

# The Ladybird Beetles (Coleoptera, Coccinellidae) of Moscow Province

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**Abstract**—Data on the fauna and ecology of the ladybird beetles (Coleoptera, Coccinellidae) of Moscow Province are summarized. In total, 60 species of 29 genera are recorded for this region. The paper is provided with 30 original color photographs of 29 species representing all the genera known from Moscow Province.

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As our long experience shows, the fauna of many groups of insects, including ladybird beetles, has been incompletely studied in Moscow Province. Our paper continues the series of publications with results of the investigation of the beetles of Moscow Province which was started by Dwigubsky (1802) and is still being continued (Nikitsky et al., 2013; Troshkova et al., 2015; Troshkov and Nikitsky, 2015).

## MATERIALS AND METHODS

Our target investigation of the coleopterous fauna of Moscow Province started in the 1960th and has become especially intensive since 1993. In the present study, in addition to the authors' collections other material was used, first of all, the specimens deposited in the Zoological Museum of M.V. Lomonosov Moscow State University (ZMMU) (including a part of N.N. Filippov's collection of ladybirds; the other part of the collection being deposited in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (ZIN)), in Moscow Pedagogical State University (MPSU), and also material from various private collections which have been made since the second half of the XIX century.

The nomenclature and data on the distribution of ladybirds are mainly based on the latest edition of the Palaearctic catalogue (Kovář, 2007) and, for some species, according to S.M. Iablokoff-Khnzorian (1983). The collection information and also some literature data (for example, Ukrainsky and Shapovalov, 2010) were used in certain cases, especially in relation

to the territory of the Northern Caucasus (referred to as "the Caucasus" in the paper), which was not separated in the Palaearctic catalogue from the south of the European territory of Russia.

For each species, the publications in which it was recorded for Moscow Province are cited. Labels are not listed for the species very widely distributed in the territory of Moscow Province. The Transcaucasia is accepted here within the traditional borders: including Georgia, Armenia, Azerbaijan, and the Black Sea part of Krasnodar Territory.

Photographs of all the ladybird species are of the same size.

## Annotated List of the Species

Family **COCCINELLIDAE** Latreille,  
1807—Ladybirds

These are usually small or rather small (in the European part of Russia, up to 10 mm long), but occasionally rather large beetles (the body length varies from 0.8 to 28 mm) (Ślipiński and Tomaszevska, 2010) frequently with bright coloration warning of their inedibility. The majority of ladybirds are predators; many species are widely known as effective entomophages on aphids (Aphididae), psyllids (Psylloidea), whiteflies (Aleurodidae), bark lice (Coccoidea), scales (Diaspididae), and mites (Acarina). Mycetophagous and phytophagous habits also occur. The insects overwinter at the adult stage. The world fauna of ladybirds comprises about 360 genera and 6000 species (Ślipiński and Tomaszevska, 2010); a little more than 160 species are known in Russia (Ukrainsky, 2007a, 2007b).

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