



Chitons (Mollusca, Polyplacophora) from the Maldive islands

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Abstract

This paper is the first comprehensive and illustrated account of living Polyplacophora from the Maldive Islands. The only important previous contribution is that of E.A. Smith (1903), describing eight species. We determined 15 species sourced from 24 sampling sites, mainly at a depth of 20–40 meters, represented by 19 living specimens and 1112 valves. Only nine species (*Parachiton hylkiae mauricejayi*, *Ischnochiton albinus*, *Ischnochiton* sp., *Rhyssoplax maldivensis*, *Tegulaplax hululensis*, *Lucilina* sp., *Acanthochitona penicillata*, *Craspedochiton* cf. *laqueatus*, *Cryptoplax burrowi*) are represented by living specimens, the others by separate valves (*Callochiton clausadeae*, *Lucilina perligera*, *L. carnosa*, *Acanthochitona* sp., *Craspedochiton* sp., *Cryptoplax sykesi*), three of them (*Lucilina perligera*, *Acanthochitona* sp., *Craspedochiton* sp.) by only one or two valves. We did not find four of the species previously reported for the Maldives, i.e. *Ischnochiton feliduensis*, *Callochiton platessa*, *Squamopleura miles* and *Schizochiton incisus*. The specimen collected by J.S. Gardiner, and reported in Smith (1903) as *Callochiton platessa* Gould, has been studied, and it is not possible to attribute to any of the other *Callochiton* species from the Indian Ocean. It thus remains undetermined as *Callochiton* sp., and *Callochiton platessa* Gould must be deleted from the list of chiton species living in the Maldive Islands. The holotype of *Ischnochiton feliduensis* (the only specimen known) is illustrated to provide a complete and exhaustive survey of all the 19 chiton species now known from the Maldive Islands. Two species from other localities, *Squamopleura miles* and *Schizochiton incisus*, also are illustrated. The type material of *Craspedochiton laqueatus* and *Cryptoplax burrowi* has been examined. Eleven species are reported for the first time for the Maldives: *Parachiton hylkiae mauricejayi*, *Ischnochiton albinus*, *Ischnochiton* sp., *Callochiton clausadeae*, *Lucilina perligera*, *L. carnosa*, *Lucilina* sp., *Acanthochitona penicillata*, *Acanthochitona* sp., *Craspedochiton* sp. and *Cryptoplax sykesi*.

Key words: Biogeography, systematics, Indian Ocean, Polyplacophora, type specimens

Introduction

The Maldive Islands are a chain of coral atolls in the central Indian Ocean, 80–130 km wide between appr. 8°N and 1°S, and stretching for around 820 km between appr. 73° and 74°E. The Archipelago is a system of interconnected atolls with about 1190 islands and small atolls (Hameed 2002), grouped in a chain of 26 larger atolls (only a few are inhabited) that spread out over a total area of 90.000 square km. The atolls of the Maldives vary in shape, and their lagoons show a variety of reef structures including micro-atolls, faros (ring shaped reefs emerging during tidal low water, surrounded by deep channels), shoals a few meters below the surface (“thila” in Maldivian languages), patch reefs and knolls. Some of the channels or passes (“kandu”) that cross the outer rim of the large atolls are quite narrow (and consequently have strong tide-depending currents), and in some passes there are caves of various dimensions in depths from 30 to 40 m. Notwithstanding the richness and variety of habitats, there is little documented information available on the Maldive molluscs (E.A. Smith 1903; Melvill 1909/1910; Baer 1989; Coleman 2000), with about 414 species reported (Hameed 2002), including some investigation on specific groups of molluscs (i.e. Kohn & Robertson 1966; Delsaerdt 2006; Turner *et al.* 2007) but only very few notices about chitons.