

WESTERNMOST OCCURRENCE OF *LATHYRUS LAEVIGATUS* (FABACEAE) IN POLAND

ZBIGNIEW SZELĄG

Abstract. New localities of *Lathyrus laevigatus* (Waldst. & Kit.) Gren. have been found in the vicinity of Częstochowa on the Wyżyna Krakowsko-Częstochowska upland (the Polish Jura). This is the westernmost occurrence of the species in Poland, disjoined from its continuous geographical range of about 120 km.

Key words: distribution, *Lathyrus laevigatus*, new disjunct localities, Poland

Zbigniew Szeląg, Institute of Botany, Jagiellonian University, Kopernika 31, 31-501 Kraków, Poland; e-mail: azszelag@wp.pl

The westernmost stations of *Lathyrus laevigatus* (Waldst. & Kit.) Gren. known to date in Poland are located in the Góry Świętokrzyskie Mts (Zajac & Zajac 2001a, b; Kucharzyk & Mitka 2008). In a popular nature guidebook by Cabała *et al.* (2007) a color photo of *L. laevigatus* was published, with the proper Polish name of the plant, in the chapter on vegetation of Góra Gąs慵y hill in the westernmost part of the Wyżyna Krakowsko-Częstochowska upland. Apparently the authors did not realize that this was a discovery, as the species is not mentioned in the text.

Recently Urbisz (2008) listed *L. laevigatus* from the Wyżyna Krakowsko-Częstochowska upland in a synoptic table, but did not cite a precise locality nor the source of this information. As the habitat of the species he cited a community of the *Betulo-Adenostyletea* class. The subalpine communities from this class occur in Poland only in the higher parts of the Carpathians and Sudetes, while all of the *L. laevigatus* stations reported here are within the *Tilio-Carpinetum* association and accompanied by many thermophilous species (Table 1).

In May 2008, I visited Góra Gąs慵y hill together with Krzysztof Piergalski, who had taken that photo published in Cabała *et al.* (2007). We found the station of *L. laevigatus*. It is on a steep western slope facing an oxbow of the Warta River, in the *Tilio-Carpinetum* forest association. Encouraged by this find, I searched all the preserved forest

remains of this type in vicinity of Góra Gąs慵y hill, discovering three more stations of *L. laevigatus*: (1) Dębowa Góra hill, (2) Góra Kokocówka hill (both are within Częstochowa municipality) and (3) Zielona Góra Reserve (located only 1.5 km SE of the city limits). All these stations of *L. laevigatus* were found in May 2008 and are in ATPOL grid square DE 85 (Fig. 1).

The population found on Góra Gąs慵y hill comprises ca 30 individuals dispersed over 300 m². *Lathyrus laevigatus* grows there together with

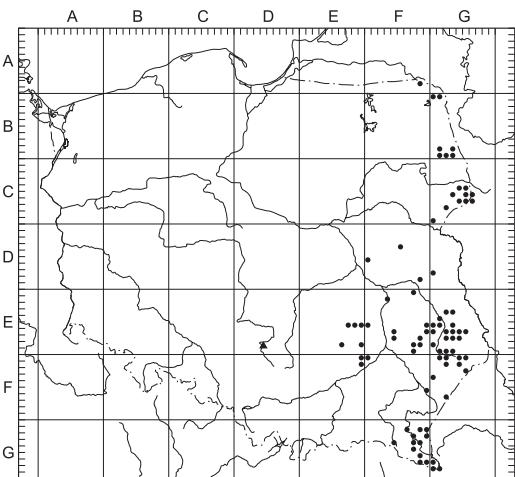


Fig. 1. Distribution of *Lathyrus laevigatus* (Waldst. & Kit.) Gren. in Poland: ▲ – new locality, ● – known localities (after Zajac & Zajac 2001b).

Table 1. Phytocoenological spectrum of the *Lathyrus laevigatus* stations: 1 – Góra Gąs慵zyk hill, 22 May 2010; 2 – Dębowa Góra hill, 17 May 2010; 3 – Góra Kokocówka hill, 17 May 2010; 4 & 5 – Zielona Góra Reserve, 26 May 2010.

Relevé number	1	2	3	4	5
Relevé area (m ²)	200	400	200	400	400
Slope	NW	NW	NW	N	SE
Aspect (°)	40	10	15	30	5
Tree cover (%)	100	90	100	100	100
Shrub cover (%)	30	75	50	50	10
Herb cover (%)	90	90	90	100	100
A. Carpinus betulus	2	1	2	3	2
<i>Fagus sylvatica</i>	2	.	1	2	.
<i>Quercus robur</i>	+	2	1	1	3
<i>Tilia cordata</i>	+	.	.	.	+
<i>Tilia platyphyllos</i>	.	1	.	+	.
B. Acer platanoides	+	.	+	1	+
<i>Acer pseudoplatanus</i>	.	.	.	1	.
<i>Carpinus betulus</i>	+	+	.	.	.
<i>Cornus sanguinea</i>	.	+	.	.	+
<i>Corylus avellana</i>	+	1	+	.	.
<i>Crataegus laevigata</i>	.	+	+	.	.
<i>Euonymus verrucosus</i>	1	1	+	.	.
<i>Fagus sylvatica</i>	1	+	1	2	+
<i>Lonicera xylosteum</i>	.	1	.	.	.
<i>Tilia cordata</i>	+	1	+	.	.
<i>Tilia platyphyllos</i>	.	+	.	+	.
C. Acer platanoides	+	.	.	.	2
<i>Aegopodium podagraria</i>	+	1	.	1	.
<i>Acer platanoides</i>	+	.	.	.	2
<i>Agrimonia eupatoria</i>	.	+	.	.	.
<i>Ajuga reptans</i>	.	+	+	.	+
<i>Anemone nemorosa</i>	1	1	1	+	1
<i>Aruncus sylvestris</i>	1	.	.	.	.
<i>Asarum europaeum</i>	+	+	1	+	1
<i>Betonica officinalis</i>	.	+	.	.	.
<i>Bupleurum longifolium</i>	1	+	.	+	+
<i>Calamagrostis arundinacea</i>	+	+	.	.	+
<i>Campanula persicifolia</i>	+	+	+	.	+
<i>Campanula rapunculoides</i>	+	.	.	+	.
<i>Campanula trachelium</i>	.	+	.	.	+
<i>Carex digitata</i>	+	.	+	+	.
<i>Carex montana</i>	.	+	.	.	.
<i>Carex pallidula</i>	.	1	.	.	+
<i>Cephalanthera damasonium</i>	.	.	.	.	+
<i>Clinopodium vulgare</i>	.	+	.	.	.
<i>Convallaria majalis</i>	+	1	1	1	+
<i>Festuca gigantea</i>	.	+	.	+	.
<i>Fragaria vesca</i>	.	.	+	.	+
<i>Galium odoratum</i>	+	+	1	2	+
<i>Galium schultesii</i>	+	3	.	.	1
<i>Galium vernum</i>	1	+	1	.	1
<i>Geranium sylvaticum</i>	.	+	.	+	+
<i>Hedera helix</i>	2	.	1	.	1

Table 1. Continued.

Relevé number	1	2	3	4	5
<i>Hepatica nobilis</i>	2	1	2	+	2
<i>Heracleum sphondylium</i>	+	+	.	.	+
<i>Hieracium murorum</i>	1	.	.	+	+
<i>Hieracium sabaudum</i>	+	.	.	.	+
<i>Hypericum montanum</i>	.	+	.	.	.
<i>Lamium galeobdolon</i>	+	1	+	1	+
<i>Lathyrus laevigatus</i>	1	2	+	2	+
<i>Lathyrus niger</i>	+	3	1	.	2
<i>Lathyrus vernus</i>	1	+	+	+	1
<i>Lilium martagon</i>	+	+	+	+	+
<i>Maianthemum bifolium</i>	.	+	.	+	.
<i>Melica nutans</i>	2	2	1	.	1
<i>Melica uniflora</i>	.	.	.	2	1
<i>Melittis melissophyllum</i>	.	1	+	.	1
<i>Mercurialis perennis</i>	+	+	2	2	3
<i>Milium effusum</i>	+	+	.	1	+
<i>Paris quadrifolia</i>	.	.	.	1	.
<i>Phyteuma spicatum</i>	1	.	.	.	1
<i>Poa nemoralis</i>	+	.	.	.	.
<i>Polygonatum multiflorum</i>	+	+	+	1	1
<i>Primula veris</i>	.	+	+	.	+
<i>Pulmonaria obscura</i>	1	.	1	1	1
<i>Ranunculus nemorosus</i>	.	+	.	+	.
<i>Sanicula europaea</i>	.	.	.	+	+
<i>Scrophularia nodosa</i>	.	+	.	.	.
<i>Solidago virgaurea</i>	+	.	.	.	+
<i>Stellaria holostea</i>	+	2	+	.	1
<i>Thalictrum aquilegiifolium</i>	.	1	+	.	.
<i>Trifolium alpestre</i>	.	+	.	.	.
<i>Vaccinium myrtillus</i>	1	.	.	.	.
<i>Veronica chamaedrys</i>	.	+	+	.	1
<i>Vicia sepium</i>	.	.	.	1	.
<i>Vicia sylvatica</i>	.	+	.	.	.
<i>Vincetoxicum hirundinaria</i>	.	.	1	.	+
<i>Viola mirabilis</i>	.	1	.	+	.
<i>Viola reichenbachiana</i>	+	+	1	1	1

Aruncus sylvestris Kostel. and *Bupleurum longifolium* L., both rare in the Polish lowlands. The population on Góra Kokocówka hill contains only 12 plants growing in a 200 m² area. *Thalictrum aquilegiifolium* L., a species rare in the Wyżyna Krakowsko-Częstochowska upland (Urbisz 2004), occurs there as an accompanying species. The most numerous population, 120–140 *L. laevigatus* plants, is located on Dębowa Góra hill. This place is rich in rare and protected plant species, such as *Bupleurum longifolium*, *Carex montana* L., *C. pallidula* Harmaja, *Cephalanthera damasonium* (Mill.) Druce, *Cimicifuga europaea* Schip-

czinskij., *Euphorbia dulcis* L., *Neottia nidus-avis* (L.) L. C. Richard, *Ranunculus nemorosus* DC., *Scorzonera humilis* L., *Senecio ovatus* (G. Gaertn. et al.) Willd., *Serratula tinctoria* L., *Thalictrum aquilegiifolium* and *Trifolium rubens* L.

Most surprising, however, was the discovery of *Lathyrus laevigatus* in the Zielona Góra Reserve, the flora and vegetation of which has been the subject of several detailed studies (Celiński & Wika 1975; Hereńiak 1975, 2002). This population comprises ca 70 individuals growing in a few clusters spread over a 1000 m² area. The phytosociological characteristics of all four *L. laevigatus* stations are given in Table 1.

The general range of *L. laevigatus* covers two isolated areas: Eastern European, comprising E Poland, Lithuania, Belarus, W Russia, Ukraine, NE Slovakia, Romania and Moldova; and Southern European, including NE Italy, SE Austria and the countries of former Yugoslavia (Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Kosovo) (Meusel et al. 1965; Kucharzyk & Mitka 2008). According to the Euro+Med database (Anonymous 2006), *L. laevigatus* subsp. *laevigatus* is limited to the Eastern European part, while in Southern Europe only *L. laevigatus* subsp. *occidentalis* (Fisch. & C. A. Mey.) Breistr. occurs.

Martinčić et al. (1999) report both subspecies from Slovenia. According to Marjan Niketić (pers. comm. 2011), *L. laevigatus* subsp. *laevigatus* grows in Bosnia and Herzegovina, Montenegro and Kosovo, while in Croatia and Slovenia both subspecies occur, probably hybridizing. The precise pattern of occurrence of *L. laevigatus* s.l. over the area of former Yugoslavia demands closer research.

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