

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.

LI DEZHI<sup>1</sup>, QIN AILI<sup>2</sup>, AND QIN HONG<sup>3</sup>

<sup>1</sup>Lab of Urbanization and Ecological Restoration of Shanghai; National Field Observation and Research Station in Tiantong Forest Ecosystem of Zhejiang; Department of Environmental Science, East China Normal University, 3663, Zhongshan Rd (N). Shanghai, China 200062)

<sup>2</sup>Jilin Forestry Staff School, Jilin, China

<sup>3</sup>Zhejiang University, Hangzhou, China

## 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-

ronmental and conservation issues. The authors seem to take an uncritical approach towards some controversial control programs undertaken by the local Department of Conservation against species introduced to New Zealand by people, over the centuries. It is somewhat unsettling, for example, to read about the "Herculean aerial poisoning operation" – "the largest rodent control program ever undertaken anywhere in the world", on the same page where the authors refer to the "humane integrity" associated with the conservation initiatives such massive poisoning operations are a part of. It should perhaps have been mentioned, for example, that such massive poisoning operations can occasionally backfire, and affect rare native species as well. For instance, poisons used to eradicate mice also killed the North Island saddleback, a rare New Zealand native forest bird (Davidson and Armstrong 2002). Also, the magnitude of the effects of introduced herbivores on New Zealand's native plants can sometimes be difficult to determine (Veblen and Stewart 1982). In addition, it is worth noting that some species, such as the swallows and silvereyes mentioned by De Roy and Jones, expanded their ranges naturally into New Zealand in recent times. When it comes to the many interactions among introduced species and their new environments, the story is often considerably more complex than this book suggests. Thus, the repeated demonization of introduced species found in the text is often overly simplistic.

The authors often mention the negative impact of introduced wild mammals such as rats or Australian brush-tailed possums in New Zealand, but, curiously, seem to largely ignore the huge impact of New Zealand's domestic animals, particularly the country's enormous sheep population. According to Ponting (1993), there are more than 70 million sheep and 8 million cattle in New Zealand, and many of the habitats of this country have been changed drastically and

irreversibly as a result. Also largely ignored in the book is a discussion of the early, pre-European, human-caused species extinctions. New Zealand's fauna used to be dominated by very large (the largest ones reached 3 meters in height) flightless birds called moa. These birds became extinct mainly due to overhunting by the Maori – the country's first human colonizers (Ellis 2004). The disappearance of the moas had important effects on some of the native plant species these giant birds were browsing on and had coevolved with. Thus, although conservation is, of course, a very important goal, it is also essential to recognize that nature is dynamic, and that the initial, pre-human colonization web of life found in New Zealand long ago can no longer be re-created due to the many irreversible changes that have taken place since then. A much more thorough and detailed discussion of New Zealand's prehistoric life and ecology can be found in the book by Worthy and Holdaway (2002).

Despite the shortcomings, the current work by De Roy and Jones represents a nice introduction to the unique natural world of this fascinating and remote country.

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RADU CORNEL GUIASU

Environmental and Health Studies Programme, Glendon College, York University, 2275 Bayview Avenue, Toronto, Ontario M4N 3M6 Canada

#### MISCELLANEOUS

### Beneath My Feet: The Memoirs of George Mercer Dawson

By Phil Jenkins. McClelland & Stewart, Toronto. 2007 Hardcover. 350 pages. 18 photographs, 6 sketches. \$34.99.

Phil Jenkins set out to write the biography of George M. Dawson, the son of Sir John William Dawson, the first principal and then first president of McGill University. Jenkins has instead taken nearly 5000 of George Dawson's letters, most of them previously unpublished, from the McGill University archives, and has wisely allowed Dawson to write his own "autobiography." Jenkins has created an introduction in Dawson's style, has abridged an article published by Dawson in *Harper's Magazine*, and has written over 5% of the text (we don't know which segments) to fill in gaps not available in Dawson's own words. The result is a personal,

frank, well-written, entertaining life of George M. Dawson, CMG, LLD.

A designer, "Mr. Richardson" (unaccountably, Jenkins does not provide his first name) has produced a charming book cover that fits perfectly with what would have been expected in the 1890s.

George M. Dawson was crippled in late childhood by spinal tuberculosis which left him a hunchback and a good foot shorter than he should have been. Nevertheless as an adult he struggled manfully through arduous hiking, canoeing and horseback riding that would have deterred many men of normal stature. He obtained superb training at the Royal School of Mines in London, England, where he was taught by Professor