

## At Long Last, an Authoritative Guide to the Mammals of Indochina

**A Guide to the Mammals of Southeast Asia. By Charles M. Francis. Princeton: Princeton University Press. 2008. 392 pp., \$55.00 (cloth). ISBN 978-0-691-13551-9.**

Jacob A. Esselstyn

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The Indochinese mammal fauna is staggeringly diverse, at nearly 500 species and counting. The systematics and biogeography of this diversity can be confusing due to the sheer magnitude of the fauna, abundant ambiguities in species delimitation, and the fact that even small-scale biodiversity inventories often uncover new species—not all of which are cryptic. For instance, the recent discovery of the Laotian rock rat or Kha-Nyou (*Laonastes aenigmamus*) in local markets of central Lao PDR (Jenkins et al. 2004) provides some indication of how little we really know about this fauna. Perhaps because our understanding of regional diversity is still developing, researchers and connoisseurs of Southeast Asian mammals have long suffered without a comprehensive guide to Indochinese mammals. Charles M. Francis, along with a team of artists, has endeavored to rectify this situation, with the publication of an illustrated guide to the diversity, distribution, and natural history of mainland Southeast Asian mammals. Francis' guide includes information on all species known from Myanmar, Thailand, Laos, Vietnam, Peninsular Malaysia, and Singapore, and provides an extremely useful resource to researchers and naturalists alike.

The book begins with a brief introduction that includes subsections covering the basics of what mammals are, how they are classified and named, and how to best identify them. This is followed by a description of how information in the remainder of the book was gathered or generated, and how it is presented, including morphometric descriptions, color plates, distributional maps, and skull drawings. Next,

Francis provides a brief section on “Finding and studying mammals,” which details techniques for observing, trapping, and collecting mammals. In addition to the standard techniques, descriptions of some less familiar methods, such as the use of harp traps and bat detectors, are included. Perhaps unusual to a guide of this nature is the section on identification by DNA sequences, or barcoding. From my perspective, Francis takes a somewhat optimistic view of what can be accomplished with barcoding, at least at the scale with which it is currently being undertaken (i.e., species-level identification with the sequence of a single locus). Fortunately, this description is followed with the necessary caveats explaining why traditional museum specimens remain a vital component of modern biodiversity studies.

As with any guide relying on multiple artists, there is variation in the quality of the color plates. The murid rodents, shrews, and primates are beautifully presented. Most bats with which I am familiar are attractive and accurately illustrated. Unfortunately, some of the region's most beautiful mammals are poorly done, including the colugos, lorises, and squirrels. These plates leave much to be desired—they are generally blurry with muted colors. Nevertheless, even the lowest quality illustrations will aid naturalists in the identification of wild mammals.

Distributional maps are presented on pages facing the color plates. The maps are easy to read at a glance and display the suspected range of species. However, I would have preferred to see vouchered point localities presented here—this would prove more useful, at least to the researcher. Unfortunately, as presented it may prove difficult to decipher the sources for the maps, because each will incorporate a unique combination of available data.

Individual species accounts follow the color plates. The text here is clearly written and easy on the eyes. Species

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J. A. Esselstyn (✉)  
Biodiversity Institute and Department of Ecology  
and Evolutionary Biology, University of Kansas,  
1345 Jayhawk Boulevard,  
Lawrence, KS 66045, USA  
e-mail: esselsty@ku.edu

accounts are arranged phylogenetically, but some antiquated taxonomy, such as the use of “Insectivora,” is followed. Orders, families, and some genera are introduced with brief sections intended to facilitate recognition of the group and provide general ecological and distributional information. Individual species accounts include the subheadings of “Identification,” “Similar species,” “Ecology and habitat,” and “Distribution and status.” When appropriate, “Taxonomic notes” is added. Overall, these accounts are thorough and dense, providing a wealth of natural history information. Line and stippled drawings of the skulls, dentition, feet, tracks, and ears of many species accompany the accounts—most were not drawn for this book, but rather were borrowed from a variety of published sources. Thus, there is substantial variation in quality, from those of little use (e.g., *Crocidura attenuata*: fig. 21, p. 186) to those of outstanding quality (e.g., *Crocidura kegoensis*: fig. 22, p. 187). Despite the variation in quality, I am very pleased to have ready access to so many skull and foot drawings in one book. With an eye toward the future, Francis also provides information on the echolocation call frequencies for numerous *Rhinolophus* and *Hipposideros*. These data are not comprehensive, but will likely prove very useful to bat researchers, as an aid to identification in two groups with extraordinarily complex taxonomy and challenging species delimitation.

Given the frequency of taxonomic changes and descriptions of new species from Indochina (e.g., Jenkins et al. 2009), completing a book of this scope would be challenging, and it would necessarily be somewhat dated by the time it is published. Francis managed to include some species described as recently as 2007 (e.g., *Kerivoula titania*, Bates et al. 2007), but not others (e.g., *Murina tiensa*, Csorba et al. 2007). An occasional update to the

guide, including illustrations and accounts of newly discovered species, would be most welcome.

As stated in the introductory chapter, Francis’ goals were to provide an aid to the identification of Southeast Asian mammals, for both the researcher and naturalist, and to improve awareness of the region’s diversity. In these objectives, the book succeeds wonderfully. Its shortcomings are trivial—its strengths great. This book has already proven very useful in my research and I anticipate relying on it for many years to come. Without it, sources of information would be scattered widely and difficult to find. As heavily as I use it, along with his guide to the mammals of Borneo (Payne and Francis 1985), I am hopeful that Francis will soon generate similar texts on the mammalian faunas of Sumatra and Java.

## References

- Bates PJJ, Struebig MJ, Hayes BD, Furey NM, Mya Mya K, Thong VD, Tien PD, Son NT, Harrison DL, Francis CM, Csorba G (2007) A new species of *Kerivoula* (Chiroptera: Vespertilionidae) from Southeast Asia. *Acta Chiropterol* 9:323–337
- Csorba G, Thong VD, Bates PJJ, Furey NM (2007) Description of a new species of *Murina* from Vietnam (Chiroptera: Vespertilionidae: Murininae). *Occas Pap Mus Texas Tech Univ* 268:1–9
- Jenkins PD, Kilpatrick CW, Robinson MF, Timmins RJ (2004) Morphological and molecular investigations of a new family, genus and species of rodent (Mammalia: Rodentia: Hystricognatha) from Lao PDR. *Syst Biodivers* 2:419–454
- Jenkins PD, Lunde DP, Moncrieff CB (2009) Descriptions of new species of *Crocidura* (Soricomorpha: Soricidae) from mainland Southeast Asia, with synopses of previously described species and remarks on biogeography. *Bull Am Mus Nat Hist* 331:356–405
- Payne J, Francis CM (1985) *Field Guide to the Mammals of Borneo*. Sabah Society, Kota Kinabalu