8: HIGHLIGHTS

Salient features and findings of the study:

1. First report on distribution and frequency of occurrence of five common terrestrial fern species of Darjeeling plain (Terai).

2. Maiden analysis and seasonality study of fern-entomofauna with special emphasis on economically important insects.

3. Comparison of dietary profiles of five common fern species and two angiosperm hosts in light of nutrients and some non-nutrients.

4. Incidence of maximum insect herbivores on a few fern species appear to be functions of higher frequency of occurrence of the hosts matched with their reduced defensive chemicals and higher water content.

5. Unpalatability of hosts appear to be chiefly connected with higher levels of non-nutrients, especially tannins.

6. Nutritionally poor hosts, in general, appear to adversely affect fecundity, survival, development period of both arctiid and acridid species.

7. Mass budgets indicate that wherever the arctiids are unable to attain minimal weight for entering pupation, weight gain through an extra-larval instar may ensure their pupation.

8. Extra moult in female nymphs of A. crenulata on both the fern and angiosperm host is possible for building up the reserve required for egg laying.

9. Higher consumption and compensatory feeding seem to be connected with poor quality of host, resulting likely from the nutrient-allelochemic balance.

10. Maintenance cost on fern, D. esculentum is higher in both the species of arctiid than on their respective angiosperm hosts. However, the acridid species shows a higher maintenance cost on angiosperm host which is nutritionally poorer than the fern host , C. crinipes.