

NEW LOCALITY OF *CIRSIUM CANDELABRUM* GRISEB., (ASTERACEAE) IN THE REPUBLIC OF NORTH MACEDONIA

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Abstract

Cirsium candelabrum Griseb., (Asteraceae) belongs to the group of Balkan endemic, with a wider distribution on the Balkan Peninsula. It was found for the first time in the territory of the Republic of North Macedonia by Grisebach, in 1839, in Shar Mountain, near Tetovo. As a result of continuous research, first by foreign authors and later by local authors, today several localities of the spread of this species are known, primarily in the western part of the country (Debar, Kičevo) and more sporadically in the eastern part of the country and the Skopje basin, in some localities of the Polog region, in Vodno, in Osogovo, etc. During my floristic research in the northwestern region of North Macedonia, another new locality of *Cirsium candelabrum* Griseb., was discovered, which represents a new record of the distribution of this species in the flora Republic of North Macedonia. Examine specimens: near the mountain road, on the right side of the main road, about 1.14 km before the mountain village of Galichnik, on the slopes of Mount Bistra, in the locality known as Bogdanec: 1537 m, 41 ° 35 ' 24 " N, 20 ° 40 ' 32 " E, August 2023.

Keywords: New locality, *Cirsium candelabrum* Griseb., *Asteraceae*, Galichnik, Republic of North Macedonia.

1. Introduction

Cirsium candelabrum Griseb., (Asteraceae) is an Balkan endemic, with a wider distribution on the Balkan Peninsula, together with *Pinguicula balcanica* Casper, *Delphinium balcanicum* Pawl., *Acanthus hungaricus* (Borbás) Baen., (syn: *Acanthus balcanicus* Heywood & I. Richardson), etc. This Balkan endemic species it was found for the first time in the territory of the Republic of North Macedonia by Grisebach, in 1839, in Shar Mountain, near Tetovo (Strid, 2000). The primary area of this endemite is the Balkans (North Macedonia, Albania, Kosovo, Greece, Montenegro, Serbia, Bosnia, and Herzegovina, Bulgaria, and Romania), where it is characterized by the mountain ruderal vegetation of forest fringes and roadsides, but also for disturbed ruderal habitats (Borovečki-Voska et al, 2022). So far, it occurs only in anthropogenic habitats and shows no tendency to spread on agricultural land or natural habitats and vegetation (Strid, 1991). *Cirsium candelabrum* Griseb., has recently been found in the European part of Turkey (Yildiz et al, 2009), in Slovenia and Croatia (Grošelj, 2012, Jasprica et al, 2015, Milović et al, 2015, Borovečki-Voska et al, 2022). *Cirsium candelabrum* Griseb., is a biennial plant from the family Asteraceae which in the first year develops a rosette of basal leaves, while in the following year it flowers and bears fruits. Grows up to 150-200 (-300) cm. Stem erect, greatly branched; axillary branches erect patent. Leaves coriaceous, undulate, margin stout and spiny; spines (6-)10-15(-25) mm, straw colored, spines between leaf lobes short and slender; rosette leaves of first-year plants linear-lanceolate, 20-30 × 5-7 cm, including winge petiole, pinnatisect; basal leaves of flowering plants similar to rosette leaves, but shorter; stem leaves

lanceolate to oblong, 10-20 × 5-7 cm, amplexicaule, acuminate, pinnatipartite, sinuate; segments triangular, lobed, lobes dentate; floral leaves (4-)6-7 × (2-)3-4 cm, lanceolate to narrowly ovate, pinnatifid to nearly entire. Capitula in clusters of 4-12, subsessile at the apex of short branches, glomerules nodding; subtending leaves pectinately spiny, about as long as capitulum. Involucres 14-19 × 7-13 mm; cylindrical to campanulate; phyllaries 6-7-seriate, adpressed, outer with 1-3 mm spines, median 6-7 mm, with a darkening ca. 1-mm linear vittae, inner expanded hyaline and spinescent-ciliate at apex. Florets 30-40, hermaphrodite; corolla 13-17 mm, white or yellowish white. Achenes oblong-trigonous, 3.5-5 × 1.5 mm, compressed, straw colored when young, later pale brown; pappus delicate, 13-16 mm. *Cirsium candelabrum* Griseb., is different from other *Cirsium* species. It can be easily distinguished from other species by the following features: plants completely glabrous, stems greatly branched nearly from base to synflorescence, capitula in clusters of 4-12 at tips of the lateral branches, branches pendulous due to weight of capitula, corolla 13-17 mm, white or whitish-yellow (Yildiz et al, 2016) (Figure 2).

2. Material and Methods

During the years 2021-2023, I visited several regions of the northwestern area of North Macedonia, to research the spread of *Cirsium candelabrum* Grisebach. During these researches, we found a new locality of the spread of this species on the slopes of Mount Bistra. The location of the new distribution locality has been determined precisely through the latitude and longitude coordinates on Google Maps. The morphological and systematic description of this species is based on relevant taxonomic literature. Plant nomenclature and taxonomy are consistent with the Euro+Med Plant base (Greuter, 2006).

3. Results and Discussion

Cirsium candelabrum Griseb., (Asteraceae) was found for the first time in the territory of the Republic of North Macedonia by Grisebach, in 1839, in Shar Mountain, near Tetovo (Strid, 2000). As a result of continuous research, first by foreign authors and later by local authors, today several localities of the spread of this species are known, primarily in the western part of the country (Debar, Kičevo) (Čarni et al, 2001) and more sporadically in the eastern part of the country and the Skopje basin (Matvejeva, 1982), in some localities of the Polog region (Haziri, 2008, 2015, 2024), in Vodno (MEPP, 2019), in Osogovo (Melovska, 2015), etc. During my floristic research in the northwestern region of North Macedonia, another new locality of *Cirsium candelabrum* Griseb. was discovered, which represents a new record of the distribution of this species in the flora Republic of North Macedonia. Examine specimens: near the mountain road, on the right side of the main road, about 1.14 km before the mountain village of Galichnik, on the slopes of Mount Bistra, in the locality known as Bogdanec: 1537 m, 41 ° 35 ' 24 " N, 20 ° 40 ' 32 " E, August 2023 (Figure 1).

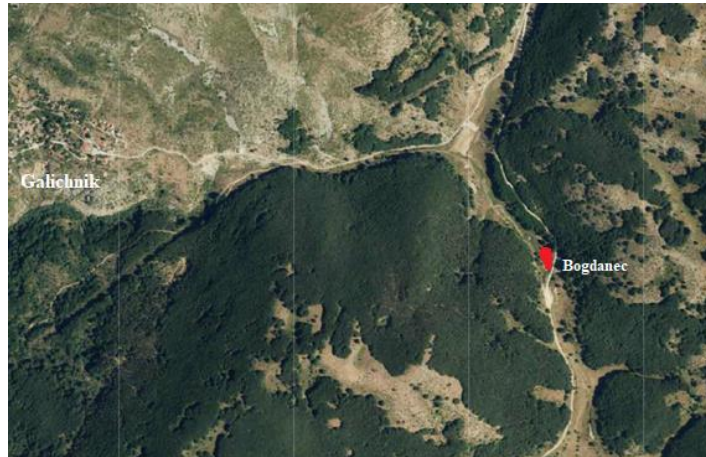


Figure 1. New locality of *Cirsium candelabrum* Griseb., in Bogdanec, on the slopes of Mount Bistra (source: Google Maps)



Figure 2. *Cirsium candelabrum* Griseb., in the new locality on the slopes of Mount Bistra (photo by Haziri, August 2023)

4. Conclusions

From what was said above we can conclude that *Cirsium candelabrum* Griseb., (Asteraceae) was found for the first time in the territory of the Republic of North Macedonia by Grisebach, in 1839, in Shar Mountain, near Tetovo (Strid, 2000). As a result of continuous research, first by foreign authors and later by local authors, today several localities of the spread of this species are known, primarily in the western part of the country (Debar, Kičevo) (Čarni et al, 2001) and more sporadically in the eastern part of the country and the Skopje basin (Matvejeva, 1982), in some localities of the Polog region (Haziri, 2008, 2015, 2024), in Vodno (MEPP, 2019), in Osogovo (Melovska, 2015), etc. The new locality of *Cirsium candelabrum* Griseb., on the slopes of Mount Bistra, on Bogdanec: 1537 m, 41 ° 35 ' 24 " N, 20 ° 40 ' 32 " E, represents a new record of the distribution of this species in the flora Republic of North Macedonia.

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