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BOOK REVIEW

STORK N.E., ADIS J. & DIDHAM R.K. (eds): CANOPY ARTHROPODS. The Natural History Museum and Chapman & Hall, London, 1997, 567 pp., hardcover. ISBN 0-412-74900-9. Price GBP 85.00.

Canopy arthropod communities have been very attractive to naturalists for many years, but only within the past few decades has the investigation of the canopy been more intensive. This volume brings a wide range of the most recent studies on canopy arthropods.

The publication contains 27 original contributions, which are grouped under five broad topics. These topics include Methods of Studying Arthropods in Trees, Community Structure of Coleoptera Assemblages, Community Structure of Non-Coleopteran Assemblages, The Biology of Canopy Arthropods, and The Management and Conservation of Canopy Arthropods.

The first part includes two review chapters dealing with both fogging and "non-fogging" methods for studying canopy insects. The next two chapters discuss problems with insecticide concentration, kind of carrier oil, drop period, and the survival rate of living arthropods obtained by fogging. A natural pyrethrum from chrysanthemum flowers as a non-killing knockdown agent is recommended.

The second part of the book consists of the chapters dealing with species richness and diversity, sizes of the tree-crown assemblages and distribution patterns of beetle assemblages in various areas (for the first time also from Africa). Similar problems are discussed in the third part, with grasshoppers, flies, ants, oribatid mites, and springtails used as the model groups.

The first chapter from the fourth part informs about the ecology and behavior of the Bornean arboreal dung beetles. A study on the biology of a canopy-dwelling carabid beetle *Colpodes buchanani* Hope is the subject of the next chapter. As indicated, *C. buchanani* is not a typical arboreal beetle, but it uses the canopy as a shelter during the immature period and a state of gonad dormancy. The third chapter deals with bioacoustic monitoring of insects in the Bornean canopy. The last two chapters of this part deal with arthropods associated with epiphytic lichen *Evernia prunastri* L. and with the biology of its feeder – the collembolan species *Entomobrya nivalis* L.

The last part of the book contains chapters about conservation of canopy arthropods. The influences of forest fragmentation, edge effect, different tree specimens, and parts of the same trees on the structure of insect assemblages are pointed out. Some main fields of study on canopy arthropods for the future are briefly discussed in the last chapter.

The majority of these studies were carried out in tropical canopies. Fogging with knockdown insecticides was used as the main collecting method. Although this method is widespread and very popular now, its effectiveness is highly affected by various factors (weather conditions, time of fogging, kind and concentration of the killing agent, selectivity etc.). In addition, fogging is not suitable to study, for example, the diel activity of insects or their host plant range. It is necessary in studying canopy insect communities to combine this method with other ones – light traps, Malaise traps, flight-interception traps, aerial "pitfall" traps, and others. Another serious problem connected with testing complex ecological hypotheses in the tropics is an insufficient knowledge of taxonomy of most insect groups. It is not a defect of some of the papers in this book only, but a general problem of many publications in tropical ecology.

Nevertheless, this book is highly recommended for everyone who is looking for up-to-date information in canopy investigations.

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