BOOK REVIEW
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Review by Are Berentsen

The tropics and subtropics are found between the Tropics of Cancer and Capricorn and are home to approximately 75% of the world’s human population. The region boasts an impressive biodiversity but also contains some of the world’s poorest communities, which in some regions are growing at a faster rate than in other areas of the world. As regional and global human populations continue to grow, so do the impacts on natural resources and biodiversity. These impacts can be felt on both global and local levels. Tropical Conservation: Perspectives on Local and Global Priorities provides well-referenced information on a variety of ecologic issues along with case studies describing global and local efforts to mitigate environmental impacts. The book is composed of 29 chapters, divided into five parts. Each part discusses an overarching theme that gets narrower in scope as the reader progresses through the book. The initial focus on landscape-level conservation gives way to human-wildlife conflicts and specific analytical techniques (including eco-logic modeling and genetic techniques), followed by challenges of illegal wildlife trade and the exploration of commercial production as a strategy to combat such trade, and concludes with practical examples of community involvement in conservation. The book focuses primarily on terrestrial mammals with a few chapters dedicated to marine mammals, reptiles, insects, and plants as well as an emphasis on community involvement in conservation issues.

Part One, “Conserving Biodiversity and Ecological Functionality in Human-Dominated Landscapes,” consists of seven chapters and three case studies discussing biodiversity at a landscape scale. The first two chapters largely describe in general terms the issues facing conservation in tropical and subtropical ecosystems. Chapter 3 discusses landscapes and corridors in conservation efforts of Asian elephants. Chapter 4 continues the landscape-level approach with respect to restoration of the Atlantic forest in Brazil followed by two case studies on howler monkeys (Alouatta pigra) in human-impacted landscapes and on conserving biodiversity in urban environments. Chapter 5 evaluates anti-deforestation policies and their impacts on hydropower supplies and economic impacts in Brazil. Chapter 6 examines the links between land-use change and infectious diseases in fragmented landscapes. The final chapter in Part One describes the impacts of climate change on biodiversity in India and concludes with a case study on a strategic plan for biodiversity with specific target goals.

Part Two, “Resolving Conflicts Between Wildlife and Humans in the Tropics and Subtropics,” narrows the scope relative to landscape-scale considerations and focuses on specific human-wildlife conflict issues in five chapters with seven case studies. Chapter 8 provides a general overview of human-wildlife conflicts in the Andean region followed by
three case studies. The first case study
describes many contributing factors that in-
crease human-wildlife conflict including habi-
tat loss, fragmentation, changes in land use,
and climatic considerations, among others. The
two case studies that follow describe conflicts
with carnivores in India and the impacts of
tourism on mountain gorillas (Gorilla beringei
beringei) in central Africa. Chapters 9 and 10
discuss bat conservation in the neotropics and
the impacts of invasive plants with particular
attention to Lantana camara. Chapter 11
focuses on conservation of dolphins and the
impacts of fisheries bycatch, intentional cap-
ture for cultural uses (i.e., food, medicinal use
or bait), public display, and habitat destruction.
The case study which follows provides an
enlightening account of the African manatee
(Trichechus senegalensis). Part Two ends with
a chapter on the conservation of loggerhead
turtles (Caretta caretta).

Part Three, “Approaches to Conserving
Species: Emerging Lessons and New Scien-
tce,” becomes slightly more technical and
provides information on current techniques
(modeling, genetics, etc.) in conservation in
six chapters with three case studies. Chapter
13 describes modeling techniques used to
manage and conserve endangered wildlife in
Ethiopia. Chapters 14 and 15 describe the use
of integrated and conservation genetic tech-
niques in the conservation of a variety of
endangered species followed by a case study
on Neotropical forest ungulates. Chapter 16
discusses effects of habitat fragmentation on
black lion tamarins (Leontopithecus chryso-
pygus) in Brazil and Chapter 17 reviews
ecology and conservation efforts of jaguars in
Mexico. The final chapter in Part Three
discusses the decline of insects as pollinators
and two case studies describing insect con-
servation and practical use of beekeeping as a
conservation tool.

Part Four, “Integrating Conservation and
Sustainable Use: The Management of Wild
Living Resources,” consists of five chapters
with six case studies. Chapter 19 discusses
illegal trade in wildlife from northern Africa
into Europe. The two case studies within this
chapter describe trade of Barbary macaques
(Macaca sylvanis) from Morocco into Europe
followed by a description of the use of modern
genetic techniques to identify species and
regions of origin for poached wildlife. Chapter
20 brings to light the issues surrounding
harvesting of bush meat in food-insecure
regions of central African rainforests and, in
particular, the ecologic impacts of over-har-
vesting. Chapter 21 reviews the successes and
failures of crocodile farming to protect wild
crocodilians throughout the Asia Pacific region
followed by a case study on similar efforts to
commercialize production of edible nests
produced by swiftlets (Aerodramus fuciphagus)
in Indonesia. The next case study provides a
unique account of the effects of deforestation
on Llaveia axin axin (a wax-producing insect in
Mexico and Central America), and the poten-
tial cultural and economic impacts of its
decline. Chapter 22 reviews the growing need
for sustainable agricultural production to
reduce habitat loss in Mexico. The two case
studies that follow describe a pilot study in
Mexico to analyze the relationships between
cattle production strategies and various ecosys-
tem services and the relationship between
agroforestry and biodiversity in Indonesia. Part
Four concludes with a discussion of how
conservation can be integrated into a new
paradigm of economic development.

Part Five, “Building Capacity to Sustain
Conservation: People, Institutions, and Net-
works,” is the final section of Tropical
Conservation: Perspectives on Local and
Global Priorities and consists of six chapters
and three case studies. This section widens
the scope to provide information on current
needs with respect to collaboration across
various communities as well as strategies to
improve conservation efforts on local and
community levels. Chapters 24 and 25 discuss
the need for improved education on conser-
vation issues, the roles nongovernmental
organizations (NGOs), business, and citizen-
science groups can play in increasing aware-
ness and establishing partnerships between
conservation professionals and educators.
Chapter 26 provides a summary of the
challenges integrating ecotourism, local com-
munities, and conservation in Kenya and is
followed by a case study describing similar
challenges in Brazil. Chapter 27 is the only
piece dedicated to a discussion of zoonotic
diseases. This chapter summarizes the capac-
ity (i.e., surveillance, laboratory infrastructure, etc.) of Columbia to study and monitor diseases in captive and free-ranging wildlife. While numerous zoonoses with wildlife reservoirs are of national interest, surveillance in wildlife is limited to West Nile virus and avian influenza in birds and yellow fever in nonhuman primates. Control of rabies is restricted to culling vampire bats (Desmodus rotundus) in rural endemic areas. Chapter 28 provides guidance on establishing an NGO to support and promote conservation including outlining objectives, staffing, and fundraising. The final two case studies provide first-hand accounts of the challenges associated with developing and maintaining conservation-based NGOs in India. The final chapter is the Afterword provided by the book’s editors, which provides a vision of hope for the future.

Tropical Conservation: Perspectives on Local and Global Priorities provides a unique snapshot into a wide variety of conservation issues ranging in scope from deforestation and climate change, human-wildlife conflicts, and illegal wildlife trade to various species-specific accounts and community involvement. The book is well organized and the chapters do not bog the reader down with extensive scientific jargon or complicated analyses. Rather, it provides a practical discussion of the growing concerns of ecologic conservation in tropical and subtropical ecosystems. Various case studies and break-out boxes within chapters provide real-world examples of successes and challenges associated with a broad spectrum of conservation efforts. The emphasis on the need for capacity building and shared knowledge among wildlife professionals, educators, local communities, and conservation organizations is an excellent example of what can be done at local levels to enhance conservation efforts. Readers with an interest in wildlife and zoonotic diseases will find the topic somewhat lacking but perhaps such an important topic will receive more attention in a subsequent edition. Overall, Tropical Conservation: Perspectives on Local and Global Priorities is a valuable reference for students, professionals, and anyone with an interest in conservation issues facing tropical and subtropical ecosystems.