

15 Research(ers) and Conservation(ists) in the Anthropocene

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15.1 Introduction

In August 2016, at an early stage in the development of this book, we convened a symposium at the joint meeting of the American Society of Primatologists and International Primatological Society in Chicago, USA. In light of the emerging primate extinction crisis, eight expert presenters, representing their respective research teams, were asked to address such questions as: how have your field sites, and correspondingly your research methods, changed? Are we still able to include evolutionary analyses in our primarily conservation-driven projects? And how can career trajectories in primatology align with the oft-competing interests of research and conservation activities? The presentations, and the lively discussion that followed, made apparent the extent to which researchers have refocused their investigations to better align with conservation imperatives. Those productive conservation and research insights form the core of the present volume and have been enhanced by additional contributions by an array of early-career and senior researchers/conservationists.

A unique feature of our book is the inclusion of personal narratives by the authors. These narratives, in combination with the research findings, demonstrate robust interconnections among people at every step in the research process. Mentors, assistants, collaborators, participants and local actors are part and parcel of primate research and conservation. And undoubtedly this is true, to varying degrees, for the entire extent of primate research and conservation activities the world over. Additionally, extra-local human interconnections (e.g. human-induced climate change; agroforestry economies of various scale) pervade our field sites. As the contributions to this volume attest, research and conservation are inextricably intertwined. As such, we should be sceptical of any isolated primate research findings or conservation prescriptions that fail to engage or acknowledge this inseparability. These points have been made elsewhere within the larger primatological and ecological literature (Ellis, 2015; Fuentes & Baynes-Rock, 2017), and align particularly well with the now mature field of ethnoprimateology (Dore et al., 2017; Fuentes, 2012; Fuentes & Wolfe, 2002; Malone et al., 2014).

15.2 Summary

15.2.1 Review of Part I: The Human–Non-human Primate Interface

This section started out with the title ‘Hunting in the Anthropocene’, but it quickly became apparent that the contributions had much more depth than just documenting animal loss due to hunting. Primate populations are decreasing due to a host of

anthropogenic factors causing both direct and indirect mortality. The chapters in this section deal more with managing and monitoring populations that are already small, trying to stop and predict habitat changes that may be detrimental to the remaining animals, as well as finding ways to integrate local communities into conservation efforts and teach children about the interconnectedness of human and animal populations (Chapters 2–4). The one chapter that focuses on hunting (Chapter 5) shows how, in the right habitat, sustainable hunting of primates as a subsistence strategy is possible with local monitoring and buy-in for conservation. Together, these chapters accurately paint the complex picture of how human and non-human primates interact across four different landscapes on three different continents and demonstrate the positive results to both humans and animals from careful conservation strategies.

15.2.2 Review of Part II: Habitat Alteration in the Anthropocene

This section was originally entitled ‘Habitat loss in the Anthropocene’ but as contributions started coming in we realised that it wasn’t only about the loss of habitat, which conjures up images of massive expanses of land being converted to unsuitable habitat, but was more about how primate habitats are being altered by humans and how primates are adapting, or not, to those alterations. The days of studying primates in pristine habitat are gone, and even forests that are remote and have low human population density are becoming altered by activities like selective logging. This is the case in Veun Sai-Siem Pang National Park, which is a 55 000 ha forested area where many primates are thought to live at high population densities, despite its bordering the 320 000 ha Virachey National Park. Chapter 6 starts this section by describing the impact of even small-scale illegal logging on the immediate behaviour of animals in this vast habitat. Such studies, which document how animals are responding to the activity of logging itself, through reactions to chainsaws, are some of the first to document how primates are adapting in these initial stages of disturbance. Following from this, Chapter 7 describes how a primate population (Angolan colobus monkeys) responds in the immediate aftermath of logging – in this case the logging had ceased and the impact could be assessed. Chapter 8 focuses our thoughts on the long-term impact of habitat alteration and the potential impact it may have on ecosystem dynamics, particularly through host–parasite relationships. Thus, while these chapters take us on a journey through the stages of impacts, one of the most interesting and relevant themes to come out of this section was the importance of collaboration and community involvement in successfully combating the impacts of habitat alteration. Chapters 9 and 10 both highlight the importance of forest regeneration as a strategy to restore lost or changed habitat for primates. Chapter 9 also gives a hopeful and successful example of the Madagascar Biodiversity Partnership and their involvement with local people. Similarly, Chapter 7 recounts how local people worked together to protest and stop both legal and illegal timber extraction in Uganda to protect the habitat of the Angolan colobus, and Chapter 10 takes us beyond the science to explore how local spatial plans are being used to protect proboscis monkey habitat. This gives us hope and provides further evidence for our

important role in the training and empowering of local people to engage in the protection of land and ecosystems so that both primates and humans can thrive.

15.2.3 Review of Part III: Climate Change in the Anthropocene

With the advent of the Anthropocene, and especially in the wake of the ‘Great Acceleration’ (the post-1950, exponential growth in human population and consumption levels), alterations of the planet’s land, oceanic and atmospheric systems interact in complex ways to impact biodiversity (Steffen et al., 2007; 2015). A changing climate produces significant challenges to primates and the researchers who study them. Chapter 11 reviews the effects of human activity with respect to the primate nutritional landscape. In light of agricultural intensification, habitat fragmentation, the introduction of pesticides and pollutants and a changing climate, these experts stress the need for ongoing assessment of the quality and distribution of feeding resources – a fundamental component of primate life. In some cases, as detailed in Chapters 12 and 13, natural disasters have intervened stochastically, providing opportunities to study vital recovery processes within ecological communities, and shifting research agendas along the way. Chapter 14 models habitat requirements (in conjunction with biological characteristics) for different primate genera in an effort to predict the presence of suitable habitats within the context of future climate change. Careful attention to the assumptions and limitations of the research is stressed, but these research efforts can refine our conservation priorities and management tactics. As all of the chapters in this section demonstrate, understanding the key factors and thresholds for primate feeding and nutrition is a complicated undertaking, but one that is of paramount importance.

15.3 Setting an Agenda: Beyond the Anthropocene

One ideological point of debate remains among the editors – is it preferable, or indeed even possible, to return to a time when researchers had the luxury in engage in ‘pure’ behavioural or ecological research? When many of today’s established primatologists entered the field a decade or more ago, most were driven by evolutionary questions centred in the field of behavioural ecology. Initial interests may have been born out of questions such as, how do animals decide what to eat or who to interact with, or when and with whom to reproduce? Should we prove successful in stemming the tide of threats, and manage to provide robust protections to viable populations of primate taxa, it may be possible to return to a more purely research-focused primatology. Indeed, some primatologists may perceive their work to have maintained its evolutionary and behaviourally driven attributes, viewing it as their role to arm conservationists with salient datasets. Some might see this as the desired outcome of our present research/conservation hybridity.

Alternatively, the accumulation of ongoing, anthropogenic influences on primate populations (and our heightened awareness of the present condition) has altered the primatological endeavour fundamentally and permanently. In embracing the Anthropocene, we’ve declared a present where ‘nature’ is shaped and defined by human

activity. Will the future involve an untangling of our entanglements, a selective enhancement or rejection of our management over formerly wild places and species, or indeed an embrace of our multispecies, post-nature relationships and, correspondingly, a shift in what we mean by ‘conservation’ (Lorimer, 2015). What will our research questions and/or our conservation prescriptions look like as a new generation of primatologists embark on studies within a ‘growing array of gray sites’ (Braverman, 2014: 54) – where distinctions between captive and wild animals, or natural and managed behavioural contexts, become less discernible? Our research questions, methods and ethics may very well be altered with these shifts (Palmer & Malone, 2018). The future of primatology will likely involve a plethora of approaches as practitioners work amid more or less intensely human-modified ecological systems.

In this book, we have examined these themes from both a practical and personal perspective. The contributions to this volume demonstrate an ability to balance research and conservation agendas. In some cases, we are presented with evidence suggestive of resilience and the flexibility of certain species to withstand anthropogenic alterations. In others we are confronted with the devastating extent to which human activities threaten the very existence of our study taxa. In both instances, the continued engagement of well-trained, well-resourced teams of researchers and conservationists is paramount. Our field sites and research agendas will undoubtedly be different from primatology’s past, but our primary motivation endures: to understand the evolutionary trajectories and complex ecologies of the fascinating species within the Order Primates, and to ensure that future generations of curious minds have the opportunity to do the same.

References

- Braverman, I. (2014). Conservation without nature: the trouble with in situ versus ex situ conservation. *Geoforum*, 51(Supplement C), 47–57.
- Dore, K. M., Riley, E. P. & Fuentes, A. (eds) (2017). *Ethnoprimatology: A Practical Guide to Research at the Human–Nonhuman Primate Interface*. Cambridge: Cambridge University Press.
- Ellis, E. C. (2015). Ecology in an anthropogenic biosphere. *Ecological Monographs*, 85(3), 287–331.
- Fuentes, A. (2012). Ethnoprimatology and the anthropology of the human–primate interface. *Annual Review of Anthropology*, 41, 101–17.
- Fuentes, A. & Baynes-Rock, M. (2017). Anthropogenic landscapes, human action and the process of co-construction with other species: making anthromes in the Anthropocene. *Land*, 6(1), 15.
- Fuentes, A. & Wolfe, L. D. (2002). *Primates Face to Face: The Conservation Implications of Human–Nonhuman Primate Interconnections*. Cambridge: Cambridge University Press.
- Lorimer, J. (2015). *Wildlife in the Anthropocene: Conservation After Nature*. Minneapolis, MN: University of Minnesota Press.
- Malone, N., Wade, A. H., Fuentes, A., et al. (2014). Ethnoprimatology: critical interdisciplinarity and multispecies approaches in anthropology. *Critique of Anthropology*, 38, 8–29.
- Palmer, A. & Malone, N. (2018). Extending ethnoprimatology: human–alloprimate relationships in managed settings. *International Journal of Primatology*. DOI: 10.1007/s10764-017-0006-6.
- Steffen, W., Crutzen, P. J. & McNeill, J. R. (2007). The Anthropocene: are humans now overwhelming the great forces of nature? *AMBIO: A Journal of the Human Environment*, 36(8), 614–21.
- Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O. & Ludwig, C. (2015). The trajectory of the Anthropocene: the great acceleration. *The Anthropocene Review*, 2(1), 81–98.