



<http://dx.doi.org/10.11646/zootaxa.3691.1.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:E98CE6DF-AF3B-4AAA-95CB-8ACD615C9FCC>

Stylasteridae (Cnidaria, Hydrozoa, Filifera) from South Africa

STEPHEN D. CAIRNS¹ & HELMUT ZIBROWIUS²

¹Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington DC 20560, USA
E-mail: cairnss@si.edu

²Helmut Zibrowius, Le Corbusier 644, 280 Boulevard Michelet, 13008 Marseille, France
E-mail: helmut.zibrowius@orange.fr
(formerly Station Marine d'Endoume, Marseille)

Table of contents

Abstract	2
Introduction	2
History of the fauna	2
Material and Methods	3
Systematic Account	4
Genus <i>Lepidopora</i>	4
<i>L. diffusa</i> (Boschma, 1963)	8
Genus <i>Inferiolabiata</i>	9
<i>I. africana</i> sp. nov.	10
<i>I. lowei</i> (Cairns, 1983)	12
<i>I. spinosa</i> Cairns, 1991	14
Genus <i>Errina</i>	14
<i>E. capensis</i> Hickson, 1912	17
Genus <i>Errinopsis</i>	18
<i>E. fenestrata</i> Cairns, 1983	18
Genus <i>Gyropora</i>	19
<i>G. africana</i> Boschma, 1960	20
Genus <i>Stylaster</i>	20
<i>Stylaster</i> (Species Group A)	21
<i>S. nobilis</i> (Kent, 1871)	21
<i>S. subviolaceus</i> (Kent, 1871)	23
<i>S. bithalamus</i> Broch, 1936	26
<i>S. griseus</i> sp. nov.	28
<i>Stylaster</i> (Species group C)	30
<i>S. amphiheloides</i> Kent, 1871	30
<i>S. lonchitis</i> Broch, 1947	32
<i>S. kenti</i> sp. nov.	34
Genus <i>Stenohelia</i>	36
<i>S. venusta</i> sp. nov.	36
<i>S. spinifera</i> sp. nov.	38
Genus <i>Conopora</i>	40
<i>C. sola</i> sp. nov.	40
<i>C. verrucosa</i> (Studer, 1878)	42
<i>C. tenuiramus</i> sp. nov.	42
Genus <i>Crypthelia</i>	45
<i>C. micropoma</i> Cairns, 1985	45
Zoogeography	48
<i>Pedicularia</i> as a symbiont of South African stylasterids	50
Acknowledgements	51
References	51
Station List and Sample Numbers	55

Abstract

We describe and figure the 20 species of stylasterid hydrozoans known from South Africa. These consist of seven new species, six range extensions, and seven species previously known from South African. Most of the specimens reported resulted from expeditions of the *Pieter Faure* (1898–1903) and *Meiring Naudé* (1975–1987), and are deposited primarily in the South African Museum (Cape Town). A replacement name (*Errina australis*) is proposed for the junior homonym *Errina hicksoni* Cairns, 1991. A brief history of species discovery of the South African stylasterids is presented. The new morphological term dactyloglossa is introduced to define a baffle-like structure found in dactylopores of some species. Of the 20 South African species, 12 (60%) are not yet known outside that area. Three patterns of distribution were noted: species confined to the tropical region of South Africa, those found in both the tropical and warm temperate regions of S. Africa, and those found only in the warm temperate regions, three in the latter group sharing their distribution with cold temperate southern South America and two with warm temperate New Zealand, representing a circum-southern temperate distribution.

Key words: Cnidaria, Stylasteridae, South Africa, new species, zoogeography, *Pedicularia*

Introduction

In her monumental work on the order Hydroida of southern Africa, Millard (1975) listed 286 species and subspecies from Africa south of 20°S (thus including southern Namibia and Mozambique). Ironically, she did not include the Stylasteridae because at that time they were placed in a different order, the Hydrocorallida. Of the 25 families of the order Hydroida reported by Millard, the 20 known species of Stylasteridae from South Africa would make it the fourth most species-rich hydroid family known from that region, following, Plumulariidae (85 species), Sertulariidae (67 species), and the Campanulariidae (21 species). The other major group of calcified corals, the Scleractinia, boasts at least 54 species for South Africa (Cairns & Keller 1993). Thus, whereas the Stylasteridae are not the most species-rich group of calcified corals known from off South Africa, they are a significantly diverse one, especially as the 14 new records reported herein suggest that a greater number may yet be found.

In addition to scientific (taxonomic, zoogeographic) interest, some of the South African stylasterids were once commercially harvested on a very limited scale to use as decorative objects, probably much as the tropical West African blue coral *Stylaster blatteus* was harvested as “akori” (Boschma 1961). According to Boonstra (1994), 382 kg of “*Allopora*” (probably *Stylaster nobilis*) was legally taken from Struis Bay to Quoia Point in 1991.

History of the Fauna

The first stylasterids reported from South African waters were three relatively shallow-water species described by Kent (1871): *Stylaster amphiheloides*, *S. nobilis*, and *S. subviolaceus*. Although the collection locality was not given for the last two species, they have subsequently been inferred to be from off South Africa, the type of *S. subviolaceus* coming from the collection of Sir E. Belcher, a British naval officer. These specimens are deposited at The Natural History Museum (BM). The next South African record was reported as *Allopora oculina* by Studer (1878) from off Cape of Good Hope, and is now regarded as an early record of the common *Stylaster bithalamus*, these specimens deposited at the Zoologisches Museum, Berlin (ZMB). Hickson (1900) reported *S. nobilis* from the Cape region, and England (1926) published histological sections of the male ampullae of the same species.

In a treatise on species of the genus *Stylaster*, Broch (1936) reported the new species *S. bithalamus* and additional records of *S. nobilis* and *S. subviolaceus* from T. Mortensen’s Java—South Africa Expedition of 1929–30. These specimens are deposited in the Zoologisk Museum, Copenhagen (ZMC).

The last person to contribute to this fauna was H. Boschma, who wrote five papers between 1956–1966 based primarily on specimens collected by the Ecological Survey of the University of Cape Town between 1947 and 1962. Each paper is an exhaustive description or re-description and discussion of one species: *Stylaster nobilis* (see Boschma 1956), *Gyropora africana* (see Boschma 1960a), *Stylaster bithalamus* (see Boschma 1960b), *Lepidopora diffusa* (see Boschma 1963b), and *Stylaster subviolaceus* (see Boschma 1966a). These specimens are deposited at The Naturalis Biodiversity Centre, Leiden. His final paper on the subject (Boschma 1966b) included a brief review of the seven species known from South Africa, concluding that the entire stylasterid fauna was endemic to that region.