

STUDIES ON THE CARCINOLOGICAL FAUNA OF GOPALPUR COAST, BAY OF BENGAL. 1. NON-BRACHYRHYNCHAN (DECAPODA : BRACHYURA)

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INTRODUCTION

The Brachyura (true crabs) constitute the largest and specialized group not only on Marine Decapoda but also class Crustacea. These Carcinological fauna of Gopalpur Coast has received very little attention. Sporadic records of Brachyura have been reported from South Orissa as well as whole Orissa Coast. From early expeditions particularly by the Indian marine survey steamer 'H. M. Investigator' Alcock's findings (1895-1900) were recorded in his monumental publications. Although additional observations by Gravely (1927), Kemp (1915-1919), Chopra (1930-1937) and Chopra & Das (1930 and 1937), Sethuramalingan and Khan (1992) have contributed considerably on the crabs of Bay of Bengal. Orissa Coast has remained unexplored, except for Chilka Lake (Kemp, 1915 and Deb, 1995) and a few isolated specimens recorded by Alcock & Anderson (1894-95). It was, therefore, considered that a representative collection of the crabs of Orissa coasts should be studied properly to augment our knowledge of this group. The general collections were made from local faunal surveys carried out during 1990-1993 at the fish landing centres of Gopalpur-On-Sea and analysed thoroughly. The non-brachyrrhynchan crabs which form an important part of Brachyura are dealt with in the present paper and other groups will follow in subsequent communication.

MATERIALS AND METHODS

The materials for the present study were collected through extensive surveys during the years 1990-1993 from the commercial fish landing centres of Gopalpur. The crab species were collected from the cast net, gill net, shore seine and drag net operated within 5 to 50 metres depth as well as from the intertidal region. The representative samples of crabs were washed under tap water and then preserved in 8% formalin. All the collected specimens were critically examined. The species identification were carried out following Alcock (1895-1900), Chhapgar (1957-1969), Sethuramalingam and Khan (1991) and Tirmizi & Kazmi (1988). In synonymies it is attempted to include all important references relating to taxonomy of each species, otherwise only a restricted synonymy is provided. The classification adopted here is after Tirmizi & Kazmi (1988). Representative specimens of each species were measured for male and female with slide calipers for their length and breadth in mm ranging from the smallest to largest. The abbreviations used

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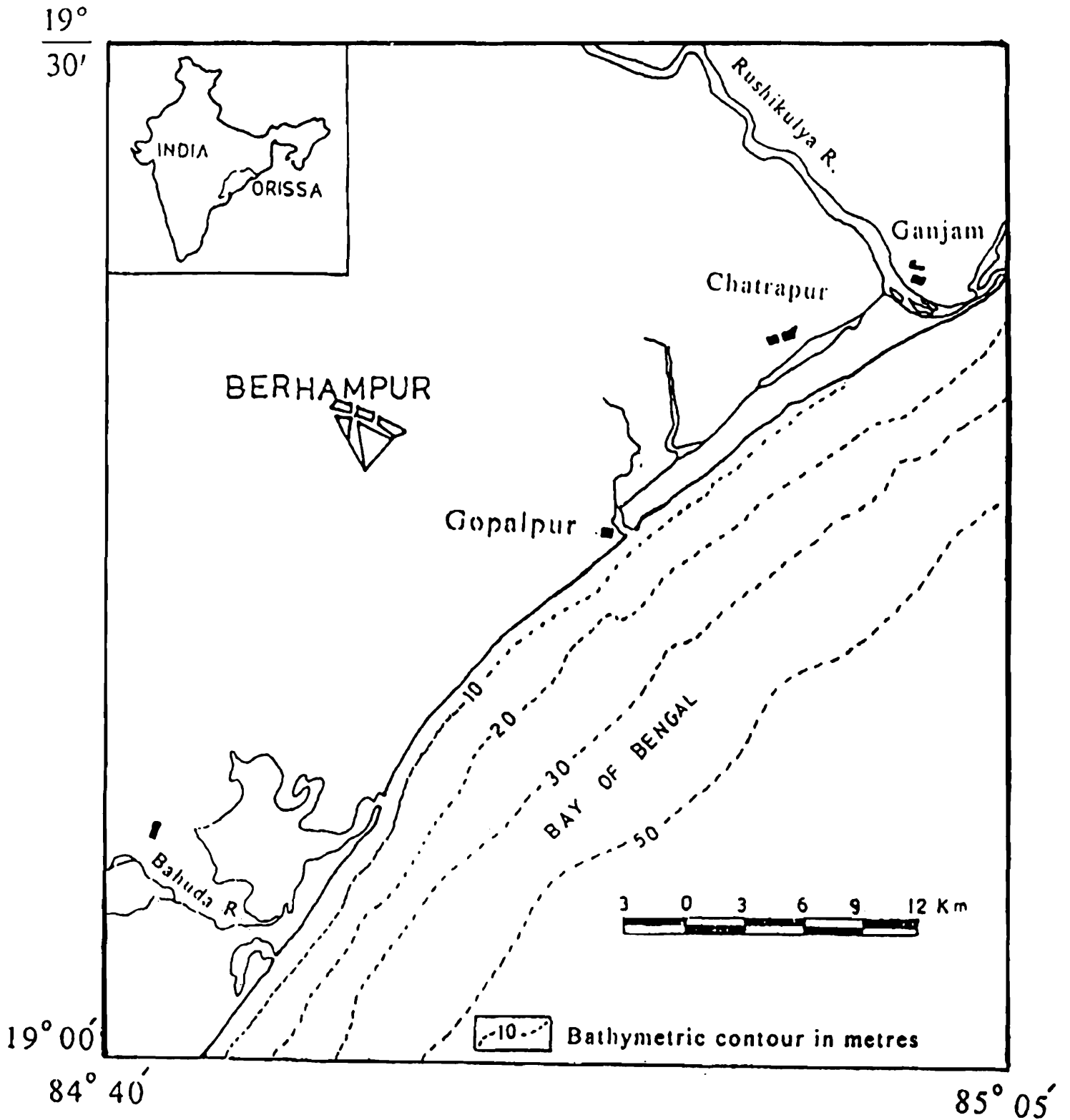


Fig. 1. Topographic features of Gopalpur Coast

throughout the text are as follows cl-Carapace Length, cb-Carapace breadth, mm-millimetre and symbols used ♂, ♀ refer to male and female, respectively. All the materials reported here in are housed in the Department of Marine Sciences, Berhampur University.

ECOLOGICAL NOTES

Gopalpur (19° 16' N, 84° 54' E) in the South Orissa Coast (Fig. 1), Bay of Bengal is a completely sandy beach having a fairly straight coastline of several kilometres running in the north-south direction. Its climate is semi-arid with an average annual rainfall of 1210 mm and nearly 80% of it is contributed by the South-West monsoon. Atmospheric temperatures on an average reach maximum of 37°C in summer and minimum of 12.7°C in winter. (India Meteorological Department, Climatological data for the years 1931-1960). During the South-West monsoon the predominant direction of wave approach is from South and South-West. Wave heights are usually greater (2.0-2.5 m) during the months May-August and in November, waves of a lesser height (1.0-1.5 m) in September-October and from December to April (Mishra, 1992). On a 20-point rating system this beach is classified as "exposed" (Rao and Pattnaik, 1986). The width of the intertidal zone varies from 25 to 50 metres depending on tides and seasons. Tides are semi-diurnal. Sandy bottoms are a predominant environmental feature along this coast. The continental shelf is narrower compared to other regions of Orissa coast.

SYSTEMATIC LIST

- Class : Crustacea
- Order : Decapoda
- Suborder : Reptantia
- Infraorder : Brachyura
- Section : Dromiacea de Haan, 1833
- Superfamily : DROMIOIDEA DE HAAN, 1833
- Family : DROMIIDAE DE HAAN, 1833
- Genus : *Conchoecetes* Stimpson, 1858
1. *Conchoecetes artificiosus* (Fabricius, 1798)
- Genus : *Dromia* Weber, 1795
2. *Dromia dehaani* Rathbun, 1923
- Genus : *Dromidia* Stimpson, 1858
3. *Dromidia unidentata* (Rüppell, 1830)

- Section : Oxystomata H. Milne Edwards, 1834
- Superfamily : DORIPPOIDEA MACLEAY, 1838
- Family : DORIPPIDAE MACLEAY, 1838
- Subfamily : DORIPPINAE MACLEAY, 1838
- Genus : *Dorippoides* Serène & Romimohtarto, 1969
4. *Dorippoides facchino* (Herbst, 1785)
- Genus : *Neodorippe* Serène & Romimohtarto, 1969
5. *Neodorippe callida* (Fabricius, 1798)
- Superfamily : LEUCOSIOIDEA SAMOUELLE, 1819
- Family : CALAPPIDAE DE HAAN, 1833
- Subfamily : CALAPPINAE DE HAAN, 1833
- Genus : *Calappa* Weber, 1795
6. *Calappa lophos* (Herbst, 1782)
7. *Calappa pustulosa* Alcock, 1896
- Subfamily : MATUTINAE DE HAAN, 1835
- Genus : *Matuta* Weber, 1795
8. *Matuta lunaris* (Forskål, 1775)
9. *Matuta planipes* Fabricius, 1798
- Family : LEUCOSIIDAE SAMOUELLE, 1819
- Subfamily : ILIINAE STIMPSON, 1871
- Genus : *Arcania* Leach, 1817
10. *Arcania erinaceus* (Fabricius, 1798)
11. *Arcania septemspinosa* (Fabricius, 1787)
12. *Arcania undecimspinosa* de Haan, 1841
- Subfamily : LEUCOSIINAE SAMOUELLE, 1819
- Genus : *Leucosia* Weber, 1795
13. *Leucosia biannulata* Tyndale-Biscoe & George, 1962

- Genus : *Philyra* Leach, 1817
14. *Philyra globosa* (Fabricius, 1798)
15. *Philyra globulosa* H. Milne Edwards, 1837
16. *Philyra scabriuscula* (Fabricius, 1798)
- Section : Oxyrhyncha Latreille, 1803
- Superfamily : MAJOIDEA SAMOUELLE, 1819
- Family : MAJIDAE SAMOUELLE, 1819
- Subfamily : INACHINAE MACLEAY, 1838
- Genus : *Macropodia* Leach, 1814
17. *Macropodia falcifera* (Stimpson, 1857)
- Subfamily : PISINAE ALCOCK, 1895
- Genus : *Doclea* Leach, 1814
18. *Doclea gracilipes* Stimpson, 1857
19. *Doclea ovis* (Herbst, 1788)
- Superfamily : PARTHENOPOIDEA MACLEAY, 1838
- Family : PARTHENOPIDAE MACLEAY, 1838
- Subfamily : PARTHENOPINAE MACLEAY, 1838
- Genus : *Parthenope* Weber, 1795
20. *Parthenope longimana* Linnaeus, 1764
21. *Parthenope pransor* (Herbst, 1796)
- Subfamily : AETHRINAE DANA, 1851
- Genus : *Cryptopodia* H. Milne Edwards, 1834
22. *Cryptopodia angulata* H. Milne Edwards & Lucas, 1841

SYSTEMATIC NOTES

1. *Conchoecetes artificiosus* (Fabricius, 1798)

Dromia artificiosa Fabricius, 1798. *Suppl. Ent. Syst.* : 360.

Cancer artificiosus Herbst, 1803. *Krabben* : 54, pl. 58, fig. 7.

Conchoecetes artificiosus Stimpson, 1907, *Smith. Misc. collns.*, : 180, pl. 21, fig. 5; Alcock, 1899, *Jour. Asiat. Soc. Bengal*, **68** (2) No. 3 : 151; Chopra, 1933, *Rec. Indian Mus.*, **35** (1) : 28; Chhapgar, 1969, *Jour. Bombay Nat. Hist. Soc.*, **65** (3) : 608; pl. 1a ; Tirmizi & Kazmi, 1988, *Marine Fauna of Pakistan*, **4** : 15, figs. 3, 4.

Material & Measurements : 1 ♂ cb. 42 mm, cl. 39.05 mm

Habitat : It occurs from 30 to 100 metres depth (Alcock, 1899) on sandy or muddy substratum.

Distribution : Madagascar, Persian Gulf, Karachi, East coast of India. Andamans, Sri Lanka, Singapore, Thailand, China, Japan and North-East Australia.

2. *Dromia dehaani* Rathbun, 1923

Dromia rumphi de Haan, 1850, *Fauna Japonica*, **5** : 107, pl. 32; Alcock, 1899b, *Jour. Asiat. Soc. Bengal*, **68** (2) No. 3 : 137.

Dromia dromia Rathbun, 1902, *Proc. U. S. Natn. Mus.*, **26** : 32; Chhapgar, 1957, *Jour. Bombay Nat. Hist. Soc.*, **54** : 401, pl. 1, fig. a.

Dromia dehaani Rathbun, 1923, *Proc. Biol. Soc. Washington*, **36** : 68; Sakai, 1976, *Crabs of Japan and the Adjacent Seas*, **1** : 8, pl. 2, fig. 1; Tirmizi & Kazmi, 1988, *Marine Fauna of Pakistan*, **4** : 20, figs. 5, 6.

Material & Measurements : 2 ♂ cb. 48-50 mm, cl. 42.05-44.04 mm 1 ♀ cb. 70.08 mm, cl. 60.05 mm.

Habitat : It inhabits on sandy or muddy bottoms, usually found from 50 to 150 metres depth.

Distribution : South Africa, Red Sea, Maldives, Karachi, Both Coasts of India, China and Japan.

Remarks : It is commonly found along this coast.

3. *Dromidia unidentata* (Rüppell, 1830)

Dromidia unidentata Rüppell, 1830, *Beschr. und Abbild. 24 Art. Krabben des Roth. Meer.*, **40** : 16, pl. 4, fig. 2; Alcock, 1899, *Jour. Asiat. Soc. Bengal*, **68** (2) No. 3 : 139.

Dromidia unidentata Kossmann, 1880, *Reise Kust. Rot. Meer. Crust.*, **3** : 67; Laurie, 1906, *Ceylon Pearl oyster Fisheries Rep.* 5. London, Suppl. No. 40 : 351; Sakai, 1976, *Crabs of Japan and the adjacent Seas*, **1** : 11, pl. 2, fig. 2, text fig. 2a, b; Tirmizi & Kazmi, 1988, *Marine Fauna of Pakistan*, **4** : 28, fig. 8.

Material & Measurements : 1 ♀ cb. 29.05 mm, cl. 30.05 mm.

Habitat : It is found from infratidal Zone to a depth of 15 to 50 metres depth on sandy or rocky bottoms.

Distribution : Madagascar, Persian Gulf, Red Sea, Karachi, Coromandel Coast, Andamans, Sri Lanka and Malay Archipelago.

Remarks : It is rarely found along this coast.

4. *Dorippoides facchino* (Herbst, 1785)

Cancer facchino Herbst, 1785, *Krabben* : 190, pl. 11, fig. 68.

Dorippe facchino de Haan, 1841, *Fauna Japonica* : 123 ; Alcock, 1896, *Jour. Asiat. Soc. Bengal*, 65(2) : 278; Ummerkutty & Deb, 1972, *Rec. Zool. Surv. India*, 66 (1-4) : 191.

Dorippe (Dorippoides) facchino Serène & Romimohtarto, 1969, *Mar. Res. Indonesia*, 9 : 4, 8, figs. 2, 6, 11, 16A, B, C, D, pl. 1C, 3D.

Dorippoides facchino Manning & Holthuis, 1981. *Smith. Contr. Zool. No. 306* : 30.

Material & Measurements : 3 ♂ cb. 22-24 mm, cl. 20.05-22 mm. 2 ♀ cb. 31.05-33 mm, cl. 28.05-30.05 mm.

Habitat : It is found on sandy or muddy substratums at a depth of 15-100 metres. Lepas are generally seen attached to its legs.

Distribution : Persian Gulf. Gulf of Oman. South and East Coast of India, Sri Lanka, Indonesia, China and Japan.

5. *Neodorippe callida* (Fabricius, 1798)

Cancer astutus Herbst, 1785. *Krabben* : 45, pl. 4, fig. 6.

Dorippe astuta Fabricius, 1798, *Suppl. Ent. Syst.* : 361; Alcock, 1896, *Jour. Asiat. Soc. Bengal* 65(2) : 280; Chhapgar, 1957. *Jour. Bombay Nat. Hist. Soc.*, 54(2) : 409, pl. 3, figs. d, e.

Neodorippe callida Manning & Holthuis, 1981. *Smith. Contr. Zool. No. 306* : 37; Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, 4 : 48, figs. 14 & 15.

Material & Measurements : 1 ♂ cb. 13 mm, cl. 15 mm. 2 ♀ cb. 18.04-20.03 mm, cl. 19.0-22 mm.

Habitat : It is found in shallow water from 15 to 30 metres depth.

Distribution : Karachi, Both the coasts of India, Mergui Archipelago, Thailand, China and Philippines.

6. *Calappa lophos* (Herbst, 1782)

Cancer lophos Herbst, 1782. *Krabben*, 5 : 201, pl. 13, fig. 77.

Calappa lophos de Haan, 1837. *Fauna Japonica* : 72, pl. 20 fig. 1; Alcock & Anderson, 1894. *Jour. Asiat. Soc. Bengal*, 63(2) No. 4 : 203; Chopra, 1933. *Rec. Indian Mus.*, 35(1) : 28; Pillai, 1951. *Bull. Cent. Res. Inst. Travancore*, : 8; Chhapgar, 1957. *Jour. Bombay Nat Hist. Soc.*, 54 : 404, pl. 1; figs. h, ij L2(1), Ser. c.

Material & Measurements : 2 ♂ cb. 46.04-57.08 mm, cl. 37.03-39 mm. 2 ♀ cb. 50.09-77.03 mm, cl. 43.03-49.02 mm.

Habitat : It occurs from 30-70 metres depth on sandy bottom.

Distribution : Mauritius, Pakistan, India, Australia, China and Japan.

Remarks : It is commonly found along this coast.

7. *Calappa pustulosa* Alcock, 1896

Calappa pustulosa Alcock, 1896. *Jour. Asiat. Soc. Bengal*, 2 : 147, pl. 6, fig. 1; Chopra, 1933. *Rec. Indian Mus.*, 35 (1) : 29; Sakai, 1965. *The crabs of Sagami Bay*, : 57, pl. 23, fig. 2.

Material & Measurements : 1 ♀ cb. 54 mm, cl. 48 mm.

Habitat : It is found on sandy bottom at a depth of 30-70 metres.

Distribution : India, Japan.

Remarks : It is rarely found along this coast.

8. *Matuta lunaris* (Forskål, 1775)

Cancer lunaris Forskål, 1775. *Descr. Anim. Avium*, 19 : 91.

Matuta victor de Haan, 1850. *Fauna Japonica*, : 127; Suvatti, 1950. *Fauna of Thailand* : 148.

Matuta lunaris Rathbun, 1903. *Proc. U. S. Nat. Mus.*, 26 : 30; Stebbing, 1905. *South African Crustacea*, (4) : 54; Chopra, 1933. *Rec. Indian Mus.*, 35(1) : 31; Chhappgar, 1957, *Jour. Bombay Nat. Hist. Soc.*, 54 : 405, pl. 2, figs. a-c; Sankarankutty, 1962. *Jour. Biol. Ass. India*, 4(1) : 153, fig. 2; Ummerkutty & Deb, 1972. *Rec. Zool. Surv. India*, 66 (1-4) : 192.

Material & Measurements : 1 ♂ cb. 27.05 mm, cl, 26 mm. 5 ♀ cb. 32-36 mm, cl. 32-36 mm.

Habitat : It lives in the intertidal zone of sandy or muddy bottom at a depth of 10-20 metres. It is fairly abundant in coastal waters.

Distribution : South Africa, Red Sea, Both Coasts of India, Australia, China and Japan.

Remarks : It is commonly found along this coast. It is consumed by local people in Bombay (Chhappgar, 1957) and in Philippines (Motoh, 1980).

9. *Matuta planipes* Fabricius, 1798

Matuta planipes Fabricius, 1798, *Suppl. Ent. Syst.* : 369; Balss, 1922. *Archiv f. Naturgesch* 88A(3) : 125; Sakai, 1976. *Crabs of Japan and the Adjacent Seas*, 3(1) : 141, pl. 44, fig. 2; Chhappgar, 1957, *Jour. Bombay Nat. Hist. Soc.*, 54 : 406, pl. 2; Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, 4 : 64, fig. 18; Deb, 1995. : *Wetl. Eco. Ser. 1, Zool. Surv. India* : 348.

Matuta lunaris Herbst, 1799, *Krabben* : 43 pl. 48, fig. 6; Alcock, 1896. *Jour. Asiat. Soc. Bengal*, 64(2) No. 2 : 161.

Matuta flagra Shen, 1936. *China Contr. Inst. Zool. Nat Acad. Peiping*, 3(3) : 64.

Material & Measurements : 2 ♀ cb. 22-35.05 mm., cl. 20-33.07 mm.

Habitat : It lives in the intertidal zone to infratidal area to a depth of 10-15 metres on sandy bottom.

Distribution : Pakistan, Both Coasts of India, Andamans, Burma, Thailand, Java, North-West Australia, China and Japan.

10. *Arcania erinaceus* (Fabricius, 1798)

Leucosia erinaceus Fabricius, 1798, *Suppl. Ent. Syst.* : 352.

Arcania erinaceus Sakai, 1976. *Crabs of Japan and the Adjacent Seas* : 93, text fig. 49; Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, 4 : 72, fig. 20 A-D.

Material & Measurements : 1 ♀ cb. 16 mm, cl. 17 mm.

Habitat : It is found from 85 metres depth (Sakai, 1976) on sandy mud bottom.

Distribution : Pakistan, East Coast of India, Sri Lanka, Singapore and Japan.

11. *Arcania septemspinosa* (Fabricius, 1787)

Leucosia septemspinosa Fabricius, 1787. *Mantissa Insect.*, 1 : 325.

Iphis septemspinosa Leach, 1817. *Zool. Miscell.*, 3 : 25; Miers, 1880. *Ann. Mag. Nat. Hist.*, 5 : 317.

Arcania septemspinosa Miers, 1886, *Rep. Sc. Res. Challenger Zool.*, : 300; Chopra, 1933. *Rec. Indian Mus.*, 35(1) : 43 Fig. 5; Chhapgar, 1957. *Jour. Bombay Nat. Hist. Soc.*, 54(2) : 408, pl. 3a-c; Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, 4 : 72, fig. 21A-H.

Material & Measurements : 2 ♂ cb. 14.04-19.04 mm, cl. 14-20 mm. 2 ♀ cb. 15.02-18 mm, cl. 17-19.04 mm.

Habitat : It is found from 25-50 metres depth of sandy or muddy bottom. It is also littoral reported by Stephensen (1945).

Distribution : Persian Gulf, Red Sea, Karachi, Both coasts of India, Andamans and Malay Archipelago.

Remarks : It is commonly found along this coast. It is also a warm water species reported by Barnard (1950).

12. *Arcania undecimspinosa* de Haan, 1841

Arcania undecimspinosa de Haan, 1841. *Fauna Japonica* : 135, pl. 33, fig. 8; Alcock, 1896. *Jour. Asiat. Soc. Bengal*, 64(11) No. 2 : 266; Sakai, 1935. *Crabs of Japan* : 58, pl. 10, fig. 1; Sankarankutty, 1962. *Jour. Mar. Biol. Ass. India*, 4(1) : 155; Campbell, 1971. *Mem. Queensland Mus.*, 16(1) : 41; Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, 4 : 76, fig. 22.

Arcania granulosa Miers, 1877. *Trans. Linn. Soc. London, Zool. Soc.*, 2(1) : 240, pl. 38, fig. 29; Haswell, 1879. *Proc. Linn. Soc. New South Wales*, 4 : 58.

Material & Measurements : 1 ♀ cb. 26.05 mm, cl. 29.03 mm.

Habitat : It occurs on sandy or muddy bottom from 7-219 metres depth. (Tirmizi & Kazmi, 1988).

Distribution : Natal, Seychelles, Karachi, Maldives, East Coast of India, Andamans, Queensland, Australia, China and Japan.

13. *Leucosia biannulata* Tyndale-Biscoe & George, 1962

Leucosia longifrons var. *neocaledonica* Alcock, 1896. *Jour. Asiat. Soc. Bengal*, **65**(2) No. 2 : 218; Tirmizi., 1980. *Proc. 1st Pakistan Congr. Zool.*, : 106.

Leucosia longifrons Chhapgar, 1969. *Jour. Bombay Nat. Hist. Soc.*, **65**(3) : 610, pl. 1b.

Leucosia biannulata Tyndale-Biscoe & George, 1962. *Jour. Roy. Soc. West Australia*, **45**(3): 92, figs. 4 13a, 13b, fig. 9; Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, **4** : 94, fig. 27A-F.

Material & Measurements : 1 ♂ cb. 19 mm, cl. 23.05 mm.

Habitat : It is found on sandy bottom at a depth of 30-100 metres.

Distribution : Karachi, Both Coasts of India.

Remarks : It is rarely found along this coast.

14. *Philyra globosa* (Fabricius, 1798)

Cancer globosus Fabricius, 1798. *Suppl. Ent. Syst.*, : 441.

Philyra parcellana Bell, 1855. *Trans. Linn. Soc. London. Zool.* **21**(1) : 300.

Philyra globosa Henderson, 1893. *Trans. Linn. Soc. London. Zool.* **5** 401; Alcock, 1896. *Jour. Asiat. Soc. Bengal*, **65**(2) No. 2 : 243; Chopra, 1933. *Rec. Indian Mus.*, **35**(1) : 27; Chhapgar, 1957. *Jour. Bombay Nat. Hist. Soc.*, **54** : 507, pl. 2, fig. k-m; Kensley, 1981. *Smith. Contr. Zool. No.* 338 : 39.

Material & Measurements : 1 ♂ cb. 18 mm, cl. 18.05 mm.

Habitat : It occurs from the depth of 20-150 metres on sandy or rocky bottoms.

Distribution : Natal, Persian Gulf, Karachi, Both Coasts of India, Mergui Archipelago.

15. *Philyra globulosa* H. Milne Edwards, 1837

Cancer anatum Herbst, 1782. *Krabben* : 90, pl. 2, fig. 19.

Leucosia globulosa Fabricius, 1798. *Suppl. Ent. Syst.*, : 349.

Philyra globulosa H. Milne-Edwards, 1837. *Hist. Nat. crust.*, **1** : 132 ; Alcock, 1896. *Jour. Asiat. Soc. Bengal*, **65**(2) No. 2 : 245 ; Chopra, 1933. *Rec. Indian Mus.*, **35**(1) : 38 ; Pillai, 1951, *Bull. Cen. Res. Inst. Travancore*, **2**(1) : 13; Tirmizi & Kazmi. 1988, *Marine Fauna of Pakistan*, **4** : 98, fig. 28 A-E.

Material & Measurements : 1 ♂ cb. 26.00 mm, cl. 25.09 mm.

Habitat : It is generally found on the sandy and muddy bottoms, from 20-100 metres depth.

Distribution : South Africa, Persian Gulf, Pakistan, India and Gulf of Thailand.

16. *Philyra scabriuscula* (Fabricius, 1798)

Leucosia scabriuscula Fabricius, 1798. *Suppl. Ent. Syst.* : 349.

Philyra scabriuscula de Man, 1888. *Archiv f. Nat. Bd.*, 53 : 201 ; Alcock, 1896. *Jour. Asiat. Soc. Bengal*, 65(2) No. 2 : 239 ; Chopra & Das, 1937. *Rec. Indian Mus.*, 39(4) 388; Tyndale-Biscoe & George, 1962. *Jour. Roy. Soc. West Australia*, 45(3) : 74, figs. 4, 6; Ummerkutty & Deb, 1972, *Rec. Zool. Surv. India*, 66(1-4) : 192; Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, 4 ; 106, fig. 31, A-I.

Material & Measurements : 2 ♂ cb. 9.08-9.09 mm, cl. 10-10.01 mm.

Habitat : It inhabits in the intertidal zone on sandy bottom.

Distribution : Persian Gulf, Red Sea, Zanzibar, Karachi, Both Coasts of India, Malayasia, Indonesia and Australia.

17. *Macropodia falcifera* (Stimpson, 1857)

Stenorhynchus falcifer Stimpson, 1857. *Proc. Acad. Nat. Sc. Philadelphia*, 3 : 219, pl. 1, fig. 1; Dofleins, 1904. *Valdivia*, : 70, fig. 6.

Stenorhynchus falcifera Stebbing, 1910. *Annl. S. African Museum* : 284; Balss, 1913. *Denksch med-naturw. Ges. Jena.*, : 109.

Macropodia falcifera Stimpson, 1907. *Smith. Misc. Colls.*, 49 : 32; Barnard, 1950. *Ann. S. African Mus.*, 38 : 16, fig. 2b-f; Tirmizi & Kazmi, 1983. *Bull. Inst. Ocean. & Fish.*, 9 : 368.

Material & Measurements : 1 ♂ cb. 16.04 mm cl. with rostrum 19.04 mm. 1 ♀ cb. 15.05 mm cl. with rostrum 19.04 mm.

Habitat : It is found on sandy bottoms. Its bathymetric range is 6-90 m (Kensley, 1981) or from 17 to 53 fathoms (Barnard, 1950).

Distribution : South Africa, Pakistan and East Coast of India.

Remarks : This may be the first record of this species from the east coast of India.

18. *Doclea gracilipes* Stimpson, 1857

Doclea gracilipes Stimpson, 1857. *Proc. Acad. Nat. Sci. Philadelphia*, 3 : 216; Alcock, 1895. *Jour. Asiat. Soc. Bengal*, 64(2) No. 2 : 229; Chopra, 1935. *Rec. Ind. Mus.*, 37(4) : 470; Chhapgar, 1957. *Jour. Bombay Nat. Hist. Soc.*, 54 : 412, pl. 3, figs. o, p; Ummerkutty & Deb, 1972. *Rec. Zool. Surv. India*, 66(1-4) : 192.

Material & Measurements : 2 ♂ cb. 34.09-38.07 mm, cl. 44.05-46.07 mm. 1 ♀ cb. 40 mm, cl. 40.05 mm.

Habitat : It is found from 30-50 metres depth on sandy, muddy or rocky bottoms.

Distribution : Both Coasts of India, Andamans, Sri Lanka, Hong Kong and Mergui.

Remarks : It is commonly found along this coast.

19. *Doclea ovis* (Herbst, 1788)

Cancer ovis Herbst, 1788. *Krabben*, 1 : 210.

Doclea ovis H. Milne-Edwards, 1834. *Hist. Nat. Crust.*, 1 : 294; Sethuramalingam & Khan, 1991. *Brachyuran Crabs of Parangipettai Coast* : 25, pl. 17, fig. d.

Material & Measurements : 1 ♂ cb. 41.05 mm, cl. 45.07 mm. 1 ♀ cb. 45 mm cl. 50.0 mm.

Habitat : It occurs on sandy or muddy bottom at a depth of 30-100 metres.

Distribution : East Coast of India, Hong Kong and Japan.

20. *Parthenope longimana* (Linnaeus, 1764)

Cancer longimanus Linnaeus, 1764. *Mus. Lud. Ulr.* : 441; Herbst, 1790. *Krabben* : 252, pl. 19, figs. 105, 106.

Lambrus longimanus H. Milne-Edwards, 1834. *Hist. Nat. Crust.*, 1 : 354, pl. 26, fig. 1; Alcock, 1895. *Jour. Asiat. Soc., Bengal*, 64(2) No. 2 : 260; Pillai, 1951. *Bull. Cen. Res. Inst. Travancore*, 2(1), Ser. C : 8.

Parthenope (Parthenope) longimanus Serène, 1968. *Singapore Nat. Acad. Sci. Spec. Publ.*, 1 : 59; Sakai, 1976. *Crabs of Japan and the Adjacent Seas*, 1 : 266, fig. 144.

Parthenope longimana Griffin, 1972. *Steenstrupia-Zoological Museum, University of Copenhagen*, 2(5) : 73.

Material & Measurements : 3 ♀ cb. 23.01-29.02 mm, cl. 22.0-27.0 mm.

Habitat : It is found on sandy mud or coarse gravel substratums at a depth of 60 to 70 metres.

Distribution : Persian Gulf, Mauritius, Pakistan, Both Coasts of India, Andamans, Sri Lanka, Gulf of Thailand, Singapore, Java, Sumatra, Australia, Philippines and Japan.

21. *Parthenope pransor* (Herbst, 1796)

Lambrus pransor Herbst, 1796. *Krabben* : 170, tab. 41, fig. 3.

Lambrus (Platylambrus) pransor Alcock, 1895. *Jour. Asiat. Soc. Bengal*, 64(2) No. 2 : 262; Chopra, 1935. *Rec. Ind. Mus.*, 37(4) : 473; Chhapgar., 1957. *Jour. Bombay Nat. Hist. Soc.*, 54 : 415, pl. 4 g.

Parthenope pransor Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, 4 : 204, fig. 63-64.

Material & Measurements : 1 ♀ cb. 27.0 mm, cl. 24.06 mm.

Habitat : It lives in shallow waters on muddy or sandy substratums at a depth of 15-45 metres.

Distribution : Karachi, Both Coasts of India, Andamans, Sri Lanka and Singapore.

22. *Cryptopodia angulata* H. Milne Edwards & Lucas, 1841

Cryptopodia angulata H. Milne Edwards & Lucas, 1841. *Arch. Mus. Hist. Nat. Paris*, 2 : 481; Alcock, 1895. *Jour. Asiat. Soc. Bengal*, 64(2) No. 2 : 282; Chopra, 1935. *Rec. Indian Mus.*, 37(4) : 473; Chhapgar, 1957, *Jour. Bombay Nat. Hist. Soc.*, 54 : 415, pl. 4, fig. J-L; Tirmizi & Kazmi, 1988. *Marine Fauna of Pakistan*, 4 : 211, fig. 65.

Material & Measurements : 1 ♀ cb. 52.07 mm, cl. 29.09 mm.

Habitat : It inhabits on muddy or sandy bottoms at a depth of 34-50 metres.

Distribution : Karachi, Both Coasts of India and Sri Lanka.

Remarks : It is less commonly found along this coast.

SUMMARY

The present qualitative analysis based on collected specimens of representative samples of crabs at hand revealed a wealth of varieties of non-brachyrynchan crabs found along the Gopalpur Coast, Orissa. A total of 22 species belonging to 14 genera, 8 subfamilies, 6 families under infraorder Brachyura of order Decapoda have been recorded from a detailed study of the Nonbrachyrynchan crabs. Most of the families are represented by two to three species while families which have good representation are Calappidae (4 species) and Leucosiidae (7 species). The study also helped in bringing out systematic notes along with habitat and a brief geographical distribution for each species. Of the 22 species, 8 species are found in the intertidal to shallow waters and 14 species are found in the shallow to greater depths. It is also observed that most of the these species are of wide distribution in the Indo-Pacific region. Among the collected species, *Dromia dehaani*, *Calappa lophos*, *Matuta lunaris*, and *Doclea gracilipes* are common and *Dromidia unidentata*, *Calappa pustulosa* and *Leucosia biannulata* are rare along this Coast.

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