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## Los coquís de Puerto Rico: su historia natural y conservación

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Los Coquis de Puerto Rico: Su Historia Natural y Conservacion. [The *Eleutherodactylus* of Puerto Rico: Their Natural History and Conservation], by Rafael L. Joglar. 1999. Editorial de la Universidad de Puerto Rico (San Juan, Puerto Rico, 00931-3360, USA; fax 787-751-8785). 232 pp. Hardcover. US \$34.95 + postage. ISBN 0-8477-0332-0.

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As the title indicates, this well-illustrated (115 photographs and 76 illustrations) book summarizes the current knowledge about the natural history of the 16 species of Eleutherodactylus inhabiting Puerto Rico. The book consists of eight chapters (including the epilogue) and it is clearly stated that it was written to serve both the scientific community and the nonspecialist reader. The goal of bridging these two audiences is ambitious and usually difficult; however, the book has probably accomplished this goal. The technical reader, i.e., students and professional herpetologists, will find a good summary of data and enough information to continue reading with interest. On the other hand, the nonspecialist reader will not be overwhelmed with technicalities and terminology beyond their reach. Indeed, it is the clear writing for a general audience that gives this book strength; furthermore, this will make the book a good general reference. The latter is important because this anticipated wide use could influence, for years to come, the general public and their approach to the island's environmental and conservation problems.

Chapter 1 serves as an introduction not only to the "world of coqui frogs" but to amphibians in general. The next three chapters represent species accounts for each of the Puerto Rican species of Eleutherodactylus. These accounts are most extensive for two species, E. coqui (Common Coqui, chapter 2) and E. cooki (Guajon or Puerto Rican Demon, chapter 3), the remaining 14 species of Eleutherodactylus are included in chapter 4. The more extensive focus on E. coqui and E. cooki probably results from the author's personal experience and the fact that more information has been accumulated over the years for these two taxa. However, all species accounts include a species description providing details of size, coloration, and morphology. References are given to additional illustrations of these species, and similar species are noted. Following the species descriptions are brief sections on distribution (with clearly-plotted maps) and natural history. The latter consists of data on habitat, behavior, reproduction, call characteristics, egg clutches, development, and other topics. The information on natural history is not uniform across taxa due to a lack of relevant data for several species. The gaps evident from these accounts could serve to guide students in the directions needed to further our knowledge of the basic biology of these species. The penultimate section includes recommendations on conservation and a summary of the current legal status of each species. I found this to be a unique and valuable contribution to the book. In particular it is very informative with respect to observed fluctuations in species populations, past conservation efforts, and responses to these efforts (mostly none!). Each species account ends with a brief section on systematics and nomenclatural history that will be of interest to the technical reader.

The remaining half of the book (chapters 5–7) is an overview of the ongoing research efforts to understand the biology of *Eleutherodactylus* species in Puerto Rico. Chapters 5 and 6, especially, present a variety of information collected by the author's research team over the last decade on species ecology, behavior, demography, conservation, and the effect of natural events (such as Hurricane Hugo) on natural populations. Although the data in these chapters may be of more interest to professional herpetologists and conservationists, it is presented clearly and should also be accessible to the non-specialist reader.

The final chapter, the epilogue, focuses on presenting the nonspecialist reader with an overview of the current environmental crisis and the responsibility that humans have in this crisis. This effort to educate the public is important and should never be dismissed or ignored.

A shortfall of the book is the lack of dichotomous keys to identify the species of *Eleutherodacytlus*. We are told at the beginning that this lack is a conscious effort to avoid the collection and handling of *Eleutherodactylus* for non-scientific or educational purposes. However, dichotomous keys would be a useful addition for the professional audience. Furthermore, if the idea is to protect critical populations and species, then I see a much greater danger in providing distributions maps with detailed plotting of previous collections.

In summary, the book is a welcome addition that brings together a good mixture of new data on the biology of Puerto Rican *Eleutherodactylus* and summary accounts of the status of each species. The book will be an excellent addition to the library of any professional or non-specialist reader interested in Puerto Rican frogs and natural history.