Новости систематики высших растений | 2019
Novitates Systematicae Plantarum Vascularium | 50: 41–46
ISSN 0568-5443

Salix acutifolia f. *pendula* (*Salicaceae*) — a new form

Salix acutifolia f. *pendula* (*Salicaceae*) — новая форма

N. Y. Stepanova[1], O. V. Epanchintseva[2], I. V. Belyaeva[2,3]

[1] Tsitsin Main Botanical Garden, Russian Academy of Sciences
Botanicheskaya Str., 4, Moscow, 127276, Russia
ny_stepanova@mail.ru

[2] Botanical Garden, Ural Branch of the Russian Academy of Sciences
8 Marta Str., 202A, Yekaterinburg, 620144, Russia
olgae06@mail.ru

[3] Royal Botanic Gardens Kew
Richmond, TW9 3AE, UK
i.belyaeva@kew.org, willow.belyaeva2017@yandex.com

Н. Ю. Степанова[1], О. В. Епанчинцева[2], И. В. Беляева[2,3]

[1] Главный ботанический сад им. Н. В. Цицина РАН
Ботаническая ул., 4, Москва, 127276, Россия
ny_stepanova@mail.ru

[2] Ботанический сад Уральского отделения РАН
ул. 8 Марта, 202а, Екатеринбург, 620144, Россия
olgae06@mail.ru

[3] Королевские ботанические сады Кью
Ричмонд, TW9 3AE, Великобритания
i.belyaeva@kew.org, willow.belyaeva2017@yandex.com

https://doi.org/10.31111/novitates/2019.50.41

Abstract. A new form, *Salix acutifolia* f. *pendula* I. V. Belyaeva, N. Y. Stepanova et O. V. Epanch., is described and its distribution is given. Existing confusion between the names, *S. acutifolia* 'Duschanbensis', *S. acutifolia* 'Pendula', *S. acutifolia* 'Moscow Cascade', *S. acutifolia* var. *duschanbensis* and *S. acutifolia* [unranked] *pendula* is clarified.

Keywords: *Salicaceae*, *Salix acutifolia*, new form.

Аннотация. Приводится описание новой формы *Salix acutifolia* Willd. f. *pendula* I. V. Belyaeva, N. Y. Stepanova et O. V. Epanch. Разъяснена существующая путаница в применении названий *S. acutifolia* 'Duschanbensis', *S. acutifolia* 'Pendula', *S. acutifolia* 'Moscow Cascade', *S. acutifolia* var. *duschanbensis* и *S. acutifolia* [unranked] *pendula*.

Ключевые слова: *Salicaceae*, *Salix acutifolia*, новая форма.

Working on taxa described by Alexey K. Skvortsov the authors of the current paper came across the name *Salix acutifolia* var. *duschanbensis* that appeared on two herbarium sheets at MHA (Figs. 1; 2) and was described by Skvortsov (1968: 84) as a cultivar *Salix acutifolia* 'Duschanbensis'. This plant was cultivated in the Botanical Garden of Dushanbe, Tajikistan, and brought by Skvortsov for cultivation in the Botanical Garden of Moscow State University and in the Tsitsin Main Botanical Garden of the Russian Academy of Sciences, Moscow for further research. From here this plant was distributed into other botanic gardens in Russia and abroad and also into private collections under the names, *S. acutifolia* [unranked] *pendula* and *S. acutifolia* 'Pendula', as a very distinctive ornamental tree with pendulous branches (Fig. 3). Although the cultivar name was published and established by Skvortsov according to the rules of ICNCP (Brickell et al., 2016: Art. 27), the other names, *S. acutifolia* [unranked] *pendula*, that was used widely in garden practice, and *S. acutifolia* var. *duschanbensis*, which appeared on the labels of the herbarium specimens, were not validly published (contrary to Art. 38.1 of ICN, Turland et al., 2018). Furthermore, the cultivar names, *S. acutifolia* 'Pendula' and *S. acutifolia* 'Moscow Cascade' were not established (contrary to Art. 27 of ICNCP, Brickell et al., 2016) and make current application of these names in garden practice unclear and confusing. Moreover, because the cultivar name *S. acutifolia* 'Duschanbensis' was published in the regional «Flora» it did not come to the attention of all botanists and, consequently, this cultivar name does not appear in the Checklist for Cultivars of *Salix* (Kuzovkina, 2015: 32) although two other cultivars of this willow are mentioned in this checklist, *S. acutifolia* 'Pendula' and *S. acutifolia* 'Moscow Cascade'. The author of the checklist states as follows: «'Moscow Cascade' (syn. 'Pendula', nom inval.). No description or published reference was found; therefore, the name is not established. This cultivar originated at the Moscow Botanical Garden, Russia, and was first called 'Pendula'. This name is currently listed on some gardening websites. Note: The original epithet 'Pendula' was replaced with 'Moscow Cascade' because it was not

Поступила в редакцию | *Submitted: 05.09.2019* *Принята к публикации* | *Accepted: 28.11.2019*



Fig. 1. Holotype of *Salix acutifolia* f. *pendula* (MHA0032916).



Fig. 2. Paratype of *Salix acutifolia* f. *pendula* (MHA0032915).


1


2


3


4


5


6


7

valid in the Latin form which came in use after 1959». Similar cases of confusion in the use of cultivar names and the incorrect application of scientific names of *Salix* in cultivation were also described and clarified earlier (Kuzovkina et al., 2016a, b; Belyaeva et al., 2018).

Weeping forms are known for many willows. There are 4 such records for species and 24 records for infraspecific taxa in *International Plant Names Index* (IPNI, 2019). There is in the section *Daphnella* Ser. ex Duby, where *S. acutifolia* Willd. belongs, already one weeping willow — *Salix rorida* Laksch. f. *pendula* Kimura. Thus, it is not surprising that *S. acutifolia* includes plants with a weeping crown as well. The authors of this publication, studying willows growing in the Urals (Belyaeva, 1994; Belyaeva et al., 2006), have observed a few individuals of *S. acutifolia* with pendulous branches in natural populations, cuttings of which were collected and plants grown from them were cultivated in the Botanical Garden of the Ural Branch of the Russian Academy of Sciences, Yekaterinburg. Herbarium material is stored at SVER. Based on the observation of the aforementioned weeping willows the authors of the current paper describe a new form of *S. acutifolia* to achieve clarity and set up a connection between all the existing names mentioned above.

Salix acutifolia Willd. f. **pendula** I. V. Belyaeva, N. Y. Stepanova et O. V. Epanch., forma nova.

Small tree to 3–3.5 m tall with long thin pendulous branches. Branchlets yellowish to dark chestnut, glabrous, with a dense glaucous bloom. Buds dimorphic, glabrous, adpressed to shoot, pubescent in the base while young, glabrous later. Generative buds to 0.8–1 cm long with acute slightly divergent from the shoot apex; vegetative to 0.3–0.4 cm long, acuminate. Leaves lanceolate, 4–16 cm long and 0.7–1.7 cm wide, with acute apex and cuneate base, thin-leathery, glabrous, serrate, gland-dotted on margin, dark green, lustrous above, blue grey glaucous below. Stipules lanceolate, acute, glandular-dentate, length equal to half of petiole, 1–1.7 cm, adnate with petiole. Petioles 0.7–2.2 cm long, yellowish with red dots, glabrous. Catkins, female, densely flowered, subsessile without leaflets at the base 2.5–3 cm long. Floral bracts oblong-ovate, 1–1.5(2) mm long, acute at apex, dark brown or almost black, densely pubescent with straight, long white hairs. Ovary ovate-conical, 2–4 mm long, glabrous, laterally flattened, on peduncle 0.7–1.5 mm long; styles connate, 0.5 mm; stigmas bifid, oblong, to 0.3 mm long. Nectary 1, adaxial, rectangular, 0.2–0.4 mm long. Number of seed scars in capsule 6.

Holotype: Russia, Moscow, cultivated in the Botanical Garden of Moscow State University, 13 V 1957, A. Skvortsov, ♀ (MHA: MHA0032916!). — Fig. 1.

Paratypes. Tadzhikistan, Dushanbe [Stalinabad 1929–1961], cultivated in the Botanical Garden, 31 X 1954, A. Skvortsov, ♀ (MHA0032915! — Fig. 2); Russia, Yekaterinburg, cultivated in the Botanical Garden of the Ural Branch of the Russian Academy of Sciences, 26 VIII 2019, I. V. Belyaeva, O. V. Epanchintseva, № 009, ♀ (SVER!, WSY!).

Affinity. *Salix acutifolia* f. *pendula* differs from *S. acutifolia* f. *acutifolia* (see descriptions by Willdenow, 1806: 489; Nasarow, 1936; Belyaeva et al., 2006; Valyagina-Malyutina, 2018) in having pendulous branches and branchlets and a more graceful habit with smaller buds and catkins.

Etymology. The epithet 'pendula' derives from Latin 'pendulus' that means 'hanging down' (Stearn, 2004) and describes the weeping form of the crown of this willow.

Distribution. Described from cultivated plant. Naturally occurs near Samara, Vyatka and Orenburg. Currently, it is cultivated in Moscow, Novosibirsk, Perm, Syktyvkar and Yekaterinburg (Russia), Lydbrook (United Kingdom), and Meise (Belgium).

Acknowledgements

The work was carried out in accordance with Institutional research project № 118021490111-5. The authors are grateful to anonymous reviewers for their useful comments that helped to improve the original text of the manuscript. The work of the editors of the journal is also greatly appreciated. Many thanks to Sonja Deneve (BR) for sharing the photo of *S. acutifolia* f. *pendula*.

References

Belyaeva I. V. 1994. Sem. *Salicaceae* Mirbel — Ivovyye [Fam. *Salicaceae* Mirbel — Willow family] // Opredelitel sosudistykh rastenii Srednego Urala [Identification key of vascular plants of Middle Ural] / P. L. Gorchakovsky (ed.-in-chief). Moscow: Nauka. P. 149–157. [In Russian] (Беляева И. В. 1994. Сем. *Salicaceae* Mirbel — Ивовые // Определитель сосудистых растений Среднего Урала / отв. ред. П. Л. Горчаковский. М.: Наука. С. 149–157).

Belyaeva I. V., Epanchintseva O. V., Shatalina A. A., Semkina L. A. 2006. Willows of Ural: Atlas and identification key. Yekaterinburg: Russian Academy of Sciences, Ural Branch.

Fig. 3. *Salix acutifolia* f. *pendula*.
1 — habit; *2* — fragment of trunk with bark; *3* — fragment of branch with glaucous bloom; *4* — leaves; *5* — fragment of shoot with generative bud and stipule; *6* — fragment of branch with vegetative bud and stipule; *7* — fragment of branch with female catkins. Photos: *1* — by Sonja Deneve; *2, 3, 7* — by Olga Epanchintseva; *4–6* — by Irina Belyaeva.

173 p. [In Russian] (Беляева И. В., Епанчинцева О. В., Шаталина А. А., Семкина Л. А. 2006. Ивы Урала: Атлас-определитель. Екатеринбург: УрО РАН. 173 с.).

Belyaeva I. V., Epantchintseva O. V., Govaerts R. H. A., McGinn K., Hunnex J., Kuzovkina Y. A. 2018. The application of scientific names to plants in cultivation: *Salix vitellina* L. and related taxa (*Salicaceae*) // Skvortsovia. Vol. 4, № 2. P. 42–70.

Brickell C. D., Alexander C., Cubey J. J., David J. C., Hoffman M. H. A., Leslie A. C., Malécot V., Jin X. (eds.). 2016. International Code of Nomenclature for Cultivated Plants (ICNCP or Cultivated Plant Code). 9th ed. Katwijk aan Zee: Drukkerij Station Drukwerk. 190 p.

IPNI: International Plant Names Index. 2019. https://www.ipni.org/ (Accessed 23.08.2019).

Kuzovkina Y. A. 2015. Checklist for cultivars of *Salix* L. (willow) / International Poplar Commission, FAO. http://www.fao.org/forestry/44058-0370ab0c9786d954da03a15a8dd4721ed.pdf

Kuzovkina Y. A., Epantchintseva O. V., Belyaeva I. V. 2016a. The application of scientific names to plants in cultivation: *Salix* × *cottetii* Lagger ex A. Kern. (*Salicaceae*) // Skvortsovia. Vol. 2, № 3. P. 32–43.

Kuzovkina Y. A., Dodge M., Belyaeva I. V. 2016b. Clarifying affiliations of *Salix gracilistyla* Miq. Cultivars and hybrids // HortScience. Vol. 51, № 4. P. 334–341. https://doi.org/10.21273/HORTSCI.51.4.334

Nasarow M. I. 1936. Rod Iva — *Salix* L. [Genus Willow — *Salix* L.] // Flora URSS / V. L. Komarov (red. princip.). T. 5. Mosqua; Leningrad: Ed. Acad. Sci. URSS. P. 24–216. [In Russian] (Назаров М. И. 1936. Род Ива — *Salix* L. // Флора СССР / гл. ред. В. Л. Комаров. Т. 5. М.; Л.: Изд-во АН СССР. С. 24–216).

Skvortsov A. K. 1968. Sem. Ivovyye — *Salicaceae* Mirbel [Willow family — *Salicaceae* Mirbel] // Flora Tadzhikskoi SSR / P. N. Ovchinnikov (ed.-in-chief). T. 3. Leningrad: Nauka. P. 56–114. [In Russian] (Скворцов А. К. 1968. Сем. Ивовые — *Salicaceae* Mirbel // Флора Таджикской ССР / гл. ред. П. Н. Овчинников. Т. 3. Л.: Наука. С. 56–114).

Stearn W. T. 2004. Botanical Latin. 4th ed. Portland, Oregon: Timber Press. 560 p.

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. Glashütten: Koeltz Botanical Books. (Regnum Vegetabile 159). https://doi.org/10.12705/Code.2018

Valyagina-Malyutina E. T. 2018. Ivy Rossii: Illustrirovannyi opredelitel [The willows of Russia: an illustrated identification book]. Moscow: KMK Scientific Press. 372 p. [In Russian] (Валягина-Малютина Е. Т. 2018. Ивы России: иллюстрированный определитель. М.: Т-во науч. изд. КМК. 372 с.).

Willdenow C. L. 1806. *Salix* // Species plantarum / C. L. Willdenow. Berolini. T. 4, ps. 2. P. 653–710.