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NEW DECAPOD CRUSTACEANS FROM
PANAMA

BY

MARY J. RATHBUN



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The new species and subspecies here described form part of a large collection made in Panama, in 1911, by Dr. S. E. Meek and Mr. S. F. Hildebrand. A complete report on the material with illustrations of the new forms will be published later.

MACROBRACHIUM ACANTHURUS PANAMENSE, new subspecies

Differs from typical *M. acanthurus*² in its constantly longer and more ascending rostrum, with more numerous spines $\frac{8-10}{6-9}$. There is an unarmed space behind the subterminal spines, which may, however, be interrupted by a single spine. The antennal peduncle just reaches the end of the first segment of the antennular peduncle. The merus of the legs of the second pair reach only to about the distal third of the scales; legs nearly smooth to the touch; *palms enlarged*, so that their circumference is greater than that of the distal end of the carpus, and definitely *shorter than the fingers*; fingers slender, almost naked, taken together narrower than the palm. *Telson continued posteriorly in an elongated triangular tooth*, the base of which is nearly as wide as the telson, and the sides nearly straight; this tooth is twice as long as the inner of the side spines, except in the young.

Dimensions.—Male from Rio Calabre: length of body, 11.2 cm.; length of foot of second pair, 71 mm.; of merus, 13 mm.; of carpus, 17 mm.; of palm, 12 mm.; of dactylus, 14 mm.

Type locality.—Rio Calabre, Republic of Panama; March 18, 1911.

Type specimen.—Male, Cat. No. 43656, U. S. Nat. Mus.

Specimens from three different localities show varying combinations of the characters which differentiate typical *acanthurus* from *acanthurus panamense*.

PSEUDOTHELPHUSA MASIMBARI, new species

Carapace depressed; gastric and branchial regions very slightly and separately convex; cervical suture curved; surface covered with a pavement of fine flattened granules which can be seen in large part

¹ This paper is the eleventh dealing with the results of the Smithsonian Biological Survey of the Panama Canal Zone.

² *Palæmon acanthurus* Wiegmann, Arch. f. Nat., Jahrg. 2, Bd. 1, 1836, p. 150.

with the naked eye; on the frontal and lateral regions many of the granules are coarser and more elevated; punctæ fine but visible without a lens. A deep median furrow runs between the epigastric lobes and is continued to the front forming a V-shaped notch in the upper margin. This margin viewed from above is convex, bending backward at the sides so that it meets the orbital margin on the dorsal plane; its edge bears a row of tubercles and projects over the concave surface of the front, but does not conceal the lateral margins of the front or the lobes of the inferior margin; this last is sinuous while the side margins are oblique; front deepest toward the outer ends. The lateral margins of the carapace are distinctly serrate, the teeth smaller in front of the cervical suture; in addition there is an ill-marked hepatic tooth, and on the right side only an indication of a cervical tooth. The orbits in front view are large compared to the eyes and are subrhomboidal with the sides of the rhomb subparallel; upper margin with shallow crenulations, lower margin with deeper ones and a rounded notch below the outer angle.

Maxillipeds rather broad, the outer margin of the merus rounding gradually into the anterior margin; ischium much wider anteriorly than posteriorly. Exognath reaching about half length of ischium. Chelipeds very unequal, stout. Merus with outer margin serrate and rugose, lower margin tuberculate, inner upper margin armed with coarse spines, below a few of which there is a tubercle; carpus rough with granulated rugæ; inner spine very sharp; chelæ covered with coarse punctæ; the right or larger palm measures very little longer above than its greatest width, while it is thicker than half its width; fingers armed with stout teeth which meet, while the tips of the fingers cross. Merus joints of ambulatory legs dilated, upper margins serrulate.

Dimensions.—Female, total length of carapace, 33.2 mm.; width, 51 mm.; width between outer angles of orbits, 31 mm.; superior width of front, 16.7 mm.; inferior width of front, 13.5 mm.

Type locality.—Rio Masimbar, Empire, Canal Zone; Feb. 8, 1911; one adult female.

Type specimen.—Cat. No. 43657, U. S. Nat. Mus.

Closely allied to *P. tuberculata*¹ Rathbun, but narrower, front deeper, orbit more rhomboidal, palm of larger cheliped without the large tubercle at base of fingers which is present in *tuberculata*.

¹ Bull. Mus. Hist. Nat., Paris, 1897, p. 60.

LEPTODIUS TABOGANUS, new species

Carapace about $\frac{3}{5}$ as long as wide, suboval; anterior $\frac{2}{3}$ deeply areolated and crossed by granulated rugæ; a well-marked straight, transverse ridge runs across the branchial region in line with the posterior border of the gastric region and just behind the transverse ridge which runs inward from the tip of the last tooth of the lateral margin. Front nearly transverse, composed of two lobes separated by a V-shaped notch, each lobe very slightly concave and more advanced at the inner than the outer angle. Of the five lateral teeth (which include the angle of the orbit), the second and third are blunt, the fourth subacute, the fifth acute; the third tooth is very obtuse-angled, the fourth a little more than a right angle, the fifth is acute-angled and points directly outward. Lower margin of orbit very prominent, its entire margin showing in dorsal view when the eye is retracted.

Outer surface of carpus and upper half of exposed surface of palm of the unequal chelipeds coarsely granulate, the surface roughened by irregular depressions and ridges. The black color of the immovable finger extends well up on the palm. Lower margin of larger palm very convex; about three teeth on each finger; the most distal tooth of the thumb of the larger chela is noticeably larger than the other teeth; tips of fingers distinctly spooned. Legs fringed with coarse hair.

Dimensions.—Male, length of carapace, 12.6 mm.; width, 20 mm.; fronto-orbital width, 12 mm.

Type locality.—Taboga Island, Bay of Panama; May 11-15, 1911; 3 males, 1 female.

Type specimen.—Male, Cat. No. 43658, U. S. Nat. Mus.

Allied to *L. occidentalis* Stimpson,¹ but carapace wider, fronto-orbital width greater, lateral teeth extending further back and of different shape, the dark color of the fingers runs further back on the palm and the abdomen of the male is narrower, especially so in the last two segments.

¹ Ann. Lyc. Nat. Hist. New York, Vol. 10, 1871, p. 108.