

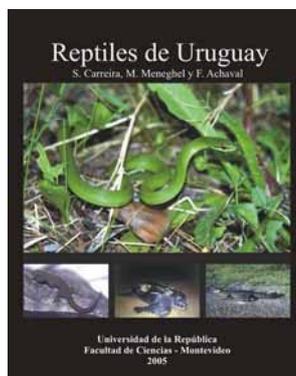


The untold story on the ecological and phylogenetic complexity of the Uruguayan reptile fauna

DANIEL PINCHEIRA-DONOSO

Evolutionary & Behavioural Ecology Research Group, School of Biosciences, University of Exeter, Streatham Campus, Exeter, EX4 4PS, Devon, United Kingdom;

E-mail: D.PincheiraDonoso@exeter.ac.uk



Carreira S., Meneghel M. & Achaval F. (2005) *Reptiles of Uruguay*. Universidad de la Republica, Facultad de Ciencias, Montevideo, 637 pp.

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Differential regimes of natural selection resulting from environmental complexities are regarded as among the major factors behind processes of evolutionary radiation (Schluter 2000). Therefore, where diverse selective environments converge, diverse organisms in terms of phylogenetic and ecological richness are expected to occur. In some areas of the world, processes of diversification can take the form of geographically widespread evolutionary radiations within the same lineage, as observed for example in the emblematic lizard genus *Anolis* (Losos 2009). In other areas, in contrast, relatively small territories characterized by rich environmental and ecological complexities allow the existence of similarly complex assemblages formed by several different lineages under tight coexistence. A prominent case of this last scenario, although largely hidden until recently, is the reptile fauna of Uruguay. Located at the subtropical Eastern extreme of South America, Uruguay encloses countless natural elements that inspire the development of an exciting story on the wonderful outcomes of ecological interactions, and ultimately, of evolution. Carreira *et al.* (2005) have recently taken the challenge to tell part of this natural story. Focusing on the most fundamental outcome of ecological and evolutionary processes, namely biodiversity at different levels, Carreira *et al.* have come out with the first detailed scientific monograph on the reptiles of Uruguay ever published, and one of the first complete accounts of this ectotherm fauna for the country in almost a century (the only previous complete account is Devincenzi's 1925).

The South American reptile fauna exhibits multiple emblematic elements that have historically resulted of major interest for researchers from several areas of the world, Charles Darwin and Alexander von Humboldt being among the most prominent of these intellectual figures. The naturalist contributions appeared during the last five decades have been complemented by outstanding classical monographs that encompass a broad range of reptile diversity in different areas of this subcontinent (e.g. Medem 1983; Pritchard & Trebbau 1984; Pérez-Santos & Moreno 1988, 1991; Avila-Pires 1995). However, only a few have achieved the exceptional task of covering the entire reptile fauna occurring in a whole country (e.g. Donoso-Barros 1966; Cei 1986, 1993). Remarkably, Carreira *et al.*'s book stands along side these few unique reptile works. Every single species reported to live in Uruguay has been studied, including introduced species such as *Tarentola mauritanica* and the controversial case of *Hemidactylus mabouia*, whose natural establishment in