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BOOK REVIEW

LACEY L.: MANUAL OF TECHNIQUES IN INSECT PATHOLOGY. Academic Press, London, 1997, 409 pp., 102 ill., 4 tab. ISBN XX-0-12-432555-6. Price USD 110.00.

In the series "Biological Techniques" Academic Press has published a manual describing techniques used in the five main fields of insect pathology: virology, bacteriology, mycology, protozoology and helminthology. 26 eminent authors give in 17 sections instructions for the isolation, identification and cultivation of insect pathogens and for the bioassay and storage of infective material. They bring together practical details of the techniques used in the specialized laboratories of the authors. In addition at the end of every chapter are excellent descriptions of fixation and staining techniques. Also offered are protocols for testing activity, safety testing of insect pathogens for mammals and nontarget organisms and methods for preparing material for optical and electron microscopy. Procedures are given for fluorescence microscopy and application of molecular techniques. A short list of literature cites recent special publications.

Insect pathology is a complex multidisciplinary subject involving entomologists, ecologists and parasitologists along with specialists working with viruses, bacteria, fungi, protozoa or helminths. In all these fields insect pathogens are excellent models for basic research. Each specialized laboratory needs information on how to work with other groups of pathogens. This publication offers this information for newcomers to the field or specialists in entomology, physiology, immunity research and other specializations where insects and their diseases play an important role. For all these the Manual supplies information on how to investigate diseases in material collected in the field and rear such material in the laboratory. The authors are specialists in different aspects of the evaluation of the interactions between pathogens and insects. Important are the protocols for evaluating the risk for non-target organisms, for perfecting biopesticides for mosquitoes, and for preparing infectious material of viruses, bacteria, fungi and nematodes for field application. Each specialist or practical worker may have his own fast method for detection and handling of insect diseases which may not be identical with the offered practices and which are useful for the beginner. After some practice microbiologists will be able tentatively to identify a BT or BS infection in a dead insect just on the basis of the typical spore-and-crystal arrangement of BT or the localization of endstanding spherical spores on BS rods prior to confirmation by cultivation. Without complicated screening of data on morphology and development research workers will not find it easy to classify microsporidian genera, or types of virus infections by using this Manual and will find the tabulation of the spicules of the main species of Steinernematidae an imperfect guide to their identification. But following the further instructions in this Manual the reader after practical training with field material will be satisfied with their identification skills. Lacking are the standard protocols for the determination of biounit activity of different pathogens and basic statistic schemes of probit analysis used for testing and comparison of materials of different origin or after different storage and application.

This Manual is a useful repository of techniques for laboratory assistants and is useful for all who need to find the methods used in insect pathology and by field workers and program leaders in insect control programs, parasitologists and medical entomologists and for pathologists who need information on the techniques used in related subjects.

J. Weiser