century. The scope of the book ranges from the African savannahs and the skies of North America to the frigid waters of the Antarctic. The book also argues that the major animal-protection treaties of the early 20th century are better understood as international hunting treaties rather than as conservation treaties. These treaties were more concerned with the protection of hunting grounds and prized prey than with protecting habitats or ecosystems. The author described the formation and implementation of these treaties, as well as the efforts of conservationists and others to reform them and eventually institute new accords that would overcome the hunting ethos of the early treaties.

This book would be a good reference for the persons who are engaged in conservation ecology, population or ecosystem ecology, or environmental law or policy makers, etc., or any other persons who are interested in this field.

LI DEZHI[1] AND QIN AILI[2]

[1] 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 Road (N), Shanghai, China. 200062

[2] Shanghai Vocational and Technical College of Agriculture and Forestry, 658 Zhongshan 2 Road, Songjiang, Shanghai, China. 201600

MISCELLANEOUS

The Ptarmigan's Dilemma: An Exploration Into How Life Organizes and Supports Itself

By John and Mary Theberge, 2010. McClelland and Stewart, 75 Sherbourne Street, Toronto, Ontario M5A 2P9 Canada. 401 pages. 34.99 CAD, Paper.

This is a remarkable book. It chronicles the professional life of a husband and wife team who, with their students, have conducted field studies for over 40 years and now have spent 6 years in putting it all together in this book. The subjects of their work included a wide range of species involving foxes, wolves, pikas, ptarmigan, ruffed grouse, caribou, white-tailed deer in various settings across Canada. The breadth of detailed studies were enhanced by many eco-tours in the Arctic, USA, Africa, Antarctic and Central/South America. It is an exceptional story, as they have followed through on many tasks in a very focussed way and applied seemingly boundless energies to often difficult projects. In so doing, John and Mary Theberge have come full circle, in not only spending their time in the field, but also effectively publishing their findings in scientific journals, taught university ecology courses and have been in the front lines in battles to protect the natural world. But this book is more then just a review of events and achievements; it is a scholarly account on how nature evolves and renews itself. A precedent had been set by a series of similar books, most notably in recent years in the book by Richard Dawkins entitled " The Greatest Show on Earth – The evidence for Evolution".

I found the title " The Ptarmigan's Dilemma" somewhat misleading. John Theberge did write his PhD. about ptarmigan, and in the course of that work found out that ptarmigan mysteriously grew gallbladders to cope with the birds' artificially manipulated diet. That anecdote comes early in the book. Very much later the authors inform us that the real dilemma that these grouse face is whether it is evolutionarily more rewarding for the survival of ptarmigan to leave the security of cover under the hens, or face potentially lethal low temperatures to obtain food. The point is, evolutionarily speaking, there are always tradeoffs. Natural selection does the rest. That is not a dilemma – it is the natural selection pressures that operate in all situations – Charles Darwin told us that a long time ago. Possibly "The healing hands of nature and mankind's role in destroying it" might have been a better title. Nevertheless, title aside, the authors have cleverly tied their vast experiences with what is known about the broader concept of evolution, genetic variability, natural selection, epigenetic inheritance, Darwinism, and Lamarckism. All concepts are well supported with appropriate citations. They cite important scientific papers, mixed in with anecdotal experiences, graduate students (their students only) projects and serendipitous findings, as occasions permitted.

The authors explore the notion that external factors may have a greater impact on the speed of evolution than mere natural selection as derived from Darwinian Theory. It leaves the reader with the hope that all is not lost in the bigger scheme of things and as such might be considered a relief from the "gloom and doom" themes outlined by many authors, when discussing the multi-faceted problems of our current biodiversity crisis, worldwide. I find little comfort in knowing that it will take between 3.3 to 5.5 billion years to create a new species of bird to replace the many of those that now have found themselves on the IUCN's (International Union for Conservation) endangered species list. I suppose a gloom and "doom" message does little to attraction the attention of our next generation of nature enthusiasts.

Not only species ,but systems in which they thrive, are dealt with in this book. I learned, with great interest, about the specifics of dynamics relating to phenomena which are common knowledge but only in a general way. For example, why the modern population explosion of Snow Geese in North America? What are the reasons for mass concentrations of Sandhill Cranes

along the Platte River in Nebraska? There is an eloquent discussion about the plight of the Palouse prairie in western North America. Every ecologist should read about the author's reflections on the merits of observation based science (page 223) vs. the more modern fashionable view on experimental science to get answers to biological questions.

Rarely is there a tome that is completely devoid of shortcomings. To keep the reader's attention there are, at times, lapses of objectivity in this book. "Fetid odour of bison dung" and "red-rimmed beady eyes" of a bison bull is not something you will experience in Canada's Wood Buffalo National Park. Nor will a bull bring his "head up, and then look around searching for wolves that might mean danger". There are errors in spelling of place names and of people in the book, but these are not major shortcomings of the book. The authors have brought their world (our world) to us, and it was therefore their responsibility to capture the readers attention. In the process a bit of hyperbole is acceptable, if that is what it takes to get the job done. Hardcore science can be boring and not entertaining. The authors' have not abandoned objectivity for clarity to deal with complex subjects. This work is written in an engaging prose, covers a broad subject and is a powerfully strong, scholarly piece of work. If only more biologists would take the time to write about the "life and times" during their professional careers in such a profound way. Future biologists will benefit from those who have come before, and they in turn should place their messages into the bigger scheme of things – how can we make this a better place for future generations? Understanding the functional relationships and processes in nature is a way of setting future agendas and apply new techniques to resolving environmental management issues. I applaud the Theberges for a job well done!

LU CARBYN

137 Wolf Willow Crescent, Edmonton Alberta T5T 1T1 Canada

[**Book Review Editor's note:** This book was a finalist for the Writers Trust Literary Prize for Non Fiction 2009-10].

The Practical Naturalist: Explore the Wonders of the Natural World

Dorling Kindersley Ltd. DK Publishing (United States), 375 Hudson Street, New York, New York. 255 pages. 22.95 CAD, Paper.

This book is interesting in concept and appealing in delivery. However, I encountered several problems while reading it. I am concerned that some of the information presented is confusing and imprecise. Reading it reminds me of reading the newspaper. If I know the subject well, I notice if the story is expressed unclearly or incorrectly. If I don't know the subject well, I might not notice, but am left suspecting that many news stories haven't got the details exactly right.

It is a very attractive-looking book. I congratulate the designers on an eye-catching cover and a comfortably-sized volume with an accessible, friendly interior. The book presents the budding "practical naturalist" with a gallery of different landscapes, ecosystems and environments to explore, a hint at the range of beings and relationships found there, and tools and skills to help one along. It includes activity suggestions. These sections are well-organized and lavishly illustrated with drawings and photos in the typical Dorling Kindersley (DK) style. You are reminded that you can explore nature in your own house and backyard, but that there is a great big world out there full of wonderful stuff too. I believe the book could be truly educational and inspiring for an audience ranging from older children to adults.

Unfortunately, I ran into trouble by page 10. Early sections discussing "Nature of the planet" (page 10) and "Climate and seasons" (page 20) attempt to show global biomes and climatic regions on world maps. These maps are cartographically murky. The "Mature of the planet" page suggests readers find their own biome on a world map. I attempted that, to find that Lake Superior and Lake Huron drain directly into a river that flows to the Atlantic Ocean. Lakes Ontario and Erie are detached and landlocked to the south. The easternmost point of North America, which should be the Avalon Peninsula of Newfoundland and Labrador, appears far south of the Great Lakes. The climate zones map shows the sub-arctic zone extending well south of the Canada-United States border judging by where the Great Lakes are on the first map. I can't make sense of the arctic coastline which is also different on each map. There is something fishy about Sweden too. Is it really all "temperate forest" from north to south while Norway and Finland are "coniferous forest"? Maybe the maps are simply meant to be impressionistic. If so, it might have been wiser not to send readers on the doubtful trail of pinpointing their home biome.

I tried to set aside my frustration over the maps to move on to the rest of the book. I was tripped up again at the "Forest birds" spread on pages 98 and 99. I suspect the publisher was trying to adapt a European-focused book to market further afield. I wonder if the editors took enough care to make sure the book would honestly satisfy an audience outside of Europe. Consider this: The jackdaw "is widespread in most of the Northern Hemisphere." This makes me think the jack-