

FUNGI OF THE SARNIA SKAŁA MASSIF IN THE TATRA MOUNTAINS (POLAND)

ANNA RONIQUIER

Abstract. This study is a detailed assessment of the diversity of agaricoid, boletoid, cyphelloid and cantharelloid fungi on the Sarnia Skała massif (Tatra National Park, S Poland), a small calcareous mountain harboring lower montane beech forest, upper montane spruce-dominated forest, and a small area of subalpine dwarf mountain pine community. This investigation, the first comprehensive mycological study in the Tatra Mts, is based on repeated surveys of the whole study area and detailed observations in 12 permanent plots (four in each vegetation belt) through six vegetation periods (1999–2004). In total, 297 taxa were recorded in the study area, 115 (39%) of which have not been reported from the Tatra Mts before. Distribution maps and altitudinal range diagrams are given for all species in the study area, their known distribution in the Tatra Mts is briefly summarized, and 172 species rare in Poland are described in detail and their micromorphological features are illustrated. Also in the permanent plots, mycocoenological observations were made in order to distinguish groups of species locally characteristic of the typical plant associations occurring in the lower montane, upper montane and subalpine belts; 42 species were recognized as characteristic of lower montane beech forest, 8 of upper montane spruce forest, and 11 of dwarf mountain pine shrubland. A general biogeographical analysis of species recorded on the Sarnia Skała massif revealed a relatively large group of 92 fungi representing the boreal-mountain element, associated with mountain areas and boreal forests and significantly contributing to the specificity of the fungi of mountain regions. A comparison of the study area's fungal diversity with that of other mycologically investigated mountain ranges in the Alps and the Carpathians showed that the study site was most similar to the Swiss National Park and Berchtesgaden National Park. This comparison demonstrates that the diversity and species composition of fungi on the Sarnia Skała massif is typical for high-mountain calcareous areas.

Key words: Agaricales, Boletales, Cantharellales, Russulales, diversity, boreal-mountain element, distribution, mycocoenology, *Dentario glandulosae-Fagetum*, *Polysticho-Piceetum*, *Pinetum mugo carpaticum*, Tatra National Park, Poland

Anna Ronikier, Department of Mycology, W. Szafer Institute of Botany, Polish Academy of Sciences, Lubicz 46, 31-512 Kraków, Poland; e-mail: a.ronikier@botany.pl

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