

FRITZSCHE R., GEILER H., SEDLAG U. (EDITORS):
ANGEWANDTE ENTOMOLOGIE.

VEB Gustav Fischer Verlag, Jena, 1968. 778 pp., 239 Figs, XXIII plates, DM 87

This publication is the work of a team of 16 specialists who have presented complicated problems of applied entomology from modern aspects. Chapter 1 is devoted to a brief historical survey of this scientific field. Chapter 2 deals with morphology, anatomy and histology of insects. Chapter 3 contains data about reproduction (sex reproduction, formation of sex cells, sex determination, peculiarities of reproduction, care for offspring), about embryonal development (structure of insect egg, fertilization, cleavage, formation of embryonal leaves and their interrelations), about post-embryonal development (types of metamorphosis, growth and its hormonal regulation), diapause and pheromones. Chapter 4 is devoted to physiology, problems of reception, transport, metabolism and excretion of matter; reception and emanation of energy; excitability and its mechanisms. Chapter 5 gives a survey of the classification of insects in orders, listing some important families. The two subsequent extensive chapters are concerned with ecology. Chapter 6 deals with abiotic factors (light, temperature, water, air, soil), Chapter 7 deals with biotic factors (plants as food, intraspecific relationships, symbiosis with microorganisms, pathology of insects, insects as predators and parasites). Chapter 8 covers biocenology and primarily gradology, course of mass occurrence, its time and space relations, causes and factors of population dynamics. Chapter 9 is devoted to biology and importance of some insect species beneficial to man, such as bees, bumble-bees, silkworm, ants etc. Chapter 10 contains problems on insect pests, such as plant pests, insects as vectors of plant diseases (viroses, bacterioses and mycoses), pests causing damages to supplies and material, and medically important insects.

Chapter 11 deals with measures taken against damages caused by insects. On one hand, they are measures of preventive character, such as perseverance in hygienic principles, cultivation of resistant plant varieties, quarantine supervision, and on the other, they may be direct measures by physical, chemical and biological methods of control. A well organized forecasting service plays an important role here. The closing sections of the chapter are concerned with various methods of control against plant pests, insects causing damages to supplies and medically important insects. The last chapter presents a list of most important text books and manuals. The volume is supplemented with a subject index.

Applied entomology has been recently intensively developed along many lines in a number of research centres. The publication of a book which gives a survey of main problems and basic knowledge on this scientific field is therefore most welcome. The book itself is well organized, the subject matter is perceptibly presented, each exhaustive section even inside separate chapters is completed by a list of most important literature. Tabular surveys are very useful. The illustrations accompanying the text are of high standard, also the photographs on glossy paper are of good quality. The medical entomologist will find here main data on human as well as on domestic animal pests: damages caused, a classification of pests, a systematic survey including most important representatives, and methods of control against medically important insects. It would be desirable that a similar publication dealing with applied acarology might appear, also.

Dr. Vladimír Černý, CSc.