

A. M. Dubitsky: Biologicheskiye metody borby s gnusom v SSSR. (Biological Control of Bloodsucking flies in the USSR). *Publ. House Nauka, Alma-Ata 1978, 267 pp., 44 Figs. Price 3.60 R.*

This publication simultaneously represents directions for work and a survey of results obtained in the studies of biological factors reducing bloodsucking Diptera, summed up under the Russian concept "gnus", by a scientific team of the Institute of Zoology, the Kazakh SSR Academy of Sciences. Following a short introductory review the author gives detailed directions for seeking out and determining biological regulators and diseases of mosquitoes, blackflies and horseflies. He describes common infectious and invasive diseases afflicting bloodsucking Diptera, and their predators out of insects and fishes, with special regard to his own findings in the USSR. In a separate chapter on biopathogenic regulation he deals with the influence of blue-green and green algae, zoogaea, antibiotics and mosquito metabolites upon populations of mosquitoes. He presents different methods for evaluation of effectiveness of natural regulators and gives directions for collecting, preservation and new use of promising pathogens and predators in the control of mosquitoes, blackflies and horseflies. Finally the author de-

fines the group of Diptera representing "gnus" discusses the occurrence of their outbreaks in the USSR and the possibilities of biological interference.

In its concept and presented data the treatise is original and very stimulating, contains a long list of bibliography (274 references) and is based on the rich experience of the author who is a prominent specialist in taxonomy and ecology of mosquitoes. Territorially the data cover vast regions of Central Asia, from where no records have been available previously. Included are also descriptions of organisms which have originally appeared in bulletins of the Institute, but these are only mimeographed editions and this fact makes the reviewed book the first valid publication of the descriptions. Although some primary information will yet require confirmation, the whole treatise is an important contribution to the evaluation of biological factors in the control of mosquitoes, blackflies and horseflies in the USSR and to the biological control of vectors of human diseases in general.

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