

The Vasile Vicol Carabidae (Coleoptera) Collection at the Zoological Museum of Babeş-Bolyai University

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Abstract: The Carabidae (Coleoptera) collection established by Professor Vasile Vicol and preserved at the Zoological Museum of Babeş-Bolyai University represents a comprehensive faunistic archive for ground beetles in Romania. Comprising 1,392 specimens belonging to 120 taxa, the collection provides valuable information on the diversity and distribution of Romanian Carabidae, with a particular emphasis on Transylvania. High specimen richness is documented in the counties of Mureş, Sălaj, Cluj, and Sibiu, with the locality of Panic (Sălaj) being especially well represented. The material also includes taxa obtained through specimen exchanges, adding rare and exotic species from several European countries as well as material from Japan.

Professor Vasile Vicol (1933–2010), a graduate of Babeş-Bolyai University, dedicated his career to teaching biology and geography in Mureş County while cultivating a lifelong passion for entomology. A founding member of the Romanian Lepidopterological Society (1990), he actively contributed to national entomological research and events. His collections remain an important scientific legacy for the study and conservation of Romanian biodiversity.

The chronological span of the collection (1955–1998) reflects two major periods of intensified field activity, coinciding with a broader wave of faunistic exploration in Romania. Several emblematic species of the genus *Carabus* (*C. hampei*, *C. variolosus*, *C. gigas*, *C. coriaceus banaticus*) are included, along with rare or regionally endemic taxa. The digitization process also revealed taxonomic inaccuracies, such as misidentifications between *Carabus hungaricus* and *C. glabratus*, which were corrected through detailed morphological analysis.

Digitized datasets enable the reconstruction of past species distributions, identification of population trends, and improved understanding of habitat requirements. Moreover, integration into global platforms such as GBIF ensures the accessibility of this information and facilitates its use in conservation planning.

This case study highlights the importance of legacy entomological collections not only for taxonomy and biogeography but also as a foundation for evidence-based biodiversity conservation. Preserving and valorizing such collections helps bridge historical data with present-day ecological and conservation challenges.

Keywords: Carabidae, entomological collections, taxonomy, digitization, GBIF, biodiversity, Romania.

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