Kwet, A., R. Lingnau, and M. Di Bernardo†. 2010. **Pró-Mata: Anfíbios da Serra Gaúcha, Sul do Brasil – Amphibien der Serra Gaúcha, Südbrasilien – Amphibians of the Serra Gaúcha, South of Brazil.** 148 pp.; 200 figures. 2nd Edition, revised and enlarged; Brasilien-Zentrum de Universität Tübingen, Tübingen, Germany, and EDIPUCRS, Porto Alegre, Brazil.

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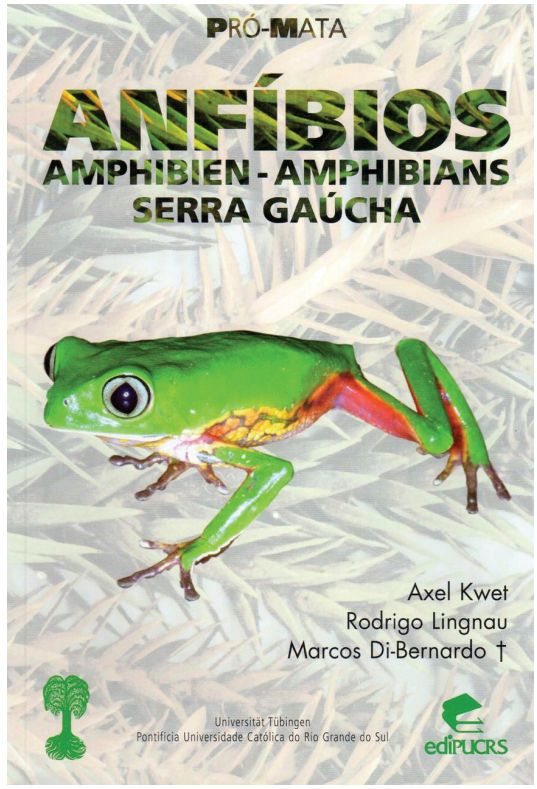

Pró-Mata is a large, 4500-ha reserve on the volcanic plateau of the southernmost Brazilian state of Rio Grande do Sul. The Pontifical Catholic University of Rio Grande do Sul (PUCRS) established this reserve in 1996 to protect remnants of Araucaria forests and to encourage scientific research in this unique habitat. The first field guide on the amphibians of Pró-Mata was published in 1999 by Axel Kwet (PhD candidate, University of Tübingen) and Marcos Di Bernardo (Professor of Zoology, PUCRS Porto Alegre). The field guide, containing photos and biological data for 37 species of living amphibians, was published in English, German, and Portuguese. Shortly after its publication, the book became a standard reference work; owing to the lack of amphibian field guides for the rest of Brazil, it was used by biologists and nature lovers not only in the Pró-Mata reserve, but also in the rest of southern and southeastern Brazil. It probably inspired similar guides that were published later—e.g., the English-Portuguese book on amphibians from the Serra do Cipó (Eterovick and Sazima 2004), as well as other field guides for the Pró-Mata Reserve—e.g., Insects of the Brazilian Pine (Mecke 2002) and Lichens of the Araucaria Forest of Rio Grande do Sul (Fleig *et al.* 2008).

The first edition of the amphibian guide went out of print in 2009, and in June 2006, co-author Marcos Di Bernardo passed away. His last PhD student, Rodrigo Lingnau, having acquired an impressive knowledge of amphibians in the course of several years of fieldwork in the states of Rio Grande do Sul and Santa Catarina, joined forces with Axel Kwet to update the data contained in the first edition and include an additional 19 species.

The geographic area covered by the second edition is no longer limited to the Pró-Mata Reserve. Instead it comprises about 500 km² of Araucaria forest, Atlantic rain forest, and open grassland. The photographs in the second edition are of much improved quality. The frogs seem much brighter than in the first edition, in which several images look somewhat pale. For some species, all photos have been replaced. A female *Rhinella icterica* was illustrated on page 13 in the first edition only in dorsal view and light conditions of the photo were not optimal. In the second edition, there is a much better photo of a

female in lateral view. In a few cases, no recent photos have been included (e.g., *Scinax* cf. *aromothyella*, *S. squalirostris*, *Hylodes meridionalis,* and *Proceratophrys bigibbosa*).

The main part of the book is dedicated to accurate species accounts of the frogs and toads including data on male and female sizes, primary diagnostic characters, and natural history information (e.g., reproductive mode, clutch size and bioacoustics). Every species account is accompanied by a set of three photos, showing in most cases a male and a female, as well as characteristics used for species identification such as belly coloration, or amplectant pairs, and calling males.

The species accounts are followed by a key to the identification of the adult anurans of Pró-Mata. The key in the first edition was used regularly by students from many universities. It is unfortunate that the authors did not include all of the 19 additional species in the key, thereby extending its geographic coverage. However, the only species added to the key is *Phyllomedusa distincta*. Although the key still is an excellent tool with which to identify frogs, it is limited to the species found at the reserve plus one other that occurs in the nearby Floresta Nacional (*Melanophryniscus cambaraensis*).

In some species accounts, the fact that the guide now covers an area much greater than just the Pró-Mata Reserve could lead to some confusion. The first edition dealt with anurans of the Pró-Mata Reserve and included four species that had been recorded nearby; it was clear which species occurred inside the reserve and which species only outside. However, some of the 19 additional species in the second edition are new records for Pró-Mata (e.g., *Phyllomedusa distincta*), whereas others are species known from the Serra Geral region. For some anurans as *Dendrophryniscus krausae,* the authors explicitly state that the species is not found inside the reserve, but for others, this information is missing. For example, the account of *Rhinella henseli* lacks any information as to whether the species occurs within Pró-Mata or not; however, the reader might deduce that *R. henseli* does not occur in the reserve, because in the introduction to the family Bufonidae, the authors observe that only *R. icterica* is found in the reserve.

Vernacular names are added to only a few of the species accounts. This is the case in the frog *Physalaemus cuvieri,* whose call resembles a barking dog, and thus is named "rã-cachorro"; likewise, *Hypsiboas faber*, a species whose call is similar to the hammering of a blacksmith, is called "sapo-martelo." The authors do not cite the authorities of these vernacular names, and in some cases, the names used by other authors (e.g., Haddad *et al*. 2008) do not match the names used in this book. Thus, *Melanophryniscus cambaraensis* is referred to as "Sapo-verde-de-barriga-vermelha" in the Pró-Mata Guide, whereas it is termed "Sapinho-verde" by Haddad *et al.* (2008). Despite having a black dorsum, *Melanophryniscus atroluteus* also is called "Sapo-verde-de-barriga-vermelha." Some species contained in this guide have well-established vernacular names that could have been included in the species description, such as "perereca-castanhola" for *Itapotihyla langsdorffii* or "perereca-das-folhagens" for *Phyllomedusa distincta*.

Hypsiboas faber is described as being the largest tree frog in the region, with females reaching a snout–vent length of 100 mm, but the same maximum length is cited for female *Itapotihyla langsdorffii*.

Although the distributional data are accurate for nearly all species, the known distribution is a bit larger than indicated for some species. For example, the range of *Hypsiboas faber* is described as "widely distributed in southeastern and southern Brazil, also in Misiones (Argentina) and eastern Paraguay." In fact, the distribution is even wider, extending to the state of Bahia in northeastern Brazil.

The nomenclature is current and follows most of the recent changes proposed by Frost *et al.* (2006). An exception is *Adenomera araucaria*, which Frost *et al.* (2006) placed in *Leptodactylus* (*Lithodytes*); the authors of this guide preferred

to maintain the genus *Adenomera*. The taxonomic identity of *Leptodactylus latrans* (*L. ocellatus* in the first edition) should be treated carefully, because Lavilla *et al.* (2010) designated a neotype from Teresópolis, State of Rio de Janeiro; thus this species currently is restricted to its type locality. Other populations outside of Rio de Janeiro, which were thought to be *L. ocellatus* prior to the publication of Lavilla *et al.* (2010) may represent *L. latrans* or an undescribed species.

However, these minor shortcomings are debatable and should not detract from the excellent quality of this field guide that I consider a must for all field herpetologists and nature lovers who plan to visit the Brazilian Araucaria forest and its surroundings.

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