

ENVIRONMENT

China Ecosystems

Sun Honglie, *Editor-in-chief*. 2005. The Science Press of China. 1823 pages. 350 Yuan RMB Cloth.

The publication of such a magnum opus can be regarded as a landmark achievement accomplished by this group of Chinese ecologists. The book summed up the main results of the long-term research on the ecosystem structure and function at more than 80 ecological research stations, extensively distributed over China, of the Chinese Academy of Science. The research comprehensively covered the various fields such as ecosystem classification, ecosystem structure and dynamics, ecosystem energy flow, water and nutrient cycling in ecosystems, ecosystem management and sustainable use and so on.

China is a vast territory, richly endowed by nature and abounding in diverse types of ecosystems. Traditional Chinese integrative philosophy, an abundance of resources and the fast increasing economic power confer on China satisfactory conditions and capacity for ecosystem research. However, in China, the initiation of ecosystem research was rather late compared with many other countries. At the beginning stage in the 1950s, ecosystem research in China was very rare and scattered. This was nearly stopped during the ten-year period of the Cultural Revolution. China began to participate in the large international ecosystem research plans, such as IBP [International Biological Program], MAB [Man and Biosphere Program], IGBP [International Geosphere-Biosphere Program], GTOS [Global Terrestrial Observation System], EHA [Ecosystem Health Assessment], PAGE [Pilot Analysis of Global Ecosystem] [Pesticide Assessment Guidelines?] and MA [Millennium Ecosystem Assessment] from the late 1970s. Driven by these international programs, Chinese ecosystem research developed quickly, especially in recent years.

Long-term observational studies play an irreplaceable role in understanding and assessing the ecosystem structure, function and their health status. In this course, the ecological research stations made great contributions. The Chinese ecological stations, which are distributed throughout the typical ecological zones of China, have accumulated long-term continuous and dynamic data, not only on the changes of the same ecosystem types under different driving forces, and on the integrated features of different types of ecosystems at the regional scale, but also on the long-term ecological experiments and management practices conducted in these stations.

Most of Chinese ecosystems were generally healthy in the past; however, in recent years, at least some of them have undergone serious degradation, and some are even close to irreversible damage. Not long ago, China Environmental Protection Administration an-

nounced the first Report on the Ecological Protection in China, which admits that the trend of environmental deterioration in China has not been effectively curbed yet, and more than 60% of lands are becoming environmentally fragile. Obviously, to achieve sustainable development, China must continually improve its deteriorating environment, maintain and continuously upgrade the capacity of its ecosystem service, which needs a sound understanding of the effective management of various types of ecosystems in China.

The results of the long-term research on the Chinese ecosystems were achieved with a background of large temporal and spatial environmental changes. Therefore, the data accumulated by the Chinese ecological research stations (data used in this book), include the information not only on the progressive but also degrading succession of Chinese ecosystems, and the summary of some restoration practices. These results are particularly unique and valuable, and could be used as references for some other regions and countries.

The objective of the Millennium Ecosystem Assessment of the UN, which involves a large number of ecologists from different regions and countries, is to systematically and comprehensively reveal the trends of changes of various ecosystems, and accordingly propose effective countermeasures for the future. *China ecosystems* is certainly helpful for such an assessment and its publication is timely.

The book is composed of eight parts. The first part is General review, including Chapter one: the history, evolution and perspective of the ecosystem research; Chapter two: the natural conditions for the formation of the Chinese ecosystems; Chapter three: the evolution of the Chinese ecosystems; Chapter four: the impacts of human activity on the ecosystems; Chapter five: the principles and the systems of the Chinese ecosystem classification.

The second part is Forest ecosystems, including Chapter one: introduction; Chapter two: cold-temperate zone northern conifer forest ecosystem; Chapter three: middle-temperate zone conifer-broad-leaved forest ecosystem; Chapter four: warm-temperate zone deciduous forest ecosystem; Chapter five: subtropical zone evergreen and deciduous broad-leaved mixed forest ecosystem; Chapter six: subtropical zone evergreen broad-leaved mixed forest ecosystem; Chapter seven: subtropical zone western mountainous region evergreen hard-and-broad-leaved forest ecosystem; Chapter eight: subtropical zone alpine conifer forest and mountainous region conifer-broad-leaved mixed forest ecosystem; Chapter nine: tropical zone seasonal rain forest ecosystem; Chapter ten: tropical zone rain forest ecosystem; Chapter eleven: sustainable development of China forest ecosystems.

The third part is Grassland ecosystems, including Chapter one: the formation and classification of the grassland ecosystems; Chapter two: temperate zone grassland ecosystems; Chapter three: high and cold region grassland ecosystems; Chapter four: warm-temperate zone grassland ecosystems; Chapter five: tropical zone grassland ecosystems.

The fourth part is China's water ecosystems, including Chapter one: introduction; Chapter two: fresh water ecosystems; Chapter three: lake ecosystems; Chapter four: the succession and primary productivity of the lake ecosystems; Chapter five: ocean ecosystems.

The fifth part is Farmland ecosystems, including Chapter one: introduction; Chapter two: northeastern Song-nen Plain farmland ecosystems; Chapter three: lower field of Liao River Plain farmland ecosystems; Chapter four: north China Taihang Piedmont Plain farmland ecosystems; Chapter five: Huang-huai Plain farmland ecosystems; Chapter six: Tai Lake Plain farmland ecosystems; Chapter seven: South China hilly region farmland ecosystems; Chapter eight: Dongting Lake Plain farmland ecosystems; Chapter nine: Central Sichuan hilly region farmland ecosystems; Chapter ten: Loess Plateau farmland ecosystems; Chapter eleven: oasis farmland ecosystems in desert regions.

The sixth part is nutrient cycling in terrestrial ecosystems, including Chapter one: a review on the research progress of biogeochemical cycling; Chapter two: cycling of carbon and main nutrient elements in farmland ecosystems; Chapter three: cycling of main

nutrient elements in forest ecosystem; Chapter four: cycling of main nutrient elements in grassland ecosystems.

The seventh part is water cycling in terrestrial ecosystems, including Chapter one: introduction; Chapter two: water cycling in farmland ecosystems; Chapter three: water cycling in forest ecosystems; Chapter four: water cycling in grassland ecosystems.

The eighth part is the theories and methods for the ecosystem network research, including Chapter one: the purposes and tasks for the ecosystem network research; Chapter two: the establishment and development of the ecosystem network; Chapter three: the methods for the ecosystem network research; Chapter four: the scales for the ecosystem network research.

The book was well written with few errors. Abundant illustrations are helpful for readers to easily understand the research results. The book is suitable for the professionals who engage in ecology or environmental science, or other persons who are interested in these fields.

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New Zealand – A Natural History

By Tui De Roy and Mark Jones. 2006. Firefly Books Ltd., Richmond Hill, Ontario. 160 pages. \$40. Hardcover.

The authors, experienced professional photographers Tui De Roy and Mark Jones, moved to New Zealand about 16 years prior to the publication of the book, and, during this time, they explored many of New Zealand's distinct and often rugged and remote natural regions. The result of these explorations and hard work is this beautifully illustrated coffee table book containing more than 450 magnificent photographs which offer a wonderful introduction to many of the unique species and habitats of New Zealand. In keeping with one of the main areas of expertise of the authors – nature photography, the book is largely made up of beautiful pictures. Early in the book, there is a helpful map, which includes many of the locations and national parks referred to later on. The book also contains a reasonably detailed and useful index. As a biologist, I appreciated the inclusion – in an appendix just before the index – of a list of scientific and common names for many of the species named in the previous pages.

The text sections are fairly brief overall. I counted 39 pages covered mainly by text (not including the acknowledgments and index), out of the total 160 pages

of the book. Thus, if one is planning a visit to New Zealand, reading the book prior to the departure may be easier than putting such a weighty, hardcover tome in the luggage.

Although brief, the text is not without merit. The authors have done their best to include information on a wide variety of animals and plants, as well as a few details about New Zealand's geological past and present. There are some interesting, although usually very short, stories about several species, including fist-sized giant carnivorous land snails – some of them endemic (restricted) to a single hill – that hunt large earthworms at night (some of the local earthworms can reach 1 meter in length) or the inquisitive kea, the very active mountain parrots of New Zealand, which are apparently capable of sometimes killing sheep and dismantling cars. There is a strong conservation theme throughout the book, and the main purpose of the text is clearly to highlight the plight of the many endangered species unique to New Zealand, and to discuss some of the conservation programs undertaken to save these rare species. This is a worthy goal, of course, and the authors' commitment to conservation is evident throughout.

However, as a scientist, I would have liked to see a more balanced and in-depth discussion of certain envi-

Erratum The Canadian Field-Naturalist 126(4)

In response to the review of *Contributions to the History of Herpetology*. CFN 126(3): 344-345, the book's editor Kraig Adler pointed out (personal communication to FRC 12 May 2013): "Only one small correction. Mrs. Martof used a kitchen knife, not a gun. She told the police she slipped while cutting some pizza. But Bernie was stabbed up under his rib cage several times!"

Erratum The Canadian Field-Naturalist

It has come to our attention that sections of many of the book reviews by Li Dezhi and Qin Aili were copied from sources without attribution. The journal and the authors apologize for this oversight.