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Annotated checklist of the decapod crustaceans of the Gulf of Oman, northwestern Indian Ocean

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Abstract

The decapod crustaceans of the Gulf of Oman have been documented based on the published literature and new sampling along the Iranian coast between 2005 and 2015. A total of 121 species were collected along the Iranian coast, of which 43 are new records for the Gulf of Oman. The Decapoda of the Gulf is currently represented by 258 species belonging to five infraorders: Axiidea, Achelata, Anomura, Brachyura, and Caridea. Brachyura, with 176 species, are the best represented group, followed by Anomura and Caridea with 42 and 17 species, respectively. The least diverse groups are Achelata, with five species, and Axiidea, with three. On the basis of the available information, the northern (Iranian) coast with 189 species is more diverse than the southern (United Arab Emirates and Oman) coast with 134 species.

Key words: Northwestern Indian Ocean, Gulf of Oman, Crustacea, Decapoda, biodiversity

Introduction

The Gulf of Oman is in the northwestern Indian Ocean and located in the northern part of the tropical weather system of the Arabian Sea. According to the International Hydrographic Organization (IHO), the Gulf of Oman is delineated in the western part by an imaginary line from Minab (27 ° 00'N, 57 ° 00'E) on the Iranian coast to Ras Qabr al-Hindi (26° 20'N, 56° 30'E) on the northeast tip of the Musandam Peninsula. The eastern limit is defined by an imaginary line running from Ras Jiwani (25° 01'N, 61° 44'E) on the border of Pakistan and Iran to Ras al-Hadd (22° 32'N, 59° 47'E) in Oman. The Gulf is bordered on the northern coast by Iran and on the southwestern coast by Oman and United Arab Emirates (UAE). The seasonal monsoon causes winds blowing southward in summer and northward in winter. Seasonal upwellings caused by the monsoons balance the temperature ranging 22–31° C and salinity of 37 ppt (Reynolds 1993).

The order Decapoda is one of the most diverse groups of malacostracan crustaceans, and currently contains nearly 180 families and 14,756 extant species (De Grave *et al*. 2009). There is greater species diversity of decapods in tropical and sub-tropical regions than in temperate and cold regions (Fransozo & Negreiros-Fransozo 1996; Boschi 2000; Fanelli *et al*. 2007). The decapod fauna of the northwestern Indian Ocean is markedly underestimated. There are some works on particular groups in the Persian Gulf (e.g. Stephensen 1946; Titgen 1982; Apel 2001; Naderloo & Türkay 2012) and Pakistan (e.g. Tirmizi & Siddiqui 1982; Tirmizi & Kazmi 1988; Tirmizi & Ghani 1996; Siddiqui & Kazmi 2003). Other regions like the western coast of India, Gulf of Oman, the Arabian Sea coast of Oman and Yemen, and the Red Sea have been poorly investigated.

Thompson (1943) was the first to record *Paguristes balanophilus* (Alcock, 1905), from the Gulf of Oman based on material collected by the John Murray Expedition to the Indian Ocean. The study of the decapod fauna of the Gulf of Oman was basically initiated by the Danish Investigation in Iran between 1937 and 1938. This expedition performed comprehensive samplings along the Iranian coast of the Persian Gulf, representing only 10 stations along the northwestern coast of the Gulf of Oman. Stephensen (1946) examined the brachyuran crabs of the Danish Investigation collection and recorded 24 species from the Gulf of Oman. Haig (1966) examined the porcellanid crabs of the collection and recorded two species *Lissoporcellana quadrilobata* (Miers, 1884), and *Porcellana persica* Haig, 1966, from Jask along the Iranian coast of the Gulf of Oman. Hogarth (1988) recorded

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