Conolophus marthae sp. nov., a new species of land iguana from the Galápagos archipelago

GABRIELE GENTILE1,3 & HOWARD SNELL2
1Dipartimento di Biologia, Università Tor Vergata, 00133 Rome, Italy
2Department of Biology and Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131, USA
3Corresponding author. E-mail: gabriele.gentile@uniroma2.it

Abstract

Conolophus marthae sp. nov., a new species endemic to Volcan Wolf of northern Isla Isabela of the Galápagos archipelago, is described. The new species is morphologically, behaviorally, and genetically distinguished from the other two congeneric species, Conolophus subcristatus and Conolophus pallidus. Besides the taxonomic implications, Conolophus marthae sp. nov. is extremely important as it is the only evidence of deep divergence within the Galápagos land iguana lineage.

Key words: Galápagos pink land iguana, Conolophus, Iguanidae, Squamata, Galápagos Islands, Galápagos National Park, lizards, endemism

Introduction

Land iguanas from the Galápagos are among the most emblematic organisms of that archipelago. The current distribution of these reptiles reflects direct and indirect human impacts (Snell et al. 1984). Consequently, at present, land iguanas occur only in limited areas of a few islands. Current taxonomy of Galápagos land iguanas recognizes two species: Conolophus pallidus Heller, 1903 and Conolophus subcristatus (Gray, 1831). The first species occurs only on Santa Fe, whereas Conolophus subcristatus occurs on Fernandina, Isabela, Santa Cruz, Plaza Sur, Seymour Norte (a translocated population), and Baltra (a repatriated population). Morphological (Snell et al. 1984) and genetic data (Rassmann et al. 2004; Tzika et al. 2008; Gentile et al. 2009) suggest that some populations of Conolophus subcristatus may warrant specific status. Thus, the taxonomy of Galápagos land iguanas is incomplete and this may represent a further threat to the persistence of all species in the group (Daugherty et al. 1990).

Recently, a previously overlooked pink and black-striped species of land iguana was found in Galápagos Islands (Gentile et al. 2009). For its genetic, morphological, and behavioral characteristics, Gentile and collaborators identified this form as a distinct species. Despite recognition as distinct, the species remained unnamed. In fact, in previous works (Tzika et al. 2008; Gentile et al. 2009), it was referred to the pink form by using the term “rosada” (pink in Spanish), but such a term was disclaimed for nomenclature purposes (Gentile et al. 2009). Here, we name this new species and provide its formal description and diagnostic characteristics.

Materials and methods

Morphological, behavioral, mitochondrial and nuclear DNA data are used to describe the new species and to distinguish it from other species of the genus Conolophus.

Snout-vent length (SVL) and vent to tip of the tail length (VTL) were measured to the nearest 0.1 cm, at