



Sorbus × *semipinnata* Hedlund (Rosaceae), a taxon newly recorded for the dendroflora of Serbia

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ABSTRACT: This paper presents the first record of a taxon here newly recorded in the dendroflora of Serbia, namely *Sorbus* × *semipinnata* Hedlund (Rosaceae), as well as some notes on morphological properties of material from the Serbian site.

KEYWORDS: *Sorbus* × *semipinnata*, Kosovo, Serbia, new record

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The genus *Sorbus* (Rosaceae) comprises over 250 species inhabiting the Northern Hemisphere (PHIPPS *et al.* 1990). The total number of species of this genus differs significantly depending on which of several different concepts is applied in species determination. Flora Europea recognises 18 representative species and 15 subspecies (91 related taxa in total) of the genus *Sorbus* (WARBURG & KÁRPÁTI 1968), while the publication Euro+Med Plantbase includes 157 species of the genus *Sorbus* (KURTTO 2009). On the other hand, some authors, such as ALDASORO *et al.* (1998), recognised only 12 species present in Europe.

The centre of diversity of the genus is Central Asia (ALDASORO *et al.* 2004), and Europe is considered as a secondary diversity centre (WARBURG & KÁRPÁTI 1968; JANKUN 1993; RICH *et al.* 2010). On the territory of Europe, the Balkan Peninsula stands out for its *Sorbus* richness (KRYŠTUFEK & REED 2004; FRAJMAN *et al.* 2014), being home to 30 taxa or 18 species and 12 subspecies within this genus (BECK-MANNAGETTA 1927; JOVANOVIĆ 1972; NIKOLIĆ 1997; MICEVSKI 1998; PULEVIĆ 2005; HAJRUDINOVIĆ *et al.* 2015).

Eight species of this genus grow in Serbia: *S. austriaca* (Beck.) Hedl, *S. domestica* L., *S. aucuparia* L., *S. torminalis* (L.) Crantz, *S. chamaemespilus* (L.) Crantz, *S.*

graeca (Spach) Kotschy, *S. aria* (L.) Crantz, and *S. umbellata* (Desf.) Fritsch (JOVANOVIĆ 1972, 2007).

The material was collected during field research on the flora of Crni vrh (2,585 m) on the northeastern slopes of the Šar Mountains during the period of 2014–2017. For identification, the following references were consulted: WARBURG & KÁRPÁTI 1968; MICEVSKI 1998; ŠILJIĆ 2005; and SOMLYAY & SENNIKOV 2016. The material was deposited in the herbarium of the Institute of Botany and Jevremovac Botanical Garden, University of Belgrade (voucher number BEOU 17248); at the Institute of Biology, Faculty of Natural Sciences and Mathematics, Skopje, Republic of Macedonia (s/n); and in the National Museum, B&H, Sarajevo (voucher number 59860).

Distribution of the species is presented on UTM fields measuring 10×10 sq km. The area researched belongs to UTM Grid Zone 34T.

The taxon *Sorbus* × *semipinnata* was recorded for the first time in Serbia, in the region of Metohija, where it was found on Crni vrh in the Šar Mountains, (UTM DM96, Fig. 1) at the Bevgrod location near Čopur (N 42°8'36", E 20°54'16", 1742 m a.s.l.) in bushes of *Vaccinium myrtillus* L. and *Juniperus sibirica* Burgsd. (leg. Duraki, Š. 22 July 2016).

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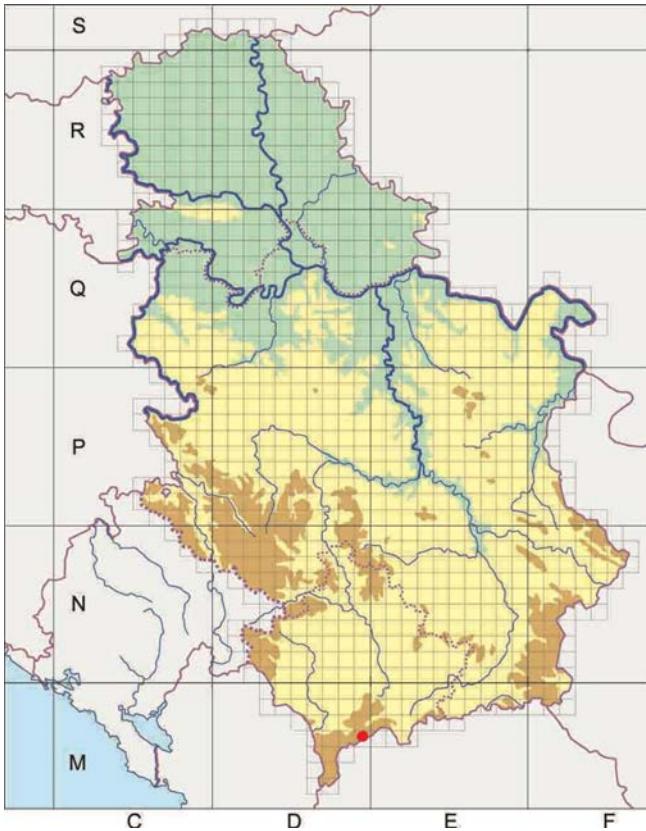


Fig. 1. Distribution of *Sorbus* × *semipinnata* in Serbia marked by a dot.

The nomenclature of this taxa is unclear, different authors having treated it unequally. We decided to follow the approach of ŠILIC (2005).

The *Sorbus* × *semipinnata* Hedlund reported in this article corresponds to that described in ŠILIC (2005) (= *S. aria* L. × *S. aucuparia* L.) (Fig. 2). This is a deciduous short tree or bush, up to 8–10 m high. The bark is dark grey-brown and smooth in older specimens. The root system is well developed. Fertile branches bear ovate shaped leaves. The lamina has double teeth at its edges, near the apex. In its lower part, the lamina is deeper lobed. Flowers are white, forming a multi-blossom shield-like inflorescence (Fig. 2C). Fruits are purple and red, round in shape, hold 1–4 seeds, and are situated on a long petiole.

The area of distribution of this unclear hybrid taxon includes Central Europe and the Balkan Peninsula. Apart from the new record in Serbia, on the Balkan Peninsula it has been reported from the territory of the Republic of Macedonia (MICEVSKI 1998), Bosnia and Herzegovina (ŠILIC 2005), and Albania (as the *S. hybrida* group) (BARINA *et al.* 2009; NÉMETH *et al.* 2017).

Sorbus × *semipinnata* is supposed to have originated as a hybrid between *S. aria* L. of subgen. *Aria* and *S. aucuparia* L. of subgen. *Sorbus*, and is classified in sub-

gen. *Soraria* (MÁJOVSKÝ & BERNÁTOVÁ 2001). *Sorbus* subgen. *Soraria* comprises di-, tri-, and tetraploid taxa which originated from hybridisation and backcrosses between members of subgen. *Aria* and *Sorbus* (MÁJOVSKÝ & BERNÁTOVÁ 2001; HAJRUDINOVIĆ *et al.* 2015). There are several similar species/aggregates reported for the Balkan Peninsula and the Carpathians: *S. hybrida* L., *S. borbasii* Jáv., *S. dacica* Borbás (= *S. semipinnata* Borbás), and the newly described *S. bosniaca* Hajrud., Frajman, Schönschw. & Bogunić (HAJRUDINOVIĆ *et al.* 2015; SOMLYAY & SENNIKOV 2016; SENNIKOV & KURTTO 2017). Due to insufficient research, many different approaches have been taken in attempting to resolve their taxonomical and nomenclatural status [SOMLYAY & SENNIKOV 2016; SENNIKOV & KURTTO 2017; The Plant List (<http://www.theplantlist.org/>), IOPI Check List (<http://plantnet.rbgsyd.nsw.gov.au/iopi/iopigp1.htm>), International Plant Name Index (<http://www.ipni.org>), EURO+MEDPLANTBASE (<http://ww2.bgbm.org/EuroPlusMed/>)]

According to the latest phylogenetic checklist of *Sorbus* sensu lato in Europe (SENNIKOV & KURTTO 2017), the current nomenclatural status of *S. semipinnata* should be: *Hedlundia* × *thuringiaca* (Nyman) Sennikov & Kurtto (= *Sorbus thuringiaca* (Nyman) Fritsch = *Sorbus semipinnata* var. *thuringiaca* (Nyman) Hedl. = *Sorbus semipinnata* Hedl.), and it belongs to *Hedlundia* Sennikov & Kurtto [*Aria* × *Sorbus*] gen. nov. (= *Sorbus* subgen. *Soraria* Májovský & Bernátová).

Further comparative taxonomic studies within the group of hybrids discussed above are needed.

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Fig. 2. *Sorbus × semipinnata*: A. leaves, B. lower surface, C. inflorescence, D. fruit. Photos by: Šemija Duraki.

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REZIME

Sorbus × *semipinnata* Hedlund (Rosaceae), novi nalaz za dendrofloru Srbije

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U radu je predstavljen novi takson za dendrofloru Srbije - *Sorbus* × *semipinnata* (Rosaceae). Prikazana su i neka zapažanja morfoloških karakteristika materijala prikupljenog u Srbiji.

KLJUČNE REČI: *Sorbus* × *semipinnata*, Srbija, Kosovo, novi nalaz