

FOREST INSECT PEST AND DISEASE MANAGEMENT IN NORTHWEST HIMALAYAS



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ABOUT THE BOOK

Northwestern part of Himalayan region is having variable climatic conditions, suitable for a variety of flora and fauna. Accordingly, a variety of forest plantations and agroforestry tree species grow in different areas and the few of these are *Abies pindow*, *Cedrus deodara*, *Grewia optiva*, *Picea smithiana*, *Pinus roxburghii*, *Quercus* spp. and *Toona ciliata*. In addition to these indigenous tree species, some exotic fast growing tree species like *Salix* spp. are also introduced into this region for meeting increasing demand of fuel, fodder, timber, and raw material for wood based industries. Insect species which remained innocuous in natural forests stand started multiplying in plantations causing epidemic outbreaks and enormous damage. There are about 1,5000 species of insect pests known to damage forests and forest products in the Indian sub-continent. Problem of termite attack in eucalyptus plantations has become a regular phenomenon, sal forests suffer from invasion of sal borer and *Leucaena psyllids* infestation on subabul has come in the way of large scale planting of these species at national level.

Presently, Himalayan ecosystem faces a serious threat from insect and diseases. In recent years there have been several epidemic of insect and disease causing economic damage to the forest trees in northwestern Himalayas. The important examples are epidemics of *Ectropis deodarae* in deodar forest, *Yponomeuta rorellus* on willow plantations in Ladakh region of Jammu and Kashmir, *Lymantria obfusca* on ban oak in Himachal Pradesh, willow drying in Lahaul and Spiti valley, Khair mortality in Shiwaliks of Himachal Pradesh, Chir pine drying in Himachal Pradesh and mortality of junipers in the higher hills are some of the examples encountered by the state forest department. Although less obvious, there are several other diseases and insect pests problems of serious concern in the Himalayan region. However the information on the insect pest and diseases management is either widely scattered or not available. Keeping these points in view, it become pertinent to bring forest entomologists/forest pathologists and forest managers together for deliberations to share their experience and outline the future course of action. In consonance, Himalayan Forest Research Institute, Shimla organised a two day symposium on "Forest Insect Pest and Disease Management in Himalayas" on 10th and 11th January, 2008, which was attended by renowned forest entomologists, forest pathologists and forest officers of this region.

All these papers were critically reviewed and prepared to cater to the need of forest scientists and forest managers. We hope that both researchers and forest managers in the Himalayan region will find this publication useful.

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