. P. 396–400. (In Russ.).
- Popov M.G.** *Diagnoses plantarum novarum // Synopsis of Flora of Lake Baikal Coast [Konspekt flory poberezhnyy ozero Baykal]*. Moscow; Leningrad, 1966. P. 212–215.
- Popov M.G., Busik V.V.** *Synopsis of Flora of Lake Baikal Coast [Konspekt flory poberezhnyy ozero Baykal]*. Moscow; Leningrad, 1966. 215 p.
- Troshkina V.I.** Notes on systematic of the Altai species of the genus *Geranium* L. (Geraniaceae Juss.) described by P.N. Krylov and L.S. Sergievskaya // *Problems of studying the vegetation of Siberia: Materials of the V International Scientific Conference dedicated to the 130th anniversary of Herbarium named after P.N. Krylov and the 135th anniversary of the Siberian Botanical Garden of Tomsk State University*. 2015. P. 83–86.
- Troshkina V.I.** Notes on systematic and chorology of *Geranium pseudosibiricum* and related species (Geraniaceae) // *Rastitel'nyj mir Aziatskoj Rossii*. 2016. 3(23):22–32. DOI: 10.21782/RMAR1995-2449-2016-3(22-32)
- Tsvelev N.N.** *Flora of Eastern Europe [Flora Vostochnoy Evropy]*. T. 9. Sankt-Peterburg, 1996. 456 p.
- Turland N.J., Wiersema J.H., Barrie F.R. et al.** *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017*. 2018. Glashütten (Regnum Veg. 159). DOI: 10.12705/Code.2018
- Webb D.A., Ferguson I.K.** *Geraniaceae // Feddes Repertorium*. 1967. 74(1–2):25–26.

*Поступила в редакцию 17.04.2020 г.,
после доработки – 24.06.2020 г.,
принята к публикации 30.06.2020 г.*