

BOOK REVIEW

ADLER P.H., CURRIE D.C. & WOOD D.M.: THE BLACK FLIES (SIMULIIDAE) OF NORTH AMERICA. With a foreword by D.H. Jansen and illustrations by R.M. Idema & L.W. Zettler. Comstock Publishing Press, Ithaca & London in association with the Royal Ontario Museum. ROM publication in science, 2004, xv + 1999 pp., 255 distribution maps, 888 line drawings, 97 black-and-white photos and 24 page color folio. ISBN 0-8014-2498-4. Price USD 99.95, GBP 57.95.

This excellent monograph covers the territory of the United States, Canada and Greenland. The book is divided into 4 parts and 10 chapters.

The first part contains three chapters: 1) An "Overview", 2) "History of research" which is a very well written history of the study of black flies in the Nearctic region that mentions all the important researchers from the 18th to the present century, with photographs of almost all prominent simuliidologists, 3) "Techniques for collection, preparation, and curation", in which methods of collection, rearing, sampling, trapping and those necessary for studying black-flies, including cytotaxonomy, are briefly mentioned.

The second part is devoted to biology. Chapter 4, "Structure and function", deals in detail with the morphology of all developmental stages, knowledge which is necessary for using the identification keys. Chapter 5, "Cytology", is very useful not only for studying sibling species but also because such information is missing from all contemporary monographs on smuliid systematics. The sixth chapter, "Behavior and ecology", describes in detail all aspects of the subject – biotopes, behaviour, autogeny, natural enemies (predators, parasites, pathogens) of American species.

Part 3 entitled "Economical aspects" is made up of two chapters: "Social and economical impact" and "Management". Black flies present a very serious economical problem, especially in Canada and Alaska. The first chapter lists the most important species and mentions all the diseases transmitted by black flies. Chapter 8, "Management", is an overview of the history of con-

trol. Attention is given to only one biocontrol agent – *Bacillus thuringiensis israelensis*, which is commonly used. This chapter concludes with information on repellents.

Part 4, "Systematic and taxonomy" is the main part of the book. Chapter 9, "Phylogeny and classification of Holarctic black flies", discusses mainly the higher classification. The presented generic classification is close to that of Croskey. The tenth chapter, "Synoptic list, identification keys and taxonomic accounts of North American black flies", contains mostly the keys for identifying larvae (praepupae), pupae and both sexes of adults. The keys are well constructed and there is little need to make microscope slides (contrary to the contemporary monographs on the Palearctic fauna). Part of this chapter, devoted to particular species, contains diagnosis of higher taxonomic units up to the level of subgenus. Under species, there are only literary references to taxonomy, morphology and optional molecular systematics. In addition each entry includes information on habitat, oviposition, development, mating, natural enemies, hosts and economic importance, if known. Almost all the species are documented by illustrations of those morphological parts (whole larvae, pupae, respiratory filaments of pupae, larval hypostomia, head capsules), important for determination. There is also a map of the distribution of each species. The authors should be congratulated on collaborating with such excellent illustrators.

The book concludes with 46 pages of literature and three indexes: "Names of black flies", "Names of organisms other than black flies" and "Subject index". Last two pages give short biographies of the authors and the artists.

The authors have successfully compiled this excellent monograph on an economically important group of bloodsucking flies. Such a work devoted to the Nearctic region was previously missing. The ecological and medical information complements the taxonomy making this book extremely useful for everybody who works in the field of medical entomology.

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