

Literature

Watt, A.D., Leather, S.R., Hunter, M.D. & Kidd, N.A.C. (eds.) 1990: Population Dynamics of Forest Insects. — Intercept Ltd. 408 pp. ISBN 946707 28 6. Price GBP 44.95.

For various reasons study of interaction between insects and the plants of the forests is of great, global importance for human society. It should be, for instance, of a more or less direct economic interest for countries exploiting their forests. Which species are pests? When do insect species become pests? Why are they regarded as pests? Answering such questions may be profitable economically but should also lead to better and more widespread understanding of the importance of forest-protection at different levels in the society. Other reasons to support the study of forests, their flora and fauna are that such studies may increase our knowledge of population ecology in general, may help us achieve progress in pest-management, and may increase our knowledge of the biodiversity of different forest types. Finland is a country highly dependent on its forests. Unwise treatment, eg. over-exploitation, would in the long run be a disaster, not only for the Finnish economy but also for the landscape itself. The present book thus deals with questions which are important for Finland now and in the future.

The book under review is based on material from the conference "Population dynamics of forest insects", held in Edinburgh, in September 1989. It is divided into four main sections, and, in all, the book contains 34 different papers. The number of contributors is as high as 57. The book starts with a section (6 papers), dealing with general population studies. The first contribution is a historical review of Pine-feeding insects. This section continues with some papers on aphids and moths and their relationships with different ecological issues. The first section ends with a paper on species-area relationships.

The second main section treats insect-plant interactions (13 papers) discussing such topics as different strategies by which host plants can affect insect abundance. Stressed plants may cause insect outbreaks, and outbreaks may end or their effect be reduced by damage-induced changes in suitability.

The impact of pollution on plants, in reducing the quality of the host plant, may affect insects both positively or negatively.

The third section (8 papers), "Insect-natural enemy interactions", deals with predators, parasites and pathogens of forest insects. Progress in this field helps us to construct successful biological programmes. Comparative studies of pests and non-pests is very useful in these efforts.

The last section, "Population models and pest management" (7 papers), presents some practical examples of modelling. Models can be aimed at examination of the importance of functions such as predation and dispersal or examination of how different factors act alone or interact. Pest-management can profit from this kind of research.

The book's title, "Population Dynamics of Forest Insects" implies that it covers a wide range of different topics. In my opinion it sounds like a textbook for university students and not a compilation of papers dealing predominantly with population ecology of foliage-feeding insects. I would prefer a more exact title, informing the presumptive readers what the book deals with! In general the book seems to be well edited with a concise text and mainly instructive illustrations. Although the conference on which the book is based obviously does not claim to be of global extent, I am surprised of the scarcity of contributors outside the Anglosaxon countries (UK, USA, Canada, Australia, New Zealand). Of 57 contributors only five come from non-Anglosaxon countries. From the Finnish point of view it is interesting to note that four of these are from Finland. The fifth is from Germany.

Finally, with minor hesitation I can recommend this book to those on the university-level interested in insect-plant interactions in forest environments. I stress, however, that the book hardly covers what the title promises and that it is regionally quite limited.

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