

## Vertebrates in Venezuela

**Vertebrate Ecology in the Northern Neotropics.** JOHN F. EISENBERG, Ed. Smithsonian Institution Press, Washington, D.C., 1980. 272 pp., illus. Cloth, \$17.50; paper, \$8.95.

Little is known of the natural history of South America; this is even true in the case of mammals and birds. In fact, about as much is known of the fossil mammals of South America as is known of its living species. It therefore is of great interest that a book on the vertebrate ecology in the northern neotropics has been published.

This book is another of a series sponsored by the National Zoological Park. Contained within it are 17 papers as diverse in topic as a description of the vegetation of the llanos of Venezuela, a description of two new species of mouse opossums, a list of the birds on a ranch in central Venezuela, and a description of the activity patterns of caiman. Several of the papers are especially noteworthy. R. M. Wetzel and E. Mondolfi provide a taxonomic review of armadillos of the genus *Dasypus*. Their redescription of *D. pilosus* from the highlands of Peru raises the question why this species has a fur coat long enough to cover its carapace, whereas other high-altitude or temperate-zone armadillos are nearly naked. These authors also show that small species of this genus occur both north and south of the Amazon basin; a study of the chromosome morphology and serolo-

The book review editor is attempting to make a collection of writings about the reviewing of scholarly books, and particularly scientific ones. Any references readers can provide to such writings would be appreciated.

gy of these species may tell us whether they are closely related or are convergent. M. A. O'Connell describes the influence of seasonality on the population density, longevity, and reproduction of six species of didelphid marsupials. She questions the view that marsupial reproduction is an adaptation to seasonal uncertainty. R. Rudran examines the demography and social mobility of howler monkeys and suggests that the principal cause of mortality was infanticide. At least 40 percent of infant deaths in this population resulted from this behavior. It normally occurred after a male invaded an established troop. Rudran believes infanticide to be an important regulator of (many?) primate populations. J. G. Robinson reports that urine washing in the capuchin monkey occurs with greatest frequency during periods of high temperature and low humidity; he suggests that this behavior may have its greatest significance in temperature regulation. C. A. Brady in a study of the crab-eating fox shows a dramatic shift in diet between the wet season, when the diet consists mainly of in-

sects, and the dry season, when it consists mainly of vertebrates and land crabs. Even though the members of a pair hunt together, they were not observed to hunt cooperatively. D. G. Kleiman, J. F. Eisenberg, and E. Maliniak demonstrate that there is much variation in the reproductive parameters of caviomorph rodents beyond that attributable to body mass. The factors responsible for this residual variation will be clarified only with further studies of this fascinating group.

In spite of the quality of these contributions, I have two complaints about this book. A minor one concerns its overly broad title. The northern neotropics presumably include everything north of the Amazon basin to central Mexico, but most of the observations reported in the book were made on one ranch and in one national park in Venezuela. More important is the question whether the editors and sponsors have chosen the best way to disseminate this material. Given the lack of intellectually unified themes, such as have been successfully tackled by the National Zoological Park in their books on arboreal folivores and marmosets, would not such specialized papers get better visibility by being published in specialist journals? Nevertheless, the publication of the work contained in this volume is a valuable contribution to our understanding of the most interesting continent—South America.

BRIAN K. McNAB

Department of Zoology,  
University of Florida,  
Gainesville 32611



"In a meeting of major biomass components of the llanos ecosystem, a caiman and a capybara eye each other." [From *Vertebrate Ecology in the Northern Neotropics*]

## Peruvian Prehistory

**Prehistoric Hunters of the High Andes.** JOHN W. RICK. Academic Press, New York, 1980. xxii, 362 pp., illus. \$27.50. Studies in Archaeology.

In the best tradition of Peruvian archaeology, Rick gives us a simple hypothesis, boldly defended: year-round sedentism in preceramic times on the puna of Junín, based primarily on vicuña hunting. There is also a secondary hypothesis, less well developed but deserving of further elaboration, relating projectile point types and styles to makers who identified themselves with particular hunting bands. Along the way, Rick provides a complete and exemplary report on his excavations.

Most surviving hunter-gatherers that have been studied live in marginal or un-