## NOTE XIV.

# DIAGNOSES OF NEW SPECIES <br> OF MACRUR0US DECAPOD CRUSTACEA FROM THE ,,SIB0GA-EXPEDITION" 

BY

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1. Iconaxius Weberi, n. sp.

Station 266. Lat. $5^{\circ} 56^{\prime} 5$ S.; long. $132^{\circ} 47^{\prime} 7$ E. Depth 595 M.
Station 267. Lat. $5^{\circ} 54^{\prime}$ S.; long. $132^{\circ} 56^{\prime} 7$ E. Depth 984 M .

Related to Iconaxiopsis spinigera Mac Gilchrist. Rostrum triangular, depressed, little longer than broad, with rather obtuse extremity, reaching about to the middle of the $2^{\text {nd }}$ joint of the antennular peduncle, its lateral margins serrulate and continued as entire ridges on to the carapace; median crest, on the anterior inclined part of the gastric region, smooth and running out in two distinct, smooth, arcuate ridges, that reach as far backward as the described lateral carinae.

Telson once and a half as long as broad, lateral edges toothed, a little more convergent and the posterior margin, that has a tooth in the middle, rather convex in the males and young females, less convergent and the posterior margin nearly straight in the old females.

[^0]Eye-peduncles short, eyes facetted, not pigmented at all. Scaphocerite large, almost reaching to the distal end of the antennal peduncle, stylocerite a little shorter.

Chelae of $1^{\text {st }}$ pair of legs about as in Icon. kermadeci, but the larger chela with a strong, broad tooth at the base of the dactylus; smaller chela with an acute, simple or bicuspid tooth at the base of the immobile finger, as in Icon. kermadeci, Icon. parvus etc.; the fingers once and a half as long as the palm, dactylus strongly curved.

Carpus of the $2^{\text {nd }}$ legs longer and more slender than in the other species, little shorter than the merus and than the chela, always longer and distally broader or thicker than the palm; fingers, in the adult, one fifth the length of the whole chela.

Eggs few in number, large.
Length of the male 16 mm , of the female 20 mm .

> 2. Iconaxius crista-galli Faxon, var. indica, n. Station 267 . Lat. $5^{\circ} 54^{\prime}$ S.; long. $132^{\circ} 56^{\prime} 7$ E. Depth 984 M .

Closely related to Iconaxius asper Rathb. from the Hawaiian Islands, but the palm of the larger chela is less high in proportion to its length and its upper border is faintly denticulate.

Median crest of the rostrum which appears a little narrower than in the type and the acute tip of which is curved upward, armed with 16 small, sharp teeth instead of 7 ; lateral ridges posteriorly more prominent than at the level of the median crest. Lateral margins of the rostrum each with 6 or 7 prominent teeth. Third joint of antennular peduncle barely shorter than the $2^{\text {nd }}$.

Carinate upper border of the palm of the larger chelipede faintly denticulate along its whole length and terminating in a small, sharp tooth; two or three teeth on the distal border of the palm, between the fingers. Of the two teeth of the dactylus that exist in the type, the distal
one is wanting. Smaller chela with a sharp tooth at the base of the fixed finger; upper border of the palm also faintly denticulate.

Palm of the $2^{\text {nd }}$ legs one third longer than the carpus, chela little shorter than the merus, which is almost twice as long as the short carpus.

Length of egg-bearing female 30 mm .
3. Iconaxius (Iconaxiopsis?) consobrinus, n. sp.

Station 280. Lat. $8^{\circ} 17^{\prime} 4 \mathrm{~S}$. ; long. $127^{\circ} 30^{\prime} 7$ E. Depth 1224 M.

Closely related to Iconaxiopsis laccadivensis Alcock, but the carapace (rostrum included) shorter, hardly longer than the first four abdominal somites combined and the proximal tooth on the fixed finger of the larger hand near the finger-cleft indistinct.

Carapace measuring little more than one third of the whole length. Rostrum very narrow, reaching to the middle or to the distal end of the $2^{\text {nd }}$ joint of the antennular peduncle, about 3 -times as long as broad in the middle; extremity subacute, lateral margins hardly converging, presenting three or four small, rather indistinct teeth. Median crest extending until near the tip, entire, dividing itself posteriorly into two rather indistinct ridges that are short, reaching not so far backward as the lateral ridges. In Icon. acutifrons Sp . Bate and in Icon. farreae Ortm. the rostrum is more triangular, broader at the base and the lateral margins diverge more strongly backward.

Carapace and abdomen as in Icon, acutifrons.
Eye-peduncles barely reaching to the middle of the rostrum, cornea facetted and of a pale yellow-green colour.

Both pairs of antennae as in Icon. acutifrons.
Lower angle of the carpus of $1^{\text {st }}$ pair of legs obtuse. Larger chela of the male little shorter than the carapace; the palm, that is slightly longer than high, is once and a half as long as the fingers that leave proximally a small

[^1]hiatus between them when closed. Fixed finger with one single, subacute tooth of medium size that is curved towards the tip, situated nearer to the articulation than to the tip and preceded by a moderately deep notch; prehensile edge finely crenulate between that tooth and the tip; dactylus with small, rounded tooth near the base.

Palm of the smaller chela little shorter than the fingers, without any trace of a tooth or prominence at the base of the triangular fixed finger.

Legs of the $2^{\text {nd }}$ pair as in Icon. acutifrons, but the carpus is a little longer than the palm; in proportion to the length of the merus and of the chela the carpus is, however, shorter than in Icon. Weberi.

Length $23,5 \mathrm{~mm}$.

## 4. Metapeneus elegans, n. sp. <br> Station 121. Menado-anchorage. Depth 55 M.

Closely resembling Metap. affinis M.-Edw. (vide Alcock, Indian Decapod Crust. Macrura, 1906, p. 21, Pl. III, fig. $8,8 a-b)$, but the petasma has a different form, terminating in two small anterior and two large posterior lobes, the latter of which are obliquely furrowed on their posterior surface.

Rostrum slender, as long as antennular peduncle, curved upward, $1+10$ toothed; upper flagellum barely shorter than the peduncle. Carapace and abdomen smooth. Postrostral ridge low, obtuse, fading away before the posterior margin of the carapace. Three first abdominal terga rounded, telson without lateral spinules.

First, second and third pair of legs with a small spine at base, first pair also with a smaller spinule at the far end of the ischium. Legs of the $5^{\text {th }}$ pair reaching to the middle of antennal scales, shorter than those of Metap. affinis. Ischium of $5^{\text {th }}$ legs with the lower margin expanded, appearing as a sharp edge, without a subterminal lobule; notch at the proximal end of the merus bounded
anteriorly by a short retrorse tooth, that is directed outward and obliquely truncate.

Length of (probably not yet full-grown) male 81 mm .
5. Metapeneus sibogae, n. sp.

Station 306. Lat. $8^{\circ} 27^{\prime}$ S.; long. $122^{\circ} 54^{\prime} 5$ E. Depth 247 M .
Station 312. Lat. $8^{\circ} 19^{\prime}$ S.; long. $117^{\circ} 41^{\prime}$ E. Salehbay, north coast of Sumbawa. Depth 274 M.

Closely related to Metap. coniger W.-Mas. var. andamanensis W.-Mas.

Body tomentose. Rostrum more slender than in the quoted variety, in the male a little longer than the rest of the carapace, in the female once and a half as long as it, rarely quite straight, usually the distal half or third part more or less curved upward. In addition to a small epigastric tooth, the rostrum is armed with 8 or 9 small teeth, all on the rostrum proper and becoming smaller and further apart as they approach the extremity. No postrostral ridge. Abdomen as in the quoted variety, the $4^{\text {th }}$ and the $6^{\text {th }}$ terga presenting even obscure traces of subcarinae; $6^{\text {th }}$ somite twice as long as the $5^{\text {th }}$ and just as long as the telson.

Antennular peduncle a little longer than the carapace without the rostrum; as in Metap. coniger the longer flagellum carries in the male a small tooth at one sixth of its length from the base.

Thoracic legs somewhat more slender than in Metap. coniger, $1^{\text {st }}$ pair bispinose, $2^{\text {nd }}$ unispinose.

Petasma at least half as long as the carapace without the rostrum, asymmetrical, the right lobe distinctly longer but narrower than the left, that is truncate; the right often somewhat turned outward.

Thelycum consisting of a quadrangular, white coloured plate, a little broader than long and longitudinally grooved in the middle; anteriorly this plate is truncate or slightly

[^2]concave, posteriorly it ends in two obtuse or rounded lobes. The slightly concave, lateral margins join the coxae of the $4^{\text {th }}$ legs; immediately behind these coxae a salient lamina extends, at either side, from the lateral margins, near the posterior end of the plate, towards the coxae of the $5^{\text {th }}$ legs; between the plate and the thickened, transverse, posterior margin there is a deep concavity.

Length of male 70 mm ., of female 80 mm .
6. Metapeneus distinctus, n. sp.

Station 37. Sailus ketjil, Paternoster-islands. Depth 27 M. and less.
Station 184. Anchorage off kampong Kelang, south coast of Manipa-island. Depth 36 M .

A species of the Metap. akayebi-group, without stridulating organ, closely related to Metap. moyiensis Rathb.

Rostrum and carapace as in this species; rostrum $7+1$ toothed, reaching just beyond the middle of $2^{\text {nd }}$ joint of antennular peduncle. Epigastric tooth at anterior fourth of carapace. Sixth abdominal somite $3 / 5$ of the length of the carapace, without the rostrum. Ventral spines between the bases of $2^{\text {nd }}$ pair well developed. Thelycum consisting of the following parts: between the legs of the $5^{\text {th }}$ pair two parallel transverse plates, the anterior less broad but longer than the posterior, its anterior margin emarginate, outer angles dentiform, lateral margins arcuate; the posterior plate is cut into three lobes, the outer lobes bluntly dentiform, more prominent than the median one that has a mucronate tip. Between the $4^{\text {th }}$ pair is a sunken plate, a little less broad than long, with mucronate tip in the middle of its anterior border. Midway between this anterior border and that of the anterior of the two plates between the $5^{\text {th }}$ pair of legs are two small teeth that have another form as in Metap. mogiensis, and between these teeth and the anterior of the two plates one observes a pair of acute dentiform tubercles,
that are probably wanting in the other species of the akayebi-group.

Length of female 60 mm .
7. Metapeneus quinquedentatus, n. sp.

Station 37. Sailus ketjil, Paternoster-islands. Depth 27 M . and less.
Station 99. Lat. $6^{\circ} 7^{\prime} 5 \mathrm{~N}$. ; long. $120^{\circ} 26^{\prime}$ E. Anchorage off North-Ubian. Depth $16-23 \mathrm{M}$.
Station 109. Anchorage off Pulu Tongkil, Sulu-archipelago. Depth 13 M .
Station 164. Lat. $1^{\circ} 42^{\prime} 5$ S.; long. $130^{\circ} 47^{\prime} 5$ E. Depth * 32 M .
Station 184. Anchorage off kampong Kelang, south coast of Manipa-island. Depth 36 M .
Station 209. Anchorage off the south point of Kabaënaisland. Depth 22 M .
Station 240. Banda-anchorage. Depth from 9-45 M.
Another new species of the Metap. akayebi-group and devoid of a stridulating organ.

Rostrum directed obliquely upward, short, reaching to the far end of the $1^{\text {st }}$ joint of antennular peduncle, hardly beyond the eyes; it is constantly armed with five teeth, in addition to the gastric tooth, that is situated at the anterior fourth of the carapace. Sixth abdominal somite measuring three-fourths of carapace without the rostrum.

Lower (inner) flagellum as long as the two last joints of the antennular peduncle.

First legs bispinose, second unispinose, third unarmed. Legs of the $5^{\text {th }}$ pair with exopodite, reaching with their dactyli beyond the eyes.

Left branch of petasma extending beyond the right; left branch with rounded tip, curved towards the right, which is less enlarged than in Metap. mogiensis.

Thelycum consisting $1^{10}$ of a posterior transverse plate, cut into three lobes, the broader middle lobe hardly reaching
beyond the outer ones, $2^{0}$ of a sunken plate between the legs of the $4^{\text {th }}$ pair, on which one observes noteeth as occur in Metap. mogiensis Rathb., perlarum Nob. and other species, $3^{0}$ between the sunken plate and the posterior lamina there is at either side a transverse lobe, directed obliquely outward.

Length of male 45 mm , of female 40 mm .
8. Parapeneopsis venusta, n. sp.

Station off Pulu Jedan, east coast of Aru-islands. Shallow water.

Rostrum very short, reaching to the end of $1^{\text {st }}$ joint of antennular peduncle, with 7 or 8 teeth in addition to the epigastric tooth; the 7 or 8 teeth are contiguous, reach to the tip and the first is situated on the carapace.

No postrostral carina. Longitudinal fissure short, reaching to the level of the epigastric tooth. Antero-inferior angle of carapace rectangular, obtuse, not spiniform or dentiform; the subhepatic ridge stops far short of that angle. Four anterior abdominal terga rounded, $5^{\text {th }}$ and $6^{\text {th }}$ carinate; telson as long as the $6^{\text {th }}$ somite, much shorter than the caudal swimmerets, lateral margins each with 4 small spinules.

Antennular flagella a little shorter than the peduncle. External maxillipedes stout, reaching to the anterior fourth or fifth of the antennal scales. Legs of $1^{\text {st }}$ pair with slender spine at base, following legs unarmed; the 3rd legs reach as far as the $5^{\text {th }}$, viz. to the middle of the terminal joint of the outer foot-jaws. An epipodite is present on the second maxillipeds only; exopodite of last pair of legs smaller than those of the other legs.

Thelycum consisting of an anterior, semicircular and slightly concave plate, that carries anteriorly a sharp tooth in the middle-line, and of a broader posterior plate, which is deeply notched in the middle, so that the thelycum presents a deep concavity in the centre.

Length of female 39 mm .
9. Trachypeneus salaco, n. sp. Station 205. Lohio-bay, Buton-strait. Depth 22 M. Station 258. Tual-anchorage, Kei-islands. Depth 22 M.

In its outer appearance much resembling Trach. anchoralis (Sp. Bate). Body, especially the carapace, more or less tomentose and finely scabrous. Rostrum with the lower margin somewhat ascending and reaching just beyond the $1^{\text {st }}$ joint of the antennular peduncle, with 8 or 9 teeth in addition to the epigastric tooth that is situated at the anterior fourth of the carapace. Postrostral crest obtuse, reaching to the posterior margin of the carapace. Abdominal terga carinate in the same manner as in Trach. anchoralis. Telson on each side with 4 small spinules, as in Trach.curvirostris (Stimps.). Both pairs of antennae, maxillipedes and thoracic legs closely resembling those of Trach. anchoralis.

Petasma symmetrical, not yet half as long as the carapace without the rostrum ; the stem ends distally in two large horns that are at right angles with the rest of the organ and that, suddenly narrowing, are inwardly curved, each horn ending in a mucronate tip. From the transverse, anterior margin of each horn a flattened, triangular lamina projects foreward at an obtuse angle with the surface of the horns. This species, at first sight distinguished by its petasma, is also remarkable, because the thoracic legs of the $1^{\text {st }}$ and $2^{\text {nd }}$ pair seem to be devoid of an epipodite, this appendage being only present on the legs of the 3 rd pair.

Length of male 42 mm .
10. Atypopeneus dearmatus, n. sp.

Station 302. Lat. $10^{\circ} 27^{\prime} 9$ S. ; long. $123^{\circ} 28^{\prime} 7$ E. Depth 216 M.
Station 306. Lat. $8^{\circ} 27^{\prime}$ S.; long. $122^{\circ} 54^{\prime} 5$ E. Depth 247 M.
Station 312. Lat. $8^{\circ} 19^{\prime}$ S.; long. $117^{\circ} 41^{\prime}$. Salehbay, north coast of Sumbawa. Depth 274 M .

In its outer appearance resembling Atyp. compressipes Notes from the Leyden Museum, Vol. XXIX.
(Hend.). Rostrum ascending, as long as the $1^{\text {st }}$ joiut of the antennular peduncle, $6+1$ or $5+1$ toothed, epigastric tooth at the anterior third of the carapace. No postrostral carina. Post-antennular spine small and postantennular sulcus wanting as in Atyp. compressipes. No hepatic spine. First three abdominal terga rounded, $4^{\text {th }}-6^{\text {th }}$ carinate.

Antennulae and antennae as in Atyp. compressipes, but the lower antennular flagellum finely serrate on its distal half in the male. External maxillipedes and legs as in Atyp. compressipes, but the 3 rd legs are distinctly longer than the $2^{\text {nd }}$. First and second legs bispinose, third legs unispinose.

Petasma symmetrical, anterior fourth of the stem somewhat narrowing and ending in a pair of short horns, which stand out at right angles to the rest of the organ and each of which terminates in two small teeth or hooks, that are slightly recurved.

Thelycum consisting of a narrow, cyathiform plate between the coxae of the $5^{\text {th }}$ legs, broader anteriorly than posteriorly, with raised lateral margins, which are separated by narrow grooves from the surface of the organ, that is continued anteriorly in a flattened triangular tooth, situated between the coxae of the $4^{\text {th }}$ legs.

Length of male 47 mm , of female 72 mm .

## 11. Solenocera Faxoni, n. sp. <br> Station 254. Lat. $5^{\circ} 40^{\prime}$ S.; long. $132^{\circ} 26^{\prime}$ E. Depth 310 M .

Rostrum acute, short, not quite reaching to the end of the eyes; upper margin directed somewhat downward, armed with 6 teeth, 3 of which are on the carapace.

Rostral crest reaching only to the cervical groove, posterior to it the carapace is rounded. No tooth at orbital angle. Post-antennular spine and hepatic spine small, postorbital spine a little larger; a strong, acute, flattened, branchiostegal spine or tooth at the extremity of the sub-

[^3]hepatic groove, this spine being larger than the three others and overhanging the unarmed, rounded, anteroinferior angle of the carapace.

First to third abdominal terga rounded, the 3 rd without any trace of carina; $4^{\text {th }}$ - $6^{\text {th }}$ terga strongly carinate.

Antennular flagella both compressed, of equal length, as long as the carapace, abruptly acuminate at their extremities; upper flagellum narrow, presenting along its whole length the same breadth of 0.7 mm , lower flagellum at its proximal extremity almost twice as broad, slightly narrowing distally, appearing therefore near the tip as narrow as the upper flagellum.

Length of carapace, rostrum included, of the very incomplete, single specimen ( $($ ) $)$ that was collected, 23 mm , without the rostrum 19 mm .; whole length 68 mm ., probably, because the caudal fan is much injured.
> 12. Solenocera melantho, n. sp.

> Station 302. Lat. $10^{\circ} 27^{\prime} 9$ S.; long. $123^{\circ} 28^{\prime} 7$ E. Depth 216 M.
> Station 306. Lat. $8^{\circ} 27^{\prime}$ S.; long. $122^{\circ} 54^{\prime} 5$ E. Depth 247 M.
> Station 312. Lat. $8^{\circ} 19^{\prime}$ S.; long. $117^{\circ} 41^{\prime}$ E. Salehbay, north coast of Sumbawa. Depth 274 M.

Body smooth, glabrous. Carapace distinctly compressed, measuring, rostrum included, one third of the whole length. Rostrum stout, short, as long as the eyes, upper margin slightly ascending, with 8 or 9 strong teeth, the $4^{\text {th }}$ situated above the frontal margin, the $1^{\text {st }}$ once and a half as far from the $2^{\text {nd }}$ as the $2^{\text {nd }}$ from the $3^{\text {rd }} ;$ postrostral carina not interrupted by the cervical groove, prominent and reaching to the posterior margin; lower margin of the rostrum very slightly concave in the middle, unarmed. Sides of carapace, besides with a more or less dentiform, orbital angle, with three spines only, the antennal, the hepatic and the post-orbital, that is somewhat remote from

Notes from the Leyden Museum, Vol. XXIX.


[^0]:    1) The first Part, containing the diagnoses of 28 new Species and of 1 new Variety, was published in 1905 in the "Tijdschrift der Ned. Dierk. Vereen." (2) T. IX, pp. 587-614.
[^1]:    Notes from the Leyden Museum, Vol. XXIX.

[^2]:    Notes from the Leyden Museum, Vol. XXIX.

[^3]:    Notes from the Leyden Museum, Vol. XXIX.

