

BOOK REVIEWS

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Lim, N. 2007. *COLUGO: THE FLYING LEMUR OF SOUTH-EAST ASIA*. Draco Publishing, National University of Singapore, Singapore, 80 pp. ISBN 981005-6454-6, price (paper), \$25.20.

The persistent decline in educational opportunities and funding for descriptive organismal research, including the demise of mammalogy courses at many North American institutions, has been well documented (Greene 2005). In tropical regions, where most species are poorly known if described at all, a few scientists have sustained the flow of natural history data by training corps of parataxonomists to document tropical biodiversity (Basset et al. 2004). Unbeknownst to many Western readers of technical journals, however, biological institutions in tropical countries have been training students in natural history and publishing their research for local consumption. While conducting field research in Malaysian Borneo for my dissertation, I whiled away many an hour waiting for immigration and research permits by perusing the natural history books in Kota Kinabalu's 2 bookstores. Reprints of colonial memoirs accounted for a substantial portion of volumes on sale, but during my 3 field seasons I witnessed substantial growth in the number of biological monographs and technical-popular hybrids from local authors. *Colugo: The Flying Lemur of South-East Asia* by Norman Lim is exemplary of this latter form, combining novel scientific results with colorful commentary and background information to produce a relevant volume of wide interest.

The most striking aspects of the book, adapted from Lim's undergraduate thesis at the National University of Singapore, are the stunning full-page photographs of kitelike colugos (order Dermoptera) launching, landing, and gliding through the canopy. These photos will justify the purchase price for most enthusiasts of Sundaland mammals, because colugos are difficult to observe in most parts of their range (I saw only a single individual in a tree on my very 1st night at the Danum Valley Field Centre in northeastern Borneo, although I spent more than a year there). Colugos achieve perhaps their highest population density in the remaining rain-forest fragments of Singapore where this study was conducted, but these photographs also testify to the author's dedication to observing colugo behavior in the field.

The book's 9 chapters adequately place the colugo in a greater biological and taxonomic context (Chapters 1 and 2), describe the colugo's extreme adaptations for gliding (Chapter 3) and the difficulties inherent in studying them (Chapter 4), their geographic range (Chapter 5), and the basic natural history observations that define the colugo's niche and ethos (activity patterns, Chapter 6; diet, Chapter 7; reproduction and social organization, Chapter 8). The final chapter is perhaps the most valuable, because the author proposes a series of small studies that could realistically be completed by either Master's (or precocious undergraduate) students in Singapore or regional conservation groups. By pointing out that volunteers in Singapore's parks have adopted the colugo as their uniform

logo, the author also shows that research focused on charismatic species can rally public support for conservation efforts in tropical countries. Lim's review in Chapter 5 of historic and contemporary occurrence records indicates that large areas of the geographic range of colugos presented in field guides are tenuous at best. Excluding the Malay peninsula, many areas in mainland Southeast Asia have not produced reliable sightings of colugos in years.

This book does have some limitations and would have benefited from more stringent editing for scientific content. The author occasionally lapses into speculation about the evolutionary history of traits of colugos without appropriate citations, such as the claim in Chapter 2 that neuroanatomical similarities between colugos and primates are obscured by constraints on brain development in colugos resulting from a folivorous diet. Although generally well researched, the text omits some of the most recent genetic results on the evolutionary relationship between colugos, primates, and treeshrews (e.g., Schmitz et al. 2005), the 3 orders comprising the Euarchonta. The omission of treeshrews is curious because colugos and treeshrews are sympatric throughout their entire range, and treeshrews have recently been the subject of a major natural history study that could serve as a model for future research on colugos (Emmons 2000). One could also question whether findings from a dense population of colugos inhabiting urban rain-forest fragments will be applicable to other populations of colugos.

Overall, this book is a welcome addition to the scant literature on colugos and is worthy of inclusion in the library of any tropical mammal enthusiast. Unfortunately this book and others like it are easily purchased only in their countries of origin, but efforts are underway to increase international availability. As these natural history titles become available at the Singapore airport and other sites where potential tourists will encounter them, one can predict that these books will play an important role in bolstering ecotourism and appreciation of biodiversity among visitors and local communities. *Colugo* is a great example of the kind of book that will work for these efforts, and provides a model for student-driven research and publication in Southeast Asia or elsewhere.—JASON MUNSHI-SOUTH, *Department of Natural Sciences, Baruch College, City University of New York, 17 Lexington Avenue, New York, NY 10010, USA; e-mail: jason_munshi-south@baruch.cuny.edu.*

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