

Potamon abbotti Rathbun.

PROCEEDINGS
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DESCRIPTIONS OF THREE NEW SPECIES OF FRESH-
WATER CRABS OF THE GENUS *POTAMON*.*

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Of the three species here described, one is a typical *Potamon*, in which the postfrontal crest is developed but interrupted; the other two belong to the subgenus *Geothelphusa*, without a postfrontal crest. The first, *P. abbotti*, is from the Malayan Peninsula, and is related to a group of Indian species described by Wood-Mason. The second, *P. (Geothelphusa) levicervix*, was taken at the Loo Choo Islands with *P. (G.) dehaanii* (White) and *P. (G.) obtusipes* (Stimpson), by a Japanese collector, Mr. F. Sakamoto, and forwarded to the U. S. National Museum by Mr. Garrett Droppers. The third species, *P. (G.) macropus*, is notable as being the first member of the subgenus taken on the west coast of Africa. The other African species of *Geothelphusa* are *Potamon (Geothelphusa) berardi* (Savigny) from Egypt, *P. (G.) socotrensis* (Hilgendorf) from Socotra, and *P. (G.) emini* (Hilgendorf) from Victoria Nyanza. This last has faint indications of a crest, but so also has *P. dehaanii* (White), which is one of the two original species of *Geothelphusa*. On account of the presence of this feeble crest in *P. dehaanii*, it were better to consider *P. obtusipes* (Stimpson) as the type of the subgenus *Geothelphusa*.

***Potamon abbotti* sp. nov.**

Pl. I.

Cervical suture obsolete; subbranchial regions distended laterally; merus of maxillipeds as long as wide.

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Carapace rather narrow, about four-fifths as long as broad, very convex in an antero-posterior direction, nearly level transversely in the widest part. Surface granulate and punctate, anterior and antero-lateral portions tuberculate or rugose. Cervical suture obsolete, except its posterior third. Postfrontal crest interrupted, tuberculate. Protogastric lobes oval, depressed, in advance of the remainder of the postfrontal crest and separated from it by a sulcus behind the inner angle of the orbit; the outer portion of the crest is concave forward and subparallel to the orbital margin, and terminates laterally in an acute epibranchial tooth, 2 mm. behind the orbital tooth. Behind the epibranchial tooth there is a raised tuberculate and convex margin extending half-way back on the carapace. The carapace is swollen laterally outside of and beneath this margin. Front (fig. 2) about one-fourth the entire width of the carapace; lower margin straight, sides oblique. The median suture is not continued in front of the protogastric lobes. Frontal and orbital margins strongly rimmed. Superior orbital margin sinuous; outer tooth broad, acute, separated from the crenulated inferior margin by a deep rounded sinus. Subbranchial regions crossed obliquely by short tuberculated rugæ which extend up to the postero-lateral margins. Suborbital region sparsely tuberculated on its posterior half.

The sides of the penultimate segment of the abdomen of the male are convex; terminal segment with slightly sinuous margins (fig 3).

Maxillipeds (fig. 4) with merus as long as wide, outer margins oblique, converging anteriorly. Chelipeds unequal in both sexes, very rough. Outer surface of merus rugose; margins with blunt teeth. Carpus rugose, a very strong inner tooth with denticles beneath. Hands very rough on the outer side, less so on the inner side. Fingers bent down, those of larger hand gaping a little at base. Ambulatory legs long and narrow.

Dimensions.—Male, length 35.5 mm., width 44, width between margins 41.5, inferior width of front 10.4; female, length 30 mm., width 37.5, width between margins 36, inferior width of front 9.5 mm.

Type locality.—Trong, Malay Peninsula; Dr. W. L. Abbott, 1896; one male, three females (U. S. Nat Mus. No. 20641).

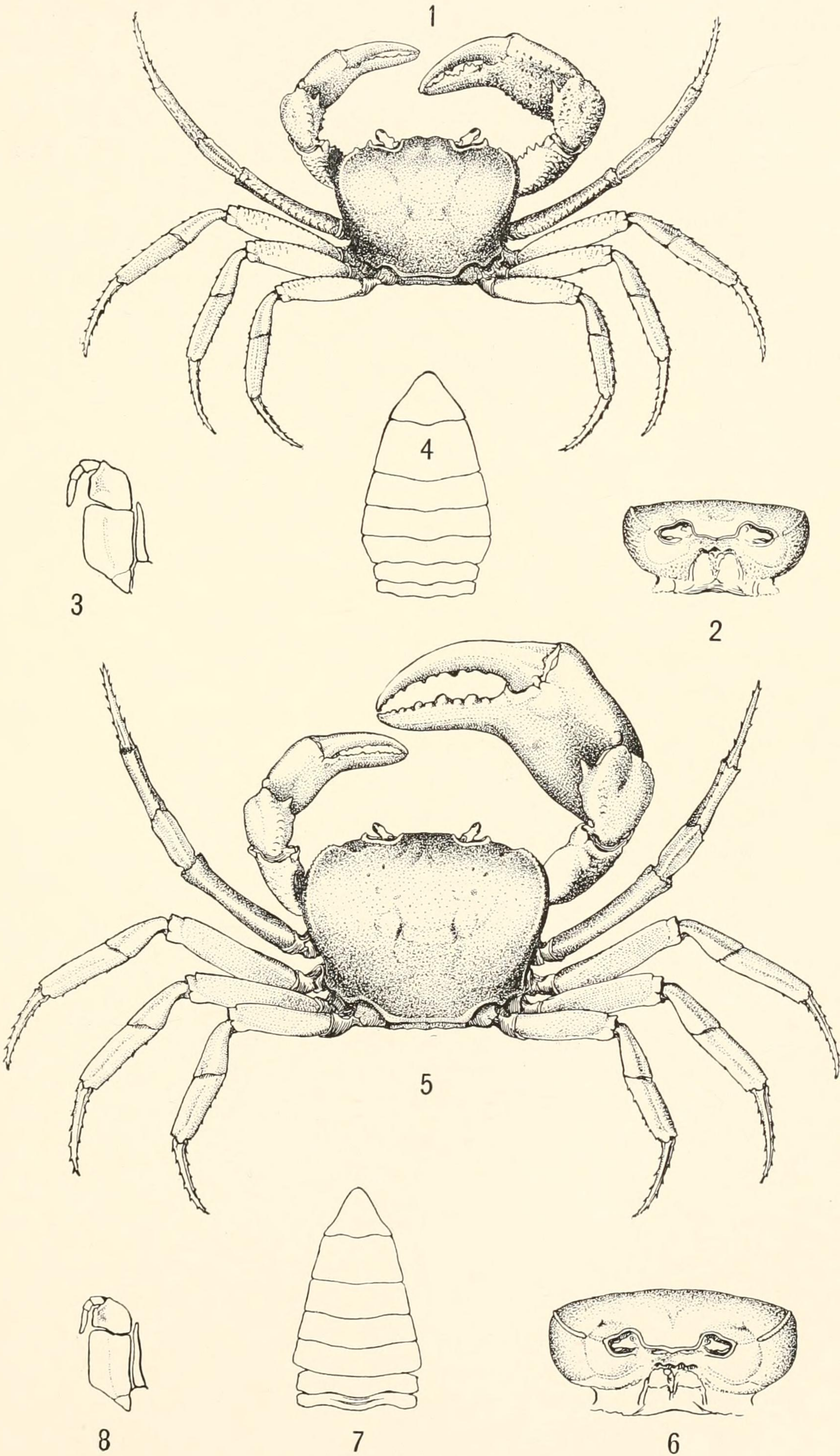
This species approaches nearest to *P. pealianus* (Wood-Mason) of Sibsaugor, Assam, but is separated from it by a number of prominent characters, viz., obliteration of cervical suture, swollen subbranchial area, elongate merus of the maxillipeds, slenderer legs, and narrower carapace.

Potamon (Geothelphusa) levicervix sp. nov.

Pl. II, figs. 5-8.

Postfrontal crest and cervical suture obsolete; epibranchial tooth blunt; legs long and narrow.

Carapace about three-fourths as long as broad, thick, very convex in a longitudinal direction, and less convex although distinctly and regularly so in a transverse direction. Surface smooth and punctate, with a few larger depressions on the anterior half. Cervical suture obsolete. Branchio-cardiac depressions deep. Postfrontal crest absent; protogastric lobes in-



FIGS. 1-4. *Potamon magnum* Rathbun.

dicated only by depressions in front of their normal position. Epibranchial tooth 7 mm. from the orbit, very broad, obtuse, its outer margin a curve continuous with the curve from the tooth to the orbit, tooth bounded anteriorly by a broad notch. Equidistant from this notch and from the orbital angle and directly behind the latter is a deep transverse and somewhat triangular depression.

Antero-lateral margin tuberculate; subbranchial region visible outside the margin as a narrow rim. Front about one-fourth the width of the carapace, margin nearly straight and not visible in a dorsal view; the median suture does not extend to the margin. Orbits oblique in a front view (fig. 6), superior margin sinuous, directed outward and forward in a dorsal view, outer angle prominent, acute. Inferior regions of the carapace smooth, punctate; subcervical groove very deep. In the abdomen of the male (fig. 7) the sides of the sixth segment are oblique, of the seventh sinuous. The merus of the outer maxilliped is broad, with regularly rounded antero-lateral outline (fig. 8).

Chelipeds very unequal. Merus with outer surface and upper and outer margins somewhat rugose; inner and lower surfaces and inner margin smooth. Carpus slightly roughened, with a stout, triangular, blunt inner tooth, below which is a low swelling; anterior half marked by an irregular longitudinal depression. Larger hand very wide and thick, slightly rough, the raised lines forming reticulating lines which are punctate, the punctæ connected by minute impressed lines; space enclosed by the lines of a darker color; fingers long; pollex bent at an angle of 45° with the palm; fingers gaping to the tips. Smaller hand punctate, almost smooth and without conspicuous color marks; fingers slightly bent and little gaping. Ambulatory legs very long; surface slightly rough; merus joints with entire margins; carpal joints with a few spinules at the distal extremity; propodal joints with upper margins spinulose in the first and fourth pairs, distal and lower margins more or less spinulose in all.

Dimensions.—Male, length 48.5 mm., width 63.3, width between margins 61.5, width of front below 14.2.

Type locality.—Loo Choo Islands; F. Sakamoto; one male (U. S. Nat. Mus. No. 20642).

This species comes nearest to *P. (G.) transversus* von Martens, but is so different that they cannot be confused. The form of the abdomen and legs alone sufficiently differentiates them.

Potamon (Geothelphusa) macropus sp. nov.

Pl. II, figs. 1-4.

Postfrontal crest obsolete; cervical suture present; epibranchial tooth acute; ambulatory legs long and narrow.

Carapace very convex antero-posteriorly, slightly so transversely; about one-third broader than long; branchial regions much swollen laterally; posterior width greater than exorbital width. The surface is very finely granulate, and covered with small punctæ visible to the naked eye. The sutures of the carapace are shallow and the surface along their

boundaries is drawn in fine wrinkles. The cervical suture if continued would cross the orbital margin at its middle. The protogastric lobes are small but prominent. The front is about one-fourth the width of the carapace, deflexed, deepest in the middle, margin sinuous. The orbits are inclined obliquely downward and outward (fig. 2); superior margin sinuous and directed forward and outward, terminating at the outer angle in a prominent acute tooth. Margin of front and superior margin of orbit strongly rimmed. Inferior margin of orbit crenulate. Epibranchial tooth small, tuberculate, situated as far from the tip of the orbital tooth as half the width of the orbit; and succeeded on the lateral margin by small irregular tubercles for about half the length of the branchial region. Subbranchial region visible laterally outside the branchial margin and covered with short oblique granulated ridges. Suborbital area comparatively smooth, but with fine scattered granules; jugal area coarsely tuberculate.

The ischium of the outer maxillipeds (fig. 3) has a deep median furrow and large punctæ; merus rougher, slightly longer than wide, and its antero-lateral margin is obtusely rounded. The sixth abdominal segment of the male (fig. 4) is longer than the seventh and its proximal margin is convex, so that the fifth segment is longer laterally than in the middle.

Chelipeds very unequal. Meri elongate; margins armed with strong teeth; lower surface near antero-distal angle furnished with a stout downward-projecting tooth. The carpi are covered with granulated rugæ and the inner margin is spinous, the distal spine much the larger; outer inferior angle with a downward-pointing tooth. The propodi are covered with minute scabrous granules, among which are scattered larger granules set in punctæ; inner surface rougher than the outer. Pollex bent down. Both fingers deeply grooved; prehensile edges armed with very irregular blunt teeth; little gaping, the projections of the one finger in general fitting into the cavities of the other.

Ambulatory legs very long; meral joints compressed, upper margins spinulose; both margins of the propodal joints spinulose.

Dimensions.—Length 23.5, width 32, exorbital width 20.2, posterior width 23.2, width of front 8.8 mm.

Type locality.—Mouth of Mesurado River, Monrovia; O. F. Cook; one male (U. S. Nat. Mus. No. 20643).

EXPLANATION OF PLATES.

PL. I. *Potamon abbotti*.

Fig. 1. Dorsal view, $\times \frac{4}{5}$.

2. Front view, $\times \frac{4}{5}$.

3. Abdomen of male, $\times 1\frac{3}{5}$.

4. Outer maxilliped, $\times 1\frac{3}{5}$.

PL. II. *Potamon macropus* and *levicervix*.

Fig. 1. *P. macropus*, dorsal view, $\times \frac{3}{4}$.

2. Front view, $\times \frac{3}{4}$.

3. Outer maxilliped, $\times 1\frac{1}{2}$.

4. Abdomen of male, $\times 1\frac{1}{2}$.

5. *P. levicervix*, dorsal view, $\times \frac{1}{2}$.

6. Front view, $\times \frac{1}{2}$.

7. Abdomen of male, $\times \frac{3}{4}$.

8. Outer maxilliped, $\times \frac{3}{4}$.