XVI. — DIAGNOSES OF NEW SPECIES OF MACRUROUS DECAPOD CRUSTACEA FROM THE SIBOGA-EXPEDITION, BY Dr. J. G. DE MAN.

Pasiphaea propinqua n. sp.

Stat. 100. 6° 11′ N., 120° 37′.5 E. Off the Sulu Islands. 450 m. (Chart). Bottom dead coral. 1 male.

Closely allied to Pasiphaea sivado (Risso). Carapace measuring one-third the length of the abdomen. Front triangular, subacute, projecting as much forward as the obtuse, outer orbital angles. Antennular prominence rounded and separated from the branchiostegal spine by a deeper sinus than from the outer orbital angle; antero-lateral angle of the carapace broadly rounded, branchiostegal sinus shallow and making an obtuse angle with the lower margin of the carapace. Carapace rounded dorsally, without ridges or carinae on the lateral sides. Anterior dorsal tooth mutilated.

First and 5th abdominal terga rounded, the 2nd, 3rd and 4th slightly carinate, the 6th segment, which is one and a half as long as the 5th and about one and a half as long as broad, sharply carinate dorsally, the carina terminating in a small acute tooth, which is directed downward. Telson one-fifth shorter than 6th segment, deeply grooved dorsally; the tip triangular, prominent, half as long as broad at the outer angles and armed probably on either side with 4 spines.

Eyes blackish or slate-coloured, little enlarged, eyestalks hardly reaching beyond the middle of basal antennular article. Antennular peduncle reaching a little beyond the middle of the distance between the orbital margin of the carapace and the apex of the scaphocerite; 3rd segment a little longer than 2rd. Scaphocerite a little more than half as long as the carapace, 4-times as long as broad, distinctly narrowing anteriorly.

External maxillipeds extending almost to the distal end of the scaphocerite. Thoracic legs resembling those of  $Pas.\ sivado$  (Risso), fingers of 1st pair two-thirds or three-fourths the length of the palm, those of 2nd pair  $^1/_6$  longer than the palm.

Length from the front to the extremity of the telson 72 mm.

Pasiphaea sivado (Risso), of which I was enabled to study 3 specimens from Nizza, differs by the following. The carapace measures about half the length of the abdomen without the telson, so e.g. in one of the

three specimens the carapace is  $17^3/_4$  mm. long, the abdomen 45 mm. inclusive the telson and 38 mm. without it. The front, though also triangular, is comparatively broader at base and projects much less forwards than the outer orbital angles. The abdominal somites are not carinate at all, even of the 6th segment, though it is much compressed, the upper margin is blunt, not sharp, and the terminal spine runs horizontally backwards. The telson is less deeply grooved and its posterior extremity is slightly convex, regularly rounded, presenting another form than in Pas. propinqua.

## Leptochela robusta Stimpson.

The examination of the numerous adult specimens, collected by the "Siboga", males and ova-bearing females, led to the result, that, like in Lept. carinata Ortm., the carapace of the female, which was hitherto still unknown, is tricarinate dorsally, while it is rounded in the male. The three carinae run parallel to near the posterior emargination of the carapace and are separated from one another by two longitudinal grooves; the median carina appears in the middle for some distance compressed, though obtuse and low, but gradually widens anteriorly and posteriorly, appearing then here rounded. Lateral carinae obtuse on the anterior third, rounded posteriorly.

## Leptochela pugnax n. sp.

Stat. 47. April 8/12. Bay of Bima, near south fort. 55 m. Bottom mud with patches of fine coral sand. 1 male.

Stat. 258. Dec. 12/16. Tual-anchorage, Kei-islands. 22 m. Bottom Lithothamnion; sand and coral. 1 ova-bearing female.

Stat. 261. Dec. 16/18. Elat, west coast of Great-Kei-island. 27 m. Bottom mud. 1 female without eggs.

A species of small size, the three specimens being only 14 or 15 mm. long from apex of rostrum to tip of telson. Rostrum reaching beyond the eyes to the distal extremity of 1st antennular article, the acute extremity distinctly turned upward. In the male the rostrum arises with a rounded carina nearly at the anterior third of the carapace, which, posterior to it, is rounded dorsally; in the female the carapace appears tricarinate along six-sevenths of the upper border, the median carina compressed, subacute in the middle, more blunt anteriorly and posteriorly, lateral carinae rounded and only defined on the inner side by the grooves on each side of the median crest. Outer angle of the orbits spiniform, antero-inferior angle of carapace obtuse.

Upper margin of 5th abdominal somite slightly compressed, blunt, though not carinate and, like in Lept. robusta Stimps., unarmed at posterior extremity. Lower surface of 6th somite, which in a lateral view appears twice as long as wide, armed on each side with a long, slender, slightly curved spine, measuring one-fourth the length of the somite, implanted, close to the lateral margin, at the posterior third of the lower surface and reaching almost as far backwards as the posterior extremity of the lateral margin: in Lept. robusta Stimps. one observes here only a much smaller spine, implanted much nearer to the posterior margin of the lower surface. Telson resembling that of Lept. robusta Stimps., but only two pairs of spines on the upper surface, because one of the two posterior pairs does not occur in this species.

External maxillipeds resembling those of Lept. robusta Stimps., but the terminal joint a little shorter in proportion to the penultimate.

Thoracic legs substantially resembling those of Lept. robusta Stimps., but of a more slender form.

## Meningodora S. I. Smith.

The genus Meningodora S. I. Smith must be considered as identical with the genus Acanthephyra A. M.-Edw. The oral appendages, indeed, show quite the same characters, also the legs, and, as regards its outer appearance, the only species, Meningodora mollis S. I. Smith, from the east coast of the United States, resembles Acanth. curtivostris W.-Mas. and other species, in which the rostrum is short. I wish to propose it, however, as a subgenus of Acanthephyra, for those species, in which the integument is very thin, soft and membranaceous.

## Acanthephyra (Meningodora) Sibogae n. sp.

Stat. 210a. Sept. 24. 5° 26′ S., 121° 18′ E. Entrance of Gulf of Boni. 1944 m. Bottom grey mud, upper layer more liquid and brown; pumice stone. 2 specimens, probably female.

Integument soft and membranaceous, like in Acanth. brevirostris S. I. Smith and Acanth. rostrata (Sp. Bate). Carapace dorsally carinate, the sharp carina presenting a little before the middle a slight depression, from which the cervical groove proceeds forwards and downwards. Rostrum one-fifth the length of the rest of the carapace, reaching to the middle of 2nd joint of antennular peduncle, just as high at the level of the orbital margin as long. Upper margin from midway between the cervical

groove and the orbital margin curving downward to near the corneae of the eyestalks, when stretched forward, and then running horizontally or slightly ascending to the tip; descending part of the upper margin with 6 small teeth, of which the 4th is placed immediately in front of the orbital margin, terminal horizontal part of the rostrum unarmed; the lower margin of the rostrum that forms a sort of hood over the eyestalks, carries one minute tooth between the extremity of the rostrum and the anterior tooth of the upper margin.

Cervical groove conspicuous, its lower end passing by a semicircular curve into the orbital groove, that proceeds from the orbital margin backwards and downwards. Outer canthus of the orbits rectangular, no post-antennular spine, post-antennal spine salient, flanked by a carina that runs to the hepatic groove. Hepatic groove angular; from the angle a strong ridge runs horizontally backwards to near the posterior margin of the carapace, at the level of the antennal carina. Abdomen as in Acanth. Batei Faxon, but the telson almost 1½-times as long as 6th somite and nearly as long as the exopodite of the caudal fan.

Corneae small, reddish brown, somewhat less broad than the eyestalks, that show a prominent obtuse carina at the inner side, just behind the corneae.

Oral appendages as in Acanthephyra.

Chela of 1st pair of legs  $^1/_3$  longer than carpus, the latter a little more than half as long as the merus. Carpus of 2nd pair  $^1/_{10}$  shorter than merus, slender, chela  $^1/_7$  shorter than the carpus, fingers almost  $^1/_3$  the length of the chela. Carpus of 3rd or 4th pair a little more than  $^1/_3$  the merus, propodus  $^21/_3$ -times as long as the carpus, slender, 20-times as long as wide, dactylus  $^1/_3$  of the propodus.

Legs of the last pair nearly like those of the 4th, but the dactylus rudimentary, hidden by a plume of setae.

Length 64 mm. from tip of rostrum to extremity of telson.

Acanthephyra media Sp. Bate, var. obliquirostris n.

Stat. 148. August 20.0° 17'.6 S., 129° 14'.5 E. Halmaheira Sea. 1855 m. Bottom fine, grey and green mud. 1 male.

This specimen differs by the rostrum that almost reaches to the extremity of the antennal scales, in stead of reaching beyond it, by the proximal part of the rostral crest presenting only six teeth, in stead of nine or ten, and by the rostrum being obliquely directed upward: it is therefore regarded as a variety.

Length 95 mm. from apex of rostrum to end of telson.

Systellaspis debilis (A. M.-Edw.), var. indica n.

Stat. 161. August 17. 1° 10′.5 S., 130° 9′ E. Halmaheira Sea. 798 m. Bottom muddy sand. 1 egg-bearing female.

This specimen differs from the typical atlantic species, as described by Stanley Kemp in: "Fisheries, Ireland, Sci. Invest., 1908, I. [1910], p. 59, Pl. VI, figs. 1—15" by the following. The rostrum, one and a half as long as the carapace, is strongly curved upward, so that the vertical distance between the apex of the rostrum and the upper margin of the carapace measures almost two-thirds the height of the latter. The antennular peduncle reaches almost to the middle of the antennal scale, viz. to  $\frac{10}{23}$  the length of the latter. The propodus (5 mm.) of the legs of the 3rd pair is but little more than twice as long as the carpus  $(2^1/_3$  mm.) and the dactylus measures about four-fifths the length of the propodus.

Length 94 mm. from apex of rostrum to end of telson.