

NATURAL MONUMENTS OF SELECTED SPECIES OF THE GENUS
SORBUS L. IN POLAND

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ABSTRACT. This paper describes 10 natural monuments, including 12 specimens of rowan trees, representing three following species: *Sorbus aria* (2), *S. aucuparia* (7) and *S. latifolia* (1). It also presents a comprehensive analysis of all rowan trees admitted as natural monuments in Poland.

KEY WORDS: monuments of nature, trees, rowans, *Sorbus*

INTRODUCTION

The genus *Sorbus* L. (Rosaceae) comprises approx. 250 species found mainly in the temperate zone of the Northern Hemisphere (PHIPPS et al. 1990). In Poland we currently distinguish seven species of rowans: common whitebeam – *S. aria* (L.) Crantz, European rowan (mountain ash) – *S. aucuparia* L. Emend. Hedl., Carpathian whitebeam – *S. carpatica* Borbás, dwarf whitebeam – *S. chamaemespilus* (L.) Crantz, Balkan whitebeam – *S. graeca* (Spach) Kotshy, Swedish whitebeam – *S. intermedia* (Ehrh.) Pers. and wild service tree – *S. torminalis* (L.) Crantz (MIREK et al. 2002). Among them only European rowan is a species frequently found throughout Poland. The other species need to be considered as rare, mostly with a very limited range. Two among the native species, *S. intermedia* and *S. torminalis*, are covered by legal species protection and their selected populations are additionally protected in reserves. Apart from the native species in green areas, we may also find several alien species. The most frequent include: showy mountain ash – *S. decora* (Sarg.) Schneid., Koehne mountain ash – *S. koehneana* Schneid., service tree of Fontainebleau – *S. latifolia* (Lam.) Pers., Japanese rowan – *S. commixta* Hedl. and bastard service tree – *S. × thuringiaca* (Ilse) Fritsch (CZEKALSKI 2002).

Natural monuments are the oldest forms of nature conservation both worldwide and in Poland. Among Polish natural monuments, which list com-

prises at present approx. 35 thousand items, single trees growing in forests and outside forested areas are definitely predominant, at over 27 thousand. Old and spectacular trees are also protected as clusters or avenues. The status of natural monument may be granted not only to specimens of native tree species, but also old trees of alien species (SYMONIDES 2007). Generally trees with circumferences (at breast height, i.e. 130 cm) exceeding 100 cm are granted the natural monument status in the case of rowans.

Rowans protected in Poland as natural monuments represent five species: *Sorbus aria*, *S. aucuparia*, *S. intermedia*, *S. latifolia* and *S. torminalis*. A list of natural monument trees for Swedish whitebeam *S. intermedia* and wild service tree *S. torminalis* were presented in earlier publications by the author of this study (BEDNORZ 2010, BEDNORZ & LUDJAN 2012). The aim of this paper is to provide information concerning monument rowans representing the other *Sorbus* species found in Poland.

RESULTS AND DISCUSSION

The paper lists natural monuments representing the following rowan species: *Sorbus aria*, *S. aucuparia* and *S. latifolia* (Table 1). Service tree of Fontainebleau *S. latifolia*, which is a hybrid formed by crossing common whitebeam *S. aria* and wild service tree *S. torminalis*, is not found in Poland in the wild. The other two species are native to Poland.

Table 1. List of rowan trees recognised as natural monuments

Province	Location	Number of trees	Circumference (cm)	Year of registration	Comments
<i>Sorbus aria</i>					
Dolnośląskie	Lubań, Mickiewicza 4	1	131		In domestic premises
Śląskie	Cieszyn, Bielska 4	1	136	1998	In the Hospital Park
<i>Sorbus aucuparia</i>					
Dolnośląskie	Wałbrzych commune, Szczawno Zdrój, Wojska Polskiego 2	1	120	1995	Square in front of domestic premises
Łódzkie	Skierniewice commune, avenue linking Julków–Dębowa Góra–Ludwików	3	130–140	1997	Mixed species avenue of trees
Mazowieckie	Warszawa, Solidarności 101–105/111b	1	110	1996	
Podlaskie	Bielsk Podlaski commune, Dobromił, former manor park	1	55	1998	Mixed species avenue of trees
Wielkopolskie	Czerwonak commune, along the Wierzonka–Mielno road	1	70	2003	Mixed species avenue of trees
	Kościan commune, Krzan plot 7057/1	1	92	2009	
	Kórnik commune, along the Kromolice–Zimin road	1	38, 34	2001	Mixed species avenue of trees, a double-trunk specimen
<i>Sorbus latifolia</i>					
Wielkopolskie	Czerwonak commune, along the Wierzonka–Mielno road	1	163	2003	Mixed species avenue of trees

Common whitebeam *Sorbus aria*, found in Poland in the wild only in the Tatra and the Pieniny Mountains, is represented by only two natural monuments. Both specimens are growing in urban green areas in southern Poland.

European rowan *Sorbus aucuparia*, found commonly throughout Poland, is represented by scarce natural monuments. There are only seven of them comprising a total of nine trees. Only one natural monument specimen is growing in the natural locality; the others are elements of green areas.

Only one specimen of service tree of Fontainebleau *Sorbus latifolia* has been granted the natural monument status. It is a tree with a circumference of 136 cm, growing in a mixed species roadside avenue near Poznań.

The greatest numbers of natural monument rowans in Poland are found for wild service trees (50 natural monuments comprising 179 trees) and Swedish whitebeams (24 natural monuments comprising 471 trees; BEDNORZ 2010, BEDNORZ & LUDJAN 2012). In the case of wild service tree, the natural monument status is granted most frequently to single, spectacular trees, less frequently their clusters, growing almost exclusively in forests in natural localities. In turn, in the case of Swedish whitebeam all recognised natural monuments are elements of urban or non-urban green areas and were planted as such. There are no natural monuments of this species growing in natural localities. Natural monuments include not only single trees or their clusters, but also avenues composed either solely of Swedish whitebeams or mixed

species avenues containing *Sorbus intermedia*. A comparison of diameters breast high for rowans granted the natural monument status shows that the biggest are found in Swedish whitebeams and wild service trees, exceeding 200 cm. Among the registered natural monument trees of *S. intermedia*, the largest trunk circumference at breast height, i.e. 275 cm, is recorded for a specimen growing in a roadside avenue in the PRUSZCZ commune (BEDNORZ & LUDJAN 2012). At present the thickest natural monument wild service tree in Poland, with a stem circumference of 226 cm (at a height of 115 cm), is growing in the Jamy Forest Division (BEDNORZ 2010). The thickest European rowan recognised as a natural monument, with a trunk circumference of 140 cm, is growing in the Skierniewice commune in a mixed species roadside avenue of trees.

The number of natural monuments comprising rowans growing in Poland is relatively low, only 84. However, it does not mean that there are so few spectacular rowan specimens in our country. The number of trees of species from the genus *Sorbus*, which have reached natural monument dimensions, is much greater. Numerous surveys concerning dendroflora in different objects (e.g. urban green, historical parks) or regions of Poland indicate the presence of the so-called monumental trees, i.e. having the dimensions of natural monuments, but not covered by this form of legal protection. However, most frequently an indication of monumental trees is not connected with a motion to have the listed objects formally granted the natural monument status.

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