Oribatid mites (Acari, Oribatida) of plain area of the Southern European Russia

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Abstract

The paper is devoted to the fauna of oribatid mites (Acari: Oribatida) mostly of a plain area of the Southern European Russia. The most updated taxonomic list of oribatid mite taxa compiled from the original authors’ data collected after sampling soil, nests and plumage of birds, as well as published sources is presented. It includes 256 species of oribatid mites belonging to 72 families. Twenty species and one family of oribatid mites are recorded for the first time at the research territory. The abundance of mites in the soil is also provided for selected species.

Key words: Oribatida, checklist, south of European Russia, plain area, soil, birds’ plumage, nests

Introduction

According to recent data, the world fauna of oribatid mites (Acari: Oribatida) accounts for 10.087 species and subspecies (Subías 2012), and every year it is significantly expanded due to extensive research in many countries. The highest number of species is known from the Palaearctic region: this also reflects the intensity of investigations carried out in the area (Schatz 2004). However, faunistic studies here are important since oribatid mite community species composition in vast areas is still poorly understood. Local faunistic lists of oribatid mites need to be clarified as the invertebrate fauna varies due to climatic changes and human activities.

Data on the distribution of oribatid mite species of the Southern European Russia, except for the Caucasus, are included into this publication. We included the following administrative regions of Russia into this study: Rostov Oblast (as the most thoroughly studied), Republic of Kalmykia, Astrakhan Oblast, Krasnodar Province, Volgograd Oblast and Stavropol Province. The territory, which we describe in this publication, covers mainly the plain areas of the South of European Russia and it is occupied by steppe landscapes. We have also added to the list our own data for Republic of Adygea, which were not included into previous reviews for this territory (Karppinen & Poltavskaya 1990; Krivolutsky et al. 1995; Shtanchaeva & Subías 2010).

We compiled our own original and unpublished data for this area with all publications on oribatid mites of this region known to us. The present paper includes data from the PhD thesis of M.P. Poltavskaya (1989a), which are published for the first time.

Initially only selective sampling of oribatid mites from soil of fields in the Rostov Area was conducted. The material was identified personally by D.A. Krivolutsky (Krivolutsky & Kazadaev 1976; Kazadaev & Ponomarenko 1979). As even a small volume of material revealed new for the Russian fauna taxa oribatid mites, the studies on oribatid mites in the agricultural fields, and particularly of virgin steppe seem to be very promising. Subsequent studies on the fauna of oribatid mites in the steppes have been carried out by M.P. Poltavskaya since 1974 (Poltavskaya & Kazadaev 1980; Poltavskaya 1984, 1987, 1989a, 1989b, 1994, 2003; Karppinen et al. 1986; Poltavskaya & Gordeeva 1987; Karppinen & Poltavskaya 1990). Recently N.V. Lebedeva and D.A. Krivolutsky conducted a study of oribatid mites in ornithogenic substrates (nests and plumage of birds) in relation with research