

SALIX × *VELCHEVII* AND *S.* × *ARDANA* (SALICACEAE)
– TWO NEW WILLOW HYBRIDS
FROM THE BULGARIAN RHODOPE MTS.

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ABSTRACT

Two previously unknown willow hybrids, *Salix xvelchevii* (*S. amplexicaulis* Bory × *S. xanthicola* K.I. Chr.) and *S. xardana* (*S. alba* L. × *S. xanthicola* K.I. Chr.), are described from the Bulgarian Rhodope Mts. This is the first report on hybridization in the endemic Balkan species *S. xanthicola*.

KEY WORDS: Balkan Peninsula, Bulgaria, Rhodopes, *Salix* hybrids, *Salix xanthicola*, *Salix xardana*, *Salix xvelchevii*.

Salix xanthicola is an endemic Balkan species occurring in the Rhodope Mountains and Thrace (Christensen 1991, 1997; Zieliński 1992). Outside Greece, from where it was formally described in 1991, it grows in Bulgaria, but in that country it was only known from one locality in the western Rhodopes (Zieliński 1992). In 2003-2004, when working on the distribution of woody plants in SE Bulgaria, we found several new sites of this species in the catchment of the Arda river in the Rhodopes. It was most frequent in sandy and stony alluvial places by streams, usually together with *S. amplexicaulis* Bory and *S. alba* L. We collected plants in two localities, which appeared to be hybrids of *S. xanthicola* with the mentioned species.

Our field studies were conducted in summer, so only sterile leafy branchlets were collected, but identification of the parent species of the mentioned hybrids was relatively easy. In both cases the influence of *S. xanthicola* was apparent in the leaf or stem characters, but most of all in the distinct presence of persistent stipules.

SALIX × *VELCHEVII* J. ZIELIŃSKI & Z. PANCHEVA,
SP. HYBR. NOVA (Fig. 1)

Salix amplexicaulis Bory × *S. xanthicola* K.I. Chr.

A *Salix amplexicaulis* foliis alternatis, distincte stipulatis differt, a *S. xanthicola* foliis leviter serratis glabris vel subglabris, stipulis ovatis dignoscitur.

Stems olive-brown, shiny, glabrous. Young twigs glabrous, rarely sparsely pubescent. Buds glabrous or with

a few hairs. Leaves alternate, rarely some of them subopposite, up to 80 mm long and 22 mm broad, oblong to oblanceolate, narrowly rounded at base, acute or shortly acuminate at apex, serrulate and flat along margins, ± coriaceous, green above, glaucous beneath, usually glabrous on both surfaces, more rarely with few appressed hairs beneath. Petioles up to 5 mm long, rarely lower leaves sessile. Stipules distinct, 3-10(-13) mm long, ovate to broadly ovate, usually narrowed into short petioles. Flowers and fruits unknown.

Type: SE Bulgaria, distr. Kărdzhali, W Rhodopes, valley of Büyük Dere near Nanovitsa, 13 km E of Momchilgrad, 17. 07. 2002, coll. J. Zieliński & Z. Pancheva (holo. SOM 162033; iso. KOR 44428).

Salix xvelchevii is morphologically intermediate between the parent species. From *S. xanthicola* it can be easily distinguished by the glabrous or sparsely hairy stems and leaves, flat and serrulate leaf margin (revolute and sinuate in *S. xanthicola*), shorter petioles, ovate or broadly ovate stipules (reniform in *S. xanthicola*). From *S. amplexicaulis* it differs by its alternate shortly petiolate leaves and distinct, persistent stipules. We also found it 4 km north of the type locality, also in the valley of Büyük Dere (KOR 44427), together with both parent species.

We name the new taxon after Professor Velcho Velchev, an eminent Bulgarian botanist, author of the *Salix* account in the Flora of Bulgaria (Velchev 1966).



Fig. 1. *Salix xvelchevii* J. Zieliński & Z. Pancheva (holotype, SOM 162033). Bar = 5 cm. Phot. M. Dziurla.



Fig. 2. *Salix xardana* J. Zieliński & A. Petrova (holotype, SOM 162034). Bar = 5 cm. Phot. M. Dziurla.

SALIX × *ARDANA* J. ZIELIŃSKI & A. PETROVA,
SP. HYBR. NOVA (Fig. 2)

Salix alba L. × *S. xanthicola* K.I. Chr.

A *Salix alba* foliis coriaceis stipulisque persistentibus differt, a *S. xanthicola* foliis angustioribus sericeis, stipulis minoribus elongatis discrepat.

Erect shrub. Annual twigs with dense (sub)appressed white hairs in upper part, glabrous or subglabrous below. Older twigs glabrous, yellowish-brown. Buds hairy. Leaves up to 65(-70) mm long, and to 13 mm broad, mostly oblanceolate, rarely oblong-lanceolate, acuminate at apex, attenuate at base, green and sparsely hairy above, glaucous and rather densely appressed-hairy beneath, densely serrulate, shortly petiolate. Stipules small, up to 5 mm long, narrowly ovate, acute, serrate, glaucous and hairy below, persistent. Flowers and fruits unknown.

Type: S Bulgaria, distr. Madan, valley of the Arda river, near the village of Bukovo, 615 m, 14.07.2004, coll. J. Zieliński & A. Petrova 30/2004 (holo. SOM 162034).

Salix × *ardana* can be distinguished from *S. alba* by its ± coriaceous leaves and small but distinct and persistent sti-

pules and from *S. xanthicola* by its narrower, serrulate, serriceous leaves and smaller, narrowly ovate stipules.

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