

New Locality of Distribution of *Berteroa mutabilis* (Vent.) DC., (*Brassicaceae*) in Republic of North Macedonia

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Abstract: Genus *Berteroa* DC (*Brassicaceae*) in North Macedonia is represented with 4 species: *Berteroa obliqua* (Sibth. Et Sm.) DC, *Berteroa mutabilis* (Vent.) DC, *Berteroa orbiculata* DC and *Berteroa incana* (L.) DC. From the current knowledge of flora in North Macedonia, *Berteroa mutabilis* (Vent.) DC., Reg. Veg. Syst. Nat. 2: 292 (1821) is presented near Skopje, in the village of Radusa, in Debar - village Baniste, in Demir Hisar-village Graiste, in Galičica [5, 7, 8, 11]. It is pointed out that is presented and in Resen-village Stenje, Ohrid - above Studeniste and village Ramne [5, 9, 10, 11]. During the research of *Berteroa mutabilis* (Vent.) DC., in North Macedonia, another new locality, was recognized which represents a new record of distribution of this species in the flora of Macedonia. Examine specimens: in the belt of hilly grasslands in the Dry Mountain: 643 m, 41° 46' N, 20° 53' E, 21 August 2019, Haziri, A.

Keywords: *Brassicaceae*, *Berteroa mutabilis*, new locality, Republic of North Macedonia

1. Introduction

The family *Brassicaceae* includes 375 genera and 3200 species according to Willis. Most of them cosmopolitan. It is distributed all over the world but mainly confined to the Mediterranean region and north temperature regions. Characterized by flowers actinomorphic rarely zygomorphic, hermaphrodite; sepals four in two whorls of two each, petals four, diagonally arranged-cruciform; stamens six, tetradynamous; gynoecium bicarpellary, syncarpous, parietal placentation, bilocular due to the formation of flase septum (replum); fruit siliqua or silicula. About 344 species are found in the Balkan flora, of which 39 are endemic plants. One of the genus of this family is and *Berteroa* DC., which in the flora of North Macedonia is represented with 4 species: *Berteroa obliqua* (Sibth. Et Sm.) DC, *Berteroa mutabilis* (Vent.) DC, *Berteroa orbiculata* DC and *Berteroa incana* (L.) DC. From the current knowledge of flora in North Macedonia, *Berteroa mutabilis* (Vent.) DC., Reg. Veg. Syst. Nat. 2: 292 (1821) is presented near Skopje, in the village of Radusa, in Debar-village Baniste, in Demir Hisar – village Graiste, in Galičica [5, 7, 8, 12]. It is pointed out that is presented and in Resen-village Stenje, Ohrid-above Studeniste and village Ramne [5, 9, 10, 11].

2. Material and Methods

For the realization of this study are applied standard methods for floristic research. Such studies involve the identification of individual species and also the assessment of abundance of species. The techniques applied are known as floristic methods of description. Specimens of these species are deposited in the Department of Biology, University of Tetova.

3. Results and Discussion

During the research of *Berteroa mutabilis* (Vent.) DC., in Macedonia, except the confirmation of known localities, another new locality, was recognized which represents a new record of distribution of this species in the flora of Macedonia. Examine specimens: in the belt of hilly grasslands in the Dry Mountain: 643 m, 41° 46' N, 20° 53' E, 21 August 2019, Haziri, A. *Berteroa mutabilis* (Vent.) DC., is a biennial to perennial plant, 20-50 cm high, with vertical stem. Leaves are 12 - 15 mm long, up to 2 mm wide, lanceolate, have a pointed or blunt tip and no stalk. They are covered in fine hairs that give them a grayish green color. Attachment is alternate. Young plants also have a basal rosette of leaves that typically wither away by flowering time. Stems are densely hairy, single or multiple from the base, usually branching. Flower rounded cluster 3 to 5 cm across at the end of branching stems near the top of the plant. Individual flowers are 4 to 6 mm across and have 4 white petals that are deeply notched to look like 8. There are 6 thick yellowish green stamens in the center. The branching stems elongate as the plant matures, with fruit forming below and flowers just opened at the tip of the stem. Fruit are 6-8 (12) mm long, up to 3-5 mm wide, elliptical, with the stub of a style at the top. They run along the length of the elongated branching stems. Flowering July-November [2, 3, 4, 6]. Specimens of this species are deposited in the Herbarium of the Department of Biology, University of Tetova.



Figure 1: *Berteroa mutabilis* (Vent.) DC (foto by Haziri, 2019).

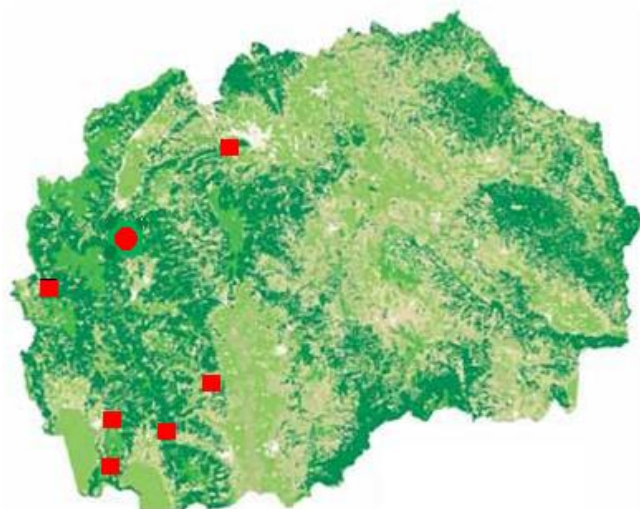


Figure 2: Distribution of *Berteroa mutabilis* (Vent.) in North Macedonia: distribution of known localities (■) and new locality in the belt of hilly grasslands in the Dry Mountain (●).

4. Conclusions

Based on what was said above, we can conclude that:

- 1) Genus *Berteroa* DC (*Brassicaceae*) in North Macedonia is represented with 4 species: *Berteroa obliqua* (Sibth. Et Sm.) DC, *Berteroa mutabilis* (Vent.) DC, *Berteroa orbiculata* DC and *Berteroa incana* (L.) DC.
- 2) From the current knowledge of flora in North Macedonia, *Berteroa mutabilis* (Vent.) DC., Reg. Veg. Syst. Nat. 2: 292 (1821) is presented near Skopje, in the village of Radusa, in Debar-village Baniste, in Demir Hisar – village Graiste, in Galičica [5, 7, 8, 12]. It is pointed out that is presented and in Resen-village Stenje, Ohrid - above Studeniste and village Ramne [1, 9, 10, 11].

New locality in the belt of hilly grasslands in the Dry Mountain (643 m, 41° 46' N, 20° 53' E, 21 August 2019, Haziri, A.) represents a new record of distribution of this species in the flora of North Macedonia. Main text paragraph.

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