

BOOK REVIEW

Savanna Monkeys: The Genus *Chlorocebus* edited by Trudy R. Turner, Christopher A. Schmitt, and Jennifer Danzy Cramer

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We are in the midst of massive changes to natural ecosystems, with most animal species suffering population declines from anthropogenic threats. The order Primates is disproportionately affected by these issues because so many species are arboreal. However, some species maintain their populations under anthropogenic threats, making them good models for understanding adaptation to habitat change. Monkeys of the genus *Chlorocebus* (i.e., savanna monkeys) are some of the most widespread and adaptable primates; thus, population comparisons can reveal how local conditions shape behavioral and biological variation. However, as the editors of this volume point out, research on widely distributed primate genera has disproportionately focused on *Macaca* and *Papio* (i.e., macaques and baboons). To help redress this problem, the editors brought this set of authors together to create a volume consolidating our knowledge of savanna monkeys. The scholars that contributed study various aspects of savanna monkey behavioral ecology, cognition, genetics, and morphology throughout sub-Saharan Africa and the Caribbean, where green monkeys were brought from West Africa more than three hundred years ago.

The book is organized into six parts. The introductory section sets up the intention for the volume and provides a chapter by Anna Jasinska on the biological resources available for genomic investigations within *Chlorocebus*. This is followed by a section on taxonomy that begins with a review by the editors emphasizing the complicated history of savanna monkey taxonomy. Turner, Schmitt, and Cramer also tackle the endless debate about where to draw species and subspecies boundaries when dealing with a widespread, adaptable genus. In chapter four, Wesley Warren and Michael Montague discuss the research potential of the complete vervet genome reference assembly. Cristian Apetrei and coauthors then examine the transmission routes

and prevalence of SIV infections in savanna monkeys, which are natural hosts and show species-specific SIVs. A chapter by Katherine Amato completes this section, describing what is known about the gut and vaginal microbiota of vervet monkeys, highlighting the paucity of data.

The third part of the volume is relatively brief and focuses on population genetics with two chapters. Turner, Schmitt, and Cramer begin with a helpful overview of primate population genetics in general before focusing on savanna monkeys, subdivided by the regions where data are available. This is followed by a chapter by Willem Coetzer and colleagues that more deeply examines the population genetic structure of South African vervet monkeys in relation to topography and suitable habitat.

Part four examines savanna monkey behavioral ecology, again beginning with a detailed review chapter by the editors. The second chapter, by Patricia Whitten, focuses on the socio-ecology of vervets in Samburu, Kenya, where ecological changes led to group fissions and restructuring of group compositions. Subsequently, Brandi Wren contributes a chapter on the link between sociality and parasite transmission in vervets at Loskop, South Africa. Lynne Isbell contributes the fourth chapter, which discusses vervet social responses in Amboseli and Laikipia, Kenya, during times of ecological change and heightened leopard predation. In the last chapter of part four, Erica van de Waal discusses vervet social learning mechanisms and biases in light of innovative experiments that she carried out with colleagues in South Africa.

Part five provides chapters dedicated to savanna monkey life history, again beginning with a detailed review by the editors. Richard McFarland, Peter Henzi, and Louise Barrett then contribute a chapter highlighting their work on thermal competence and fitness-related variables in South African vervets in a seasonal environment. The third chapter in this section, by Lynn Fairbanks, reviews how work with savanna monkeys has shown that genetic variation, early experience, and the current environment determine novelty-seeking behaviors. Maryjka Blaszczyk continues in this theme and

discusses her work on measuring novelty-seeking in wild vervets in regard to personality research. The final chapter in part five, by Rafael Rodríguez and colleagues, considers causes of variation in the static allometry of morphological structures in vervet monkeys, with a focus on male genitalia.

Finally, part six of the volume focuses on savanna monkeys through an ethno-primatological lens. As in the other sections, this one begins with a useful review by the editors. Next, Kerry Dore discusses the complicated history and current situation of green monkeys in the Caribbean. The final chapter of this section, and of the book, by Matt

Sponheimer and coauthors, is a study comparing stable isotope values of vervets, green monkeys, and chimpanzees in areas of high and low anthropogenic disturbance.

This volume is a must for researchers studying any species of *Chlorocebus* because it neatly sums up prior research on the genus. Hopefully, it will encourage more research on savanna monkeys because they still have much to teach us about how variation in local environments can alter biology and behavior, in addition to furthering our understanding of how some nonhuman primate species can adapt and thrive, despite anthropogenic threats.