
Contents

Preface	v
1. History, Definitions and Basic Concept	1
2. Organization of the Biological World	7
3. Abundance, Distribution and Diversity of Insects	11
4. Basic Principles of Abiotic Factors and their Generalized Action on Insects	23
5. Implications for Abundance and Distribution of Organisms including Insects: Law of Minimum, Law of Tolerance and Biocoenosis, Systems Approach to Ecology	31
6. Basic Concepts of Abundance, Model v/s Real World, Population Growth Basic Models, Exponential v/s Logistic Models, Discrete v/s Continuous Growth Model	37
7. Vital Statistics: Life Table and their Application in Insect Biology	47
8. Population Dynamics - Factors Affecting Abundance - Environmental Factors, Dispersal and Migration, Seasonality in Insects, Classification and Mechanism of Achieving different Seasonality - Diapauses (Quiescence) - Aestivation, Hibernation	57
9. Biotic Factors: Food is a Limiting Factors for Distribution and Abundance, Nutritional Ecology	75
10. Food Chain: Web and Ecological Succession	81
11. Interspecific Competition: Lotka-Volterra-Model	101

12. Concept of Niche: Ecological Homologous Competitive Exclusion Prey-Predators Interactions – Defence Mechanism against Predators/Parasitoids – Evolution of Mimicry, Colouration, Defense Mechanism against Predators/Parasitoids	109
13. Community Ecology: Concept of Guild, Organisation of Community	129
14. Relative Distribution of Organism, Concept of Diversity: The Wallacian View	133
15. Assessment of Diversity, Diversity Stability, Debate Relevance to Pest Management	143
16. Pest Management as Applied Ecology	167
<i>Index</i>	181