"Betula x oycoviensis" Besser in the environs of Kraków (S. Poland)

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Betula x *oycoviensis* Besser in the environs of Kraków (S. Poland)*

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Among the birches occurring in Poland, *Betula* x *oycoviensis* Besser is of particular interest because, for a long time, it was treated as a Polish endemic species (JENTYS-SZAFEROWA 1960). Long-term taxonomic-experimental studies did not support its endemic character, indicated also that *Betula* x *oycoviensis* is a hybrid between *Betula pendula* Roth and *Betula szaferi* Jen.-Szaf. ex Stasz. (JENTYS-SZAFEROWA 1952, 1967, WIECKOWSKA 1964, JENTYS-SZAFEROWA et al. 1974, SZWABOWICZ 1972, PAWLOWSKA 1980). The later parental species is "saved" within *Betula* x *oycoviensis* genotype and occurs in nature ephemerally as its segregate (STASZKIEWICZ 1986).

Betula x *oycoviensis* is a heliophilous tree, reaching a height of 20 m, flowering and fruiting abundantly usually at the age of two years, with 3-5(7) leaves on the short shoot; leaves on the short shoot, 20-42 mm long with 4-6(7) pairs of lateral veins, and leaves on the long shoot (40)60-90 mm long.

Betula x *oycoviensis* was described by BESSER (1809) as a species from Hamernia and Swawola near Krakow (the Krakow-Czestochowa Upland). In 1966, based on herbarium material, KORCZYK revised that opinion, indicating that apart from the localities already known in the surroundings of Krakow, this taxon occurs or occurred in historical periods in some other localities in Poland and also in the southern part of the Scandinavian Peninsula, in Den-

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* This paper is dedicated to the memory of Professor Dr. Istvan Karpati (1924-1989) who died on the 4th day of the 19th International Phytogeographic Excursion (IPE), returning from the *Betula* x *oycoviensis* locality in the Dolina Kobylanska valley.

mark (Zealand), W. Bohemia (KRIZ 1981), W. Ukraine, Romania and middle Russia (Fig. 1).

It forms an interesting subject of quantitative investigations because only a small number of *Betula* x *oycoviensis* specimens is known. A detailed inventory, taken in 1966 of those growing in the surroundings of Krakow recorded 39 specimens in locus classicus in Hamernia and Swawola (KORCZYK 1966, 1967). In 1985, only six specimens were found there (STASZKIEWICZ and WOJCICKI 1986). *Betula* x *oycoviensis* suffered great losses in this locality, in spite of a few protection endeavours.

The Dolina Kobylanska valley (Fig. 2, Table 1) is another area where the occurrence of *Betula* x *oycoviensis* has been thoroughly investigated. Only one tree and four shrubby specimens grew there in 1952. In an inventory in 1966, 35 specimens in five groups, and 239 seedlings growing in one single concentration (E) were recorded. Most of the latter were very likely to succumb to strong competition. At present, *Betula* x *oycoviensis* has expanded in that territory. The number of shrubby and tree specimens has grown to 116.

The results presented above indicate that *Betula* x *oycoviensis* is regenerating well in the Dolina Kobylanska valley, while in the territory of Hamernia

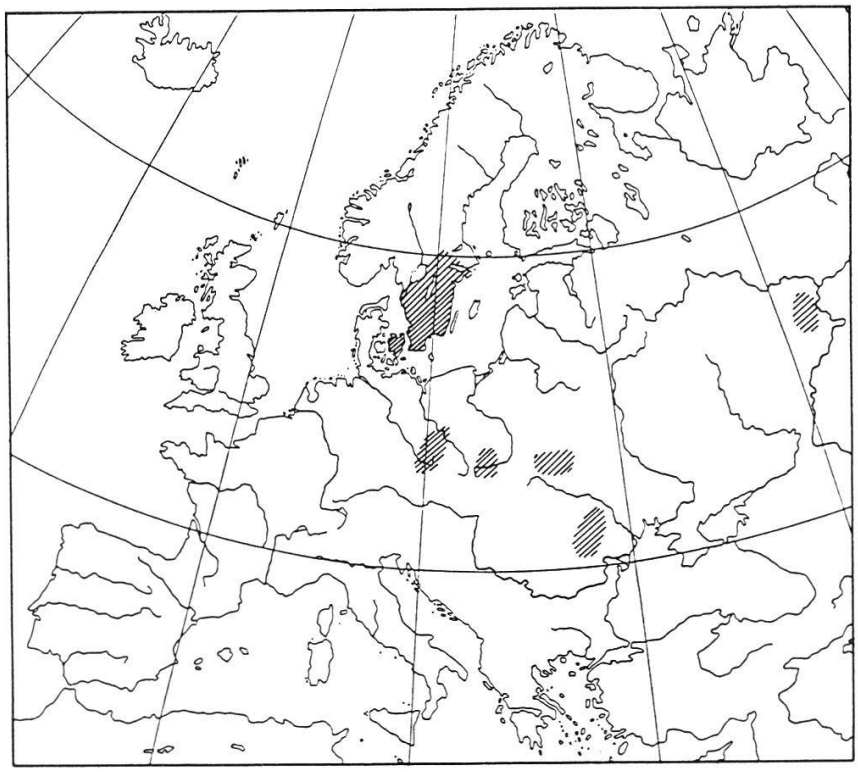

Fig. 1. Distribution map for *Betula* x *oycoviensis* Besser.

and Swawola it is threatened with extinction, which would be an irretrievable loss because it is locus classicus of this taxon.

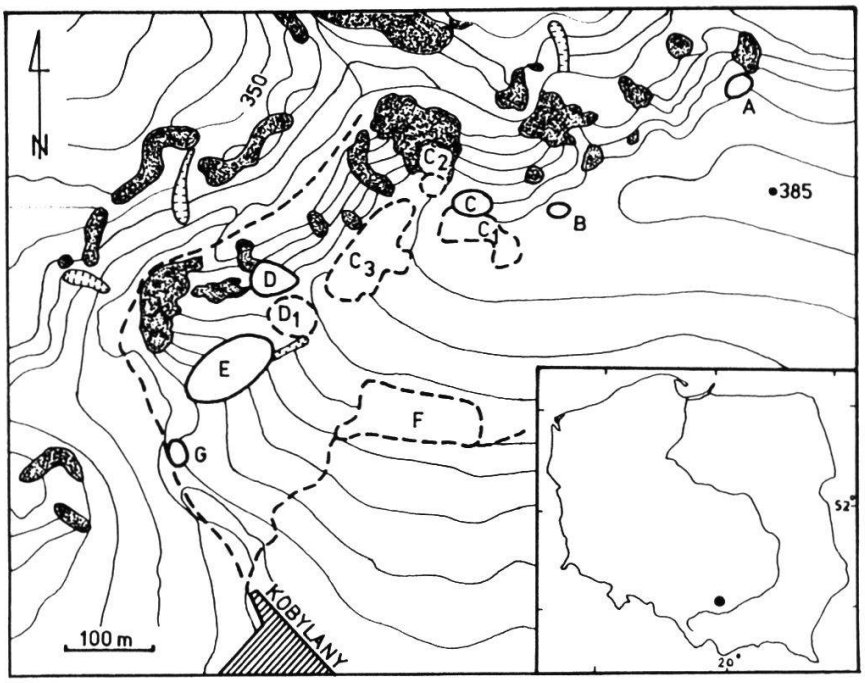

Fig. 2. Distribution of *Betula* x *oycoviensis* in the Dolina Kobylanska valley in 1966 (A-E according to KORCZYK 1967) and in 1985 (A-G, C1-C3, D, D1).
The rocks are doted. The number of specimens in the particular groups are given in Table 1.

Table 1. The number of *Betula* x *oycoviensis* specimens in the Dolina Kobylanska valley in 1965-1966 (KORCZYK 1966, 1967) and 1985.
A-G as in Fig. 2.

1965 and 1966		1985	
Group	Number of specimens	Group	Number of specimens
A	6	A	2
B	1	B	5
C	8	C	14
		C1	8
		C2	2
		C3	3
D	19	D	3
		D1	6
E	1	E	16
		F	56
		G	1
Total	35		116

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