Publications

Biodiversity conservation and poverty alleviation: exploring the evidence for a link edited by Dilys Roe, Joanna Elliott, Chris Sandbrook and Matt Walpole (2012), xiv+336 pp., Wiley-Blackwell, Oxford, UK. ISBN 978-0470674789 (pbk) GBP 45.00/USD 79.95.

Much has been made in recent years of the importance of biodiversity, and associated ecosystem services, for human well-being. The Millennium Ecosystem Assessment, for example, lays out a conceptual framework that identifies biodiversity as underpinning the delivery of a range of ecosystem services-provisioning, regulating, cultural and supporting-that in turn contribute to wellbeing and poverty reduction. At the same time, the 2002 Conference of Parties to the Convention on Biological Diversity developed a strategic plan to 'achieve by 2010 a significant reduction of the current rate of biodiversity loss' as a contribution to poverty alleviation'. This target was subsequently included in the UN Millennium Development Goals in 2006. More recently, the 2010 Conference of Parties adopted a decision on the 'integration of biodiversity into poverty eradication and development' and the current Convention on Biological Diversity Strategic Plan for Biodiversity has as its mission the halting of the loss of biodiversity 'thereby contributing to human well-being and poverty eradication'.

But what is the evidence for these links? This edited volume seeks to answer this question with contributions based on the presentations made at a symposium hosted by the Zoological Society of London in April 2010. The introduction follows the philosophy of Socrates: 'The beginning of wisdom is the definition of terms', stressing the importance of being clear about what we mean by 'biodiversity' and the difference between biodiversity per se and the interventions involved in biodiversity conservation. The book is then divided into sections, each with several chapters exploring a range of related issues: the potential for synergies between biodiversity, ecosystem services and poverty; the links in different ecosystems-forest, coasts, drylands and agricultural landscapes; the impacts on poverty of different conservation interventions-protected area management, species conservation, community-based natural resource management and conservation-friendly enterprise development; and benefit distribution and the role of local organizations. The final section looks at the global picture, asking whether addressing global poverty can help save biodiversity, whether investing more in conservation can solve poverty, or whether there are much

larger questions to be answered about how we choose to live, to develop economically, and to govern the sharing of the world's resources.

In the concluding chapter the editors address the ultimate question of what contribution biodiversity and its conservation can really make in tackling global poverty. As elucidated in several of the preceding chapters, they acknowledge that the evidence base is limited, with a tendency for those promoting the links to talk in generalizations. Much of what is said and written about these relationships seems to be largely based on myth and assumption. This resonates with my own experience working at the interface between conservation, livelihoods and environmental governance. This helpful book goes some way towards dispelling some of those myths and challenging those assumptions. For example, the editors conclude there is evidence that people living in poverty are often disproportionately dependent on biodiversity for subsistence, income and as a safety net or insurance against risk. Although in some circumstances biodiversity conservation can help people move out of poverty, in other cases it can be a poverty trap. There is also, crucially, acknowledgement that the contribution that biodiversity and its conservation makes to poverty differs greatly between individuals and between households. So biodiversity conservation—and the maintenance of ecosystem services-may contribute to poverty alleviation for some people in some places but it cannot be taken as read that conservation will inevitably be beneficial for the poor. The authors finally stress the importance of recognizing that biodiversity conservation and poverty alleviation are both inherently political processes. Good governance will be needed at all levels if conservation is truly to have a positive impact on the lives of the women and men, girls and boys who live closest to the biodiversity that conservationists are seeking to maintain and enhance.

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The Kingdom of Rarities by Eric Dinerstein (2013), xiii+295 pp., Island Press, Washington, DC, USA. ISBN 9781610911955 (hbk), GBP 18.99/USD 29.99.

In *The Kingdom of Rarities*, Eric Dinerstein takes his readers on a tour of some of nature's

most amazing places. Aimed at an educated popular audience with an interest in plants and animals, the book provides a superb balance between description, science and conservation. It's an easy, pleasant, and even exciting read, with the science gently fed to the reader as part of the book's adventure narrative.

An introductory chapter asks 'Why, wherever you land, do you always find a few superabundant species and a multitude of rare ones?' It suggests that as many as 75% of all species on the planet may be considered rare, occupying a limited geographical space and having a low population density. It promises that better understanding of rarity can 'help shape our response to saving wild nature.' The use of the second person plural is no accident, as throughout the book the author encourages the reader to be at least a vicarious participant in the search for rarities and the ways to ensure their continued survival.

The book has eight longish chapters (20 pages or so) that each focus on a particular way station on our quest to seek places particularly relevant to rarities. We start in New Guinea, an island continent that has been isolated from Australia and Asia long enough to evolve an amazing variety of species found nowhere else. The description of searching for rarities such as birds of paradise is woven with science and conservation to present an intriguing tapestry. A key thread here is that customs controlled overhunting among the great diversity of native peoples on the island, where over 800 languages are spoken (although many are being lost). But these traditions are now losing their conservation effectiveness as missionaries discourage taboos and other pagan beliefs. Another thread is the remarkable Kikori River valley, where a major oil company, Chevron, has established a substantial strict nature reserve that is being repopulated by rarities. While the ethics of exclusion are questioned, the results have been positive for many rare species.

Our next stop is the Madre de Dios region of Peru, with healthy populations of jaguars, pumas and c. 1,000 species of birds. The big cats are being monitored by radio tracking technology that provides important conservation insights. This setting helps explain why the tropical rainforests are so rich in plant species, and why ecosystems fundamentally change through trophic cascades when apex predators are removed (for example, by poachers). Other concepts introduced include dispersal corridors and payments to forest-dwelling people for serving as stewards of the forest and its large cats.