

Linum dolomiticum Borbás, a strictly protected wild relative of cultivated flax in Hungary

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Linum dolomiticum: a wild relative of cultivated flax

The dolomite flax (*Linum dolomiticum* Borbás) a very rare, endemic, perennial flax species restricted to some habitats on dolomite rocks in Hungary. It's a relic species, the entire world population is living on a 10 ha (25 acre) spot (a strictly protected area) about 20 miles (32 km) north-west of Budapest (near Pilisszentiván). It was declared as a strictly protected species in 1951.

Distribution

Endemic and relic plant species of the Hungarian flora can be found only at one location (Kisszénás) in the entire world, in close proximity to the Buda Landscape Protection Area. The world population is living on a 10 hectare size habitat (a strictly protected area).

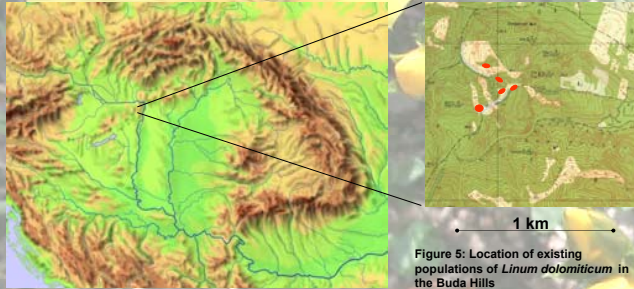


Figure 4: Distribution of *Linum dolomiticum* in the Carpathian Basin



Figure 6: Natural habitat of *Linum dolomiticum* in the Buda Hills



Figure 1: Vince Borbás, who described *Linum dolomiticum* in 1897 from the Buda Hills



Figure 2: *Linum dolomiticum* in bloom in the middle of May



Figure 3: *Linum dolomiticum* with ripe capsules in late June

Taxonomy

Sect. *Syllinum* Griseb.

Linum flavum group

Taxon: *Linum dolomiticum* Borbás (1897)

Forms: *f. dolomiticum* with petals 15-16 mm long and ovate

f. parviflorum Wagner with petals 10-12 mm long and lanceolate

Vernacular name: Dolomite flax (English), Pilisi len (Hungarian)

Synonym(s): No

Biology and Ecology

A dwarf shrub (chamaephyton) with woody, branching stem ending in leaf rosettes. Flowering stems usually 10–15 cm. Inflorescence with 2–6 yellow flowers. Sepals 6–7 cm narrowly lanceolate acuminate. Petals 10–16 mm obovate or lanceolate. Capsule globose with 10 seeds. Closely related to *Linum elegans* Spruner ex BOISS. in the Balkan Peninsula. It has $2n = 28$. It is pollinated by insects (entomogamy), sometimes autogamy too, seeds dispersed by animals (epizoochory).

The Budapest part of the Buda Landscape Protection Area managed by Directorate of the Danube-Ipoly National Park is also characterized by the richness of plant communities. The limestone and dolomite rock grasslands, covered only with a thin layer of ground, have the highest diversity, and are home to the most rare species. Such species are the *Draba lasiocarpa* Rochel var. *demissorum* Borbás, *Phyteuma orbiculare* L., *Seseli leucospermum* Waldst. et Kit., *Dianthus plumarius* L. ssp. *regis-stephani* (Rapcs.) Baksay, *Centaurea sadleriana* Janka, or *Vincetoxicum pannonicum* (Borhidi) Holub, which latter can be found only in the Villányi Mountains and here. Facing north, on the cooler slopes grows the *Sesleria sadleriana* Janka. All these plants are considered endemic species in the Carpathian basin.

Country	Number of locations / Occurrence	Total number of plants	Major threat	Trend	Threat assessment	Protection
Hungary	only one: near Pilisszentiván	~1000	Small population, disturbance	stagnant	low	In situ, Ex situ

Table 1.: Occurrence per country, national threat status and national protection

In situ conservation

First steps to protect this endemic flax species were taken in 1934. This species is protected by Law No. LIII. of 1996 on Nature Conservation, and Act No. 13/2001 of Ministry of Environmental Protection. In addition it is listed in the Bern Convention 1979, CORINE Biotopes and the Habitats Directive (92/43/EEC) Appendix I. and European Diploma 1995 (The Szénás Hills strictly protected area).

Ex situ conservation

Three seed samples from 3 populations conserved in the gene bank collection at the Institute for Agrobotany, Tápószéle (Hungary)

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