



Article

Clarification on the typification of *Salix sphenophylla* A.K. Skvortsov subsp. *pseudotorulosa* A.K. Skvortsov (Salicaceae)Nina Y. Stepanova,^{1*} Sergey A. Poluektov² and Irina V. Belyaeva^{3,4}¹ 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.ru³ Russian Academy of Sciences, Ural Branch: Institute Botanic Garden, 8 Marta, 202A, Yekaterinburg, 620144, Russia⁴ Royal Botanic Gardens Kew, Richmond, TW9 3AE, UKEmail: i.belyaeva@kew.org; willow.belyaeva2017@yandex.com

Received: 6 September 2019 | Accepted by Keith Chamberlain: 12 October 2019 | Published on line: 21 October 2019

Abstract

The typification of *Salix sphenophylla* subsp. *pseudotorulosa* is clarified and the correct typification of this taxon is made.

Keywords: Salicaceae, *Salix sphenophylla*, *Salix sphenophylla* subsp. *pseudotorulosa*, typification.

While working on taxa described by Alexey K. Skvortsov, the authors of the current paper came across the name *Salix sphenophylla* subsp. *pseudotorulosa* that was described by him (Skvortsov, 1966: 62). There have been a few attempts to typify *Salix sphenophylla* subsp. *pseudotorulosa* (Petruk, 2010; Buzunova *et al.*, 2011; Buzunova *et al.*, 2018) but, unfortunately, none achieved the correct typifications.

Skvortsov (1966, 1968 and 1999) cited, as the type for *Salix sphenophylla* subsp. *pseudotorulosa* “Peninsula Tschukotka, prope pag. Uëlen, tundra lapidosa, alt. 100–130 m.s.m., 8.VIII 1959. Leg. T. Derviz-Sokolova. Herb. Fl. URSS, No. 4524”, i.e., a series of exsiccatae that were sent to the herbaria of different botanical institutions under the same number which is the same gathering as it is defined in the footnote to Article 8.2 of the Code (Turland *et al.*, 2018). Thus, all the herbarium specimens under the number 4524 became syntypes according to Article 9.6 (Turland *et al.*, 2018), and the lectotype should be chosen. Skvortsov (1966) mentioned that the type is stored in LE. However, there were two specimens of female plants found corresponding to the same number, 4525, as was reported also by Petruk (2010: 23): “В общем фонде Гербария БИН было найдено два образца из этой серии. Один из них мной выбран в качестве лектотипа (с одним фрагментом кустарничка с



Figure 1. Lectotype of *Salix sphenophylla* A.K.Skvortsov subsp. *pseudotorulosa* A.K.Skvortsov



Figure 2. Isolectotype of *Salix sphenophylla* A.K.Skvortsov subsp. *pseudotorulosa*

A.K.Skvortsov

женскими соцветиями), 3 подписанных образца (LE!, MW!, NS!) – изолектотипы, все остальные образцы этой серии эксикат нужно принимать за синтипы.” [In general Herbarium at LE two specimens were found from the same series. One of them is chosen by me as the lectotype (with one fragment of shrublet with female inflorescence), 3 signed specimens (LE!, MW!, NS!) – isolectotypes, the rest of specimens from this series of exsiccatae should be treated as syntypes. – IVB translation]. Unfortunately, Petruk did not interpret the term ‘exsiccatae’ correctly and did not fully understand the meaning of isolectotype or syntype according to the corresponding articles in the Code and was corrected by her colleagues at LE (Buzunova *et al.*, 2011) who came to the correct conclusion, that all exsiccatae numbered 4524 left after the lectotype designation became isolectotypes. However, Mikhailova (Buzunova *et al.*, 2018) did not agree with the lectotypification by Petruk as neither the number of the specimen was mentioned, nor was any sign left by Petruk on the specimens to indicate which she had chosen as the lectotype. As mentioned above in Petruk’s citation, she chose as the lectotype the specimen with only one fragment with female inflorescence. Figures 1 and 2 show both specimens which have one fragment with female inflorescence each. Therefore, the lectotypification made by Petruk (2010) was not considered successful and these two specimens were accepted as syntypes by Mikhailova (Buzunova *et al.*, 2018), even though the labels on the specimens still define them as holotypes. Based on all previous research, the authors of the current paper designate the specimen LE01016774 as the lectotype here.

S. sphenophylla A.K. Skvortsov, Sched. Herb. Fl. URSS, 16(91): 62. 1966.

≡ *S. cuneata* Turcz. ex Ledeb. 1850, Fl. Ross. 3, 2: 623, non Nutt. 1842.

Type: Eastern Siberia, Buryatia, Barguzinsk by River Gremyaczaya, 1834, *Turczaninov s.n.*, ♀, in fruits (LE01016583! – lectotype, designated by Buzunova in Buzunova *et al.*, 2011; LE01016584! – isolectotype; syntypes: LE LE01016585!, LE LE01016586! and LE LE01016587!)

= *S. arctica* var. *leiocarpa* Ledeb., [Fl. Ross.\[C.F. von Ledebour\] 3\(2\): 619](#). 1850

= *S. arctica* var. *nervosa* Andersson, [Prodr. \[A.P. de Candolle\], 16\(2\): 286](#). 1868.

= *S. torulosa* Hulten, Fl. Alaska Yukon 3: 519. 1942.

Salix sphenophylla A.K. Skvortsov **subsp. *pseudotorulosa*** A.K. Skvortsov, Sched. Herb. Fl. URSS, 16(91): 62. 1966.

Type: Tschukotka, Uëlen, 8.VIII 1959. *T. Derviz-Sokolova*, Herb. Fl. URSS, No. 4524, ♀, in fruits (LE01016774! – lectotype, **designated here**; isolectotypes: BM000906633! C10018521!, LE01016775!; MHA0032952!, MW0591831! NS0025075!)

Acknowledgments

The work was carried out in accordance with the Institutional Research Project No. 118021490111-5. The authors appreciate the great help of Ivan Tatanov (LE), Tatyana

Krestovskaya (LE), Marina Legczenko (LE) and Nataliya Kovtonyuk (NS) for providing information and scans of original material stored at LE and NS.

References

- Buzunova, I.O., Illarionova, I.D., Krestovskaya, T.V., Mikhailova, M.A. and Raenko, L.M.** (2011). Type specimens of the Siberian and Russian Far Eastern taxa of Salicaceae Mirb. Kept in the Herbarium of the Komarov Botanical Institute (LE). *Turczaninovia* 14(3): 117–130.
- Buzunova, I.O., Illarionova, I.D., Krestovskaya, T.V., Mikhailova, M.A. and Raenko, L.M.** (2018). Salicaceae Mirb. In: Sokolova, I.V. (Ed.) Catalogue of the type specimens of the vascular plants from Siberia and the Russian Far East kept in the Herbarium of the Komarov Botanical Institute (LE). Part 2. St Petersburg–Moscow: KMK Scientific Press: 11–40.
- Czerepanov, S.K.** (1981). Salicaceae Mirb. In: Czerepanov, S.K. *Plantae Vasculares URSS*. Leningrad: Nauka: 455–460.
- Petruk, A.A.** 2010. Typification of some species and intraspecific taxa of the genus *Salix* L. (Salicaceae Mirb.). *Rast. Mir Aziatsk. Rossii* 1(5): 19–24.
- Skvortsov, A.K.** 1966. 4524. *Salix sphenophylla* A.K.Skvortsov. In: Czerepanov, S.K. (Ed.) *Schedae ad Herbarium Florae URSS ab Instituto Botanico Academiae Scientiarum URSS editum*. XVI, fasc. 89–94 (№№ 4401–4700). Moscow–Leningrad: Nauka: 62–63. (In Russian)
- Skvortsov, A.K.** 1968. Willows of the USSR. A taxonomic and geographic revision. Moscow: Nauka publisher. (In Russian)
- Skvortsov, A.K.** 1999. Willows of Russia and adjacent countries. Taxonomical and geographical revision. *Univ. Joensuu Fac. Math. Nat. Sci. Rep. Ser.* 39: 1–307.
- Turland, N.J., Wiersema, J.H., Barrie, F.R., Greuter, W., Hawksworth, D.L., Herendeen, P.S., Knapp, S., Kusber, W.-H., Li, D.-Z., Marhold, K., May, T.W., McNeill, J., Monro, A.M., Prado, J., Price, M.J. & Smith, G.F.** (eds.) 2018: International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. *Regnum Vegetabile* 159. Glashütten: Koeltz Botanical Books. DOI <https://doi.org/10.12705/Code.2018>