A checklist of marine anomurans (Crustacea: Decapoda) of Pakistan, northern Arabian Sea

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Abstract


A checklist of marine Anomura from Pakistan is presented. A review of the literature showed that the anomuran fauna comprises 45 species representing 16 genera and six families arranged in three superfamilies. The family Diogenidae is best represented, with 23 species in five genera; the families Coenobitidae and Paguridae each have a single genus with three species in the former, and two species in the latter; the family Porcellanidae has 15 species in seven genera; whereas the families Albuneidae and Hippidae are each represented with one species. The list contains information on habitat and geographical distribution.

Keywords

Crustacea, Anomura, Pakistan, checklist

Introduction

The potential for exploitation of biological resources of the northern Arabian Sea and Pakistan coastal waters has been recently recognised (Thompson and Tirmizi, 1995). The resources of this region are subjected to considerable human pressure. The invertebrate fauna is poorly known and hence the human effects on the fauna are difficult to assess. Although there have been a few attempts to investigate and document the diversity of anomurans (Mustaquim, 1972; Tirmizi and Siddiqui, 1981, 1982; Tirmizi et al., 1982, 1989) there is urgent need to update this information. The checklist of the Crustacea Decapoda and Stomatopoda (Tirmizi and Kazmi, 1983) now needs revision in light of additions and changes to species of Diogenes (McLaughlin and Holthuis, 2001).

The present paper is a checklist of the anomurans from intertidal or subtidal regions of the Pakistan coast. Families are listed according to the classification of Martin and Davis (2001) with genera and species alphabetical within each family. The list is based on information provided by scientists working in Pakistan and from literature. Each record is followed by information on habitat and geographical distribution, and its first report in the literature. * denotes a new record from the region.

Checklist

Superfamily Galatheoidea Samouelle, 1819

Porcellanidae Haworth, 1825

Ancylocheles Haig, 1978

Ancylocheles gravelei (Sankolli, 1963). Pakistan; west coast of India; Gulf of Mannar; Australia. Under stones, in small pools to a depth of about 16 m (Tirmizi et al., 1982).

Enosteoides Johnson, 1970

Enosteoides ornatus (Stimpson, 1858). Pakistan; Korea; China; Hong Kong; Vietnam; Gulf of Thailand; Singapore; Japan; Australia. Under stones (Tirmizi et al., 1982).

Pachycheles Stimpson, 1852

Pachycheles natalensis (Krauss, 1843). Western Indian Ocean; Pakistan; Africa; Oman. In rock crevices near low water mark (Mustaquim, 1972).

Pachycheles tomentosus Henderson, 1893. Western Indian Ocean; Pakistan; western India; southern India; South Africa; Madagascar; Red Sea; Gulf of Aden; Persian Gulf. In holes and crevices of rocks near low water mark (Mustaquim, 1972).

Petrolisthes Stimpson, 1858

Petrolisthes boscii (Audouin, 1826). Indo-West Pacific; Pakistan; Taiwan; Hong Kong; Gulf of Thailand; Japan; Australia; Oman; Red Sea; Persian Gulf. In rocky pools under stones, and in sand near low water mark (Mustaquim, 1972).

Petrolisthes lamarckii (Leach, 1820). Indo-west Pacific; Pakistan. Under large stones (Mustaquim, 1972).

Petrolisthes leptochaetes (Heller, 1861). Pakistan; India;...
Somalia; Red Sea; Gulf of Aden; Oman; Persian Gulf. Under stones (Mustaquim, 1972).

_Petrolithes ornatus_ Paulson, 1875. Pakistan; Gulf of Kutch; India; Sri Lanka; Comoro Island; Madagascar; Mozambique; Zanzibar; Red Sea; Gulf of Aden; Gulf of Oman; Persian Gulf. Under stones (Mustaquim, 1972).

_Petrolithes rufescens_ (Heller, 1861). Pakistan; Indo-west Pacific; Pakistan; Gulf of Kutch; eastern Africa; Nicobar Island; Madagascar; Comoros; Somalia; Red Sea; Gulf of Aden; Persian Gulf. Under stones (Mustaquim, 1972).

_Mustaquim, 1972._

**Sindia delagoae** (Barnard, 1955). Pakistan; South Africa; Oman. Under stones in small pools (Tirmizi et al., 1982).

**Sindia gordonii** (Johnson, 1970). Pakistan; India; Australia; South Africa; Red Sea; Gulf of Aden; Persian Gulf. Sublittoral, occasionally found in littoral zone under stones (Tirmizi et al., 1989).

**Polynyx** Stimpson, 1858

_Polynyx hentzoni_ Southwell, 1909. Pakistan; western India; Sri Lanka; Japan; Korea; Hong Kong; Western Australia and Queensland, Australia. Under stones (Tirmizi et al., 1982).

_Polynyx loinicola_ Sankolli, 1965. Pakistan; and India. Buried under mud (Tirmizi et al., 1989).

**Raphidopus** Stimpson, 1858

_Raphidopus ciliatus_ Stimpson, 1858. Pakistan; Korea; Formosa Strait; China; Hong Kong; Gulf of Thailand; Singapore; Japan; Australia; Malay Peninsula. Muddy bottom (Tirmizi and Ghani, 1994).

Superfamily **Hippidae** Latreille, 1825

**Albuneidae** Stimpson, 1858

_Albunea_ Fabricius, 1793

_Albunea steinitzi_ Holthus, 1958. Pakistan; Philippines; Western Australia; Red Sea: Gulf of Aden. In littoral sand (Tirmizi, 1978).

_Hippidae_ Latreille, 1825.

_Emerita_ Scopoli, 1777

_Emerita holthuisi_ Sankolli, 1965. Pakistan; and India. In littoral sand (Tirmizi, 1977).

Superfamily **Paguroidea** Latreille, 1802

**Coenobitidae** Dana, 1851

_Coenobita_ Latreille, 1826


_Coenobita sceaevola_ (Forskål, 1775). Northern Arabian Sea; Pakistan; Red Sea; Gulf of Aden; Oman. Semi-terrestrial, more abundant above sandy shores and tidal zone (Tirmizi and Siddiqui, 1981).

**Diogenidae** Ortmann, 1892

_Calcinus_ Dana, 1851

_RCalcinus elegans_ H. Milne Edwards, 1837. Pakistan; Hawaiian Island to East Africa. Rocky shore (Siddiqui, pers. obs.).

_Calcinus latens_ (Randall, 1840). Indo-Pacific region; Pakistan; Maldives; Australia; Hawaiian Islands; eastern Africa; Red Sea; Gulf of Aden; Oman. Rocky shore (Tirmizi and Siddiqui, 1981).

_Clibanarius_ Dana, 1852

_Clibanarius aequabilis_ Dana 1852. Pakistan; Sri Lanka; Mergui; Malay Peninsula; Tahiti; western Africa. Muddy and sandy shores (Ahmed and Khan, 1971). This record appears to be in error.


_Clibanarius infraspinatus_ Hilgendorf, 1869. Indo-Pacific; northern Arabian Sea; Pakistan; Bay of Bengal; Malay Archipelago; eastern Arabia; Red Sea. Muddy and sandy beaches (Ahmed and Khan, 1971).

_Clibanarius padavensis_ De Man, 1888. Indo-Pacific; Pakistan to Singapore; East Indies; Australia; New Caledonia. Muddy and sandy shores (Ahmed and Khan, 1971).

_Clibanarius signatus_ Heller, 1861. Northern Arabian Sea; Pakistan; Oman; Red Sea. Common on rocky and sandy shores, rare on muddy shore (Tirmizi and Siddiqui, 1981).

_Clibanarius striolatus_ Dana, 1852. Karachi, Pakistan; Gulf of Aden; Seychelles and eastward to Tahiti; Australia. Rocky and muddy shores (Alcock, 1905).

_Clibanarius virescens_ (Krauss, 1843). Pakistan; Australia; Japan; Philippine and Fiji Islands; Hong Kong; eastern Africa; Red Sea; Gulf of Aden; Oman; Persian Gulf. Rocky shore (Tirmizi and Siddiqui, 1981).

_Dardanus_ Paulson, 1857

_Dardanus setifer_ (H. Milne Edwards, 1836). Pakistan and eastward to Hong Kong; Australia; southern and eastern Africa. Offshore (Tirmizi and Siddiqui, 1981).


**Diogenes** Dana, 1852


_Diogenes avarus_ Heller, 1865. Northern Arabian Sea; Pakistan; Vietnam; Philippine Islands; Indonesia; Thailand; northern and western Australia; eastern Africa; Red Sea. Rocky shore (Tirmizi and Siddiqui 1981).
**References**


