

Annexe F. p. 2: Heller, "Novara" Crust. p. 26: Brocchi, Ann. Sci. Nat. (6) II. 1875. Art 2, p. 55, pl. xvi. figs. 83, 84 (*male appendages*): Miers, Cat. New Zealand Crust. p. 26, and Ann. Mag. Nat. Hist. (5) V. 1880, p. 288, and Challenger Brachyura, p. 174: Streets, Bull. U. S. Nat. Mus. VII. 1877, p. 106: Haswell, Cat. Austral. Crust., p. 77: Filhol, Crust. Nouv. Zél., Miss de l'île Campbell, p. 382, F. Muller, Verh. Naturf. Ges. Basel, VIII. 1886, p. 475: de Man, Archiv. f. Naturges. LIII. i. 1887, p. 328, and in Weber's Zool. Ergebn. Niederl. Ost-Ind. II. 1892, p. 285 and Zool. Jahrb., Syst. etc., VIII. 1894-95, p. 556: Cano, Boll. Soc. Nat. Napol. III. 1889, p. 212: Pfeffer, Mitt. Nathist. Mus. Hamburg VII. 1889 (1890), No. 8, p. 6 (*female dimorphism*): J. R. Henderson, Tr. Linn. Soc. Zool. (2) V. 1893, p. 368: Ortmann, Zool. Jahrb., Syst. etc., VII. 1893, p. 75, and in Semon's Forschungar. (Jena, Denk VIII) Crust. p. 45.

Carapace very broad, little convex, its length in the middle line half its breadth excluding the great lateral spines, finely granular everywhere in the young but only in the anterior half in the adult, crossed transversely by some slightly-raised granular lines—two on the gastric, one on either branchial region—conspicuously marked posteriorly by three large blood-red spots.

Front cut into four sharp and very distinct teeth—not counting the inner supra-orbital angles—of which the middle two are the less prominent and have projecting between and far beyond them the spine-like process of the epistome. Supra-orbital borders cut by 2 fissures into 3 lobes, the angles of the middle lobe not conspicuous.

Antero-lateral borders very long and oblique, cut into 9 teeth (including the outer orbital angle) the last of which is about four times as long as any of the others. The posterior border, which is smooth, forms a common curve with the postero-lateral borders.

Antero-external angle of merus of external maxillipeds not produced.

Chelipeds in the adult male about  $2\frac{1}{2}$  times the length of the carapace, but rather less in the female and young male: the hand is the most massive segment. Arm with 3 or 4 large spines on the anterior (inner) border, but without any on the posterior border. Hand and outer surface of wrist costate, the costae smooth: both inner and outer angle of wrist strongly spiniform: the palm, which is not, or only slightly, longer than the fingers has two spines dorsally, one being in front of the apex of the wrist-joint, the other just behind the finger-joint.

Legs smooth: a spinule near the far end of the posterior border of the carpus of the first two pairs.

A large species.

In the Indian Museum are 60 specimens, from Penang, Nicobars, east and west coasts of the Peninsula, Ceylon, and Karachi.

12. *Neptunus pelagicus*, Linn.

*Pagurus reidjungan*, Bumph, Amboinsch. Rariteitk. I. p. 11 (which also seems to include *N. sanguinolentus*), pl. vii. fig. R.

*Cancer pelagicus*, Linnæus, Mus. Lud. Ulr. p. 434, and Syst. Nat. (xii. ed.) p. 1042: Forskal, Descr. Anim. p. 89: Fabricius, Ent. Syst. II. p. 447 (part).

*Cancer cedo-nulli*, Herbst, Krabben, II. ii. 157, pl. xxxix.

*Cancer reticulatus*, Herbst, Krabben, III. i. 65, pl. l.

*Portunus pelagicus*, Fabricius, Ent. Syst. Suppl. p. 367: Latreille, Hist. Nat. Crust. VI. 16, and Encycl. Meth. X. p. 188: Savigny, Descr. Egypt. pl. iii. fig. 8 (Andouin, Expl. p. 88).

*Portunus cedo-nulli*, Bosc, Hist. Nat. Crust. I. p. 221.

*Lupa pelagica*, Desmarest, Dict. Sci. Nat. XXVIII. p. 223 and Consid. Gen. Crust. p. 98, pl. vi. fig. 2: Milne Edwards, Hist. Nat. Crust. I. 450: Lucas, Hist. Nat. Anim. Art. Crust. p. 101, pl. vii. fig. 2: Dana, U. S. Expl. Exp. Crust. pt. I. p. 271: Stimpson, Proc. Acad. Nat. Sci. Philad. 1858, p. 83: Heller, SB. AK. Wien, XLIII. 1861, p. 855: Hilgendorf in v. d. Decken's Reisen Ost-Afr. III. i. p. 77: Tozzetti, 'Magenta' Crust. p. 66, pl. v. fig. 3a-b.

*Neptunus pelagicus*, DeHaan, Fann. Jap. Crust. p. 87, pl. ix, x: Krauss, Sudafr. Crust. p. 28: A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 320, 329, and Nouv. Archiv. du Mus. IV. 1863, p. 70, and IX. 1873, p. 156: Heller, Novara Crust. p. 27: Hess, Archiv. f. Naturges. XXXI. 1865, i. pp. 138, 172: Brocchi, Ann. Sci. Nat. (6) II. 1875, Art. 2, p. 52, pl. xv. fig. 74, 75 (male appendages): Miers, Cat. New Zealand Crust. p. 25, and Ann. Mag. Nat. Hist. (4) XVII. 1876, p. 221, and (5) V. 1880, p. 238, and Zool. H.M.S. Alert, pp. 183, 289, and Challenger Brachyura, p. 172: Kossmann, Reise roth Meer. Crust. p. 46: Neumann, Cat. Crust. Heidelb. Mus. p. 24: Hilgendorf, MB. AK. Berl. p. 799: Nanok, Zeits. Wiss. Zool. XXXIV. 1880, p. 62 (gastric teeth): de Man, Notes Leyden Mus. II. 1880, p. 183, and Archiv. f. Naturges. LIII. 1887, i. p. 328, and Journ. Linn. Soc., Zool., XXII. 1888, p. 69, and in Weber's Zool. Ergebn. Niederl. Ost-Ind. II. 1892, p. 284: Haswell, Cat. Austral. Crust. p. 77: Filhol, Crust. Nouv. Zél. p. 381: Cano, Boll. Soc. Nat. Napoli, III. 1889, p. 212: Pfeffer, Mitteil. Nat. Hist. Mus. Hamb. XII. 1889, No. 8, p. 6: A. O. Walker, Journ. Linn. Soc., Zool., XX. 1890, p. 110: J. R. Henderson, Trans. Linn. Soc. Zool., (2) V. 1893, p. 367: Ortmann, Zool. Jahrb., Syst., VII. 1893, p. 74, and in Semon's Forschungar. (Jena. Denk. VIII.) Crust. p. 45.

*P. Neptunus armatus*, A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 322, 339, pl. xxxiii. fig. 2: Miers, Zool. H. M. S. Alert, pp. 183, 229: Cano, Boll. Soc. Nat. Napoli, III. 1889, p. 212: J. R. Henderson, Trans. Linn. Soc., Zool., (2) V. 1893, p. 370: Ortmann, Zool. Jahrb. Syst. VII. 1893-94, p. 75.

*Neptunus trituberculatus*, Miers, Ann. Mag. Nat. Hist., (4) XVII. 1876, p. 221 and (5) V. 1880, p. 238, and Cat. Crust. New Zealand, 1876, p. 25, and Challenger Brachyura, p. 172: Ortmann, Zool. Jahrb. Syst. VII. 1893, p. 74.

Carapace broad, little convex, its length a little more than half its breadth without the great lateral spines, at all ages closely covered with largish miliary granules: two transverse lines on the gastric, one on either branchial region: sometimes two lumps on the cardiac and one on the post-gastric region, these being very variable in size and distinctness.

Front cut into four teeth—not counting the inner angles of the orbit—of which the middle two are small and little prominent, or obsolescent, or even confluent and obsolete: between and far beyond them projects the spine-like process of the epistome. Supra-orbital borders cut by two fissures into three lobes, the outer angle of the middle lobe being usually dentiform.

Antero-lateral and posterior borders and external maxillipeds almost as in the preceding species.

Chelipeds in the adult male more than 3 times, in the female and young male not quite 2½ times the length of the carapace—the hand the most massive segment. Arm with 3 large spines on the anterior (inner) border and with 1 at the far end of the posterior border. Wrist and hand much as in the preceding species, but the costæ are, for the most part, granular, and the hand carries 3 spines two of which stand side by side behind the finger-joint.

Legs as in *N. sanguinolentus*.

Colours in spirit yellowish, the carapace chelipeds and proximal joints of the last pair of legs having the dorsal surface copiously and coarsely reticulated with bluish and purplish green.

A large species.

In the Indian Museum are 46 specimens from all parts of the coasts of the Indian Seas, from Penang to the Persian Gulf, besides 13 from Japan, Hongkong, Australia and Suez.

### 13. *Neptunus (Amphitrite) gladiator* (Fabr.).

*Portunus gladiator*, Fabricius, Ent. Syst. Suppl. p. 368: Bosc, Hist. Nat. Crust. I. p. 219: Latreille, Hist. Nat. Crust. VI. p. 19, and Encycl. Meth. X. p. 189.

*Cancer menestho*, Herbat, Krabben, III. iii. 34, pl. lv. fig. 3.

*Lupea gladiator*, Milne Edwards, Hist. Nat. Crust. I. 456.

*Amphitrite gladiator*, De Haan, Faun. Jap. Crust. p. 39, pl. i. fig. 5: Haswell, Cat. Austral. Crust. p. 84.

*Neptunus gladiator*, A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 330, 339: Richters in Möbius Meeresf. Maurit. p. 152: Muller Verh. Nat. Ges. Basel, VIII. 1886, p. 475: Miers, Challenger Brachyura, p. 177: de Man, Journ. Linn. Soc., Zool., XXII. 1888, p. 69: J. B. Henderson, Trans. Linn. Soc., Zool., (2) V. 1893, p. 367: Ortmann, Zool. Jahrb. Syst. VII. 1893-94, p. 78.

*Amphitrite Haanii*, Stimpson, Proc. Ac. Nat. Sci. Philad. 1858, p. 38.

? *Amphitrite media*, Stimpson, Proc. Ac. Nat. Sci. Philad. 1858, p. 39 (v. A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 331, 339 and Ortmann, Zool. Jahrb. Syst. VII. 1893-94, p. 78).

Carapace depressed, finely submentose, its length about two-thirds its breadth without the great lateral spines, its surface broken by low symmetrically disposed sub-regional elevations the summits alone of which are granular.

Front cut into four acute teeth (not counting the inner supra-orbital angles) of which the middle two are the smaller and less prominent and have projecting between them the dentiform process of the epistome. Supra-orbital margin cut by two fissures into three lobes, the outer angle of the middle lobe strongly dentiform.

Antero-lateral and posterior borders much as in the preceding species except that the great lateral spines are only about  $2\frac{1}{2}$  times the length of any of the others.

Eyes large, reniform, not concealed to dorsal view by the orbits, which are large and almost entirely dorsal in position.

Antero-external angle of merus of external maxillipeds very strongly produced in a lateral direction.

Chelipeds in the adult male a little over  $2\frac{1}{2}$  times the length of the carapace, somewhat shorter in the female—the hand the most massive segment: granular in places, the granules on the upper surface of the arm and under surface of the hand forming sub-squamiform lines. Arm with 4 spines on the anterior (inner) border and 2 near the far end of the posterior border. Wrist and hand costate, the costae granular. Both inner and outer angle of wrist strongly spiniform, the former very strongly so. Two spines on the hand, one being just in front of the apex of the wrist-joint, the other being a short distance behind the finger-joint: the carina that forms the outer boundary of the lower surface of the hand is very salient.

Legs, like the arm, tomentose in places, but very strongly so along the anterior (inner) border: no spinule on the posterior border of the carpodites.

The abdomen in the male has remarkably sinuous lateral borders: the 2nd and 3rd abdominal terga in both sexes are very strongly carinated.

Colours in spirit yellow, often with some red markings on edges of carapace and on fingers and on spines of chelipeds.

A species of medium size, adult males having the carapace about 33 millim. long and about 65 millim. broad including the great lateral spines.

In the Indian Museum are 13 specimens from Ceylon, Madras, Sunderbunds, and Mergui.

#### 14. *Neptunus (Amphitrite) argentatus* (White) A. M. Edw.

[“*Amphitrite argentata*, White List. Crust. Brit. Mus. p. 126.”]

*Neptunus argentatus*, A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 332, 339, pl. xxxi. fig. 4: J. R. Henderson, Trans. Linn. Soc., Zool., (2) V. 1893, p. 368.

*Neptunus gladiator*, var. *argentatus*, Miers, Challenger Brachyura, p. 177: Cano, Boll. Soc. Nat. Napoli. III. 1889, p. 214: Ortmann, Zool. Jahrb. Syst., VII, 1893, 94, p. 73.



Very like *N. gladiator* but easily distinguished by the following characters:—

(1) the carapace is longer and narrower, its length being three-fourths its breadth without the great lateral spines; and its sub-regional convexities are in much stronger relief and much better defined:

(2) the median frontal teeth are smaller and less prominent, and the outer angle of the middle lobe of the supra-orbital margin is less acute:

(3) the crests of the outer surface of the palm and immobile finger and of the third abdominal segment are not only more salient and trenchant, but also have a curious silvery or coppery pearly sheen:

(4) the chelipeds are shorter; and there is a dark round spot near the tip of the dactylus of the last pair of legs.

It is a very much smaller species; only one of numerous egg-laden females in the Indian Museum has the carapace more than 20 millim. long and 30 millim. broad (including spines). Specimens of *N. gladiator* of this size are obviously immature.

In the Indian Museum are 63 specimens from the Andamans, Mergui (Marine Survey), Arakan coast, Ganjam coast, Ceylon, and Malabar coast. Nearly half the specimens are recorded from depths of 18 to 33 fathoms.

15. *Neptunus (Amphitrite) argentatus* var. *glareosus*.

In this variety the carapace is even narrower and more elongate, its subregional convexities are hardly less salient and well defined than those of *N. tuberculosus*, and its surface is almost free of tomentum. The carina of the 3rd abdominal tergum is about twice as prominent as it is in the typical form, having the shape of a prominent foliaceous lobe. The dorsal surface of the body and chelipeds is profusely speckled.

26 specimens, including egg-laden females, were dredged from a bottom of sand and stones off the Andamans at 55 fathoms.

16. *Neptunus (Amphitrite) petreus*, n. sp.

This species differs from *N. gladiator*, and approaches *N. spinicarpus* Stimpson, in the enormous development of the spine at the inner angle of the wrist.

It will be sufficient to point out the characters that distinguish it from *N. gladiator*, of which it may prove to be only a variety.

The length of the carapace is nearly  $\frac{3}{4}$  the breadth without the lateral spines. The frontal teeth are blunt and the epistome is not

produced. The last spine of the antero-lateral border is hardly twice the length of any of the others. The costæ of the wrist and hand are low, and the spine at the inner angle of the wrist is about two-thirds the length of the palm.

A single male specimen from the Pedro Shoal north of the Laccadive Islands. The carapace is 12 millim. long and 18 millim. broad including the spines.

17. *Neptunus (Hellenus) hastatoides* (Fabr.) A. M. Edw.

*Portunus hastatoides*, Fabricius, Ent. Syst. Suppl. p. 368.

*Cancer hastatus*, Herbst, Krabben, III. iii. 3, pl. lv. fig. 1.

*Amphitrite hastatoides*, De Haan, Faun. Jap. Crust. p. 39, pl. i. fig. 3: Stimpson, Proc. Ac. Nat. Sci. Philad. 1858, p. 88.

*Neptunus hastatoides*, A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 332, 333: Miers, Zool. H. M. S. Alert, pp. 183, 229, and Challenger Brachynura, p. 175: J. E. Henderson, Trans. Linn. Soc., Zool., (2) V. 1893, p. 368: Ortmann, Zool. Jahrb., Syst., VII. 1893-94, p. 74: de Man, Zool. Jahrb., Syst., VIII. 1894-95, p. 557.

Carapace very flat, its length in the middle line is about two-thirds its breadth not counting the great lateral spines, finely subtomentose, its surface symmetrically broken up into low subregional convexities the summits alone of which are granular.

Front slightly prominent beyond the inner supra-orbital angles and cut into four teeth, the middle two of which are very much narrower and acuter than, and are usually as prominent as or even more prominent than, the others: the inconspicuous apical prolongation of the epistome can be seen between, but does not project beyond, the middle teeth. Supra-orbital border cut by two fissures into three lobes, the outer angle of the middle lobe being dentiform.

Antero-lateral borders of moderate length and obliquity, cut into 9 teeth (including the outer angle of the orbit) the last of which is less than three times the length of any of the others in adults, but is longer in the young. The finely-beaded posterior border is practically straight, and forms a sharp or claw-like angle of junction with the postero-lateral borders.

Eyes large and reniform, not concealed by the entirely-dorsal orbits. The antero-lateral angle of the merus of the external maxillipeds is acutely produced in a lateral direction.

Chelipeds in the adult male slightly more than twice the length of the carapace, finely subtomentose, the hands little if at all less massive than the arm. 3 or 4 spines on the anterior (inner) border of the arm, 2 near the far end of the posterior border: hand and upper surface of wrist costate, the costæ granular: inner and outer angles of wrist strongly spiniform: two spines on the hand, one being in front of the apex of the wrist-joint the other just behind the finger-joint.

Legs more or less subtomentose, quite unarmed, but the after half of the distal border of the merus of the last pair is finely serrulate.

The 3rd segment of the abdomen of both sexes is strongly and sharply carinate: the length of the 6th segment of the male is nearly twice its greatest breadth.

Colours of good fresh spirit specimens, greenish yellow more or less mottled: tip of dactylus of last pair of legs blackish brown.

A small species: egg-laden females have the carapace 22 millim. long and 42 millim. broad including spines.

In the Indian Museum are 137 specimens from the Madras coast, Andamans, G. of Martaban, Penang, and Persian Gulf, besides 6 from Hongkong.

### 18. *Neptunus (Hellenus) andersoni*, de Man.

*Neptunus andersoni*, de Man, Journ. Linn. Soc., Zool., XXII. 1888, p. 70, pl. iv. figs. 3, 4; J. R. Henderson, Trans. Linn. Soc., Zool., (3) V. 1893, p. 368.

This species differs from *N. hastatoides* in the following characters:—

The carapace is more convex, the subregional elevations, instead of being low and ill-defined, are sharply-defined tubercles, and the oblique ridge that traverses either epibranchial region is particularly salient. The front is more prominent beyond the inner supra-orbital angles and the two middle teeth are less prominent than the others. The posterior angles of the carapace are much less acute. The antero-external angle of the merus of the external maxillipeds is less produced in a lateral direction. The chelipeds are shorter, being less than twice the length of the carapace in the male, and the costæ of the wrist and hand are smooth. The 6th segment of the male abdomen is less elongate than in *N. hastatoides*.

The colour of good fresh spirit specimens is biscuit yellow without any mottling or marking.

In the Indian Museum are 4 specimens from the Persian Gulf.

### 19. *Neptunus (Hellenus) spinipes*, Miers.

*Neptunus spinipes*, Miers, Challenger Brachyura, p. 178, pl. xv. fig. 1.

This species has a strong superficial resemblance to *N. hastatoides*, but is easily distinguished (1) by the more convex carapace (2) by the non-fissured supra-orbital border (3) by the form of the merus of the external maxillipeds which has its antero-external angle rounded not produced laterally (4) by the spine on the posterior border of the merus of the last pair of legs, and (5) by the position of the anterior spine of the hand, which is placed a good way back instead of immediately behind the finger-joint.

Carapace appreciably convex, but shaped and sculptured as in *N. hastatoides*. Front very distinctly prominent beyond the inner supra-orbital angles and beyond the epistome, cut into four teeth of which the middle two are somewhat smaller narrower and less prominent than the others.

The supra-orbital border is not fissured, but the orbits otherwise, and the eyes, are as in *N. hastatoides*.

Antero-lateral border cut into 9 teeth (including the outer orbital angle) of which the first 2 or 3 are very small and inconspicuous and the next 5 or 6 small, the last being a spike usually from a third to half the breadth of the carapace proper in length. The posterior border is straight and forms an acutely dentiform angle of junction with the postero-lateral borders.

The merus of the external maxillipeds is narrow and has its antero-external angle simply rounded, not produced laterally.

The chelipeds in the adult male are rather more than  $2\frac{1}{2}$  times the length of the carapace, but are otherwise similar to those of *N. hastatoides*, except that the second spine of the hand is placed a good way behind the finger-joint.

There is a spine near the far end of the posterior border of the merus of the last pair of legs.

The 2nd and 3rd abdominal terga in both sexes are transversely carinate, the carinae being of no great depth but very elegantly denticulate. The length of the 6th tergum of the male is not much more than its greatest breadth.

A small species: egg-laden females are 6.5 millim. long and 16 millim. broad including spines, but males are nearly twice this size.

In the Indian Museum are 66 specimens, from the Madras coast, Andamans, G. of Martaban, Arakan coast, and Muscat. Most of them come from over 20 fathoms.

The specimen figured by Miers has abnormally short lateral epibranchial spines.

## 20. *Neptunus (Hellenus) longispinosus* (Dana).

*Amphitrite longispinosa*, Dana, Proc. Ac. Nat. Sci. Philad. 1852, p. 84, and U. S. Expl. Exp. Crust. pt. I. p. 277, pl. xvii. figs. 2 a-c.

*Neptunus longispinosus*, A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 387, 389.

*Xiphonectes longispinosus*, Miers, Challenger Brachynura, p. 183: J. R. Henderson, Trans. Linn. Soc., Zool., (2) V. 1893, p. 370.

*Amphitrite vigilans*, Dana, Proc. Ac. Nat. Sci. Philad. 1852, p. 84, and U. S. Expl. Exp. Crust. pt. I. p. 278, pl. xvii. figs. 3 a-d.

*Neptunus vigilans*, A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 386, 389.

and in Maillard's l'Île Réunion, Annexe F. p. 2: Richters in Möbius, Meeresf. Maurit. p. 152: var. *obtusidentatus*, Miers. Zool. H. M. S. Alert, p. 538, pl. xlviii, fig. A.

*Xiphonectes leptochelae*, A. Milne Edwards, Nouv. Archiv. du Mus. IX. 1873, p. 159, pl. iv. fig. 1.

Carapace flattish, its length is from  $\frac{3}{4}$  to  $\frac{5}{4}$  its breadth without the spines, its surface is submentose and is cut up into well defined sub-regional elevations, the convexities of which are granular.

Front prominent beyond the hardly independent inner supra-orbital angles and beyond the epistome, cut into four usually acute, triangular teeth—the middle two small and receding, the outer ones very large and prominent. Supra-orbital margin cut by 2 fissures.

Antero-lateral borders moderately oblique, armed with a variable number of small and inconspicuous teeth, and ending in a lateral epibranchial spine that is about half the breadth of the carapace in length. The number of teeth, including the outer orbital angle and the lateral spine, varies from 6 in the young to 9 in the adult, though there are adults with less than 9.

The posterior border is nearly straight and makes a dentiform or sub-dentiform angle of junction with the postero-lateral borders.

Orbits dorsal not concealing the large reniform eyes. Antero-external angle of merus of external maxillipeds not produced in a lateral direction.

Chelipeds of male about  $2\frac{1}{2}$  times the length of the carapace, granular, the granules being in places sub-squamiform, the hand as a whole not less massive than the arm: 3 or 4 spines on the anterior (inner) border of the arm and one at the far end of the posterior border: inner and outer angles of wrist spiniform: hand and fingers costate, the costae granular, there are 3 spines on the hand, one being in front of the apex of the wrist-joint, the other two standing side by side (the inner the larger) in the distal half of the upper surface.

First three pair of legs slender.

2nd and 3rd abdominal terga transversely carinate, the carinae not being very prominent: the sides of the male abdomen sinuous.

A small species: egg-laden females have the carapace 9 millim. long and 20 millim. broad including the spines, but many males are a good deal larger, and, on the other hand, egg-laden females are occasionally much smaller.

Colours of good fresh spirit specimens yellow, with much brown and green mottling on dorsal surface of carapace, chelipeds and legs.

In the Indian Museum are 81 specimens from the Andamans, Maldives, and Persian Gulf, besides 2 from Mauritius.

For a long time I thought I could recognize three distinct species differing from one another (1) in relative length of carapace, (2) in relative length and in sculpture of chelipeds, especially of the hands, and (3) in the degree of prominence of the inner supra-orbital angle. But after a careful examination of 88 specimens I find that all these differences are inconstant, as Miers has already said.

## 21. *Neptunus (Hellenus) tenuipes*, De Haan.

*Amphitrite tenuipes*, De Haan, Faun. Japon. Crust. p. 39, pl. i. fig. 4: Haswell, Cat. Austral. Crust. p. 83.

*Neptunus tenuipes*, A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 335, 339: Thallwitz, Abb. Zool. Mus. Dresden, 1890-91, No. 3. p. 48: Ortman, Zool. Jahrb., Syst. VII. 1893, p. 74.

Carapace little convex, its length about  $\frac{2}{3}$  its breadth without the spines, its surface sufficiently tomentose to appear almost smooth, but when denuded it is found to be cut up into well defined sub-regional elevations the convexities alone of which are granular.

Front prominent beyond the inner supra-orbital angles and beyond the epistome, cut into three bluntly triangular teeth, of which the middle one is slightly the smaller and less prominent. Supra-orbital border cut by two-fissures.

Antero-lateral border cut into 9 close-set teeth (including the outer orbital angle) of which the last is about three times as long as any of the others. The posterior border is slightly curved and meets the postero-lateral borders at a well-marked angle, which is sometimes slightly turned up.

Eyes large, reniform, not concealed by the almost completely dorsal orbits. Outer angle of merus of external maxillipeds not produced laterally.

Chelipeds in the adult male about  $2\frac{1}{2}$  times the length of the carapace, the hand being the most massive segment. Arm with 3 spines on the anterior (inner) border and 1 at the far end of the outer border: both inner and outer angle of wrist spiniform, the inner most conspicuously so. Hand costate, the costae serrulate; armed with 2 spines, one being in front of the apex of the wrist-joint, the other slightly behind the finger-joint.

First 3 pair of legs slender, the first pair hardly shorter than the chelipeds.

Abdomen of male sinuous.

In the Indian Museum are 14 specimens from the Andamans.

## 22. *Neptunus (Hellenus) tuberculosus*, A. M. Edw.

*Neptunus tuberculosus*, A. Milne Edwards, Archiv. du Mus. X. 1861, pp. 333, 339.