

Monograph



ZOOTAXA



The Fishes of the Red Sea—Reappraisal and Updated Checklist

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(*Zootaxa* 2463)

135 pp.; 30 cm.

14 May 2010

ISBN 978-1-86977-531-5 (paperback)

ISBN 978-1-86977-532-2 (Online edition)

FIRST PUBLISHED IN 2010 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

http://www.mapress.com/zootaxa/

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ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

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Abstract

A new and updated checklist of the fishes of the Red Sea is presented. A total of 1078 species belonging to 154 families, 25 orders and two classes are listed. The number of species is considerably lower than that given in the last checklist (CLOFRES II, Goren and Dor, 1994) which included all records, "quotations" and distribution maps without distinguishing between substantiated and unsubstantiated records. In addition, an annotated list is provided for all those species that were recorded unjustifiably and were included in CLOFRES II and in subsequent publications.

Introduction

The ichthyofauna of the Red Sea has been of great importance for modern biological research. Being relatively close to Europe, the Red Sea and the marine animal life characteristic of that region and environment was the first tropical fauna to be studied in the "modern" scientific method.

The Swedish naturalist Peter Simon Forsskål participated in the first expedition to the Red Sea in 1761-1763. The scientists left Europe via Constantinople for northern Egypt, reaching the Red Sea one and a half year after its commencement. Unfortunately five out of the six scientists died during this ill-fated expedition. The only survivor, Carsten Niebuhr, published in 1775 a list of 151 species of them 122 from the Red Sea. Due to a variety of difficulties, including financial constraints as well as political instability, a large portion of the collection was lost; only 99 dry skin specimens survived the return journey and later mis-curation, representing 65 species, of which only 58 had been described by Forsskål himself (Klausewitz and Nielsen, 1965; Nielsen, 1993; Fricke, 2008; Goren, 2008).

At the turn of the 18th century, the French zoologist Étienne Geoffroy Saint-Hilaire conducted a scientific expedition that accompanied Napoleon during his campaign in the Near East during the years 1798-1801. The ichthyological results based on this modest collection of fish specimens from the eastern Mediterranean and the Red Sea were published only after almost two decades had passed (Geoffroy Saint-Hilaire, 1817).

German scientists took the lead in ichthyological research of the Red Sea in the beginning of the 19th century. During the years 1820-1826 the Zoological Museum of Berlin supported the participation of the zoologist Wilhelm Friedrich Hemprich and the botanist Christian Gottfried Ehrenberg in an expedition to Egypt. Hemprich and Ehrenberg collected many specimens of animals and plants, among them more than 500 fish species. The two naturalists travelled to various ports in the Red Sea and finally arrived in Eritrea. Their joint expedition was cut short in 1825 when Hemprich died quite suddenly of malarial fever (Vine and Schmid, 1987; Klausewitz, 2002). Ehrenberg returned to Berlin with the collected material; the fish specimens were given to the French ichthyologist Baron Georges Cuvier. Cuvier and his student Achille Valenciennes included this material with descriptions of 59 new species in their *Histoire naturelle des poisons* (Cuvier and Valenciennes, 1828-1849); Valenciennes followed in his mentor's footsteps, becoming a renowned zoologist and continuing Cuvier's work after his death in 1832 (Vine and Schmid, 1987).

Meanwhile during the years 1821-1831 the naturalist and explorer Wilhelm Eduard Rüppell conducted several expeditions in the same area of Egypt and the Red Sea for the Senckenberg Museum of Frankfurt am