

Cerastium dinaricum G. Beck & Szysz. - a new species in the flora of Slovenia

Cerastium dinaricum G. Beck & Szysz. - nova vrsta v flori Slovenije

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Abstract: The author reports the first known locality of *Cerastium dinaricum* in Slovenia, which he discovered in 1994 in the Notranjski Snežnik mountains (South Slovenia). He discusses its occurrence on Mount Snežnik and describes the total previously known distribution area of this distinctly Illyric species (Slovenia, Croatia, Bosnia, Hercegovina, Yugoslavia /Montenegro, Serbia: Kosovo/, and Albania). He also touches on its phytosociological attachment.

Izvleček: Pisec poroča o prvem znanem nahajališču vrste *Cerastium dinaricum* v Sloveniji, ki ga je odkril 1994 na Notranjskem Snežniku. Opisuje njeno pojavljanje na Snežniku in navaja vsa doslej znana nahajališča (Slovenija, Hrvaška, Bosna, Hercegovina, Jugoslavija /Črna gora, Srbija: Kosovo/, Albanija) te izrazito ilirske vrste, dotika pa se tudi njenega fitocenološkega položaja.

*Come mai questa pianta potè trasportarsi da un
punto all'altro tanto distante? In regione
alpina? Quale fu la località aborigena?*

(A. Baldacci 1891: 66-67)

1. Introduction

In 1886 the Polish botanist I. SZYSZYŁOWICZ undertook a botanical journey through some at that time floristically very little known parts of Montenegro and Albania and published the results of his collection activity in collaboration with G. BECK in 1888. Among the new taxa described in their report was *Cerastium dinaricum*, based on specimens collected by SZYSZYŁOWICZ on Mount Kučki Kom as well on those collected by F. MALY in 1869 and Th. PICHLER at about the same time on Mount Malovan in the Velebit mountain range. The original description thus already indicates many of the

most distant locations of the then known distribution of *C. dinaricum* which so astonished BALDACCII (1891: 66-67) in view of his first encounter with it more than a century ago. Later discoveries largely filled the gaps between the first published localities. The first botanist to collect *C. dinaricum* in the Komovi Mountains was PANČIĆ (1875: 15, "*C. alpinum*"), and its occurrence in the Velebit Mountains was first published by VISIANI (1872: 163-164, "*C. latifolium*").

On August 9, 1994, the author encountered an unfamiliar *Cerastium* on Notranjski Snežnik (Southern Slovenia) which turned out to be *C. dinaricum*, a new species in the flora

of Slovenia (0452/2).

2. The occurrence of *C. dinaricum* on Notranjski Snežnik

Notranjski Snežnik (1797 m), known also simply as Mount Snežnik, is the highest elevation of the Dinaric Mountains in Slovenia. Its flora represents an interesting mixture of Middle-European, Alpine, and Balkan geoelements, first analysed by GINZBERGER 1909). Some of them attain there their southeast distribution border (e.g., *Achillea atrata*, *Arabis vochinensis*, *Galium noricum*, *Nigritella miniata*, *Ranunculus traunfellneri*, *Saxifraga exarata* subsp. *moschata* -

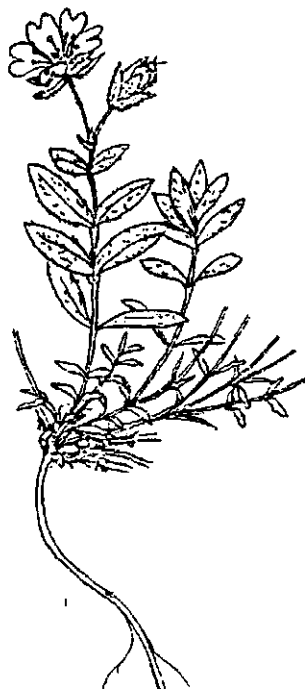


Fig. 1 (sl. 1): *Cerastium dinaricum* (JÁVORKA & CSAPODY 1934: tab. 135, fig. 1067)

unpublished, *Saxifraga sedoides* subsp. *sedoides* - unpublished, *Trisetum argenteum*) or, respectively, their north-west distribution border (e.g., *Carex kitaibeliana*, *Festuca bosniaca*, *Scabiosa silenifolia*, *Seseli malyi*) (WRABER 1971).

The very summit region of Mount Snežnik (Veliki Snežnik 1797 m, Mali Snežnik 1694 m) is encircled by a ring, largely broken on the south and west sides, of lower elevations which reach an average height of about 1600 m. Between the main and the secondary ridges are situated some distinct dolines with a splendidly developed inversion of vegetation. Lacking local names in the summit region of Mount Snežnik, the author invented some new geographical names (WRABER, unpublished), among others "Smrekova Draga" for the biggest doline on the northeast side of the main peak. Smrekova Draga itself consists of four main smaller dolines, their bottoms lying in a north-south direction at 1426.9 m, 1416.9 m, 1408.2 m, and 1435.8 m above sea level. (Republic of Slovenia: Basic Topographic Sketch, Čabar Section 1, 1:10 000, Geodetski zavod SRS, Ljubljana 1974). In the deepest doline a very limited number of *Cerastium dinaricum* specimens occur. The habitat is Mesozoic limestone scree. *Cerastium dinaricum* grows at the northern end of the doline, at about 1411 m, together with *Achillea clavinae*, *Arabis scopoliana*, *Galium anisophyllum* subsp. *alpinobalcanicum*, *Hieracium* spec., *Leontopodium alpinum*, *Myosotis alpestris*, *Parnassia pusilla*, and *Thymus praecox* subsp. *polytrichus* (*Th. balcanus*). Such a floristic composition does not allow its attri-

bution to any well-defined vegetation unit, albeit most of the taxa are to be found in the *Edraiantho-Caricetum firmae* (= *Caricetum firmae croaticum*) association (WRABER 1967). The explanation for this situation probably lies in the minute presence of a scree habitat encircled by mountain pine (*Hyperico-Pinetum mugo*), beech (*Polysticho lonchitis-Fagetum*), and

collection is kept, there are no specimens of *Cerastium* from Mount Snežnik. However, *C. carinthiacum* is not known in the flora of Mount Snežnik. What then did PLEMEL see there? It is not likely that he descended to the currently known locality of *C. dinaricum* on Mount Snežnik but it is worth considering that the highest elevation of Mount

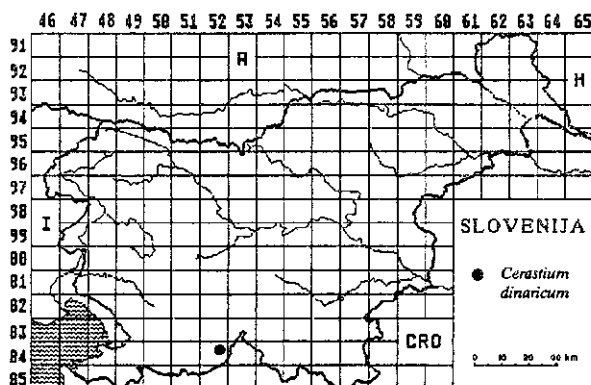


Fig. 2: Distribution of *Cerastium dinaricum* in Slovenia

Sl. 2: Razširjenost dinarske smiljke v Sloveniji

Norwegian spruce (*Lonicero caeruleae-Piceetum*) vegetation. The scarce presence of *Cerastium dinaricum* gives the impression of being the very last traces of a former colonization. It is worth noting that PLEMEL (1862: 128) quoted "*Cerastium alpinum* L." as found on Mount Snežnik: "Auf allen Alpen, auf dem Schneeberge, sehr häufig am Save-Ufer im Flussgerölle bei Jauerburg."

C. alpinum does not occur at all in Slovenia. The specimens labelled *C. alpinum* in the PLEMEL Herbarium (LJM) belong to *Cerastium carinthiacum*. Unfortunately, here and also at the University of Ljubljana where a small part of the PLEMEL

Snežnik once was less covered by mountain pine (*Hyperico-Pinetum mugo*) vegetation and therefore more suited for scree vegetation. The photograph published in CUMIN's guidebook (1929: tab. V, p. 60/61) demonstrates less mountain pine cover than known today, probably owing to the later abandonment of pastures. With the increase of mountain pine vegetation, the former or possible habitats of *C. dinaricum* on the highest elevation may have been eliminated — or they have not as yet been discovered.

The occurrence of *C. dinaricum* on Mount Snežnik represents a new, and probably ultimate, northwest

border of its total area; its nearest previously known locality (Vaganski vrh) lies about 157 km to the south-east. The Mount Snežnik specimens are not glandular, thus representing *C. dinaricum* f. *dinaricum*. The glandular specimens (*C. dinaricum* f. *velebiticum* DEGEN) are of no taxonomic value because they frequently occur together with other non-glandular specimens. Moreover, many other *Cerastium* species show the simultaneous presence of both glandular and non-glandular specimens.

3. The total distribution area of

Cerastium dinaricum

Cerastium dinaricum occurs in an area between the almost extreme ends of the Dinaric mountain system, i.e., between the Mount Snežnik massif in the northwest and the Prokletije (Bjeshkët e Nemuna) Range in the southeast. The air distance between the most distant localities (NW: Snežnik and SE: Djaravica and Abata) is 460 km. Intermediate localities are rather scarce, concentrated in Montenegro, Hercegovina, the Dinara Mountains on the Bosnian-Croatian border, and in the Velebit Mountains of Croatia. Therefore, *C. di-*

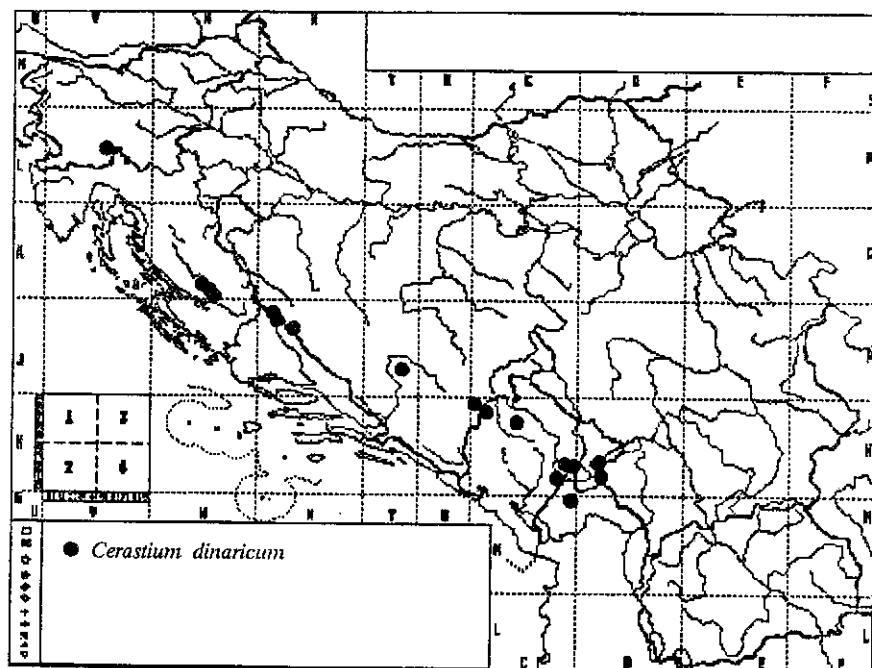


Fig. 3: The whole distribution area of *Cerastium dinaricum*
Sl. 3: Celotna razširjenost dinarske smiljke

naricum is a typical example of the well known Illyric (= west Balkan) distribution.

The following synopsis is based on revised herbarium specimens (LJU, W, WU) and original printed sources. The quotation follows a north-west-southeast direction.

Cerastium dinaricum G. Beck & Szysz., Rozpr. Akad. Um. (Mat.-Przr.) 19: 62 (1888)

Syn.: *C. latifolium* Vis., Mem. Ist. Veneto 16(1): 163-164 (1872), non L.

C. alpinum Pančić, Elench. Plant. Vasc. Cernag.: 15 (1875), non L.

Icones: BECK & SZYSZYŁOWICZ
1888: tab. IV, a-f
HORVAT 1931: tab. V, fig. 9, 10
JÁVORKA & CSAPODY
1934: tab. 135, fig. 1067
ŠILIC 1984: 19

Slovenia:

Notranjski Snežnik: Smrekova Draga (T. WRABER 1994, LJU 125827)

Croatia:

Velebit Mountains

Vaganski vrh (LENGYEL 1909, W; ROSSI 1924: 60)

between Vaganski vrh and Golić (HORVAT 1931: tab. V, rel. 6, tab. VI, rel. 13)

Golić (1735 m) (HORVAT 1931: 131, tab. VI, rel. 10, 11, 12)

Kitaibelov vrh (1710 m) (ROSSI 1924: 60)
Malovan (DEGEN 1906, W; Th. PICHLER ap. VISIANT 1872: 163-164; F. MALY 1869 and Th. PICHLER (later) ap. BECK & SZYSZYŁOWICZ 1888: 64; HORVAT 1931: tab. VII, rel. 4)

between Bunovac and Paklenica gorge

(JANCHEN 1907, WU)

between Vaganski vrh and Malovan (DEGEN 1907: 126)

Solila (ROSSI 1924: 60)

Sveto brdo (JANCHEN and WATZL 1907 ap. DEGEN 1937: 61,

Vončina ap. DEGEN 1937: 61)

Referring to JANCHEN & WATZL (1908: 164), the otherwise extremely reliable DEGEN (1937: 61) cites by mistakes the localities of Počiteljski vrh and Visočica. JANCHEN, who treated the genus *Cerastium* in the cited paper, mentioned the taxa of the *C. arvense* group only.

Dinara Mountains

Dinara (JANCHEN & WATZL 1907, WU; DEGEN 1905 ap. JANCHEN & WATZL 1908: 16.; HORVAT 1931: tab. II, rel. 9, 11, tab. VI, rel. 2, 3, 4, 5, 6, 8, 9)
Janski vrh (HORVAT 1931: tab. V, rel. 9)

Bosnia:

The localities given for the Dinara Mountains (Croatia) may also extend into the territory of Bosnia since the border between Croatia and Bosnia passes mainly along the main ridge of the Dinara Mountains.

Dinara Mountains

Troglav (BECK-MANNAGETTA 1897: 486, 488)

The Maglić - Volujak Massif

Studenac on Volujak (SLAVNIĆ 1956 ap. BJELČIĆ 1956: 143)

Volujak (LAKUŠIĆ 1968: tab. 13, rel. 1, 2)

Vlasulja Planina: Bojanića Vrata (ŠILIC ap. BJELČIĆ & al. 1969: 92)

Hercegovina:

The Prenj Planina

Lupoglav, above Police (VANDAS 1893, WU; VANDAS 1895: 12, 17)

HORVAT (1933: 106) mentioned in passing *C. dinaricum* as occurring "on more places in the mountains of Hercegovina" but only the locality in the Prenj Planina mountains has been confirmed.

Yugoslavlja - Montenegro:

The Durmitor Mountains

Savin Kuk (LAKUŠIĆ 1968: tab. 10, rel. 3, tab. 13, rel. 13)

The Komovi Massif

Kom Kučki (SZYSZYŁOWICZ 1886 ap. BECK & SZYSZYŁOWICZ 1888: 64; BALDACCI 1891: 66, 1893: 168; HORÁK 1898: 3; LAKUŠIĆ 1968: tab. 7, rel. 5, tab. 9, rel. 6) (locus classicus!)

Kom: Rogam (=pastures on the north-west side of the Kom Kučki) (BALDACCI 1890: 467, 1893: 168)

Kom Vasojevički (BALDACCI 1898, WU; BALDACCI 1890: 469, 1892: 163, 1900: 10; LAKUŠIĆ 1968: tab. 7, rel. 4)

The Žijovo Planina Massif

Žijovo, "between 1700 m and the summit" (BALDACCI 1892: 89)

Yugoslavlja - Serbia, Kosovo:

The Prokletije Mountains

Marjaš (=Bogdaš) (LAKUŠIĆ 1968: tab. 14, rel. 6)

Djaravica (RECHINGER & SCHEFFER 1933 ap. RECHINGER 1935: 152)

Shqiperia (Albania):

The Bjeshkëte Nemuna Mountains

District Šala (Shala), above Abata (DÖRFLER 1916, W, WU;

DÖRFLER ap. HAYEK 1924: 114)

STRID (1986: 122) mentions *C. dinaricum* as "incorrectly reported species" for Greece and rectifies by this

the error in the first edition of *Flora Europaea* 1 (JALAS 1964: 139). JALAS himself omitted *C. dinaricum* as occurring in Greece in the second edition of *Flora Europaea* 1 (1993: 171).

4. The phytosociological attachment of *Cerastium dinaricum*

The first data on the phytosociological attachment of *C. dinaricum* were published by HORVAT who established the *Cerastietum dinarici* association (HORVAT 1931: tab. VI) occurring on scree habitats in the Dinara as well in the southern Velebit mountains. Moreover, he found *C. dinaricum* in other associations (*Drypidi spinosae-Heracleetum orsinii*, *Bunio-Iberidetum camosae*, *Dryopteridetum villarii*, *Potentillo clusianae-Primuletum kitaibelii*) although with a much lesser degree of presence. With the occurrence of *C. dinaricum* in Slovenia, the floristic affinity of the phytosociological units as described by HORVAT is low since most species found together with *C. dinaricum* on Mount Snežnik (*Achillea clavennae*, *Arabis scopoliana*, *Thymus "balcanus"*, *Galium anisophyllum*, *Silene pusilla*, *Myosotis alpestris*), HORVAT (1931: tab. VI), ranks only as "accompanying species." Further to southeast, in the "Southeast Dinaric Mountains" of Bosnia, Hercegovina, and Montenegro, LAKUŠIĆ (1968) and LAKUŠIĆ & al. (1969) quote *C. dinaricum* as a characteristic species of the *Arabidetalia flavescentis* (serce), *Amphoricarpetalia* (rock fissures), and even *Crepidetalia dinaricae* (grassland) vegetation, where it occurs in many different associations.

The author thanks the curators of the LJM, W, and WU herbaria

for the opportunity to work with their collections. Moreover, he is greatly indebted to the National Institute for the Conservation of the Natural Heritage for the financial support of his field work.

5. Povzetek

Že avtorja vrste *Cerastium dinaricum* sta z navedenima nahajališčema (Kučki Kom v Črni Gori in Malovan na j. Velebitu na Hrvaškem) začrtala osnovno sliko njenega areala, ki je pozneje doživljala predvsem dopolnitve na vmesnem ozemlju in le manjše zaokrožitve na njegovih robovih. Nepričakovano, iz fitogeografskih razlogov pa vendarle komaj presenetljivo, je bilo njeno odkritje 1994 na Notranjskem Snežniku, kjer raste v zelo maloštevilnih primerkih na melišču malo nad dnom vrtače z nadmorsko višino dna 1408,2 m, ki je spet del večje podolgovate uleknine, zaradi mrzliščnega pojavljanja smreke ob naslonitvi na znano vrtačo v Trnovskem gozdu imenovane Smrekova Draga. Zaradi svoje maloštevilnosti je dinarska smiljka med najbolj ran-

ljivimi in zato ogroženimi vrstami slovenskih semenk. Njen izvor je v zvezi z naselitvijo balkanske flore na Snežniku, ki jo sicer dokumentira kar nekaj drugih vrst.

Pisec navaja natančno razširjenost dinarske smiljke v njenem celotnem arealu, pri čemer se opira na pregledane herbarijske primerke (LJU, W, WU) in (praviloma) le primarne literaturne vire. Po zdajšnji vednosti se dinarska smiljka pojavlja v Sloveniji, na Hrvaškem, v Bosni in Hercegovini, Jugoslaviji (Črna Gora, Srbija: Kosovo) in Albaniji. Pisec navaja tudi njen fitocenološki položaj, pri čemer kaže, da je ta najbolj specifičen na južnem Velebitu in na Dinari (samostojna asociacija *Cerastietum dinarici!*), medtem ko je v Jugovzhodnih Dinaridih fitocenološko manj vezana, saj se pojavlja v dokaj različnih vegetacijskih tipih. Zaradi prostorske miniaturnosti in floristične revščine nahajališče na Snežniku fitocenološko pobleže ni določljivo; skoraj vse vrste, s katerimi se dinarska smiljka druži, se pojavljajo tudi v asociaciji *Edraiantho-
-Caricetum firnae*.

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