

JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.



Vol. LXIII. Part II.—NATURAL SCIENCE.

No. IV.—1894.

Natural History Notes from H. M. Indian Marine Survey Steamer 'Investigator,' Commander C. F. Oldham, R. N., commanding. Series II., No. 17. List of the Shore and Shallow-water Brachyura collected during the Season 1893-1894.—By A. ALCOCK, M.B., C.M.Z.S., Superintendent of the Indian Museum, and A. R. ANDERSON, B.A., M.B., Surgeon-Naturalist to the Survey.

[Received 1st October—Read 7th November.]

1. INTRODUCTION.

Some explanation is due from us for having undertaken, amid much other work, to name the large collection of shore and shallow-water crabs recently made on board the 'Investigator.'

In the first place the collection, though large, is but a small part of the entire collection of *Brachyura* made during many surveying seasons; and it may, therefore, be thought that we should have waited until the whole collection could be taken in hand.

In the second place, it might be doubted whether our opportunities of actually comparing our specimens with types, or with authentically determined specimens of type value, have been sufficient.

To the first objection, we can only reply that our time for joint work is too limited, and too liable to indefinite interruption, to permit a larger undertaking.

The second objection is a serious one; for everyone knows how, even with the most complete literature and illustrations at hand, the most remarkable errors in identification are possible.

Although, thanks to the late Professor Wood-Mason, who for many years aimed at perfecting it, the literature at our call has been as complete as could be desired, yet we have been by no means entirely dependent upon figures and print.

We have had for comparison, in the first place, Dr. J. Anderson's Mergui collection, named by Dr. deMan; in the second place, a considerable number of authentically named specimens acquired by Professor Wood-Mason from European collections, by exchange; and, thirdly, the specimens named by Professor Wood-Mason himself, which specimens may have been—though we can speak with no certainty on this point—compared by him when in Europe.

Of a total number of 119 species collected, only 6 are described with some confidence as new to science, namely:—

1. *Achæus hyalinus*.
2. *Inachoides dolichorhynchus*.
3. *Arcania quinquespinosa*.
4. *Leucosilia granulosa*.
5. *Dorrippe polita*.
6. *Cymopolia serripes*.

Of the before-known species of our collection 28 do not appear to be mentioned in any of the large collections of *Indian Crustacea* described by previous authors, and may therefore be regarded as new to the Indian fauna. These species are:—

1. *Hyastenus gracilirostris*, Miers.
2. *Hyastenus tenuicornis*, Pocock.
3. *Cryptopodia spatulifrons*, Miers.
4. *Lophozozymus nitidus*, Dana.
5. *Chlorodius lævissimus*, Dana.
6. *Chlorodopsis areolatus*, Edw.
7. *Cymo quadrilobatus*, Miers.
8. *Pilumnus cursor*, A. M.-Edw.
9. *Eriphia scabricula*, Dana.
10. *Carupa tenuipes*, Dana.
11. *Lupocyclus orientalis*, Miers.
12. *Lupocyclus rotundatus*, Ad. and Wh.
13. *Grapsus crinipes*, Dana.
14. *Plagusia clavimana*, Desm.
15. *Sesarma obesa*, Dana.
16. *Typhlocarcinus nudus*, Stimps.
17. *Typhlocarcinus villosus*, Stimps.
18. *Cryptosoma granulorum*, deHaan.
19. *Leucosia hæmatosticta*, Ad. and Wh.

20. *Leucosia obtusifrons*, deHaan.
21. *Arcania lœvimana*, Bell.
22. *Arcania novem-spinosa*, Ad. and Wh., var. *aspera*, Miers.
23. *Phlyxia erosa*, A. M.-Edw.
24. *Myra darnleyensis*, Hasw.
25. *Myra elegans*, Bell.
26. *Nursilia dentata*, Bell.
27. *Iphiculus spongiosus*, Ad. and Wh.
28. *Cryptodromia conchifera*, Hasw.

2. LIST OF KNOWN SPECIES.

In the following list we have given references only to such species as are rare or new to the Indian fauna, and only such references as we have ourselves verified as aiding the discrimination of the species.

OXYRHYNCHA.

1. *Oncinopus neptunus*, Adams and White, North Maldive atoll, 20 fathoms.
2. *Doclea ovis*, Herbst, off Madras coast.
3. *Doclea muricata*, Herbst, Palk straits.
4. *Egeria indica*, Leach, off Madras coast, 20 fathoms.
5. *Chlorinoides aculeatus*, Edw., off Madras coast.
6. *Hyastenus aries*, Latr., off Madras coast.
7. *Hyastenus ? gracilirostris*, Miers, off Madras coast.

Described from Fiji, Ann. Mag. Nat. Hist., Vol. IV., 1879, p. 12.

8. *Hyastenus tenuicornis*, Pocock, off Ceylon, 30 fathoms.

Described from the China Sea, Ann. Mag. Nat. Hist., Vol. V., 1890, p. 76.

9. *Schizophrys spiniger*, Adams and White, off Madras coast.
10. *Micippe philyra*, Herbst, North Maldive atoll.
11. *Macrocoeloma* sp., off Colombo, 26½ fathoms.
12. *Lambrus calappoides*, Adams and White, off Colombo, 26½ fathoms.
13. *Lambrus carinatus*, Edw., off Madras coast.
14. *Lambrus contrarius*, Herbst, off Colombo, 26½ fathoms.
15. *Lambrus deflexifrons*, Miers, off Ceylon.

Described from Ceylon, Ann. Mag. Nat. Hist., Vol. IV., 1879, p. 21, pl. V. fig. 5.

16. *Lambrus echinatus*, Herbst, Palk Straits.
17. *Lambrus longimanus*, Leach, off Madras coast.
18. *Lambrus turriger*, Adams and White, off Madras coast.
19. *Cryptopodia fornicata*, Fabr., Palk Straits.
20. *Cryptopodiu spatulifrons*, Miers, var. *laevimana*, Miers, Palk Straits.

Described from Australia and Borneo, Ann. Mag. Nat. Hist., Vol. IV., 1879, pp. 26 and 27, pl. V., fig. 10.

CYCLOMETOPA.

21. *Carpilius convexus*, Forsk., Laccadives.
 22. *Carpilius maculatus*, L., Palk Straits.
 23. *Lophozozymus nitidus*, Dana, Palk Straits.
- Dana, U. S. Expl. Exp., Pt. I., p. 166, pl. VIII., fig. 4a, b.
24. *Actæa granulata*, Aud., Palk Straits.
 25. *Actæa tomentosa*, Edw., Palk Straits.
 26. *Xantho punctatus*, Edw., Palk Straits.
 27. *Xanthodes notatus*, Dana, Palk Straits.
 28. *Xanthodes lamarchii*, Edw., off Madras coast.
 29. *Zozymus aeneus*, L., Laccadives.
 30. *Daira perlata*, Herbst., Laccadives.
 31. *Chlorodius laevissimus*, Dana. Palk Straits.
- Dana, U. S. Expl. Exp., Pt. I., p. 215, pl. XII., figs. 4 a—g.
32. *Leptodius cavipes*, Dana, Palk Straits.
 33. *Leptodius exaratus*, Edw., Palk Straits.
 34. *Leptodius sanguineus*, Edw., Palk Straits.
 35. *Chlorodopsis areolatus*, Edw. nec Ad. and Wh., Palk Straits.
- For latest synonymy, see Miers, Zoology of H. M. S. 'Alert,' Crustacea, p. 532.
36. *Polycremnus octodes*, Herbst, off Madras coast.
 37. *Etsius laevimanus*, Rand., Palk Straits. Laccadives.
 38. *Phymodius ungulatus*, Edw., off Madras coast.
 39. *Cymo quadrilobatus*, Miers, Palk Straits.
- Zoology of H. M. S. 'Alert,' p. 533.
- We agree with Mr. Miers that this species is distinct from *C. andreossii*.
40. *Menippe rumphii*, Fabr., Laccadives.
 41. *Actumnus setifer*, DeHaan, Palk Straits.
 42. *Pilumnus andersoni*, de Man, Palk Straits.

43. *Pilumnus ? cursor*, A. M.-Edw., Palk Straits.

Described in Nouvelles Archives du Museum, Vol. IX., 1873, p. 244, pl. IX., fig. 4, from New Caledonia.

44. *Pilumnus vespertilio*, Fabr., Palk Straits.

45. *Trapezia cymodoce*, Herbst., Palk Straits.

46. *Trapezia digitalis*, Latr., Palk Straits.

47. *Tetralia glaberrima*, Herbst., N. Maldive atoll, 15-30 fathoms.

48. *Quadrella coronata*, Dana, off Ceylon, 28 fathoms.

49. *Eriphia lævimana*, Latr., Laccadives.

50. *Eriphia scabricula*, Dana, Palk Straits.

Dana, U. S. Expl. Exp., Crustacea, Part I., p. 247, pl. XIV., figs. 5a-b. For distribution see Miers, Zoology H. M. S. 'Alert,' pp. 535 and 572.

51. *Achelous granulatus*, Edw., off Colombo, 26½ fathoms.

52. *Achelous whitei*, A. M.-Edw., Palk Straits.

53. *Neptunus hastatoides*, Fabr., Palk Straits. Madras coast.

54. *Neptunus sanguinolentus*, Herbst, off Madras coast.

55. *Neptunus tuberculatus*, A. M.-Edw., Palk Straits.

56. *Xiphonectes longispinosus*, Dana, N. Maldive atoll, 15-30 fathoms.

57. *Thalamita admete*, Herbst, Palk Straits.

58. *Thalamita prymna*, Herbst, Palk Straits.

59. *Thalamita savignyi*, A. M.-Edw., Maldives. Palk Straits.

60. *Goniosoma luciferum*, Fabr., deMan, Madras coast.

61. *Goniosoma truncatum*, Fabr., deH., Palk Straits.

62. *Goniosoma variegatum*, Fabr., var. *callianassa*, Herbst, Palk Straits.

63. *Carupa tenuipes*, Dana, off Madras coast.

Dana, U. S. Expl. Exp. Crustacea. Pt. I., p. 279, pl. XVII., figs. 4a-e; and A. Milne-Edwards, Archiv. du Mus., Vol. X., p. 386, and Nouv. Archiv. du Mus., Vol. IX., 1873, p. 171.

64. *Lupocyclus orientalis*, Miers, off Madras coast, 33 fathoms.

Described from deep water, off Ki Islands and Admiralty Islands, 'Challenger' Brachyura, p. 186, pl. XVII., fig. 1.

65. *Lupocyclus rotundatus*, Adams and White, off Madras coast.

Adams and White, Voyage of H. M. S. 'Samarang,' Crustacea, p. 47, pl. XII., fig. 4. Borneo.

Our single specimen only differs from the above in one unimportant particular, namely, that instead of five spines on the anterior edge of the meropodite of the cheliped, as described by Adams and White, *loc. cit.*, and by deMan (Notes Leyden Museum, Vol. V., 1883, p. 153), there are seven. A. Milne-Edwards, however (Archiv. du Mus., Vol. X., 1861, p. 388), says "*environ cinq épines*," which would appear to show that the number is variable.

CATOMETOPA.

66. *Cardisoma carnifex*, Herbst, Pulicat, Madras coast.
67. *Ocypoda ceratophthalma*, Pall., Laccadives. Madras coast.
68. *Ocypoda cordimana*, Latr., Trincomallee. Madras coast.
69. *Ocypoda macrocera*, Edw., Ceylon coast. Madras coast.
70. *Ocypoda platytarsis*, Edw., Ceylon coast.
71. *Gelasimus annulipes*, Latr., Pulicat, Madras coast.
72. *Metopograpsus messor*, Forsk., Palk Straits.
73. *Grapsus crinipes*, Dana, Laccadives.

Dana, U. S. Expl. Exp., Crustacea, pt. i., p. 341., pl. XXI., figs. 6 a.-d.

74. *Grapsus pictus*, Latr., Laccadives. Ceylon.
75. *Grapsus strigosus*, Herbst, Trincomallee.
76. *Plagusia clavimana*, Desm., Madras coast.

Milne-Edwards, Hist., Nat., Crust., tom. II., p. 92, and Cuvier, Règne Animal, Crustacés, pl. 23., fig. 3.

77. *Plagusia depressa*, Herbst, Madras coast.
78. *Plagusia squamosa*, Lam., Palk Straits.
79. *Varuna litterata*, Fabr., Madras coast.
80. *Sesarma tetragona*, Fabr., Pulicat.
81. *Sesarma quadrata*, Fabr., Madras coast.
82. *Sesarma ? obesa*, Dana, Minnikoy.

Dana, U. S. Expl., Exp., Crustacea, pt. I, p. 356, pl. XXII., figs. 10a.-c. Str. of Balabac.

83. *Carcinoplax* sp. Madras coast.
84. *Notonyx* sp. Madras coast.
85. *Typhlocarcinus nudus*, Stimpson, Palk Straits.

Stimpson, Proc. Ac. Nat. Sci. Philad., 1858, p. 96, from Hong-kong.

86. *Typhlocarcinus villosus*, Stimpson, Palk Straits.

Stimpson, Proc. Ac. Nat. Sci. Philad., 1858, p. 96, from Hong-kong :

Miers, Proc. Zool. Soc., 1879, p. 40, from Corean and Japanese Seas :

Walker, Journ. Linn. Soc. Zool., Vol. XX., 1890, pl. IX., figs 6-8, from Singapore.

OXYSTOMATA.

87. *Calappa hepatica*, L., Laccadives. Maldives. Ceylon.

88. *Calappa lophos*, Herbst, off Madras coast.

89. *Cryptosoma granulatum*, deH., N. Maldive atoll.

deHaan, Fauna Japonica, Crustacea, p. 71, pl. XIX., fig. 3.

90. *Mursia bicristimana*, nob., Madras coast, 33 fathoms.

Vide Journ. Asiatic Soc. Bengal, pt. 2, 1894, p. 179.

The male differs from the female, (1) in its smaller size, (2) in its narrower rostrum, and (3) in its more closely and sharply granular integument.

91. *Matuta victrix*, Fabr., off Madras coast.

92. *Leucosia hæmatosticta*, Adams and White, off Madras coast.

Adams and White, Voyage, H. M. S. 'Samarang,' Crustacea, p. 54, pl. XII., fig. 2. "Eastern Seas." Also Walker, J. L. S., Zool., Vol. XX., 1890, p. 111, from Singapore: Miers, P. Z. S., 1879, p. 40, from Corean and Japanese Seas: Stimpson, Proc. Ac. Nat. Sci. Philad., 1858, p. 160, from Japan.

93. *Leucosia obtusifrons*, deH., off Madras coast.

deHaan, Fauna Japonica, Crustacea, p. 133, pl. XXXIII., fig. 2.

94. *Leucosia ornata*, Miers, off Trincomallee, 28 fathoms.

Miers, Trans. Lin. Soc., Zool., (ii) Vol. I., p. 236, pl., XXXVIII., figs. 7-9, from Ceylon. Dr. deMan, however, J. L. S., Zool., Vol. XXII., 1888, p. 197, regards this species only as a variety of *L. urania*, Herbst.

95. *Leucosia rhomboidalis*, deH., off Madras coast.

deHaan, Fauna Japonica, Crustacea, p. 134, pl. XXXIII., fig. 5. Already reported from Trincomallee, by F. Müller, Verh. Naturf. Ges. Basel, Band 8, 1890, p. 472.

96. *Leucosia urania*, Herbst, off Trincomallee, 28 fathoms.

97. *Arcania lævimana*, Bell, Maldives.

Bell, Trans. Linn. Soc., Zool., Vol. XXI., 1855, p. 310, pl. XXXIV., fig. 10, from Philippines. Also A. Milne-Edwards, Nouv. Archiv. du Mus., Vol. X., 1874, p. 48, pl. III., fig. 4, from New Caledonia.

98. *Arcania novemspinosa*, Adams and White, var. *aspera*, Miers, off Madras coast.

Miers, Ann. Mag. Nat. Hist., Vol. V., 1880, p. 317. "Malaysia."

99. *Ixa cylindrus*, Fabr. Palk Straits. Off Madras coast.

100. *Phlyxia erosa*, A. M.-Edw., Maldive atoll.

A. Milne-Edwards, *Nouv. Archiv. du Mus.*, Vol. X., 1874, p. 47, pl. III., fig. 2, from New Caledonia.

Also Miers, *P. Z. S.*, 1884, p. 13, from Mauritius, and from Fiji: and Haswell, *Cat. Australian Crustacea*, p. 125.

101. *Myra australis*, Haswell, off Madras coast.

102. *Myra darnleyensis*, Haswell, Maldives. Off Madras coast.

Haswell, *Proc. Linn. Soc. N. S. Wales*, Vol. IV., 1879, p. 52, pl. V., fig. 4. Australia.

103. *Myra elegans*, Bell, off Madras coast.

Bell, *Trans. Lin. Soc., Zool.*, Vol. XXI., 1855, p. 297, pl. XXXII., fig. 4. "In mari orientali."

104. *Myra fugax*, Fabr., off Madras coast.

105. *Pseudophilyra melita*, deMan, off Madras coast.

The granulation of the hand and upper surface of the carapace appears to be a secondary sexual character confined to males of large size.

106. *Nursea plicata*, Herbst, off Madras coast.

107. *Nursilia dentata*, Bell, Maldives. Off Madras coast.

Bell, *Trans. Lin. Soc., Zool.*, Vol. XXI., 1855, p. 309, pl. XXXIV., fig. 6. "In oceano Indico." Also Stimpson, *Proc. Ac. Nat. Sci. Philad.*, 1858, p. 161, from E. Pacific Ocean: Haswell, *Proc. Linn. Soc., N. S. Wales*, Vol. IV., 1879, pp. 56 and 104, from Australian Region: Miers *Zoology*, H. M. S., 'Alert,' *Crustacea*, pp. 253 and 548, from Australia Arafura Sea, Fiji, Seychelles: Pocock, *Ann. Mag. Nat. Hist.*, Vol. V., 1890, p. 73, from China Sea, 40 fathoms.

108. *Iphiculus spongiosus*, Adams and White, off Madras coast.

Adams and White, *Voyage H. M. S. 'Samarang,' Crustacea*, p. 57. Philippines. Also Stimpson, *Proc. Ac. Nat. Sci. Philad.*, 1858, p. 161, from Hong-kong: Miers, *Zoology H. M. S. 'Alert,' Crustacea*, p. 253, from the Arafura Sea, 32-36 fms.

109. *Dorippe quadridens*, Fabr., off Madras coast.

110. *Dorippe sima*, Edw., Palk Straits.

111. *Cymopolia jukesii*, White., N. Maldive atoll.

We place this species here, though we share Mr. Miers' doubt ('Challenger,' *Brachyura*, p. 334) as to its having any very near connexion with the *Dorippidæ*. We think that it is probably a *Catometope*, and that it should be placed near the *Gonoplacidæ*, as delimited by Dana.

ANOMALA.

112. *Cryptodromia* ? *conchifera*, Haswell, off Madras coast.

Haswell, Cat. Australian Crustacea, p. 141, pl. III., fig. 4.

113. *Raninoides serratifrons*, Henderson, off Trincomallee, 28 fathoms.

Henderson, Trans. Lin. Soc., Zool., 1893, p. 408, pl. XXXVIII., figs. 10-12.

3. DESCRIPTIONS OF NEW SPECIES.

OXYRHYNCHA.

ACHÆUS, Leach, Miers.

114. *Achæus hyalinus*, n. sp.

Carapace subtriangular, thin, vitreous, spiny, the regions fairly well defined, the postorbital region constricted.

The spiny rostrum, as seen from above, ends in two short spines,* each of which is bifid from the base; but, as seen from below, these spines do not form the end of the rostrum, which is now seen to consist of a strong vertically deflexed spine united by a flying bridge to the interantennular septum.

The inflated gastric and branchial regions, as well as the hepatic regions and the antero-lateral border of the carapace, are coarsely, sharply, and rather distantly spiny, most of the spines being capped with a tuft of short hairs.

The eyes are movable but not retractile, and the eye-peduncle has a tubercle in the middle of its anterior surface.

All the ambulatory legs are hairy throughout, the hairs of those of the 2nd and 3rd pairs being remarkably long, close-set, even and stiff. The arm, wrist, and hand of the chelipeds are acutely spiny, as are also the edges of the meropodites of the 2nd-5th legs, the spines on the front edge of the meropodites of the 2nd and 3rd pairs being particularly large and conspicuous.

The 5th pair of legs is subcheliform, the propodite being remarkably dilated at its base to receive the tip of the claw-like dactylus: the dactylus is minutely spinate, but the expanded base of the propodite is furnished with a comb of sharp spines.

Length of carapace 14 millim., breadth of carapace 9 millim. greatest span 67 millim.

Off Trincomallee, 28 fathoms.

* These spines are very short and divergent, and are nothing like those of *Stenothynchus*.

INACHOIDES, Edw. and Lucas.

Milne-Edwards and Lucas, in D'Orbigny, Voy. dans l'Amer. merid., Crustacés, pp. 4-5.

Miers, Journ. Linn. Soc., Zool., vol. XIV., 1879, p. 646.

A. Milne-Edwards, Miss. Sci. au Mexique etc., I, Crustacés etc., p. 198.

115. *Inachoides dolichorhynchus*, n. sp.

Distinguished by its rostrum, which is equal in length to the rest of the carapace.

Excepting the rostrum, the form of the body is very similar to that of the type species (Milne-Edwards and Lucas, *op. cit.*, pl. iv., fig. 2.)

The long curved simple rostrum, and the carapace, are spiny: the regions of the carapace are well delimited: the supra-ocular and post-ocular spines, though small, are distinct. In addition to spinules there are numerous larger spines—four on the gastric region, a bicuspid one on the cardiac region, one on the intestinal, and about four on each branchial.

The eyes are retractile towards the sides of the carapace, but are in all positions *completely* exposed.

The chelipeds are about one-fourth longer than the carapace rostrum included; their palm, which is about two-fifths of their total extent and nearly three times the length of the fingers, is broadened and moderately inflated.

The other legs in form and proportion resemble those of the type (Edw. and Lucas, *op. cit.*, pl. iv., fig. 2).

Total length of carapace, 17.5 millim.; greatest breadth of carapace, 8 millim.; greatest span 54 millim.

Off Madras coast, shallow-water.

The genus *Inachoides* though recorded from Viti, by M. A. Milne-Edwards (Journ. Mus. Godeffroy, vol. i., 1873-74, p. 253), does not appear to have been before observed in Indian waters.

OXYSTOMATA.

ARCANIA, Leach, Miers.

116. *Arcania quinquespinosa*, n. sp.

Only differs from the well-known *Arcania septemspinosa* (which, though not contained in the present collection, is very common in shallow water off the Madras coast) in the following particulars.—

(1) the great spines of the carapace are relatively smaller, and

the spine on the posterior part of the branchial region—on either side of the intestinal region—is altogether wanting;

(2) the lobes of the rostrum are longer and more acute;

(3) the fingers, instead of being equal in length to the palm, are nearly twice the length of the palm;

(4) the small cardiac region is of a bright-red colour, edged with white, and this can be seen fairly well even after prolonged immersion in strong spirit.

In all other respects this species exactly resembles *Arcania septem-spinosa*,¹Fabr.

Off Madras coast, up to 13 fathoms.

LEUCOSILIA, Bell.

117. *Leucosilia granulosa*, n. sp.

Carapace slightly broader than long, subglobose: truncated anteriorly, so that the external maxillipeds are visible beyond the front: very closely covered, as are also the chelipeds, with bead-like granulations: the regions delimited by shallow yet distinct furrows. The rostrum consists of two divergent hollow lobes, beneath which the antennules are lodged: immediately behind the rostrum the carapace is traversed from side to side by a deep groove. The antero-lateral margin is interrupted by a deep notch, in front of which is a coarse blunt hepatic tooth, while behind it is a stronger epibranchial tooth. The lateral angle is also marked by a prominent granule. The posterior margin is almost straight and bears three tubercles, of which the median is hardly conspicuous. The hepatic regions are inflated, as are also the sides of the gastric region. The intestinal region forms a tumid boss, on the summit of which the granulations are obsolescent.

The tips of both rami of the external maxillipeds are strongly bent upwards, that of the exognath ending in a large blister-like tubercle. The spine on the penultimate abdominal segment of the male is a mere tumescence.

A male and an egg-laden female from the North Maldivé atoll, 15–30 fathoms.

	Male.	Female.
Length of carapace.....	6·5 millim.	7·5 millim.
Breadth of carapace	7·0 millim.	9·0 millim.
Greatest span (of chelipeds).....	24·0 millim.	26·5 millim.

Besides being smaller, and having the chelipeds of slightly greater relative length, the male differs from the female in being much more sharply granular.

DORIPPE, Fabr., Edw.

118. *Dorippe polita*, n. sp.

Apparently nearest to *Dorippe sexdentata*, Stimpson, Proc. Acad. Sci. Philad., 1858, p. 163, from South Japan.

Distinguished by the smooth, hard, naked, and polished integument of the body and limbs.

Carapace smooth and polished, slightly broader than long, with the regions hardly defined.

Front divided into four small lobes, of which the two median, though slightly the smaller, are slightly the more prominent, and also arise on a lower level.

The external orbital angles are a little more prominent than the front. Infra-orbital tooth blunt, small, and inconspicuous.

The lateral borders of the carapace are faintly notched near the middle, being sharp, almost straight, and convergent in front of the notch, and a little inflated behind it.

The sterna between the chelæ are remarkably tumid.

The eye-stalks are long, slender, and much curved.

The legs are perfectly smooth, and, except for some scanty hairs on the chelipeds, are naked: the last four pairs are flat, and the last two pairs typically subchelate. The pleuræ, or plates beneath which the fifth pair of legs arise, are remarkably large.

Length of carapace, about 11.5 millim., greatest breadth of carapace about 12 millim., greatest span (3rd pair of legs) 61 millim.

A single egg-laden female from off the Madras coast, 7 fathoms.

In many respects this species resembles *Ethusa* much more closely than *Dorippe*; but the disposition of the afferent branchial opening proves it to be a true *Dorippe*.

? CATOMETOPA.

CYMOPOLIA, ROUX, Edw.

119. *Cymopolia serripes*, n. sp.

This species is characterized by the broadly expanded lamellar (natatory) propodites and dactyli of the third and fourth pairs of legs, and by the sharp serration of the posterior edges of those joints.

The carapace is of the usual form, with the regions plainly delimited, and the surface very crisply granular. The front is four-lobed, the outer lobe on either side being inconspicuous and recurved upwards at tip, the two middle lobes being conspicuous and deflexed. The supra-orbital margin is serrated and folded much as in *C. caronii*.

The antero-lateral margins have, exclusive of the large external

orbital tooth, four sharp teeth, which increase in size from behind forwards.

The sinuous postero-lateral margins are quite smoothly moulded.

The posterior margin is surmounted by a festoon of eight even teeth, much as in *C. caronii*; below it the last—and only the last—sternal segment is produced to form a remarkably sharp and salient crest, much more salient than that, for example, of *C. caronii*.

The trunk-legs of the second pair are not longer, and, except in their meropodite, hardly stouter than those of the fifth pair: their propodite is sharply and finely serrated along its posterior border, and their claw-like dactylus has at its base, on the same border, two sharp teeth.

The trunk-legs of the third and fourth pair resemble each other in form and size, their length being about one-fifth more than the greatest breadth of the carapace: their prismatic meropodites are short, inflated, and considerably more than half as broad as long, with the edges sharply denticulate, and with the upper surface crisply granular: their carpopodites, though distinctly prismatic, with all the edges sharply delimited, are much depressed, and have the anterior, posterior, and distal borders all sharply denticulate: their propodites and dactyli are broadly lamellar and distinctly natatory, the swimming surface being increased by a thick fringe of very long setæ on the anterior border: both these joints are longitudinally ribbed and fluted, and both have the posterior border sharply serrated.

The legs of the fifth pair are filiform: their length is about two-thirds the greatest breadth of the carapace: they are finely granular above, and their dactylus is as long as their propodus.

Colours in spirit, mottled shades of white and purplish brown, with broad cross-bands on the propodites and dactyli of the third and fourth pairs of legs.

Length of carapace 9.5 millim., breadth of carapace 11 millim. greatest span (fourth pair of legs) 37 millim.

Off Madras coast, shallow water

Postscript. We take the present opportunity of noticing an omission in the Plate (Plate IX) illustrating *Archæoplax notopus*, nob.* A figure of the external maxillipeds has been inadvertently left out.

* J. A. S. B., Part ii., No. 3, 1894, pp. 181–183, Plate ix.
