



Article

Typification of *Primula nivalis* Pall.Nataliya Kovtonyuk^{1*} and Charles E. Jarvis²

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Abstract

The herbarium material that was the basis for *Primula nivalis*, described by Simon Pallas in 1776, and held at the Natural History Museum in London, is discussed, and a lectotype of *Primula nivalis* is designated.

Key Words: historical collections, Peter Simon Pallas, *Primula*, taxonomy, typification.

Introduction

Primula nivalis was described by Peter Simon Pallas (Pallas, 1776) from East Siberia, Dauria, Russia. As far as we are aware, no type specimen for this name has previously been located (Kovtonyuk, 2006, 2011; Buzunova and Kovtonyuk, 2010). Peter Pallas was a “German botanist and geographer; explorer of Russia and Siberia, pioneer naturalist of Northern Asia; Dr. med. Leiden 1759; 1761-1766 working in Holland and England” (Stafleu and Cowan, 1983). In 1767, Pallas was invited by Catherine the Great of Russia to become a professor at the St Petersburg Academy of Sciences and, between 1768 and 1774, he led an expedition to the central Russian provinces, Povolzhye, the Urals, West Siberia, Altai and Transbaikalia collecting natural history specimens on the Academy’s behalf (Sytnin, 1997, 2014; Belyaeva and Sennikov, 2008).

The regular reports which Pallas sent to St Petersburg were collected and published in 1771–1776 in three volumes as “Reise durch verschiedene Provinzen des Russischen Reichs” [=Journey through various provinces of the Russian Empire]. They covered a wide range of topics, including geology and mineralogy, reports on the native peoples and their religions, and descriptions of new plants and animals.

The major part of the Pallas Herbarium was sold during his lifetime to A.B.Lambert (Litvinov, 1909; Miller, 1970). At the Lambert’s sale, one part went to Robert Brown, the

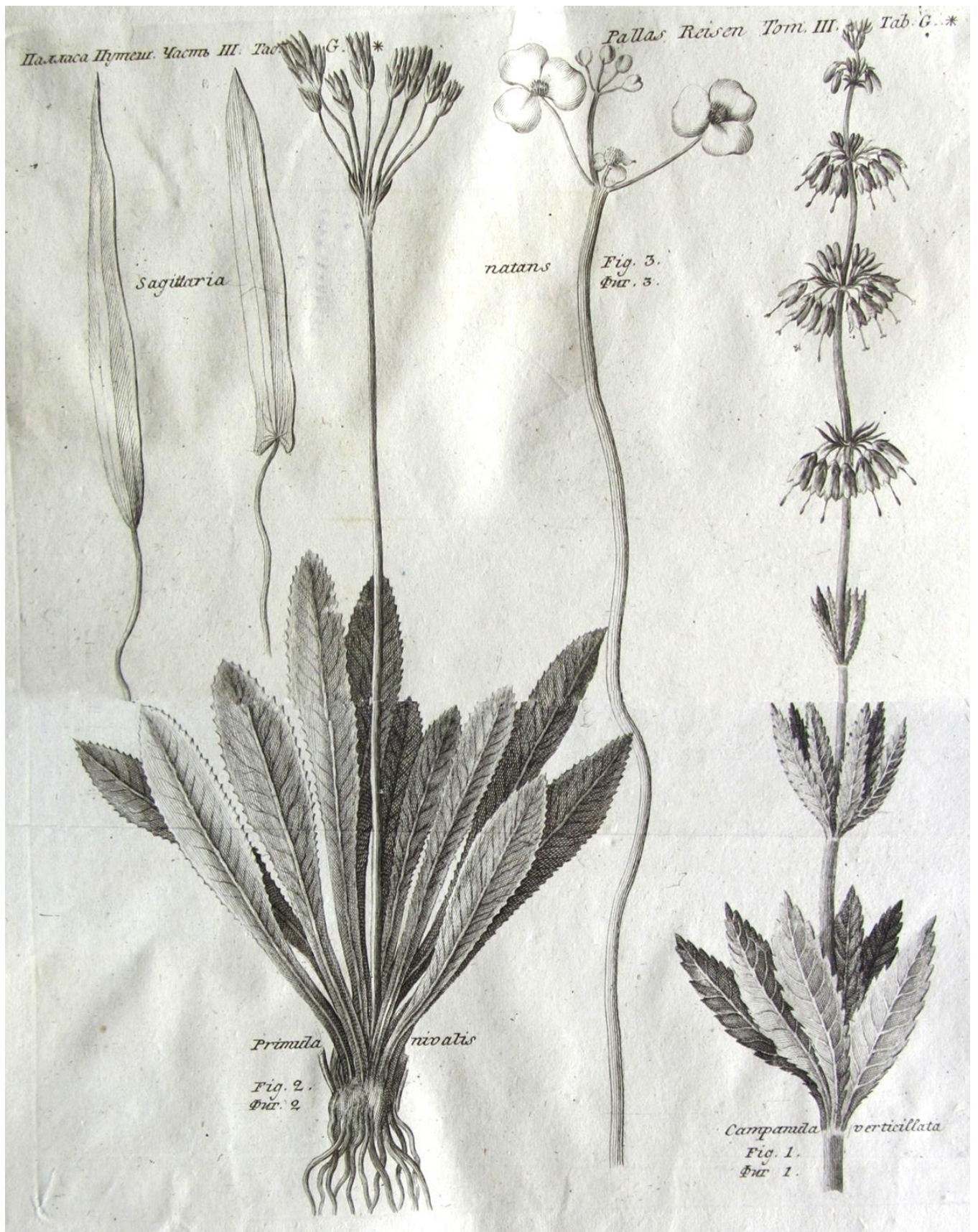


Fig.1. Illustration of *Primula nivalis* Pall. (Pallas, Reisen, Part III, Tab. G, fig. 2).
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Fig. 2. Lectotypus of *Primula nivalis* Pall. held in Natural History Museum, London (BM001124519).

remainder to William Robertson (both now at BM); other specimens can be found in various other herbarium collections (Stafleu and Cowan, 1983). Halda (1992) wrote that the type specimen of *P. nivalis* should be in St. Petersburg (LE), but he did not see it. According to Fedorov's treatment of the genus *Primula* in "Flora of USSR" (1952, 1967), the type specimen of *P. nivalis* Pall. should be in London. The protologue of *P. nivalis*, accompanied by an illustration, was published in the third volume of the Pallas' "Reise" (Fig. 1).

Typification

The senior author (NK) located an authentic herbarium collection, comprising two specimens, of *P. nivalis* on a single sheet in the collections of the Natural History Museum, London (BM) in April 2013. The specimen to the right (Fig. 2) is very similar to the image in "Reise" (Pallas, 1776: 723, Tab. G, fig. 2), and both plants are in the fruiting phase. In the protologue of *P. nivalis*, Pallas wrote "Provenit circa nives et scaturigines frigidissimas Alpium Davuricarum" [= "grows near snow and very cold streams in the Daurian Alps"]. It can be seen that the two specimens were originally mounted together on an older sheet, along with other collections, but these two specimens have together been cut from their original sheet and subsequently remounted alone on what is now herbarium sheet BM001124519 (Fig. 2). Beneath the specimens, on the original mounting paper, there is a remark in pencil: "Primula nivalis Pallas it. 3. p. 723, t[ab.] G*, f[ig.] 2". Each of the specimens has also been labelled at its base with the number "1" (which must have served to distinguish them from other collections on the original mounting sheet), and the key to this number (which would have been written on the reverse of the original sheet) has been cut out and pasted on the new sheet below the specimens. This caption (in ink) reads "1. Dauria Alpes P.S. Pallas, MD [Doctor of Medicine]".

In Dauria, *P. nivalis* could have been found only on Mt. Sokhondo (Kovtonyuk, 2011, 2012). The type specimens may well have been collected here by Nikita Sokolov in 1772 when, as a student of Pallas, he was collecting on the Academy's expedition (Sytn, 1997, 2014).

P. nivalis Pall. 1776, Reise Russ. Reich. 3: 723; Lehmann, 1817, Monogr. Primul.: 67; Bunge, 1829 in Ledeb. Fl. Altaic. 1: 210; Fedorov 1952, in Fl. URSS 18: 192; Halda, 1992, The Gen. Primula: 203; Kovt. 1997, in Fl. Sibiri 11: 44; Kovt. 2012, in Konspekt Fl. Aziatsk. Rossii: 132; Richards, 1993, Primula: 174, p. p.; Richards, 2003, Primula: 203, p. p. – *P. nivalis* Pall. var. *typica* Regel, 1875, Trudy Imp. S.-Peterburgsk. Bot. Sada 3: 135, nom. inval.; Pax,

1889, Bot. Jahrb. Syst. 10, 3: 207; E.A. Busch, 1926, in N.A. Busch, Fl. Sibiri Dal'nego Vostoka, 4: 70; Krylov, 1937, Fl. Zapadn. Sibiri 9: 2131.

Type: Russia, East Siberia, Dauria: “Dauria Alpes. P.S. Pallas, MD” [fr.]. “*Primula nivalis* Pallas it. 3. p. 723, t G*, f 2” (lectotype BM001124519! **designated here** by Kovtonyuk).

In the protologue: “Provenit circa nives et scaturigines frigidissimas Alpium Davuricarum”.

Grows on the banks of mountain streams, in wet alpine lawns, near snow fields and glaciers: West Siberia, Altai, Transbaikalia, Mongolia, Kazakhstan.

Primula nivalis is the type species of the section *Crystallophlomis* (Rupr.) Fed., previously reported by Kovtonyuk (2011).

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