

T. N. Doszhanov: Mukhi-krovososki (Diptera, Hippoboscidae) Kazakhstana. (Louse-flies of Kazakhstan). Publ. House Nauka, Alma-Ata 1980, 208 pp., 49 Figs, 2 Tables. Price 2.30 R.

Although louse-flies constitute an important group of ectoparasites of birds and mammals, they started to be systematically studied in the Soviet Union as late as the 1960-ies primarily due to the author of this publication which represents the first monograph in the USSR dealing with this family from many aspects. As an introduction to the book the history of Hippoboscidae research in the territory of the USSR is related in the first chapter. The second chapter is devoted to morphology and anatomy, the subsequent one to systematics and classification. The fourth chapter deals with the research methods used. Over 500,000 avian hosts examined, from which over 50,000 hippoboscids were collected and 3,300 specimens obtained from wild mammals are evidence of the extensive studies carried out. The largest section of the book, covering over 100 pages, contains an ecological-faunistic survey of hippoboscids of Kazakhstan. A total of 32 species from 10 genera are listed, *Melophagus grunini* and *M. dyspnoetus* are described as species new for science. The section also includes diagnoses and keys to different taxons. Type-species, morphological characteristics and species spectrum are mentioned with genera, while the material studied, morphology, distribution, hosts, season of parasitism and biology are stated with species. The accompanying figures depict the most important morphological characters and distribution of hippoboscids in Kazakhstan. The sixth chapter is concerned with known hosts of hippoboscids and mentions findings of particular species on the representatives of 14 avian and 3 mammalian orders from the USSR territory, including Kazakhstan. The subsequent chapter discusses the morphophysiological adaptations of hippoboscids and their specificity. The author distinguishes closely and widely specific species in avian

hipoboscids, and gives examples of monogenic, monofamilial and polyordinal specificity with the latter group. In mammalian hippoboscids he distinguishes mono-, steno- and polyxenous species. The eighth chapter covers geographic distribution of avian hippoboscids in the USSR. They may be divided into four groups: the accidentally introduced species from the tropics of Asia and Africa; the regularly brought-in tropical species; the species widespread in the moderate zone of the Palearctic and in the tropics of the old world; finally, the species of northern regions. All mammalian hippoboscids of the Soviet Union are of Palearctic origin. The last chapter is devoted to the harmfulness of different representatives of hippoboscids, mainly the species *Melophagus ovinus*, *Hippobosca equina* and *Lipoptena cervi*. At the end of the book there is a 9-page conclusion followed by a list of references used.

Unfortunately the text includes some errors. Throughout the author uses the names *Icosta ardea* and *I. schoutedeni* instead of the correct *ardeae* and *schoutedeni*. *Melophagus montanus* is indicated as sp.n., but it should be stat.n., as it means the promotion of the known subspecies to species.

As a whole, the monograph of T. N. Doszhanov may be highly evaluated. As mentioned above, it is the first comprehensive treatise of Hippoboscidae in the Soviet literature, which will undoubtedly give an impetus to further research. It contains data and materials relating not only to Kazakhstan and the Soviet Union, as some problems are presented from a global aspect. Medical entomologists and dipterologists are thus provided with a valuable and important publication which exceeds the boundaries of the territory indicated in its title.

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