



Article

**Nomenclatural and taxonomic notes on the names published by M.G. Popov
in *Salix* L. and *Populus* L. (Salicaceae)**

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Abstract

The nomenclatural status and taxonomic position of three names of *Populus* and seven names of *Salix*, including names published by the Russian botanist Mikhail Popov are discussed. Two new taxa, *Salix krylovii* f. *acutifolia* I.V.Belyaeva & Kovt. and *Salix krylovii* f. *laetissima* I.V.Belyaeva & Kovt., are described and one new combination, *Populus suaveolens* f. *baicalensis* (Kom.) I.V.Belyaeva & Kovt., is made. *Salix fumosa* var. *laxiflora* Popov is placed as a new synonym of *Salix saxatilis* Turcz. ex Ledeb. Three names of *Populus* and one name of *Salix* are typified.

Key words: historical collections, new combinations, nomenclature, Popov, *Populus*, *Salix*, Salicaceae, taxonomy, typification.

Introduction

This paper is part of three projects in which the authors of the present paper are involved: compilation of the World Checklist of Salicaceae s. str. (I. Belyaeva), digitization of type specimens and placing them in International virtual herbaria (N. Kovtonyuk) and a compilation of additions and corrections to ‘Konspekt flory Asiatskoï Rossii’ recently published by Baïkov (2012) (I.Belyaeva and N. Kovtonyuk).

As defined in Art. 7.1 of the ICN (McNeill *et al.*, 2012), the application of scientific names of taxa at the rank of family and below is determined by the use of nomenclatural types. Therefore, typification of the names of taxa is an important step in the process of taxonomic research. Understanding of the original material that was in the possession of the author of the names helps not only in making correct decisions on typification but also in unambiguous placement of the taxa.

The Russian botanist Mikhail Grigorievich Popov (1893–1955) was the author of more than 200 scientific publications and 10 monographs devoted to taxonomy and research on the flora of different regions of Eurasia, in particular of Siberia, Middle Asia, Caucasus, the Carpathians, the Sakhalin Peninsula and in the region of Lake Baikal. Popov published about 300 new names of plants including seven in *Salix* and one in *Populus*.

Popov graduated from Petrograd University in 1917, taught in Saratov and Tashkent universities (1917–1927), and worked in the All-Union Institute of Plant Industry (VIR), the Kazakh branch of the Academy of Sciences of USSR and the Batumi Botanical Garden (1927–1940). He was a professor at universities in Samarkand (1940–1944), Kiev (1944–1945), L'viv (1945–1948), head of the Sakhalin branch of the Academy of Sciences of USSR (1948–1950) and head of the Department of Flora and Geobotany of the East Siberian branch of the USSR Academy of Sciences in Irkutsk (1950–1955). During the last years of his life, Popov was dedicated to the study of the Siberian flora and, especially, that of the shores of Lake Baikal. In a short period, under Popov's leadership, the richest herbarium in East Siberia was created. The basis of this herbarium was the personal collections by Popov and his followers. After Popov's death, the herbarium was named in his honour. Between 1951 and 1955 he worked on manuscripts of 'Flora Sredneĭ Sibiri' (Popov, 1957; 1959) and 'Konspekt flory poberezhii ozera Baikal' (Popov and Busik, 1966). Popov explored in detail the northern coast of Lake Baikal, but, unfortunately, he did not finish this work because of his sudden death. His rich herbarium material from the shores of Lake Baikal was used later in scientific research and cited in many publications. The main part of analysing and describing Popov's collections from the environs of Lake Baikal was done and published by Busik (Popov and Busik, 1966). This publication was based on the herbarium specimens collected by Popov and his colleagues, L.V. Bardunov, L.I. Malyshev and G.A. Peshkova, during their field trips in 1951–1955.

In his manuscript, 'Konspekt flory poberezhii ozera Baikal', which was prepared in 1955, Popov described 53 new taxa from the shores of Lake Baikal, including 6 new taxa of *Salix* and one of *Populus*. Popov's manuscript was completed and published 11 years later by Busik (Popov and Busik, 1966). Popov also published some ideas on the endemic flora of the Baikal region including those on endemic taxa of the complex family Salicaceae (Popov, 1956).

Material and methods

These studies are based on information from the protologues, authentic herbarium specimens held mainly in NSK, but also in K, LE and W, and information stored in the international database ‘Virtual Herbaria’ (<http://herbarium.univie.ac.at/>). Herbarium acronyms are cited as in Thiers (2013). Accepted names are given in bold. Typification was made according to the ICN (McNeill *et al.*, 2012).

As the book by Popov and Busik (1966) was not widely distributed outside of Russia and is difficult to access, we provide here protologue information in Latin for the taxa described by Popov (Fig.1). However, there is also some protologue information in another part of the book provided in Russian that is cited and discussed in the appropriate parts of this paper.

Busik made only minor changes to the manuscript written by Popov and neither author used the word ‘type’ either in the Latin or Russian parts of the protologues, but cited only places, collectors and year that could count as citation of the herbarium specimens. Such citations would have been enough to satisfy valid publication of the names before 1958. According to Art. 40.1 and 40.2 of the ICN (McNeill *et al.*, 2012), however, for names published on or after 1st of January 1958 an indication of the type is required and this indication could be achieved by reference to an entire gathering, or part thereof, even if it consists of two or more specimens as defined in Art. 8 of the ICN.

Nomenclatural and taxonomic notes

1. *Populus suaveolens* Fisch. ex Loudon var. *baicalensis* Popov, Konspekt Fl. Pober. Baikal: 214. 1966, **nom. inval.**

Comments: The name was intended to be published as a new combination based on *Populus baicalensis* Kom. However, the authors of the publication did not provide a full basionym reference and, according to Art.41.5 of the ICN (McNeill *et al.*, 2012), this name has not been validly published as a new combination. In the Latin part of the protologue, on page 214, reference is made to “Lacus Baical, pag. Sarma, 1951, I. Andreeva”. In the Russian part of the protologue, on page 181, there are two more references: “По берегам Байкала. Маломорское поб.: дер. Сарма, 1951, М. Попов, Л. Бардунов. Сев.-вост. поб.: окр. с. Сосновки, В.Сукачев” [On the shores of Baikal. Malomorskoye Coast: Sarma Village, 1951, M. Popov, L. Bardunov. Northeastern coast: near Sosnovka Village, V. Sukachev]. Since three gatherings

34. *Patrinia sibirica* var. *arenicola* M. Pop. var. n. Haec varietas arenarum incolae est, qua de causa caudicem bene evolutum praebet. Folia radicalia rosulantia magis dissecta, quam *P. sibiricae* Juss. f. *typicae*. Inflorescentia compacta, subcapitata. Lacus Baical, ostium fl. Bolschoj Czivyrukuj, 1954, M. Popov.
35. *Cirsium heterophyllum* ssp. *angarense* M. Pop. ssp. n. Stolones nulli; folia amplissima, latissima, semper integra, margine spinulosa; involucri phylla subnigra; corollae obscurae, cyaneo-violaceae. Lacus Baical, sinus Chakussy, 1953, L. Bardunov.
36. *Scorzonera radiata* var. *tenuis* M. Pop. var. n. Caules tenues, debiles, 1—2.5 mm crassi, ad 38 cm alti. Folia angustissima, 1.5—3.5 (6) mm lata. Lacus Baical, in fluxu superiore fl. Schumilicha, 1954, L. Bardunov.
37. *Crepis tenuifolia* var. *tenuiloba* M. Pop. var. n. Forma humilior, magis xerophila. Folia segmentis angustis, linearibus, 0.5—1.5 mm latis; involucri campanulato-cylindricum, 6—8 mm altum. Lacus Baical, promontorium Zugduk, 1954, G. Galazij.
38. *Crepis tenuifolia* var. *latiloba* M. Pop. var. n. Caules altiores, robusti, crassi ad 34 cm alti. Folia segmentis latis, lanceolatis 2—7 mm latis; involucri valde pubescens, ad 12 mm longum. Lacus Baical, pag. Listvennicznoje, 1951, M. Popov.
39. *Populus suaveolens* var. *baicalensis* (Kom.) M. Pop. comb. n. (*P. baicalensis* Kom. — in Journ. Bot. de l'URSS, 1934). Cortex ramorum juvenilium flavus. Folia ovata ad 15 cm longa, 8 cm lata, subtus ad nervos villosa; petiolo lamina 2.5—3 plo brevior. Lacus Baical, pag. Sarma, 1954, I. Andreeva.
40. *Salix fumosa* var. *laxiflora* M. Pop. var. n. Folia ovalia vel obovata, utrinque angustata, acuta vel acuminata, glabra, supra viridia, opaca, subtus glauca. Amenta cylindrica, laxiflora. Ovarium oblongum, viride, glabrum, 4—5 mm longum. Lacus Baical, in alibus jugi Baicalensis adversus sinum Zavorotnaja, 1955, M. Popov.
41. *Salix baicalensis* var. *acutifolia* M. Pop. sp. n. Folia (2) 3—5 cm longa, in parte media latissima, oblongo-lanceolata, acutata, supra opaca, viridia, glaberrima, nervis distincte impressis, subtus albo-tomentosa. Amenta in ramulis brevibus vix foliosis. Lacus Baical, ostium fl. Bolschoj Czivyrukuj, 1954, M. Popov.
42. *Salix baicalensis* var. *laetissima* M. Pop. var. n. Folia breviora, 1.3—3.5 cm longa, supra laete viridia, glaberrima vel obtomertulum tenue canescentia, nervis distincte impressis, subtus dense sericeo-albo-tomentosa. Lacus Baical, promontorium Pokojniki, 1953, M. Popov.
43. *Salix baicalensis* var. *pseudolapponum* M. Pop. var. n. Folia acuta, subtus griseo-tomentosa, supraparce tomentosa. Amenta sessilia. Lacus Baical, fl. Tompuda, 1954, L. Malyshev, G. Peschkova.
44. *Salix rectjulis* var. *latifolia* M. Pop. var. n. (= *S. semiglabra* var. *latifolia* M. Pop.). Folia majora ac latiora quam formae typicae, 2—4.5 cm longa, 1.5—3 cm lata, orbiculari-ovata, acuminata, margine acute serrato-dentata, bractee oblongo-ovatae, 7—10 mm longae, acutae, margine oblique serrulatae. Lacus Baical, sinus Ajaja, 1954, M. Popov.
45. *Salix rectjulis* var. *angustifolia* M. Pop. var. n. Folia minora et angustiora quam *S. rectjulis* Ledeb. typicae, oblonga, breviter acuminata, 1—2.5 (3) cm longa, 5—12 mm lata, crebro serrato-dentata eis *S. myrsinites* L. similia, glabra, petiolis brevibus, 1—4 mm longis, stipulis parvis, 1—3 mm longis. Lacus Baical, sinus Irinda, 1954, M. Popov, G. Peschkova.
46. *Salix lanata* var. *glabra* M. Pop. var. n. Folia magna, 3—10 cm longa, 1.5—6 cm lata, elliptica, vel orbiculari-elliptica, acuta, glabra; petiolis 3—17 mm longis, sparse pilosis. Amenta crassa, 13—16 mm lata, longa, 9—11 cm longa, pilis flavis dense vestita. Capsulae glabrae. Lacus Baical, fl. Schumilicha, 1954, L. Bardunov.
- 47a. *Betula middendorffii* var. *henriettae* (Sukacz.) M. Pop. comb. n. (*B. henriettae* Sukacz. — Liber memorialis societatis botanicorum URSS Leninopoli, 1928). Forman baicalensem (Maxime occidentalem) *B. middendorffii* T. et M., foliis flabellatis praebet. Lacus Baical, promontorium Kotelnikovskij, 1952, M. Popov.
- 47b. *Betula ermani* var. *subbaicalensis* M. Pop. var. n. Perulae pilosae. Folia parva, 3—5 cm longa, ovata, petiolis ac nervis pilosiusculis. Amenta feminea 2—3 cm longa, 1.2—1.5 cm crassa, erecta; lobes lateralibus bractee fertis brevioribus, oblongis, sursum directis. Lacus Baical, arenae ripariae inter fl. Gromatucha et fl. Bolschaja Czeremschana, 1954, M. Popov.
48. *Betula ermani* var. *subbaicalensis* M. Pop. f. *brachystachys* M. Pop. f. n. Amenta feminea brevissima, 1—1.5 cm longa, suborbicularia. Lacus Baical, sinus Davscha, 1954, M. Popov.
49. *Betula baicalensis* f. *obscura* M. Pop. f. n. Trunci ad 10, basi ad 10, cm in diam. (aetate annis 15—20), 5 m alti. Cortex arbusculae vetustae subnigra. Folia orbiculari-rhombea, 3—5 cm longa, in parte media latissima (3—4 cm lata) basi cuneiformis, apice acuta. Amenta feminea ca 3 cm longa, 1.5 cm lata, pedunculo glabro 12 mm longo; bracteis ca 7 mm longis. Lacus Baical, sinus Davscha, 1954, M. Popov.
50. *Euphorbia discolor* f. *gracilis* M. Pop. f. n. Caulis tenuis, gracilis, 16—23 cm altus. Folia brevia, angusta, 1—1.5 cm longa, 2—4 mm lata, lineari-spathulata; bractee et cyathia minora. Lacus Baical, fl. Tompuda, 1954, M. Popov.

Fig. 1. Page from the book 'Konspekt flory poberezhii ozera Baikal' (1966) by M.G. Popov and V.V. Busik
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were cited in the protologue and none of them was indicated as a type, which is required in Art. 40.1 and 40.2 of the ICN (McNeill *et al.*, 2012), the name *Populus suaveolens* var. *baicalensis* was not validly published. However, the authors of the present paper accept this taxon as a form of *P. suaveolens*.

Populus suaveolens Fisch. ex Loudon f. ***baicalensis*** (Kom.) I.V.Belyaeva & Kovt., **comb. & stat. nov.** \equiv *Populus baicalensis* Kom., Bot. Zhurn. S.S.S.R. 19: 511. 1934 \equiv *Populus suaveolens* subsp. *baicalensis* (Kom.) Egor. & Sipl., Novosti Sist. Vyssh. Rast. 6 : 235. 1970.

Type: Russia: Irkutsk Region, Lake Baikal, Sosnovka, by the mouth of River Kudaity, 8.VII.1914, G.Poplavskaya 1068, ♀ (lectotype LE!, the fragment in the middle, **designated here**, isolectotype LE!).

Locality information from the protologue: “Crescit in planitiibus subulosis ad ripa lacus Baical, in pinetis pumilae”.

Comments: As follows from the protologue (Komarov: 1934: 501) *Populus baicalensis* was described by Komarov based on the specimens of *P. suaveolens* from the region of Lake Baikal. There are at least three herbarium sheets of *P. suaveolens* at LE that correspond to the protologue and could belong to the original material although none of them was annotated by Komarov. The first herbarium sheet bears two labels: “Herb. Ledebour. *Populus pseudobalsamifera* Fisch. Ad Baicalem ausrtalem. 1835. Turcz.” and “Herb. Ledeb. 843.6. *Populus suaveolens* Fisch.” One fragment with juvenile leaves and a few separated leaves attached to this sheet belong to the same species, *P. suaveolens*. Two other sheets of *P. suaveolens* have the same label: “Байкальская экспедиция Имп. Академии Наукъ и Имп. Русск. Географическаго Общества. 1068. *Populus suaveolens* Fisch. Забайкальская обл. Оз. Байкаль. Дер. Сосновка. Берег Байкала у устья р. Кудайты. Песчаная равнина с *Pinus pumila*. 1914. VII. 8. Г. Поплавская” [Baikal Expedition Imp. Academy of Sciences and Imp. Russian Geographical Society. 1068. *Populus suaveolens* Fisch. Baikal Region. Lake Baikal. Sosnovka Village. Coast of Lake Baikal at Kudaity River mouth, 8.VII.1914, G. Poplavskaya] and bear the same number. These two herbarium sheets were mentioned in the publication by Buzunova *et al.*, (2011: 118) as “?Holotypus et ?isotypus” suggesting that the authors of the paper had their doubts about the type designation. Three fragments are attached to the first sheet with number 1068 (Fig. 2), two with juvenile leaves and one that is a semi-detached fruiting catkin. All three fragments belong to the same species, *P. suaveolens*, and probably were collected from the same individual. The other herbarium sheet from the same gathering with number 1068 bears only one fragment with juvenile leaves that is very similar to the two



Fig. 2. Lectotype of *Populus baicalensis* Kom. (LE)

fragments on the first sheet. Both herbarium sheets belong to the original material and there is evidence that Komarov saw and used them for his description of *P. baicalensis* as Komarov (1934: 501) has written: “Тополь с волосистыми осями при гладких завязях собран экспедицией В.Н. Сукачева на Байкале у дер. Сосновки. Молодые ветви и листья его сильно опушены. Его следует отделить от *P. suaveolens*; думаю что всего удобнее назвать его *P. baicalensis* Ком.” [Poplar with pubescent axis and glabrous ovaries was collected by V.N. Sukaczew’s expedition on Lake Baikal near village Sosnovka. Its young twigs and leaves are densely pubescent. It should be separated from *P. suaveolens*; I think it could be named *P. baicalensis* Kom.].

However, in the protologue there is no citation of a specimen as required in Art. 9.1 of ICN (McNeill *et al.*, 2012). Mention of locality is not enough to be able to state that Komarov used this particular specimen only when he described *Populus baicalensis* and, because of this and also following recommendations by McNeill (2014; 2015), the specimen 1068 at LE cannot be the holotype but is designated here as the lectotype (Art. 9.2 and 9.11, ICN).

2. *Salix fumosa* Turcz. var. *laxiflora* Popov, Sched. Herb. Fl. Ross. 14: 11. 1957, **synon. nov.** = *Salix saxatilis* Turcz. ex Ledeb., Fl. Ross. 3(2): 621. 1850.

Type: Russia: Irkutsk Region: Lake Baikal, Baikal Ridge, opposite Zavorotnaya Bay, 24.VI.1955, *M.Popov* 4011, ♀ (lectotype NSK, NSK0000042!, fragment on the left, **designated here**, isolectotypes K, K000335342!, LE!, W, W1958-0017533!).

Information from the protologue: “Лас. Байкал, рипа boreali-occidentalis. In subalpinis jugi Baicalensis contra sinum Savorotnaja, 24.VI.1955, *M.Popov* 4011”.

Comments: A number of exsiccatae that belong to the same gathering, all part of the original material, were distributed under number 4011 to different herbaria. Four herbarium sheets that correspond to the protologue and are annotated as *Salix fumosa* Turcz. var. *laxiflora* have been located at NSK (NSK0000042), K (K000335342), LE (without barcode) and W (W1958-0017533). There are two fragments with catkins and juvenile leaves attached to each sheet, one with female catkins and the other with male catkins (Fig. 3). The protologue citation does not refer to the single specimen and, because of this, all specimens that correspond to the original description have to be treated as syntypes according to Art. 9.5 and 9.12 of ICN (McNeill *et al.*, 2012). Since Popov did not make a formal type designation when describing this taxon, the fragment with pistillate flowers on the left of the herbarium sheet deposited at NSK (NSK0000042) is designated here as the lectotype.



Fig. 3. Lectotype of *Salix fumosa* Turcz. var. *laxiflora* Popov (NSK000042)

3. *Salix baicalensis* Turcz. ex Andersson var. *acutifolia* Popov, Konspekt Fl. Pober.

Baikal: 214. 1966, **nom. inval.**

Comments: In the Latin part of the protologue, on page 214, reference is made to “Lacus Baical, ostium fl. Boljschoj Czivyrkui, 1954, M. Popov”. In the Russian part of the protologue, on page 187, there are five more references: “Сев.-Зап. поб.: бухта Болсодей, 1955, Л. Малышев. Сев.-Вост. поб.: о. Ярки, 1954, Г. Галазий; устье Б. Чивыркуя, 1954, М. Попов, Г. Галазий; губа Давша и устье р. Биракан, 1954, М. Попов; мыс Иринда, 1954, М. Попов” [Northwestern coast: Bolsodei Bay, 1955, L. Malyshev. Northeastern coast: Yarki Island, 1954, G. Galazii; mouth of the B. Chivyrkuĭ River, M. Popov, G. Galazii; Davsha Bay and mouth of Birakan River, 1954, M. Popov; Cape Irinda, 1954, M. Popov]. Since six gatherings were cited in the protologue and none of them was indicated as a type, which is required in Art. 40.1 and 40.2 of the ICN (McNeill *et al.*, 2012), the name *Salix baicalensis* var. *acutifolia* was not validly published. However, the authors of the present paper accept this taxon as a form of *S. krylovii* E.L.Wolf.

Salix krylovii E.L.Wolf f. *acutifolia* I.V.Belyaeva & Kovt., **f. nov.** (Fig. 4).

Description: *Salix baicalensis* Turcz. ex Andersson var. *acutifolia* Popov in M.G.Popov & V.V.Busik, Konspekt Fl. Pober. Baikal: 214. 1966.

Type: Russia, Central Siberia, Buryatiya: Lake Baikal, Bol'shoĭ Czivyrkuĭ River mouth, 53° 45' N, 109° 11' E, 9.VII.1954, *M.Popov s.n.*, ♀ (holotype NSK, NSK0000513! isotype NSK, NSK0000514!).

Comments: Two herbarium sheets from one of the localities cited in the protologue with the same labels annotated by Popov that correspond to the original description were found at NSK (NSK0000513 and NSK0000514). Each herbarium sheet contains two fragments with juvenile leaves and fruiting catkins. All four fragments are similar to each other and probably were collected from the same individual.

4. *Salix baicalensis* Turcz. ex Andersson var. *laetissima* Popov, Konspekt Fl. Pober.

Baikal: 214. 1966, **nom. inval.**

Comments: In the Latin part of the protologue, on page 214, reference is made to “Lacus Baical, promontorium Pokojniki, 1953, M. Popov”. In the Russian part of the protologue, on

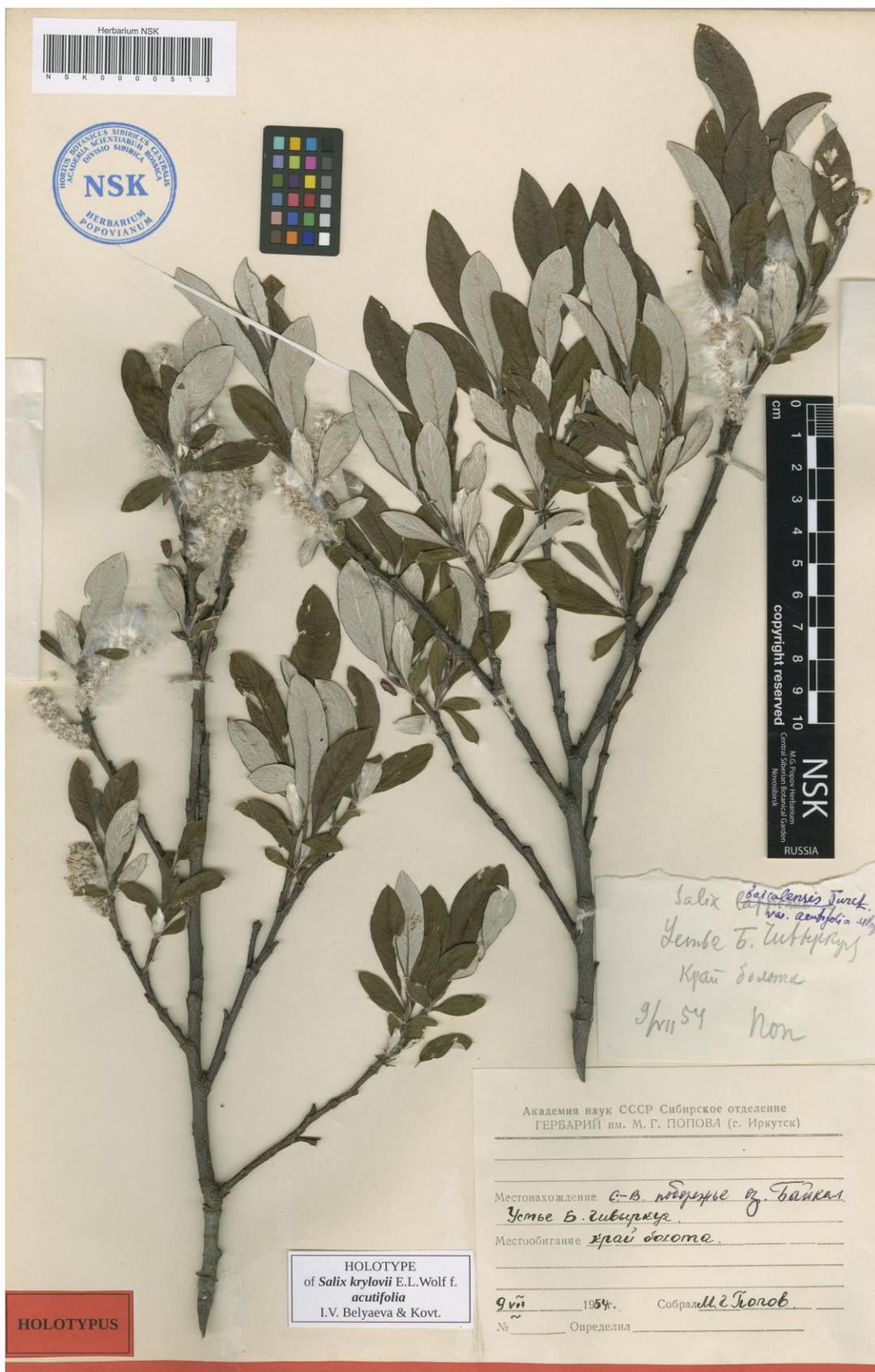


Fig. 4. Holotype of *Salix krylovii* E.L. Wolf f. *acutifolia* I.V. Belyaeva & Kovt. (NSK0000513)

page 187, there are six more references: “Юго-Вост. поб.: междуречье Паньковка – Мурино, 1953, Г. Галазий. Сев.-Зап. поб.: гольцы бухты Заворотной, 1955, Л. Малышев, В. Прохоров; 1-я речка, 1955, М. Попов, В. Каплин; мыс Шартла, 1955, Л. Малышев; мыс Покойники (наблюдался М.Г. Поповым, 1953). Сев.-Вост. поб.: гольцы Б. Чивыркуя, 1954, Л. Малышев” [Southeastern coast: Pan’kovka – Murino, 1953, G. Galazii. Northwestern coast: rock fields of Zavorotnaya Bay, 1955, L. Malyshev, V. Prokhorov; 1st River, 1955 M. Popov, V. Kaplin; Shartla Cape, 1955, L. Malyshev; Cape Pokoïniki (observed by M.G. Popov, 1953). Northeastern coast: rock fields of the B. Chivyrkuï River, 1954, L. Malyshev]. Since seven gatherings were cited in the protologue and none of them was indicated as a type, which is required in Art. 40.1 and 40.2 of the ICN (McNeill *et al.*, 2012), the name *Salix baicalensis* var. *laetissima* was not validly published. However, the authors of the present paper accept this taxon as a form of *S. krylovii*.

Salix krylovii E.L.Wolf f. *laetissima* I.V.Belyaeva & Kovt., **f. nov.**

Description: *Salix baicalensis* Turcz. ex Andersson var. *laetissima* Popov in M.G.Popov & V.V.Busik, *Konspekt Fl. Pober. Baïkal*: 214. 1966.

Type: Russian Federation, Irkutsk Region, northwestern coast of Lake Baikal, Pokoïniki, 54° 03′ N, 108° 16′ E, 25.VI.1953, *M.Popov*, ♀ (holotype NSK, NSK0000041!)

Comments: The only herbarium sheet with Popov’s handwritten label that corresponds to the original description and is from one of the localities cited in the protologue was found at NSK (NSK0000041). It is annotated as *Salix baicalensis* Turcz. var. *laetissima* and bears two fragments with juvenile leaves and fruiting catkins (Fig. 5). Both branchlets were probably collected from the same individual as they look very similar to each other.

5. *Salix baicalensis* Turcz. ex Andersson var. *pseudolapponum* Popov, *Konspekt Fl. Pober. Baïkal*: 214. 1966, **nom. inval.** = *Salix krylovii* E.L.Wolf, *Trudy Imp. S.-Peterburgsk. Bot. Sada* 28: 537. 1911.

Comments: In the Latin part of the protologue, on page 214, reference is made to “Lacus Baical, fl. Tompuda, 1954, L. Malyshev, G. Peshkova”. In the Russian part of the protologue, on page 187, there are three more references: “Хамар-Дабан, 1951, Г. Галазий. Сев.-Зап. поб.: гольцы близ Нижне-Ангарска, 1955, Л. Бардунов, В. Каплин. Сев.-Вост. поб.: гольцы в верховьях р. Томпуды, 1954, Л. Малышев, Г. Пешкова” [Khamar-Daban, 1951, G. Galazii. Northwestern coast: rock fields near Nizhne-Angarsk, 1955, L. Bardunov,



Figure 5. Holotype of *Salix krylovii* E.L. f. *laetissima* I.V. Belyaeva & Kovt. (NSK0000041)

V. Kaplin. Northeastern coast: the upper reaches of Tompuda River, 1954, L. Malyshev, G. Peshkova]. Since four gatherings were cited in the protologue and none of them was indicated as a type, which is required in Art. 40.1 and 40.2 of the ICN (McNeill *et al.*, 2012), the name *Salix baicalensis* var. *pseudolapponum* was not validly published.

6. *Salix rectijulis* Ledeb. ex Trautv. var. *latifolia* Popov, Konspekt Fl. Pober. Baikal: 214. 1966, **nom. inval.** = *Salix recurvigemmata* A.K.Skvortsov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 18: 37. 1957.

Comments: In the Latin part of the protologue, on page 214, reference is made to “Lacus Baical, sinus Ajaja, 1954, M. Popov”. In the Russian part of the protologue, on page 187, there is similar reference: “Сев.-Вост. поб.: бухта Аяя, 1954, М. Попов” [Northeastern coast: Ayaya Bay, 1954, M. Popov]. Since neither a number of collection nor an exact date was mentioned in the protologue which could have been evidence that the authors’ intention was to cite one gathering only, there can never be any certainty that cited gatherings were made at one time as required in Art. 8 of the ICN because in the same year the same person could collect at the same place but on a different day and/or month. In the introduction to the Popov & Busik publication (1966: 7–10) it is mentioned that the same places were visited by the same collectors several times in the same year. These facts prove that the indication of the type was not made here as required in Art. 40.1 and 40.2 of the ICN (McNeill *et al.*, 2012) and the name *Salix rectijulis* var. *latifolia* was not validly published.

7. *Salix rectijulis* Ledeb. ex Trautv. var. *angustifolia* Popov, Konspekt Fl. Pober. Baikal: 214. 1966, **nom. inval.** = *Salix recurvigemmata* A.K.Skvortsov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 18: 37. 1957.

Comments: In the Latin part of the protologue, on page 214, reference is made to “Lacus Baical, sinus Irinda, 1954, M. Popov, G. Peschkova”. In the Russian part of the protologue on page 188 there is another reference with a different collector: “Сев.-Вост. поб.: р. Иринда, 1954, М. Попов” [Northeastern coast: Irinda River, 1954, M. Popov. Since two gatherings were cited in the protologue and none of them was indicated as a type, which is required in Art. 40.1 and 40.2 of the ICN (McNeill *et al.*, 2012), the name *Salix rectijulis* var. *angustifolia* was not validly published.

8. *Salix lanata* L. var *glabra* Popov, Konspekt Fl. Pober. Baikal: 214. 1966, **nom. inval.**
= *Salix recurvigemmata* A.K.Skvortsov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk
S.S.S.R. 18: 37. 1957.

Comments: In the Latin part of the protologue, on page 214, reference is made to “Lacus Baical, fl. Schumilicha, 1954, L. Bardunov”. In the Russian part of the protologue, on page 187, similar reference is made to “Сев.-Вост. поб.: гольцы реки Шумилихи, 1954, Л. Бардунов” [Northeastern coast: rock fields of Shumilikha River, 1954, M. Popov]. Since neither a number of collection nor an exact date was mentioned in the protologue which could have been evidence that the authors’ intention was to cite one gathering only, there can never be any certainty that cited gatherings were made at one time as required in Art. 8 of the ICN. In the introduction to the Popov & Busik publication (1966: 7–10) it is mentioned that the same places were visited by the same collectors several times in the same year. These facts prove that the indication of the type was not made here as required in Art. 40.1 and 40.2 of the ICN (McNeill *et al.*, 2012) and the name *Salix lanata* var *glabra* was not validly published.

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