P R E F A C E

Darjeeling foothill represents an agroclimatically unique region. This is the seat of the Terai tea plantation punctuated by forests, crop fields, fallows and is watered by a number of rivulets besides being flanked by the mighty river Teesta in the east and the broad Mechi river in the west. The coexistence of plantation and cash crops along with a fair growth of weeds, a major bulk of which is made up of the evergreen terrestrial fern, constitute a mosaic of characteristic vegetation. Since very little information is available on the fern flora of this region and their associated entomofauna and the nature of insect-fern-crop interaction, a thorough study in these aspects is long due. In order to provide a first hand information on fern entomofauna and bioecology of some of the polyphagous forms, the present investigation has been contemplated. Hopefully, the study would also reveal information on the ecological role that ferns play in insect-crop interaction.

A primary aspect of functional organization of ecosystem involves food-feeder relationship. Thus a knowledge in nutritional ecology of some of these polyphagous pests is essential to understand atleast some organizational area of the ecosystem and functioning of the insect pests within it. Unfortunately, much information on nutritional ecology of such polyphagous

pest that have a broad spectrum of host plants ranging from cryptograms (ferns) to the highest evolved angiosperms is lacking. The present work would furnish some idea on the nutritional requirements of two such lepidopteran and one orthopteran pest, and on the role of nutrients and non-nutrients (including some allelochemicals) influencing their pre-and post feeding performance and fitness. Such a knowledge in future may be utilized in the control programmes of these pests through better management of the ecosystem and if possible, by developing resistant crops differing in nutritive or allelochemic contents.