

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

NEW CRABS FROM THE GULF OF SIAM.*

BY MARY J. RATHBUN.

The forms here described are part of a collection made by Dr. Theodor Mortensen in the Gulf of Siam in 1899-1900. A full report with illustrations will be published in *Det Kongelige Danske Videnskabernes Selskabs Skrifter*. The type specimens are in the Museum at Copenhagen.

FAMILY LEUCOSIIDÆ.

SUBFAMILY LEUCOSINÆ.

Heteronucia mesanensis sp. nov.

Type.—♀, between Koh Mesan and Koh Chuen, 15 fathoms.

Dimensions.—Length, 3.7 mm.; width, 4.5 mm.

Carapace covered with vesiculous granules, subglobular, very uneven; cardiac and mesogastric regions set off by a deep groove; branchial region nodulous. On the pterygostomian region a large obtuse-angled prominence in line with the eye. Front and orbits nearly one-half as wide as carapace; front with a median furrow and faintly bidentate. Outer maxilliped bent almost at a right angle near its middle. Chelipeds knobby, palm very thick proximally, as long as fingers which are evenly denticulate and overlap, dactylus lying within pollex.

Cryptocnemus mortenseni sp. nov.

Type.—♂, Koh Chuen, 30 fathoms, shell bottom.

Dimensions.—Length, 3 mm.; width, 3.8 mm.

Near *C. pentagonus* Stimpson. Margin of posterior half of carapace regularly arched; of anterior half slightly angled at hepatic region; edge of front arcuate. Carapace surrounded by a thin striated rim, widest at postero-lateral region, and continued downward to anterior margin of buccal cavity, forming lower margin of a facet, of which upper edge is blunt. Chelipeds with striated marginal crests; palm $1\frac{1}{4}$ times as long as wide; immovable finger broadly triangular, sharp-pointed; dactylus strongly bent down.

* Published with the permission of Dr. Theodor Mortensen.

Philyra olivacea sp. nov.

Type.—♂, coast of Lem Ngob, in seine.

Dimensions.—Length, 9 mm.; width, 7.8 mm.

Carapace elongate oval, hepatic facet well defined; elevated portions granulate; from the postero-lateral margin 2 oblique lines run inward and converge, forming a small triangular area. Front subtruncate, a slight median point; end of maxillipeds visible from above. Eyes long, slender. Strong tooth on lower hepatic margin. Lateral margins of carapace bi-angular. Posterior margin trilobate. Chelipeds granulous, hand $\frac{2}{3}$ as wide as long, outer edge straight, inner convex; dactylus $\frac{1}{4}$ longer than outer edge of palm. Third, fourth and fifth segments of abdomen fused, penultimate segment unarmed, wider than terminal half of preceding segment.

SUBFAMILY ILIINÆ.

Arcania siamensis sp. nov.

Type.—♀, Sound at Koh Chang, 3-5 fathoms, soft clay.

Dimensions.—Length with spine, 17.5 mm.; without spine, 15.7 mm.; width with spines, 24.5 mm.; without spines, 15.5 mm.

Near *A. septemspinosa* (Fabricius); carapace more globular, branchial regions more swollen; surface densely covered with granules visible to naked eye; marginal spines shorter, the long lateral spine less than $\frac{1}{3}$ width of carapace.

FAMILY HYMENOSOMIDÆ.

Rhynchoplax coralicola sp. nov.

Type.—♀, Singapore, on coral reef.

Dimensions.—Length, 2.2 mm.; exclusive of rostrum, 1.8 mm.; width, 1.7 mm.

Shell thin, spotted with fine black dots, sparingly hairy, ovate, bordered by a raised rim; only one lateral spine, situated on antero-lateral margin. Rostrum, a long median and two short lateral spines. Chelipeds unarmed, fingers as long as palm. Dactyli of legs spinulous.

FAMILY OCYPODIDÆ.

SUBFAMILY MACROPHTHALMINÆ.

Cleistostoma lingulatum sp. nov.

Type.—♀, Lem Ngob, in mangrove swamp.

Dimensions.—Length, 3.1 mm.; width, 4.5 mm.; width of front, 1.3 mm.

Surface setose, setæ retaining mud, granules forming clumps and thickened lines on elevated parts. Front almost vertical, with 2 transverse, oval, concave surfaces. Upper border of orbit very oblique. Median tooth of epistome long and lingulate. Exognath concealed; merus of endognath very narrow anteriorly and with a deep outer sulcus. Legs subcylindrical, with one or two tubercles on their anterior margin.

FAMILY GRAPSIDÆ.

SUBFAMILY VARUNINÆ.

Camptandrium paludicola sp. nov.

Type.—♀, mangrove swamp, Lem Ngob.

Dimensions.—Length, 4.3 mm.; width, 5.3 mm.

Surface uneven, regions ornamented with a few tubercles regularly placed. Width of front $\frac{1}{3}$ greatest width of carapace. Three large antero-lateral teeth, and a minute tooth behind the last. Chelipeds subcylindrical, subterminal spine on arm. Fingers as long as palm, broadly hollowed at tips. Merus joints of legs dilated, a triangular spine on distal third of anterior border.

Acmaeopleura rotunda sp. nov.

Type.—♂, south of Koh Kut, 17–20 fathoms, mud.

Dimensions.—Length 2 mm.; width 1.75 mm.; fronto-orbital width, 1.7 mm.; width of front, 0.7 mm.

Carapace subcircular, widest at middle; front bilobed; eyes stout, filling orbits. Maxillipeds not gaping, merus and ischium subequal to each other in length and width, but much wider than long; exognath narrow. Legs narrow, unarmed, dactyli very slender, moderately curved.

SUBFAMILY SESARMINÆ.

Sesarma (Chiromantes) siamense sp. nov.

Type.—♀, Koh Kut, stony coast.

Dimensions.—Length, 8.5 mm.; anterior width, 9.5 mm.; posterior width, 9.7 mm.; width of front, 5.1 mm.

Lateral tooth slight, obtuse-angled. Middle pair of superior lobes of front distinctly wider than outer pair. A slight obtusangular expansion on anterior margin of arm. Palm striated on upper surface, 2 striae sharply marked, 5 or 6 spinules on upper edge of dactylus on proximal $\frac{3}{4}$. A sharp subdistal spine on merus-joints of legs, last three joints sparsely furnished with long fine hairs.

FAMILY PINNOTHERIDÆ.

SUBFAMILY PINNOTHERINÆ.

Pinnotheres bürgeri sp. nov.

Type.—♀, Koh Kram, 30 fathoms.

Dimensions.—Length, 2 mm.; width, 2 mm.

Near *P. gracilis* Bürger. Carapace nearly circular, front little advanced, orbits cut out of margin, eyes unpigmented. Chelipeds with lower margin of propodus concave below distal end of palm; fingers tapering pretty regularly to the strongly curved tips; a slight basal prominence on each finger.

Pinnotheres lanensis sp. nov.

Type.—♀, Koh Lan, 30 fathoms, mud.

Dimensions.—Length, 2.4 mm.; width, 2.7 mm.

Allied to *P. parvulus* Stimpson. Carapace very thin, with an antero-

lateral angle. Orbits invisible from above; eyes pigmented. Last two segments of endognath mitten-shaped, dactylus small, attached half-way back on propodus, and reaching its terminal fifth. Chelipeds stout, palm widening distally, pollex wider at base than dactylus. Legs, third longest, second next, first and fourth subequal; dactyli of third and fourth pairs longest, equal.

Pinnotheres quadratus sp. nov.

Type.—♀, Koh Chang, one fathom, coral.

Dimensions.—Length, 5.2 mm.; breadth, 5.3 mm.

Near *P. palaensis* Bürger. Carapace subquadrate, with rounded corners. Orbits ventral, eyes pigmented. Propodus of maxilliped large, spatulate, overreaching inner angle of merus; dactylus small, linear, scarcely visible when maxillipeds are folded in place. Cheliped stout, widening distally, more than twice as long as high, and twice as long as fingers; a large tooth near base of dactylus fits between two smaller teeth on pollex. Legs, third longest, fourth next, second next; third and fourth dactyli longest, subequal, first and second subequal.

Pinnotheres nigrans sp. nov.

Type.—♀, Koh Lan.

Dimensions.—Length, 6.8 mm.; width, 8.3 mm.

Allied to *P. latus* Bürger. Carapace very high in the middle; anterior margin advanced at middle; orbits invisible in dorsal view; corneae black. Dactylus of endognath does not reach end of propodus, which tapers toward the end. Cheliped not much stouter than legs, palm widest at distal end, margins nearly straight, $1\frac{1}{2}$ times as long as fingers. Legs nearly of a length, third longest, second and fourth next, subequal; dactyli of third and fourth pairs longest, equal, twice as long as the others.

Pinnotheres kamensis sp. nov.

Type.—♂, west of Koh Kam, 5 fathoms.

Dimensions.—Length, 1.4 mm.; width, 1.5 mm.

Carapace ovate, an antero-lateral angle; surface coarsely punctate; front strongly advanced, bilobed; eyes large, orbits in margin of carapace; corneae black. Inner margin of merus of endognath angled; propodus long and narrow; dactylus inserted behind middle of propodus, and not reaching end of same. Chelipeds short and stout, fingers gaping widely. Legs broad, first 3 pairs subequal, last pair smaller; same is true of the strongly curved dactyli.

Pinnotheres kutensis sp. nov.

Type.—♂, south of Koh Kut, 17–20 fathoms, mud.

Dimensions.—Length, 1.1 mm.; width, 1.02 mm.

Carapace oblong-hexagonal, transparent; front advanced, subtruncate, eyes large, projecting beyond carapace. Palpus of endognath reaches a little beyond angle of merus; propodus short, broad, with dactylus articulating near its middle and overreaching it. Hands inflated, fingers slender, gaping. Legs, second longest, third next, first next; dactyli, fourth shortest, others subequal.

Pinnotheres siamensis sp. nov.

Type.—♂, south of Koh Kut, 17-20 fathoms, mud.

Dimensions.—Length, 1.1 mm.; width, 1.05 mm.

Near *P. kutensis*. Carapace more strongly angled behind orbit, surface deeply punctate; front plainly bilobed. Propodus of endognath very elongate, dactylus attached on distal half of propodus not far from middle, and reaching end of propodus. Sternum hollowed out in a circular depression in which lies the end of the abdomen. Palms much swollen. Carpal and propodal segments of legs widened in distal half; dactyli subequal.

SUBFAMILY PINNOTHERELINÆ.

Mortensenella gen. nov.

Dorsal aspect of *Pinnixa*. Maxillipeds filling buccal cavity, ischium-merus broad, longitudinal, the two segments subequal, subquadrate, fused, but with a faint suture line; palpus small, attached near outer angle of merus, three segments end to end. Exognath exposed and of good size.

Type and only species,

Mortensenella forceps sp. nov.

Type.—♂, Koh Chang, outside mangroves.

Dimensions.—Length, 4.2 mm.; width, 6.8 mm.; fronto-orbital width, 2.8 mm.; edge of front, 1.3 mm.; posterior margin, 4.6 mm.

Edge of front straight; lateral angles of carapace rounded; lateral margins crenulate, with closed fissures. Chelipeds equal; fingers strongly curved away from each other, making a wide gap; a truncate tooth at middle of dactylus. Abdomen narrow-triangular, fifth segment constricted at middle; appendages of first segment would exceed abdomen if extended, but they are bent sharply backward opposite posterior margin of first sternal segment, their extremities broadly oval.

SUBFAMILY ASTHENOGNATHINÆ.

Asthenognathus hexagonum sp. nov.

Type.—♀, north of Koh Kong, 8 fathoms, mud.

Dimensions.—Length, 5.6 mm.; width, 7.8 mm.; fronto-orbital width, 4.3 mm.; width of lower edge of front, 1.7 mm.

Carapace strongly hexagonal. Front advanced, edge straight, sides oblique. Second leg longest, about twice as long as carapace, and only slightly longer than third leg; first much smaller; fourth most feeble, reaching little beyond merus of preceding pair.

FAMILY GONOPLACIDÆ.

SUBFAMILY CARCINOPLACINÆ.

Litocheira cristata sp. nov.

Type.—♀, two miles south of Koh Tutu, 10 fathoms, sandy mud, shells.

Dimensions.—Length, 5.5 mm.; width, 7.7 mm.; fronto-orbital width, 5 mm.; frontal width, 2.8 mm.

Anterior border of carapace, chelipeds and legs fringed with long hair. Four lateral teeth, of which the third is triangular and prominent. Arm with a thin crest above, forming a tooth near end of segment; wrist eroded; fingers long, cylindrical. Legs with a thin smooth crest on merus, anterior in first three pairs, posterior in fourth pair.

SUBFAMILY RHIZOPINÆ.

Megæsthesius* gen. nov.

Allied to *Camatopsis* Alcock. Eyes unpigmented; movable part of antennules immensely stout; buccal cavern anteriorly narrowed and arcuate, outer maxillipeds closing the cavity; ischiognath as broad as long and broader than merognath, which is subtriangular and bears the palp at its summit; exognath short and narrow.

Type and only species,

Megæsthesius sagedæ sp. nov.

Type.—♂, Singapore, 2-3 fathoms.

Dimensions.—Length, 2.7 mm.; width, 2.7 mm.; frontal-orbital width, 1.8 mm.; width of front, 0.6 mm.

Carapace pentagonal; postero-lateral borders long, parallel; antero-lateral borders short, in line with orbits; front bilobed, lobes arcuate. Antennæ slender, crowded by the antennules away from the front. Chelipeds shorter than legs; palm spinulose below; fingers cylindrical, longer than palm. Legs long, narrow, margins spinulose. Third to fifth segments of abdomen fused.

SUBFAMILY TYPHLOCARCINOPSINÆ nov.

Characters of

Typhlocarcinops gen. nov.

Differs from *Typhlocarcinus* Stimpson chiefly in having the first segment of the male abdomen very broad, covering the whole width of the sternum, and transversely grooved. Remainder of abdomen narrow.

Type and only species,

Typhlocarcinops canaliculata sp. nov.

Type.—♂, between Koh Mesan and Cap Liant, 5-8 fathoms, sand, stones.

Dimensions.—Length, 2.7 mm.; width, 3.6 mm.; fronto-orbital width, 2 mm.; frontal width, 0.9 mm.

Carapace widest posteriorly, lateral margins granulate, entire. Front widening anteriorly, strongly deflexed, lower margin arcuate and faintly emarginate. Orbits circular, eyes slightly pigmented. Buccal cavity with sides parallel; antero-external angle of merognath not produced. Chelipeds about $1\frac{1}{2}$ times as long as carapace; second and third legs subequal, second longest.

* μέγας, great; αἰσθησις, perception by feeling.

SUBFAMILY HEXAPODINÆ.

Thaumastoplax orientalis sp. nov.

Type.—♂, north of Koh Kut, 10 fathoms.

Dimensions.—Length, 9 mm.; width, 12.6 mm.; width across front and orbits, 5 mm.; greatest width of front, 2.8 mm.

Carapace longitudinally very convex, transversely very level; lateral borders marked by a raised line; antero-lateral margin angularly arcuate, postero-lateral margins subparallel; posterior margin convex. Front posteriorly constricted, anterior margin concave, a shallow median tooth. Epistome obsolete in the middle. Propodus of endognath as wide as long. Chelipeds short, stout. Second leg much larger than first and third which are subequal. Third and fourth segments of abdomen fused, also fifth and sixth; appendages of first segment much longer than the abdomen, but doubly recurved, forming together a figure 8.

Thaumastoplax chuenensis sp. nov.

Type.—♂, Koh Chuen, 30 fathoms, shell bottom.

Dimensions.—Length, 3.6 mm.; width, 4.8 mm.; width across front and orbits, 2.5 mm.; greatest width of front, 1.5 mm.

Differs from the preceding in narrower carapace, gastric region sharply outlined; antero-lateral margin less angled, fronto-orbital distance greater, front wider, epistome complete, legs narrower.

Lambdophallus anfractus sp. nov.

Type.—♂, off Koh Kut, 6 fathoms.

Dimensions.—Length, 4.7 mm.; width, 7.3 mm.

Carapace subquadrilateral; anterior angles rounded; convex in both directions. Front nearly vertical, subtruncate. Orbits oblong-oval. Eyes almost immovable, pigmented. Buccal cavity narrows anteriorly; inner margin of ischium-merus so convex that the space between ischium-joints is nearly filled by the palpi. First segment of sternum with a transverse sinuous trench for the projecting extremities of the abdominal appendages. Third to fifth segments of abdomen completely fused, sixth segment nearly as long as wide, seventh segment subtriangular with convex sides.

FAMILY XANTHIDÆ.

SUBFAMILY MENIPPINÆ.

Pilumnus borrailei sp. nov.

Type.—♂, Koh Chang, 1 fathom, coral.

Dimensions.—Length, 7.4 mm.; width, 10 mm.; fronto-orbital width, 7.1 mm.; width of front, 3.5 mm.

Carapace flattened; a fringe of long hairs on anterior border; antero-lateral regions a little granular. Lobes of front very oblique, convex. Superior orbital fissures small, outer notch broad. Four antero-lateral lobes, gradually diminishing in size. Palms covered with pearly granules; only distal half of fingers is dark colored. Nearest to *P. pilosus* Fulton and Grant.

Actumnus changensis sp. nov.

Type.—♀, Koh Chang, 1 fathom, coral.

Dimensions.—Length, 3.8 mm.; width, 5.7 mm.

Near *A. tomentosus* Dana. Frontal and antero-lateral regions dotted with separated granules; an indistinct line of granules curves inward and forward from the last lateral tooth. Surface almost bare, with occasional hairs which do not disguise the markings. First antero-lateral tooth truncate, second and third acute; postero-lateral margins straight. Chelipeds very unequal, granules small, bead-like, dense on palms; larger pollex short, with four large teeth.

Heteropanope sexangula sp. nov.

Type.—♀, Gulf of Siam, exact locality not given.

Dimensions.—Length, 5.2 mm.; width, 7 mm.

Form of *H. eucratoides* Stimpson; hexagonal; surface uneven, a transverse ridge on each frontal and protogastric lobe and a few nodules on branchial region. Front strongly deflexed, quadrilobate; four antero-lateral teeth, fourth largest, acute, third minute. Chelipeds unequal; merus with a subterminal spine, wrist nodular, palms granulose except on distal portion of larger one. Legs slender.

NEW NAMES APPLIED TO KNOWN SPECIES.

Uca manii, nom. nov. for *Gelasimus acutus* de Man, Alcock, not *G. acutus* Stimpson, which is synonymous with *U. dussumieri* (Milne Edwards).

Pinnotheres alcocki, nom. nov. for *P. parvulus* de Man, Bürger and Alcock, not *P. parvulus* Stimpson.

Hypocolpus haanii, nom. nov. for *Hypocolpus granulatus* (de Haan) = *Cancer (Xantho) granulatus* de Haan, 1837, not *Cancer granulatus* Linnaeus, 1758.

Portunus (Lupocycloporus) innominatus, nom. nov. for *Neptunus (Lupocycloporus) gracilimanus* Alcock, not Stimpson.