

NEW LOCALITY OF SPECIES *ROSA PIMPINELLIFOLIA* L., IN NORTH MACEDONIA

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Abstract

New locality of *Rosa pimpinellifolia* L., (Rosaceae) was found during field research in August 2020. Even after many years of effort and research, *Rosa pimpinellifolia* L. was found for the first time in mountain ridge located in Jellak- North Macedonia, specifically in the place known as “Maja e zezë – (Black Peak)”, which is located approximately 2000 m above sea level. Until now, it is found in other seven locations in North Macedonia. Taxonomic identification of *Rosa pimpinellifolia* L fits in the Macedonian Flora specter. New distribution locality and brief morphological descriptions of the *Rosa pimpinifolia* were provided together with the conservation and status issues. Further field research is needed to confirm the spread of *Rosa pimpinellifolia* L. across Sharr Mountain.

Keywords: Sharr Mountain, New locality, *Rosa pimpinellifolia*

1. Introduction

The species of the family Rosaceae (roses) are represented by about 120 genera and over 3000 species, widespread mainly in areas with medium and subtropical climates of the northern hemisphere. Most of them (cosmopolitan plants), are spread all over the world in form of herbaceous plants or trees and shrubs, while liana forms are rarer.

Species of genus *Rosa* (rose) grows as shrubs, usually prickly. They have actinomorphic bisexual flowers, with a perianth consisting of 5 sepals and petals, while the number of fringes and carpels is large. Carpels, with one fertile ovule, where each of them forms one fruit (monocarp), with a single seed, and all together compose a compound fruit. The flower bed is raised or deepened.

The plant species "*Rosa pimpinellifolia*" belongs to the family of plants Rosaceae or roses.

Characteristics:

Small shrub 10 - 50 cm, rarely 1 m. Stems form dense clumps, numerous thorns, straight, uneven.

Leaflets 5 - 11, small, nearly round or elliptical wide, usually with simple teeth.

Lonely flowers. Narrow laryngeal sepals, full, firm on fruit. Petals pale yellow - white, rarely pale pink.

Spherical fruit, Black.

Flowering: V-VI.

It grows in dry places with stones and rocks.

2. Material and methods

Study area - The Sharr Mountain massif lies in the northwestern part of the Republic of North Macedonia and is part of the Pollog region, respectively constitutes its western part. [Map no. 1].



Map 1. Locality of Sharr Mountain in North Macedonia

Sharr Mountain is the largest mountain massif in North Macedonia and lies in the following geographical coordinates: between $42^{\circ}16'34''$ and $42^{\circ}41'43''$ north latitude, as well as between $20^{\circ}34'51''$ and $20^{\circ}16'00''$. Unlike other mountains of the Balkan Peninsula that have a northwest-southeast extension, the Sharr Mountain massif has a northeast-southwest extension. This mountain massif extends to a length of 80 km and a width of 10-20 km. The average height of the slope is 2200 m.[1]

3. Geological aspects of the researched region

Geological construction of Sharr Mountain is consisted from rocks of different composition and age. The Paleolithic rocks are more widespread, followed by marble carbonate rocks and serpentines as well as diabase formations, Neogene lake sediments and river alluvium in the lower parts as the newest geological formation. Geological aspects of the researched region Geologically (Menkovic 1978), the Sharr Mountain is composed of limestone, but there are also limestone and magmatic rocks.

Chromium ore is closely related to the igneous rocks on Sharr Mountain, while in Bistra the iron ore is closely related. From non-metals there are large layers of gypsum and layers of quality marble near Gostivar.

In terms of geological composition, mainly Paleozoic breeds with large amounts of lime and dolomites dominate. Bistra Mountain from the geological aspect is composed of old Paleozoic rocks and also presents glacial reliefs, especially cirques.[2]

4. Climatic conditions

The geographical position of the Sharr Mountain massif in the northwestern part of North Macedonia, the dominance of the mountainous relief and the approximately meridional direction of its fragmentation, have determined two climatic types in the Sharr Mountain: the middle continental climate and the mountainous climate. This mountain massif is located in the latitude of the northern hemisphere. The proximity to the Adriatic Sea makes the Sharr Mountain massif to be under the climatic influence of this sea.

The cold continental middle climate reigns in the areas of the massif with an altitude of 550-1,000 meters, while in the areas with an altitude of more than 1,000 meters the mountainous climate reigns and in the areas with an altitude of more than 1,700 meters the harsh mountain climate reigns.

The mountain climate is characteristic for mountains above 1000 m above sea level. It is distinguished by long and cold winters, with snowfall and by short and cool summers. Spring here is colder than autumn, this climate is more represented by others, as most of the explored region presents high mountain terrains.

Climatic characteristics are quite well expressed in the daily, monthly, seasonal and annual performance of its elements, regarding the obstacle that this mountain massif makes to the humid western air masses coming from the Adriatic Sea. The data for the climatic elements of this mountain massif were taken from the hydrometeorological station of Kodra e Diellit, for the observation period 1961-1990. Kodra e Diellit as a winter tourist center on Sharr Mountain is located at an altitude of 1,750 m.[3]

5. Results and discussions

From the literature used, "Flora of Macedonia", Kiril Micevski, it is emphasized that the species "*Rosa pimpinellifolia*" grows in some mountains of North Macedonia but not in Sharr Mountain.[4] During our several years of scientific research (2013-2021) of the flora of Sharr Mountain in more than localities, the plant species "*Rosa pimpinellifolia*" [photo. 1.] was found only in the locality Maja e zezë - Jellak.



Fig 1. *Rosa pimpinellifolia* (Foto. N. Abdii)

6. Conclusion

From our several years of scientific research of the flora of Sharr Mountain, we can conclude that "*Rosa pimpinellifolia*" is found only in one locality in Sharr Mountain on the road to Maja e Zezë - Jellak. Our participation in scientific symposia as well as in scientific debates for the proclamation of Sharr Mountain national park will affect the plant species "*Rosa pimpinellifolia*" as a rare and endangered plant will be preserved in the flora of Sharr Mountain.

Summary

In the publications of local and foreign authors, the number of taxa described in the flora of t Sharr Mountain reaches up to 600 while during this scientific research the total number of plant species reaches up to about 1000. Analyzing and comparing our current material with that known to date for Sharr Mountain is observed a large number of rare and endangered plants of which is also "*Rosa pimpinellifolia*".

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