

PREFACE

Conservation biology has gradually become one of the mainstream fields in contemporary science. The importance of biodiversity conservation is apparently straightforward to understand: because of global urbanization, industrialization and climate change, people become more knowledgeable about the harmony between human beings, society and nature. Biodiversity science is a leading multidisciplinary science in the 21st century.

In tropical and temperate Asia, there are two BRICS countries: India and China, both of which are giant and developing countries. At the end of 2013, human population sizes of both countries rank in the top two across the nations of the whole world. Species extinction and biodiversity conservation in these areas are definitely challenging and urgent because of the expanding population, environmental pollution, rapid urbanization and industrialization.

In comparison to developed countries, biodiversity surveys and inventories in most Asian countries are not very comprehensive. New species are increasingly discovered in the region, and the mega-biodiversity and original forests in the region provide invaluable resources for ecologists to explore biodiversity patterns over there. It is a great opportunity to present biodiversity and biogeography patterns in the region. My book can convey valuable information for researchers interested in the conservation issues of the Asian countries.

This special book is only focused on the quantitative analyses and systematic discussion of spatial biodiversity and biogeographic patterns across the nations in the Asia-Pacific region, including China, India and other Pacific countries. This book is a complement of my another book which will be published soon. In another book, I focused on the presentation of different numerical and multivariate statistical methods widely used in analyzing

biodiversity and macroecology patterns for contemporary ecologists. In contrast, in this book, I focused on the empirical applications of different statistical methods and numerical ecology techniques and testing of different ecological hypotheses using biodiversity data sets collected from different areas of the Asian-Pacific region.

In summary, there are four parts of the book: In the first part of the book, topics including phylogenetic community structure, latitudinal biodiversity patterns and island biodiversity patterns of China were extensively presented in different chapters, in which the vertebrate taxonomic groups found in China were the major concern. In the second part of the book, different case studies on the plant biodiversity patterns over the South and Southeast Asian regions were presented. The third part of the book is devoted to analyzing biodiversity patterns in the remaining Asia-Pacific region, including latitudinal beta diversity analysis of the microarthropod communities in SW Canada and a systematic comparison of phylogenetic community structure over the major ecoregions of the world. The concluding part of the book is to discuss relevant theories and reasons in biodiversity maintenance and conservation. The audience of the book includes university libraries, academic scholars and professors, graduate and undergraduate students.

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