

Summary

This PhD thesis contains a checklist of the 53 species of potter wasps (subfamily Eumeninae) recorded to date in Poland, together with identification keys for the subfamilies, genera and species occurring in this country. The supraspecific taxa have been diagnosed, and each species is described in detail. Data are provided on the distribution of all the Polish species, and an attempt has been made to update and systematize knowledge of the biology of Eumeninae.

This research was based on collections from museums and other scientific institutions: the Museum and Institute of Zoology of the Polish Academy of Sciences (Warsaw), the Natural History Museum of the University of Wrocław, the Natural History Museum of the University of Łódź, the Upper Silesian Museum (Bytom), the Museum of Silesian Opole, the Institute of Animal Evolution and Systematics of the Polish Academy of Sciences (Kraków) and the Jan Kochanowski University (Kielce). Accessible private collections and materials from the author's own field research were also delved into. Where voucher specimens from Poland were not available for comparative purposes, relevant specimens from other European countries were examined (in collections at the Upper Silesian Museum (Bytom) and the Institute of Zoology of the Russian Academy of Sciences (St. Petersburg)). The potter wasps were identified under a Nikon SMZ 1000 stereomicroscope. To produce the drawings, the insects were photographed using a camera synchronized with a Nikon SMZ 1500 microscope. The identification keys were based on morphological characters and illustrated with the author's own original drawings produced with the aid of CorelDRAW X5. The distribution data were mapped on the UTM (Universal Transverse Mercator) 10 x 10 km grid.

A total of 11 266 specimens of Eumeninae from Poland were identified and analysed, as were a further 1474 specimens from 19 other European countries for comparative purposes. Based on the available data, the species recorded in Poland were assigned to 10 zoogeographical units in accordance with Mazur's (2001) approach. The seasonal occurrence dynamics of potter wasps was analysed and their frequency defined in order to highlight species that are extremely rare in Poland. The distributions of potter wasps in the country's zoogeographical regions were also analysed and compared with the relevant fauna from neighbouring countries. The account of each species contains a list of synonyms with references to the literature concerning Poland, a detailed description of both the male and female, taxonomic comments facilitating its identification, a phenology chart, data on its worldwide distribution and aspects of its biology, such as preferred habitats, nesting sites, flower species visited, larval food, parasites/parasitoids and flight period. The distributional data for each species in Poland are given in the text in catalogue form. The species distributions are illustrated on the basis of the maps of the zoogeographical regions of Poland taken from the Catalogue of Polish Fauna (Burakowski et al. 1978).

Four species have been recorded in Poland for the first time – *Microdynerus longicollis* F. Morawitz, 1895, *Stenodynerus bluethgeni* van der Vecht, 1971, *Stenodynerus clypeopictus* (Kostylev, 1940), *Stenodynerus picticrus* (Thomson, 1874). In addition, *Allodynerus rossii* (Lepelletier, 1841) has been rediscovered after an interval of more than 90 years. The presence in Poland of *Ancistrocerus auctus* (Fabricius, 1793) and *Eumenes pomiformis* (Fabricius, 1781) is regarded as doubtful: all the relevant data are from the literature, and no voucher specimens are obtainable from either collections or current studies. This research has confirmed that the following three species, earlier erroneously recorded as occurring in Poland, do not in fact occur in the country: *Microdynerus nugdunensis* (Saussure, 1856), *Stenodynerus punctifrons* (Thomson, 1874) and *Symmorphus fuscipes* Herrich-Schaeffer, 1838.