

the five themes include community, inheritance, hospitality, recognition and hope. In exploring community, we are taken to Brisbane, Australia where van Dooren reflects on the people that are either making space for urban crows or removing it. He talks with civilians and scientists to provide a holistic picture of what it means to influence—and be influenced by—the presence of crows in our urban and suburban spaces. In addition, he explores what it means, and who gets to define, living in ‘balance’ with nature.

In Chapter 2 we travel to the Big Island of Hawaii, where we explore the restoration efforts of the endemic ‘Alalā, or Hawaiian crow. Like many Western conservation efforts, the reintroduction of the extinct ‘Alalā coincides with an inheritance of colonialism. Van Dooren’s interviews with conservationists, both white and Indigenous, offer insight into our cultural and ecological inheritance, and what it means to attempt to restore something for which there is no template of wholeness.

Next we travel to Rotten, Netherlands, where a small band of introduced house crows experience the wrath of being othered. Juxtaposed against the backdrop of one of the most influential centres of globalization in the world, the city’s effort to eradicate these introduced victors feels insulting, though van Dooren is careful not to say so explicitly. For many ecologists like myself, who fear biological homogenization and embrace the necessity to eliminate invasive species, this chapter may invite the most difficult questions of introspection.

Chapter 4 centres around the expansion of common ravens in the Mojave Desert, and their subsequent impacts on the increasingly rare desert tortoise. We explore what it means to consider the ravens’ intelligence not as an obstacle to managing them, but as a gift for non-lethal collaboration. Instead of killing ravens, perhaps we can train them out of consuming the food source that has sustained their growing population. As with all of his queries, however, van Dooren does not leave us here to sit contentedly with a clever solution to a difficult problem. The is far more to unpack in this story, and mostly there is no easy answer.

By Chapter 5, which explores the restoration of the Aga, or Mariana crow, on the island of Rota in the Commonwealth of the Northern Mariana Islands, the echoes of each previous chapter can be heard. Far from becoming repetitive, the tapestry van Dooren has been weaving comes together in hope, the chapter’s theme, but not without a deep exploration of nuance.

What is most unique about this volume is that van Dooren’s exploration of each topic goes far beyond simple reporting, and instead

reaches deep into the humanities to provide a sharp academic backdrop of complexity. Ideas many ecologists might take as fact are questioned, deconstructed, and left for the reader to reassemble anew. It is a unique and powerful look at what it means to live in a shared world, and asks that we reconsider our ethics in doing so. It is far from a light read, but it is one that grants the experience of expansion that curious people crave.

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Shepherding Nature: The Challenge of Conservation Reliance by J. Michael Scott, John A. Wiens, Beatrice Van Horne & Dale D. Goble (2020) 396 pp., Cambridge University Press, Cambridge, UK. ISBN 978-1-108434331 (pbk), GBP 29.99.

The lesser kestrel *Falco naumanni* and the European roller *Coracias garrulus* are both avian species that require cavities to be able to nest. In their Portuguese stronghold they nest mostly in cavities in abandoned rural buildings and artificial nest sites. The buildings in which they nest are slowly collapsing, making artificial nest sites an increasing requirement. Both species are on their way to becoming conservation reliant (Gameiro et al., 2020).

In a series of influential papers the authors of *Shepherding Nature* laid out the concept of conservation reliance. In *Shepherding Nature* they expand their argument and provide the following definition of conservation reliance: ‘A species is conservation reliant if it is vulnerable to threats that persist and requires continued management intervention to prevent a decline toward extinction or to maintain a population’ (p. 3). The term is not binary but rather dynamic, changing with threats, conservation actions and the biology of the species. The concept has its roots in the 1994 version of IUCN’s Red List but was dropped in 2001.

For too long the conservation community has operated under a little-examined assumption that somehow when a previously threatened species was fully conserved it would not require further conservation actions. And how wrong we have been. In the USA, for example, some four-fifths of the species listed as Threatened or Endangered under the Endangered Species Act are conservation reliant. Similar figures for other countries have not been calculated.

Shepherding Nature is a book with 11 chapters that details the circumstances,

stories and strategies of conservation reliance. Its chapters cover existing threats, emerging threats, policy and law, and species conservation tools. Throughout the book are scattered some 11 ‘essays’: short case studies written by outside experts, some of which strongly carry the narrative forward and others less so. The well-known stories of the California condor, Hawaii’s native forest birds and Kirtland’s warbler provide both the basis and the powerful illustration of how and why conservation reliance comes about. The book finishes with a prioritization framework for action to conserve species. The book is mostly about the USA, the country where all authors reside; where it does cross national boundaries, it is largely to other English-speaking countries, particularly Australia and New Zealand.

In many ways the book is more about general species conservation than just conservation reliant species. Although this may have been necessary, it dilutes the power of the concept as it reviews a good deal of basic conservation biology that will be well known to many readers. *Shepherding Nature* is situated in the core of traditional species conservation and conservation biology. It pays only slight attention to the larger forces that suggest to many of us that traditional conservation and its traditional tools may not be enough to address the future of nature in a human-dominated world. A recent study by Ceballos and colleagues (2020) shows that c. 94% of the populations of 77 mammal and bird species on the brink have been lost in the last century. Conservation reliance is here to stay. And in the end the challenge for humanity is to realize that we, ourselves, are a conservation reliant species.

References

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