

BOOK REVIEW

DUSBÁBEK F. & BUKVA V. (eds): MODERN ACAROLOGY. Vol. 1, 2. Proceedings of the VIII International Congress of Acarology. Academia, Praha, 1991. ISBN 90-5103-054-1. Price: Vol. 1 CKR 500.00, Vol. 2 CKR 620.00.

The two volumes of *Modern Acarology* comprise some 200 of the papers presented at the eighth International Congress of Acarology held in August 1990. The congress, organized by the Institute of Parasitology, Czechoslovak Academy of Sciences in České Budějovice, attracted much interest with a record number of 317 workers from 45 countries attending.

Just over half of volume 1 is taken up by invited papers. These were given in 10 symposium sessions covering topics at the forefront of acarological interest; the more comprehensive ones are highlighted here.

The single mite contribution to "Pheromonal communication of mites and ticks" reports an investigation into the presence of alarm, aggregation and sex pheromones in 18 species of Astigmata (Kuwahara). Ticks are the subject of the remaining four papers; the role of pheromones in aggregation and mate recognition is considered and new data presented on the structure of palpal pheromone-detectors.

The great interest in finding alternatives to acaricidal tick control is demonstrated in "Host immunoresistance to ticks". Recent advances in vaccine development are reviewed and examples given of natural and induced host immunity to ticks. The Lyme disease symposium includes an hypothesis for the palaeogenesis of the distribution of *Ixodes ricinus* (Filippova), an assessment of the effectiveness of *I. persulcatus* as a vector of *Borrelia burgdorferi* (Korenberg et al.) and the identification of *I. ovatus* and *I. persulcatus* as vectors and feral rodents as possible reservoirs of the pathogen in Japan (Miyamoto et al.). The successful application of sophisticated techniques routinely used to study other groups of animals is particularly evident in "Cell and molecular biology of Acari". They are used, for example, to analyse haemolymph and egg yolk proteins in *Dermacentor variabilis* (Rosell & Coons), to construct a cDNA library to screen for *D. variabilis* vitellogenin (Lamoreaux & Coons) and to determine whether a salivary gland

immunogen is common to several tick genera and the cement they secrete (Jaworski et al.).

"Mites in biological and integrated control of pests in agriculture" provides an excellent overview of this topic. As well as describing the ways in which predatory taxa, particularly the Phytoseiidae, are used in control programmes, papers highlight the basic data still needed before additional predators can be exploited and a wider range of pests targeted.

Studies included in "Environmental acarology" show the influence of human activities on the occurrence of Acari, particularly of ticks. The mites associated with animal and plant products stored by humans receive detailed attention (Žďárková); methods of control are described, literature reviewed and gaps in our knowledge identified.

One symposium is devoted to those ubiquitous and adaptable parasites of humans and animals, *Sarcoptes scabiei* and *Demodex* spp. Problems concerning their taxonomy, epidemiology, treatment, prevention and biology are all addressed.

The remainder of these Proceedings comprise some 150 submitted papers divided between 12 sections. These cover the following broad topics: The biological role of mites in soil; watermites as indicators of environmental pollution; mite pests of plants and stored products; Acari as parasites and vectors of disease organisms; morphology and phylogeny; physiology and biochemistry; genetics and reproduction; ecology, biology and behaviour and biological and chemical control.

The papers have been efficiently edited and the illustrations clearly reproduced. However, I would have preferred to have the micrographs bound with the relevant text rather than in a block at the end of each volume. My only other negative comment concerns the numbers of papers appearing in inappropriate sections. Perhaps the worst instance is that only half of the papers in "Watermites as the indicators of environmental pollution" actually mention environmental pollution.

Together, these two volumes excellently reflect current acarological research and the diversity of papers refute the accusation sometimes levelled that acarology is just an old-fashioned branch of entomology. I have no hesitation in recommending them.

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