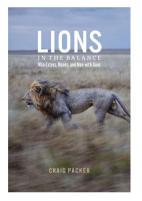
The Messy Work of Saving Lions

Lions in the Balance: Man-Eaters, Manes, and Men with Guns. Craig Packer. University of Chicago Press, 2015. 346 pp., illus. \$35.00 (ISBN: 9780226092959 cloth).

he Serengeti ecosystem in northern Tanzania is fixed in the minds of many as a pristine sea of grass harboring vast herds of wildebeests, zebras, and antelopes, relentlessly stalked by the lions, leopards, and hyenas that prey upon them. Perhaps no scientist has contributed more to the public's understanding of this savanna habitat than Craig Packer, whose decades of research on its lions have been chronicled and shared in dozens of popular videos and magazine articles. Packer, a professor of ecology, evolution, and behavior at the University of Minnesota, has been an inspiration to other scientists and to the public. Indeed, in February 1995, when I landed in Nairobi to begin my own PhD research, I had learned most of what I knew about the challenges of research in East Africa from Packer's 1994 book, Into Africa.

In his latest book, Lions in the Balance: Man-Eaters, Manes, and Men with Guns, Packer has a different story to tell. In 1994, he focused on the science and the challenges of getting it done. How, for example, does one transport a dozen beef hearts for hundreds of miles in tropical temperatures with unreliable refrigeration so that they can be used to deliver deworming medication to lions? It was a candid, behind-the-scenes look at what it takes to actually make research happen. Twenty years later, Packer is focused on a different practical concern-but a much more challenging, dangerous, and consequential one: How can wild lion populations be maintained in a country with rapid human population growth, widespread corruption, and unfenced natural areas populated by dangerous and valuable animals?

The book opens in 1999 with Packer, his wife, and their Nairobi hosts being awakened in the night by men with guns who menace them and steal their cameras, cash, and passports. Men with weapons-guns and spears-continue to play prominent roles in the rest of the book as Packer describes his experiences working with-and against-the trophy-hunting industry and its corrupt beneficiaries in Tanzania. Suffice it to say that the benefits and costs of trophy hunting go far beyond what Americans learned from the killing of Cecil the Lion in Zimbabwe, and Packer is an excellent guide.



A license to kill a lion in Tanzania costs tens of thousands of dollars, money that is meant to support conservation and to compensate local people who live with the risks that lions pose to their livestock, their children, and themselves. Packer describes terrifying scenes of lions in southern Tanzania entering people's houses and snatching victims from inside, a peril particularly common in seasons when wild food is scarce. If hunting were well managed, the financial benefits for conservation could outweigh the loss of lion lives. What would well-managed hunting look like? Karyl Whitman, a graduate student of Packer's, developed a mathematical model that showed that lion hunting was sustainable as long as males were not killed before 6 years of age. Furthermore, Whitman, Packer, and their team developed a handy and easy way for hunters—and their guides—to determine the age of a male lion just by looking at its nose. Much of the first half of the book describes Packer's efforts to convince the hunting companies and Tanzanian bureaucrats to abide by this age limit.

As a scientist, I was struck most by Packer's courage while reading his account. Bravery may seem a quality one would expect in a lion specialist, but the courage on display here is far different from what is needed in a typical day of savanna fieldwork. Packer is willing to let us see his mistakes, political and strategic, and to appear naive as he becomes more and more invested in trying to reconcile the lives of lions with those of the humans they hunt and that hunt them. As Packer works to ensure the responsible hunting of lions, he becomes more and more aware of the magnitude of corruption in the hunting industry, aided and abetted by its chief regulators in Tanzania. By the second half of the book, he is both more frustrated and more realistic. But some successes happen. In the last weeks of 2015, the US Fish and Wildlife Service listed the lion as an endangered species, allowing the government to refuse to allow the importation of lion trophies. Packer's part in making this happen is described in the book.

There is certainly science in the book in addition to the lion politics. Packer describes research on savanna food webs using wildlife cameras and a global network of citizen scientists, and he explains how giant stuffed toys can be used to decipher the consequences of variation in mane color. Packer also dispels some common myths about lions, including the notion that the females do all of the hunting and that they are bad mothers. But the majority of the book is personal and political. Packer names names and recounts conversations-fearlessly and mercilessly. The Tanzanian director of wildlife and his staff are compared to the mafia, and there are secret recordings, menacing meetings, international assaults, and nighttime knocks on hotel room doors. When that director is fired, his successor is likened to a weasel, who served as the "slushfund manager and delivery boy" for his predecessor. Many of the hunters come off poorly as well. In one memorable scene, Packer meets with Steve Chancellor, a multimillionaire, lion hunter, and lifelong Indiana resident, at his mansion in Evansville. Packer is given a tour of Chancellor's private museum, which houses 1050 stuffed

trophies of 385 species, including over 50 lions, several elephants, 10 leopards, a number of crocodiles, and a couple of rhinos. Chancellor recounts that he likes to bring school groups to visit the animals in his museum, where they are arranged in naturalistic groupings—so much better than seeing them in a zoo (except that they are dead).

In the end, Packer's efforts at policy and management have changed the course of his science—and his life—in ways that remain for readers to discover. The book is not without its organizational quirks, and Packer's account reveals a strong personality. I am sure that many of the subjects of his stories would appreciate a chance to tell their versions of events. But readers of this book will have a frontrow seat on the real, messy, and merciless business of conservation, and I doubt anyone who finishes the book will ever think of African savannas as quite so pristine again.

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