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A new species of *Solitariopagurus* from the Red Sea with notes on *S. profundus* (Crustacea: Decapoda: Paguridae)

MICHAEL TÜRKAY

Senckenberg Forschungsinstitut, Senckenberganlage 25, 60325 Frankfurt a. M., Germany. E-mail: michael.tuerkay@senckenberg.de

Abstract

A new species of *Solitariopagurus*, *S. cautilcolus*, from the Red Sea is described. This is the second species of the genus associated with coral reefs, and the fifth known for the genus. New material of *S. profundus* from the central deep Red Sea is listed. The bivalve shell carrying is confirmed also for this deep sea species.

Key words: *Solitariopagurus*, new species, Red Sea

Introduction

The genus *Solitariopagurus* was established by Türkay (1986) for a peculiar new deep sea pagurid from the Red Sea, *S. profundus*. This species exhibited deep sea adaptations such as reduced corneas that, however, are still functional. In 1987 the same species was again collected from the central Red Sea during “Meteor”-Cruise 5 and, therefore, has to be considered a typical faunal element of that area.

From 1996 on additional three species of the genus were described from shallower depths in the Indo-Pacific: *S. triprobolus* Poupin & McLaughlin, 1996 from French Polynesia and later from Vanuatu, Chesterfield Islands and New Caledonia from deep waters of 200–380 m, *S. tuerkayi* McLaughlin, 1997 from Indonesia, later also recorded from New Caledonia and Okinawa also from deep waters of 61–212 m (McLaughlin 2000) as well as Hawaii at 153 m (Martin *et al.* 2009), and *S. trullirostris* McLaughlin, 2000 from New Caledonia and the Marquesas Islands in 30–180 m depth (McLaughlin 2000). Of these three species only the latter one is known to be associated with coral reefs, although it also occurs in deep waters. Of the deepwater species, *S. triprobolus* is known to occur on hard ground, as it was dredged from bottoms such as coral rubble (Poupin & McLaughlin 1996).

During a survey in the framework of a cooperation project between the Senckenberg Research Institute, Frankfurt, and the Faculty of Marine Science and Fisheries of the Red Sea University, Port Sudan, on the comparative ecology of the biota and habitats in littoral and shallow sublittoral waters of the Sudanese Red Sea, a specimen of *Solitariopagurus* was collected during scuba-diving operations at the Sanganeb Reef in March 1991. This specimen could not be identified to one of the hitherto known species and therefore is described here as new.

The Sanganeb Reef is located 25 km east-north-east of Port Sudan. It has the shape of an atoll and a very high biodiversity. Detailed information on its topography and coral cover has been published by Mergner & Schuhmacher (1985a, b). Because of the high biodiversity of the area, it was also proposed as a candidate for a marine protected area (PERSGA 2004).

Besides the description of this new shallow water species, new information on the only other Red Sea species of the genus, *S. profundus*, is also presented. The respective specimens were collected during three cruises with the German Research Vessels “Sonne” (So-02, 1977), “Valdivia” (Va-79, 1979) and “Meteor (Me-05, 1987). Narratives including the description of collecting stations and methods have been published by Thiel (1977) and Nellen *et al.* (1996).

In conjunction with the station lists in these two publications the following abbreviations were used for gear types in the material lists of the present paper: FM = baited trap, KF = trap chain, Ku = beam trawl, ST = closing trawl, TA = trawl.

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