Annotated checklist and distribution of the Socotran Archipelago Herpetofauna (Reptilia)

EDOARDO RAZZETTI1,8, ROBERTO SINDACO3, CRISTINA GRIECO4, FRANCESCA PELLA2, UGO ZILIANI6, FABIO PUPIN2,7, ELISA RISERVAT02, DANIELE PELLITTERI-ROSA2, LUCA BUTIKOFER2, AHMED SAEED SULEIMAN3, BADAR AWADH AL-ASEILY3, CATERINA CARUGATI5, ELEONORA BONCOMPAGNI6 & MAURO FASOLA2

1Museo di Storia Naturale, Università di Pavia, Piazza Botta 9, I-27100 Pavia, Italy
2Dipartimento di Biologia Animale, Università di Pavia, Via Ferrata 9, I-27100 Pavia, Italy
3Environment Protection Agency, Socotra Branch, Yemen
4Istituto per le Piante da Legno e l’Ambiente, Corso Casale 476, I-10132 Torino, Italy
5Museo Civico di Storia Naturale, Via San Francesco di Sales 88, I-10022 Carmagnola (TO), Italy
6Platypus s.r.l., Via Pedroni 13, I-20161, Milano, Italy
7Museo Tridentino di Scienze Naturali, Via Calepina 14, I-38122 Trento, Italy
8Corresponding author. Email: edoardo.razzetti@unipv.it

Table of contents

Abstract ................................................................. 2
Introduction ........................................................... 2
Material and methods ................................................. 3
Results ................................................................. 3

Chamaeleo monachus Gray, 1865 ........................................ 4
Haemodracon riebeckii (Peters, 1882) ................................. 4
Haemodracon trachyrhinus (Boulenger, 1899) .................. 5
Hemidactylus dracaenacolus Rössler & Wranik, 1999 .......... 6
Hemidactylus flaviviridis Rüppell, 1835 .......................... 6
Hemidactylus forbesii Boulenger, 1899 .......................... 7
Hemidactylus granii Boulenger, 1899 ............................ 7
Hemidactylus homoeolepis Blanford, 1881 ...................... 8
Hemidactylus intellectus Sindaco, Ziliani, Razzetti, Pupin, Grieco, 2009 ........................................ 9
Hemidactylus oxyrhinus Boulenger, 1899 ...................... 9
Hemidactylus pumilio Boulenger, 1903 .......................... 9
Hemidactylus robustus Heyden, 1827 ............................ 10
Pristurus abdelkuri Arnold, 1986 ................................ 10
Pristurus gutchardi Arnold, 1986 ................................ 11
Pristurus obsti Rössler & Wranik, 1999 ......................... 11
Pristurus insignis Blanford, 1881 ................................ 12
Pristurus insignoides Arnold, 1986 ............................... 12
Pristurus sambhaensis Rössler & Wranik, 1999 ................ 13
Pristurus sokotranus Parker, 1938 ................................ 13
Mesalina balfouri (Blanford, 1881) ............................... 14
Mesalina kuri Joger & Mayer, 2002 ................................ 14
Hakaria simonyi (Steindachner, 1899) ......................... 15
Trachylepis socotranus (Peters, 1882) .......................... 15
Pachycalamus brevis Günther, 1881 ............................ 15
Leptotyphlops filiformis (Boulenger, 1899) ..................... 16
Leptotyphlops macrurus (Boulenger, 1903) ..................... 16
Leptotyphlops wilsoni Hahn, 1978 ............................... 17
Typhlops socotranus Boulenger, 1889 ........................... 17
Dityphlops vivax Günther, 1881 .................................. 18
Hemerophis socotrae (Günther, 1881) .......................... 18

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Abstract

We update the knowledge on the 30 terrestrial reptile species of Socotra, an archipelago well known for its highly endemic flora and fauna. We use the records obtained during several surveys throughout all the islands of the archipelago, carried out between 2007 and 2010, as well as the bibliographic records. We recorded all the known species of terrestrial reptiles for the islands (Chamaeleo monachus, Haemodracon riebeckii, Haemodracon trachyrhinus, Hemidactylus dracaenacolus, H. granti, H. homoeolepis, H. flaviviridis, H. forbesi, H. inintellectus, H. oxyrhinus, H. robustus, H. pumilio, Pristurus abdellkuri, P. guichardi, P. obsti, P. insignoides, P. insignis, P. sokotranus, P. samhaensis, Mesalina balfouri, M. kuri, Hakaria simonyi, Trachylepis socotrana, Pachycalamus brevis, Leptotyphlops filiformis, L. macrurus, L. wilsoni, Typhlops socotranus, Ditypophis vivax, Hemerophis socotrae). We report for the first time the occurrence of Hemidactylus robustus in Samha Island. H. homoeolepis is excluded from the fauna of Abd al-Kuri Island.

Key words: Socotra, Yemen, reptiles, distribution

Introduction

The Socotran Archipelago (12°30’N; 54°00’E; Fig. 1) is part of the Yemen Republic and it is well known for its highly endemic flora and fauna. The main island is a fragment of Gondwana, isolated in the Indian Ocean during Eocene-Oligocene (34–41 MYBP), when Arabia moved northward into Eurasia (Braithwaite, 1987; Girdler & Styles, 1974).

In 2008 it was recognized as a World Natural Heritage site by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2010). The main island, Socotra, is situated in the northern part of the Indian Ocean, 230 km off the Horn of Africa and 350 km south of Ras Fartak, on the Arabian coast. It stretches about 130 km East to West, and 25–40 km North to South, with a 3,625 km² surface area, and with about 50,000 inhabitants. The archipelago includes three smaller islands: Darsa, located 35 km South-West of Socotra, a small uninhabited island of about 16 km², Samha, located 17 Km west of Darsa, with a surface of 40 km² and a small village of about 100 fishermen. Samha and Darsa are collectively known as “Al Ikhwān” (“The Brothers”). Abd al-Kuri, the westernmost island of the archipelago is situated approximately 100 km from the main island and 90 km from the Horn of Africa. It measures 130 km² and is populated by about 300 people.

The Socotran Archipelago is completely void of amphibians (Forbes, 1903: 107) but it is rich in reptile species, most of which are endemic. Despite the numerous accounts on the herpetofauna of Socotra (Balfour, 1881; Blanford, 1881; Günther, 1881; Peters, 1882b; Steindachner, 1899, 1903; Boulenger, 1899, 1903; Forbes, 1903; Hahn, 1978; Arnold, 1986b; Schätti & Desvoignes, 1999; Wranik, 1998a, 1998b; Rösler, 1998; Rösler & Wranik, 1998, 1999, 2003, 2004, 2006a; Joger & Mayer, 2002; Sindaco et al., 2008), the distribution and habitat preference of Socotran reptiles is still weakly defined, and most of their phylogenetic relationships are poorly understood. Most taxa are known only from old records and from a very limited number of sites, most of them in the surroundings of Hadiboh, the main settlement of the island (Forbes, 1903; Wranik, 1998b; Schätti & Desvoignes, 1999). The remote small islands of Darsa, Samha, and especially Abd al-Kuri have been only scantily visited and cursorily by herpetologists. The first herpetological records for Samha were published by Steindachner (1903) and for Darsa by Rösler & Wranik (2000b). Abd al-Kuri was surveyed by both the Austrian (Steindachner, 1903) and British expeditions (Forbes, 1899; Boulenger, 1903). Original herpetological records for these islands were also collected in 1967 by K.M. Guichard (see Arnold, 1986b), and twice in 1999 (Joger, 2000; Joger & Mayer, 2002; Rösler & Wranik, 2004).

In this paper we define the taxonomic status and the distribution and ecology of the terrestrial reptiles of the Socotran Archipelago. We summarize the results of four surveys, accomplished from 2007 to 2010 throughout the entire archipelago, as well as from all the available bibliographic records.