

**Jongman, R. & G. Pungetti (eds). 2004. *Ecological Networks and Greenways: Concept, Design, Implementation*. Cambridge University Press, xxi + 345 p., 17.5 x 24.5 cm, paperback, US\$?????, ISBN 0-521-53502-6.**

World population is projected to grow by 1.83 billion people between 2003 and 2030 – all in urban areas and most (85%) in less developed regions of the world (United Nations 2004). As people spread over the globe their cities, roads, and farms fragment remaining undeveloped areas, jeopardizing many other species. There is increasing recognition that biodiversity conservation cannot afford to ignore developed landscapes and that more integrated approaches to planning and development are needed.

Against this backdrop, *Ecological Networks and Greenways* fits nicely into an emerging vision of a world in which core protected areas and the surrounding developed lands function synergistically to support vibrant ecological and human communities. In the introductory chapter, Jongman and Pungetti describe how ecological networks – which include core protected areas, buffer zones, and corridors linking these components – arose from efforts to conserve biodiversity and. Greenways arose from efforts to create connections for people, allowing them to access the countryside and providing links between urban and rural lands. The lines are not drawn sharply, and both terms have evolved to embrace multiple purposes consistent with sustainable land use.

*Ecological Networks and Greenways*, the second offering in the *Cambridge Studies in Landscape Ecology* series, contains 16 contributed chapters that explore these conservation tools in some breadth and depth. The focus is on “...how ecological networks and greenways can be developed on the ground after the theoretical basis has been established (p. xviii)” and the book is aimed at scientific, design, and planning audiences. The contributions are generally well written, though the tone changes markedly from chapter to chapter – not unexpected for an edited volume. Less excusable, several maps have poor resolution, indistinguishable shades of grey, or confusing legends. A number of the graphs contain unnecessary clutter (the kind that

Excel software generates by default) and the choice of legends could have been better in some. Some standardization among chapters could have improved the graphs and maps.

The volume presents many aspects of ecological networks and greenways in Europe and the Americas, including scientific concepts and theories; planning and design considerations; and the policy dimensions, broad collaboration and public participation needed for successful implementation. The first three chapters define ecological networks and greenways and place them in historical context. They are somewhat duplicative in technical content, but it is worth reading them all to experience the differences between European and American history and perspectives. The following 12 chapters present examples with varying degrees of conceptual, technical, policy, and implementation detail. The concepts and examples presented range from individual greenways, through citywide greenway systems, to regional, multi-national, and continental ecological networks. The editors summarize the issues and challenges in the final chapter.

Common threads permeate the book: the importance of designing networks for explicit functional goals; the need to consider networks from the perspective of the species that will occupy them; the need to resolve conflicts between human and green infrastructure (e.g., the ecological “black spots” where roads and ecological networks meet); the tension between designing networks for multiple uses and avoiding conflicts among uses; the reality that “... no single theory, no single scientific or planning concept can be taken as universally applicable (p. 292);” and the notion that political challenges to implementing ecological networks and greenways are currently greater than technical challenges.

Perhaps the most important thread is an explicit recognition that “nature conservation and land use planning are social actions (p. xix).” Consequently, a major theme that emerges is the importance of social context and networks to success. Simply put, the (re)creation of functional ecological networks depends on the development of collaborative networks among a broad array of people, including scientists, policy-makers, transportation planners, open space planners, land developers, and, perhaps most importantly, the public

at large. This is indeed an arena of great opportunity and formidable challenges. For example, Chapter 13 describes an ecological network in Florida, USA, that will include some 30% of the state's land. It has grown out of collaboration among environmental and transportation forces, has broad political and public support, and is extremely well funded. Yet, efforts to complete the network face considerable challenges from groups that support private property rights and the privatization of resources, and an economy based increasingly on land development. In Argentina, collaborative efforts to protect conservation land in the Yungas ecoregion are confronted by massive land use change (to agriculture), sharp socioeconomic disparities, high unemployment rates, and social unrest (Chapter 14).

In the final analysis, *Ecological Networks and Greenways* is an excellent volume for anyone interested in learning more about ecological networks and greenways. It would be a great book to read and discuss in a semester-long graduate seminar, or as part of just about any graduate course dealing with landscape ecology, conservation biology, environmental policy, or sustainable development. I can easily imagine individual chapters showing up on the reading lists of more specialized courses in a variety of disciplines. The contributors' inspiring visions and examples of a world in which people and institutions collaborate in the name of conservation are sure to incite readers to think outside the box.

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### **Literature Cited**

United Nations. 2004. World Urbanization Prospects: The 2003 Revision (ST/ESA/SER.A/237). United Nations, Department of Economic and Social Affairs, Population Division. New York.