Nomenclatural notes of Salix wangiana and S. zangica var. tibetica (Salicaceae)

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Working within the framework of the Flora of the Pan-Himalayas project, we examined many reports regarding Salix and found that the valid publication date for Salix wangiana is later than that for S. rhododendroides. Consequently, S. wangiana is treated as a synonym of S. rhododendroides instead of the reverse. Salix wangiana var. tibetica is invalid, and therefore the intended combination S. zangica var. tibetica indeed represents a new variety, for which the authorship is “C. Wang & C.F. Fang ex N. Chao”. Furthermore, the names S. rhododendroides and S. zangica var. tibetica are lectotypified.

Salix Linnaeus (1753: 1015) includes ca. 350 – 520 species that are widely distributed in temperate and boreal regions of the Northern Hemisphere (Fang et al. 1999, Brummitt 2007, Argus et al. 2010). There are 275 species and 82 varieties in China, of which 189 species and 74 varieties are endemic (Fang et al. 1999).

Working within the framework of the Flora of the Pan-Himalayas project, we examined many studies regarding Salix. We found that the name Salix wangiana K.S. Hao ex C.F. Fang & A.K. Skvortsov (1998: 469) was erroneously treated by Fang et al. (1999) as the correct name for S. rhododendroides C. Wang & C.Y. Yu in Anonymous (1974: 598). Both names are usually regarded as synonyms and applied to a willow endemic to central China. However, S. rhododendroides was published at an earlier date than was S. wangiana, and hence the former has nomenclatural priority.

Furthermore, the name Salix zangica var. tibetica C. Wang & C.F. Fang ex N. Chao (1985: 7) was overlooked in Flora of China. It was originally published as a new combination, “S. zangica var. tibetica (C. Wang & C.F. Fang) N. Chao (1985: 7)”, based on the invalid name, “S. wangiana K.S. Hao var. tibetica C. Wang & C.F. Fang (1979: 103)”. However, Chao’s Latin descriptions and type indications accompanying this intended new combination indeed validated a new variety, S. zangica var. tibetica C. Wang & C.F. Fang ex N. Chao. Additional details, the correct status, and related information for all of these names are given below.

Nomenclature

Type:—CHINA. Shaanxi: Taibai Mountain, 2840 m, 9 July 1957, K.J. Fu 9509 (lectotype, designated here: WUK 171975!; isolecototype WUK 90140!, digital image examined; [♀]).—For image of lectotype, see Fig. 1A.
CHINA. Shaanxi: Taibai Mountain, 2700 m, 4 August 1933, T.P. Wang 1769 (holotype PE [barcode] 00766307!; isotypes IBSC [barcode] 0349187!, WUK 00438! [♀]).—For image of holotype, see Fig. 1B.

Salix wangiana K.S. Hao was not validly published, with an English description instead of the Latin description or diagnosis, which was obligatory between 1 January 1935 and 31 December 2011, according to Art. 39.1 of the ICN (Melbourne Code, McNeill et al. 2012). It was subsequently validated by Fang & Skvortsov (1998), who referenced Hao’s protologue and provided a Latin description.

Fang & Skvortsov (1998) stated that the holotype of Salix wangiana is located in Paris (P). However, the type information in Hao’s (1936) protologue is “T.P. Wang 1769 (type in Herb. Peiping)”. “Herb. Peiping” is the predecessor of PE, and a duplicate of T.P. Wang 1769 is found there (PE [barcode] 00766307) with a written label in Hao’s hand, which reads “Salix wangiana Hao n. sp.”. In addition, T.P. Wang 1769 was not located at P (according to the digital herbarium database of P, https://science.mnhn.fr/institution/mnhn/collection/p/item/search/form [accessed 6 November 2015]). Therefore, we deduce
that Fang & Skvortsov’s reference to “P” may be a printing error, which should be corrected to PE, and the sheet of *T.P. Wang 1769* at PE should be Fang & Skvortsov’s holotype.

Salix rhododendroides was described by Wang & Yu in 1974, who cited K.J. Fu 9509 as the type but did not state where the type specimens were conserved. Two duplicates of K.J. Fu 9509 were found in WUK (WUK 171975 & 90140); WUK 171975 with a written label in Yu’s hand on 10 February 1966 was annotated as “Salix rhododendroides Wang et Yu sp. nov.”, which is designated here as the lectotype under Art. 9.11 of the ICN.

Chou et al. (1984) accepted “Salix wangiana K.S. Hao”, and reduced S. rhododendroides to a synonym, neglecting that S. wangiana had not been validly published at that time. In addition, this treatment was followed by that of Fang et al. (1999), who cited S. rhododendroides as a synonym of S. wangiana K.S. Hao ex C.F. Fang & A.K. Skvortsov in Flora of China. However, the name S. rhododendroides is the earlier name compared to S. wangiana. After examining the type specimens of S. rhododendroides and S. wangiana, we could not find relevant differences between these, and we followed Chou et al. (1984) in considering both names as conspecific. Therefore, the correct name of this species is S. rhododendroides, and S. wangiana is its synonym.


Type:—CHINA. Xizang: Zayü County, Demula Mountain, 4100 m, 23 August 1973, Qinghai-Xizang Expedition 73-1207 (lectotype, designated here: PE [barcode] 00934296!; isolecotypes, KUN [barcode] 0527123!, PE [barcode] 00766330!; [♀]).—For images of the lectotype and isolecotype, see Fig. 1C & D.

Salix wangiana K.S. Hao var. tibetica C. Wang & C.F. Fang is invalid because S. wangiana itself was not validly published until 1998 (see Art. 35.1, Melbourne Code, McNeill et al. 2012). Chao (1985) transferred “S. wangiana var. tibetica” to S. zangica N. Chao (1980: 26), providing a Latin description and type material and also referring to Wang & Fang (1979). Therefore, he unintentionally validated the new variety, S. zangica var. tibetica, the authorship of which should be cited as “C. Wang & C.F. Fang ex N. Chao”. Lin et al. (2007) omitted that S. wangiana var. tibetica is invalid, and selected a “lectotype” for it. However, Lin et al.’s “S. wangiana var. tibetica” could not be a new combination based on S. zangica var. tibetica, because they did not cite S. zangica var. tibetica. Chao (1985) cited “Qinghai-Xizang Expedition 73-1207 (fr., typus S. wangianae var. tibetica!)” as the type of S. zangica var. tibetica. However, in the intended combination of Wang & Fang (1979), “Qinghai-Xizang Expedition 73-120 (Typus, BH)” was provided. The collection number “73-120” is a printing error, which should be corrected to “73-1207” (Lin et al. 2007). BH was the code of Herbarium, Institutum Botanicum Academiae Sinicae at the time of Wang & Fang (1979), referring to the herbarium of the Institute of Botany, Chinese Academy of Sciences (PE). Three duplicates of Qinghai-Xizang Expedition 73-1207 were found, two in PE and one in KUN, all of which are in agreement with the protologue of S. zangica var. tibetica. The specimen PE [barcode] 00934296 is the intended lectotype of Lin et al. (2007), with a flower drawing, which is designated here as the lectotype.

The journal Bulletin of Forest Plant Research, in which Chao’s (1985) article was published, has not been widely circulated, even in China. Obviously, Fang et al. (1999) overlooked Chao’s new name, and treated S. wangiana var. tibetica as a synonym of S. wangiana. However, in our opinion, S. wangiana var. tibetica (= S. zangica var. tibetica) clearly differs from S. wangiana (= S. rhododendroides) by its adaxial and abaxial nectaries, short ovary stipe, and leaves with entire or irregularly obtuse-serrate margins. Furthermore, it is endemic to Xizang and should not be treated as a synonym of S. rhododendroides.

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