The occurrence of Tenebrionidae (Coleoptera) in Poland based on the largest national museum collections

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Abstract: The paper presents the results of a study on the tenebroid beetles (more than 10,500 specimens belonging to 78 species) collected in Poland and preserved in the following national zoological collections: Institute of Systematics and Evolution of Animals PAS, Cracow (ISEA), Museum and Institute of Zoology PAS, Warsaw (MIZ) and Upper Silesian Museum, Bytom (USMB). The occurrence of 14 rarely recorded species is confirmed. The presence of 14 studied species on the “Polish Red List of Endangered Animals” and “Polish Red Data Book of Animals” is recorded. The common species, *Isomira murina* (L.), as a senior synonym of *I. semiflava* (KÜST.), should be excluded from the “Polish Red List of Endangered Animals”. Two species should be excluded from Polish fauna because of an erroneous determination: *Pedi-nus helopioides* AHR. as *Crypticus quisquilius* (L.), and *Isomira ictropa* (KÜST.) as *Isomira murina* (L.). New distributional data on the occurrence on Catalogus faunae Poloniae regions is given for 44 species. *Centorus elongatus* (HERBST), *Cryphaeus cornutus* (FISH.) and *Nalassus convexus* (COM.) are recorded from Poland, but not included in Polish fauna.

Key words: Coleoptera, Tenebrionidae, new records, faunistic data, Poland, museum collections.

INTRODUCTION

Nearly 25 years ago, in Volume 14 of the „Catalogus Faunae Poloniae” (KFP) (BURAKOWSKI et al. 1987), a study on 20 families belonging to the superfamily of Cucujoidea, as defined at that time, was published. The work included, among others, taxa discussed in this paper. According to the previously developed outline, it contained data on taxonomy, distribution, bibliography, and on biology of species which were accounted in literature to the fauna of Poland in its present geographical borders.

The authors of KFP based on the taxonomic system, which was later modified (BOUCHARD et al. 2005). For this reason, the Tenebrionidae family, as interpreted presently, comprises of three taxa treated in the catalogs of 1987 as separate families: Tenebrionidae (58 taxonomic names with catalog numbers) Lagriidae (2) and Alleculidae (22). The number of names is not equal to the number of species as some of them were later
Scope and applicability of information stored in natural history collections – a case study based on the largest museum collections of Tenebrionidae (Coleoptera) in Poland

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Abstract: Collections of specimens in museums of natural history constitute very rich sources of information, containing data that can be analyzed in many ways and answer various types of questions. The aim of this article was to analyze the data content of three big collections of specimens of darkling beetles (Coleoptera, Tenebrionidae) and to show possible uses of different types of analysis with a specific focus to GIS-based methods. The source material was analyzed with regard to collections, species and collecting persons, using a number of aspects, both as summaries and spatial distribution analyses, such as counts of records, species, specimen localities, UTM squares, collection dates.

Key words: Coleoptera, Tenebrionidae, specimen labels, natural history collections, faunistics, spatial analysis, UTM squares, Poland

INTRODUCTION

Museums of natural history contain rich sources of biological data, providing material for several fields of scientific research, mostly connected with taxonomy, biogeography, and phylogeny. This is due to the very character of objects that they hold. Specimens of organisms, collected, preserved and deposited in a museum, are physical evidence of the reality of times when they were collected. If a collection is big enough, one can analyze various aspects of information it contains. It is possible under one condition: specimens themselves have to be well documented. The quality and detail level of data given on labels, concerning collecting events, determine feasibility of most of the possible future analyses connected with particular specimens.

Recently, during the last 10 years, the information content stored in museum collections has been given much more attention from science than ever before. We can observe a kind of renaissance of natural history collections, linked with and actually catalyzed by current progress in information technologies. It is so called biodiversity informatics that has increased interest of many scientists in museum collections and caused a change of their perception (SOBERÓN & PETERSON 2004, JOHNSON 2007). This is less and less the old-fashioned, traditional, almost non-scientific field of biological sciences; the modern approach has made it possible to understand multifaceted and