

## **Handbook of Road Ecology**

Edited by Rodney van der Ree, Daniel J. Smith, and Clara Grilo. 2015. Wiley Blackwell, 9600 Garsington Road, Oxford, UK, OX4 2DQ. 522 pages, 176 CAD, Cloth.

What do roads have to do with ecology? With over 60 million kilometres of roads on Earth, roads have destroyed and fragmented ecosystems around the world. The science of road ecology seeks to better understand the threats that roads pose and provide solutions to those threats. This new book, *Handbook of Road Ecology*, is a multi-authored volume that summarizes current research in a variety of areas of road ecology.

The book is composed of 62 chapters authored by over 100 experts in road ecology: academics, practitioners, and transportation agency personnel from 25 different countries. To help ensure a broad perspective, most chapters were written by more than one author,

generally from different countries. Each chapter follows a standard format with a summary, introduction, lessons, conclusions, further reading, and references. The lessons are the core of each chapter. The editors required the authors to provide a numbered list of “insights or principles” on their topic. The goal is that readers can quickly find relevant topics within a chapter. Overall, this approach is effective as each chapter is a standalone document. Authors were also asked to keep each chapter to 3,000 words or less. The book is well illustrated with many photos (most of them in colour), maps, and graphs.

The chapters span a wide range of topics including road planning and design, impacts on various groups of organisms, monitoring strategies, mitigation approaches, and case studies. While the main focus is on roads, a few chapters address other linear infrastructure such as railways and utility corridors. Individual chapters examine the effects of roads on invertebrates, amphibians, reptiles, fish, birds, bats, carnivores, and small mammals, with case studies on crabs, jaguars, tigers, elephants, and canopy bridges for primates. Additional chapters focus on particular landscapes such as arid lands or tropical ecosystems. Other chapters profile particular areas including the Amazon, southern India, the Serengeti, South Africa, and China.

One minor annoyance is that the table of contents does not group chapters into major sections. A few key

section headings would make it easier to find broad topics. Individual chapters provide a good overview of topics but they are not exhaustive. Additional references could have been provided in many chapters to allow readers to dive into the topics in greater detail. For example, in the chapter on reptiles, the authors cite a couple of papers on drivers intentionally running over reptiles but don't cite a later, key paper on the topic. This can make it difficult for readers to find recent papers on a topic. Overall, though, this is an excellent summary of a fast-growing body of knowledge in a critical area of ecology.

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