

## SPECIES OF PORTUNID CRABS (DECAPODA, BRACHYURA) FROM KARACHI

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(Received October 31, 1975; revised November 12, 1975)

**Abstract.** The taxonomy and distribution of fifteen species of Portunid crabs: *Charybdis* (*Charybdis*) *annulata*, *C. (C.) callianassa*, *C. (C.) feriatius*, *C. (C.) hellerii*, *C. (C.) lucifera*, *C. (C.) natator*, *C. (C.) orientalis*, *C. (C.) variegata*, *C. (Goniosoma)* *hoplites*, *Portunus pelagicus*, *P. sanguinolentus sanguinolentus*, *Scylla serrate*, *Thalamita admete*, *T. crenata* and *T. prymna* has been described.

Among the marine brachyuran crabs of the coast of Karachi those belonging to the family Portunidae appear to be the most abundant. Although generally natatory by habit, several species can be collected from ponds and puddles and from beneath the stones in the intertidal zone. Such collection often contain several species of family Portunidae. The first worker to record Portunid crabs from the coast of Karachi was Kohli<sup>1</sup> who identified genus *Charybdis* under the name of *Goniosoma*. The second worker who has given attention to the marine crabs of Karachi is Hashmi<sup>2,3</sup> who provided a check list. This list contains virtually the same species of crabs which Chhapgar<sup>4</sup> has described from the coast of Bombay. Evidently the crab fauna of Karachi and Bombay is quite similar.

The incentive for the present study was provided by a large collection of brachyuran crabs from various localities of Karachi coast collected during 1972-73. Specific identification has been revised by Stephenson, making necessary correction wherever necessary. The identified specimens are now housed in the Institute of Marine Biology. The synonymies given in the present report are not meant to be complete and are restricted mostly to the publications of the workers from Indo-Pakistan. Detail description and diagrams of the species of *Charybdis*, *Portunus*, *Scylla* and *Thalamita* reported here, can be found in Leene,<sup>5</sup> Stephenson and Campbell<sup>6,7</sup> and Stephenson and Hudson<sup>8</sup> respectively. A check list and key is also published by Stephenson<sup>9</sup> on the Indo-West-Pacific swimming crabs, and this should be consulted for more detailed synonymies.

**Genus *Charybdis* de Haan**Subgenus *Charybdis* de Haan*Charybdis* (*Charybdis*) *annulata* (Fabricius)

*Portunus annulatus* Fabricius, 1798: 364  
*Goniosoma annulatum*, Henderson, 1893:375  
*Charybdis* (*Goniosoma*) *annulata*, Alcock, 1899: 54;  
 Chopra and Das, 1937: 393; Chhapgar, 1957:  
 420, pl. 6h-k; Hashmi, 1963:239  
*Charybdis* (*Charybdis*) *annulata*, Leene, 1938: 60,  
 figs. 26-28; Stephenson, 1972:31.

Numerous specimens of both sexes measuring 38-66 mm carapace width.

Carapace smooth, cardiac ridges absent, first antero-lateral tooth not truncated and almost as large as the second; median lobule on lateral part of lower borders of orbit not dentiform; violet rings on legs present except large specimens where colour bands are either very faint or absent.

From Bulleji, Paradise Point and Manora Island during low tides, under small rocks and weeds in rock pools. Very common.

Tanzania, Pakistan (Karachi), India (Bombay, Madras), East-Indies and Java.

*Charybdis* (*Charybdis*) *callianassa* (Herbst)

*Cancer callianassa* Herbst, 1789: pl. 54, Fig. 7 (cited in Stephenson<sup>9</sup>)

*Goniosoma variegatum* var. *callianassa*, Henderson, 1893: 377; Alcock and Anderson, 1894: 201.

*Charybdis* (*Goniosoma*) *callianassa*, Alcock, 1899: 57; Chopra, 1935: 489; Chhapgar, 1957: 421, pl. 7a-c; Hashmi, 1963: 239

*Charybdis* (*Charybdis*) *callianassa*, Leene, 1938: 81 Figs. 41-43; Stephenson, Hudson and Campbell, 1957: 493, Figs. 1B-D, 2C, 3D, pl. 2, pl. 4A; Stephenson, 1972: 31

Numerous specimens of both sexes measuring 23-34 mm carapace width.

Convex carapace with cardiac ridges, mesobranchial ridges absent; first anterolateral tooth truncated; hand of the cheliped swollen.

From offshore waters. Common in catches of fishermen at Fish Harbour and Korangi Creek.

Pakistan (Karachi), India (Bombay, Madras, Orissa, mouth of Hoogly river) to Australia.

*Charybdis* (*Charybdis*) *feriatius* (Linnaeus)

*Cancer feritatus* Linnaeus, 1758: 627 (cited in Stephenson<sup>9</sup>)

*Charybdis* (*Goniosoma*) *crucifera*, Alcock, 1899: 51

*Charybdis* (*Goniosoma*) *cruciatius*, Chopra and Das, 1937: 392; Chhapgar, 1957: 419, pl. 5d-g; Hashmi, 1963:239

*Charybdis* (*Charybdis*) *cruciata*, Leene, 1938: 24, Figs. 1-2; Stephenson, Hudson and Campbell, 1957: 497, Fig. 2E, 3F, pl. 1, Fig. 3, pl. 4B.

*Charybdis* (*Charybdis*) *feriatius*, Stephenson and Rees, 1967: 10, Stephenson, 1972:31

Two males only, measuring 70 and 77 mm carapace width.

Anterior carapace with large yellow cross on purplish brown background; first anterolateral tooth truncated.

Not very common. One specimen collected from catch of fishermen at Korangi Creek and the other from Manora Island during low tides under the rocks.

Tanzania, Madagascar, South Africa, Pakistan (Karachi), India (Bombay, mouth of Hoogly river) to Japan and Australia.

*Charybdis (Charybdis) hellerii* (A. Milne Edwards)  
*Goniosoma Hellerii* A. Milne Edwards, 1867: 282  
*Goniosoma merguensis* de Man, 1889: 85, pl. V, Figs. 3-4.

*Charybdis (Goniosoma) merguensis*, Alcock, 1899:55; Chopra, 1935: 484; Hashmi, 1963: 239

*Charybdis (Charybdis) Hellerii*, Leene, 1938: 44, Figs. 15-17.

*Charybdis (Charybdis) hellerii*, Stephenson, Hudson and Campbell, 1957:497, figs. 1A, 2I, 3J, pl. 1, Fig. 4, pls. 4C, 5B; Hashmi, 1963: 239; Stephenson, 1972:32

Numerous specimens of both sexes measuring 30-58 mm carapace width.

Carpus of fifth leg with distinct spine on posterior border. Hashmi<sup>2</sup> listed *C. (G.) merguensis* (de Man) and *C. (C.) hellerii* (A. Milne Edwards) as two different species, but the description of de Man.<sup>19</sup> shows a carpal spine on the fifth leg (p. 87) which is a characteristic feature of the present species.

From Manora Island, Bulleji, Paradise Point and Korangi Creek during low tides from rock pools and under stones. Very common.

Mediterranean to Hawaii including Pakistan (Karachi) and India (mouth of Hoogly river).

*Charybdis (Charybdis) lucifera* (Fabricius)  
*Portunus lucifer* Fabricius, 1798: 364  
*Goniosoma luciferum*, Henderson, 1893: 374; Alcock and Anderson, 1894: 201.

*Charybdis (Goniosoma) quadrimaculata*, Alcock, 1899: 54.

*Charybdis (Goniosoma) lucifera*, Chopra and Das, 1937: 392; Chhapgar, 1957: 420, pl. 6d-g; Hashmi, 1963:239

*Charybdis (Charybdis) lucifera*, Leene, 1938: 57, Figs. 23-25; Stephenson, Hudson and Campbell, 1957: 500, Figs. 2F, 3G, pl. 2, Fig. 2, pl. 5A; Stephenson, 1972:33.

Four males, 50-64 mm and two females 60 and 64 mm carapace width.

Two pale spots on either branchial region of carapace; median lobe on lateral part of lower border of orbit dentiform.

From Manora Island and Bulleji during low tides from rock pools where they hide under weeds.

Pakistan (Karachi), India (Bombay, Coramandal) to Japan including Australia.

*Charybdis (Charybdis) natator* (Herbst)  
*Cancer natator* Herbst, 1789: pl. 40, Fig. 1 (cited in Stephenson<sup>9</sup>).

*Charybdis (Goniosoma) natator*, Alcock, 1899: 61  
*Goniosoma natator*, Kohli, 1921-22:85.

*Charybdis (Charybdis) natator*, Leene, 1938: 93; Stephenson, Hudson and Campbell, 1957: 501, Figs. 2G, 3H, pl. 2, Fig. 4, pl. 4J; Stephenson, 1972:33.

One male only, 74 mm carapace width.

Carapace with cardiac and mesobranchial ridges,

median and submedian teeth of front not prominent beyond lateral teeth.

The specimen was from the catch of fishermen at Fish Harbour. This species appears to be rare in Karachi and was not reported by Hashmi,<sup>2,3</sup> Kohli<sup>1</sup> was able to collect five specimens from Manora Island

South-East Africa, Pakistan (Karachi), India (Pondicherry, Madras) to Japan including Australia.

*Charybdis (Charybdis) orientalis* Dana  
*Charybdis orientalis* Dana, 1852a: 85; 1852b: 285.

*Goniosoma orientale*, Henderson, 1893:375.  
*Charybdis (Goniosoma) orientalis*, Alcock, 1893: 63;

Chhapgar, 1957: 422, pl. 7d-g Hashmi, 1963:239

*Charybdis (Charybdis) orientalis*, Leene, 1938:68, Figs. 32-34; Stephenson, Hudson and Campbell, 1957: 502, Figs. 2B, 3B, pl. 3, fig. 1, pl. 4C; Stephenson, 1972:33.

Two males, 33 and 35 mm and one female measuring 28 mm carapace width.

Second tooth of the anterolateral borders of carapace smaller than first tooth but not rudimentary in present collection, as described by Chhapgar,<sup>4</sup> moreover sixth male abdominal segment slightly broader than long.

From Bulleji and Manora Island during low tides, under rocks. Not common.

East Africa, Red Sea, Pakistan (Karachi), India (Bombay, Gulf of Manar, Madras, Arakan coast) to Japan including Australia.

*Charybdis (Charybdis) variegata* (Fabricius)  
*Portunus variegata* Fabricius, 1798: 364  
*Charybdis (Goniosoma) variegata*, Alcock, 1899: 60; Chopra, 1935: 488.

*Charybdis (Charybdis) variegata*, Leene, 1938: 84, Figs. 44 and 45; Stephenson, Hudson and Campbell, 1957: 503, Fig. 3C, pl. 3, Fig. 2; Hashmi, 1963: 239; Rees and Stephenson, 1966:39; Stephenson, 1972:34

One male only, 31 mm carapace width.

Carapace with cardiac and mesobranchial ridges but median and submedian teeth of front of carapace much prominent beyond lateral teeth.

Rare, the single specimen from the catch of fishermen at Fish Harbour.

Persian Gulf, Pakistan (Karachi), India (Bombay, Madras, mouth of Hoogly river) to Northern Australia.

Subgenus *Goniohellenus* Alcock  
*Charybdis (Goniohellenus) hoplites* (Wood-Mason)  
*Goniosoma hoplites* Wood-Mason, 1877: 422

*Charybdis (Goniohellenus) hoplites*, Alcock, 1899: 66; Leene, 1938:99, Figs. 53, 54a-c; Chhapgar, 1957: 423, pl. 7h-k; Hashmi, 1963:239; Stephenson, 1972:35.

*Charybdis hoplites*, Stephenson and Rees, 1967:3, Fig. 1.

Numerous specimens of both sexes measuring 31-42 mm carapace width.

Carapace with granular patches or convexities; posterior border of carapace straight forming an angular junction with posterolateral borders.

Common in the catch of fishermen at Fish Harbour and Korangi Creek.

Persian Gulf, Pakistan (Karachi) and India (Bombay, Madras).

**Genus Portunus Weber***Portunus pelagicus* (Linnaeus)

- Cancer pelagicus* Linnaeus, 1766: 1042.  
*Neptunus pelagicus*, Henderson, 1893: 367; Alcock, 1899: 34; Kohli, 1921-22: 85.  
*Neptunus (Neptunus) pelagicus*, Chopra, 1935: 476; Chhappgar, 1957: 419, pls. 6a-c; Hashmi, 1963: 239.  
*Portunus pelagicus*, Stephenson and Campbell, 1959: 96, Figs. 2A, 3A, pl. 1, Fig. 1; pls. 4A, 5A; Stephenson, 1968a; 84, Figs. 1A-D, pl. 11; 1968b: 386, Fig. 2C, D; 1972: 41.

Numerous specimens of both sexes measuring 50-167 mm carapace width.

Carapace granular without any blood red spots; two frontal lobes.

From Manora Island, Bulleji, Paradise Point, under rocks and in rock pools; very common in the catch of fishermen at Fish Harbour and Korangi Creek.

Mediterranean to Japan including Pakistan (Karachi) and India (Bombay, Malabar, Tuticorin, Madras).

*Portunus sanguinolentus sanguinolentus* (Herbst)

- Cancer sanguinolentus* Herbst, 1783: 161, pl. 8, Figs. 56-57 (cited in Stephenson 9).  
*Neptunus sanguinolentus*, Henderson, 1893: 368; Alcock and Anderson, 1894: 201; Alcock, 1899: 32; Kohli, 1921-22: 84.  
*Neptunus (Neptunus) sanguinolentus*, Chopra, 1935: 474; Chopra and Das, 1937: 391; Chhappgar, 1957: 417, pl. 4m-o; Hashmi, 1963: 239  
*Portunus sanguinolentus*, Stephenson and Campbell, 1959: 98, Figs. 2B, 3B, pl. 1, Figs. 2, pl. 4B, 5B; Stephenson, 1968b: 368, Fig. 2B.  
*Portunus sanguinolentus sanguinolentus*, Stephenson, 1972: 43

Numerous specimens of both sexes measuring 52-110 mm carapace width.

Carapace with three blood red spots on almost plain background; four frontal lobes.

From Manora Island, Sandspit and from the catch of fishermen at Fish Harbour. Very common.

East Africa to Japan including Pakistan (Karachi) and India (Bombay, Rameswaram, Madras, mouth of Hoogly river).

**Genus Scylla de Haan***Scylla serrata* (Forsk.)

- Cancer serratus* Forskal, 1755: 90 (cited in Stephenson 9)  
*Scylla serrata*, de Haan, 1833: 44; Henderson, 1893: 372; Alcock, 1899: 27; Chopra and Das, 1937: 391; Leene, 1938: 14; Chhappgar, 1957: 416, pl. 5a-b; Stephenson and Campbell, 1960: 111, Fig. 2N, pl. 4, Fig. 4, pls. 5N, 6C (Synon.); Stephenson, 1972: 44

Four males and three females measuring 85-110 mm carapace width.

Carapace with nine subequal anterolateral teeth.

From Korangi Creek and Hub River Delta, under rocks. Very common.

East Africa to Japan including Pakistan (Karachi) and India (Bombay, Madras, Calcutta).

**Genus Thalamita Latreille***Thalamita admete* (Herbst)

- Cancer admete* Herbst, 1803: 40, pl. 57, Fig. 1  
*Thalamita admete*, Henderson, 1893: 372; Alcock, 1899: 82; Borradaile, 1900: 574; Stephenson and Hudson, 1957: 320, Figs. 2I, 3I, pl. 1, Fig. 1, pls. 7A, 10A; Hashmi, 1964: 452; Stephenson, 1972: 44.

*Thalamita admete* var. *edwardsi*, Borradaile, 1900 579; 1902: 202

*Thalamita admete* var. *admete*, Borradaile, 1902: 202

*Thalamita admete* var. *savignyi*, Borradaile, 1902: 202

Two males and two females measuring 35-58 mm carapace width.

Carapace with mesobranchial ridge, front two lobed, four anterolateral teeth.

Not common. From Manora Island and Korangi Creek, under rocks.

East Africa, Red Sea, Pakistan (Karachi), India (Rameswaram), Gulf of Martaban to Hawaii including Japan and Australia.

*Thalamita crenata* H. Milne Edwards

*Portunus crenatus* H. Milne Edwards, 1834: 461 (cited in Stephenson 9).

- Thalamita crenata*, Alcock, 1899: 76; Kohli, 1921-22: 85; Chhappgar, 1957: 423, pl. 71-n; Stephenson and Hudson, 1957: 332, Figs. 2Q, 3Q, pl. 2, Fig. 3, pls. 7F, 9C; Hashmi, 1963: 239

Numerous specimens of both sexes measuring 38-70 mm carapace width.

Front six lobed; five anterolateral teeth, subequal.

Very common. From Korangi Creek, Bulleji and Paradise Point, under rocks.

South Africa, Red Sea, Persian Gulf, Pakistan (Karachi), India (Bombay) to Japan and Hawaii.

*Thalamita prymna* (Herbst)

- Cancer prymna* Herbst, 1803: 41, pl. 57, Fig. 2.  
*Thalamita prymna*, Henderson, 1893: 372; Alcock and Anderson, 1894: 201; Alcock, 1899: 78; Borradaile, 1902: 201; Chopra and Das, 1937: 395; Chhappgar, 1957: 424, pl. 70-g; Stephenson and Hudson, 1957: 346, Figs. 2R, 3R, pl. 4, Fig. 3, pls. 8L, 9E; Stephenson, 1972: 50.

One male only measuring 54 mm carapace width.

Front six lobed; five anterolateral teeth, first tooth entire and fourth rudimentary.

Rare. A single specimen was collected from Korangi Creek, under rocks.

S. Africa, Red, Sea, Pakistan (Karachi), India (Bombay, Tuticorin, Rameswaram, Madras, Bay of Bengal) to Japan including Australia.

**Acknowledgement.** We are indebted to Professor W. Stephenson of Zoology Department, Queensland University, Brisbane, Australia, for help in specific identifications and for suggesting useful amendments in the manuscript.

Thanks are also due to Professor N. D. Aziz, Dr. M. Ahmed and Miss Durreshahwar for their help and encouragement; and to the authorities of Zoological Survey Department, Karachi, for the use of their Library.

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