

Michael and Patricia Fogden



*The Asian green vine snake is an especially slender species that grows up to six feet in length.*

pected snake in the path, easily stepped around, is so often killed, a reification of our fear and ignorance. Greene is keenly aware of the symbolic nature of his subject and is able to intermingle this understanding with rigorous scientific fact, so that each way of knowing illuminates the other. In *Snakes*, Greene has combined, in one place and at one time, a massive compendium of snake biology, an explication of snakes and society, and a moving account of his own life's journey.

*Snakes* is organized into three parts that treat the biology of snakes topically, taxo-

# Snakes and the Evolu

By Kurt Schwenk

*Snakes: The Evolution of Mystery in Nature*, by Harry W. Greene. Photographs by Michael and Patricia Fogden. University of California Press, \$45; 351 pp., illus.

## Review

I can think of no better way to capture the essence of this astonishing book than to relate a simple fact: twice while reading it, I was moved to tears. How can a scholarly treatise on the biology of snakes evoke such a response? The answer has something to do with the masterful way Harry Greene, a curator of herpetology at the Museum of Vertebrate Zoology and professor of integrative biology at Berkeley, blends an encyclopedic knowledge of snake natural history with extensive personal experience and insight. And it has something to do with snakes themselves, which for Greene have served as "personal icons of danger, of life and death," guiding his path since childhood.

For many of us, snakes are metaphors for the profound ambivalence we feel toward the natural world. Although we might fear and loathe them, we are drawn to snakes because in their glassy eyes we see mirrored our own duplicity, our own violent intent. Thus it is that the unex-

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*The eyelash pit viper, distinguished by a chunky body and paired infrared-sensing pits between its nostrils and eyes, moves between the ground and the canopy to prey upon frogs, lizards, bats, and birds.*

nomically, and in overview. An appendix explains lucidly for the lay reader some of the more technical aspects of biological systematics. Each chapter begins with an introductory essay, which establishes a unifying theme; the themes are later synthesized within a concluding epilogue. Most chapters have “special topic boxes,” which treat particular subjects in some detail. The introductory essays and the special topics are, perhaps, the greatest strength of the book because they most clearly manifest Greene’s personal style. The prose is highly readable and acces-

sible to all interested naturalists. Professional biologists will mine this book for its wealth of original scholarship. I found myself stopping constantly to jot down notes for later reference in my own research. There is something here for everyone, however, because Greene uses snakes as a platform for general discussions about biodiversity, ecology, and evolution.

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The book is richly illustrated with color photographs taken by renowned nature photographers Michael and Patricia Fogden. A Peringuey’s adder buries itself in the sand of a vast desert landscape. The silhouette of an Asian green vine snake is revealed through the sunlit leaf on which it rests. These images convey so much more than the outward appearance of a given species. Like the text, the photographs transcend the false dichotomy of scientific objectivity and aes-

thetic subjectivity to proclaim the beauty of snakes in their own environments. Although well known for his many scientific contributions, Greene is also an accomplished and committed educator. His concern for teaching at all levels is evident throughout the book. When we first met at Berkeley in 1978, I was a new graduate student, and Greene was a new assistant professor. Our common interest in reptiles drew us together, and during our conversations, his gift as a teacher became apparent. He listened to my nascent ideas—no matter how naïve—and con-

sidered them with the same attention accorded those of a distinguished colleague. I have seen him treat with equal respect children, undergraduates, and the public at large. This validation nurtures self-confidence and inculcates students with the understanding that they, too, have something to contribute. I have aspired to this simple quality in my own teaching. Greene is the quintessential field biologist, and his experiences in the field are the strongest parts of the book. I had the good fortune to accompany him on many trips to the Mojave Desert—for me, profoundly educating breaks from the lab during my graduate years. One crystalline, still morning in Darwin Canyon, our attention was drawn to the wildly swaying branches of a creosote bush. There, climbing easily, if not gracefully, among the overburdened twigs, was a large lizard, an adult chuckwalla, gorging on a spring delicacy of yellow flowers. As any ecologist will tell you, chuckwallas are strictly rock and crevice dwellers and are assuredly not arboreal. Yet animals do unexpected things in nature, and this is a theme Greene returns to throughout the book. Fossorial blind snakes climb trees, and yellow-bellied sea snakes drift on the ocean with the plankton. DNA tells us nothing of these things,

nor can laboratory studies predict them. A complete understanding of evolution and adaptation requires context, and, as Greene asserts, only direct observations of the organism in the field can provide it. Through his extensive field experience, Greene is able to share this context and so enrich us. Only Harry Greene could have written *Snakes*; it bears the unique imprint of his life and career. It therefore seemed ironic that he opened the book with a self-deprecatory anecdote. He recounts a 1993 meeting with Norman MacLean (author of *A River Runs Through It*), in which MacLean urged him to write about what he knew. The meeting, for Greene, was somewhat of a disappointment: “It took several years to abandon my earlier pretensions, admit that I was unable to say much about more personal matters, and appreciate the wisdom of his advice.” But in writing about what he knows best, Greene’s voice is intensely “personal,” and therein lies the triumph of this book.

Kurt Schwenk, an associate professor of ecology and evolutionary biology at the University of Connecticut, researches the functional morphology of lizards and snakes and the evolution of their feeding and chemosensory systems.



Harry Greene, left, with a colleague and a speckled rattlesnake

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