THE STALK-EYED CRUSTACEA OF PERU AND THE ADJACENT COAST.

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INTRODUCTION.

Among the collections obtained by Dr. Robert E. Coker during his investigations of the fishery resources of Peru during 1906–1908 were a large number of Crustacea, representing 80 species. It was the original intention to publish the reports on the Crustacea under one cover, but as it has not been feasible to complete them at the same time, the accounts of the barnacles [a] and isopods [b] have been issued first. There remain the decapods, which comprise the bulk of the collection, the stomatopods, and two species of amphipods. One of these, inhabiting the sea-coast, has been determined by Mr. Alfred O. Walker; the other, from Lake Titicaca, by Miss Ada L. Weckel. See papers immediately following.

Throughout this paper, the notes printed in smaller type were contributed by Doctor Coker.

One set of specimens has been returned to the Peruvian Government; the other has been given to the United States National Museum.

Economic value.—The west coast of South America supports an unusual number of species of large crabs, which form an important article of food. Various smaller kinds, when occurring in abundance, are also eaten, such as the hermit crabs and the so-called hippas or sand bugs. Two species of the latter inhabit Peru. The natives distinguish them by separate names, although carcinologists are slow to recognize their differences. The large and handsome land crab, *Ucides*, which is rare in collections, is said to be abundant in the mangrove swamps, and very palatable. The river shrimp, *Bithynis*, is one of the most abundant of the forms brought to market; it some-

[a] Proc. U. S. Nat. Mus., vol. 37, no. 1700, 1909, pp. 63–74, pls. 16–19, text figs. 1–2.
[b] Idem, vol. 38, no. 1729, 1910, pp. 79–85, text figs. 1–6.

times exceeds a foot in length. The rock crab, *Grapsus*, common in all tropical countries, is used for bait, as are also the hippas above mentioned.

History.—The first list of Crustacea of Peru was made by Kinahan and published in the Journal of the Royal Society of Dublin, volume 1, 1857. It comprised only those species, 24 in number, which were collected and brought home by Kinahan himself; many of the commoner forms existing on the coast were, owing to circumstances, not included. Kinahan's observations were confined to two localities, Callao Roads and the Chincha Islands. Some crabs which he reported as common are not included in the Coker collection, as *Cancer longipes*, *Panopeus crenatus*, and *Cyclograpsus cinereus*.

Aside from the above-mentioned list, our knowledge of the Crustacea is somewhat fragmentary, having been derived from the various voyages which have touched at one or more ports in Peru. It was on the voyage of the French corvette, the *Coquille*, during the years 1822 to 1825, that Lesson observed the galatheid crab, *Grimotea gregaria*, so-called, in such abundance that it gave the water the appearance of blood, a phenomenon already observed by Banks on his voyage with Captain Cook. As the result of Doctor Coker's labors, we are able to-day to differentiate this species from the true *Munida gregaria*. (See *M. cokeri*, on p. 559.)

The most important contribution to our knowledge of the fauna was made by d'Orbigny on his voyage to South America during 1826 to 1833. The Crustacea were described by Milne Edwards and Lucas and illustrated largely with colored drawings. Their report forms the basis of all subsequent work on the crustacean fauna of Peru and Chile.

The United States exploring expedition around the world during 1838 to 1842, under the command of Capt. Charles Wilkes, U. S. N., touched at Callao, and a number of species from that point are included in the report by James D. Dana on the Crustacea in the collection.

Other expeditions that have added to our knowledge of Peruvian Crustacea are those by the Austrian frigate *Novara* during 1857 to 1859, the British ship *Challenger* during the years 1873 to 1876, and the Italian *Vettor Pisani* during 1882 to 1885. The Crustacea of this last voyage were reported on by Cano in 1889; the lists of species from Peru are much fuller than those given by Kinahan, but their value is impaired by the obvious error in localities assigned to many strictly oriental species. These will be found in my list of species incorrectly referred to Peru.

For the study of the Crustacea of the west coast of South America, the third volume of Gay's Historia de Chile is indispensable; each species known up to 1849 is there described by Nicolet, and many are figured in the second volume of the folio atlas.

Recent additions to the fauna.—The crustacea obtained by Doctor Coker were collected at various points on the coast between latitudes 3° 30′ and 17° S.; on the beaches and salt marshes, in shallow water along shore, in fish nets, and with the dredge and trawl in a few fathoms at three or four stations; also in the rivers and at the markets. More extensive dredging in shoal waters would no doubt result in a much greater number of forms. The new stalk-eyed species and subspecies number 7; of the known species, there are 27 additions to the Peruvian fauna, making in all 122 species.

The most notable additions are a *Dromidia*, the first typical dromiid reported on the west coast of South America; and specimens of *Panopeus bermudensis* hitherto known only from the Atlantic. *Eupleurodon trifurcatus* and *Hepatella amica* have never before been noted since their first description. One is impressed by the superabundance of Xanthidæ and Inachidæ and the scarcity of Partheno-pidæ and of shrimps of all kinds.

The number of interrogation points in the list of synonyms gives an indication of the amount of work still to be done before the fauna of the west coast of South America is thoroughly known. Fortunately, the governments of both Peru and Chile have become aware of the importance of a knowledge of the marine fauna, and it is hoped that the work so well begun will be continued with the same vigor.

The Peruvian Province.—The Crustacea of Peru form part of a fauna corresponding to the molluscan "Peruvian Province," defined by Dall [a] as extending from Guayaquil, Ecuador, to the island of Chiloë, in southern Chile. While the southern limit of the fauna is rather well defined, the transition at the north into the Panamic Province is much more gradual. For this reason there have been included in my list of species likely to occur in Peru all those recorded from Panama southward to Chiloë, down to a depth of 10 fathoms; also all fresh-water decapods on the Pacific slope south of Panama.

Some of the species listed from southern Chile, as *Lithodes antarctica* and perhaps *Paromola rathbuni* and *Palinustus frontalis*, belong properly to the Magellanic Province.

ANNOTATED LIST OF THE SPECIES COLLECTED BY R. E. COKER.

INACHOIDES MICRORHYNCHUS Milne Edwards and Lucas.

Plate 36, fig. 1.

Inachoides microrhynchus Milne Edwards and Lucas, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 5; vol. 9, atlas, 1847, pl. 4, fig. 2.

Carapace subtriangular, longer than broad, setose, convex, uneven, the most elevated portions and the margins tuberculated; postorbital tooth triangular; supraorbital tooth blunt; rostrum spiniform, equal in length to distance between orbits. Antennæ visible beside ros-

[a] Proc. U. S. Nat. Mus., vol. 37, 1909, no. 1704, p. 185.

trum. Chelipeds in the male long and very stout, palms much swollen, longer than fingers, which gape narrowly in basal half; chelipeds in the female feeble, fingers as long as palm. Legs slender, subcylindrical.

Length 10 to 20 mm.

Dredged, Bay of Sechura, about half-way between Bayovar and Matacaballa, in 5 to 6 fathoms, April 10, 1907.

Not previously known from Peru.

Distribution.—Peru; Chile.

EPIALTUS MARGINATUS Bell.

Plate 36, fig. 2.

Epialtus marginatus BELL, Proc. Zool. Soc. London, pt. 3, for 1835 (1836), p. 173; Trans. Zool. Soc. London, vol. 2, 1836, p. 62, pl. 11, fig. 4 (female); pl. 13 (male).

Large. Carapace very convex, suborbicular, save for the flat, deflexed rostrum, smooth; lateral border marginate, two teeth anteriorly, an obscure tooth at widest part of carapace and a trace of another behind it. Rostrum subtriangular, tip bifurcate; preorbital tooth present. Eye-stalks globular, sunk in the circular orbits. Chelipeds elongate, very strong in male, two tubercles on upper edge of arm, one tooth at antero-internal angle of wrist, fingers long, gaping. Legs diminishing rapidly in length from first to fourth, a setiferous tooth on under side of propodites increasing in the same order; dactyli bluntly spinulous beneath.

Length 8 to 10 cm.

Shells of crabs from Independencia Bay, July, 1907.

"Apancora;" also called "Jaiva" by some. Taken in fish net near the shore, Mollendo, July 22 and 23.

Distribution.—Galapagos Islands; Peru to Chile; Rio Janeiro (?).

ACANTHONYX PETIVERII Milne Edwards.

Plate 46, fig. 4.

Acanthonyx petiverii MILNE EDWARDS, Hist. Nat. Crust., vol. 1, 1834, p. 343.—DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 128; atlas, 1855, pl. 5, fig. 6.
Acanthonyx emarginatus MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 9; vol. 9, atlas, 1847, pl. 5, fig. 2.

Small. Carapace elongate, subpentagonal, nearly smooth, a few tufts of hair; lateral margins nearly parallel, tridentate, first tooth large, at antero-lateral angle; preorbital tooth present; rostrum short, deflexed, tip bifurcate; each marginal tooth is fringed with hair. Antennæ visible either side of beak. Orbits in sides of carapace; eyes visible from above. Chelipeds short, considerably enlarged in male; two tubercles on lower outer edge of arm; wrist cristate above; palm longer than fingers, which gape narrowly. Legs

compressed, decreasing in length from first to fourth; propodi dilated, a blunt tooth on under edge against which the dactylus plays.

Length 15 to 18 mm.

Dredged, Bay of Sechura, about half-way between Bayovar and Matacaballa, in 5 to 6 fathoms, April 10, 1907.

Taken from seaweed, Chincha, North Island, June 18, 1907.

Distribution.—From Cape St. Lucas, Lower California, to Chile; Galapagos Islands. Also east coast of tropical America.

EUPLEURODON TRIFURCATUS Stimpson.

Plate 49, fig. 5.

Eupleurodon trifurcatus STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 98.

Very small. Carapace pentagonal, post-rostral portion broader than long, a strong forward-projecting tooth at antero-lateral angle, and a large tooth farther back on side margin; surface uneven, armed with about fourteen setose tubercles. A strong preorbital tooth. Rostrum bifid, the teeth lobiform and inclined toward each other. Chelipeds small; two tubercles and a terminal tooth on upper edge of arm; wrist nodose; upper edge of palm concave. Propodi and dactyli of legs subequal in length, a strong tooth on proximal half of propodi.

Length 8 to 10 mm.

From rocks between tide lines, north end of Ferrol Bay (Chimbote), March 1.

Not previously known from Peru.

Distribution.—Cape St. Lucas, Lower California; Peru.

MICROPHRYS PLATYSOMA (Stimpson).

Plate 50, fig. 3.

Milnia platysoma STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 180.

Carapace subtriangular, posterior margin arcuate; surface tuberculate, with occasional long hairs; uneven, margins spinulous; two larger spines, one above the other, at outer angle of branchial region; three marginal laminæ, one on orbital tooth, one on hepatic region, and the other on branchial region; between and below the last two a spine; orbit deeply fissured above; preorbital spine present; between it and the rostrum a prominent antennal spine; rostrum bispinous. Chelipeds strong in male, feeble in female; arm and wrist tuberculate, arm with flat teeth above; fingers in male widely gaping and dactylus with large basal tooth; fingers in female nearly meeting. Legs cylindrical, rapidly diminishing from first to fourth; subterminal spine on merus of first pair.

Length 12 to 18 mm.

From rocks between tide lines, north end of Ferrol Bay (Chimbote), March 1.

Distribution.—From Lower California to Peru; Galapagos Islands; Porto Rico.

MICROPHRYS ACULEATUS (Bell).

Plate 45, fig. 4.

Pisa aculeata BELL, Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 171; Trans. Zool. Soc. London, vol. 2, 1836, p. 50, pl. 9, fig. 7.

Carapace ovate, surface setose and hairy; a transverse series of spines across cardiac and branchial regions; two spines at outer angle of branchial region; three elongated laminæ on lateral margin, without intermediate spine. Rostral and antennal spines more slender and cylindrical than in *M. platysoma*. Arm with three triangular teeth above; spine on carpal joints of legs.

Length 15 to 18 mm.

Lobos de Afuera, March 18, 1907. Rocky bottom, along shore, which is covered with a growth of seaweed.

Not previously known from Peru.

Distribution.—Galapagos Islands; Ecuador; Peru.

TELEOPHRYS CRISTULIPES Stimpson.

Plate 46, fig. 2.

Teleophrys cristulipes STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 190, pl. 2, fig. 2.

Mithrax (Teleophrys) cristulipes A. MILNE EDWARDS, Crust. Rég. Mex., 1875, p. 113, pl. 19, fig. 2.

Carapace ovate, a little broader than long, convex, granulate and tuberculate, three small spines on branchial margin, of which one is at the lateral angle and the others before and behind it. Orbital border not fissured; a preorbital tooth. Rostral horns short, thick, nearly contiguous, or curving toward each other. Chelipeds of male very large, inner border laminate; arm tuberculate, wrist carinate; fingers widely gaping, a tooth near middle of dactyl. Chelipeds of female similar but feeble, fingers narrowly gaping. Legs armed with laminiform spines except on the dactyli.

Width 10 to 15 mm.

Dredged, Bay of Sechura, about half-way between Bayovar and Matacaballa, in 5 to 6 fathoms, April 10, 1907.

Distribution.—From Cape St. Lucas, Lower California, to Peru; Galapagos Islands; also Brazil.

CALLINECTES TOXOTES Ordway.

Plate 55.

Callinectes toxotes ORDWAY, Boston Journ. Nat. Hist., vol. 7, 1863, p. 576.—RATHBUN, Proc. U. S. Nat. Mus., vol. 18, 1896, p. 363, pls. 21; 24, fig. 9; 25, fig. 9; 26, fig. 9; 27, fig. 8.

Very large. Carapace twice as wide as long, hexagonal, with a strong spine on each side and a row of eight teeth between the spine

and the orbit; surface uneven, granulate, two transverse granulated ridges. Front and orbits together equaling one-third width of carapace; front between orbits four-toothed, teeth broadly rounded; orbits and eyes large. Chelipeds long and strong; arm with four large spines on inner edge and a terminal spine on outer edge; palm prismatic, with seven granulate ridges and a spine at either end; fingers as long as palm; prehensile edges armed with stout irregular teeth. Legs flattened, last pair very broad, especially the last two segments, which form a swimming paddle. Abdomen of male broad at base, narrow distally; third to fifth segments fused; terminal segment in both sexes longer than one-half of penult segment; appendages of first segment in male sinuous, reaching nearly to end of abdomen.

Width 18 to 19 cm.

Taken with casting net, mouth of river Tumbes, January 15, 1908. "Jaiva." Said to be very abundant at times. Only a few were seen during my stay in the region (January 15 to February 15). Of economic value.

Not previously reported from Peru.

Distribution.—From Cape St. Lucas, Lower California, to Peru.

CALLINECTES ARCUATUS Ordway.

Plate 56.

Callinectes arcuatus ORDWAY, Boston Journ. Nat. Hist., vol. 7, 1863, p. 578.—RATHBUN, Proc. U. S. Nat. Mus., vol. 18, 1896, p. 362, pls. 20; 23, fig. 1; 24, fig. 8; 25, fig. 7; 26, fig. 7; 27, fig. 7.

Similar to the preceding, but smaller; intramedial area shorter and broader; antero-lateral region smoother; frontal teeth more triangular, acute, the middle pair very small. Terminal segment of abdomen in both sexes shorter than one-half of penult segment; appendages of first segment in male straight or nearly so, not reaching terminal segment of abdomen.

Width 10 to 12 cm.

Oyster beds of Matapalo, near Capon, February 3 ("Jaivas").
On the beach at Las Vacas, near Capon, January 23, 1908 ("Jaiva").

Not previously known from Peru.

Distribution.—From Lower California to Peru.[a]

ARENÆUS MEXICANUS (Gerstæcker).

Plate 37, fig. 2.

Euctenota mexicana GERSTÆCKER, Arch. für Naturg., vol. 22, pt. 1, 1856, p. 131, pl. 5, figs. 3 and 4.
Neptunus mexicanus A. MILNE EDWARDS, Crust. Rég. Mex., 1879, p. 212, pl. 42, fig. 3.

Of medium size. Carapace twice as broad as long, hexagonal, with the antero-lateral margins more arcuate than in *Callinectes* and

[a] Professor Porter records a fragment of a *Callinectes* from Coquimbo, Chile.

cut into eight well-separated teeth; a strong spine at each lateral angle. Carapace covered with small whitish spots; very convex, densely granulate, a little uneven, ridges faint. Lower surface of carapace densely hairy, hair showing in dorsal view between the side teeth. Front between the orbits quadridentate, teeth separated by U-shaped sinuses; orbit with two open V-shaped sinuses above. Buccal cavity without a longitudinal ridge. Chelipeds and legs similar to those of *Callinectes;* arm spines feebler, none on outer edge; a spine at inner angle of wrist. Abdomen of male more triangular, less T-shaped than in *Callinectes.*

Width 75 to 85 mm.

Sand beach, Ancon, February 13.

Not previously known from Peru.

Distribution.—From west coast of Mexico to Peru.

PORTUNUS (PORTUNUS) ACUMINATUS (Stimpson).

Plate 49, fig. 4.

Acheloüs acuminatus STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 112.

A small, pubescent species. Carapace twice as broad as long, subhexagonal; antero-lateral margin armed with eight small curved teeth, of which the second, fourth, and sixth are a little smaller; a slender lateral spine; posterior margin truncate, angles rounded; surface uneven, granulate on the elevated portions, ridges strong. Of the four teeth of the front, those of the middle pair are more advanced; intervals V-shaped. Chelipeds elongate, prismatic; arm with four or five spines on inner margin, a terminal outer spine; wrist with two distal spines, one outer, the other inner and much longer; the seven ridges of the palm strong, granulate; a proximal spine and on upper margin a subdistal spine; fingers strongly ridged, tips dark colored and crossing. Legs much as in the preceding; the swimming feet have a spine at the distal end of the lower margin of the merus. Abdomen of male triangular.

Width about 30 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907.

Dredged, Bay of Sechura, about half-way between Bayovar and Matacaballa, in 5 to 6 fathoms, April 10, 1907.

Distribution.—From Panama to Peru.

CANCER POLYODON Pœppig.

Plate 38, fig. 2.

Cancer dentatus BELL, Proc. Zool. Soc. London, vol. 3, 1835, p. 87; Trans. Zool. Soc. London, vol. 1, 1835, p. 339, pls. 45, 47, figs. 4 and 5. Not *C. dentatus* HERBST, 1785.

Cancer polyodon PŒPPIG, Arch. für Naturg., vol. 2, pt. 1, 1836, p. 133.

Large and hairy. Carapace broadly oval, very convex, closely granulate; antero-lateral margin very long, armed with ten broad,

acute, and strongly projecting teeth, the first of which forms the outer angle of the orbit, and the last is the smallest; postero-lateral margin concave, bearing one small tooth. Front very narrow, tridentate, middle tooth more advanced and lower than the others. Orbits bordered by six prominent teeth. Maxillipeds exceeding the buccal cavity. Chelipeds nearly equal; wrists and upper borders of chelæ spinous; outer surface of palm crossed by five longitudinal, granulated ridges; fingers narrowly gaping, black color extending from tips half-way along outer border and whole length of inner border. Legs broad, flat.

Width 9 to 14 cm.

Sand beach, Ancon, February 13.

Callao, May 18, 1908.

Taken in fish net, rocky shore, northeast side of San Lorenzo Island, January 11, 1907.

Independencia Bay, taken in 1 fathom at the "Punta Callao" of Isla Vieja, July 20, 1907. "Cangrejos" of economic value.

Distribution.—Ecuador; Peru; Chile.

CANCER PLEBEJUS Pœppig.

Plate 38, fig. 1.

Cancer irroratus BELL, Proc. Zool. Soc. London, vol. 3, 1835, p. 87; Trans. Zool. Soc. London, vol. 1, 1835, p. 340, pl. 46 (part). Not *C. irroratus* SAY.

Cancer plebejus PŒPPIG, Arch. für Naturg., vol. 2, pt. 1, 1836, p. 134.

Large and sparsely hairy. Carapace a little shorter and broader than the preceding; also smoother. The ten teeth of the antero-lateral margin are broad, low, and separated largely by closed fissures; the postero-lateral tooth is indicated by a simple notch. Teeth of front and orbits less strong than in *C. polyodon;* no tooth on upper margin of orbit between inner and outer teeth. Maxillipeds less produced than in *C. polyodon*, their distal margins more transverse. Chelipeds subequal; two spinous crests on upper surface of chelæ; four additional granulated ridges on outer face of palm; dark color restricted to a small area near extremity of fingers and along the prehensile teeth; gape very slight. Legs broad, flat, nearly naked.

Width 10 to 12 cm.

Callao, May 18, 1908.

Distribution.—From Peru to Port Otway, Patagonia.

PLATYXANTHUS ORBIGNYI (Milne Edwards and Lucas).

Plate 40, fig. 2.

Xantho orbignyi MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 14; vol. 9, atlas, 1847, pl. 7, fig. 1.

Very large. Carapace broad, slightly convex and uneven; antero-lateral margins strongly arched, continuous with margin of front and

cut into from eight to ten strong saw-teeth, some of which may have an accessory tooth; last tooth with a dorsal ridge continued on the carapace. Front four-toothed, teeth blunt, middle pair more advanced, middle sinus deepest. Lower margin of orbit prominent, bidentate, upper margin with two closed fissures. Chelipeds strong, smooth, unequal; a low protuberance on upper border of arm and an acute tooth at inner angle of wrist; palms swollen, fingers shorter than palm, gaping, dark-colored except at outer base, teeth and tips white. Legs flattened, tips horny. Under part of carapace, upper border of arm and margins of legs hairy. Color red.

Width 9 to 11 cm.

Callao, May 18, 1908.

Distribution.—Ecuador; Peru; Chile.

PLATYXANTHUS CRENULATUS A. Milne Edwards.

Plate 39, fig. 2.

Platyxanthus crenulatus A. MILNE EDWARDS, Bull. Soc. Philom. (7), vol. 3, 1879, p. 106, pl. 2, fig. 1.

Large. Carapace transverse, subhexagonal, very convex, uneven. Antero-lateral margins angled, cut into four teeth, exclusive of orbital angle; three teeth are broad and subtruncate, posterior tooth subacute, thickened. Of the four frontal teeth, the two outermost are broad, obliquely truncate. Inner suborbital tooth flattened, broadly rounded. Chelipeds very strong and unequal; a stout tooth above arm, another at inner angle of wrist; chelæ more compressed than in *P. orbignyi;* fingers as long as palm, dark color extending the length of prehensile border (the teeth themselves are white), but less than half way up the outer edges. Legs much narrower than in the preceding; dactyli prismatic, hairy.

Width 8 to 9 cm.

Taken in boat beam trawl dredging in 7 to 8 fathoms, southeast of Caleta Colon, Bay of Payta. Soft mud bottom. April 13.

Thrown on the beach near the mouth of the Rimac by a strong sea, February 4, 1907.

From the beach at Pisco, July 7, 1908.

Distribution.—From Peru to Patagonia.

XANTHO GAUDICHAUDII Milne Edwards.

Plate 39, fig. 1.

Xantho gaudichaudii MILNE EDWARDS, Hist. Nat. Crust., vol. 1, 1834, p. 396.—MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 15; vol. 9, atlas, 1847, pl. 5, fig. 4.

Of medium size. Carapace octagonal, thick, deeply areolated; antero-lateral margin with three teeth remote from orbit; postero-lateral margin straight; front, between orbits, one-fourth as wide as

carapace, subtruncate, bilobed, lobes concave; orbital margin with three closed fissures and no teeth. Chelipeds unequal, stout, rugose; arm short, denticulate above; wrist with two blunt teeth at inner angle, one below the other; palm swollen; fingers dark-colored, gaping, teeth low. Legs short, thick; dactyli stout, furry, with short, horny tips.

Width 20 to 45 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907.

Tide pool on shingle beach at La Punta, December, 1906.

Distribution.—From Ecuador to Patagonia; Juan Fernandez.

CYCLOXANTHOPS SEXDECIMDENTATUS (Milne Edwards and Lucas).

Plate 40, fig. 1.

Xantho sexdecimdentatus MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 15; vol. 9, atlas, 1847, pl. 7, fig. 2.

Of medium size. Carapace transversely suboval, the antero-lateral margins being very long and arched, the postero-lateral margins short and nearly straight; front narrow, bilobed, lobes oblique, truncate, separated by a closed fissure. Antero-lateral teeth eight on each side, irregular in size and shape. Preorbital tooth, above and below, well marked; three orbital fissures closed. Chelipeds stout, very unequal; arm short and broad; wrist with two teeth at inner angle and a short subdistal spine above; palm broad, compressed; fingers dark, nearly closing.

Width 40 to 45 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907.

Dredged, Bay of Sechura, about half-way betweén Bayovar and Matacaballa, in 5 to 6 fathoms, April 10, 1907.

Lobos de Afuera, March 25.

Tide pool on shingle beach at La Punta, December, 1906.

Dredged near northeast side of San Lorenzo Island, depth 2½ fathoms, February 5.

Dredged in Bay of Chilca, September 2, 1907.

Independencia Bay, taken in 1 fathom at the "Punta Callao" of Isla Vieja, July 20, 1907. "Cangrejos" of economic value.

Distribution.—Ecuador to Chile.

PANOPEUS PURPUREUS Lockington.

Plate 41, fig. 2.

Panopeus purpureus LOCKINGTON, Proc. Cal. Acad. Sci., vol. 7, 1876 (1877), p. 101.—A. MILNE EDWARDS, Crust. Rég. Mex., 1880, p. 316, pl. 57, fig. 3.

Carapace convex in both directions; regions well marked; surface granulate and with several short transverse ridges; shape hexagonal; antero-lateral margin shorter than postero-lateral, armed with five teeth (orbital included), the first two small and partly fused, the

others large and acute. Front divided by a median fissure, a small tooth at outer angle; orbits large, three large sinuses below. Chelipeds unequal, strong; two teeth on upper border of arm and one at inner angle of wrist; fingers dark, the color of the immovable finger not reaching quite to its base; fingers deflexed, not gaping, a strong tooth at base of larger dactyl. Legs long, narrow, hairy.

Width 37 to 50 mm.

Taken in casting net at mouth of River Tumbes (Boca Alamo), January 15, 1908.

Not previously known from Peru.

Distribution.—From Lower California to Peru.

PANOPEUS CHILENSIS Milne Edwards and Lucas.

Plate 41, fig. 4.

Panopeus chilensis MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 16; vol. 9, atlas, 1847, pl. 8, fig. 2.

Similar to the preceding; regions more deeply marked; surface rougher, with more numerous transverse ridges; first two antero-lateral teeth more widely separated; last three teeth narrower and more falcate; front narrower, its lobes more pronounced; distal tooth of arm stronger; legs broader, especially the propodi of the last two pairs.

Width 38 to 48 mm.

Oyster beds of Matapalo (near Capon), January 23, 1908.

Distribution.—West coast of Mexico to Chile.

PANOPEUS BERMUDENSIS Benedict and Rathbun.

Panopeus bermudensis BENEDICT and RATHBUN, Proc. U. S. Nat. Mus., vol. 14, 1891, p. 376, pl. 20, fig. 2; pl. 24, figs. 14 and 15.

Small. More oval than the preceding species; antero-lateral more nearly equal to postero-lateral margin; surface strongly areolate, transverse rugæ numerous; of the five lateral teeth, the first and second are separated by a very shallow sinus, the second much less advanced than the first; last three sinuses deep; third and fourth teeth subacute; fifth tooth narrow, acute. Border of front medially emarginate, each lobe faintly sinuous; upper edge of orbit between sutures separately convex. Chelipeds unequal, granulate, granules reticulating; a superior tooth on arm, an inner tooth on wrist; a groove at distal end of wrist and on upper surface of palm; larger chela high,

FIG. 1.—PANOPEUS BERMUDENSIS, MALE × 1½.

fingers dark with light tips, gaping in male, a large tooth at base of dactyl. Legs narrow, hairy, dactyli elongate, with slender horny tips.

Width 6 to 14 mm.

Oyster beds of Matapalo (near Capon), January 23, 1908, one male; two females were taken from masses of sponge at the same place.

Not before recorded from the west coast of America.

Distribution.—Peru. From Florida to Brazil; Bermudas.

EURYPANOPEUS TRANSVERSUS (Stimpson).

Panopeus transversus STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 210.—BENEDICT and RATHBUN, Proc. U. S. Nat. Mus., vol. 14, 1891, p. 367, pl. 22, fig. 2; pl. 24, fig. 9.

Small. Carapace broadly oval, posterior half flat, anterior half inclined downward to the margin; regions indicated. Of the five normal teeth of the lateral margin, the first two are completely fused and form a truncate lobe; next two teeth also lobiform; last tooth dentiform, blunt; last three sinuses V-shaped. Front faintly four-lobed. Chelipeds unequal; a stumpy tooth at inner angle of wrist; fingers rather slender, those of the larger chela of male narrowly gaping, the dactylus with a slightly enlarged tooth at its base. Legs narrow, compressed.

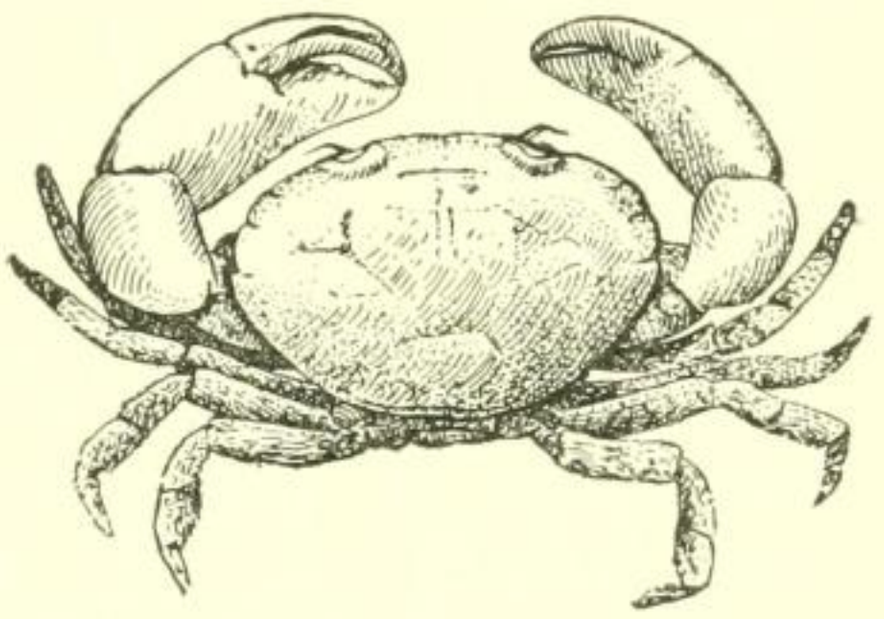

FIG. 2.—EURYPANOPEUS TRANSVERSUS, MALE, NATURAL SIZE.

Width 18 to 20 mm.

On the beach at Las Vacas, near Capon, January 23, 1908. Called "Pangoritas;" in the belief of the fishermen, these are the females corresponding to *Eriphia squamata*, male!

Not previously known from Peru.

Distribution.—From Salvador, Central America, to Peru.

EURYTIUM TRISTANI Rathbun.

Plate 47, fig. 1.

Eurytium tristani RATHBUN, Proc. Biol. Soc. Wash., vol. 19, 1906, p. 100.

Carapace very convex from front to back, transverse, hexagonal; surface very finely granulate, without ridges, regions fairly marked; antero-lateral margin very short, cut into five teeth, including tooth at outer angle of orbit, the first two teeth partly fused, the others strong, the fifth most acute; postero-lateral margins very long and convex. Front about one-fourth as wide as carapace, with two rounded lobes; orbits of good size, with three large sinuses below. Chelipeds very unequal, heavy; arm with tubercles and a strong tooth above; wrist with a strong inner tooth; fingers light colored,

gaping, larger dactyl with a large molariform tooth at its base. Legs compressed, margins hairy, dactyli long, slightly curved.

Width 28 to 52 mm.

Salto (near Capon), January 31.

Not previously known from Peru.

Distribution.—Costa Rica; Peru.

PILUMNOIDES PERLATUS (Pœppig).

Plate 50, fig. 2.

Hepatus perlatus PŒPPIG, Arch. für Naturg., vol. 2, pt. 1, 1836, p. 135, pl. 4, fig. 2.
Pilumnoides perlatus MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 21; vol. 9, atlas, 1847, pl. 9, fig. 1.

Small. Carapace convex, suborbicular, broader than long; anterior two-thirds tuberculate, posterior third nearly smooth; antero-lateral margin with five or six irregular teeth, the margin continued inward upon the carapace by a granulous line. Front most produced at middle, bilobed; orbit subcircular, margin almost entire. Chelipeds equal, stout, tuberculate, the tubercles arranged in rows on lower half of palm, one row terminating in a large tooth on outside of immovable finger; upper edge of palm tridentate; fingers brown with white tips, gaping slightly in basal half. Legs slender, terminal half furry; dactyli ending in long, curved, horny tips.

Width 9 to 20 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907.

Dredged near northeast side of San Lorenzo Island, depth 2½ fathoms, February 5.

Distribution.—From Panama to Chile.

ERIPHIA SQUAMATA Stimpson.

Plate 41, fig. 1.

Eriphia squamata STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 56.—A. MILNE EDWARDS, Crust. Rég. Mex., 1880, p. 339, pl. 56, fig. 3.

Carapace truncate in front, sides convex anteriorly, straight and convergent posteriorly, greatest width considerably in front of middle. Surface anteriorly rough with granules and short rugæ; sides armed with seven or eight stout, curved spines. Interorbital distance one-half width of carapace; half this space lies between orbit and antennæ; front between antennæ cut by a broad median sinus into two truncate, tuberculate lobes; orbit nearly round. Chelipeds unequal, stout; wrist and hand covered with large, flattened, scale-like tubercles which become obsolete on lower part of palm; fingers stout, a large basal tooth on the dactyl. Legs compressed, long-hairy.

Width 35 to 40 mm.

Taken on the beach at Las Vacas, near Capon, January 23, 1908. "Pangora."

Distribution.—From Cape St. Lucas, Lower California, to Chile.

SPEOCARCINUS OSTREARICOLA, new species.

Plate 48, fig. 2.

Of small size. Body and legs coarsely hairy. Carapace subcylindrical, transverse, granulate, antero-lateral margin arcuate, tridentate. Front equal to one-fourth width of carapace. Eye-stalks distally slender, filling orbits. Chelipeds unequal, broad, nearly smooth; a tooth on upper edge of arm and inner edge of wrist; palm high, fingers narrowly gaping, toothed. Legs narrow, third pair longest; dactyli nearly straight, prismatic.

Width of type male 17.6 mm., length 12 mm.

In *S. granulimanus* Rathbun [a] of Lower California, which is nearly related to the above species, the carapace is narrower, side teeth smaller, hands and wrists coarsely granulate.

Type-locality.—Oyster beds of Matapalo (near Capon), January 23, 1908.

Type.—Cat. No. 40469, U.S.N.M. One male.

OSTRACOTHERES POLITUS Smith.

Plate 43, fig. 3.

Ostracotheres politus SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 169.—LENZ, Zool. Jahrb., Suppl. vol. 5, 1902, p. 765, pl. 23, figs. 9 and 9*a*.

Small. Carapace thin, flattened, smooth and shining; transversely oval; front not projecting; a median sulcus on front and a U-shaped sulcus extending from orbits to middle of carapace. Palp of outer maxilliped two-jointed. Chelipeds equal; segments rounded, smooth; hands compressed; fingers not gaping; dactylus with basal tooth. Legs short, cylindrical; dactyli of first three pairs short and curved, dactyli of first and second pairs folding against the expanded distal end of propodus which is clothed with hair; fourth pair of legs much the slenderest, dactylus slightly curved and as long as the propodus.

Width 7 to 14 mm.

Found with *Crepidula*-like form [*C. dilatata*] on mussels taken in Ancon Bay.

Distribution.—Peru; Chile. Living within shells of mollusks.

DISSODACTYLUS NITIDUS Smith.

Plate 48, fig. 6.

Dissodactylus nitidus SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 173.

Of small size. Carapace transversely oblong, flattened, smooth. Front narrow; eyes minute. Buccal cavity broad behind, arched anteriorly, very nearly reaching the front. Palate not divided by a median ridge. Ischium and merus of outer maxillipeds coalesced, palpus of two segments, the terminal one large and spatulate. Cheli-

[a] Proc. U. S. Nat. Mus., vol. 16, 1893, p. 242.

peds small, equal; hands short, rounded. Legs small, slender; dactyli of first three pairs short and deeply bifurcate, of last pair simple and slender. Sternum of male broad and flat; abdomen narrow, three-jointed, first and second normal joints being fused, and third to sixth inclusive also fused.

Width 5 to 6.5 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907.

Not previously known from Peru.

Distribution.—Lower California (off Abreojos Point) to Peru.

PINNIXA TRANSVERSALIS (Milne Edwards and Lucas).

Plate 46, fig. 1.

Pinnotheres transversalis MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 23; vol. 9, atlas, 1847, pl. 10, fig. 3.

Carapace high, more than twice as wide as long, oblong, the outer ends inclined downward; a transverse ridge on the posterior part of the carapace. Front narrow, truncate, deflexed; orbits small, oval. Palpus of outer maxilliped very large, with three segments, the last of which is articulated to the inner side of the preceding; both of these are fringed with long hair. Chelipeds equal, with hairy margins; chelæ compressed, tapering distally, sparsely granulous, two granulous and hairy ridges on outer surface and one on lower margin. A line of hair between second and third abdominal segments.

Width 17 to 22 mm.

Dredged near northeast side of San Lorenzo Island, depth 2½ fathoms, February 5. Taken from a piece of tube resembling the end of a tube of *Chætopterus*.

Distribution.—From Panama to Punta Arenas, Patagonia.

PINNOTHERELIA LÆVIGATA Milne Edwards and Lucas.

Plate 51, fig. 3.

Pinnotherelia lævigata MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 25; vol. 9, atlas, 1847, pl. 9, fig. 1.

Small. Carapace smooth, firm, a little broader than long, subrectangular, with the corners rounded off, flat except in its anterior portion, which is strongly bent down. Front two-fifths as wide as carapace; orbits and eyes oval. Outer maxillipeds parallel to each other; ischium distinct from and smaller than merus; palpus very large, segments end to end. Sternum flat, forming an angle with the plane of the carapace. Chelipeds stout, smooth; palms inflated; fingers narrowly gaping. Legs flattened, second longest; meropodites and propodites thickly hairy beneath.

Width 10 to 12 mm.

Callao. These casts were found on the rocks of the inner side of the natural dyke of rubble separating the lagoon at the mouth of the river from the ocean.

Distribution.—Peru; Chile.

GRAPSUS GRAPSUS (Linnæus).

Plate 42, fig. 1.

Pagurus maculatus CATESBY, Nat. Hist. Carolina, Florida, and the Bahama Islands, vol. 2, 1743, p. 36, pl. 36, fig. 1.
Cancer grapsus LINNÆUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 630.

Of good size. Carapace discoidal, crossed by obliquely transverse ridges, tuberculate anteriorly; one side tooth behind the dentiform antero-lateral angle. Front broad, high, almost vertical, overhanging epistome and almost concealing antennules; four prominent superior tubercles. Chelipeds short, stout, tuberculate and striate; a broad flat tooth on wrist; tips of fingers broad, spoon-shaped. Legs long, broad and flat; dactyli short, spinous.

Width 70 to 85 mm.

Pescadores Islands, February 12. Abundant, running on the rocky shores, in and above the surf.

From the rocks in and above the surf, north end of Callao water front, December 27, 1906. The crabs of this or closely related species are exceedingly abundant on all rocky shores from Independencia Bay to Lobos de Tierra, at least.

"Araña." Crab abundant on the rocky shores, usually just above the water. Valued for bait in the line fishing. Chincha Islands, July 13.

"Araña." Mollendo, July 25, 1908.

Distribution.—From Lower California to Chile; Galapagos Islands; Juan Fernandez. Also shores of tropical Atlantic.

LEPTOGRAPSUS VARIEGATUS (Fabricius).

Plate 45, fig. 2.

Cancer variegatus FABRICIUS, Ent. Syst., vol. 2, 1793, p. 450.
Grapsus planifrons DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 338; atlas, 1855, pl. 21, figs. 3*a*–3*e*.

In size and shape similar to preceding. Two side teeth behind antero-lateral angle. Front broad, moderately inclined, truncate. Chelipeds larger than in *Grapsus;* inner margin of arm laminate; tooth of wrist small; outer surface of palm nearly smooth; fingers widely gaping at base in male. Legs of moderate length; last two joints spinous. Form and color variable.

Width 60 to 70 mm.

"Cangrejo." Mollendo, July 25, 1908.

Distribution.—From Peru to Chile; Juan Fernandez; also Australia and other parts of the southern hemisphere.

GONIOPSIS PULCHRA (Lockington).

Plate 47, fig. 3.

Goniograpsus pulcher LOCKINGTON, Proc. Cal. Acad. Sci., vol. 7, 1876 (1877), p. 152 [8].

Carapace subquadrilateral, convex, smooth in the middle, striated elsewhere. Front half as wide as carapace, vertical, four lobes above.

Chelipeds short, stout; inner margin of arm laminate and spinous; wrist spinulous; chelæ flat; tips of fingers narrow, slightly spoon-shaped. Legs spinous and hairy; merus joints broad. Color dark, purplish or brown, mottled with citrine on the carapace, yellowish on the legs.

Width 30 to 40 mm.

Taken on the beach at Las Vacas, near Capon, January 23, 1908. "Chanduya," common on muddy beaches; noted especially about the mangrove swamps.

Not previously known from Peru.

Distribution.—From Magdalena Bay, Lower California, to Peru.

PACHYGRAPSUS TRANSVERSUS (Gibbes).

Plate 46, fig. 3.

Grapsus transversus GIBBES, Proc. Amer. Ass. Adv. Sci., vol. 3, 1850, p. 181.
Goniograpsus innotatus DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 345; atlas, 1855, pl. 21, fig. 9 *a–c*.

A small species. Carapace trapezoidal, much broader than long and much broader in front than behind; transversely and obliquely striated; one tooth behind the outer tooth of the orbit. Front inclined, more than half as wide as carapace, edge sinuous. Chelipeds equal, stout, striated; inner lamina of arm distally laciniate; a blunt tooth on wrist; propodus with an obliquely longitudinal line near lower edge; palm nearly smooth outside. Legs spinous at extremity of upper and lower margins of merus; margins sparsely clothed with long bristles; dactyli with long spines.

Width 12 to 15 mm.

On the beach at Las Vacas, near Capon, January 23, 1908.
Oyster beds of Matapalo, near Capon, January 23, 1908.

Distribution.—From California to Peru; Galapagos Islands. Also widely distributed in tropical Atlantic and Oriental Region.

ARATUS PISONI (Milne Edwards).

Plate 50, fig. 4.

Sesarma pisonii MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 76, pl. 19, figs. 4 and 5.

Carapace trapezoidal, nearly as long as wide, very narrow behind; regional furrows deep, sides striated. Front vertical, very wide, showing four lobes above and reaching nearly to the buccal cavity. Chelipeds of moderate length, stout in male; arm inwardly expanded; outer surface of wrist obliquely elongate; claws tuberculate, an oval area on the outside is covered with long black bristles; fingers narrowly gaping. Legs thin, flat, last two joints hairy on margins; two spines at end of upper edge of merus joints; propodus very long; dactyli very short.

Width 20 to 25 mm.

Near Capon, February 2. "Cangrejos de los manglares." Commonly seen climbing on the roots and branches of the mangroves, sometimes entering holes in its mud (which may, however, pertain to other species of crabs).

Not previously known from Peru.

Distribution.—From Nicaragua to Peru; also on the east coast of America.

CARDISOMA CRASSUM Smith.

Plate 44.

Cardiosoma crassum SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 144, pl. 5, fig. 5.

Of huge size. Carapace thick, convex, subcordate, deeply furrowed, otherwise smooth. Front truncate, about one-fourth as wide as carapace. Eyes stout, moderately long, in large triangular orbits. Merus of outer maxillipeds notched at summit. Chelipeds massive, very unequal, mostly smooth, margins tuberculate or bluntly spinous, larger claw longer than width of body, its fingers gaping, armed with strong prehensile teeth. Terminal joint of legs spinous.

Width about 125 mm., length of large claw about 150 mm.

Mouth of River Tumbes, February 12. The "Cangrejo sin boca" (mouthless crab), an inappropriate and inexplicable name.

Not previously known from Peru.

Distribution.—From La Paz, Lower California, to Peru.

UCIDES OCCIDENTALIS (Ortmann).

Plate 42, fig. 2.

Uca una MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 23.

Uca lævis MILNE EDWARDS, Arch. Mus. Hist. Nat., Paris, vol. 7, 1854, p. 185, pl. 16, figs. 1 and 1*a*.

Œdipleura occidentalis ORTMANN, Zool. Jahrb. Syst., vol. 10, 1897, p. 336.

Of large size. Sexes very unlike. Carapace thick, very convex, in male transversely oval, in female much narrower and with a well-defined marginal line. Front narrow, arcuate, bent down. Eyes of moderate length, nearly filling orbits. Merus of outer maxillipeds quadrate, not notched at summit. Chelipeds of male very long, nearly equal, very spinous on the margins and inner surface. Palms longer than the broad, flat, narrowly gaping fingers; chelipeds of female much shorter, relatively broader, very unequal, similarly roughened, palm not noticeably longer than fingers, which gape widely in larger claw. Legs margined with fringes of hair, especially beneath; terminal joint unarmed.

Width of male about 95 mm., of female about 75 mm.; length of longer cheliped of male about 23 cm.

From the mangrove swamps at Las Vacas in the region of Capon, January 23, 1908. This is the "cangrejo" abundant in the mud of the mangrove swamps of the region.

They are taken at low tide by thrusting one's arm into the deep holes in the mud. The fisherman first enlarges the hole with his foot. The meat is of excellent flavor. Color: Carapace olive-green, margined with orange; claws, legs, and eye stalks deep red. A handsome and valuable form.

Not previously known from Peru.

Distribution.—From Lower California to Peru; Valparaiso (?).

OCYPODE GAUDICHAUDII Milne Edwards and Lucas.

Plate 43, fig. 2.

Ocypoda gaudichaudii MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 26; vol. 9, atlas, 1847, pl. 11, figs. 4–4*b*.

Carapace squarish, broader than long, anterior corners flattened. Front between the eyes narrow, bent down. Eyes large, elongated, prolonged beyond the cornea in a slender style. Chelipeds stout, unequal, rough, fingers with truncate ends. Legs long, finely roughened.

Width about 40 mm.

Taken on the beach at Las Vacas, near Capon, January 23, 1908. "Carretero" (=cart-driver).

Beach, Lobos de Tierra, March 30.

Sand beach, Chimbote, February 27. Very abundant.

Sand beach, Ancon, February 13. Their burrows were common on the beach, but only two crabs were seen out on the beach (early afternoon).

Distribution.—From Lower California to Chile; Galapagos Islands.

UCA PRINCEPS (Smith).

Plate 48, fig. 3.

Gelasimus princeps SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 120, pl. 2, fig. 10; pl. 3, figs. 3–3*c*.

Carapace trapezoidal, very broad, especially anteriorly, angles acute; surface nearly smooth. Front between the eyes very narrow, spatulate, bent down. Eyes with very long, slender stalks, set in deep orbits. One cheliped of male enormously developed, the hand joint longer than width of body; palm coarsely roughened; fingers long and broad, smooth except on margins; other cheliped of male and both chelipeds of female very small. Legs smooth, merus joints expanded.

Width of back 35 to 40 mm.

Salt flats at Puerto Grande on the Rio Zarumilla (2 leagues from Capon), February 2, 1908. "Maestro-Sastre" (meaning master-tailor).

Salt marshes back of Chulliyache (on Bay of Sechura).

Not previously known from Peru.

Distribution.—From San Bartolome Bay, Lower California, to Peru.

UCA INSIGNIS (Milne Edwards).

Plate 43, fig. 1.

Acanthoplax insignis MILNE EDWARDS, Ann. Sci. Nat. (3), Zool., vol. 18, 1852, p. 151, pl. 4, fig. 23; Arch. Mus. Hist. Nat., Paris, vol. 7, 1854, p. 162, pl. 11, figs. 1–1*b*.

Larger than *U. princeps;* carapace narrower, more uneven; side margins with a few small blunt spines or tubercles. Front and eyes similar to those of *U. princeps.* Large cheliped enormous; palm tuberculated, fingers very broad and flat, the movable finger having its widest point in the distal half. Merus joints of legs with blunt spines beneath.

Width of carapace about 45 mm., length of claw about 90 mm.

Salt marshes back of Chulliyache (on Bay of Sechura).

Distribution.—From Gulf of Fonseca, Salvador, to Chile.

UCA GALAPAGENSIS Rathbun.

Plate 46, fig. 6.

Uca galapagensis RATHBUN, Proc. Wash. Acad. Sci., vol. 4, 1902, p. 275, pl. 12, figs. 1 and 2.

Smaller than the other fiddler crabs, somewhat cylindrical, smooth; front arched between the eyes, which are correspondingly shorter than in the other species. Large cheliped granulate, relatively smooth; fingers slender, the movable one longest, curving down past the tip of the immovable finger. Legs narrow, noticeably hairy.

Width about 20 mm.

Salt flats at Puerto Grande on the Rio Zarumilla (2 leagues from Capon), February 2, 1908. "Cangrejitos de las salineras."

Not before recorded from Peru.

Distribution.—Galapagos Islands; Peru.

HEPATUS CHILIENSIS Milne Edwards.

Plate 37, fig. 1.

Hepatus chiliensis MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 117.
Hepatus chilensis MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 28; vol. 9, atlas, 1847, pl. 14.

Of good size. Carapace broadly oval, with the postero-lateral margins concave, posterior margin narrow; surface a little uneven; margins crenulate; front narrow, truncate; orbits small, filled by the eyes; below the orbit, a concave, subtriangular area. Buccal cavity triangulate, produced nearly to antennules. Chelipeds stout, folding close to the body; hands with a superior, dentate crest and five ridges

on the outer surface; fingers not gaping; dactylus partly tuberculate above. Legs compressed, unarmed, dactyli furry above and below.

Width 70 to 85 mm.

Dredged near northeast side of San Lorenzo Island, depth 2½ fathoms, February 5; Callao, October 29, 1907.

Distribution.—Ecuador; Peru; Chile.

HEPATELLA AMICA Smith.

Plate 50, fig. 5.

Hepatella amica SMITH, in Verrill, Amer. Nat., vol. 3, 1870, p. 250.

Carapace subrectangular, little broader than long, antero-lateral margins arched and crenulate, postero-lateral margins deeply excavate and meeting the posterior margin at an angle; antero-lateral regions depressed; gastric, cardiac and post-branchial regions elevated and granulate; front produced, subtruncate. The concave area below the orbit is very shallow and ill defined. Maxillipeds notched at tip. Chelipeds moderate; wrist and chela cristate above; upper crest of hand tridentate, lower edge crenate, four ridges on outer surface. Legs cristate above and below.

Width 16 to 20 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907.

Not previously known from Peru.

Distribution.—Panama; Peru.

LEUCOSILIA JURINEI (Saussure).

Plate 45, fig. 1.

Guaia (ilia) jurinei SAUSSURE, Rev. et Mag. de Zool., no. 8, 1853, p. 12, pl. 13, fig. 4.

Leucosilia jurinii BELL, Trans. Linn. Soc. London, vol. 21, 1855, p. 295, pl. 32, fig. 1.

Carapace orbicular, very convex, surface closely covered with granulations; hepatic region bearing a low elevation, margin separately convex; a tooth or tubercle on the intestinal region; front with two small triangular, divergent teeth. Orbits small, three closed fissures on its margin. Buccal cavity as advanced as the front, subtriangular. Chelipeds and legs granulate; arm joints cylindrical; palms a little compressed, narrowing distally; fingers long and slender, slightly gaping in male; dactyli of legs setose, slightly curved.

Length 14 to 21 mm.

Oyster beds of Matapalo (near Capon), January 23, 1908.

Not previously known from Peru.

Distribution.—From Mazatlan, Mexico, to Peru; Galapagos Islands.

DROMIDIA SARRABUREI, new species.

Plate 48, fig. 4.

Densely covered with fur except ends of fingers and dactyli; abdomen partly extended. Carapace high, subglobular, broader than long; antero-lateral margins directed toward the buccal angles and armed with six small teeth or tubercles; from the last tooth an oblique furrow runs across the branchial region. Front vertical, tridentate. Orbits with a tooth above and below; orbits and antennular pits continuous. Maxillipeds protuberant. Chelipeds short, stout, equal; fingers deeply channeled inside, gaping at base. First and second legs broad, dactyli with a curved horny tip and a row of horny spines beneath; third and fourth legs narrower, subdorsal and prehensile, third shorter, dactyli strongly curved, fourth one recurved, both folding against a spinous process on the propodus.

Length of carapace of an ovigerous female 28.2 mm., width 30 mm.

Type-locality.—Taken in trawl, Bay of Sechura, west of Mataca-balla, depth about 5 fathoms, April 8, 1907.

"Camarones del Mar." Crab housed in sponge.

Type.—Cat. No. 40475, U.S.N.M.

Dedicated to Señor Don Carlos Sarrabure y Correa, Director de Fomento.

HYPOCONCHA PERUVIANA, new species.

Plate 47, fig. 2.

Covered with a coat of short setæ, margins fringed with short hair; abdomen partly extended; dorsal surface fitting the contour of the molluscan valve which it holds over itself. Carapace flattened, membranaceous; length subequal to breadth; anterior margin arcuate, with a slight median incision and notches at the insertion of the antennæ; postero-lateral margins subparallel and forming a sinus behind the lateral angle. Eyes and orbits small, wholly ventral. Antennæ long and slender. Prominences of ventral surface granulated. Chelipeds small, equal; wrist and claw granulated; outer face of wrist bordered by fringe of hair; fingers stout, not gaping, tips red. First and second legs stout; third and fourth slender, dorsal, third the shorter, dactyli very short and hooked, helping to hold the crab in place in the shell which it carries on its back.

Length of mature female 18 mm., width 19.5 mm.

Under valve of *Chione asperrima* Sowerby.[a]

Type-locality.—Oyster beds of Matapalo, near Capon, February 3.

Type.—Cat. No. 40474, U.S.N.M.

Near *H. digueti* Bouvier,[b] from La Paz Bay, Mexico, but differs in having a Y-shaped depression on the gastric region directly in

[a] All the mollusks mentioned in this paper were identified by Dr. W. H. Dall.

[b] Bull. Mus. Hist. Nat., Paris, vol. 4, 1898, pp. 374 and 376.

front of the cervical suture; the margins of front and carapace granulated; the endostomian crest prominent and armed with a denticle; the wrist bordered by a prominent granulated and fringed marginal crest, except on the distal border, and a sharp spine at the infero-distal angle; the abdomen of the female with a backward-pointing fringe of hair on the posterior border of the fourth and the fifth segments.

EMERITA ANALOGA (Stimpson).

Plate 49, fig. 1.

Hippa analoga STIMPSON, Proc. Boston Soc. Nat. Hist., vol. 6, 1857, p. 85.
Hippa talpoides DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 409; atlas, 1855, pl. 25, figs. 10*a–c*.

Carapace oblong-oval, very convex, with fine transverse rugæ; two short transverse impressed lines on anterior half; antero-lateral margin finely serrulate. Front having three small lobes or teeth, lateral teeth more advanced than median; sinuses rounded. Eyestalks long and slender, directed forward. Antennules twice as long as eyes. Second joint of antennal peduncle ending in three spines, of which the middle one is the largest; flagellum very long, curved and bent back under the body. Maxillipeds large, operculiform. First pair of legs not chelate, dactyli oval; dactyli of second and third pairs falcate; fifth pair of legs very slender, concealed. Abdomen partially extended; telson large, elongate-triangular, more than twice as long as wide.

Length of carapace 20 to 23 mm.

Sand beach, Ancon, February 13. Abundant. These "mui-muis" are used for bait in fishing; also the soft ones are eaten.

From sand beach, NE. side of San Lorenzo Island, January 11, 1907.

"Cameroncitos;" Mollendo, July 23 (or "mui-mui" of other places).

Distribution.—From Oregon to Chile.

EMERITA EMERITA (Linnæus).

Plate 49, fig. 6.

Cancer emeritus LINNÆUS, Syst. Nat., 12th ed., vol. 1, pt. 2, 1767, p. 1055.
Hippa emerita DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 409; atlas, 1855, pl. 25, figs. 9*a–c*.

Very similar to the preceding, but larger; carapace rougher, postero-lateral expansion longer; frontal teeth longer and narrower; eyes longer, reaching beyond middle of antennules; second joint of antennal peduncle much longer, due to the great length of the middle spine; telson less than twice as long as wide.

Length of carapace 32 to 38 mm.

Ocean beach, Capon, January 29. These are called "barquillas" here, instead of "mui-muis," as corresponding forms are known generally on the coasts. They are eaten by the fishermen after boiling, but contain little meat.

Distribution.—From Lower California to Chile; from Florida to Brazil.

PAGURISTES HIRTUS Dana.

Plate 51, fig. 2.

Paguristes hirtus DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 437; atlas, 1855, pl. 28, figs. **2***a–f*.

A rough, hairy hermit crab; rostrum short; eyes slender, much longer than antennal acicle, shorter than base of antennule; eye scale elongate, inner margin denticulate; flagellum of outer antennæ long-ciliated below. Chelipeds equal; hand subelliptical, short-spinous and tufted hirsute, margins spinous, outer margin very arcuate. First and second pairs of legs rough and hairy, dactyli longer than propodi.

Length 50 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, about 5 fathoms, April 8, 1907.

One small specimen, in *Marginella curta* Sowerby.

Distribution.—Peru; Chile.

PAGURISTES TOMENTOSUS (Milne Edwards).

Plate 50, fig. 1.

Pagurus tomentosus MILNE EDWARDS, Ann. Sci. Nat. (3), Zool., vol. 10, 1848, p. 64.

A small hermit crab, in which the base of the antennæ, the equal chelipeds and the next three pairs of feet are clothed with long, soft hair, which conceals the surface, except some sharp, black spines which border the inner edge of the wrist and hand and are scattered also on their dorsal surface; similar spines on upper edge of the ambulatories, and smaller spines on their outer surfaces. The rostral point is stronger than in *P. hirtus*, and the eyes are more cylindrical, not at all dilated at the cornea.

Length said to be $2\frac{1}{2}$ inches. Our specimen is about 1 inch or 25 mm.

Dredged, Bay of Sechura, about half-way between Bayovar and Matacaballa, 5 to 6 fathoms, April 10, 1907.

One specimen, in shell of *Oliva peruviana*.

Distribution.—Peru; Chile (?).

CLIBANARIUS PANAMENSIS Stimpson.

Plate 47, fig. 4.

Clibanarius panamensis STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 84.

A hermit crab with the carapace elongate, well calcified in front of the cervical groove, rostrum small, triangular. Abdomen well developed, soft, spirally coiled. Eye stalks long and slender; eye scales approximated. Antennal acicle short, flagellum long. Chelipeds similar, equal, spinous; fingers opening horizontally, tips cor-

neous and broadly hollowed. First two pairs of legs longer than chelipeds, and like them, finely striped longitudinally with red and white. Third and fourth pairs of legs small, third subcheliform, fourth cheliform. Abdomen having an appendage on left side of second, third, fourth, and fifth segments; tail-fan present, more developed on left side.

Length of carapace about 20 mm.; entire length of extended crab about 85 mm.

Isla de la Correa, near Capon, January 25, 1908. "Diablicas." The native method of extracting the "diablicas" from the shell is to apply a coal of fire to the apex, until the animal voluntarily abandons his house. They are said to be as palatable as the "camerones" (shrimps).

Distribution.—From Lower California to Peru.

DARDANUS SINISTRIPES (Stimpson).

Plate 49, fig. 2.

Pagurus sinistripes STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 82.

A hermit crab with carapace elongate, partially calcified anteriorly; rostrum absent; a tooth at base of antenna. Abdomen soft, spirally coiled. Eye stalks stout; eye scales large and well separated. Antennal scale moderate, flagellum long. Chelipeds dissimilar, left the larger; spinous; fingers opening in an obliquely vertical plane; tips corneous, somewhat spooned. Next two legs long and spinous; the second one on the left side is unlike the others, the last two segments much broadened, covered outside with overlapping scales, propodus with a longitudinal ridge, the dactylus with a deep furrow. Last two legs small, third subchelate, fourth chelate. Abdominal appendages similar to those of *Clibanarius;* behind the third one, but more ventral, there is a fleshy spur.

Length of animal extended, about 80 mm.; length of carapace about 20 mm.

In a species of *Natica.*

Dredged, Bay of Sechura, about half-way between Bayovar and Matacaballa, in 5 to 6 fathoms, April 10, 1907.

Distribution.—From Lower California to Peru.

DARDANUS IMBRICATUS, new species.

Plate 49, fig. 3.

Similar to the preceding; eye stalks shorter, eye scales not spreading at the extremity; antennal scale just reaching the cornea. Left cheliped the larger, with wrist sparsely spinous, palm broader than long, outer face covered with numerous fan-shaped, overlapping scales which are largest near the immovable finger; scales bordered distally by small chalky-white granules and a fringe of short hair;

dactylus similarly ornamented, except for a row of tubercles next to the prehensile teeth. Right cheliped wanting, as are also the left ambulatory legs. Right ambulatories nearly smooth, long, hairy; dactyli somewhat shorter than in *D. sinistripes*.

Length of carapace 18 mm., length of body about 70 mm.

One specimen lacking the right cheliped, in shell of *Thais chocolata* Duclos.

Dredged, Bay of Sechura, about half-way between Bayovar and Matacaballa, 5 to 6 fathoms, April 10, 1907.

Type.—Cat. No. 40470, U.S.N.M.

? PAGURUS BENEDICTI (Bouvier).

Plate 48, fig. 1.

Eupagurus minutus BENEDICT, Proc. U. S. Nat. Mus., vol. 15, 1892, p. 14 (not *Pagurus minutus* HESS, 1887).

Eupagurus benedicti BOUVIER, Bull. Mus. Hist. Nat., Paris, 1898, p. 381.

A small, somewhat hairy, hermit crab with front nearly straight, faintly three-lobed; eye stalks long, stout; scales short, rounded, with a slender subterminal spine; acicle of antenna shorter than eye, peduncle scarcely longer than eye. Chelipeds dissimilar, unequal, right larger; its wrist triangular above, inner margin armed with slender spines, a few scattered spines on the surface; chela suboval, inner margin set with long slender spines; spines of outer margin smaller, two rows of spines beginning at carpus converge at base of pollex, other scattered spines; wrist of smaller cheliped with two rows of spines, upper face and oblique outer face of chela subequal, the latter bordered by sharp spines. Ambulatory legs slender, longer than chelipeds.

Total length reaches 33 mm. The single Peruvian specimen is very small, about 15 mm., and bears eggs. It is placed here with some doubt.

The ambulatories show broad bands of red and white, one of each color on the propodus and the dactylus, the white distal to the red.

Dredged near the northeast side of San Lorenzo Island, depth 2½ fathoms, February 5.

Not previously known from Peru.

Distribution.—Gulf of California; Peru.

CALLIANASSA UNCINATA Milne Edwards.

Plate 45, fig. 3.

Callianassa uncinata MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 310, pl. 25*bis*, figs. 1–3.

A burrowing shrimp with submembranaceous shell; carapace small, oblong-oval, rostrum minute. Eye stalks flat, triangular, with small dorsal corneæ. Inner antennæ stout, peduncle as long as flagella;

outer antennæ without scale, flagellum longer than carapace. Outer maxillipeds operculiform. First, second, and fourth pairs of feet chelate, those of first pair largest, unequal, flattened, smooth, and hard; the larger one with arm small, wrist very large, palm of equal width, hollowed out distally next the immovable finger and having a tooth projecting into the wide gape; movable finger with a truncate tooth at its base, extremity hooked; smaller cheliped of first pair much narrower; propodus of third pair obliquely oval. First segment of abdomen narrow; tail-fan broad, telson squarish.

Length of body about 7 cm. The Peruvian specimens are small, about 17 mm. long. The wrist is proportionately longer than in Milne Edwards's figure and the tooth on the dactyl of the large claw broader.

Living in the muddy sand of the inside beach at Capon.

Not previously known from Peru.

Distribution.—Peru; Chile.

PETROLISTHES ARMATUS (Gibbes).

Plate 41, fig. 3.

Porcellana armata GIBBES, Proc. Amer. Ass. Adv. Sci., vol. 3, 1850, p. 190.

Porcellana gundlachii GUÉRIN, in La Sagra's Hist. Cuba, vol. 8 (atlas), 1855, Articulata, pl. 2, fig. 6.

Small. Carapace ovate, finely rugose; a spinule on lateral margin behind hepatic sinus. Front triangular, undulated. Eye stalks short and stout, cornea large. Flagellum of antenna much longer than body. Maxillipeds very large, projecting beyond the front. Chelipeds broad and flat, subequal but unlike; wrist long, tridentate on anterior margin, two or three spines at distal end of posterior margin; palm triangular, widening distally; fingers shorter than palm, slightly gaping in the stouter chela. First three pairs of legs half as long as chelipeds; merus joints flattened, spinous; following joints slender. Last pair of legs much slenderer, inflexed. Abdomen symmetrical, bent under the body, sixth segment bearing a pair of lamellar appendages, which with the telson form a swimming fan.

Width 7 to 8 mm.

Taken on the beach at Las Vacas, near Capon, January 23, 1908. "Salamandra." These crabs are found in vast abundance on the shelly oyster banks bordering the mangrove swamps at Matapalo. The bank is exposed at low tide for a width of about 25 meters. By scratching in the shelly ground many of these crabs can be taken.

Oyster beds of Matapalo (near Capon), January 23, 1908, from masses of sponge.

Not previously known from Peru.

Distribution.—From Lower California to Peru; from Florida to Brazil; Bermudas; Indo-Pacific region.

PETROLISTHES SPINIFRONS (Milne Edwards).

Plate 48, fig. 5.

Porcellana spinifrons MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 256.

Similar in shape to the preceding. Carapace rougher, areolated; antero-lateral margin denticulated. Front quinquedentate, middle tooth largest and most prominent, intermediate pair on lower level. Orbits better defined and eyes smaller than in *P. armatus*. Pedunc-ular segments of antenna tuberculate; flagellum very long. Maxil-lipeds also long. Chelipeds shorter than in the preceding; a strong tooth at middle of anterior margin of wrist; palms as broad as long; fingers as long as palm. First three pairs of legs stout; fourth pair shorter and a little broader than in *P. armatus*.

Width 10 mm.

Pescadores Islands, February 12. Small, dark purple crab.

Distribution.—Peru; Chile.

PACHYCHELES GROSSIMANUS (Guérin).

Plate 46, fig. 5.

Porcellana grossimana GUÉRIN, Bull. Soc. Sci. Nat. France, 1835, p. 116; Mag. de Zool., vol. 8, 1838, cl. 7, pp. 6, 8, pl. 26, fig. 3.

Allied to *Petrolisthes*. Carapace ovate, as broad as long, convex, faintly rugose. Front bluntly tridentate, orbits shallow, eyes large. First article of antenna reaches margin of carapace; flagellum longer than carapace. Maxillipeds visible in dorsal view. Chelipeds very broad and thick, rough and setose; wrist broader than long, two teeth on anterior margin; palms as broad as long; outer margin of propodus very convex; fingers gaping, densely hairy within. First three pairs of legs stout and hairy; fourth pair slender, inflexed.

Width 8 to 12 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907.

Taken from seaweed, Chincha, North Island, June 18, 1907.

Distribution.—Peru; Chile.

MUNIDA COKERI, new species.

Plate 53, fig. 5.

Grimotea gregaria GUÉRIN, Voy. *Coquille*, atlas, 1830, pl. 3, fig. 1 (colored); vol. 2, pt. 2, 1831, p. 32 (not *Galathea gregaria* FABRICIUS, 1793).

Carapace oblong; abdomen partly extended; chelipeds elongate, longitudinal, as are also the first three pairs of legs; last pair of legs very slender, inflexed. Cervical suture deep; numerous transverse striæ bordered by setæ; rostrum a slender spine, longer than eyes,

its upper margin and the extremities of its lower and lateral margins very finely denticulate; a short spine on either side of the base of the rostrum, and also at antero-lateral angles; a few spinules on anterior side margin. Corneæ large, reniform. Chelipeds narrow, not twice length of carapace, rough with spinules; spines at distal angles of arm and wrist; palm twice as long as wide, fingers longer than palm, not gaping. First three legs rough, margins hairy. Abdomen transversely striated and ciliated, unarmed; swimming fan broad.

Length of carapace of type male 18.8 mm., length of entire animal extended 60 mm.

Lobos de Afuera, March, 1907. "Cameron del Mar."

"Camerones del Mar" (red), casually very abundant, Callao Bay, June, 1908.

Type-locality.—Callao Bay.

Type.—Cat. No. 40484, U.S.N.M.

Guérin [a] says that this species is so abundant in the roadstead of Callao that it gives the water the appearance of blood.

PANULIRUS ORNATUS (Fabricius).

Plate 52, fig. 1.

Palinurus ornatus FABRICIUS, Ent. Syst., Suppl., 1798, p. 400.

Palinurus fasciatus DE HAAN, Fauna Japon., Crust., 1849, p. 159, pls. 43, 44, fig. 2.

A large lobster with carapace longitudinally subcylindrical and spinous; orbits partially excavated; eyes stout; a long horn-like spine behind each eye. Flagella of first antennæ long and slender, the segment that carries them produced considerably in advance of the frontal margin and bearing four spines. Second antennæ subcylindrical, with strong, spinous, peduncular segments and long, rigid multi-articulate flagella. Five pairs of legs similar, third longest; not chelate, except fifth pair in female which is subchelate; tips horny. First to sixth abdominal segments nearly smooth, produced laterally to a spine; swimming fan spinulous.

Length of body about 25 cm.; length including antennæ about 56 cm.

Payta, April 27, 1907. "Langosta."

Not previously known from Peru.

Distribution.—From Lower California to Peru; Indo-Pacific region.

BITHYNIS CÆMENTARIUS GAUDICHAUDII (Milne Edwards).

Plate 54, fig. 1.

Palemon gaudichaudii MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 400.

Palæmon gaudichaudii MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, 1843, p. 37; vol. 9, atlas, 1847, pl. 17, fig. 2.

A river shrimp or prawn of large size. Body smooth, subcylindrical; abdomen diminishing posteriorly; first two pairs of legs chelate,

[a] Voy. *Coquille*, vol. 2, pt. 2, 1831, p. 32.

second pair very large, unequal. Rostrum short, triangular, with a superior crest, dental formula $\frac{6}{2}\cdot\frac{8}{3}$. A spine on anterior margin of carapace just outside orbital sinus. Inner antenna with three slender flagella; outer antenna with a large scale and a very long flagellum, dorso-ventrally flattened. First pair of legs slender; second pair stout, spinous, the smaller one as long as the body, the larger one one and a half times as long, palm compressed, wider than wrist; last three pairs simple, spinulous. Telson subtriangular, with two pairs of dorsal spinules, extremity rounded.

Length of body 16 cm.; total length to end of large claw 37 cm.

Taken at Pacasmayo from a small and rather dirty stream which flows through the town, conveying to the bay the surplus water from irrigation ditches supplied from the River Jequetepeque, March 12, 1907; common.

Market of Lima, November 2, 1907.

Market of Lima, April, 1908. The seller stated that they were brought from Chancay.

Market of Lima, April, 1908. Presumably from the Rimac.

Taken in the Rimac near Villegas (below Lima), November 6, 1907.

Arequipa, July 26, 1908.

Mollendo, July 23, 1908.

Distribution.—From Ecuador to Chile.

MACROBRACHIUM JAMAICENSE (Herbst).

Plate 51, fig. 1.

Cancer (Astacus) jamaicensis HERBST, Natur. Krabben u. Krebse, vol. 2, 1792, p. 57, pl. 27, fig. 2.

Similar to the preceding; rostrum narrower and longer, about as long as peduncles of inner antennæ, teeth $\frac{1}{3}\cdot\frac{1}{5}$; an additional spine on the carapace behind the marginal spine. Chelipeds of second pair equal, spinous; palm slightly compressed, scarcely wider than carpus and more than three times as long as wide.

This species may attain the size of the preceding, but the Peruvian specimens are small, body not exceeding 7 cm.

Taken at Pacasmayo from a small and rather dirty stream which flows through the town, conveying to the bay the surplus water from irrigation ditches supplied from the River Jequetepeque, March 12, 1907; common.

Not previously known from Peru.

Distribution.—Fresh waters of the Pacific slope of America from Lower California to Peru; and of the Atlantic slope from Texas to Brazil, including the West Indies.

?PALÆMON RITTERI Holmes.

Plate 53, fig. 1.

Palæmon ritteri HOLMES, Proc. Cal. Acad. Sci. (2), vol. 4, 1895, p. 579, pl. 21, figs. 29–35.

A small shrimp, allied to *Macrobrachium*, with smooth carapace, armed with two spines on each side of the anterior margin; rostrum

long, thin, acuminate, teeth $\frac{7-8}{3}$. Antennal scale about as long as rostrum. All the legs slender; second or larger cheliped smooth, reaching well beyond the rostrum.

One specimen only was taken by Doctor Coker, and differs from North American specimens in having the rostrum more arched above and not exceeding antennal scale; the second pair of feet extending beyond rostrum by length of chela; its carpus longer than one-half of merus and longer than palm. As the species of *Palæmon* are very variable, I refrain from making a new species on a single specimen.

Length of body of Peruvian individual 23 mm.

From salt creeks at La Palisada near Tumbes, February 12, 1908.

Not previously known from Peru.

Distribution.—San Diego, California; Lower California; Ecuador; Peru.

RHYNCHOCINETES TYPUS Milne Edwards.

Plate 52, fig. 2.

Rhynchocinetes typus MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 383.—MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, 1843, p. 36; vol. 9, atlas, 1847, pl. 17, fig. 1.

A shrimp of medium size, in which the large lamellate rostrum is articulated with the carapace; seven spines on anterior margin of carapace, of which the median spine is followed by another farther back. Rostrum bent strongly upward; superior margin armed with two spines near the base and seven or eight denticles near the end; inferior margin with about twenty teeth. Eyes short, stout. Inner antennæ biflagellate; scale of outer antennæ long and narrow, flagellum as long as body. First and second legs chelate; first stout, a spine at end of arm and wrist; third, fourth, and fifth legs similar, spinulous beneath, third longest of all. Telson long and narrow, three pairs of dorsal spinules.

Length 11 cm.

Lobos de Afuera, March 22. "Cameron del Mar."

Not previously known from Peru.

Distribution.—Péru; Chile; New Zealand; Australia; Indian Ocean.

SYNALPHEUS LATASTEI Coutière.

Synalpheus latastei COUTIÈRE, Proc. U. S. Nat. Mus., vol. 36, 1909, p. 25, text fig. 7.

Small shrimps having one very heavy claw, attached by slender segments to the body. Eyes covered by the translucent carapace. A small rostral spine and a similar shorter spine on each side in front of eye. Outer antennæ with a strong scale bearing a subapical spine; inner antennæ with a large spine attached to its basal joint. Legs of first pair unequal and unsymmetrical, larger chela suboval, somewhat

twisted, unarmed; fingers broad, especially the dactylus, locking together, tips corneous. Second legs slender, chelate; carpus 5-articulate, first article equal to sum of other four; second, third, and fourth articles small, subequal; last three legs simple.

Length of body about 30 mm., in Peruvian specimens about 20 mm.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907.

Not previously known from Peru.

Distribution.—Peru; Chile; Australia?

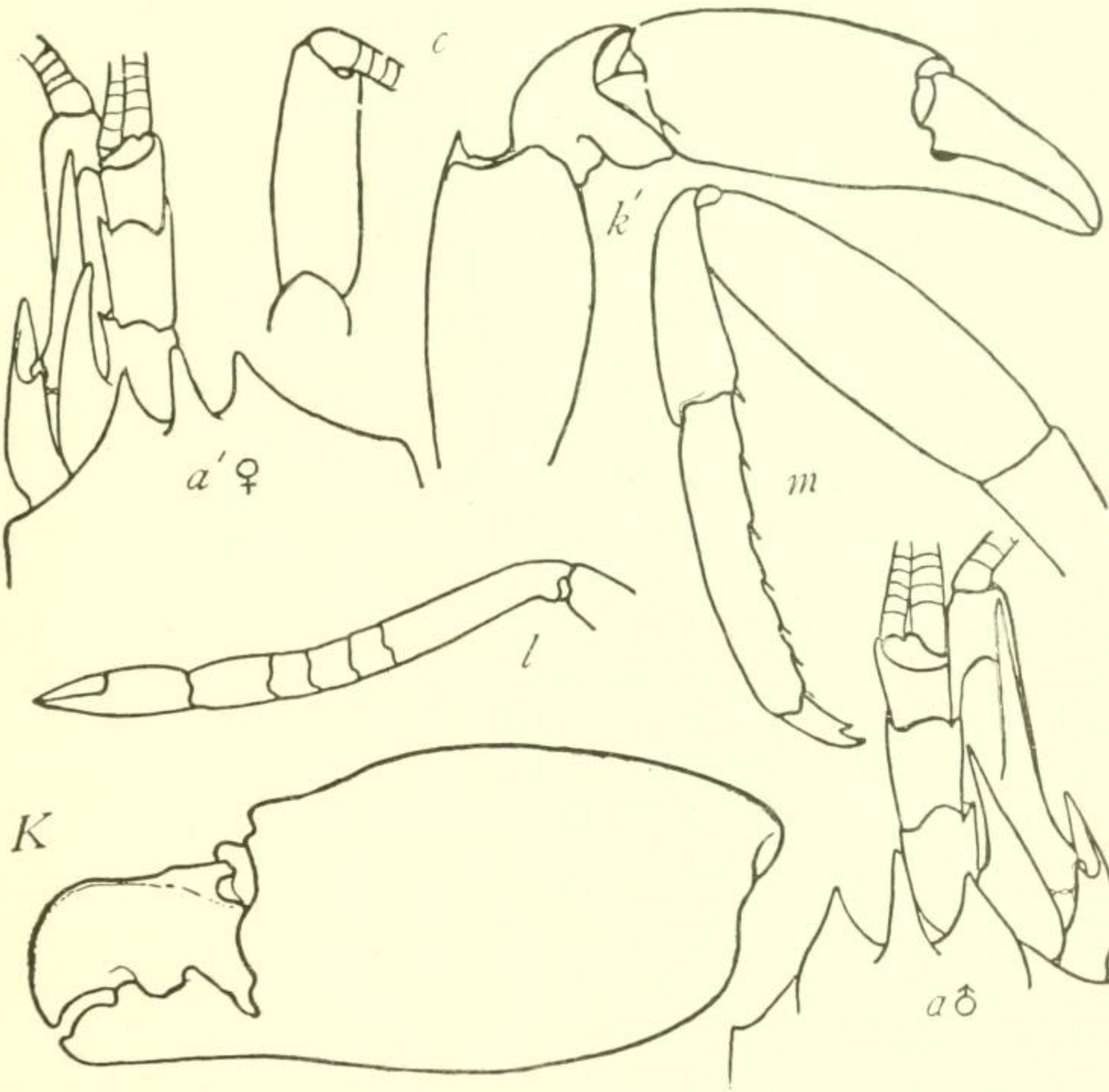

FIG. 3.—SYNALPHEUS LATASTEI. AFTER COUTIÈRE. *a*, FRONTAL AND ANTENNAL REGION, MALE, AUSTRALIA; *a′*, FRONTAL AND ANTENNAL REGION, FEMALE, CHILE; *c*, CARPOCERITE; *K*, LARGE CHELA; *k′*, SMALL CHELIPED OF FIRST PAIR; *l*, FOOT OF SECOND PAIR; *m*, FOOT OF THIRD PAIR.

SYNALPHEUS TOWNSENDI PERUVIANUS, new subspecies.

Plate 53, fig. 4.

Similar in form to the preceding. Rostral spine slender, exceeding slightly the frontal spines. Antennular peduncle very long; first segment exceeds rostrum by a distance equal to length of second segment; second segment one and a half times third; stylocerite reaching middle of second segment. Antennal peduncle overreaching slightly the antennular peduncle; scale reaching end of antennular peduncle; basicerite unarmed above, lateral spine reaching middle of first antennular segment. Palm of larger claw ending in a curved

spine. Distal angles of telson rectangular; inner spine more than twice as long as outer spine.

Length of body of ovigerous female 19.5 mm.

The elongate antennular peduncles, which are about half as long as carapace, serve to distinguish this form at once from the typical form of *S. townsendi* Coutière.[a]

Type-locality.—Oyster beds of Matapalo (near Capon), January 23, 1908.

Type.—Cat. No. 40503, U.S.N.M.

PENEUS STYLIROSTRIS (Stimpson.)

Plate 53, fig. 2.

Penæus stylirostris STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 134.

Body strongly compressed; carapace carinated; a spine on anterior margin and one behind it; rostrum long and slender, reaching beyond antennular peduncles, teeth $\frac{8-12}{4}$, no teeth above near the extremity. Eyes very large, sunk in the hollowed antennules. Antennular flagella longer than peduncle; inner flagellum much longer than outer. Antennal flagella twice as long as body. Legs slender, first three pairs chelate. Fifth and sixth segments of abdomen carinate; telson narrow-triangular, furrowed, unarmed, greatly exceeded by appendages of sixth segment.

Length about 15 cm., of Peruvian specimens 4 to 5 cm.

From salt creeks at La Palisada near Tumbes, February 12, 1908. "Camerones del Mar."

Not previously known from Peru.

Distribution.—Panama; Peru.

PENEUS BREVIROSTRIS Kingsley.

Plate 54, fig. 2.

Peneus brevirostris KINGSLEY, Proc. Acad. Nat. Sci. Phila., 1878, p. 98.

Penæus californiensis HOLMES, Occas. Papers Cal. Acad. Sci., vol. 7, 1900, p. 218, pl. 4, figs. 64–69.

Similar to the preceding. The carina of the carapace is accented by a groove on either side extending its whole length; on the carapace, in addition to the two spines of *P. stylirostris*, there is a small marginal spine above the eye and a short crest running back from it. Rostrum shorter than antennular peduncles, teeth $\frac{9-10}{2}$, tip unarmed. Antennular flagella scarcely longer than peduncle; inner flagellum shorter than outer. Antennal flagellum not twice as long as body. Fourth, fifth, and sixth segments of abdomen carinate.

The body attains a length of 19 cm. Peruvian specimens are about 11 cm.

[a] Proc. U. S. Nat. Mus., vol. 36, 1909, p. 32, text fig. 14.

Taken in trawl, Bay of Sechura, west of Matacaballa, depth about 5 fathoms, April 8, 1907. "Camerones del Mar."

Not previously known from Peru.

Distribution.—From San Francisco Bay, California, to Peru; Galapagos Islands.

CHLORIDELLA DUBIA (Milne Edwards).

Plate 54, fig. 3.

Squilla dubia MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 522.

A stomatopod or mantis shrimp. Carapace small, not covering the last four segments of the thorax; rostrum oblong-triangular; eye stalks dilated, corneæ oblique, corneal shorter than peduncular axis; first five pairs of thoracic limbs serving as accessory mouth parts, the second pair strongly developed into large raptorial limbs in which the dactylus bears six spines and closes on the manus like the blade of a penknife; last three pairs of thoracic limbs ambulatory, bearing a lateral appendage on the penult segment; lateral spine of fifth thoracic segment curved. Abdomen large, its first five segments carry tufted gills on the exopods, and have eight longitudinal dorsal carinæ; swimming fan large; telson wider than long, with a median crest and a row of pits on each side; six marginal spines, intervening denticles 1–3, 3–4, 1; basal process of uropods two-spined, inner spine longer.

Length 12 to 13 cm.

Mouth of River Tumbes, January 15, 1908. "Cameron brujo" (=the wizard shrimp). The "cameron brujo" is much feared by the fishermen and is said to inflict a very severe wound. My guide received a bad wound in the foot while wading, and attributed it to a "cameron brujo." Exopodite and endopodite of last pair of abdominal limbs (uropods) red.

Taken in casting net at mouth of river Tumbes (Isla Santa Lucia), January 15, 1908. Color olivaceous, barred with red. A broad red bar on each segment of thoracic and abdominal regions, this color being especially deep on the six longitudinal ridges. Telson mainly red, bluish in median region, the margin white, with a band of blue just interior to the white. Cephalic shield olivaceous, with narrow red streaks on the longitudinal ridges. "Arms" bluish.

Distribution.—Ecuador; Peru; also South Carolina and Georgia.

PSEUDOSQUILLA LESSONII (Guérin).

Plate 52, fig. 3.

Squilla lessonii GUÉRIN, Voy. *Coquille*, Atlas, Crust., 1830, pl. 4, fig. 1.
Squilla cerisii GUÉRIN, Voy. *Coquille*, vol. 2, pt. 2, 1831, p. 40.

A mantis shrimp, with body more cylindrical than the preceding; rostrum pentagonal, three-spined; corneal greater than peduncular axis; dactylus of raptorial limb three-spined; no spine on fifth thoracic segment. First five abdominal segments smooth; telson

with median crest and ten other carinæ; submedian spines with movable tips; denticles 0, 2, 1; basal process of uropods three-spined, outer spine longest.

Length 13 to 13½ cm.

Callao, January 29, 1907.

Distribution.—From Wilmington, California, to Chile.

LYSIOSQUILLA DECEMSPINOSA, new species.

Plate 53, fig. 3.

A mantis shrimp with depressed body; rostrum transversely oblong, with a median spine, anterior angles produced. Eye stalks short, stout, cylindrical; corneæ globular. Dactylus of raptorial claw with ten spines. Abdomen dorsally smooth; six marginal spines on telson; intermediate denticles, 9, 1, 0, almost concealed in dorsal view by the overhanging margin; basal prolongation of uropods armed with two long spines.

Length about 24 mm.

Near *L. armata* Smith,[a] which is larger and has a different arrangement of spines on the telson.

Type-locality.—Capon.

Living in vertical holes in the muddy sand of the inside beach at Capon. Small yellow eggs were often noted attached to the sides of the holes. January 30, 1908.

Type.—Cat. No. 40498, U.S.N.M.

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[a] See Bigelow, Proc. U. S. Nat. Mus., vol. 17, 1894, p. 503.

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APPROXIMATE LATITUDES OF PERUVIAN LOCALITIES MENTIONED IN THIS PAPER.

Capon, Matapalo, Puerto Grande, Las Vacas, Salto, mouth of Rio de Tumbes (Tumbez); also Boca Alamo, La Palisada, and Isla Santa Lucia.	3°	30′	S.
Zorritos	3	50	S.
Paita (Payta) and Caleta Colon	5	00	S.
Sechura Bay; also Matacaballa and Bayovar	5	40	S.
Lobos Islands, northern (Lobos de Tierra)	6	30	S.
Lobos Islands, southern (Lobos de Afuera)	7	00	S.
Pacasmayo	7	20	S.
Chimbote Bay (or Ferrol Bay)	9	05	S.
Ancon and Pescadores Islands	11	45	S.
Callao, Lima, La Punta, and San Lorenzo Island; also mouth of the Rimac.	12	04	S.
Bay of Chilca	12	30	S.
Pisco and Chincha Islands	13	45	S.
Independencia Bay	14	15	S.
Arequipa	16	20	S.
Mollendo	17	00	S.

LIST OF SPECIES OCCURRING FROM PANAMA TO THE ISLAND OF CHILOË.

Class CRUSTACEA.

Order DECAPODA.

Tribe BRACHYGNATHA.

Family HYMENOSOMIDÆ.

Genus HALICARCINUS White.

HALICARCINUS PLANATUS (Fabricius).

Cancer planatus FABRICIUS, Ent. Syst., vol. 2, 1793, p. 446.—*Hymenosoma ? tridentatum* JACQUINOT, in Hombron and Jacquinot, Voy. au Pôle Sud, Zool., vol. 3, 1852(?), Crust., p. 60; atlas of zool., pl. 5, figs. 27–33 (*tridentata*). Chile to Straits of Magellan; Antarctic region.

Family INACHIDÆ.

Subfamily INACHINÆ.

Genus STENORYNCHUS Lamarck.

STENORYNCHUS DEBILIS (Smith).

Leptopodia sagittaria MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 3; vol. 9, atlas, 1847, pl. 4, fig. 3 (not *L. sagittaria* LEACH).—*Leptopodia debilis* SMITH, Ann. Rept. Peabody Acad. Sci. for 1870 (1871), p. 87. Lower California to Chile; Galapagos Islands. Low-water mark to 31 fathoms.

Genus PODOCHELA Stimpson.

PODOCHELA MARGARITARIA Rathbun.

Proc. Wash. Acad. Sci., vol. 4, 1902, p. 283, pl. 12, fig. 12. Galapagos Islands, on reef and at 12 fathoms.

Genus INACHOIDES Milne Edwards and Lucas.

INACHOIDES MICRORHYNCUS Milne Edwards and Lucas. See page 533.[a]

Peru; Chile.

INACHOIDES INORNATUS A. Milne Edwards.

Jour. Mus. Godeffroy, vol. 4, 1873, p. 77. Valparaiso[b] (Ortmann).

INACHOIDES LÆVIS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 192. Panama.

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[a] This and similar citations refer to preceding pages of this paper.

[b] A. Milne Edwards gives for the locality "les îles Viti," but Ortmann, Zool. Jahrb. Syst., vol. 7, 1893, p. 38, says that the original specimen is labeled "Valparaiso."

Genus EURYPODIUS Guérin.

EURYPODIUS LATREILLII Guérin.

Mém. Mus. Hist. Nat. Paris, vol. 16, 1828, p. 354, pl. 14. From Peru via Straits of Magellan to Rio de Janeiro, Brazil; Falkland Islands.

Genus DASYGYIUS Rathbun.

DASYGYIUS GIBBOSUS (Bell).

Microrhynchus gibbosus BELL, Proc. Zool. Soc. London, vol. 3, 1835, p. 88; Trans. Zool. Soc. London, vol. 2, 1836, p. 41, pl. 8, fig. 1. Galapagos Islands, 6 fathoms.

DASYGYIUS DEPRESSUS (Bell).

Microrhynchus depressus BELL, Proc. Zool. Soc. London, vol. 3, 1835, p. 88; Trans. Zool. Soc. London, vol. 2, 1836, p. 42, pl. 8, fig. 2. Gulf of California; Galapagos Islands. 6 to $26\frac{1}{2}$ fathoms.

DASYGYIUS TUBERCULATUS (Lockington).

Inachus tuberculatus LOCKINGTON, Proc. Cal. Acad. Sci., vol. 7, 1876 (1877), p. 30.—*Dasygyius tuberculatus* RATHBUN, Harriman Alaska Exped., vol. 10, 1904, p. 172, pl. 10, figs. 3, 3*a*, text fig. 92. From Alamitos Bay, California, to Panama Bay. 4 to 33 fathoms.

Subfamily ACANTHONYCHINÆ.

Genus EPIALTUS Milne Edwards.

EPIALTUS DENTATUS Milne Edwards.

Hist. Nat. Crust., vol. 1, 1834, p. 345. Panama (?); Peru; Chile; western Patagonia.

EPIALTUS MARGINATUS Bell. See page 534.

Galapagos Islands; Peru to Chile; Rio de Janeiro (?).

EPIALTUS BITUBERCULATUS Milne Edwards.

Hist. Nat. Crust., vol. 1, 1834, p. 345, pl. 14, fig. 11.—A. MILNE EDWARDS, Crust. Rég. Mex., 1878, p. 139, pl. 27, figs. 1–3. Southern California to Chile; Florida to Rio de Janeiro.

Genus LEUCIPPA Milne Edwards.

LEUCIPPA PENTAGONA Milne Edwards.

Ann. Soc. Ent., France, vol. 2, 1833, p. 517, pl. 18B, figs. 1 and 2 (*pantagona*). Magdalena Bay, Lower California; from Chile to Rio de Janeiro. To a depth of 52 fathoms.

Genus ACANTHONYX Latreille.

ACANTHONYX PETIVERII Milne Edwards. See page 534.

Cape St. Lucas to Chile; Galapagos Islands; east coast of tropical America.

Genus EUPLEURODON Stimpson.

EUPLEURODON TRIFURCATUS Stimpson. See page 535.

Cape St. Lucas, Lower California; Peru.

Subfamily PISINÆ.

Genus CHIONŒCETES Krøyer.

CHIONŒCETES CHILENSIS Streets.

Proc. Acad. Nat. Sci. Phila., 1870, p. 106. Chile.

Genus LIBIDOCLÆA Milne Edwards and Lucas.

LIBIDOCLÆA GRANARIA Milne Edwards and Lucas.

D'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 8; vol. 9, atlas, 1847, pl. 3, fig. 1; pl. 4, fig. 1. Valparaiso, Chile.

Genus PISOIDES Milne Edwards and Lucas.

PISOIDES TUBERCULOSUS Milne Edwards and Lucas.

D'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 11; vol. 9, atlas, 1847, pl. 5, fig. 1. Chile.

PISOIDES EDWARDSII (Bell).

Hyas edwardsii BELL, Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 171; Trans. Zool. Soc. London, vol. 2, 1836, p. 49, pl. 9, fig. 5. Panama; Galapagos Islands; Chile; Straits of Magellan.

Genus NOTOLOPAS Stimpson.

NOTOLOPAS LAMELLATUS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 97.—MIERS, *Challenger* Rept., Zool., vol. 17, 1886, pp. 64 and 65, pl. 8, fig. 1*c*. Manzanillo, Mexico, to Panama.

Genus PELIA Bell.

PELIA PULCHELLA Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 170; Trans. Zool. Soc. London, vol. 2, 1836, p. 45, pl. 9, fig. 2. Galapagos Islands, 6 fathoms.

PELIA PACIFICA A. Milne Edwards.

Crust. Rég. Mex., 1875, p. 73, pl. 16, fig. 3. Magdalena Bay (?), Lower California; Panama.

Genus LIBINIA Leach.

LIBINIA ROSTRATA Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 169; Trans. Zool. Soc. London, vol. 2, 1836, p. 42, pl. 8, fig. 3. Peru, 5 fathoms.

LIBINIA SPINOSA Milne Edwards.

Guérin's Icon., Crust., pl. 9, fig. 3; Hist. Nat. Crust., vol. 1, 1834, p. 301. Chile, rare (Nicolet); Patagonia; Argentina; Brazil.

LIBINIA SUBSPINOSA Streets.

Proc. Acad. Nat. Sci. Phila., 1870, p. 105. Chile.

Genus HERBSTIA Milne Edwards.

HERBSTIA EDWARDSII Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 170; Trans. Zool. Soc. London, vol. 2, 1836, p. 46, pl. 9, fig. 3. Galapagos Islands, 6 fathoms.

HERBSTIA PYRIFORMIS (Bell).

Rhodia pyriformis BELL, Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 170; Trans. Zool. Soc. London, vol. 2, 1836, p. 44, pl. 9, fig. 1. Galapagos Islands, 6 fathoms.

Genus LISSA Leach.

LISSA AURIVILLIUSI Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, p. 575, pl. 41, fig. 4. Off Lower California, 12 to 31 fathoms; Galapagos Islands, on reef.

Subfamily SCHIZOPHRYSINÆ.

Genus PARAMITHRAX Milne Edwards.

PARAMITHRAX PERONII Milne Edwards.

Paramithrax peronii MILNE EDWARDS, Hist. Nat. Crust., vol. 1, 1834, p. 324.—JACQUINOT and LUCAS, Voy. au Pôle Sud, Zool., vol. 3, 1853, Crust., p. 10, pl. 1, fig. 3. Juan Fernandez; Australia; New Zealand.

Genus TYCHE Bell.

TYCHE LAMELLIFRONS Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 173; Trans. Zool. Soc. London, vol. 2, 1836, p. 58, pl. 12, fig. 3. Gulf of California, 7 fathoms; Panama.

Genus PITHO Bell.

PITHO SEXDENTATA Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 172.—*Othonia sex-dentata* BELL, Trans. Zool. Soc. London, vol. 2, 1836, p. 56, pl. 12, fig. 1. Cape St. Lucas, Lower California; Galapagos Islands.

PITHO QUINQUEDENTATA Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 172.—*Othonia quinque-dentata* BELL, Trans. Zool. Soc. London, vol. 2, 1836, p. 57, pl. 12, fig. 2. Gulf of California to Panama; Galapagos Islands; Payta, Peru (?).

Genus MACROCŒLOMA Miers.

MACROCŒLOMA VILLOSUM (Bell).

Pericera villosa BELL, Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 173; Trans. Zool. Soc. London, vol. 2, 1836, p. 59, pl. 12, fig. 4. Cape St. Lucas, Lower California; Bay of Guayaquil, Ecuador.

Genus STENOCIONOPS Leach.

STENOCIONOPS OVATA (Bell).

Pericera ovata BELL, Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 173; Trans. Zool. Soc. London, vol. 2, 1836, p. 60, pl. 12, fig. 5. Galapagos Islands, 6 fathoms.

Genus MICROPHRYS Milne Edwards.

MICROPHRYS WEDDELLI Milne Edwards.

Microphrys weddelli MILNE EDWARDS, Ann. Sci. Nat. (3), Zool., vol. 16, 1851, p. 251 [31], pl. 10, figs. 1 and 2.—*Microphrys weddellii* A. MILNE EDWARDS, Crust. Rég. Mex., 1873, pl. 14, figs. 1, 1*c;* 1875, p. 60. Ecuador; Peru; Guadeloupe.

MICROPHRYS PLATYSOMA (Stimpson). See page 535.

Lower California to Peru; Galapagos Islands; Porto Rico.

MICROPHRYS ACULEATUS (Bell). See page 536.

Galapagos Islands; Ecuador; Peru.

MICROPHRYS BRANCHIALIS Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, p. 577, pl. 41, fig. 5. Lower California and Gulf of California; Galapagos Islands. On reef, and from 12 to 48 fathoms.

Genus MITHRAX Latreille.

MITHRAX ROSTRATUS Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 171; Trans. Zool. Soc. London, vol. 2, 1836, p. 51, pl. 10, fig. 1. West coast of South America (?).

MITHRAX BELLII Gerstæcker.

Arch. f. Naturg., vol. 22, pt. 1, 1856, p. 112.—*Mithrax ursus* BELL, Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 171; Trans. Zool. Soc. London, vol. 2, 1836, p. 52, pl. 10, figs. 2 and 3. Galapagos Islands; Chile.

MITHRAX PYGMÆUS Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 172; Trans. Zool. Soc. London, vol. 2, 1836, p. 55, pl. 11, fig. 3. Panama, 10 fathoms.

MITHRAX TRIGONOPUS Cano.

Mitrax trigonopus CANO, Boll. Soc. Nat. Napoli (1), vol. 3, 1889, p. 183, pl. 7, fig. 8. Panama.

MITHRAX TUMIDUS (Cano).

Mitraculus tumidus CANO, Boll. Soc. Nat. Napoli (1), vol. 3, 1889, p. 186, pl. 7, fig. 7. Payta, Peru.

MITHRAX NODOSUS Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 171; Trans. Zool. Soc. London, vol. 2, 1836, p. 53, pl. 11, fig. 1. Galapagos Islands; Chile.

MITHRAX DENTICULATUS Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 172; Trans. Zool. Soc. London, vol. 2, 1836, p. 54, pl. 11, fig. 2. Lower California to Ecuador; Galapagos Islands.

MITHRAX AREOLATUS Lockington.

Proc. Cal. Acad. Sci., vol. 7, 1876 (1877), p. 71 [9]. Gulf of California; Pearl Islands, Bay of Panama.

MITHRAX SPINIPES (Bell).

Pisa spinipes BELL, Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 171; Trans. Zool. Soc. London, vol. 2, 1836, p. 50, pl. 9, fig. 6. Gulf of California, 33 fathoms; Galapagos Islands, 16 fathoms; Sancta Elena, Ecuador, 6 fathoms.

Genus TELEOPHRYS Stimpson.

TELEOPHRYS CRISTULIPES Stimpson. See page 536.

Cape St. Lucas, Lower California, to Peru; Galapagos Islands; Brazil.

Genus THOË Bell.

THOË EROSA Bell.

Proc. Zool. Soc. London, vol. 3, 1835 (1836), p. 171; Trans. Zool. Soc. London, vol. 2, 1836, p. 48, pl. 9, fig. 4. Panama; Galapagos Islands; Ecuador.

THOË SULCATA Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 177.—A. MILNE EDWARDS, Crust. Rég. Mex., 1875, pl. 19, fig. 5; 1878, p. 121. Lower California to Panama Bay.

THOË PANAMENSIS Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 30. Panama; Ecuador.

Family PARTHENOPIDÆ.

Subfamily PARTHENOPINÆ.

Genus PARTHENOPE Weber.

PARTHENOPE (PARTHENOPE) HYPONCUS (Stimpson).

Lambrus hyponcus STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 100.—A. MILNE EDWARDS, Crust. Rég. Mex., 1878, p. 153, pl. 30, fig. 3. Mazatlan, Mexico; Panama.

Genus SOLENOLAMBRUS Stimpson.

SOLENOLAMBRUS ARCUATUS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 101. Panama.

Genus HETEROCRYPTA Stimpson.

HETEROCRYPTA MACROBRACHIA Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 103.—A. MILNE EDWARDS, Crust. Rég. Mex., 1878, p. 167, pl. 29, fig. 3. Magdalena Bay, Lower California, 12 to 51 fathoms; Mexico; Panama.

Family EURYALIDÆ (=CORYSTIDÆ).

Genus BELLIA Milne Edwards.

BELLIA PICTA Milne Edwards.

Ann. Sci. Nat. (3), vol. 9, 1848, p. 192. Peru; Chile.

Genus CORYSTOIDES Milne Edwards and Lucas.

CORYSTOIDES CHILENSIS Milne Edwards and Lucas.

D'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 32; vol. 9, atlas, 1847, pl. 16, fig. 1. Valparaiso, Chile.

Genus GOMEZA Gray.

GOMEZA SERRATA Dana.

Crust. U. S. Expl. Exped., pt. 1, 1852, p. 305; atlas, 1855, pl. 18, fig. 7. Callao, Peru; Calbuco, Chile; Patagonia, 50 fathoms.

Genus PSEUDOCORYSTES Milne Edwards.

PSEUDOCORYSTES SICARIUS (Pœppig).

Corystes sicarius PŒPPIG, Arch. f. Naturg., vol. 2, pt. 1, 1836, p. 139.—*Pseudocorystes armatus* MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 30; vol. 9, atlas, 1847, pl. 15, fig. 2. Mollendo, Peru; Chile; Straits of Magellan.

Family PORTUNIDÆ.

Subfamily LIOCARCININÆ.

Genus OVALIPES Rathbun.

OVALIPES BIPUSTULATUS (Milne Edwards).

Platyonichus bipustulatus MILNE EDWARDS, Hist. Nat. Crust., vol. 1, 1834, p. 437, pl. 17, figs. 7–10. Chile; Juan Fernandez; Patagonia; Argentina; also Japan, New Zealand, Cape of Good Hope, etc.

Subfamily PORTUNINÆ.

Genus CALLINECTES Stimpson.

CALLINECTES TOXOTES Ordway. See page 536.

Cape St. Lucas to Peru.

CALLINECTES ARCUATUS Ordway. See page 537.

Lower California to Peru.

Genus ARENÆUS Dana.

ARENÆUS MEXICANUS (Gerstæcker). See page 537

West coast of Mexico to Peru.

Genus PORTUNUS Weber.

PORTUNUS (PORTUNUS) ACUMINATUS (Stimpson). See page 538.

Panama to Peru.

PORTUNUS (PORTUNUS) XANTUSII (Stimpson).

Acheloüs xantusii STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 222.—*Neptunus xantusii* A. MILNE EDWARDS, Crust. Rég. Mex., 1879, p. 213, pl. 38, fig. 1; pl. 39, fig. 4. Puget Sound; from San Pedro, California, to Chile.

PORTUNUS (PORTUNUS) PANAMENSIS (Stimpson).

Acheloüs panamensis STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 112. From Gulf of California and Magdalena Bay, west coast of Lower California, to Panama.

PORTUNUS (PORTUNUS) TRANSVERSUS (Stimpson).

Acheloüs transversus STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 111. Manzanillo, Mexico; Panama Bay, 7 fathoms.

PORTUNUS (ACHELOÜS) SPINIMANUS Latreille.

Portunus spinimanus LATREILLE, Nouv. Dict. Hist. Nat., vol. 28, 1819, p. 47. America; common on coasts of Brazil.—*Acheloüs spinimanus* A. MILNE EDWARDS, Arch. Mus. Hist. Nat., Paris, vol. 10, 1861, p. 341, pl. 32. The figures probably represent the species, but the locality, Chile, is very likely erroneous. Chile (A. Milne Edwards); Virginia to Rio de Janeiro, Brazil.[a]

[a] *Acheloüs smithii* Verrill, Trans. Conn. Acad. Arts and Sci., vol. 13, 1908, p. 386 *et seq.*, text figs. 32, 33, is based on a comparison with the enlarged figure of a very young specimen of *A. spinimanus* A. Milne Edwards, Crust. Rég. Mex., 1879, pl. 39, fig. 2. This figure was copied by Professor Verrill and labeled "about ½ nat. size."

PORTUNUS (ACHELOÜS) BREVIMANUS (Faxon).

Acheloüs brevimanus FAXON, Mem. Mus. Comp. Zoöl., vol. 18, 1895, p. 23. San Benedicto Island, Lower California, to Cocos Island, Central America; Galapagos Islands. To a depth of 66 fathoms.

PORTUNUS (ACHELOÜS) ANGUSTUS Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, p. 594, pl. 44, fig. 2. Galapagos Islands, on reef, and also from 12 to 20 fathoms.

PORTUNUS (ACHELOÜS) STANFORDI Rathbun.

Proc. Wash. Acad. Sci., vol. 4, 1902, p. 282, pl. 12, fig. 11. Galapagos Islands, on reef.

Subfamily THALAMITINÆ.

Genus CRONIUS Stimpson.

CRONIUS EDWARDSII (Lockington).

Amphitrite edwardsii LOCKINGTON, Proc. Cal. Acad. Sci., vol. 7, 1876 (1877), p. 43 [3]. Lower California to Ecuador.

Subfamily PODOPHTHALMINÆ.

Genus EUPHYLAX Stimpson.

EUPHYLAX DOVII Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 226, pl. 5, fig. 5. Mexico (?); west coast of Central America to Payta, Peru.

Family POTAMONIDÆ.

Subfamily POTAMONINÆ.

Genus POTAMON Savigny.

POTAMON (GEOTHELPHUSA) CHILENSIS (Heller).

Thelphusa chilensis HELLER, Verh. k.-k. Zool. Bot. Ges. Wien, vol. 12, abth. 1, 1862, p. 520 [2].—*Geothelphusa chilensis* HELLER, Reise *Novara*, vol. 2, abth. 3, 1865, Crust., p. 33, pl. 3, fig. 4. Chile.

Subfamily PSEUDOTHELPHUSINÆ.

Genus PSEUDOTHELPHUSA Saussure.

PSEUDOTHELPHUSA MACROPA (Milne Edwards).

Boscia macropa MILNE EDWARDS, Ann. Sci. Nat. (3), Zool., vol. 20, 1853, p. 208 [174].—*Pseudothelphusa macropa* RATHBUN, Nouv. Arch. Mus. Hist. Nat., Paris, vol. 7, 1905, p. 276, pl. 13, fig. 1, text fig. 74. Fresh waters of Colombia and Bolivia.

PSEUDOTHELPHUSA LINDIGIANA Rathbun.

Bull. Mus. Hist. Nat. Paris, 1897, p. 59; Nouv. Arch. Mus. Hist. Nat., Paris, vol. 7, 1905, p. 277, text fig. 75. Fresh waters of Colombia and Ecuador.

PSEUDOTHELPHUSA PLANA Smith.

Trans. Conn. Acad. Arts and Sci., vol. 2, 1870, pp. 146, 147.—RATHBUN, Nouv. Arch. Mus. Hist. Nat., Paris, vol. 7, 1905, p. 278, text fig. 76. Payta, Peru.

PSEUDOTHELPHUSA ECUADORENSIS Rathbun.

Bull. Mus. Hist. Nat., Paris, 1897, p. 58; Nouv. Arch. Mus. Hist. Nat., Paris, vol. 7, 1905, p. 279, pl. 13, fig. 8, text fig. 77. Ecuador, fresh water.

PSEUDOTHELPHUSA ÆQUATORIALIS (Ortmann).

Potamocarcinus æquatorialis ORTMANN, Zool. Jahrb. Syst., vol. 10, 1897, p. 319, pl. 17, fig. 5. Ecuador; Peru: Rio Ucayali.

PSEUDOTHELPHUSA CHILENSIS (Milne Edwards and Lucas).

Potamia chilensis MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 22; vol. 9, atlas, 1847, pl. 10, fig. 1. Lima, Peru.

PSEUDOTHELPHUSA NOBILII Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, pp. 518, 535, 537, text fig. 8. Ecuador, fresh water.

PSEUDOTHELPHUSA CONRADI Nobili.

Pseudotelphusa conradi NOBILI, Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 12, 1897, no. 275, p. 3.—*Pseudothelphusa conradi* RATHBUN, Nouv. Arch. Mus. Hist. Nat., Paris, vol. 7, 1905, p. 298, text fig. 90. Ecuador; Peru: Cuterro and Tambillo.

PSEUDOTHELPHUSA CAPUTII Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, 1901, no. 415, p. 38. Fresh waters of Ecuador.

PSEUDOTHELPHUSA DENTATA (Latreille).

Telphusa dentata LATREILLE, Ency. Méth., Hist. Nat., Ent., vol. 10, 1825, p. 564 (not synonymy).—*Pseudothelphusa dentata* RATHBUN, Nouv. Arch. Mus. Hist. Nat., Paris, vol. 7, 1905, p. 300, pl. 14, fig. 4, text fig. 93. Chile (?).

PSEUDOTHELPHUSA HENRICI Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 12, 1897, no. 275, p. 1. Fresh waters of Ecuador.

PSEUDOTHELPHUSA PERUVIANA Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, pp. 527, 535, 537, text fig. 18. Moyombamba, Peru.

PSEUDOTHELPHUSA REFLEXIFRONS (Ortmann).

Potamocarcinus reflexifrons ORTMANN, Zool. Jahrb. Syst., vol. 10, 1897, pp. 317, 321, pl. 17, fig. 6. Upper Amazon.

Subfamily TRICHODACTYLINÆ.

Genus TRICHODACTYLUS Latreille.

TRICHODACTYLUS (TRICHODACTYLUS) FLUVIATILIS (Latreille).

Trichodactylus fluviatilis LATREILLE, Encyc. Méth., Hist. Nat., Ent., vol. 10, 1825, p. 705.—*Trichodactylus* (*Trichodactylus*) *fluviatilis* RATHBUN, Nouv. Arch. Mus. Hist. Nat., Paris (4), vol. 8, 1906, p. 35, pl. 15, fig. 11, text fig. 106. Fresh waters of Chile, Brazil, and Guiana.

TRICHODACTYLUS (VALDIVIA) MARGARITIFRONS (Ortmann).

Dilocarcinus margaritifrons ORTMANN, Zool. Jahrb. Syst., vol. 7, 1893, p. 492, pl. 17, fig. 11. Rio Ucayali, Peru; British Guiana.

TRICHODACTYLUS (VALDIVIA) PARDALINUS (Gerstæcker).

Dilocarcinus pardalinus GERSTÆCKER, Arch. f. Naturg., vol. 22, pt. 1, 1856, p. 148. Upper Amazon (?); Paraguay.

TRICHODACTYLUS (VALDIVIA) LATIDENS (A. Milne Edwards).

Sylviocarcinus latidens A. MILNE EDWARDS, Ann. Soc. Ent. France (4), vol. 9, 1869, p. 175.—*Trichodactylus* (*Valdivia*) *latidens* RATHBUN, Nouv. Arch. Mus. Hist. Nat., Paris (4), vol. 8, 1906, p. 49, pl. 17, fig. 4, text fig. 112. Upper Amazon.

TRICHODACTYLUS (VALDIVIA) PERUVIANUS (A. Milne Edwards).

Sylviocarcinus peruvianus A. MILNE EDWARDS, Ann. Soc. Ent. France (4), vol. 9, 1869, p. 174.—*Trichodactylus* (*Valdivia*) *peruvianus* RATHBUN, Nouv. Arch. Mus. Hist. Nat., Paris (4), vol. 8, 1906, p. 50, pl. 17, fig. 1. Guyallaga, Peru; upper Amazon, Brazil.

TRICHODACTYLUS (DILOCARCINUS) ORBICULARIS (Meuschen).

Cancer orbicularis MEUSCHEN, Index Zoophylacii Gronoviani, fasc. 3, 1781.—*Trichodactylus* (*Dilocarcinus*) *orbicularis* RATHBUN, Nouv. Arch. Mus. Hist. Nat., Paris (4), vol. 8, 1906, p. 58, pl. 18, figs. 3, 8, text fig. 119. Brazil; Paraguay; North Argentina; Bolivia (?).

TRICHODACTYLUS (DILOCARCINUS) PICTUS (Milne Edwards).

Dilocarcinus pictus MILNE EDWARDS, Ann. Sci. Nat. (3), Zool., vol. 20, 1853, p. 216 [182]; Arch. Mus. Hist. Nat., Paris, vol. 7, 1854, p. 181, pl. 14, figs. 2–2*d*. Amazon at Nauta, Peru; Colombia; Guiana; Brazil; Paraguay; Argentina.

TRICHODACTYLUS (DILOCARCINUS) EMARGINATUS (Milne Edwards).

Dilocarcinus emarginatus MILNE EDWARDS, Ann. Sci. Nat. (3), Zool., vol. 20, 1853, p. 216 [182]; Arch. Mus. Hist. Nat., Paris, vol. 7, 1854, p. 181, pl. 14, fig. 4. Rio Ucayali, Peru; Colombia.

Family ATELECYCLIDÆ.

Subfamily ATELECYCLINÆ.

Genus ATELECYCLUS Leach.

ATELECYCLUS CHILENSIS Milne Edwards.

Hist. Nat. Crust., vol. 2, 1837, p. 143. Chile.

Genus HYPOPELTARIUM Miers.

HYPOPELTARIUM SPINULOSUM (White).

Atelecyclus spinulosus WHITE, Ann. Mag. Nat. Hist., vol. 12, 1843, p. 345.—*Peltarion spinulosum* DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 304; atlas, 1855, pl. 18, fig. 6*a–b*. Chile to Southern Patagonia; Falkland Islands.

Subfamily ACANTHOCYCLINÆ.

Genus ACANTHOCYCLUS Milne Edwards and Lucas.

ACANTHOCYCLUS GAYI Milne Edwards and Lucas.

D'Orbigny's Voy. Amér. Mér., vol. 6, 1843, pt. 1, p. 30; vol. 9, atlas, 1847, pl. 15, fig. 1. Peru to Straits of Magellan.

ACANTHOCYCLUS ALBATROSSIS Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, pp. 598, 599. Chile; west coast of Patagonia; Straits of Magellan (?).

ACANTHOCYCLUS HASSLERI Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, pp. 598, 599, pl. 43, fig. 1. Panama; Chile.

Family CANCRIDÆ.

Subfamily CANCRINÆ.

Genus CANCER Linnæus.

CANCER LONGIPES Bell.

Proc. Zool. Soc. London, vol. 3, 1835, p. 87; Trans. Zool. Soc. London, vol. 1, 1835, p. 337, pl. 43. Bay of Panama, 210 and 286 fathoms; Callao Reef, Peru; Bolivia; Chile.

CANCER EDWARDSII Bell.

Proc. Zool. Soc. London, vol. 3, 1835, p. 87.—*Cancer edwardsii* BELL, Trans. Zool. Soc. London, vol. 1, 1835, p. 338, pl. 44. Peru; Chile (as far as Chiloë).

CANCER POLYODON Pœppig. See page 538.

Ecuador; Peru; Chile.

CANCER PLEBEJUS Pœppig. See page 539.

Peru to Port Otway, Patagonia.

Family XANTHIDÆ.

Subfamily XANTHINÆ.

Genus PLATYXANTHUS A. Milne Edwards.

PLATYXANTHUS ORBIGNYI (Milne Edwards and Lucas). See page 539.

Ecuador; Peru; Chile.

PLATYXANTHUS CRENULATUS A. Milne Edwards. See page 540.

Peru to Patagonia.

Genus XANTHO Leach.

XANTHO GAUDICHAUDII Milne Edwards. See page 540.

Ecuador to Patagonia; Juan Fernandez.

XANTHO CRENATUS Milne Edwards.

Hist. Nat. Crust., vol. 1, 1834, p. 396. Peru (Milne Edwards); Payta (Cano).

Genus LEPTODIUS A. Milne Edwards.

LEPTODIUS OCCIDENTALIS (Stimpson).

Chlorodius occidentalis STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 108. Lower California to Panama; Galapagos Islands.

LEPTODIUS COOKSONI Miers.

Proc. Zool. Soc. London, 1877, p. 73, pl. 12, figs. 1–1*d*. Galapagos Islands.

LEPTODIUS SNODGRASSI Rathbun.

Proc. Wash. Acad. Sci., vol. 4, 1902, p. 279, pl. 13, figs. 7 and 8. Galapagos Islands.

LEPTODIUS SPINOSO-GRANULATUS Lenz.

Zool. Jahrb., Suppl. vol. 5, 1902, p. 762, pl. 23, figs. 8, 8*a*. Juan Fernandez.

LEPTODIUS TRIDENTATUS Lenz.

Zool. Jahrb., Suppl. vol. 5, 1902, p. 761, pl. 23, figs. 7, 7*a*. Puerto Corral, Chile; Juan Fernandez.

Genus XANTHODIUS Stimpson.

XANTHODIUS STERNBERGHII Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 52. Lower California to Ecuador.

XANTHODIUS LOBATUS (A. Milne Edwards).

Leptodius lobatus A. MILNE EDWARDS, Crust. Rég. Mex., 1880, p. 271, pl. 49, fig. 4. Clarion Island, Mexico; Galapagos Islands; Chile.

Genus HOMALASPIS A. Milne Edwards.

HOMALASPIS PLANA (Milne Edwards).

Xantho planus MILNE EDWARDS, Hist. Nat. Crust., vol. 1, 1834, p. 397. From Callao, Peru, to Straits of Magellan.

Genus PARAXANTHUS Milne Edwards and Lucas.

PARAXANTHUS BARBIGER (Pœppig).

Gecarcinus barbiger PŒPPIG, Arch. f. Naturg., vol. 2, pt. 1, 1836, p. 138.—*Paraxanthus hirtipes* MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 19; vol. 9, atlas, pl. 7*bis*, fig. 1. Callao, Peru; Chile; Juan Fernandez.

Genus CYCLOXANTHOPS Rathbun.

CYCLOXANTHOPS SEXDECIMDENTATUS (Milne Edwards and Lucas). See page 541.

Ecuador; Peru; Chile.

CYCLOXANTHOPS VITTATUS (Stimpson).

Xantho vittata STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 206. Cape St. Lucas, Lower California; Panama.

CYCLOXANTHOPS (?) STIMPSONI (A. Milne Edwards).

Xantho stimpsoni A. MILNE EDWARDS, Crust. Rég. Mex., 1879, p. 252, pl. 46, fig. 2. Cape St. Lucas and Mazatlan, Mexico; Ecuador.

Genus MEDÆUS Dana.

MEDÆUS LOBIPES Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, p. 583, pl. 44, fig. 1. Cape St. Lucas; Panama Bay; Galapagos Islands. $5\frac{1}{2}$ to 33 fathoms.

Subfamily ACTÆINÆ.

Genus ACTÆA de Haan.

ACTÆA DOVII Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 104.—A. MILNE EDWARDS, Crust. Rég. Mex., 1879, p. 244, pl. 45, fig. 1. Salvador; Panama; Ecuador; Galapagos Islands.

Genus GLYPTOXANTHUS A. Milne Edwards.

GLYPTOXANTHUS LABYRINTHICUS (Stimpson).

Actæa labyrinthica STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 204.—*Glyptoxanthus labyrinthicus* A. MILNE EDWARDS, Crust. Rég. Mex., 1879, p. 255, pl. 43, fig. 4. West coast of Mexico; Panama.

Genus DAIRA de Haan.

DAIRA AMERICANA Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 212.—A. MILNE EDWARDS, Nouv. Arch. Mus. Hist. Nat., Paris, vol. 1, 1866, p. 299, pl. 16, figs. 4–4*c*. California (A. Milne Edwards) to Ecuador. By "California" was probably meant "Lower California."

Genus PLATYPODIA Bell.

PLATYPODIA ROTUNDATA (Stimpson).

Atergatis rotundatus STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 202.—*Lophactæa rotundata* A. MILNE EDWARDS, Crust. Rég. Mex., 1879, p. 243; 1880, pl. 44, fig. 2. Cape St. Lucas, Lower California; Panama.

PLATYPODIA GEMMATA Rathbun.

Proc. Wash. Acad. Sci., vol. 4, 1902, p. 279, pl. 12, figs. 5 and 6. Galapagos Islands.

Subfamily CHLORODIELLINÆ.

Genus MICROPANOPE Stimpson.

MICROPANOPE TABOGUILLENSIS Rathbun.

Mem. Mus. Comp. Zoöl., vol. 35, 1907, p. 69, pl. 1, fig. 8; pl. 7, figs. 3 and 3*a*. Taboguilla Island, Panama.

Genus XANTHIAS Rathbun.

XANTHIAS XANTUSII (Stimpson).

Xanthodes xantusii STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 105. Cape St. Lucas; Ecuador.

Subfamily PANOPEINÆ.

Genus PANOPEUS Milne Edwards.

PANOPEUS PURPUREUS Lockington. See page 541.

Lower California to Peru.

PANOPEUS CHILENSIS Milne Edwards and Lucas. See page 542.

West coast of Mexico to Chile.

PANOPEUS BERMUDENSIS Benedict and Rathbun. See page 542.

Peru; Florida to Brazil; Bermudas.

PANOPEUS BRADLEYI Smith.

Proc. Boston Soc. Nat. Hist., vol. 12, 1869, p. 281. Panama.

Genus EURYPANOPEUS A. Milne Edwards.

EURYPANOPEUS TRANSVERSUS (Stimpson). See page 543.

Salvador to Peru.

EURYPANOPEUS PLANUS (Smith).

Panopeus planus SMITH, Proc. Boston Soc. Nat. Hist., vol. 12, 1869, p. 283.—BENEDICT and RATHBUN, Proc. U. S. Nat. Mus., vol. 14, 1891, p. 369, pl. 24, figs. 10 and 11. Panama; Ecuador.

EURYPANOPEUS CRENATUS (Milne Edwards and Lucas).

Panopeus crenatus MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, pt. 1, 1843, p. 16; vol. 9, atlas, 1847, pl. 8, fig. 1. Puna, Ecuador; Callao, Peru; Chile.

Genus EURYTIUM Stimpson.

EURYTIUM AFFINE (Streets and Kingsley).

Panopeus affinis STREETS and KINGSLEY, Bull. Essex Inst., vol. 9, 1877, p. 106.—*Eurytium affine* A. MILNE EDWARDS, Crust. Rég. Mex., 1880, p. 334, pl. 60, fig. 1. Lower California; Ecuador (?).

EURYTIUM TRISTANI Rathbun. See page 543.

Costa Rica; Peru.

Subfamily MENIPPINÆ.

Genus MENIPPE de Haan.

MENIPPE OBTUSA Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol: 7, 1859, p. 53; Crust. Rég. Mex., 1879, p. 264, pl. 48, fig. 1. Panama.

MENIPPE FRONTALIS A. Milne Edwards.

Crust. Rég. Mex., 1879, p. 264, pl. 48, fig. 2. Nicaragua; Panama; Ecuador.

Genus PILUMNOIDES Milne Edwards and Lucas.

PILUMNOIDES PERLATUS (Pœppig). See page 544.

Panama to Chile.

PILUMNOIDES PUSILLUS Rathbun.

Proc. Wash. Acad. Sci., vol. 4, 1902, p. 281, pl. 12, figs. 9 and 10, Galapagos Islands.

Subfamily PILUMNINÆ.

Genus PILUMNUS Leach.

PILUMNUS LIMOSUS Smith.

Proc. Boston Soc. Nat. Hist., vol. 12, 1869, p. 285.—A. MILNE EDWARDS, Crust. Rég. Mex., 1880, p. 291, pl. 50, fig. 4. Panama; Ecuador; Peru at Zorritos.

PILUMNUS SPINOHIRSUTUS (Lockington).

Acanthus spino-hirsutus LOCKINGTON, Proc. Cal. Acad. Sci., vol. 7, 1876 (1877), pp. 33, 102. San Diego, California; Gulf of California; Ecuador.

PILUMNUS SPINULIFER Rathbun.

Proc. U. S. Nat. Mus., vol. 21, 1898, p. 585, pl. 42, figs. 6–8. Off Cape St. Lucas, 31 fathoms; Galapagos Islands, on reef, also at 12 fathoms.

Genus HETERACTÆA Lockington.

HETERACTÆA LUNATA (Milne Edwards and Lucas).

Pilumnus lunatus MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, 1843, p. 20; vol. 9, atlas, 1847, pl. 9, fig. 2. From San Diego, California, to Chile.

Subfamily OZIINÆ.

Genus OZIUS Milne Edwards.

OZIUS VERREAUXII Saussure.

Rev. et Mag. de Zool. (2), vol. 5, 1853, p. 359, pl. 12, fig. 1. Lower California to Ecuador; Galapagos Islands.

OZIUS AGASSIZII A. Milne Edwards.

Crust. Rég. Mex., 1880, p. 279, pl. 55, fig. 1. Gulf of Panama to Ecuador; Galapagos Islands.

Subfamily ERIPHIINÆ.

Genus ERIPHIA Latreille.

ERIPHIA SQUAMATA Stimpson. See page 544.

Lower California to Chile.

ERIPHIA GRANULOSA A. Milne Edwards.

Crust. Rég. Mex., 1880, p. 339, pl. 56, fig. 2. Galapagos Islands; Chile.

Genus ERIPHIDES Rathbun.

ERIPHIDES HISPIDA (Stimpson).

Eriphia hispida STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 218.—*Pseuderiphia hispida* A. MILNE EDWARDS, Crust. Rég. Mex., 1880, p. 340, pl. 56, fig. 1. West coast of Central America; Panama; Galapagos Islands.

Subfamily TRAPEZIINÆ.

Genus TRAPEZIA Latreille.

TRAPEZIA CYMODOCE FERRUGINEA Latreille.

Trapezia ferruginea LATREILLE, Encyc. Méth., Ent., vol. 10, 1825, p. 695.—*Trapezia cymodoce* DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 257; atlas, 1855, pl. 15, fig. 5. Acapulco, Mexico (Faxon); Pearl Islands, Bay of Panama (A. Milne Edwards, Smith, Faxon); Indo-Pacific region.

TRAPEZIA DIGITALIS Latreille.

Encyc. Méth., Ent., vol. 10, 1825, p. 696.—*Trapezia formosa* A. MILNE EDWARDS, Crust. Rég. Mex., 1880, p. 343, pl. 58, fig. 1. Cape St. Lucas, Mexico, to Panama Bay; Indo-Pacific region.

Genus QUADRELLA Dana.

QUADRELLA CORONATA Dana.

Crust. U. S. Expl. Exped., pt. 1, 1852, p. 266; atlas, 1855, pl. 16, fig. 5. Pearl Islands, Panama Bay, 6 to 8 fathoms; Indo-Pacific region.

Family GONOPLACIDÆ.

Subfamily PRIONOPLACINÆ.

Genus PRIONOPLAX Milne Edwards.

PRIONOPLAX CILIATA Smith.

Prionoplax ciliatus SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 160. Panama; Guayaquil, Ecuador.

Genus EURYPLAX Stimpson.

EURYPLAX POLITA Smith.

Euryplax politus SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 163. Panama.

Genus SPEOCARCINUS Stimpson.

SPEOCARCINUS OSTREARICOLA Rathbun. See page 545.

Matapalo, Peru.

Genus GLYPTOPLAX Smith.

GLYPTOPLAX PUGNAX Smith.

Trans. Conn. Acad. Sci., vol. 2, 1870, p. 165.—A. MILNE EDWARDS, Crust. Rég. Mex., 1880, p. 335, pl. 61, figs. 5–5*f*. Costa Rica to Panama.

Family PINNOTHERIDÆ.

Subfamily PINNOTHERINÆ.

Genus PINNOTHERES Latreille.

PINNOTHERES MARGARITA Smith.

In Verrill, Amer. Nat., vol. 3, 1869, p. 245; Trans. Conn. Acad. Sci., vol. 2, 1870, p. 166. La Paz, Lower California; Pearl Islands, Bay of Panama. In pearl oyster.

PINNOTHERES SILVESTRII Nobili.

Pinnoteres silvestrii NOBILI, Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 402, 1901, p. 11; Revista Chilena Hist. Nat., vol. 6, 1902, p. 235. San Vicente, Chile.

PINNOTHERES BIPUNCTATUM Nicolet.

In Gay, Hist. Chile, Zool., vol. 3, 1849, p. 155, pl. 1, fig. 2. San Carlos de Chiloë.

Genus PINNAXODES Heller.

PINNAXODES CHILENSIS (Milne Edwards).

Pinnotheres chilensis MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 33. Ecuador to Port Otway, Patagonia.

PINNAXODES MEINERTI Rathbun.

Proc. Biol. Soc. Wash., vol. 17, 1904, p. 162. Valparaiso, Chile.

Genus OSTRACOTHERES Milne Edwards.

OSTRACOTHERES POLITUS Smith. See page 545.

Peru; Chile.

Genus DISSODACTYLUS Smith.

DISSODACTYLUS NITIDUS Smith. See page 545.

Off Abreojos Point, Lower California, to Peru.

Subfamily PINNOTHERELINÆ.

Genus PINNIXA White.

PINNIXA TRANSVERSALIS (Milne Edwards and Lucas). See page 546.

Panama to Punta Arenas, Patagonia.

PINNIXA VALDIVIENSIS Rathbun.

Revista Chilena Hist. Nat., vol. 11, 1907, p. 45, pl. 3, figs. 2, 3, text fig. 1. Corral, Province Valdivia, Chile.

Genus PINNOTHERELIA Milne Edwards and Lucas.

PINNOTHERELIA LÆVIGATA Milne Edwards and Lucas. See page 546.

Peru; Chile.

Family GRAPSIDÆ.

Subfamily GRAPSINÆ.

Genus GRAPSUS Lamarck.

GRAPSUS GRAPSUS (Linnæus). See page 547.

Lower California to Chile; Galapagos Islands; Juan Fernandez Also shores of tropical Atlantic.

GRAPSUS STRIGOSUS (Herbst).

Cancer strigosus HERBST, Naturg. d. Krabben u. Krebse, vol. 3, pt. 1, 1799, p. 55, pl. 47, fig. 7.—*Grapsus strigosus* DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 338; atlas, 1855, pl. 21, fig. 2. Chile; Indo-Pacific region.

Genus GEOGRAPSUS Stimpson.

GEOGRAPSUS LIVIDUS (Milne Edwards).

Grapsus lividus MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 85.—DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 340; atlas, 1855, pl. 21, fig. 5*a–c*. Lower California to Chile; Clipperton Island; Galapagos Islands; Florida Keys to Colombia.

Genus LEPTOGRAPSUS Milne Edwards.

LEPTOGRAPSUS VARIEGATUS (Fabricius). See page 547.

Peru; Chile; Juan Fernandez; also Australia and other parts of the southern hemisphere.

Genus GONIOPSIS de Haan.

GONIOPSIS PULCHRA (Lockington). See page 547.

From Magdalena Bay, Lower California, to Peru.

Genus PACHYGRAPSUS Randall.

PACHYGRAPSUS CRASSIPES Randall.

Jour. Acad. Nat. Sci. Phila., vol. 8, 1839 (1840), p. 127.—DE MAN, Notes Leyden Mus., vol. 12, 1890, p. 86, pl. 5, fig. 11. Oregon to Gulf of California; Galapagos Islands; Chile. Japan.

PACHYGRAPSUS, sp. [near CRASSIPES], Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 42. Tumaco, Colombia.

PACHYGRAPSUS TRANSVERSUS (Gibbes). See page 548.

California to Peru; Galapagos Islands. Also widely distributed in tropical Atlantic and Oriental region.

PACHYGRAPSUS PUBESCENS Heller.

Reise *Novara*, Crust., 1865, p. 45, pl. 4, fig. 4. Chile.

Genus PLANES Bowdich.

PLANES MINUTUS (Linnæus).

Cancer minutus LINNÆUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 625. From Alaska to Bay of Valparaiso, Chile; off Galapagos Islands. In all tropical and temperate seas.

Subfamily VARUNINÆ.

Genus CYRTOGRAPSUS Dana.

CYRTOGRAPSUS ANGULATUS Dana.

Proc. Acad. Nat. Sci. Phila., vol. 5, 1851, p. 250; Crust. U. S. Expl. Exped., pt. 1, 1852, p. 352; atlas, 1855, pl. 22, fig. 6*a–e*. San Lorenzo Island, Peru; Rio de Janeiro, Brazil, to Rio Negro, Patagonia.

Genus HEMIGRAPSUS Dana.

HEMIGRAPSUS CRENULATUS (Milne Edwards).

Cyclograpsus crenulatus MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 80.—*Hemigrapsus crenulatus* DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 349; atlas, 1855, pl. 22, fig. 3. Chile; west coast of Patagonia; New Zealand.

Genus GLYPTOGRAPSUS Smith.

GLYPTOGRAPSUS IMPRESSUS Smith.

Trans. Conn. Acad. Sci., vol. 2, 1870, p. 154. Acapulco, Mexico, to Panama.

Subfamily SESARMINÆ.

Genus SESARMA Say.

SESARMA (SESARMA) ÆQUATORIALIS Ortmann.

Sesarma æquatorialis ORTMANN, Zool. Jahrb. Syst., vol. 7, 1894, p. 722, pl. 23, figs. 14, 14*k*, 14*z*. Ecuador.

SESARMA (SESARMA) BARBIMANUM Cano.

Sesarma barbimana CANO, Boll. Soc. Nat. Napoli (1), vol. 3, 1889, pp. 93, 245. Payta, Peru.

SESARMA (SESARMA) OPHIODERMA Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 44. Ecuador.

SESARMA (HOLOMETOPUS) OCCIDENTALE Smith.

Sesarma occidentalis SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 158. Acajutla, Salvador; Ecuador.

SESARMA (HOLOMETOPUS) ANGUSTUM Smith.

Sesarma angusta SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 159. Costa Rica to Bay of Panama.

SESARMA (HOLOMETOPUS) FESTÆ Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 42. Ecuador.

Genus ARATUS Milne Edwards.

ARATUS PISONI (Milne Edwards). See page 548.

Nicaragua to Peru; east coast of America.

Genus CYCLOGRAPSUS Milne Edwards.

CYCLOGRAPSUS CINEREUS Dana.

Proc. Acad. Nat. Sci. Phila., 1851, p. 251; Crust. U. S. Expl. Exped., pt. 1, 1852, p. 360; atlas, 1855, pl. 23, fig. 3*a*–*e*. Panama to Lota, Chile.

CYCLOGRAPSUS PUNCTATUS Milne Edwards.

Hist. Nat. Crust., vol. 2, 1837, p. 78.—*Gnathochasmus barbatus* MCLEAY, Ill. Zool. S. Africa, 1838, p. 65, pl. 3. Chile; Juan Fernandez; South Africa; Indian Ocean.

Subfamily PLAGUSIINÆ.

Genus PLAGUSIA Latreille.

PLAGUSIA TUBERCULATA Lamarck.

Hist. Nat. Anim. sans Vert., vol. 5, 1818, p. 247.—*Plagusia immaculata* MIERS, *Challenger* Brachyura, 1886, p. 273, pl. 22, fig. 1. Lower California to Chile; Indo-Pacific region.

PLAGUSIA CHABRUS (Linnæus).

Cancer chabrus LINNÆUS, Mus. Lud. Ulr., 1764, p. 438.—*Plagusia tomentosa* KRAUSS, Südafr. Crust., 1843, p. 42, pl. 2, fig. 6. Chile; Juan Fernandez; Tongatabu; Australia; Tasmania; New Zealand; Cape of Good Hope.

Genus PERCNON Gistel.

PERCNON PLANISSIMUM (Herbst).

Cancer planissimus HERBST, Natur. d. Krabben u. Krebse, vol. 3, pt. 4, 1804, p. 3, pl. 59, fig. 3. Cape St. Lucas to Chile; Bahamas to Brazil; Bermudas; eastern Atlantic to Japan and Hawaiian Islands.

Family GECARCINIDÆ.

Genus CARDISOMA Latreille.

CARDISOMA CRASSUM Smith. See page 549.

La Paz, Mexico, to Peru.

Genus UCIDES Rathbun.

UCIDES OCCIDENTALIS (Ortmann). See page 549.

Lower California to Peru; Valparaiso, Chile (?).

Genus GECARCINUS Leach.

GECARCINUS LATERALIS (Freminville).

Ocypoda lateralis FREMINVILLE, Ann. Sci. Nat. (2), Zool., vol. 3, 1835, p. 224.—*Gecarcinus lateralis* GUÉRIN, Icon. Règne Anim., pl. 5, fig. 1. Ecuador (Cano, Nobili); Bahamas to Guiana; Bermudas.

GECARCINUS QUADRATUS Saussure.

Rev. et Mag. de Zool. (2), vol. 5, 1853, p. 360, pl. 12, fig. 2. Mexico to Panama; Turbo, Colombia (Atlantic side).

GECARCINUS MALPILENSIS Faxon.

Bull. Mus. Comp. Zoöl., vol. 24, 1893, p. 157; Mem. Mus. Comp. Zoöl., vol. 18, 1895, p. 28, pl. 4, figs. 2–2*b*. Malpelo Island, off Bay of Panama.

Family OCYPODIDÆ.

Subfamily OCYPODINÆ.

Genus OCYPODE Fabricius.

OCYPODE OCCIDENTALIS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 229. Lower California to Peru.

OCYPODE GAUDICHAUDII Milne Edwards and Lucas. See page 550.

Lower California to Chile; Galapagos Islands.

Genus UCA Leach.

UCA PRINCEPS (Smith). See page 550.

San Bartolome Bay, Lower California, to Peru.

UCA STYLIFERA (Milne Edwards).

Gelasimus platydactylus MILNE EDWARDS, Règne Anim. Cuvier, disciples ed., Crust., pl. 18, fig. 1*a* (not MILNE EDWARDS, 1837).—*Gelasimus styliferus* MILNE EDWARDS, Ann. Sci. Nat. (3), Zool., vol. 18, 1852, p. 145 [109], pl. 3, fig. 3. Salvador to Guayaquil, Ecuador.

UCA INSIGNIS (Milne Edwards). See page 551.

Salvador to Chile.

UCA BREVIFRONS (Stimpson).

Gelasimus brevifrons STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1860, p. 229.—*Uca brevifrons* HOLMES, Proc. Cal. Acad. Sci. (3), vol. 3, 1904, p. 308, pl. 35, figs. 1–5. Lower California to Panama.

UCA GALAPAGENSIS Rathbun. See page 551.

Galapagos Islands; Peru.

UCA MACRODACTYLUS (Milne Edwards and Lucas).

Gelasimus macrodactylus MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, 1843, p. 27; vol. 9, atlas, 1847, pl. 11, fig. 3. Guaymas, Mexico, to Valparaiso, Chile.

UCA PANAMENSIS (Stimpson).

Gelasimus panamensis STIMPSON, Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 63.—SMITH, Trans. Conn. Acad. Sci., vol. 2, 1870, p. 139, pl. 4, fig. 5. Gulf of Fonseca, Central America, to Payta, Peru.

UCA HELLERI Rathbun.

Proc. Wash. Acad. Sci., vol. 4, 1902, p. 277, pl. 12, figs. 3 and 4. Galapagos Islands.

UCA STENODACTYLUS (Milne Edwards and Lucas).

Gelasimus stenodactylus MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, 1843, p. 26; vol. 9, atlas, 1847, pl. 11, fig. 2. Gulf of Fonseca, Salvador, to Valparaiso, Chile.

UCA FESTÆ Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 51. Ecuador.

UCA LATIMANUS (Rathbun).

Gelasimus latimanus RATHBUN, Proc. U. S. Nat. Mus., vol. 16, 1893, p. 245. La Paz, Mexico, to Ecuador.

Subfamily MACROPHTHALMINÆ.

Genus EUPLAX Milne Edwards.

EUPLAX LEPTOPHTHALMA Milne Edwards.

Ann. Sci. Nat. (3), Zool., vol. 18, 1852, p. 160 [124]. Chile.

Tribe OXYSTOMATA.

Family CALAPPIDÆ.

Subfamily CALAPPINÆ.

Genus CALAPPA Fabricius.

CALAPPA CONVEXA Saussure.

Rev. et Mag. de Zool. (2), vol. 4, 1853, p. 362, pl. 13, fig. 3. Cape St. Lucas, Lower California, to Ecuador.

Genus PLATYMERA Milne Edwards.

PLATYMERA GAUDICHAUDII Milne Edwards.

Platymera gaudichaudii MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 108.—MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, 1843, p. 28; vol. 9, atlas, pl. 13, fig. 1. Coast of California, 26 to 218 fathoms, to Chile.

Subfamily MATUTINÆ.

Genus HEPATUS Latreille.

HEPATUS KOSSMANNI Neumann.

Catalog Pod. Crust. Heidelberger Mus., 1878, p. 28. Panama Bay, 7 to 14 fathoms; Callao (Cano); North Island, Chinchas (Kinahan); Chile (Lenz).

HEPATUS CHILIENSIS Milne Edwards. See page 551.

Ecuador; Peru; Chile.

Genus HEPATELLA Smith.

HEPATELLA AMICA Smith. See page 552.

Panama; Peru.

Genus OSACHILA Stimpson.

OSACHILA ACUTA Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 114. Manzanillo, Mexico, to Panama; Darien (Nobili).

Family LEUCOSIIDÆ.

Subfamily LEUCOSIINÆ.

Genus UHLIAS Stimpson.

UHLIAS ELLIPTICUS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 10, 1871, p. 117. Panama; Ecuador.

Genus LEUCOSILIA Bell.

LEUCOSILIA JURINEI (Saussure). See page 552.

Mazatlan, Mexico, to Peru; Galapagos Islands.

Genus PERSEPHONA Leach.

PERSEPHONA EDWARDSII Bell.

Trans. Linn. Soc. London, vol. 21, 1855, p. 294, pl. 31, fig. 8. Panama; Galapagos Islands.

PERSEPHONA ORBICULARIS Bell.

Trans. Linn. Soc. London, vol. 21, 1855, p. 294, pl. 31, fig. 7. Valparaiso, Chile.

PERSEPHONA TOWNSENDI (Rathbun).

Myra townsendi RATHBUN, Proc. U. S. Nat. Mus., vol. 16, 1893, p. 255. Gulf of California,-20 to 58 fathoms; Panama Bay, 7 to 14 fathoms.

Tribe DROMIACEA.

Family HOMOLIDÆ.

Genus PAROMOLA Wood-Mason.

PAROMOLA RATHBUNI Porter.

Revista Chilena Hist. Nat., vol. 12, 1908, p. 88, pl. 8. Juan Fernandez.

Family DROMIIDÆ.

Genus DROMIDIA Stimpson.

DROMIDIA SARRABUREI Rathbun. See page 553.

Bay of Sechura, Peru.

Genus HYPOCONCHA Guérin.

HYPOCONCHA PANAMENSIS Smith.

Amer. Nat., vol. 3, 1869, p. 249. Bay of Realejo, Nicaragua; Panama.

HYPOCONCHA PERUVIANA Rathbun. See page 553.

Matapalo, near Capon, Peru.

Tribe HIPPIDEA.

Family ALBUNEIDÆ.

Genus BLEPHARIPODA Randall.

BLEPHARIPODA OCCIDENTALIS Randall.

Jour. Acad. Nat. Sci. Phila., vol. 8, 1839 (1840), p. 131, pl. 6. San Francisco, California, to Chile.

Genus LEPIDOPA Stimpson.

LEPIDOPA CHILENSIS Lenz.

Zool. Jahrb., Suppl. vol. 5, 1902, p. 749, pl. 23, figs. 5, 5*a*. San Lorenzo, Peru (?); Iquique, Chile.

Genus ALBUNEA Fabricius.

ALBUNEA, sp., Cunningham.

Trans. Linn. Soc. London, vol. 27, 1871, p. 494. Herradura Bay, Chile.

Family HIPPIDÆ.

Genus EMERITA Gronovius.

EMERITA ANALOGA (Stimpson). See page 554.

Oregon to Chile.

EMERITA EMERITA (Linnæus). See page 554.

Lower California to Chile; Florida to Brazil.

Genus HIPPA Fabricius.

HIPPA DENTICULATIFRONS (Miers).

Remipes testudinarius, var. *denticulatifrons* MIERS, Jour. Linn. Soc. London, vol. 14, 1878, p. 318, pl. 5, fig. 2. Galapagos Islands; Indo-Pacific region.

Tribe PAGURIDEA.

Family LITHODIDÆ.

Genus LITHODES Latreille.

LITHODES ANTARCTICA Jacquinot.

In Hombron and Jacquinot, Voy. au Pôle Sud, Zool., vol. 3, 1852 (?), Crust., p. 90; atlas of zool., pl. 7, fig. 1, pl. 8, figs. 9–14. Calbuco, Chile, to Terra del Fuego.

Family CŒNOBITIDÆ.

Genus CŒNOBITA Latreille.

CŒNOBITA RUGOSUS Milne Edwards.

Cenobita rugosa MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 241.—*Cœnobita rugosus* ALCOCK, Cat. Indian Dec. Crust., pt. 2, fasc. 1, 1905, p. 143, pl. 14, figs. 3, 3*a*. Lower California to Chile; Vancouver Island (?); Indo-Pacific to tropical West Africa.

CŒNOBITA RUGOSUS WAGNERI Doflein.

Cœnobita rugosus, var. *wagneri* DOFLEIN, Sitzungsb. math.-phys. Cl. Akad. Wiss. München, 1900, p. 134. Rio Bayano, Panama.

CŒNOBITA COMPRESSUS Guérin.

Cœnobita compressa GUÉRIN, Voy. autour du Monde sur la *Coquille* par Duperrey, Zool., vol. 2, pt. 2, 1831, p. 29. Lower California to Payta, Peru; Galapagos Islands; westward to East Africa.

CŒNOBITA PANAMENSIS Streets.

Cenobita panamensis STREETS, Proc. Acad. Nat. Sci. Phila., 1871, p. 241. Lower California; Panama.

Family PAGURIDÆ.

Subfamily DARDANINÆ.

Genus PAGURISTES Dana.

PAGURISTES WEDDELLII (Milne Edwards).

Pagurus weddellii MILNE EDWARDS, Ann. Sci. Nat., Zool. (3), vol. 10, 1848, p. 64. Peru.

PAGURISTES HIRTUS Dana. See page 555.

Peru; Chile.

PAGURISTES TOMENTOSUS (Milne Edwards). See page 555.

Peru; Chile (?).

Genus CLIBANARIUS Dana.

CLIBANARIUS ÆQUABILIS Dana.

Crust. U. S. Expl. Exped., pt. 1, 1852, p. 464; atlas, 1855, pl. 29, fig. 4*a–f*. Chile; California; and westward to Madeira.

CLIBANARIUS PANAMENSIS Stimpson. See page 555.

Lower California to Peru.

CLIBANARIUS ALBIDIGITUS Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 24. Ecuador.

Genus ISOCHELES Stimpson.

ISOCHELES ÆQUIMANUS (Dana).

Bernhardus æquimanus DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 445; atlas, 1855, pl. 27, fig. 6. Valparaiso (?), Chile.

ISOCHELES WURDEMANNI PACIFICUS Bouvier.

Isocheles wurdemanni, var. *pacificus* BOUVIER, Bull. Mus. Hist. Nat., Paris, 1907, no. 2, p. 115, text figs. 2, 3. Payta, Peru.

Genus CALCINUS Dana.

CALCINUS OBSCURUS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 83. Lower California to Ecuador.

CALCINUS CHILENSIS (Milne Edwards).

Pagurus chilensis MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 230, pl. 22, fig. 9. Lower California (?); Chile.

CALCINUS TIBICEN (Herbst).

Cancer tibicen HERBST, Naturg. d. Krabben u. Krebse, vol. 2, 1791, p. 25, pl. 23, fig. 7. Ecuador; West Indies.

Genus DARDANUS Paulson.

DARDANUS SINISTRIPES (Stimpson). See page 556.

Lower California to Peru.

DARDANUS IMBRICATUS Rathbun. See page 556.

Bay of Sechura, Peru.

Genus PETROCHIRUS Stimpson.

PETROCHIRUS CALIFORNIENSIS Bouvier.

Bull. Mus. Hist. Nat., Paris, 1895, p. 6. Lower California; Ecuador.

Genus ANICULUS Dana.

ANICULUS ELEGANS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 83. Lower California; Panama.

ANICULUS LONGITARSIS Streets.

Proc. Acad. Nat. Sci. Phila., 1871, p. 240. Panama.

Subfamily PAGURINÆ (=EUPAGURINÆ).

Genus PAGURUS Fabricius.

PAGURUS GLADIUS (Benedict).

Eupagurus gladius BENEDICT, Proc. U. S. Nat. Mus., vol. 15, 1892, p. 7. Gulf of California; Ecuador.

PAGURUS BENEDICTI (Bouvier). See page 557.

Gulf of California; Peru.

PAGURUS PURPURATUS (Benedict).

Eupagurus purpuratus BENEDICT, Proc. U. S. Nat. Mus., vol. 15, 1892, p. 15.

PAGURUS EDWARDSII (Dana).

Bernhardus edwardsii DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 447.—*Eupagurus edwardsi* LENZ, Zool. Jahrb., Suppl. vol. 5, 1902, p. 739, pl. 23, fig. 1. Callao, Peru; Chile.

PAGURUS OBESOCARPUS (Dana).

Bernhardus obesocarpus DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 445; atlas, 1855, pl. 27, fig. 5 *a–d*. Valparaiso (?), Chile; Coquimbo, Chile (Cunningham).

PAGURUS VILLOSUS Nicolet.

In Gay, Hist. Chile, Zool., vol. 3, 1849, p. 188; atlas, pl. 1, fig. 5. Chile.

PAGURUS PERLATUS Milne Edwards.

Ann. Sci. Nat., Zool. (3), vol. 10, 1848, p. 60. Chile.

PAGURUS BARBIGER (A. Milne Edwards).

Bernhardus barbiger A. MILNE EDWARDS, Crust. Miss. Sci. du Cap Horn, 1882, p. 28, pl. 3, fig. 1*a–e*. Chile; Straits of Magellan.

PAGURUS COMPTUS White.

Proc. Zool. Soc. London, pt. 15, 1847, p. 122.—*Eupagurus comptus* MIERS, *Erebus* and *Terror*, Crust., 1874, p. 3, pl. 2, fig. 5. Chile; Patagonia; Falkland Islands.

PAGURUS GAYI Nicolet.

In Gay, Hist. Chile, Zool., vol. 3, 1849, p. 190; atlas, pl. 1, fig. 6. Chile.

PAGURUS GAUDICHAUDII Milne Edwards.

Pagurus gaudichaudii MILNE EDWARDS, Ann. Sci. Nat., Zool. (2), vol. 6, 1836, p. 269. Valparaiso, Chile.

PAGURUS FORCEPS Milne Edwards.

Ann. Sci. Nat., Zool. (2), vol. 6, 1836, p. 272, pl. 13, fig. 5. Chile.

Genus PORCELLANOPAGURUS Filhol.

PORCELLANOPAGURUS PLATEI Lenz.

Zool. Jahrb. Suppl. vol. 5, 1902, p. 740, pl. 23, fig. 2. Juan Fernandez.

Tribe THALASSINIDEA.

Family THALASSINIDÆ.

Genus THALASSINA Latreille.

THALASSINA ANOMALA (Herbst).

Cancer (*Astacus*) *anomalus* HERBST, Naturg. d. Krabben u. Krebse, vol. 3, pt. 4, 1804, p. 45, pl. 62. Chile; Indo-Pacific region.

Family CALLIANASSIDÆ.

Genus CALLIANASSA Leach.

CALLIANASSA UNCINATA Milne Edwards. See page 557.

Peru; Chile, as far south as the island of Quehuy, off Chiloë.

Tribe GALATHEIDEA.

Family PORCELLANIDÆ.

Genus PETROLISTHES Stimpson.

PETROLISTHES ARMATUS (Gibbes). See page 558.

Lower California to Peru; Indo-Pacific region; Florida to Brazil; Bermudas.

PETROLISTHES VIOLACEUS (Guérin).

Porcellana violacea GUÉRIN, Voy. *Coquille*, Zool., vol. 2, pt. 2, 1831, p. 33, pl. 3, fig. 2. Ancon, Callao, San Lorenzo and Chincha Islands, Peru; Chile.

PETROLISTHES ANGULOSUS (Guérin).

Porcellana angulosa GUÉRIN, Bull. Soc. Sci. Nat. France, 1835, p. 115; Mag. de Zool., vol. 8, 1838, cl. 7, pp. 6, 7, pl. 25, fig. 3.

PETROLISTHES PUNCTATUS (Guérin).

Porcellana punctata GUÉRIN, Bull. Soc. Sci. Nat. France, 1835, p. 115; Icon., Crust. p. 13, pl. 18, fig. 1. Ancon and San Lorenzo, Peru; Chile.

PETROLISTHES SINUIMANUS Lockington.

Petrolisthes (Pisosoma) sinuimanus LOCKINGTON, Ann. Mag. Nat. Hist. (5), vol. 2, 1878, p. 401. Gulf of California; Ecuador.

PETROLISTHES HIANS Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 17. Ecuador.

PETROLISTHES ÓRTMANNI Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 16. Ecuador.

PETROLISTHES, sp. [near ORTMANNI], Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 16. Ecuador.

PETROLISTHES SPINIFRONS (Milne Edwards). See page 559.

Peru; Chile.

PETROLISTHES HOLOTRICHUS Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 14. Ecuador.

PETROLISTHES GRACILIS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 74. Guaymas, Mexico; Ecuador.

PETROLISTHES POLITUS (Gray).

Porcellana polita GRAY, Zool. Misc., 1831, p. 15; Griffith's Cuvier, Animal Kingdom, vol. 13, 1833, p. 312, pl. 25, fig. 2, (*Porcellaria*). Panama; Colon; West Indies.

PETROLISTHES EDWARDSII (Saussure).

Porcellana edwardsii SAUSSURE, Rev. et Mag. de Zool. (2), vol. 5, 1853, p. 366, pl. 12, fig. 3. Gulf of California to Ecuador.

PETROLISTHES GALATHINUS (Bosc).

Porcellana galathina Bosc, Hist. Nat. Crust., vol. 1, 1802, p. 233, pl. 6, fig. 2. Panama; South Carolina to Rio de Janeiro, Brazil.

PETROLISTHES TUBERCULATUS (Guérin).

Porcellana tuberculata GUÉRIN, Bull. Soc. Sci. Nat. France, 1835, p. 116; Mag. Zool., vol. 8, 1838, cl. 7, pp. 6, 7, pl. 26, fig. 2. San Lorenzo Island, Peru; Chile.

PETROLISTHES TUBERCULOSUS (Milne Edwards).

Porcellana tuberculosa MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 256. Peru; Chile.

PETROLISTHES PATAGONICUS (Cunningham).

Porcellana patagonica CUNNINGHAM, Trans. Linn. Soc. London, vol. 27, 1871, p. 495. Iquique, Chile; Port Otway, Patagonia; Straits of Magellan.

PETROLISTHES ACANTHOPHORUS (Milne Edwards and Lucas).

Porcellana acanthophora MILNE EDWARDS and LUCAS, d'Orbigny's Voy. Amér. Mér., vol. 6, 1843, p. 33; vol. 9, atlas, 1847, pl. 16, fig. 2. Callao, Peru; Chile.

PETROLISTHES (?) DESMARESTII (Eydoux and Gervais).

Porcellana desmarestii EYDOUX and GERVAIS, in Guérin, Bull. Soc. Sci. Nat. France, 1835, p. 115; Mag. de Zool., vol. 8, 1838, pp. 6, 7, pl. 26, fig. 1. Chile.

PETROLISTHES (?) LÆVIGATUS (Guérin).

Porcellana lævigata GUÉRIN, Bull. Soc. Sci. Nat. France, 1835, p. 115; Mag. de Zool., vol. 8, 1838, cl. 7, pp. 5, 6. Ecuador; Payta and Callao, Peru; Chile.

Genus PACHYCHELES Stimpson.

PACHYCHELES GROSSIMANUS (Guérin). See page 559.

Peru; Chile.

PACHYCHELES RUDIS Stimpson.

Ann. Lyc. Nat. Hist. N. Y., vol. 7, 1859, p. 76, pl. 1, fig. 5. Puget Sound to Lower California; Ecuador.

PACHYCHELES PANAMENSIS Faxon.

Bull. Mus. Comp. Zoöl., vol. 24, 1893, p. 175; Mem. Mus. Comp. Zoöl., vol. 18, 1895, p. 71, pl. 15, figs. 2, 2*a*. Panama; Ecuador; Bahamas (Ortmann).

PACHYCHELES VICARIUS Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 19. Ecuador.

Genus PORCELLANA Lamarck.

PORCELLANA MITRA Dana.

Crust. U. S. Expl. Exped., pt. 1, 1852, p. 419; atlas, 1855, pl. 26, fig. 9*a–b*. Island of San Lorenzo, Peru.

PORCELLANA PULCHELLULA Cano.

Boll. Soc. Nat. Napoli (1), vol. 3, 1889, p. 260. San Lorenzo, Peru.

Genus POLYONYX Stimpson.

POLYONYX TUBERCULIPES (Lockington).

Pachycheles tuberculipes LOCKINGTON, Ann. Mag. Nat. Hist. (5), vol. 2, 1878, p. 404. Gulf of California; Ecuador.

Genus PORCELLANOPSIS[a] Rathbun.

PORCELLANOPSIS FESTÆ (Nobili).

Porcellanides festæ NOBILI, Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 21. Ecuador.

Family GALATHEIDÆ.

Genus GALATHEA Fabricius.

GALATHEA LENZI Rathbun.

Revista Chilena Hist. Nat., vol. 11, 1907, p. 49, pl. 3, fig. 1. Corral, Province Valdivia, Chile.

Genus CERVIMUNIDA Benedict.

CERVIMUNIDA JOHNI Porter.

Revista Chilena Hist. Nat., vol. 7, 1903, p. 276, text figs. 8 and 9, pl. 17. Chile.

Genus MUNIDA Leach.

MUNIDA GREGARIA (Fabricius).

Galathea gregaria FABRICIUS, Ent. Syst., vol. 2, 1793, p. 473.—*Grimotea gregaria* MILNE EDWARDS, Règne Anim. de Cuvier, p. 124, pl. 47, fig. 2 (*Grimothea*). Calbuco, Chile; Straits of Magellan; Falkland Islands.

MUNIDA COKERI Rathbun. See page 559.

Peru.

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[a] *Porcellanopsis*, new genus, for *Porcellanides* Nobili, 1901, preoccupied by *Porcellanides* Czerniawsky, 1884, Crust. Decap. Pontica Littoralia, p. 109.

Genus PLEURONCODES Stimpson.

PLEURONCODES MONODON (Milne Edwards).

Galathea monodon MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 276; Ann. Sci. Nat., Zool. (3), vol. 16, 1851, p. 71, pl. 11, figs. 6–9. Chile (Milne Edwards); (?) off Acapulco, Mexico, 94 to 286 fathoms (Faxon).

Family ÆGLIDÆ.

Genus ÆGLA Leach.

ÆGLA LÆVIS (Latreille).

Galathea lævis LATREILLE, Tabl. Encyc. et Méth., pt. 24, 1818, pl. 308, fig. 2.—*Ægla lævis* LEACH, Dict. Sci. Nat., vol. 18, 1821, p. 49.—MILNE EDWARDS, Cuvier's Règne Anim., Atlas, Crust., "1849," pl. 47, fig. 3. Chile; northwest Patagonia; Argentina; Uruguay; southern Brazil. Fresh water, ranging from mountains to lowlands.

ÆGLA DENTICULATA (Nicolet).

In Gay, Hist. Chile, Zool., vol. 3, 1849, p. 200, pl. 2, fig. 1. Chile.

Tribe NEPHROPSIDEA.

Family ASTACIDÆ.

Genus PARASTACUS Huxley.

PARASTACUS CHILENSIS (Milne Edwards).[a]

Astacus chilensis MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 333. Chile.

PARASTACUS HASSLERI Faxon.

Proc. U. S. Nat. Mus., vol. 20, 1898, p. 687, pl. 70, figs. 1–3. Talcahuano, Chile.

PARASTACUS NICOLETII Faxon.

Astacus chilensis NICOLET (not MILNE EDWARDS), in Gay, Hist. Chile, Zool., vol. 3, 1849, p. 211, pl. 1, fig. 4.—*Parastacus nicoletii* FAXON, Proc. U. S. Nat. Mus., vol. 20, 1898, p. 689. Chile.

PARASTACUS AGASSIZII Faxon.

Proc. U. S. Nat. Mus., vol. 20, 1898, p. 690, pl. 70, figs. 4, 5. Chile: Talcahuano; Lag. Llanquihué (Puerto Montt). Argentina.

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[a] Professor Bouvier has kindly examined the type of *Astacus chilensis* Milne Edwards and considers it a *Parastacus*, but of a different species from those enumerated by Faxon.

Tribe SCYLLARIDEA.

Family PALINURIDÆ.

Genus PALINUSTUS A. Milne Edwards.

PALINUSTUS FRONTALIS (Milne Edwards).

Palinurus frontalis MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 294. Chile (Milne Edwards); Juan Fernandez (Lenz).

Genus PANULIRUS White.

PANULIRUS ORNATUS (Fabricius). See page 560.

Lower California to Peru; Indo-Pacific region.

PANULIRUS PENICILLATUS (Olivier).

Astacus penicillatus OLIVIER, Encyc. Méth., Hist. Nat., Insectes, vol. 6, 1791, p. 343.—*Panulirus penicillatus* BATE, *Challenger* Macrura, 1888, p. 82, pl. 12, fig. 2. Galapagos Islands; Hawaiian Islands; South Pacific Islands to Red Sea.

Family SCYLLARIDÆ.

Genus SCYLLARUS Fabricius.

SCYLLARUS DELFINI (Bouvier).

Arctus delfini BOUVIER, Revista Chilena Hist. Nat., vol. 13, 1909, p. 213, text fig. 30. Juan Fernandez, Chile.

Genus EVIBACCUS Smith.

EVIBACCUS PRINCEPS Smith.

Amer. Jour. Sci. (2), vol. 42, 1866, p. 119. La Paz, Lower California; Panama; Ecuador.

Tribe CARIDEA.

Family GNATHOPHYLLIDÆ.

Genus GNATHOPHYLLUM Latreille.

GNATHOPHYLLUM PANAMENSE Faxon.

Bull. Mus. Comp. Zoöl., vol. 24, 1893, p. 198; Mem. Mus. Comp. Zoöl., vol. 18, 1895, p. 146, pl. E. Reef at Panama, low tide.

Family PONTONIIDÆ.

Genus CORALLIOCARIS Stimpson.

CORALLIOCARIS CAMERANI Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, 1901, no. 415, p. 3. Ecuador: Isola Flamenco.

Family PALÆMONIDÆ.

Genus BITHYNIS Philippi.

BITHYNIS CÆMENTARIUS (Pœppig).

Palæmon cæmentarius PŒPPIG, Arch. f. Naturg., vol. 2, pt. 1, 1836, p. 143. Chile.

BITHYNIS CÆMENTARIUS GAUDICHAUDII (Milne Edwards). See page 560.

Ecuador to Chile.

Genus MACROBRACHIUM Bate.

MACROBRACHIUM LAMARREI (Milne Edwards).

Palemon lamarrei MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 397.—*Palæmon amazonicus* HELLER, Sitzungsb. Akad. Wiss. Wien, vol. 45, pt. 1, 1862, p. 418, pl. 2, fig. 45. Darien; Ecuador; Peru; Paraguay; Brazil; Guiana.

MACROBRACHIUM NATTERERI (Heller).

Palæmon nattereri HELLER, Sitzungsb. Akad. Wiss. Wien, vol. 45, pt. 1, 1862, p. 414, pl. 2, figs. 36, 37. Ecuador; Guiana; southern Brazil.

MACROBRACHIUM MEXICANUM (Saussure).

Palæmon mexicanus SAUSSURE, Mém. Soc. Phys. Hist. Nat. Genève, vol. 14, 1858, p. 468 [52], pl. 4, fig. 27, 27*a*. Cuba; Mexico; Isthmus of Panama.

MACROBRACHIUM ACANTHURUS (Wiegmann).

Palæmon acanthurus WIEGMANN, Arch. f. Naturg., vol. 2, pt. 1, 1836, p. 150. Panama; Ecuador; Texas to Rio Grande do Sul, Brazil; West Africa.

MACROBRACHIUM APPUNI ÆQUATORIALE (Ortmann).

Palæmon appuni, var. *æquatorialis* ORTMANN, Zool. Jahrb. Syst., vol. 5, 1891, p. 723, pl. 47, fig. 6. Ecuador.

MACROBRACHIUM OLFERSII (Wiegmann).

Palæmon olfersii WIEGMANN, Arch. f. Naturg., vol. 2, pt. 1, 1836, p. 150.—*Palæmon spinimanus* VON MARTENS, Arch. f. Naturg., vol. 35, pt. 1, 1869, p. 26, pl. 2, fig. 3. La Paz, Mexico, to Rio Sabana, Darien; West Indies to Rio de Janeiro; West Africa.

MACROBRACHIUM JAMAICENSE (Herbst). See page 561.

Fresh waters of Pacific slope of America from Lower California to Peru, and of Atlantic slope, from Texas to Brazil, including West Indies.

Genus PALÆMON Weber.

PALÆMON RITTERI Holmes. See page 561.

San Diego, California, to Peru.

Genus CRYPHIOPS Dana.

CRYPHIOPS SPINULOSOMANUS Dana.

Cryphiops spinuloso-manus DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 595; atlas, 1855, pl. 39, fig. 4*a–h* (*spinulosi-manus*). Chile, in fresh-water streams, 50 to 100 miles from the sea.

Family RHYNCHOCINETIDÆ.

Genus RHYNCHOCINETES Milne Edwards.

RHYNCHOCINETES TYPUS Milne Edwards. See page 562.

Peru; Chile; New Zealand; Australia; Indian Ocean.

Family HIPPOLYTIDÆ.

Genus HIPPOLYSMATA Stimpson.

HIPPOLYSMATA PORTERI Rathbun.

Revista Chilena Hist. Nat., vol. 11, 1907, p. 49, pl. 3, fig. 4. Bay of Valparaiso, Chile.

Genus NAUTICARIS Bate.

NAUTICARIS MARIONIS Bate.

Challenger Macrura, 1888, p. 603, pl. 108. Chile: Cavancha (Lenz). Off Falkland Islands, 12 fathoms; Indian Ocean, 69 to 140 fathoms.

Family CRANGONIDÆ (=ALPHEIDÆ).

Genus BETÆUS Dana.

BETÆUS TRUNCATUS Dana.

Crust. U. S. Expl. Exped., pt. 1, 1852, p. 559; atlas, 1855, pl. 35, fig. 10*a–c*. Chile to Straits of Magellan.

BETÆUS SCABRODIGITUS Dana.

Betæus scabro-digitus DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 560; atlas, 1855, pl. 35, fig. 12*a–f*. Chile.

BETÆUS, sp., Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 402, 1901, p. 3. San Vicente, Chile.

Genus ALPHEOPSIS Coutière.

ALPHEOPSIS CHILENSIS Coutière.

Ann. Sci. Nat., Zool. (8), vol. 9, 1899, p. 193, text fig. 232. Chile: Talcahuano; Juan Fernandez.

Genus SYNALPHEUS Bate.

SYNALPHEUS NOBILII Coutière.

Proc. U. S. Nat. Mus., vol. 36, 1909, p. 40, text fig. 22. St. Helena, Ecuador.

SYNALPHEUS LOCKINGTONI Coutière.

Alpheus lævisculus LOCKINGTON, Ann. Mag. Nat. Hist. (5), vol. 1, 1878, p. 474.—*Synalpheus lockingtoni* COUTIÈRE, Proc. U. S. Nat. Mus., vol. 36, 1909, p. 21, text fig. 1. Off San Nicolas Island, California, 229 to 298 fathoms; Gulf of California; Baia di S. Elena, Ecuador.

SYNALPHEUS LATASTEI Coutière. See page 562.

Peru; Chile; Australia (?).

SYNALPHEUS TOWNSENDI PERUVIANUS Rathbun. See page 563.

Matapalo, Peru.

SYNALPHEUS DIGUETI ECUADORENSIS Coutière.

Proc. U. S. Nat. Mus., vol. 36, 1909, p. 49, text fig. 28, *aa*, *cc*. St. Helena, Ecuador.

SYNALPHEUS SPINIFRONS (Milne Edwards).

Alpheus spinifrons MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 355.—NICOLET, in Gay, Hist. Chile, Zool., vol. 3, 1849, p. 214; atlas, vol. 2, 1854, Crust., pl. 2, fig. 2, 2*a*. Chile.

Genus CRANGON Weber (=ALPHEUS Fabricius).

CRANGON BOUVIERI CHILENSIS (Coutière).

Alpheus bouvieri, var. *chilensis* COUTIÈRE, in Lenz, Zool. Jahrb., Suppl. vol. 5, 1902, p. 732. Calbuco, Chile.

CRANGON CLAMATOR (Lockington).

Alpheus clamator LOCKINGTON, Proc. Cal. Acad. Sci., vol. 7, 1876 (1877), p. 43.—HOLMES, Occas. Papers Cal. Acad. Sci., vol. 7, 1900, p. 182, pl. 2, figs. 39, 40. Farallon Islands, California, to San Bartolome Bay, Lower California; Panama.

CRANGON HETEROCHÆLIS (Say).

Alpheus heterochælis SAY, Jour. Acad. Nat. Sci. Phila., vol. 1, 1818, p. 243.—*Alpheus heterochelis* HERRICK, Mem. Nat. Acad. Sci., vol. 5, 1891, p. 372, pl. 2. West coast of Nicaragua and Panama (Kingsley); Punta di Sant 'Elena, Ecuador (Nobili); east coast of North America.

CRANGON MAINDRONI (Coutière).

Alpheus maindroni COUTIÈRE, Bull. Soc. Ent. France, 1898, p. 133, figs. 2, 2′. Puerto Montt, Chile; Mascate and Djibouti (Coutière).

CRANGON MALLEATOR (Dana).

Alpheus malleator DANA, Crust. U. S. Expl. Exped., pt. 1, 1852, p. 557; atlas, 1855, pl. 31, fig. 9. Baia di S. Elena, Ecuador; Galapagos Islands; Rio de Janeiro, Brazil (?); Cape Verde Islands.

CRANGON PANAMENSIS (Kingsley).

Alpheus panamensis KINGSLEY, Bull. U. S. Geol. Surv., vol. 4, 1878, p. 192. Acajutla, Salvador; Panama.

CRANGON, sp.

Alpheus sp., NOBILI, Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 3. Punta di S. Elena, Ecuador.

Family PANDALIDÆ.

Genus PANDALUS Leach.

PANDALUS PAUCIDENS Miers.

Proc. Zool. Soc. London, 1881, p. 74, pl. 7, figs. 6 and 7. Chile: Calbuco; Cavancha. Patagonia.

Family DISCIDÆ.

Genus DISCIAS Rathbun.

DISCIAS SERRIFER Rathbun.

Proc. Wash. Acad. Sci., vol. 4, 1902, p. 290, text figs. 2–4. Galapagos Islands, on reef.

Tribe PENEIDEA.

Family PENEIDÆ.

Genus PENEUS Weber.

PENEUS BREVIROSTRIS Kingsley. See page 564.

San Francisco Bay, California, to Peru; Galapagos Islands.

PENEUS STYLIROSTRIS (Stimpson). See page 564.

Panama; Peru.

Genus METAPENÆUS Wood-Mason.

METAPENÆUS GOODEI (Smith).

Parapenæus goodei SMITH, Proc. U. S. Nat. Mus., vol. 8, 1885, p. 176. Bay of Panama; North Carolina to Brazil; Bermuda.

Genus PARAPENÆUS Smith.

PARAPENÆUS KISHINOUYEI Rathbun.

Proc. Wash. Acad. Sci., vol. 4, 1902, p. 288, pl. 12, figs. 13–15. Galapagos Islands, on reef, and also at 2 fathoms.

Genus XIPHOPENEUS Smith.

XIPHOPENEUS RIVETI Bouvier.

Bull. Mus. Hist. Nat., Paris, 1907, No. 2, p. 113, text fig. 1. Payta, Peru.

Order STOMATOPODA.

Family CHLORIDELLIDÆ.

Genus CHLORIDELLA Miers.

CHLORIDELLA ARMATA (Milne Edwards).

Squilla armata MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 521. Chile: Valparaiso Bay; Talcahuano.

CHLORIDELLA DUBIA (Milne Edwards). See page 565.

Ecuador; Peru; South Carolina; Georgia.

CHLORIDELLA PARVA (Bigelow).

Squilla parva BIGELOW, Proc. U. S. Nat. Mus., vol. 17, 1894, p. 518, text figs. 11, 12. Off Manzanillo, Mexico; Bay of Panama, 7 to 16 fathoms.

CHLORIDELLA ACULEATA (Bigelow).

Squilla aculeata BIGELOW, Johns Hopkins Univ. Circ., vol. 12, 1893, p. 101; Proc. U. S. Nat. Mus., vol. 17, 1894, p. 523, text figs. 15, 16. Panama; Iquique, Chile.

Genus GONODACTYLUS Latreille.

GONODACTYLUS FESTÆ Nobili.

Boll. Mus. Zool. Anat. comp. R. Univ. Torino, vol. 16, no. 415, 1901, p. 53. Ecuador.

Genus PSEUDOSQUILLA Dana.

PSEUDOSQULLA LESSONII (Guérin). See page 565.

Wilmington, California, to Chile.

PSEUDOSQUILLA BIGELOWI Rathbun.[a]

Gonodactylus styliferus MILNE EDWARDS, Hist. Nat. Crust., vol. 2, 1837, p. 530, pl. 27, figs. 9–14. Chile; California; Australia.

Genus LYSIOSQUILLA Dana.

LYSIOSQUILLA POLYDACTYLA von Martens.

Sitzungsb. Ges. naturf. Fr. Berlin, 1881, p. 92. Locality unknown, probably Chile.

LYSIOSQUILLA DECEMSPINOSA Rathbun. See page 566.

Capon, Peru.

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[a] New name for *P. stylifera* (Milne Edwards, 1837), not *P. stylifera* (Lamarck, 1818) Dana.

SPECIES OF WHICH THE LOCALITY IS INCORRECT OR DOUBTFUL.

Actæa hirsutissima (Rüppell). Payta (Cano).
Calappa granulata (Linnæus). Panama (Cano).
Calappa hepatica (Linnæus). Payta (Cano).
Carpilius maculatus (Linnæus). Payta (Cano).
Ceratoplax ciliata Stimpson. Ecuador (Cano).
Cosmonotus grayi White. Callao (Cano).
Dorippe dorsipes (Linnæus). Payta (Cano).
Epixanthus frontalis (Milne Edwards). Panama (Cano).
"*Eriphia lævimana* var. *smithii* McLeay." Panama (Cano).
"*Euryozius bouvieri* var. *mellissii* Miers." Panama (Cano).
"*Leptodius exaratus* var. *sanguineus* (Milne Edwards)." Payta (Cano).
"*Neptunus* (*Amphitrite*) *gladiator* var. *argentatus* White." Payta (Cano).
"*Ozius rugosus* Milne Edwards and Lucas." Chile (Milne Edwards and Lucas).
Podophthalmus vigil (Fabricius). Payta (Cano).
"*Remipes adactylus* (Fabricius)." Valparaiso? (Ortmann).
Thalamita integra Dana. Payta (Cano).

SPECIES WHICH ARE INDETERMINABLE.

Atelecyclus dilatatus Philippi. *Nomen nudum.* Chile.
"*Callianassa gigas* Dana?" San Carlos de Ancud, Chiloë (Cunningham).
Cancer apancora Molina. Chile.
Cancer cæmentarius Molina. Chile.
Cancer coronatus Molina. Chile. Perhaps =*Cancer plebejus* Pœppig.
Cancer talicuna Molina. Chile.
"*Gelasimus pugilator*" Cano, not (Bosc). Panama.
"*Gelasimus vocator*" Cano. Gulf of Panama.
Pirimela chilensis Philippi. *Nomen nudum.* Chile.
Uca vocator Doflein. Guayaquil, Ecuador.
Uca vocator, var., Nobili. Esmeraldas, Ecuador.
Xantho parvulus Cano. Panama.

SUMMARY OF SYNONYMS.

Abrote spinimana Philippi=*Blepharipoda occidentalis* Randall.
Acanthocyclus gay Targioni-Tozzetti=*Acanthocyclus albatrossis* Rathbun.
Acanthocyclus gayi Miers=? *Acanthocyclus albatrossis* Rathbun.
Acanthocyclus gayi Strahl=*Acanthocyclus albatrossis* Rathbun.
Acanthocyclus villosus Strahl=*Acanthocyclus gayi* Milne Edwards and Lucas.
Acanthonyx concamerata Kinahan=*Acanthonyx petiverii* Milne Edwards.
Acanthonyx debilis Dana=*Acanthonyx petiverii* Milne Edwards.
Acanthonyx emarginatus Milne Edwards and Lucas=*Acanthonyx petiverii* Milne Edwards.
Acanthoplax insignis Milne Edwards=*Uca insignis* (Milne Edwards).
Acanthopus clavimanus Krauss=*Percnon planissimum* (Herbst).
Acanthopus gibbesi Milne Edwards=*Percnon planissimum* (Herbst).
Acanthus spinohirsutus Lockington=*Pilumnus spinohirsutus* (Lockington).
Acheloüs acuminatus Stimpson=*Portunus* (*Portunus*) *acuminatus* (Stimpson).
Acheloüs brevimanus Faxon=*Portunus* (*Acheloüs*) *brevimanus* (Faxon).
Acheloüs panamensis Stimpson=*Portunus* (*Portunus*) *panamensis* (Stimpson).
Acheloüs smithii Verrill=*Portunus* (*Acheloüs*) *spinimanus* (Latreille).
Acheloüs spinimanus Faxon=*Portunus* (*Acheloüs*) *brevimanus* (Faxon).

Acheloüs transversus Stimpson=*Portunus* (*Portunus*) *transversus* (Stimpson).
Acheloüs xantusii Stimpson=*Portunus* (*Portunus*) *xantusii* (Stimpson).
Actæa labyrinthica Stimpson=*Glyptoxanthus labyrinthicus* (Stimpson).
Actæa meandrica Lockington=*Glyptoxanthus labyrinthicus* (Stimpson).
Actæodes mexicanus Lockington=*Xanthodius sternberghii* Stimpson.
Æglea lævigata Milne Edwards and Lucas=*Ægla lævis* (Latreille).
Æglea odebrechtii Fritz Müller=*Ægla lævis* (Latreille).
Albunæa scutellata Dana=*? Lepidopa chilensis* Lenz.
Albunhippa spinosa Milne Edwards and Lucas=*Blepharipoda occidentalis* Randall.
Alpheus bouvieri chilensis Coutière=*Crangon bouvieri chilensis* (Coutière).
Alpheus clamator Lockington=*Crangon clamator* (Lockington).
Alpheus heterochælis Say=*Crangon heterochælis* (Say).
Alpheus lævigatus Nicolet=*? Betæus truncatus* Dana.
Alpheus leviusculus Lockington=*Synalpheus lockingtoni* Coutière.
Alpheus maindroni Coutière=*Crangon maindroni* (Coutière).
Alpheus malleator Dana=*Crangon malleator* (Dana).
Alpheus panamensis Kingsley=*Crangon panamensis* (Kingsley).
Alpheus pugilator A. Milne Edwards=*Crangon malleator* (Dana).
Alpheus scabrodigitus Miers=*Betæus scabrodigitus* Dana.
Alpheus, sp., Nobili=*Crangon*, sp.
Alpheus spinifrons Milne Edwards=*Synalpheus spinifrons* (Milne Edwards).
Amphitrite edwardsii Lockington=*Cronius edwardsii* (Lockington).
Amphitrite paucispinis Lockington=*Portunus* (*Portunus*) *panamensis* (Stimpson).
Arctus delfini Bouvier=*Scyllarus delfini* (Bouvier).
Arenæus bidens Smith=*Arenæus mexicanus* (Gerstæcker).
Arica septemdentata White=*Trichodactylus* (*Dilocarcinus*) *orbicularis* (Meuschen).
Astacus chilensis Milne Edwards=*Parastacus chilensis* (Milne Edwards).
Atelecyclus spinulosus White=*Hypopeltarium spinulosum* (White).
Atergatis cristatissimus Lockington=*Platypodia rotundata* (Stimpson).
Atergatis rotundatus Stimpson=*Platypodia rotundata* (Stimpson).
Bernhardus æquimanus Dana=*Isocheles æquimanus* (Dana).
Bernhardus barbiger A. Milne Edwards=*Pagurus barbiger* (A. Milne Edwards).
Bernhardus edwardsii Dana=*Pagurus edwardsii* (Dana).
Bernhardus obesocarpus Dana=*Pagurus obesocarpus* (Dana).
Bernhardus perlatus Kinahan, not Milne Edwards=*Pagurus edwardsii* (Dana).
Bithynis forceps Bate=*Macrobrachium acanthurus* (Wiegmann).
Bithynis jamaicensis Bate=*Macrobrachium jamaicense* (Herbst).
Bithynis longimana Philippi=*Bithynis cæmentarius gaudichaudii* (Milne Edwards).
Bithynis spinimanus Bate=*Macrobrachium olfersii* (Wiegmann).
Blepharopoda spinimana (Philippi)=*Blepharipoda occidentalis* Randall.
Blepharopoda spinosa Stimpson=*Blepharipoda occidentalis* Randall.
Boscia chilensis Milne Edwards=*Pseudothelphusa chilensis* (Milne Edwards and Lucas).
Boscia dentata Milne Edwards=*Pseudothelphusa dentata* (Latreille).
Boscia macropa Milne Edwards=*Pseudothelphusa macropa* (Milne Edwards).
Calappa angustata Fabricius=*Hepatus angustatus* (Fabricius).
Calappa flammea Cano, not (Herbst)=*? Calappa convexa* Saussure.
Calappa xantusiana Stimpson=*Calappa convexa* Saussure.
Cancer (*Astacus*) *jamaicensis* Herbst=*Macrobrachium jamaicense* (Herbst).
Cancer chabrus Linnæus=*Plagusia chabrus* (Linnæus).
Cancer dentatus Bell=*Cancer polyodon* Pœppig.
Cancer emeritus Linnæus=*Emerita emerita* (Linnæus).
Cancer grapsus Linnæus=*Grapsus grapsus* (Linnæus).
Cancer irroratus Bell, not Say=*Cancer plebejus* Pœppig.
Cancer minutus Linnæus=*Planes minutus* (Linnæus).

Cancer mutilatus Herbst=*? Trichodactylus* (*Dilocarcinus*) *pictus* (Milne Edwards).
Cancer orbicularis Meuschen=*Trichodactylus* (*Dilocarcinus*) *orbicularis* (Meuschen).
Cancer planatus Fabricius=*Halicarcinus planatus* (Fabricius).
Cancer planipes Seba=*Percnon planissimum* (Herbst).
Cancer planissimus Herbst=*Percnon planissimum* (Herbst).
Cancer pusillus Fabricius=*Planes minutus* (Linnæus).
Cancer santolla Molina=*? Lithodes antarctica* Jacquinot.
Cancer septemdentatus Herbst=*Trichodactylus* (*Dilocarcinus*) *orbicularis* (Meuschen).
Cancer setosus Molina=*? Cancer polyodon* Pœppig.
Cancer (*Thelphusa*) *dentatus* de Haan=*Pseudothelphusa dentata* (Latreille).
Cancer tibicen Herbst=*Calcinus tibicen* (Herbst).
Cancer variegatus Fabricius=*Leptograpsus variegatus* (Fabricius).
Cancer xaiva Molina=*? Epialtus dentatus* Milne Edwards.
Cenobita intermedia Streets=*Cœnobita panamensis* Streets.
Charybdella edwardsii Rathbun=*Cronius edwardsii* (Lockington).
Chlorodius fisheri Lockington=*Leptodius occidentalis* (Stimpson).
Chlorodius occidentalis Stimpson=*Leptodius occidentalis* (Stimpson).
Cœnobita clypeata Owen=*Cœnobita rugosus* Milne Edwards.
Cœnobita compressa, var. *rugosa* Bouvier=*Cœnobita rugosus* Milne Edwards.
Cœnobita compressus de Man, not Guérin=*Cœnobita rogosus* Milne Edwards.
Corystes sicarius Pœppig=*Pseudocorystes sicarius* (Pœppig).
Corystoides armatus Philippi=*Pseudocorystes sicarius* (Pœppig).
Cronius ruber Nobili, not (Lamarck)=*Cronius edwardsii* (Lockington).
Cryptograpsus cirripes Smith=*Cyrtograpsus angulatus* Dana.
Cyclograpsus crenulatus Milne Edwards=*Hemigrapsus crenulatus* (Milne Edwards).
Cyclograpsus (*?*) *gnatherion* Kinahan=*Pinnotherelia lævigata* Milne Edwards and Lucas.
Cyclograpsus minutus Jacquinot and Lucas=*Cyclograpsus punctatus* Milne Edwards.
Cyclograpsus punctatus Kinahan, not Milne Edwards=*Cyclograpsus cinereus* Dana.
Dilocarcinus cryptodus Ortmann=*Trichodactylus* (*Dilocarcinus*) *emarginatus* (Milne Edwards).
Dilocarcinus emarginatus Milne Edwards=*Trichodactylus* (*Dilocarcinus*) *emarginatus* (Milne Edwards).
Dilocarcinus margaritifrons Ortmann=*Trichodactylus* (*Valdivia*) *margaritifrons* (Ortmann).
Dilocarcinus pagei Stimpson=*Trichodactylus* (*Dilocarcinus*) *orbicularis* (Meuschen).
Dilocarcinus pardalinus Gerstæcker=*Trichodactylus* (*Valdivia*) *pardalinus* (Gerstæcker).
Dilocarcinus pictus Milne Edwards=*Trichodactylus* (*Dilocarcinus*) *pictus* (Milne Edwards).
Dilocarcinus septemdentatus Gerstæcker=*Trichodactylus* (*Dilocarcinus*) *orbicularis* (Meuschen).
Dilocarcinus spinifrons Kingsley=*Trichodactylus* (*Valdivia*) *peruvianus* (A. Milne Edwards).
Epialtus affinis Stimpson=*Epialtus bituberculatus* Milne Edwards.
Epialtus brasiliensis Dana=*Epialtus bituberculatus* Milne Edwards.
Epialtus dilatatus A. Milne Edwards=*Epialtus bituberculatus* Milne Edwards.
Epialtus minimus Lockington=*Epialtus bituberculatus* Lockington.
Epialtus sulcirostris Stimpson=*Epialtus bituberculatus* Lockington.
Eriphia hispida Stimpson=*Eriphides hispida* (Stimpson).
Euctenota mexicana Gerstæcker=*Arenæus mexicanus* (Gerstæcker).
Eupagurus barbiger Lenz=*Pagurus barbiger* A. Milne Edwards.
Eupagurus benedicti Bouvier=*Pagurus benedicti* (Bouvier).
Eupagurus comptus Stimpson=*Pagurus comptus* White.
Eupagurus edwardsii Lenz=*Pagurus edwardsii* (Dana).
Eupagurus gladius Benedict=*Pagurus gladius* (Benedict).

Eupagurus minutus Benedict=*Pagurus benedicti* (Bouvier).
Eupagurus obesocarpus Stimpson=*Pagurus obesocarpus* (Dana).
Eupagurus perlatus Stimpson=*Pagurus perlatus* Milne Edwards.
Eupagurus purpuratus Benedict=*Pagurus purpuratus* (Benedict).
Eurypodius audouinii Milne Edwards and Lucas=*Eurypodius latreillii* Guérin.
Eurypodius brevipes Dana=*Eurypodius latreillii* Guérin.
Eurypodius septentrionalis Dana=*Eurypodius latreillii* Guérin.
Eurypodius tuberculatus Eydoux and Souleyet=*Eurypodius latreillii* Guérin.
Fabia chilensis Dana=*Pinnaxodes chilensis* (Milne Edwards).
Galathea gregaria Fabricius=*Munida gregaria* (Fabricius).
Galathea lævis Latreille=*Ægla lævis* (Latreille).
Galathea latirostris Lenz, not Dana=*Galathea lenzi* Rathbun.
Galathea monodon Milne Edwards=*Pleuroncodes monodon* (Milne Edwards).
Gecarcinus barbiger Pœppig=*Paraxanthus barbiger* (Pœppig).
Gecarcinus depressus Saussure=*Gecarcinus lateralis* (Freminville).
Gecarcinus regius Pœppig=*Homalaspis plana* (Milne Edwards).
Gecarcinus ruricola Cano, Nobili, not (Linnæus)=*Gecarcinus lateralis* (Freminville).
Gelasimus (*Acanthoplax*) *excellens* Gerstæcker=*Uca insignis* (Milne Edwards).
Gelasimus armatus Smith=*Uca insignis* (Milne Edwards).
Gelasimus brevifrons Stimpson=*Uca brevifrons* (Stimpson).
Gelasimus gibbosus Smith=*Uca stenodactylus* (Milne Edwards and Lucas).
Gelasimus heterocheles Kingsley (part)=*Uca princeps* (Smith).
Gelasimus heterophthalmus Smith=*Uca stylifera* (Milne Edwards).
Gelasimus insignis Smith=*Uca insignis* (Milne Edwards).
Gelasimus latimanus Rathbun=*Uca latimanus* (Rathbun).
Gelasimus macrodactylus Milne Edwards and Lucas=*Uca macrodactylus* (Milne Edwards and Lucas).
Gelasimus ornatus Smith=*Uca insignis* (Milne Edwards).
Gelasimus panamensis Stimpson=*Uca panamensis* (Stimpson).
Gelasimus platydactylus Milne Edwards in Régne Anim., not Milne Edwards, 1837=*Uca stylifera* (Milne Edwards).
Gelasimus platydactylus Saussure=*? Uca princeps* (Smith).
Gelasimus princeps Smith=*Uca princeps* (Smith).
Gelasimus stenodactylus Milne Edwards and Lucas=*Uca stenodactylus* (Milne Edwards and Lucas).
Gelasimus styliferus Milne Edwards=*Uca stylifera* (Milne Edwards).
Gelasimus vocator Kingsley (part)=*Uca brevifrons* (Stimpson).
Geograpsus occidentalis Stimpson=*Geograpsus lividus* (Milne Edwards).
Geothelphusa chilensis Heller=*Potamon* (*Geothelphusa*) *chilensis* (Heller).
Glyptograpsus spinipes Cano=*Glyptograpsus impressus* Smith.
Gnathochasmus barbatus McLeay=*Cyclograpsus punctatus* Milne Edwards.
Goniograpsus innotatus Dana=*Pachygrapsus transversus* (Gibbes).
Goniograpsus pulcher Lockington=*Goniopsis pulchra* (Lockington).
Goniograpsus simplex Kinahan=*? Pachygrapsus crassipes* Randall.
Goniopsis cruentatus Cano, part, not de Haan=*? Goniopsis pulchra* (Lockington).
Gonodactylus chiragra Nobili, 1897=*Gonodactylus festæ* Nobili.
Gonodactylus styliferus Milne Edwards=*Pseudosquilla stylifera* (Milne Edwards).
Grapsus altifrons Stimpson=*Grapsus grapsus* (Linnæus).
Grapsus brevipes Milne Edwards=*Geograpsus lividus* (Milne Edwards).
Grapsus cinereus Say, not Bosc=*Planes minutus* (Linnæus).
Grapsus declivifrons Heller=*Pachygrapsus transversus* (Gibbes).
Grapsus diris Costa=*Planes minutus* (Linnæus).
Grapsus eydouxi Milne Edwards=*Pachygrapsus crassipes* Randall.
Grapsus (*Grapsus*) *pusillus* de Haan=*Planes minutus* (Linnæus).

Grapsus lividus Milne Edwards=*Geograpsus lividus* (Milne Edwards).
Grapsus maculatus Milne Edwards=*Grapsus grapsus* (Linnæus).
Grapsus minutus Latreille=*Planes minutus* (Linnæus).
Grapsus ornatus Milne Edwards=*Grapsus grapsus* (Linnæus).
Grapsus pelagicus Say=*Planes minutus* (Linnæus).
Grapsus personatus Lamarck=*Leptograpsus variegatus* (Fabricius).
Grapsus pictus Latreille=*Grapsus grapsus* (Linnæus).
Grapsus planifrons Dana=*Leptograpsus variegatus* (Fabricius).
Grapsus strigosus Kinahan=*? Grapsus grapsus* (Linnæus).
Grapsus testudinum Roux=*Planes minutus* (Linnæus).
Grapsus transversus Gibbes=*Pachygrapsus transversus* (Gibbes).
Grapsus variegatus Latreille=*Leptograpsus variegatus* (Fabricius).
Grapsus webbi Milne Edwards=*Grapsus grapsus* (Linnæus).
Grimotea gregaria Guérin, not Leach=*Munida cokeri* Rathbun.
Grimothea gregaria Leach=*Munida gregaria* (Fabricius).
Guaia (ilia) jurinei Saussure=*Leucosilia jurinei* (Saussure).
Hemigrapsus sanguineus Lenz, not Milne Edwards=*Hemigrapsus crenulatus* (Milne Edwards).
Hepatus angustatus Kinahan, Cano, and Lenz, not (Fabricius)=*Hepatus kossmanni* Neumann.
Hepatus perlatus Pœppig=*Pilumnoides perlatus* (Pœppig).
Heteractæa pilosus Lockington=*Heteractæa lunata* (Milne Edwards and Lucas).
Hippa analoga Stimpson=*Emerita analoga* (Stimpson).
Hippa emerita Dana=*Emerita emerita* (Linnæus).
Hippa talpoides Dana=*Emerita analoga* (Stimpson).
Hyas edwardsii Bell=*Pisoides edwardsii* (Bell).
Hymenosoma tridentatum Jacquinot and Lucas=*? Halicarcinus planatus* (Fabricius).
Hypolobocera chilensis Ortmann=*Pseudothelphusa chilensis* (Milne Edwards and Lucas).
Inachus mitis Pœppig=*Epialtus dentatus* Milne Edwards.
Inachus tuberculatus Lockington=*Dasygyius tuberculatus* (Lockington).
Lambrus hyponcus Stimpson=*Parthenope (Parthenope) hyponcus* (Stimpson).
Leander ritteri Nobili=*Palæmon ritteri* Holmes.
Leiolophus planissimus Miers=*Percnon planissimum* (Herbst).
Leptodius lobatus A. Milne Edwards=*Xanthodius lobatus* (A. Milne Edwards).
Leptodius sternberghii A. Milne Edwards=*Xanthodius sternberghii* Stimpson.
Leptograpsus ansoni Milne Edwards=*Leptograpsus variegatus* (Fabricius).
Leptograpsus gayi Milne Edwards=*Leptograpsus variegatus* (Fabricius).
Leptograpsus rugulosus Milne Edwards=*Pachygrapsus transversus* (Gibbes).
Leptograpsus verreauxi Milne Edwards=*Leptograpsus variegatus* (Fabricius).
Leptopodia debilis Smith=*Stenorynchus debilis* (Smith).
Leptopodia modesta A. Milne Edwards=*Stenorynchus debilis* (Smith).
Leptopodia sagittaria Milne Edwards and Lucas, not (Fabricius)=*Stenorynchus debilis* (Smith).
Leucippa ensenadæ Milne Edwards and Lucas=*Leucippa pentagona* Milne Edwards.
Leucippa lævis Dana=*Leucippa pentagona* Milne Edwards.
Leucosia pacifica Pœppig=*? Cyclograpsus cinereus* Dana.
Liriopea leachii Nicolet=*? Halicarcinus planatus* (Fabricius).
Liriopea lucasii Nicolet=*? Halicarcinus planatus* (Fabricius).
Lophactæa rotundata A. Milne Edwards=*Platypodia rotundata* (Stimpson).
Macrobrachium americanum Bate=*Macrobrachium jamaicense* (Herbst).
Metopograpsus dubius Saussure=*Pachygrapsus transversus* (Gibbes).
Metopograpsus miniatus Saussure=*Pachygrapsus transversus* (Gibbes).
Microphrys error Kingsley=*Microphrys platysoma* (Stimpson).
Microrhynchus depressus Bell=*Dasygyius depressus* (Bell).

Microrhynchus gibbosus Bell=*Dasygyius gibbosus* (Bell).
Microrhynchus (*Inachus*) *tuberculatus* Lockington=*Dasygyius tuberculatus* (Lockington).
Milnia platysoma Stimpson=*Microphrys platysoma* (Stimpson).
Mithraculus areolatus Lockington=*Mithrax areolatus* (Lockington).
Mithrax (*Teleophrys*) *cristulipes* A. Milne Edwards=*Teleophrys cristulipes* Stimpson.
Mithrax ursus Bell=*Mithrax bellii* Gerstæcker.
Mitraculus ruber Cano, not Stimpson=*? Mithrax nodosus* Bell.
Mitraculus tumidus Cano=*Mithrax tumidus* (Cano).
Myra townsendi Rathbun=*Persephona townsendi* (Rathbun).
Nautilograpsus angustatus Stimpson=*Planes minutus* (Linnæus).
Nautilograpsus major McLeay=*Planes minutus* (Linnæus).
Nautilograpsus minutus Milne Edwards=*Planes minutus* (Linnæus).
Nautilograpsus smithii McLeay=*Planes minutus* (Linnæus).
Nemausa spinipes A. Milne Edwards=*Mithrax spinipes* (Bell).
Neorhynchus depressus A. Milne Edwards=*Dasygyius depressus* (Bell).
Neorhynchus gibbosus A. Milne Edwards=*Dasygyius gibbosus* (Bell).
Neorhynchus mexicanus Rathbun=*Dasygyius tuberculatus* (Lockington).
Neptunus acuminatus A. Milne Edwards=*Portunus acuminatus* (Stimpson).
Neptunus asper A. Milne Edwards=*Portunus xantusii* (Stimpson).
Neptunus (*Callinectes*) *diacanthus* Ortmann, part (from southern Chile)=either *Callinectes arcuatus* Ordway or *C. toxotes* Ordway.
Neptunus cribrarius Cano, not (Lamarck)=*Arenæus mexicanus* (Gerstæcker).
Neptunus diacanthus Cano and Doflein, part, not (Latreille)=*Callinectes*, species indeterminable.
Neptunus mexicanus A. Milne Edwards=*Arenæus mexicanus* (Gerstæcker).
Neptunus panamensis A. Milne Edwards=*Portunus panamensis* (Stimpson).
Neptunus transversus A. Milne Edwards=*Portunus transversus* (Stimpson).
Neptunus xantusii A. Milne Edwards=*Portunus xantusii* (Stimpson).
Ocypoda lateralis Freminville=*Gecarcinus lateralis* (Freminville).
Ocypoda urvillei Doflein, not Milne Edwards=*? Ocypode occidentalis* Stimpson.
Ocypode (*Acanthopus*) *clavimana* de Haan=*Percnon planissimum* (Herbst).
Ocypode (*Acanthopus*) *serripes* de Haan=*Percnon planissimum* (Herbst).
Œdipleura occidentalis Ortmann=*Ucides occidentalis* (Ortmann).
Orthograpsus hillii Kingsley=*Geograpsus lividus* (Milne Edwards).
Orthostoma emarginatum Ortmann=*Trichodactylus* (*Dilocarcinus*) *emarginatus* (Milne Edwards).
Orthostoma latidens Ortmann=*Trichodactylus* (*Valdivia*) *latidens* (A. Milne Edwards).
Orthostoma margaritifrons Ortmann=*Trichodactylus* (*Valdivia*) *margaritifrons* (Ortmann).
Orthostoma pardalinum Ortmann=*Trichodactylus* (*Valdivia*) *pardalinus* (Gerstæcker).
Orthostoma peruvianum Ortmann=*Trichodactylus* (*Valdivia*) *peruvianus* (A. Milne Edwards).
Orthostoma pictum Ortmann=*Trichodactylus* (*Dilocarcinus*) *pictus* (Milne Edwards).
Orthostoma septemdentatum Ortmann=*Trichodactylus* (*Dilocarcinus*) *orbicularis* (Meuschen).
Othonia aculeata (*?*) Cano, not (Gibbes)=*? Pitho quinquedentata* (Bell).
Othonia mirabilis Cano, not (Herbst)=*Pitho sexdentata* (Bell).
Othonia sexdentata Bell=*Pitho sexdentata* (Bell).
Ozius rugosus Milne Edwards and Lucas=*Lydia tenax* (Rüppell).
Pachycheles lævidactylus Ortmann=*Pachycheles grossimanus* (Guérin).
Pachygrapsus advena Catta=*Pachygrapsus transversus* (Gibbes).
Pachygrapsus intermedius Heller=*Pachygrapsus transversus* (Gibbes).
Pachygrapsus lævimanus Stimpson=*Pachygrapsus transversus* (Gibbes).

Pachygrapsus socius Stimpson=*Pachygrapsus transversus* (Gibbes).
Pagurus chilensis Milne Edwards=*Calcinus chilensis* (Milne Edwards).
Pagurus maculatus Catesby=*Grapsus grapsus* (Linnæus).
Pagurus sinistripes Stimpson=*Dardanus sinistripes* (Stimpson).
Pagurus tibicen Bosc=*Calcinus tibicen* (Herbst).
Pagurus tomentosus Milne Edwards=*Paguristes tomentosus* (Milne Edwards).
Pagurus weddellii Milne Edwards=*Paguristes weddellii* (Milne Edwards).
Palæmon acanthurus Wiegmann=*Macrobrachium acanthurus* (Wiegmann).
Palæmon africanus Kingsley=*Macrobrachium acanthurus* (Wiegmann).
Palæmon amazonicus Heller=*Macrobrachium lamarrei* (Milne Edwards).
Palæmon appuni, var. *æquatorialis* Ortmann=*Macrobrachium appuni æquatoriale* (Ortmann).
Palæmon aztecus Saussure=*Macrobrachium jamaicense* (Herbst).
Palæmon brachydactylus Wiegmann=*Macrobrachium jamaicense* (Herbst).
Palæmon brasiliensis Heller=*Macrobrachium nattereri* (Heller).
Palæmon cæmentarius Pœppig=*Bithynis cæmentarius* (Pœppig).
Palæmon dasydactylus Streets=*Macrobrachium mexicanum* (Saussure).
Palæmon faustinus Saussure=*Macrobrachium olfersii* (Wiegmann).
Palæmon forceps Milne Edwards=*Macrobrachium acanthurus* (Wiegmann).
Palæmon gaudichaudii Milne Edwards and Lucas=*Bithynis cæmentarius gaudichaudii* (Milne Edwards).
Palæmon jamaicensis Milne Edwards=*Macrobrachium jamaicense* (Herbst).
Palæmon lamarrei Milne Edwards=*Macrobrachium lamarrei* (Milne Edwards).
Palæmon mexicanus Saussure=*Macrobrachium mexicanum* (Saussure).
Palæmon nattereri Heller=*Macrobrachium nattereri* (Heller).
Palæmon olfersii Wiegmann=*Macrobrachium olfersii* (Wiegmann).
Palæmon punctatus Randall=*Macrobrachium jamaicense* (Herbst).
Palæmon sexdentatus Streets=*Macrobrachium mexicanum* (Saussure).
Palemon gaudichaudii Milne Edwards=*Bithynis cæmentarius gaudichaudii* (Milne Edwards).
Palemon macrobrachion Herklots=*Macrobrachium acanthurus* (Wiegmann).
Palemon spinimanus Milne Edwards=*Macrobrachium olfersii* (Wiegmann).
Palinurus brevipes Pfeffer, part=*Panulirus ornatus* (Fabricius).
Palinurus fasciatus de Haan=*Panulirus ornatus* (Fabricius).
Palinurus frontalis Milne Edwards=*Palinustus frontalis* (Milne Edwards).
Palinurus inflatus Bouvier=*Panulirus ornatus* (Fabricius).
Palinurus martensii Nobili=*Panulirus ornatus* (Fabricius).
Palinurus ornatus Fabricius=*Panulirus ornatus* (Fabricius).
Palinurus pæssleri Pfeffer=*Panulirus ornatus* (Fabricius).
Panæus occidentalis Streets=*Peneus stylirostris* (Stimpson).
Panopeus affinis Streets and Kingsley=*Eurytium affine* (Streets and Kingsley).
Panopeus crenatus Milne Edwards and Lucas=*Eurypanopeus crenatus* (Milne Edwards and Lucas).
Panopeus planus Smith=*Eurypanopeus planus* (Smith).
Panopeus transversus Stimpson=*Eurypanopeus transversus* (Stimpson).
Panopeus validus Smith=*Panopeus chilensis* Milne Edwards and Lucas.
Panulirus gracilis Streets=*Panulirus ornatus* (Fabricius).
Panulirus polyphagus Ortmann, part=*Panulirus ornatus* (Fabricius).
Paralpheus spinifrons Bate=*Synalpheus spinifrons* (Milne Edwards).
Paraxanthus hirtipes Milne Edwards and Lucas=*Paraxanthus barbiger* (Pœppig).
Paraxanthus sexdecimdentatus Dana=*Cycloxanthops sexdecimdentatus* (Milne Edwards and Lucas).
Peltarion magellanicus Jacquinot and Lucas=*Hypopeltarium spinulosum* (White).
Peltarion spinulosum Dana=*Hypopeltarium spinulosum* (White).

Penæus californiensis Holmes=*Peneus brevirostris* Kingsley.
Pericera fossata Stimpson=*Macrocœloma villosum* (Bell).
Pericera ovata Bell=*Stenocionops ovata* (Bell).
Pericera villosa Bell=*Macrocœloma villosum* (Bell).
Petrolisthes agassizii Faxon=*Petrolisthes edwardsii* (Saussure).
Petrolisthes brasiliensis Smith=*Petrolisthes galathinus* (Bosc).
Petrolisthes danæ Kingsley=*Petrolisthes galathinus* (Bosc).
Petrolisthes edwardsius Lockington=*Petrolisthes edwardsii* (Saussure).
Petrolisthes marginatus Stimpson=*Petrolisthes armatus* (Gibbes).
Petrolisthes occidentalis Stimpson=*Petrolisthes galathinus* (Bosc).
Petrolisthes reissi Ortmann=*Petrolisthes angulosus* (Guérin).
Petrolisthes sexspinosus Stimpson=*Petrolisthes galathinus* (Bosc).
Petrolisthes similis Stimpson=*Petrolisthes armatus* (Gibbes).
Petrolisthes validus Henderson=*Petrolisthes lævigatus* (Guérin).
Phigaleia septemdentata White=*Trichodactylus* (*Dilocarcinus*) *orbicularis* (Meuschen).
Pilumnoides danai Kinahan=*Pilumnoides perlatus* (Pœppig).
Pilumnus lunatus Milne Edwards and Lucas=*Heteractæa lunata* (Milne Edwards and Lucas).
Pinnaxodes hirtipes Heller=*Pinnaxodes chilensis* (Milne Edwards).
Pinnixa panamensis Faxon=*Pinnixa transversalis* (Milne Edwards and Lucas).
Pinnotheres chilensis Milne Edwards=*Pinnaxodes chilensis* (Milne Edwards).
Pinnotheres transversalis Milne Edwards and Lucas=*Pinnixa transversalis* (Milne Edwards and Lucas).
Pisa aculeata Bell=*Microphrys aculeatus* (Bell).
Pisa spinipes Bell=*Mithrax spinipes* (Bell).
Pisoides cælatus Lockington=*Microphrys platysoma* (Stimpson).
Pisoides edwardsi Dana=*Pisoides tuberculosus* Milne Edwards and Lucas.
Plagusetes elatus Heller=*Acanthocyclus gayi* Milne Edwards and Lucas.
Plagusia capensis de Haan=*Plagusia chabrus* (Linnæus).
Plagusia clavimana Latreille=*Percnon planissimum* (Herbst).
Plagusia gaimardi Milne Edwards=*Plagusia chabrus* (Linnæus).
Plagusia orientalis Stimpson=*Plagusia tuberculata* Lamarck.
Plagusia serripes Lamarck=*Percnon planissimum* (Herbst).
Plagusia spinosa McLeay=*Percnon planissimum* (Herbst).
Plagusia squamosa Lamarck, not (Herbst)=*Plagusia tuberculata* Lamarck.
Plagusia tomentosa Milne Edwards=*Plagusia chabrus* (Linnæus).
Planes clypeatus Bowdich=*Planes minutus* (Linnæus).
Planes cyaneus Dana=*Planes minutus* (Linnæus).
Planes linnæana Bell=*Planes minutus* (Linnæus).
Platycarcinus dentatus Milne Edwards and Lucas, Nicolet=*Cancer polyodon* Pœppig.
Platycarcinus edwardsii Milne Edwards and Lucas, Nicolet=*Cancer edwardsii* Bell.
Platycarcinus irroratus Milne Edwards and Lucas, Nicolet, not Milne Edwards=*Cancer plebejus* Pœppig.
Platycarcinus longipes Milne Edwards and Lucas, Nicolet=*Cancer longipes* Bell.
Platyonichus bipustulatus Milne Edwards=*Ovalipes bipustulatus* (Milne Edwards).
Platyonychus purpureus Dana=*Ovalipes bipustulatus* (Milne Edwards).
Platypes edentata Lockington=*Thoë sulcata* Stimpson.
Porcellana acanthophora Milne Edwards and Lucas=*Petrolisthes acanthophorus* Milne Edwards and Lucas.
Porcellana affinis Guérin, not Gray=*Petrolisthes tuberculosus* (Milne Edwards).
Porcellana angulosa Guérin=*Petrolisthes angulosus* (Guérin).
Porcellana armata Gibbes=*Petrolisthes armatus* (Gibbes).
Porcellana boscii Dana=*Petrolisthes galathinus* (Bosc).
Porcellana carinata Kinahan=*Petrolisthes angulosus* (Guérin).

Porcellana cristata Milne Edwards=*Petrolisthes punctatus* (Guérin).
Porcellana danæ Gibbes=*Petrolisthes galathinus* (Bosc).
Porcellana desmarestii Eydoux and Gervais=*Petrolisthes* (?) *desmarestii* (Eydoux and Gervais).
Porcellana dubia Kinahan=*Petrolisthes acanthophorus* (Milne Edwards and Lucas).
Porcellana edwardsii Saussure=*Petrolisthes edwardsii* (Saussure).
Porcellana galathina Bosc=*Petrolisthes galathinus* (Bosc).
Porcellana granulosa Guérin=*Petrolisthes lævigatus* (Guérin).
Porcellana grossimana Guérin=*Pachycheles grossimanus* (Guérin).
Porcellana gundlachii Guérin=*Petrolisthes armatus* (Gibbes).
Porcellana lævigata Guérin=*Petrolisthes* (?) *lævigata* (Guérin).
Porcellana leporina Heller=*Petrolisthes armatus* (Gibbes).
Porcellana lobifrons Milne Edwards=*Petrolisthes tuberculatus* (Guérin).
Porcellana macrocheles Pœppig=*Petrolisthes violaceus* (Guérin).
Porcellana magnifica Gibbes=*Petrolisthes politus* (Gray).
Porcellana (*Pachycheles*) *crassa* A. Milne Edwards=either *Pachycheles grossimanus* (Guérin) or *Pachycheles mexicanus* Streets.
Porcellana patagonica Cunningham=*Petrolisthes patagonicus* (Cunningham).
Porcellana polita Gray=*Petrolisthes politus* (Gray).
Porcellana punctata Dana, not Guérin=*Petrolisthes angulosus* (Guérin).
Porcellana sexspinosa Gibbes=*Petrolisthes galathinus* (Bosc).
Porcellana spinifrons Milne Edwards=*Petrolisthes spinifrons* (Milne Edwards).
Porcellana striata Milne Edwards=*Petrolisthes granulosus* (Guérin).
Porcellana tuberculata Guérin=*Petrolisthes tuberculatus* (Guérin).
Porcellana tuberculifrons Milne Edwards and Lucas, part=*Petrolisthes tuberculatus* (Guérin).
Porcellana tuberculifrons Milne Edwards and Lucas, part=*Petrolisthes tuberculosus* (Milne Edwards).
Porcellana tuberculosa Milne Edwards=*Petrolisthes tuberculosus* (Milne Edwards).
Porcellana valida Dana=*Petrolisthes lævigatus* (Guérin).
Porcellana violacea Guérin=*Petrolisthes violaceus* (Guérin).
Potamia chilensis Milne Edwards and Lucas=*Pseudothelphusa chilensis* (Milne Edwards and Lucas).
Potamia dentata Latreille=*Pseudothelphusa dentata* (Latreille).
Potamocarcinus æquatorialis Doflein=*Pseudothelphusa macropa* (Milne Edwards).
Potamocarcinus dentatus Ortmann=*Pseudothelphusa dentata* (Latreille).
Potamocarcinus macropus Ortmann=*Pseudothelphusa macropa* (Milne Edwards).
Potamocarcinus planus Ortmann=*Pseudothelphusa plana* (Smith).
Potamocarcinus principessæ Doflein=*Pseudothelphusa macropa* (Milne Edwards).
Potamocarcinus reflexifrons Ortmann=*Pseudothelphusa reflexifrons* (Ortmann).
Prionoplax spinicarpus Stimpson, not Milne Edwards=*Prionoplax ciliata* Smith.
Pseuderiphia hispida A. Milne Edwards=*Eriphides hispida* (Stimpson).
Pseudocorystes armatus Milne Edwards=*Pseudocorystes sicarius* (Pœppig).
Pseudotelphusa dentata Ortmann, part=*Pseudothelphusa macropa* (Milne Edwards).
Pseudotelphusa tenuipes Pocock=*Pseudothelphusa dentata* (Latreille).
Pseudothelphusa dentata Ortmann, part=*Pseudothelphusa plana* Smith.
Pseudothelphusa gracilipes Nobili=*Pseudothelphusa nobilii* Rathbun.
Pseudothelphusa macropa Miers, part=*Pseudothelphusa ecuadorensis* Rathbun.
Pseudothelphusa macropa, var. *plana* (?) Miers=*Pseudothelphusa lindigiana* Rathbun.
Quadrella nitida Smith=*Quadrella coronata* Dana.
Rhodia pyriformis Bell=*Herbstia pyriformis* (Bell).
Sesarma barbata Krauss=*Cyclograpsus punctatus* Milne Edwards.
Sesarma pisonii Milne Edwards=*Sesarma pisoni* (Milne Edwards).
Solenolambrus typicus Cano, not Stimpson=*? Solenolambrus arcuatus* Stimpson.

Squilla aculeata Bigelow=*Chloridella aculeata* (Bigelow).
Squilla armata Milne Edwards=*Chloridella armata* (Milne Edwards).
Squilla cerisii Guérin=*Pseudosquilla lessonii* (Guérin).
Squilla dubia Milne Edwards=*Chloridella dubia* (Milne Edwards).
Squilla lessonii Guérin=*Pseudosquilla lessonii* (Guérin).
Squilla monoceros Milne Edwards=*Pseudosquilla lessonii* (Guérin).
Squilla nepa Nicolet, not Latreille=*? Chloridella aculeata* (Bigelow).
Squilla parva Bigelow=*Chloridella parva* Bigelow.
Squilla spinifrons Owen=*Pseudosquilla lessonii* (Guérin).
Sylviocarcinus devillei Moreira=*Trichodactylus* (*Valdivia*) *peruvianus* (A. Milne Edwards).
Sylviocarcinus peruvianus A. Milne Edwards=*Trichodactylus* (*Valdivia*) *peruvianus* (A. Milne Edwards).
Synalpheus neptunus Lenz. *See* Coutière, Proc. U. S. Nat. Mus., vol. 36, 1909, p. 10.
Telphusa dentata Latreille=*Pseudothelphusa dentata* (Latreille).
Telphusa (*?*) *quadrata* Latreille=*Trichodactylus* (*Trichodactylus*) *fluviatilis* (Latreille).
Thalassina maxima Hess=*Thalassina anomala* (Herbst).
Thalassina scorpionides Latreille=*Thalassina anomala* (Herbst).
Thelphusa chilensis Heller=*Potamon* (*Geothelphusa*) *chilensis* (Heller).
Thoë edentata (Lockington), Cano=*Thoë sulcata* Stimpson.
Thoë erosa A. Milne Edwards, not Bell=*Thoë panamensis* Nobili.
Trapezia formosa Smith=*Trapezia digitalis* Latreille.
Trapezia leucodactyla Rüppell=*Trapezia digitalis* Latreille.
Trichodactylus cunninghami A. Milne Edwards=*Trichodactylus* (*Trichodactylus*) *fluviatilis* (Latreille).
Trichodactylus granarius Nicolet=*Hemigrapsus crenulatus* (Milne Edwards).
Trichodactylus granulatus Milne Edwards=*Hemigrapsus crenulatus* (Milne Edwards).
Trichodactylus punctatus Eydoux and Souleyet=*Trichodactylus* (*Trichodactylus*) *fluviatilis* (Latreille).
Trichodactylus quadrata Milne Edwards=*Trichodactylus* (*Trichodactylus*) *fluviatilis* (Latreille).
Uca cunninghami Bate=*Trichodactylus* (*Trichodactylus*) *fluviatilis* (Latreille).
Uca gibbosa Holmes=*Uca stenodactylus* (Milne Edwards and Lucas).
Uca lævis Milne Edwards=*Ucides occidentalis* (Ortmann).
Uca platydactyla Ortmann, part=*Uca princeps* (Smith).
Uca platydactyla, var. *stylifera* Ortmann, part=*Uca stylifera* (Milne Edwards).
Uca una Milne Edwards and Lucas=*Ucides occidentalis* (Ortmann).
Uca vocator Ortmann, part=*Uca brevifrons* (Stimpson).
Xantho bifrons Ortmann=*Xantho gaudichaudii* Milne Edwards.
Xantho denticulata Stimpson, not *X. denticulatus* White=*Cycloxanthops* (*?*) *stimpsoni* (A. Milne Edwards).
Xantho grandimanus Lockington=*Ozius verreauxii* Saussure.
Xantho multidentatus Lockington=*Cycloxanthops* (*?*) *stimpsoni* (A. Milne Edwards).
Xantho orbignyi Milne Edwards and Lucas=*Platyxanthus orbignyi* (Milne Edwards and Lucas).
Xantho planus Milne Edwards=*Homalaspis plana* (Milne Edwards).
Xantho sexdecimdentatus Milne Edwards and Lucas=*Cycloxanthops sexdecimdentatus* (Milne Edwards and Lucas).
Xantho vittata Stimpson=*Cycloxanthops vittatus* (Stimpson).
Xanthodes xantusii Stimpson=*Xanthias xantusii* (Stimpson).

EXPLANATION OF PLATES.

PLATE 36.

Fig. 1.—*Inachoides microrhynchus*, nat. size. After Milne Edwards and Lucas.
2.—*Epialtus marginatus*, male, × ½. After Bell.

PLATE 37.

Fig. 1.—*Hepatus chiliensis*, × ½. After Milne Edwards and Lucas.
2.—*Arenæus mexicanus*, male, nat. size. After A. Milne Edwards.

PLATE 38.

Fig. 1.—*Cancer plebejus*, much reduced. After Bell.
2.—*Cancer polyodon*, much reduced. After Bell.

PLATE 39.

Fig. 1.—*Xantho gaudichaudii*, nat. size. After Milne Edwards and Lucas.
2.—*Platyxanthus crenulatus*, nat. size. After A. Milne Edwards.

PLATE 40.

Fig. 1.—*Cycloxanthops sexdecimdentatus*, nat. size. After Milne Edwards and Lucas.
2.—*Platyxanthus orbignyi*, × ⅝. After Milne Edwards and Lucas.

PLATE 41.

Fig. 1.—*Eriphia squamata*, male, × ⅚. After A. Milne Edwards.
2.—*Panopeus purpureus*, female, × ⅚. After A. Milne Edwards.
3.—*Petrolisthes armatus*, reduced. After Guérin.
4.—*Panopeus chilensis*, × ⅚. After Milne Edwards and Lucas.

PLATE 42.

Fig. 1.—*Grapsus grapsus*, × ½. After Milne Edwards.
2.—*Ucides occidentalis*, male, × ⅜. After Milne Edwards.

PLATE 43.

Fig. 1.—*Uca insignis*, female, nat. size. After Milne Edwards.
2.—*Ocypode gaudichaudii*, nat. size. After Milne Edwards and Lucas.
3.—*Ostracotheres politus*, female, × 2. After Lenz.

PLATE 44.

Cardisoma crassum, male, × ¾, La Paz.

PLATE 45.

Fig. 1.—*Leucosilia jurinei*, × ⅘. After Bell.
2.—*Leptograpsus variegatus*, × ⅗. After Dana.
3.—*Callianassa uncinata*, × $\frac{9}{10}$. After Milne Edwards.
4.—*Microphrys aculeatus*, female. After Bell.

PLATE 46.

Fig. 1.—*Pinnixa transversalis*, nat. size. After Milne Edwards and Lucas.
2.—*Teleophrys cristulipes*, male, × 2. After Stimpson.
3.—*Pachygrapsus transversus*, × ⅗. After Dana.
4.—*Acanthonyx petiverii*, nat. size. After Milne Edwards and Lucas.
5.—*Pachycheles grossimanus*, nat. size. After Guérin.
6.—*Uca galapagensis*, male, × 1⅛. *a*, inner side of large claw; *b*, dorsal view.

PLATE 47.

Fig. 1.—*Eurytium tristani*, male, × $\frac{7}{10}$.
2.—*Hypoconcha peruviana*, female, × 2.
3.—*Goniopsis pulchra*, female, × $\frac{7}{10}$.
4.—*Clibanarius panamensis*, × 2.

PLATE 48.

Fig. 1.—*Pagurus benedicti*, × $1\frac{1}{2}$, San Luis Gonzales Bay.
2.—*Speocarcinus ostrearicola*, male, × $1\frac{1}{2}$.
3.—*Uca princeps*, male, nat. size, Abreojos Point.
4.—*Dromidia sarraburei*, female, nat. size.
5.—*Petrolisthes spinifrons*, × $1\frac{1}{2}$.
6.—*Dissodactylus nitidus*, female, × $2\frac{1}{2}$, *Albatross* Station 2835.

PLATE 49.

Fig. 1.—*Emerita analoga*, nat. size.
2.—*Dardanus sinistripes*, nat. size, Magdalena Bay.
3.—*Dardanus imbricatus*, × $1\frac{1}{2}$.
4.—*Portunus* (*Portunus*) *acuminatus*, male, × $1\frac{1}{2}$, Panama Bay.
5.—*Eupleurodon trifurcatus*, female, × $2\frac{1}{2}$.
6.—*Emerita emerita*, nat. size.

PLATE 50.

Fig. 1.—*Paguristes tomentosus*, × $2\frac{1}{2}$.
2.—*Pilumnoides perlatus*, male, × 2.
3.—*Microphrys platysoma*, male, × $1\frac{1}{2}$, Lower California, L. Diguet.
4.—*Aratus pisoni*, × $\frac{5}{6}$. After Milne Edwards.
5.—*Hepatella amica*, female, × $2\frac{1}{2}$.

PLATE 51.

Fig. 1.—*Macrobrachium jamaicense*, × $\frac{3}{10}$. After Bate.
2.—*Paguristes hirtus*. After Dana. *a*, anterior part of animal, × 2; *b*, part of inner antennæ; *c*, hand; *d*, part of leg of second or third pair; *e*, part of leg of fourth pair; *f*, of fifth pair.
3.—*Pinnotherelia lævigata*, nat. size. After Milne Edwards and Lucas.

PLATE 52.

Fig. 1.—*Panulirus ornatus*, much reduced. After de Haan.
2.—*Rhynchocinetes typus*, × $\frac{7}{10}$. After Milne Edwards and Lucas.
3.—*Pseudosquilla lessonii*, × $\frac{1}{2}$. After Guérin.

PLATE 53.

Fig. 1.—*Palæmon ritteri*, × $2\frac{1}{2}$.
2.—*Peneus stylirostris*, × $1\frac{1}{2}$.
3.—*Lysiosquilla decemspinosa*, × $2\frac{1}{2}$.
4.—*Synalpheus townsendi peruvianus*, × $2\frac{1}{2}$.
5.—*Munida cokeri*, × $1\frac{1}{2}$.

PLATE 54.

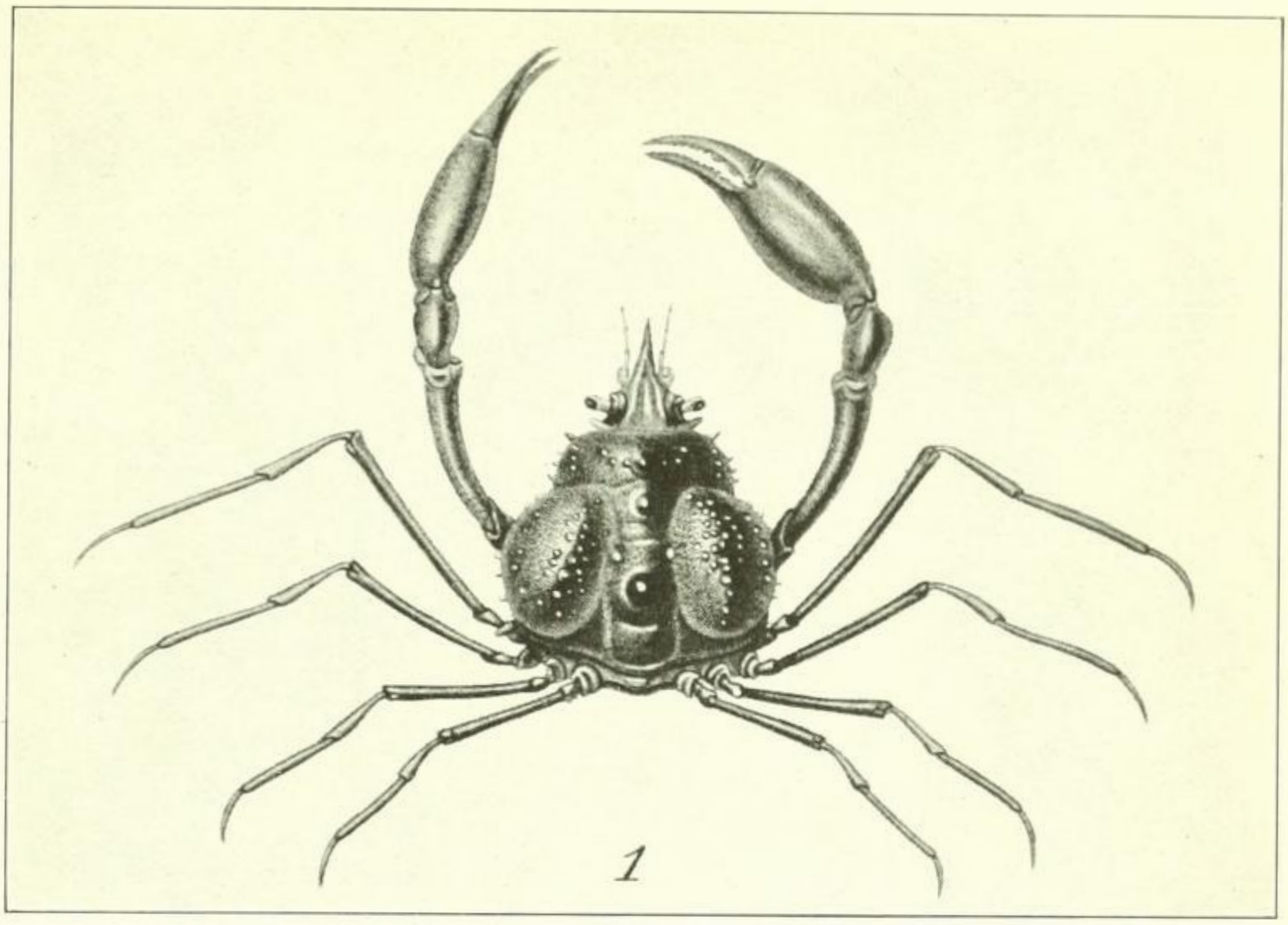
Fig. 1.—*Bithynis cæmentarius gaudichaudii*, × $\frac{1}{3}$.
2.—*Peneus brevirostris*, nat. size, Guaymas.
3.—*Chloridella dubia*, × $\frac{2}{3}$.

PLATE 55.

Callinectes toxotes, female, × $\frac{2}{3}$.

PLATE 56.

Callinectes arcuatus, male, × $\frac{2}{3}$.



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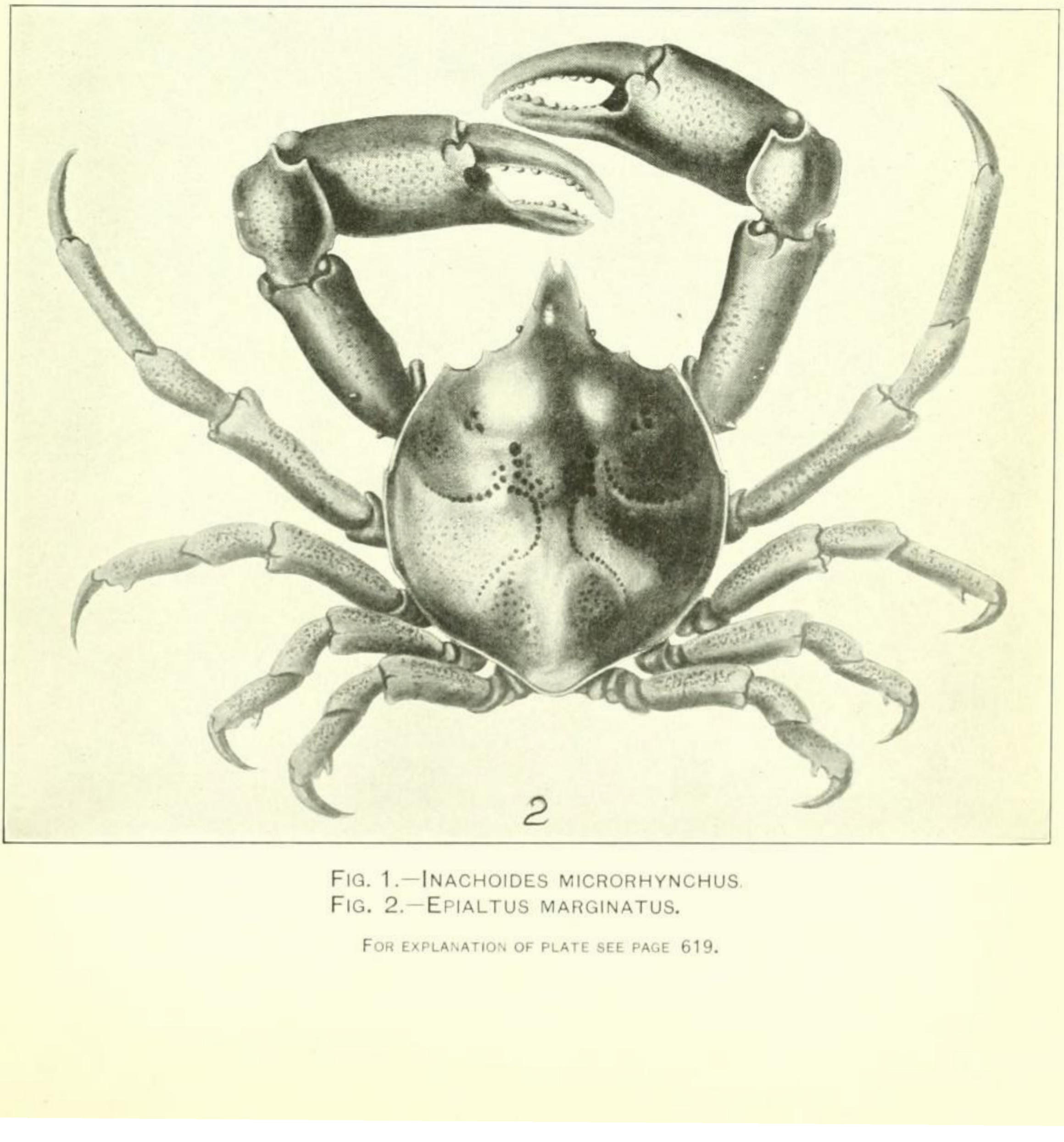

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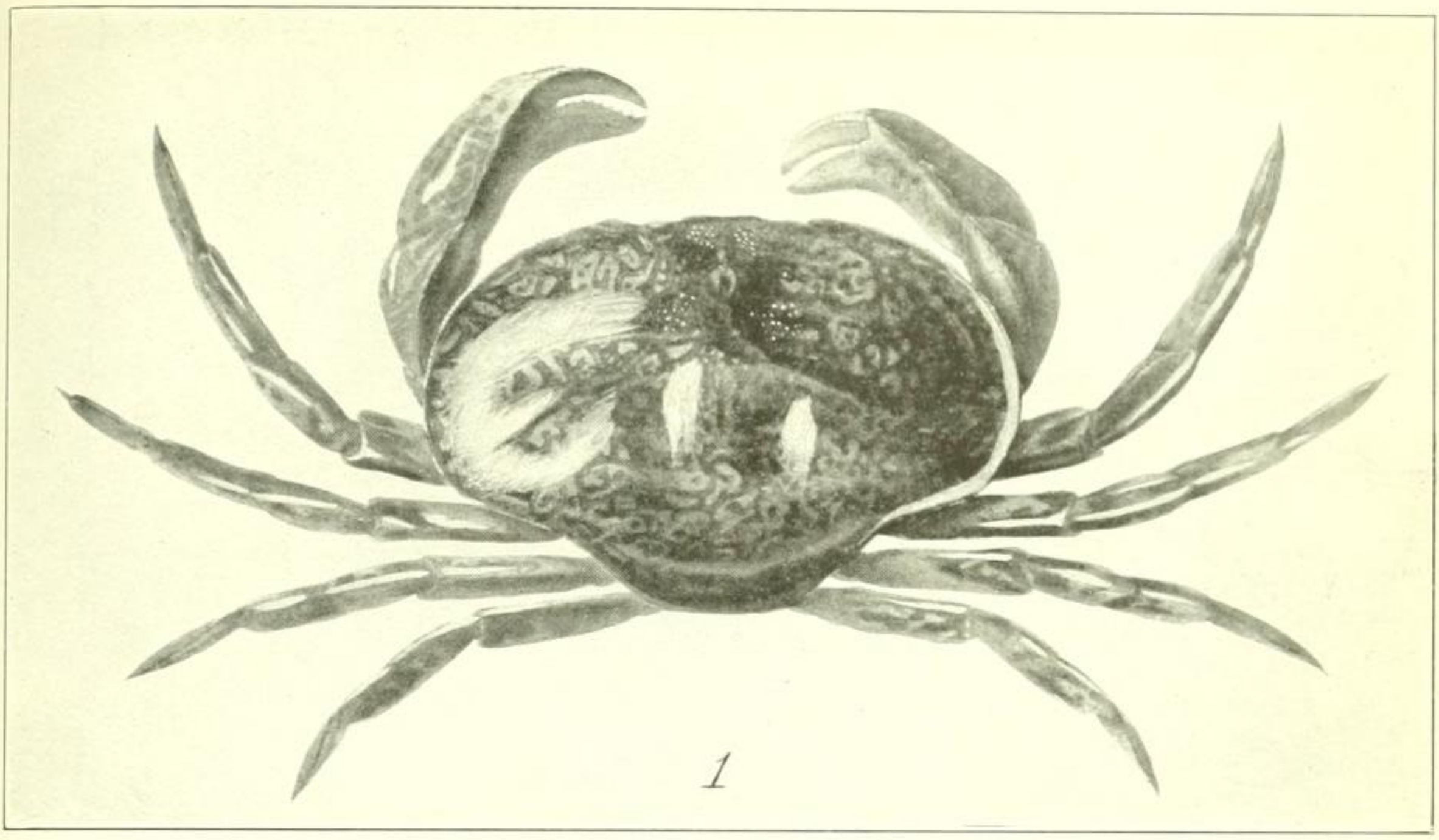
FIG. 1.—INACHOIDES MICRORHYNCHUS.
FIG. 2.—EPIALTUS MARGINATUS.

FOR EXPLANATION OF PLATE SEE PAGE 619.



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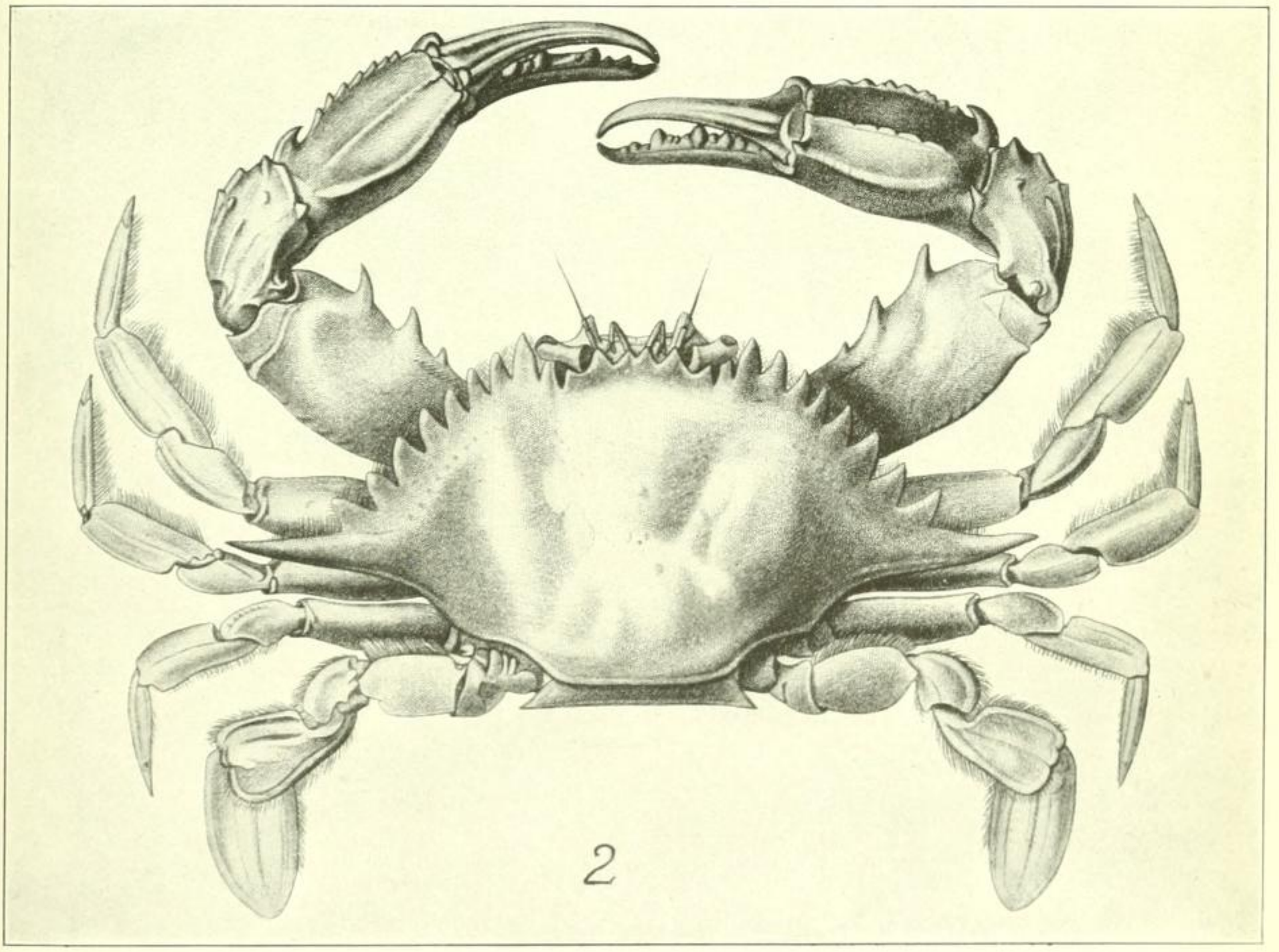

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FIG. 1.—HEPATUS CHILIENSIS.
FIG. 2.—ARENÆUS MEXICANUS.

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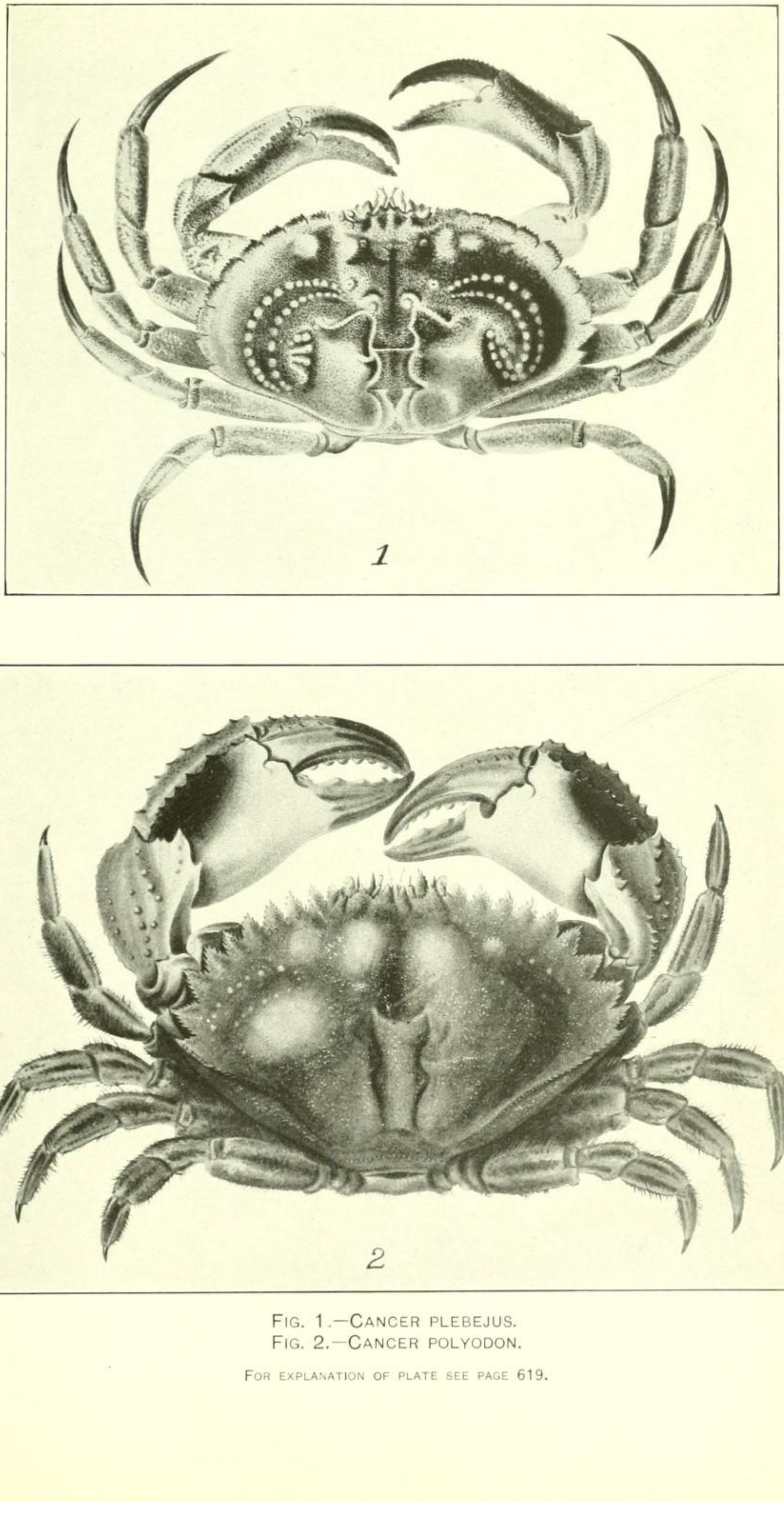

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FIG. 1.—CANCER PLEBEJUS.
FIG. 2.—CANCER POLYODON.

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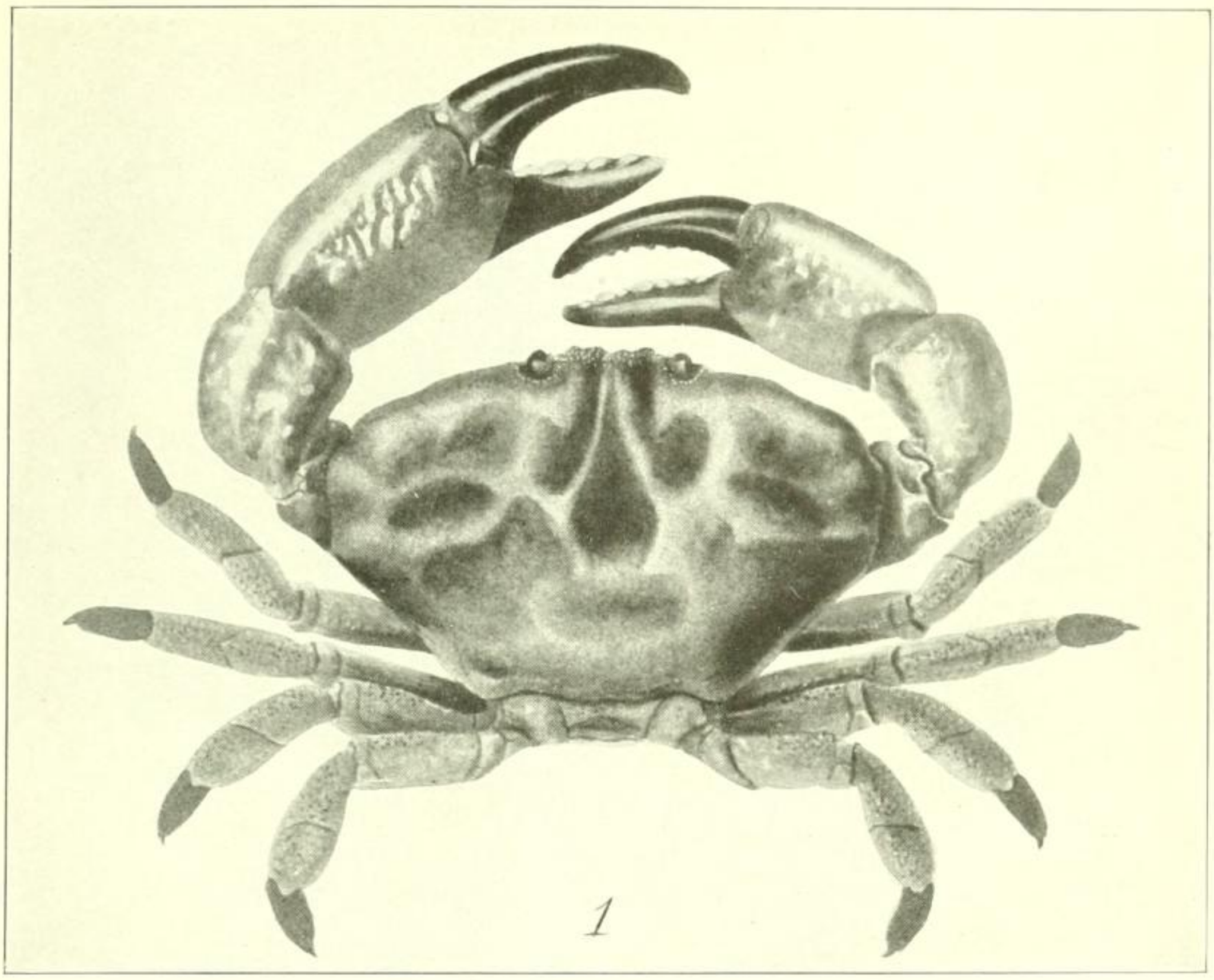

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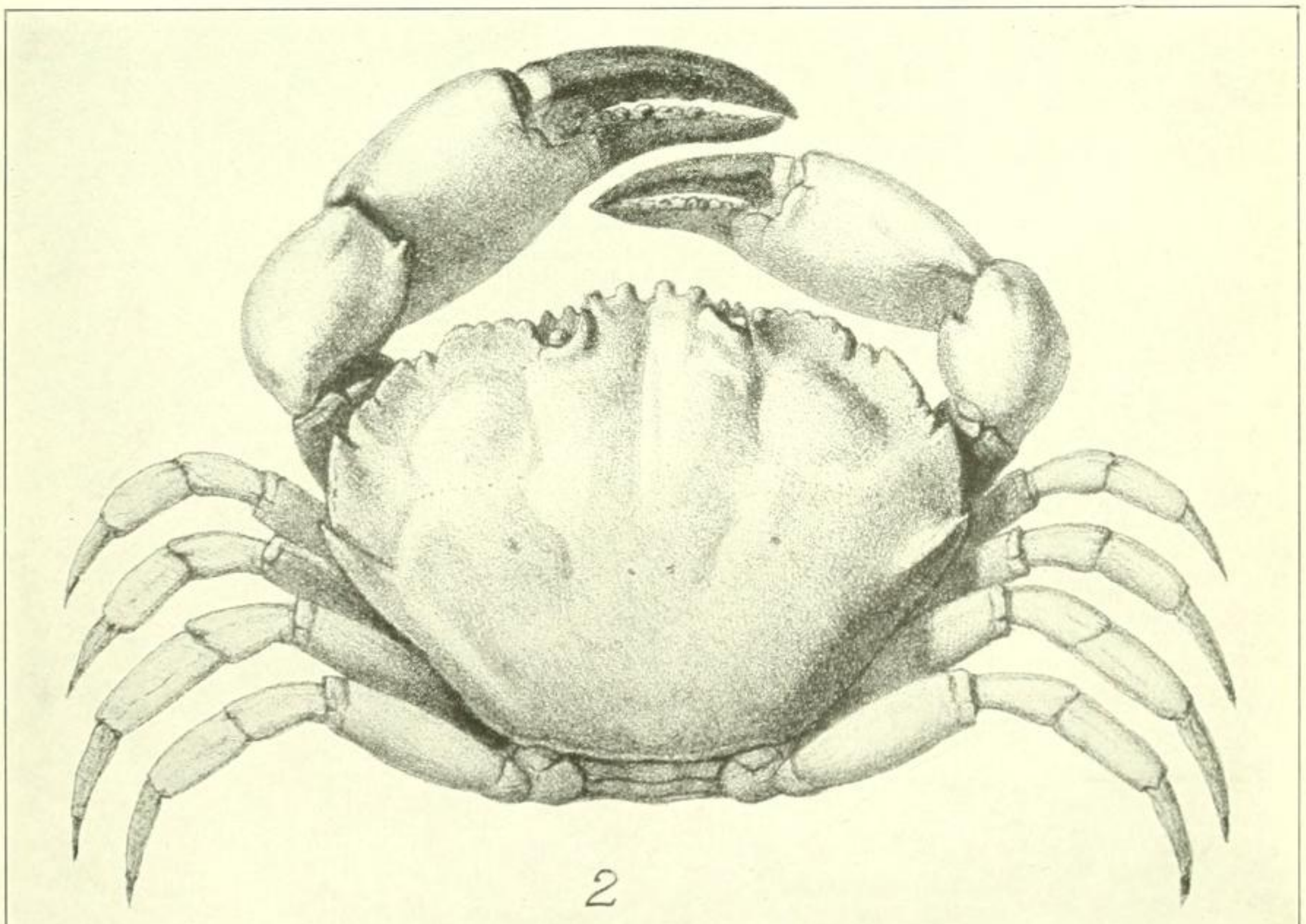

2

FIG. 1.—XANTHO GAUDICHAUDII.
FIG. 2.—PLATYXANTHUS CRENULATUS.

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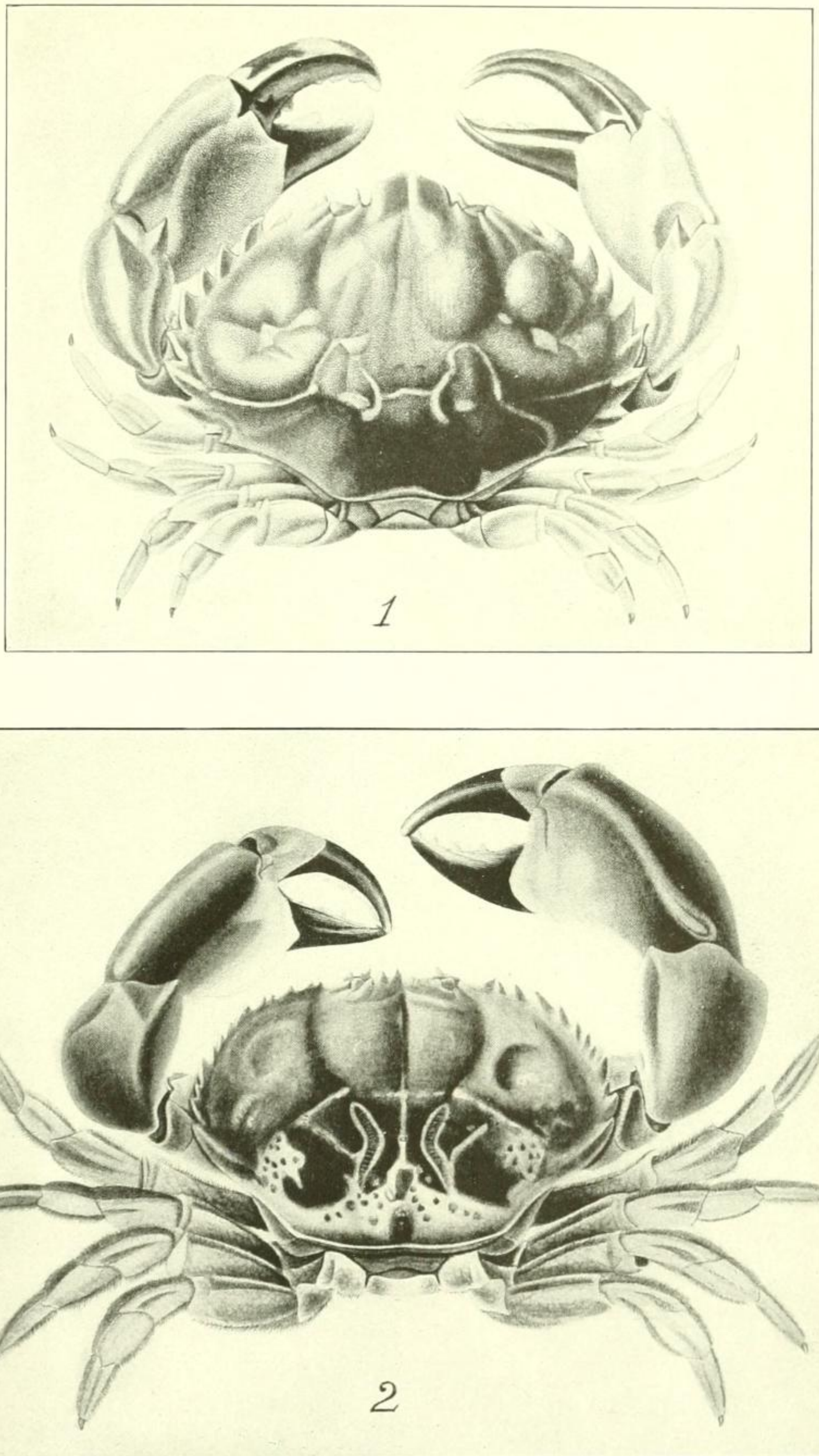

FIG. 1.—CYCLOXANTHOPS SEXDECIMDENTATUS.
FIG. 2.—PLATYXANTHUS ORBIGNYI.

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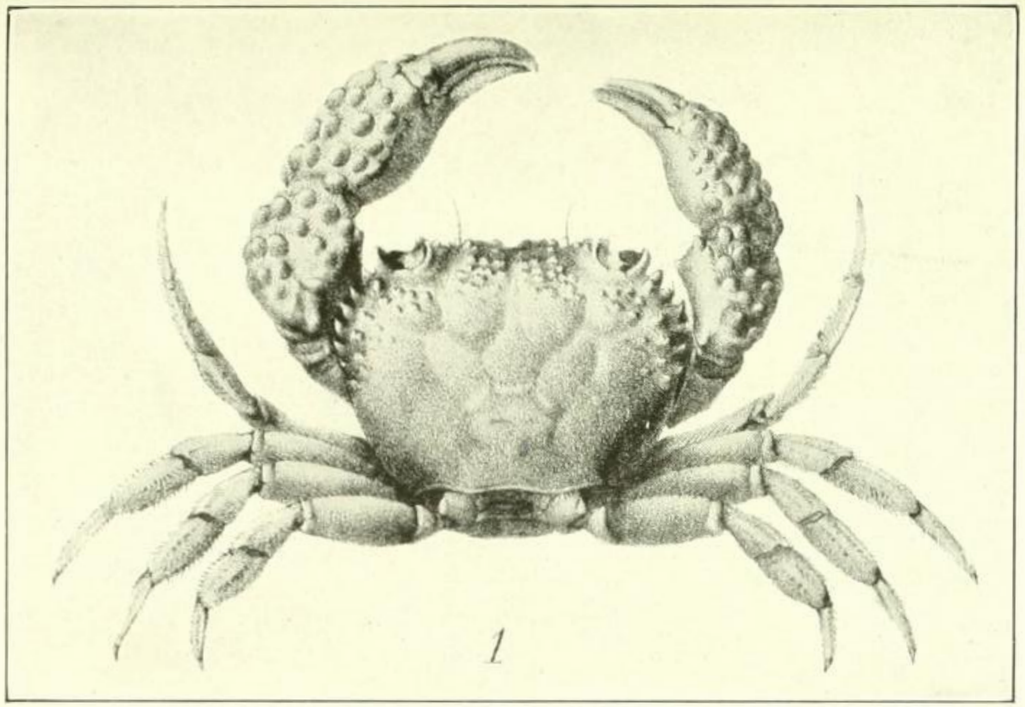
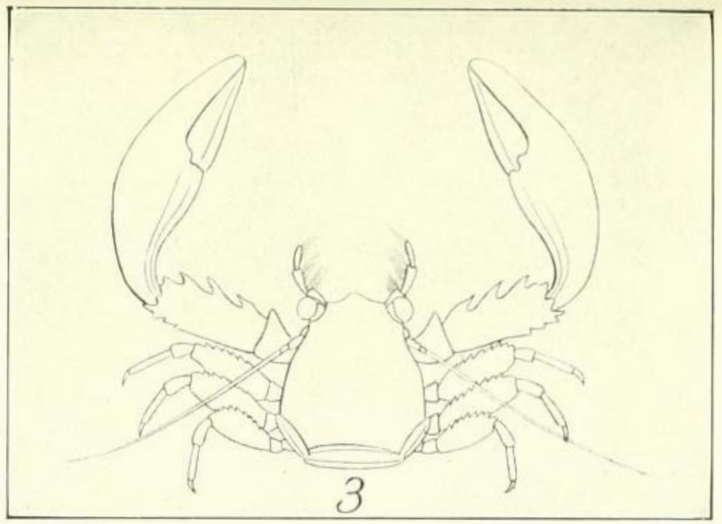
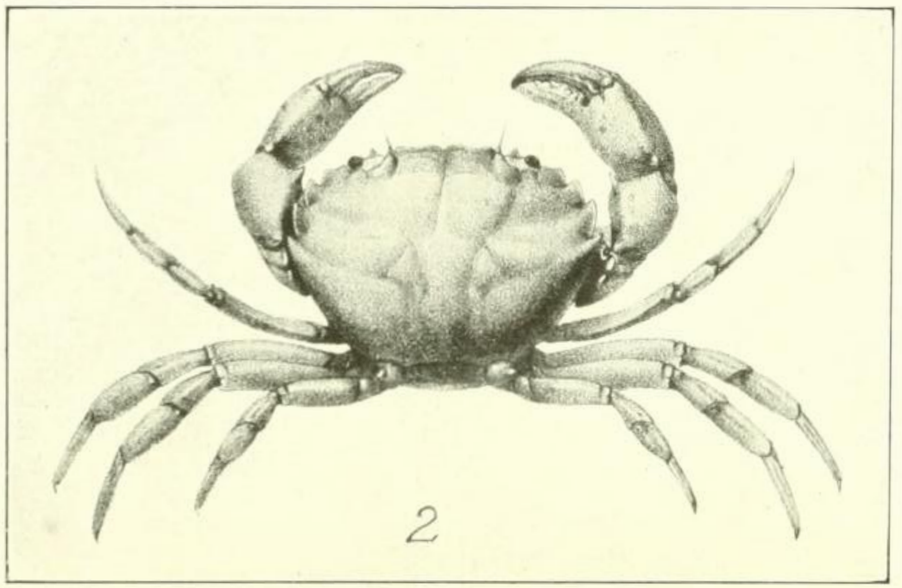






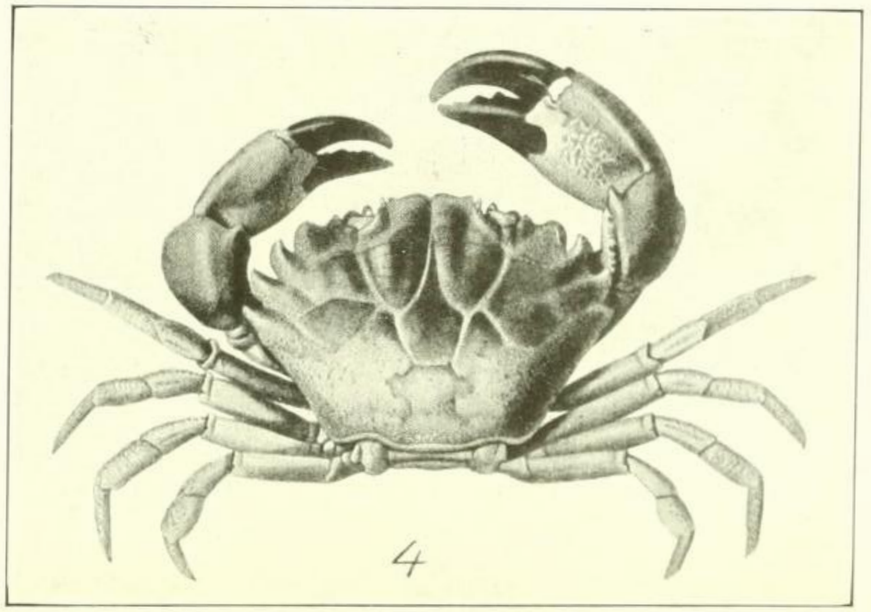
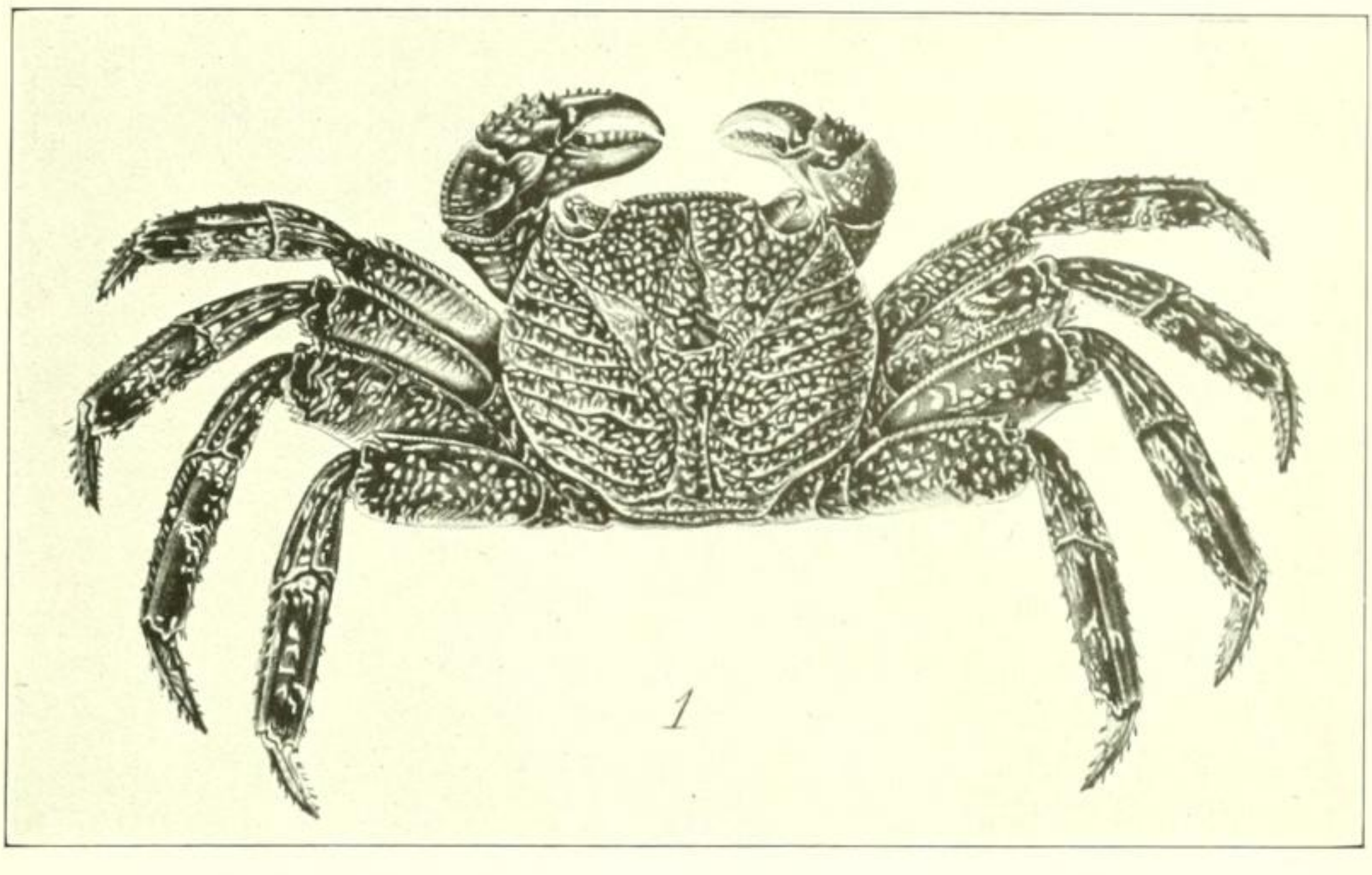


FIG. 1.—ERIPHIA SQUAMATA.
FIG. 3.—PETROLISTHES ARMATUS.

FIG. 2.—PANOPEUS PURPUREUS.
FIG. 4.—PANOPEUS CHILENSIS.

FOR EXPLANATION OF PLATE SEE PAGE 619.



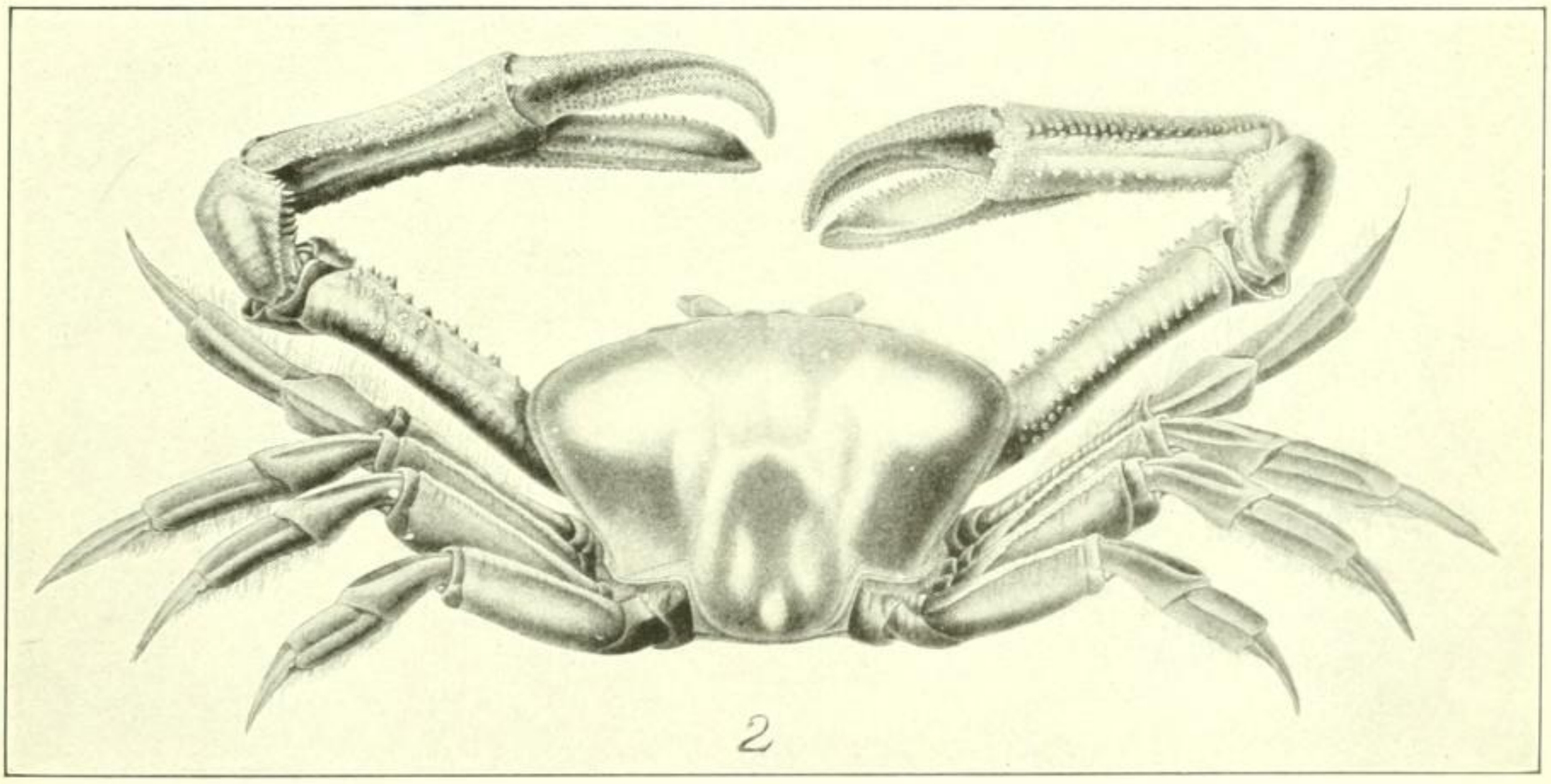
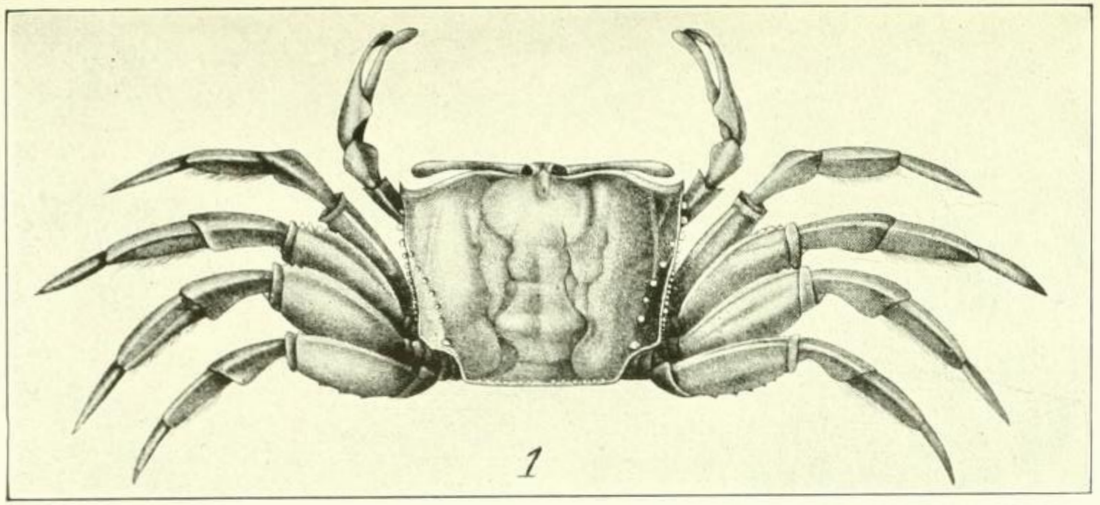
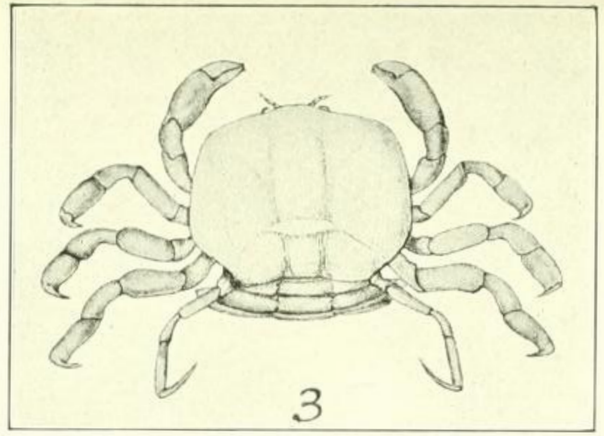


FIG. 1.—GRAPSUS GRAPSUS.
FIG. 2.—UCIDES OCCIDENTALIS.

FOR EXPLANATION OF PLATE SEE PAGE 619.





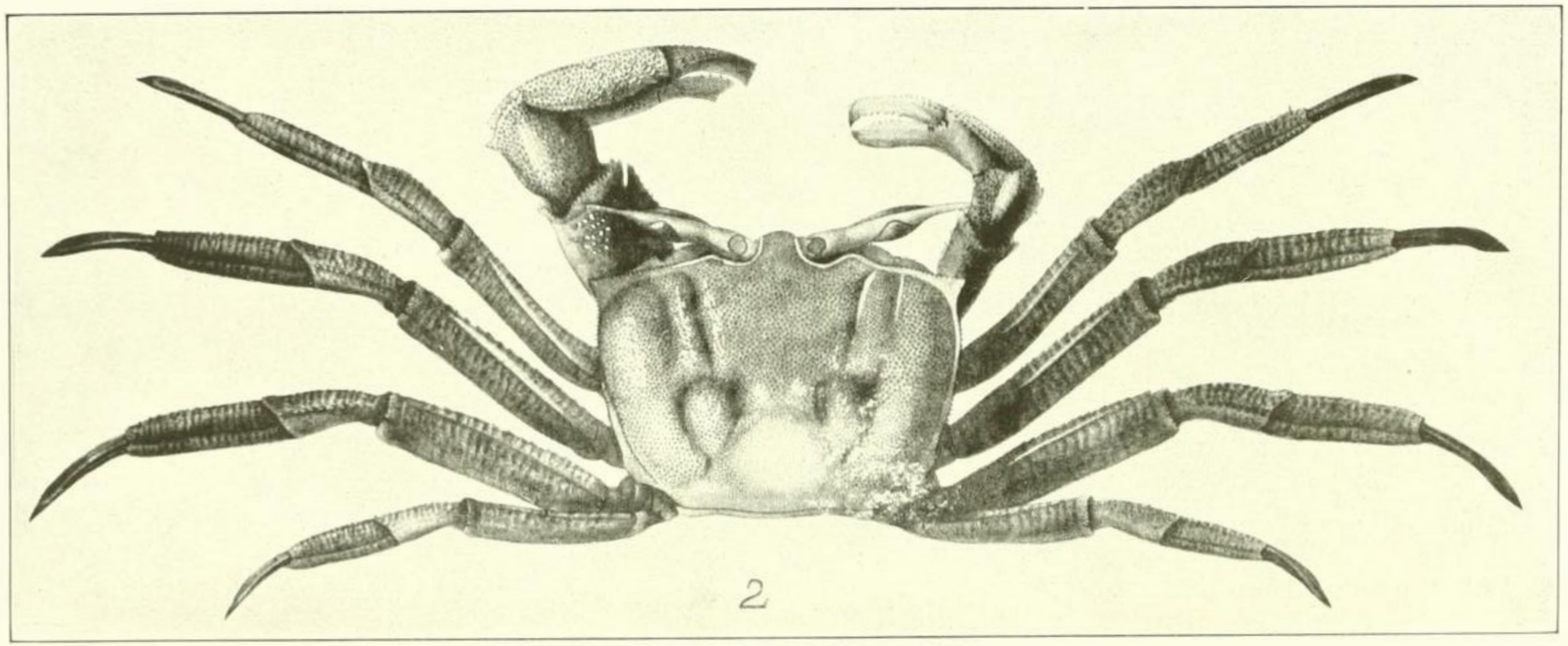
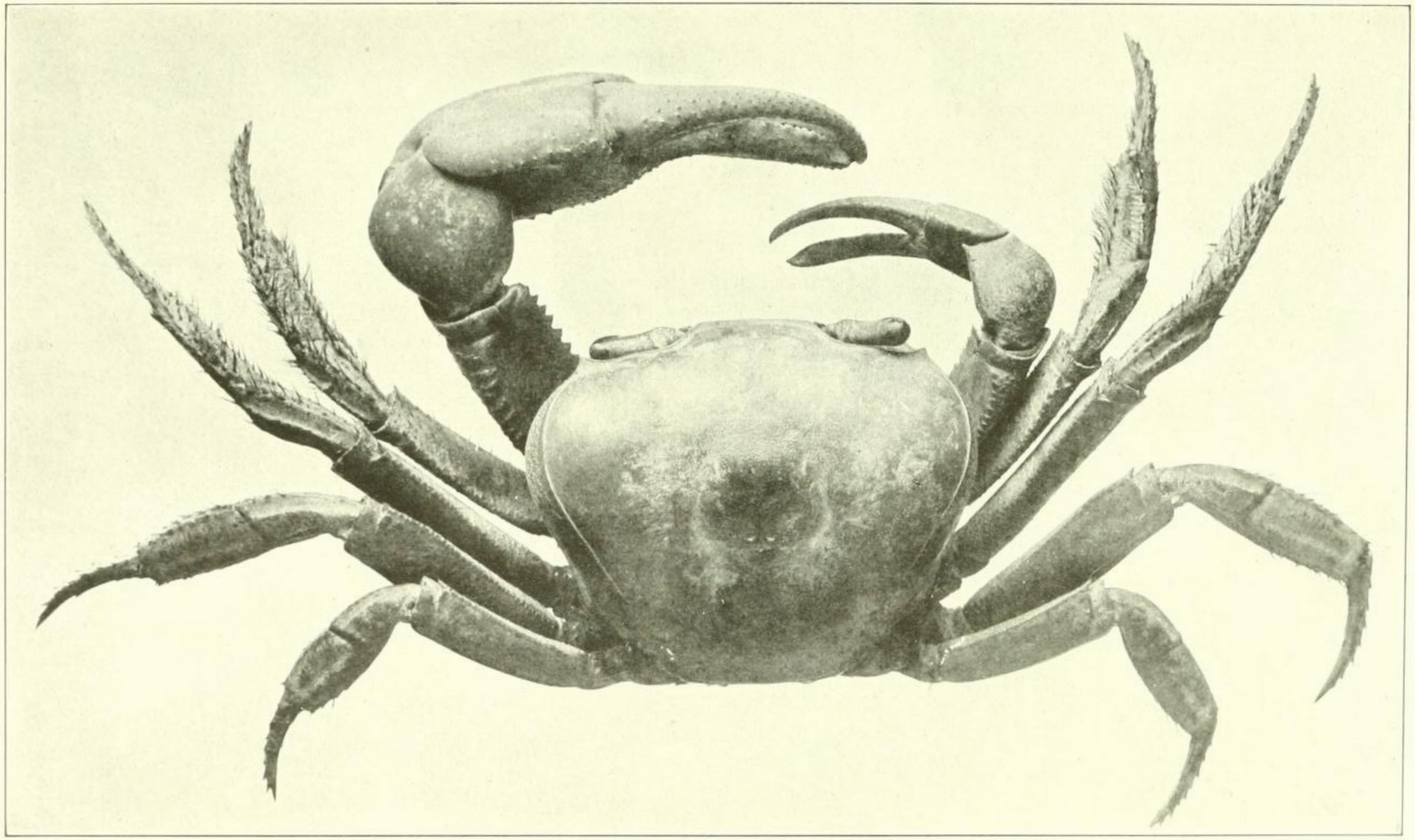


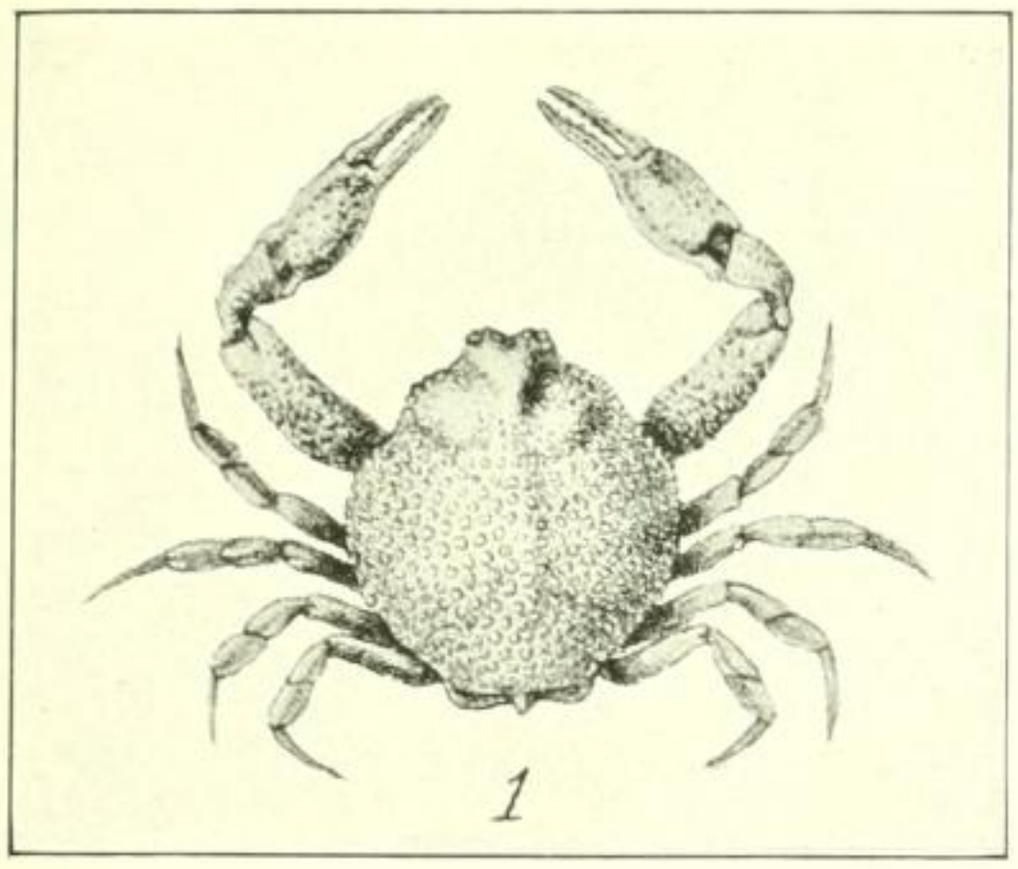
FIG. 1.—UCA INSIGNIS. FIG. 2.—OCYPODE GAUDICHAUDII. FIG. 3.—OSTRACOTHERES POLITUS.

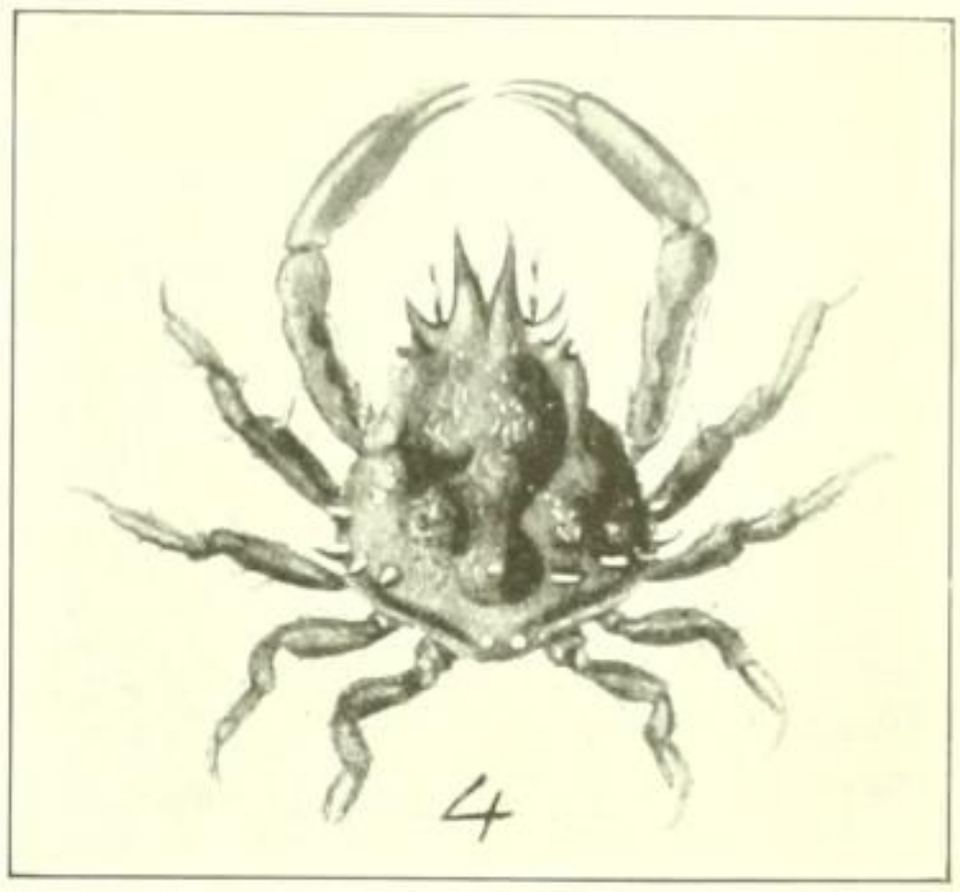
FOR EXPLANATION OF PLATE SEE PAGE 619.



CARDISOMA CRASSUM.

FOR EXPLANATION OF PLATE SEE PAGE 619.





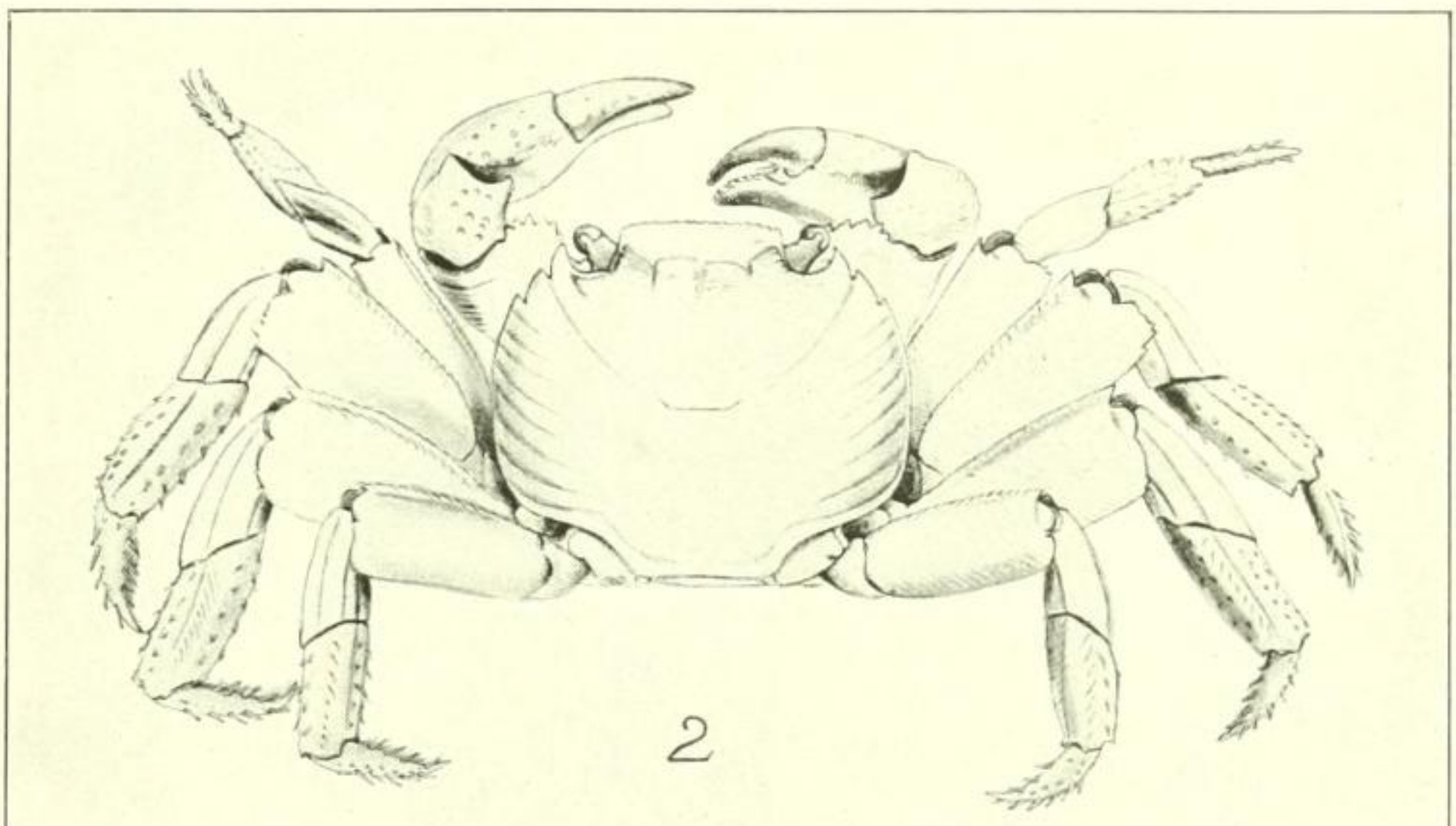
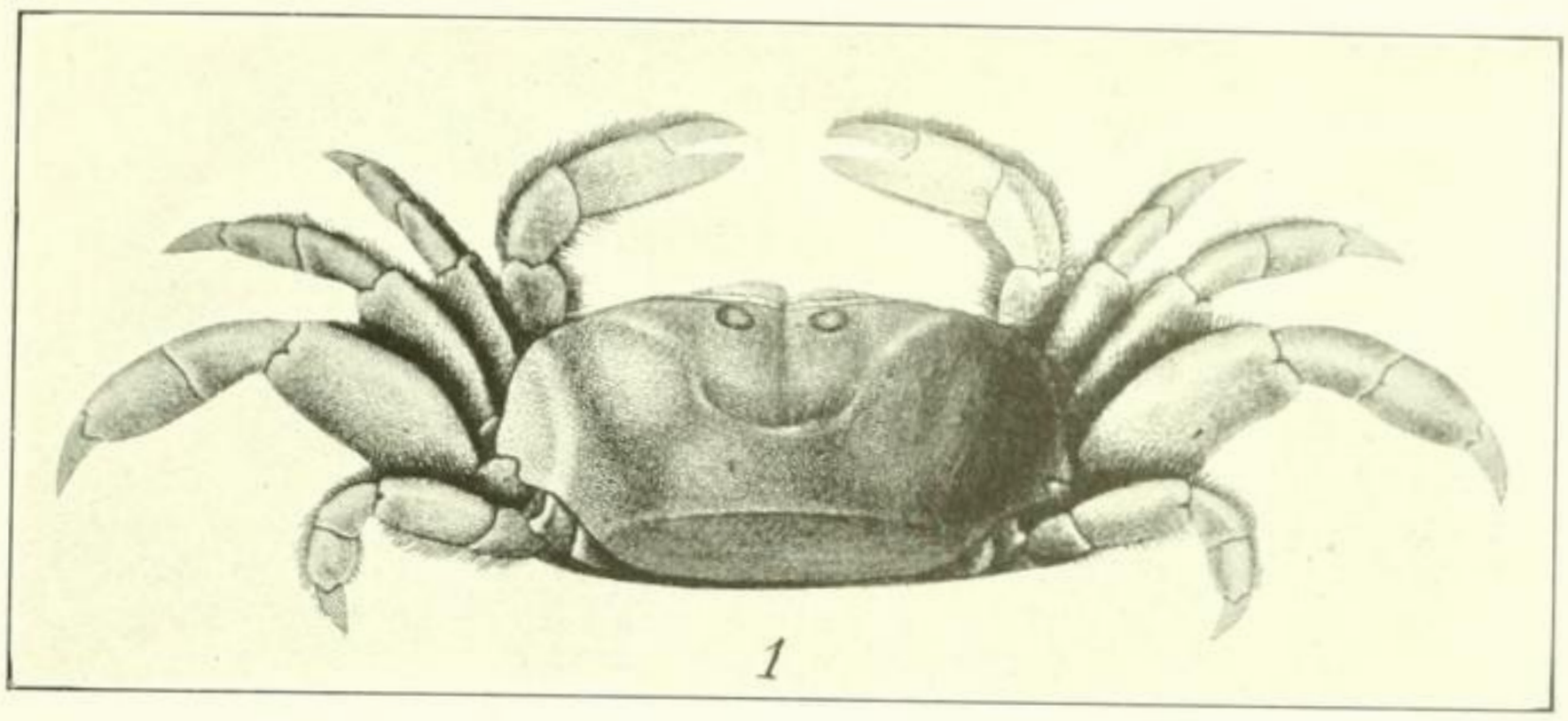


FIG. 1.—LEUCOSILIA JURINEI.
FIG. 2.—LEPTOGRAPSUS VARIEGATUS.
FIG. 3.—CALLIANASSA UNCINATA.
FIG. 4.—MICROPHRYS ACULEATUS.

FOR EXPLANATION OF PLATE SEE PAGE 619.



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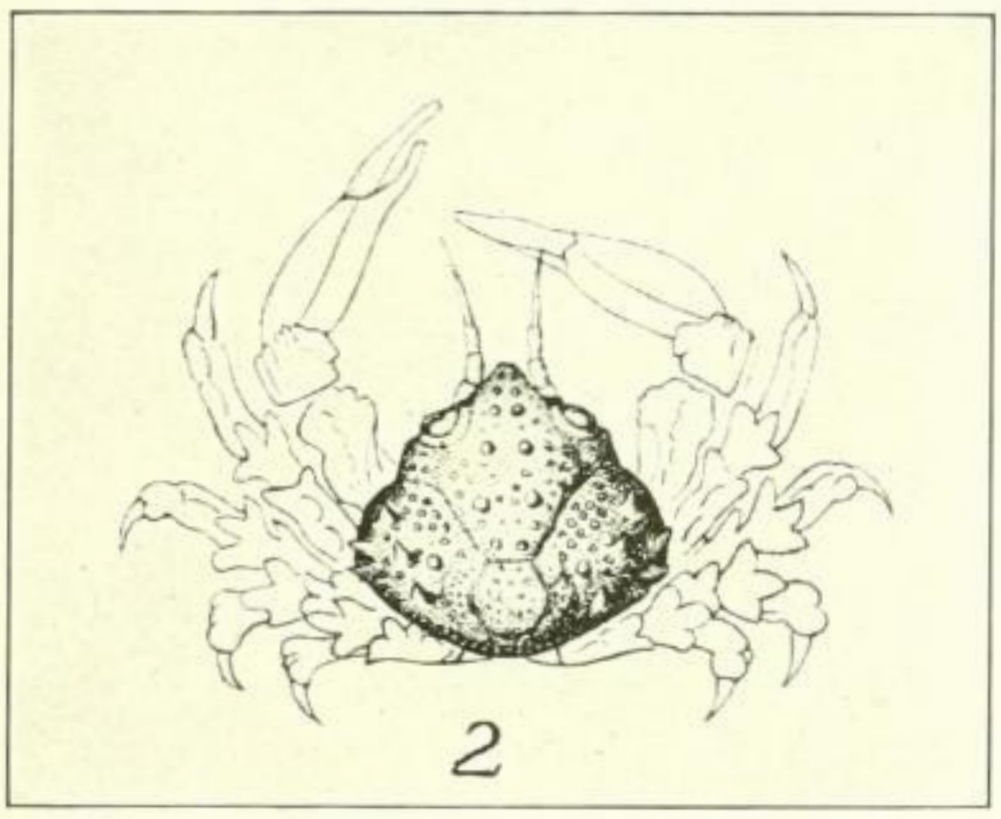

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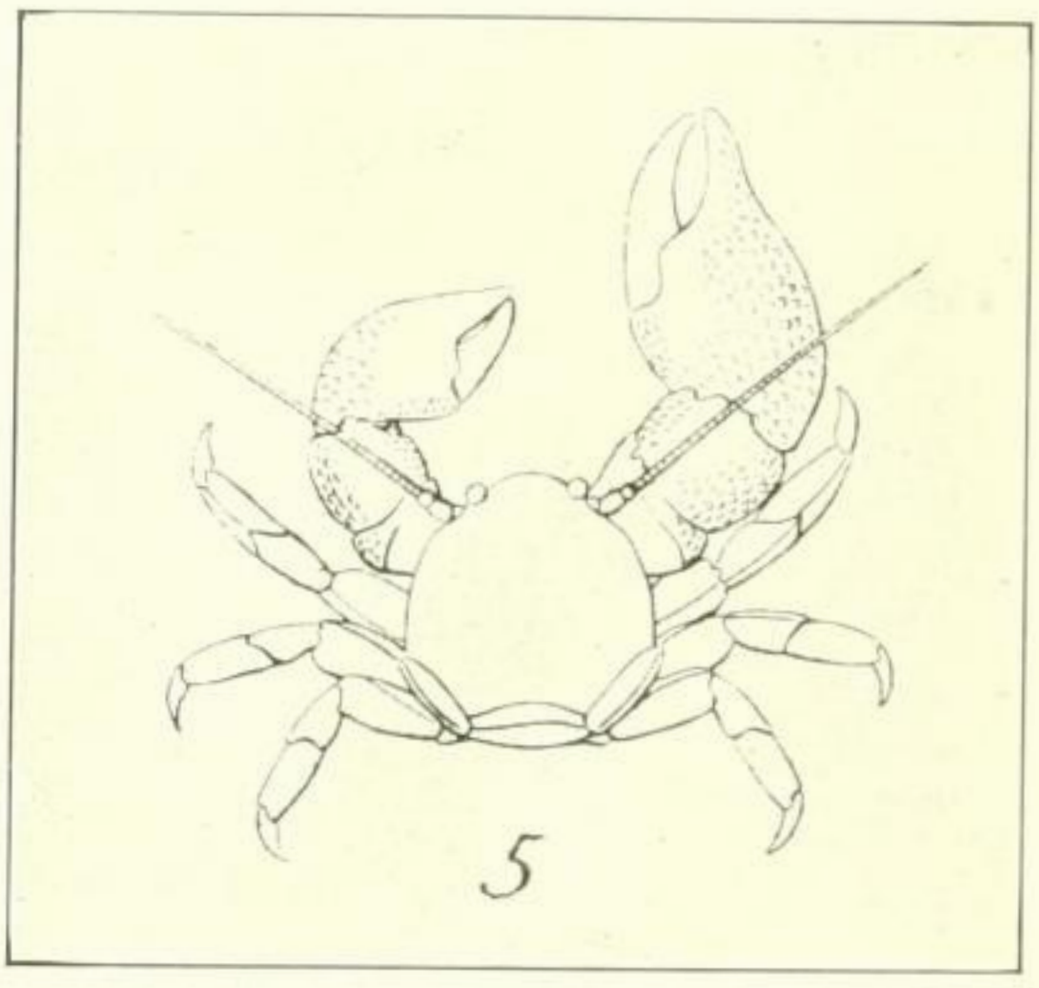

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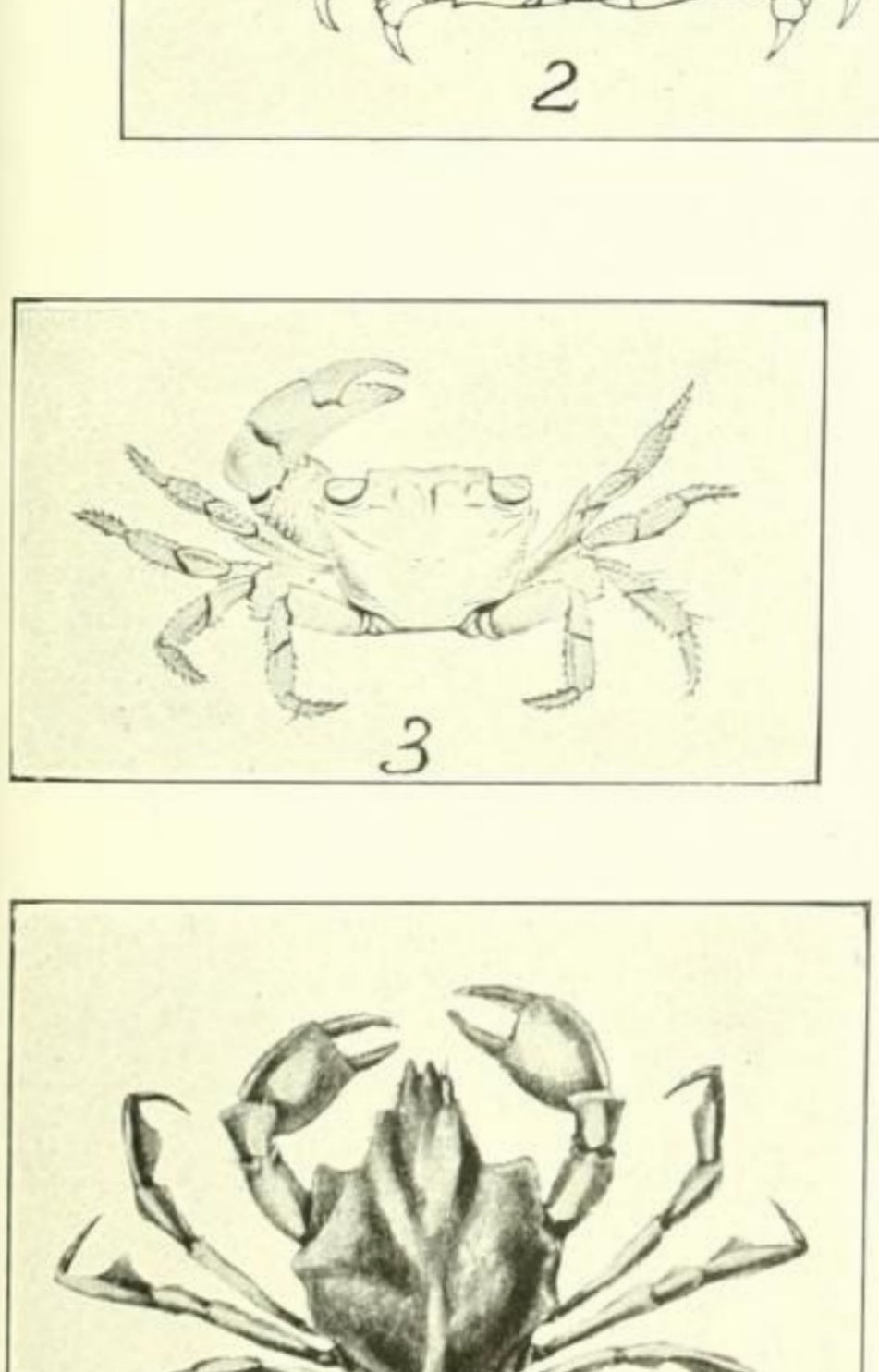

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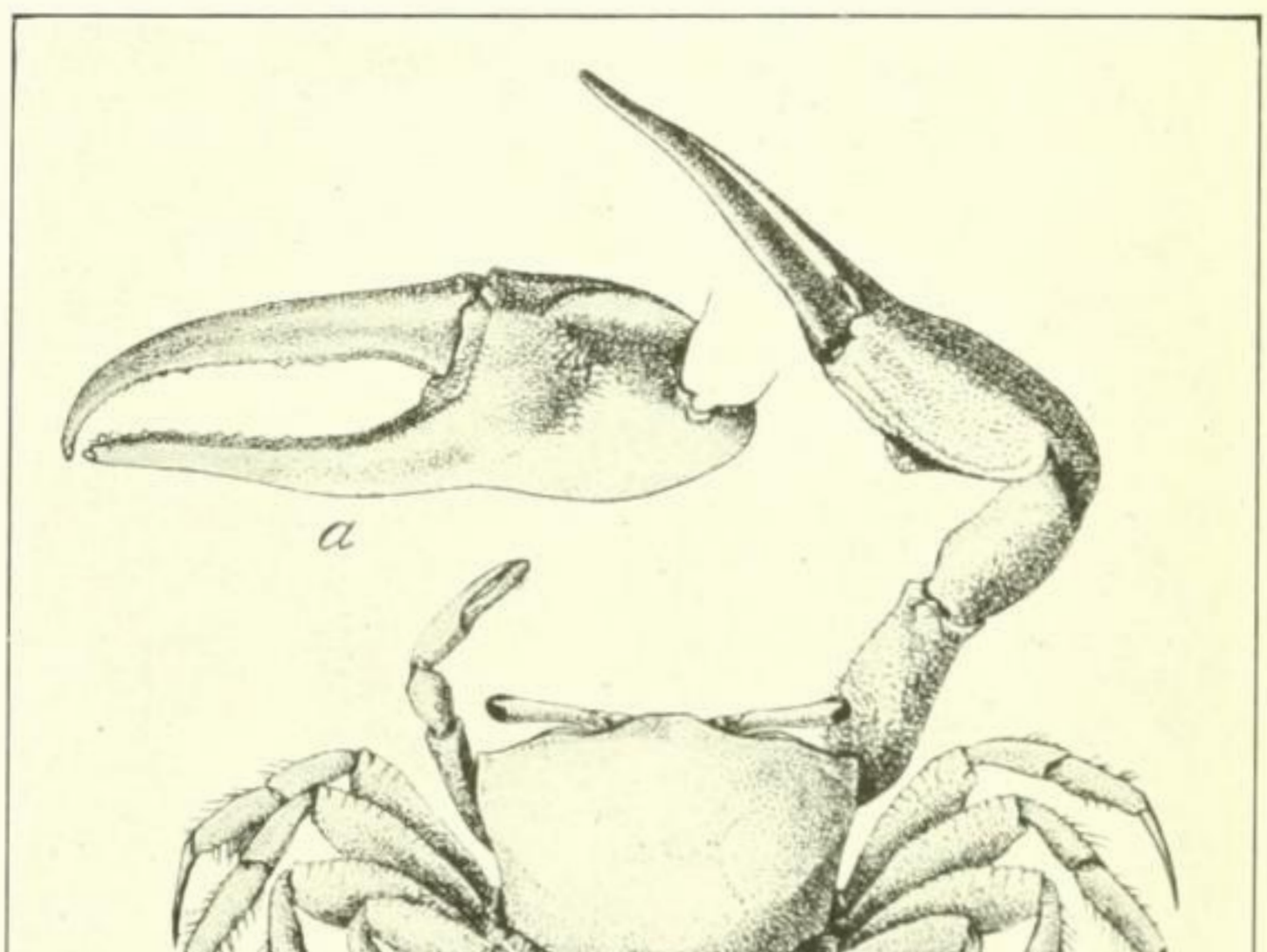
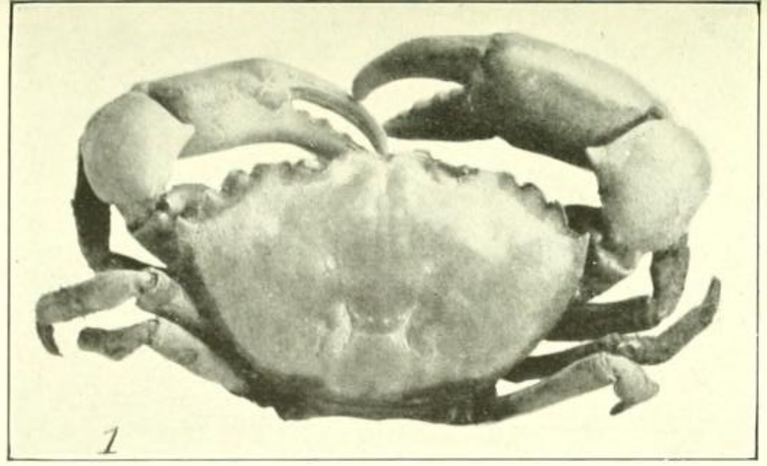
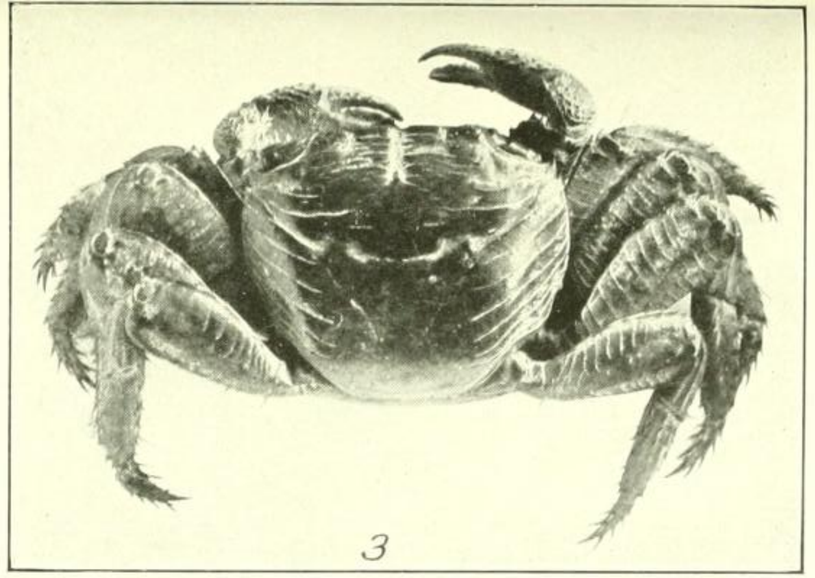


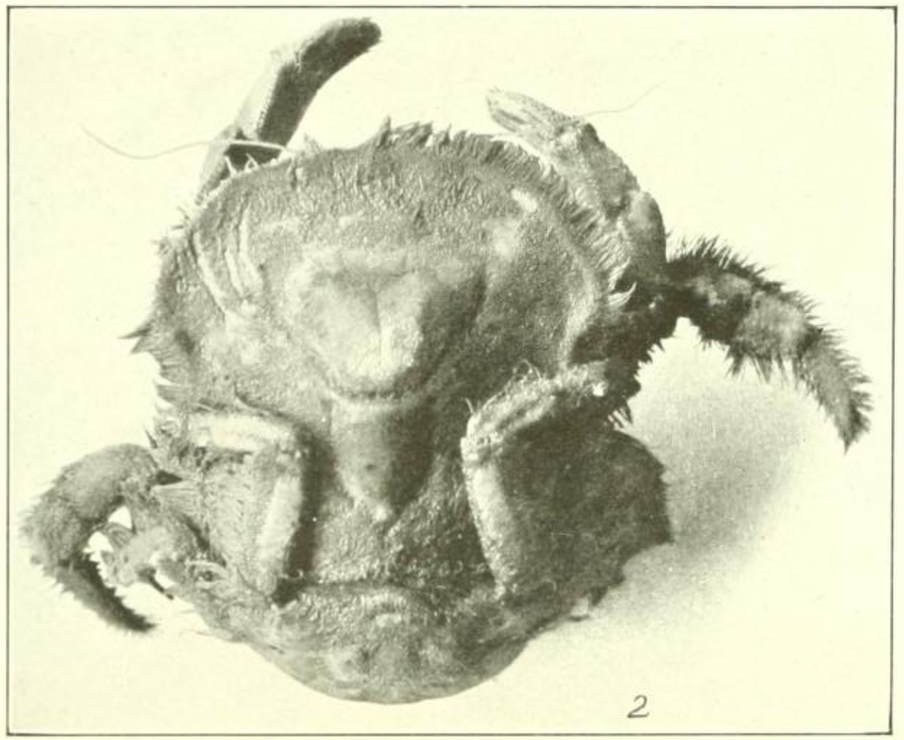
6

FIG. 1.—PINNIXA TRANSVERSALIS.
FIG. 2.—TELEOPHRYS CRISTULIPES.
FIG. 3.—PACHYGRAPSUS TRANSVERSUS.
FIG. 4.—ACANTHONYX PETIVERII.
FIG. 5.—PACHYCHELES GROSSIMANUS.
FIG. 6.—UCA GALAPAGENSIS.

FOR EXPLANATION OF PLATE SEE PAGE 619.







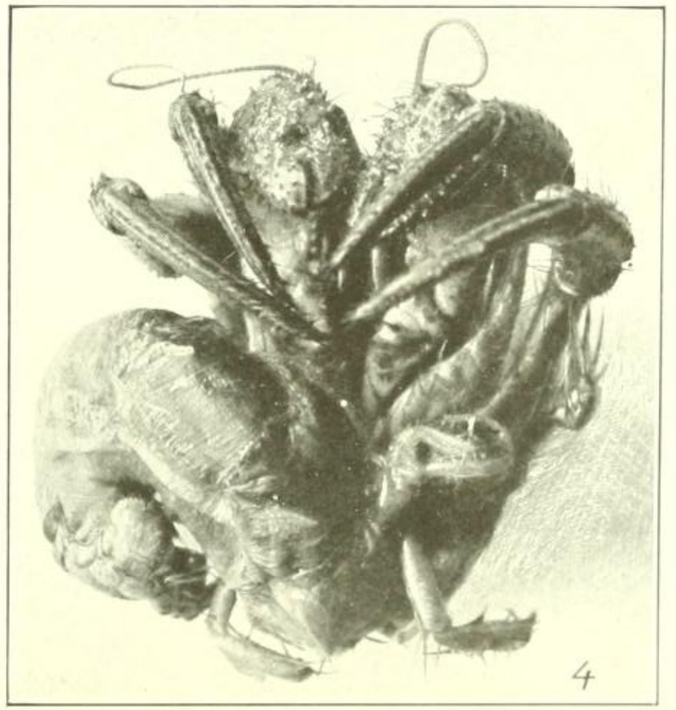
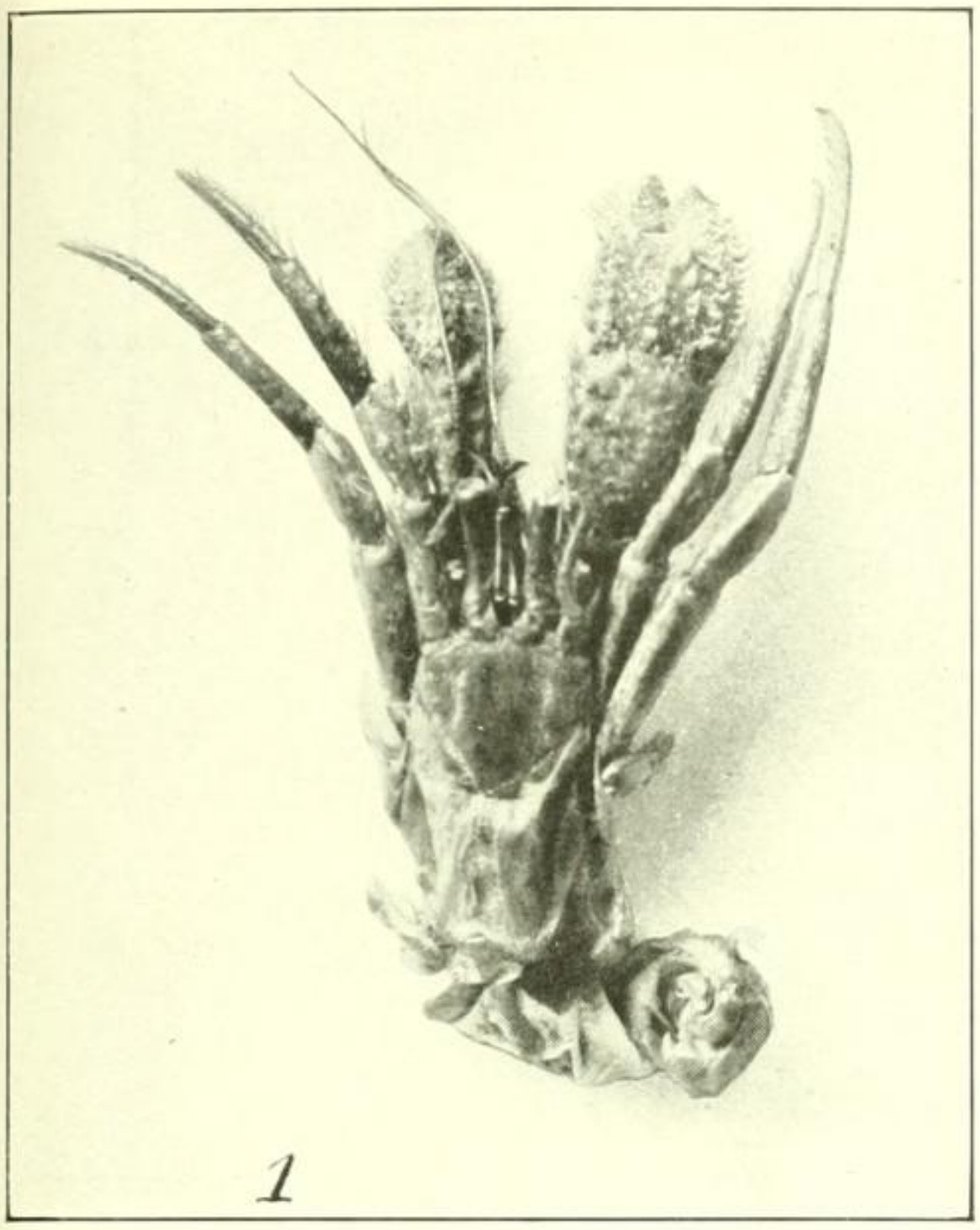


FIG. 1.—EURYTIUM TRISTANI.
FIG. 3.—GONIOPSIS PULCHRA.

FIG. 2.—HYPOCONCHA PERUVIANA.
FIG. 4.—CLIBANARIUS PANAMENSIS.

FOR EXPLANATION OF PLATE SEE PAGE 620.



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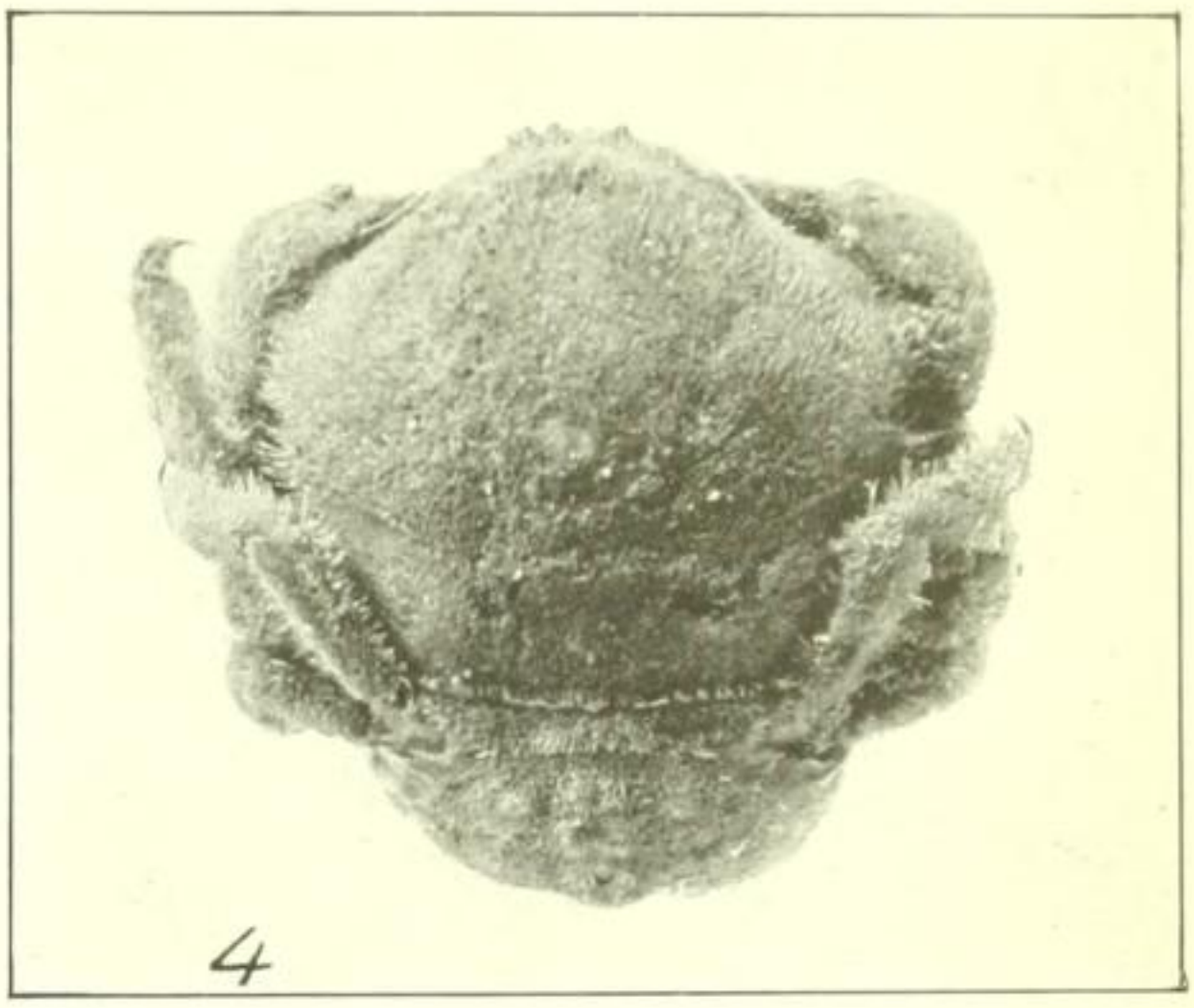

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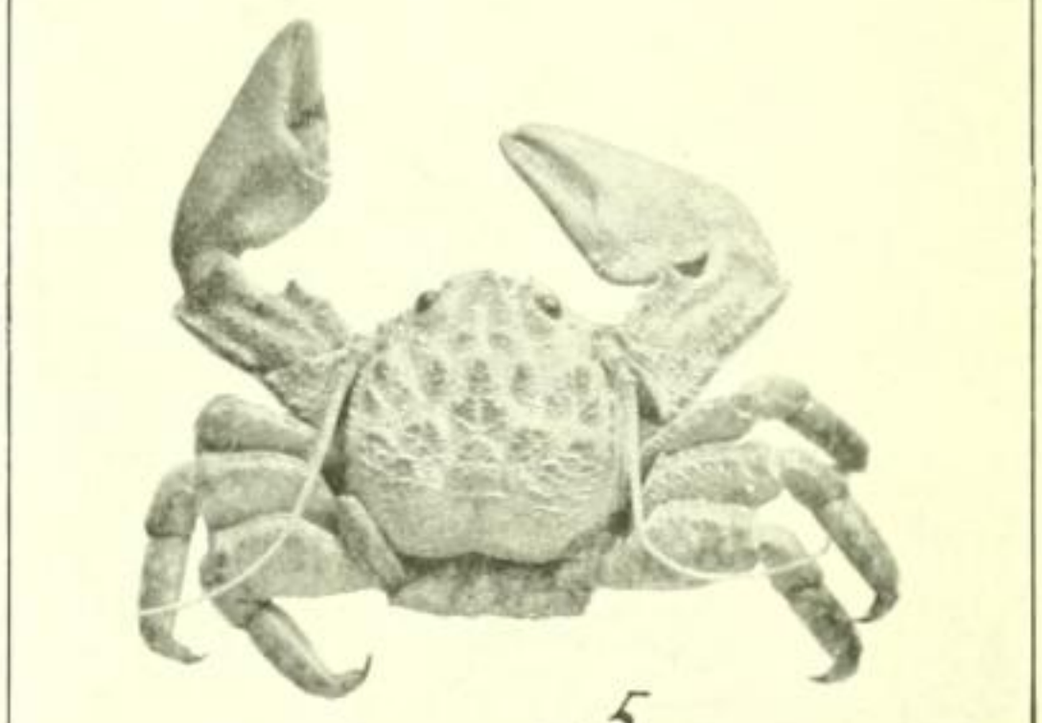

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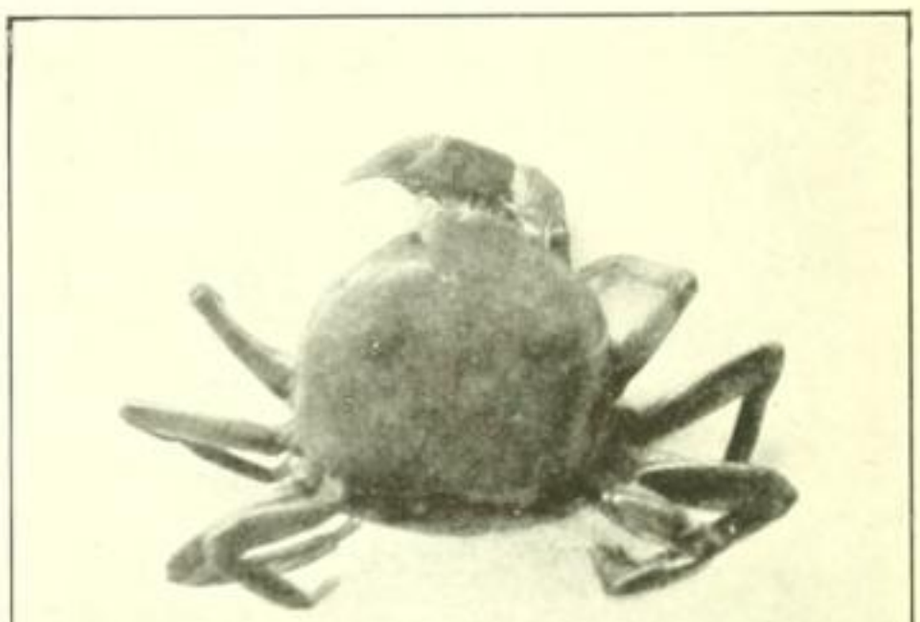

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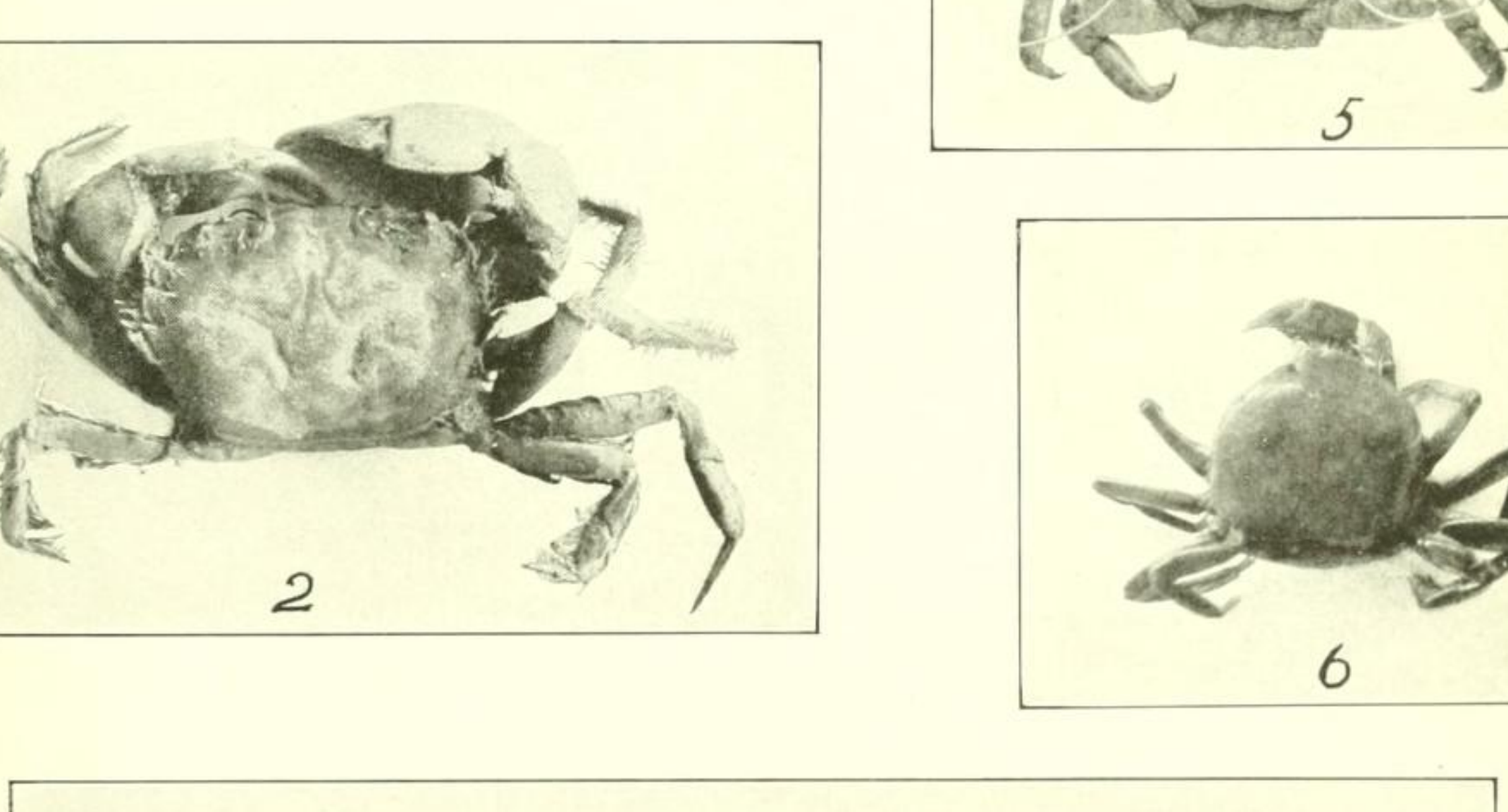
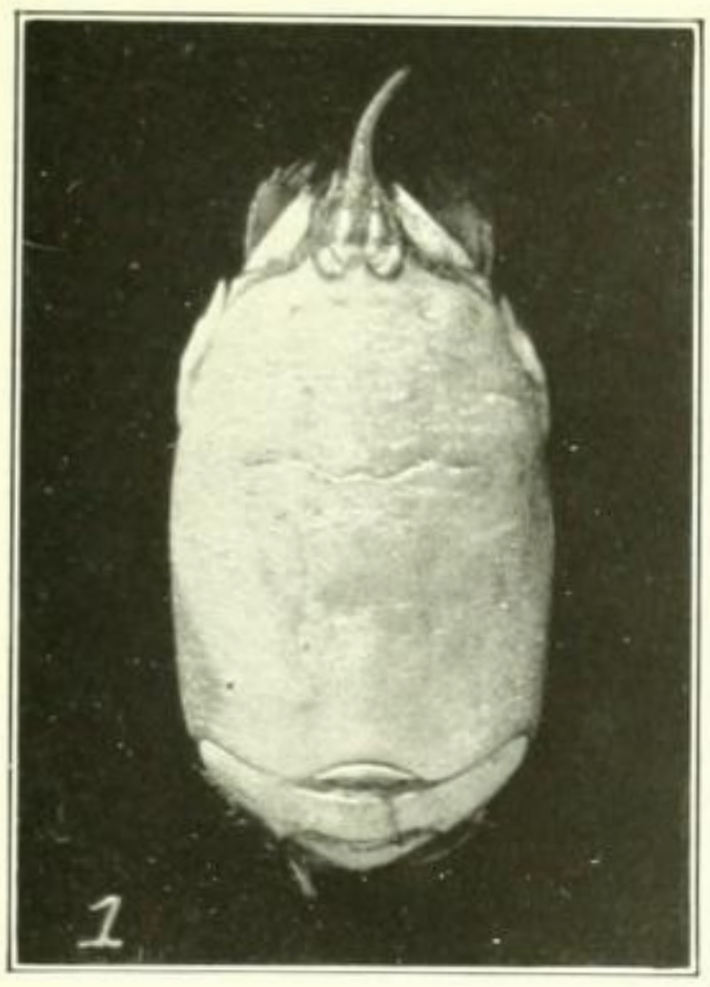
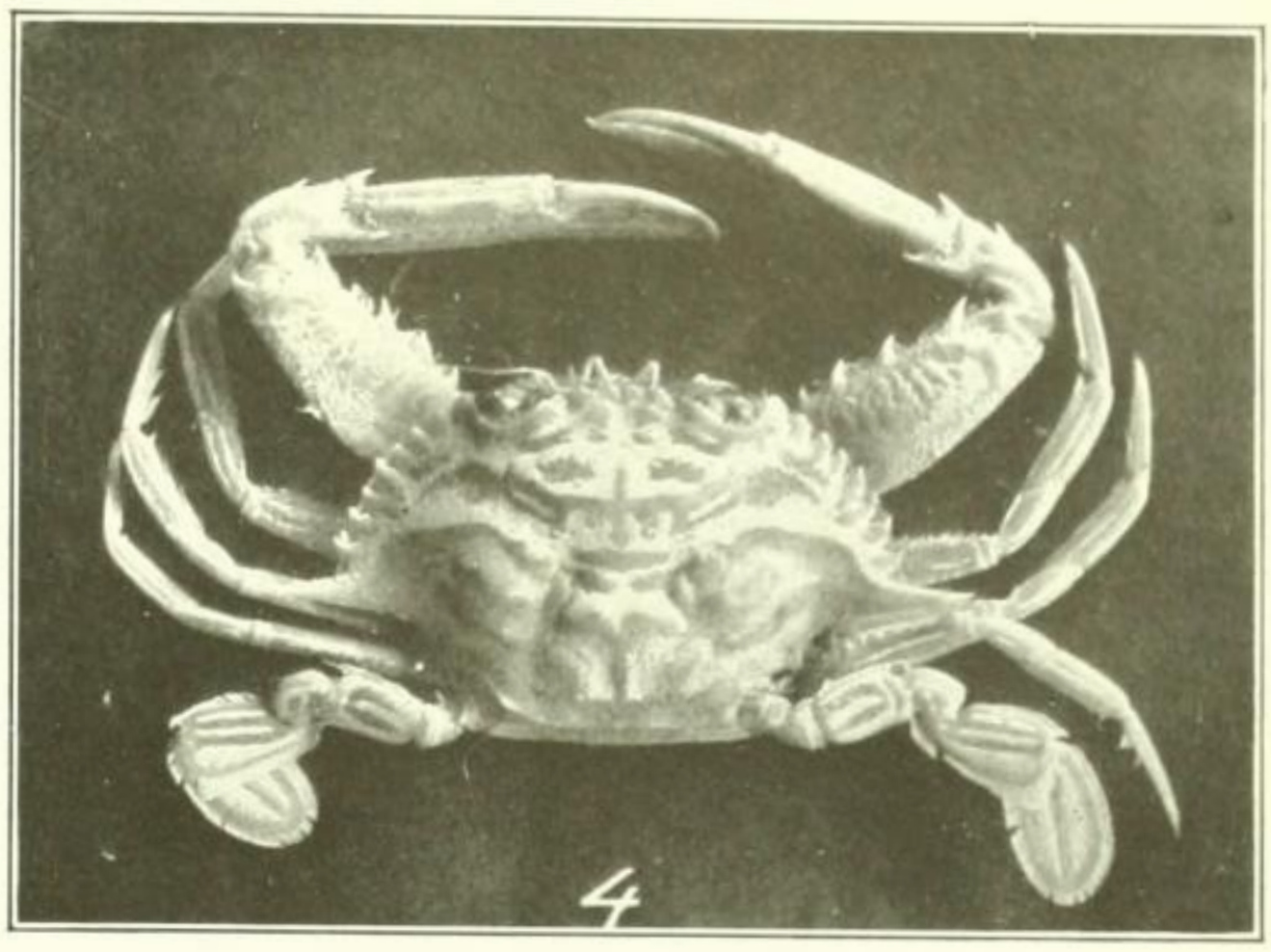


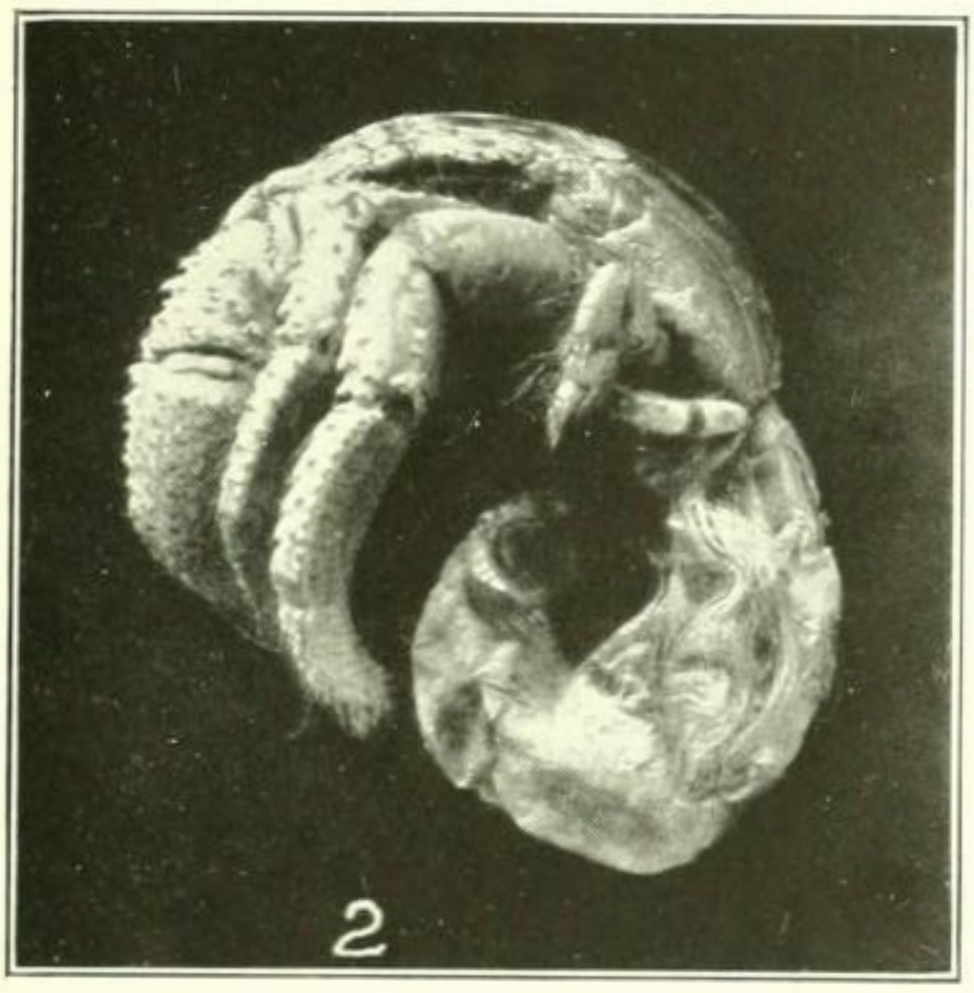
3

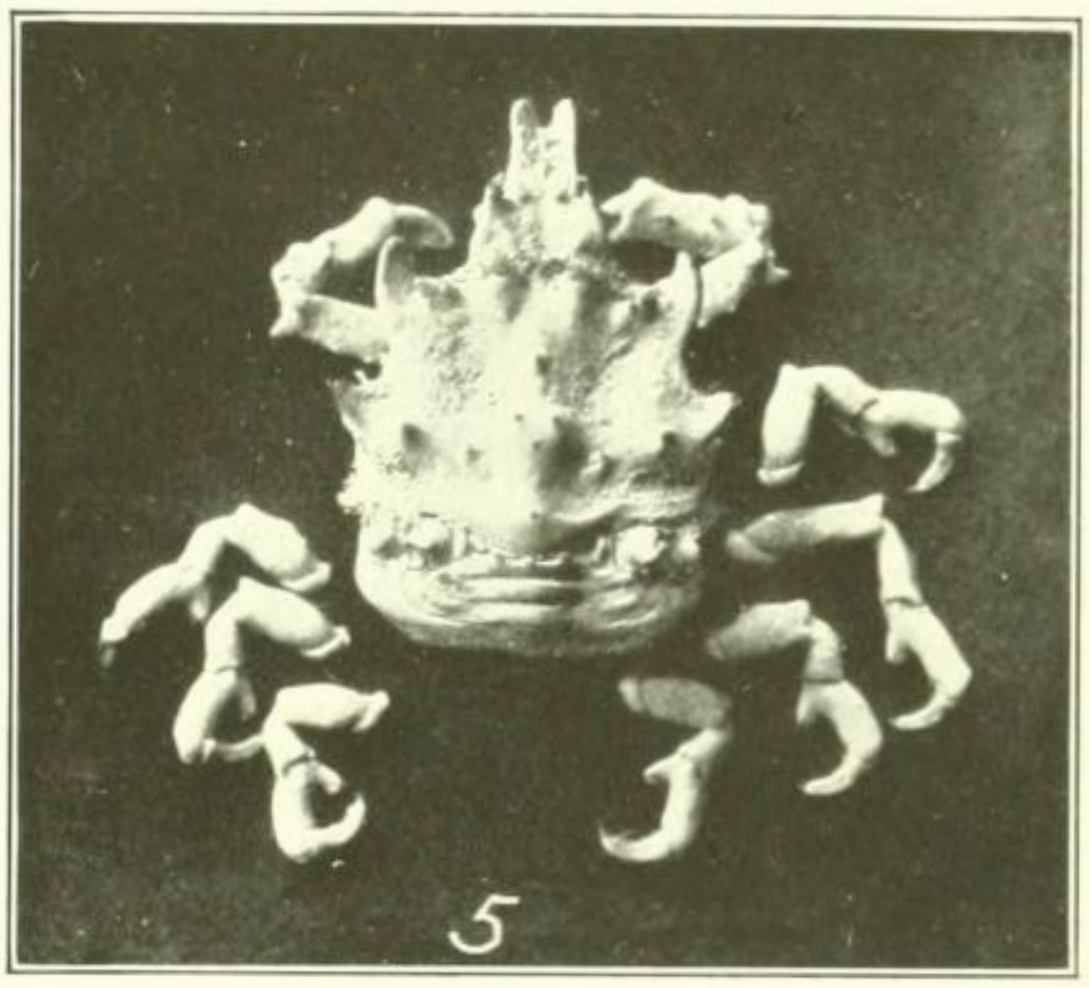
FIG. 1.—PAGURUS BENEDICTI.
FIG. 2.—SPEOCARCINUS OSTREARICOLA.
FIG. 3.—UCA PRINCEPS.
FIG. 4.—DROMIDIA SARRABUREI.
FIG. 5.—PETROLISTHES SPINIFRONS.
FIG. 6.—DISSODACTYLUS NITIDUS.

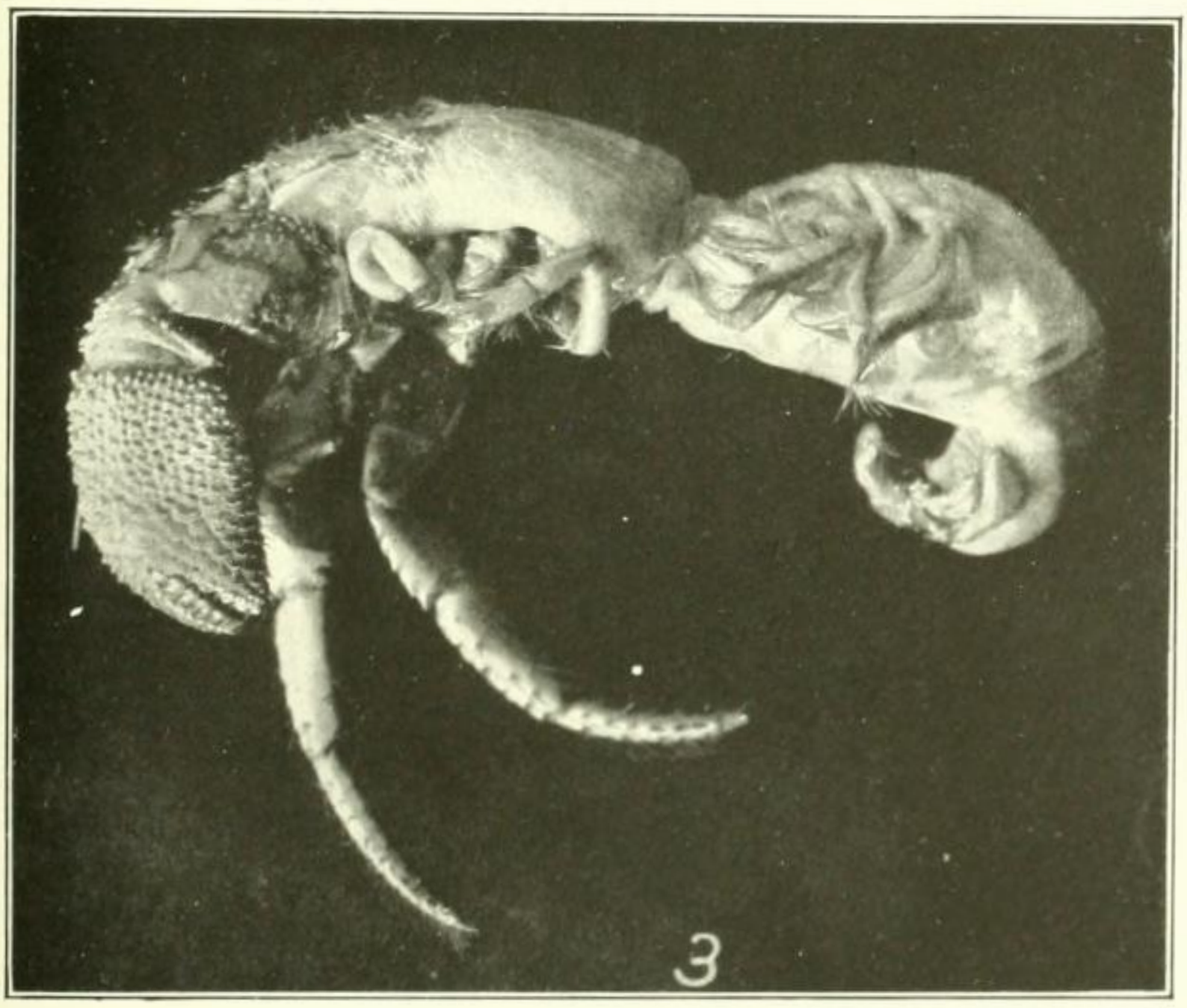
FOR EXPLANATION OF PLATE SEE PAGE 620.











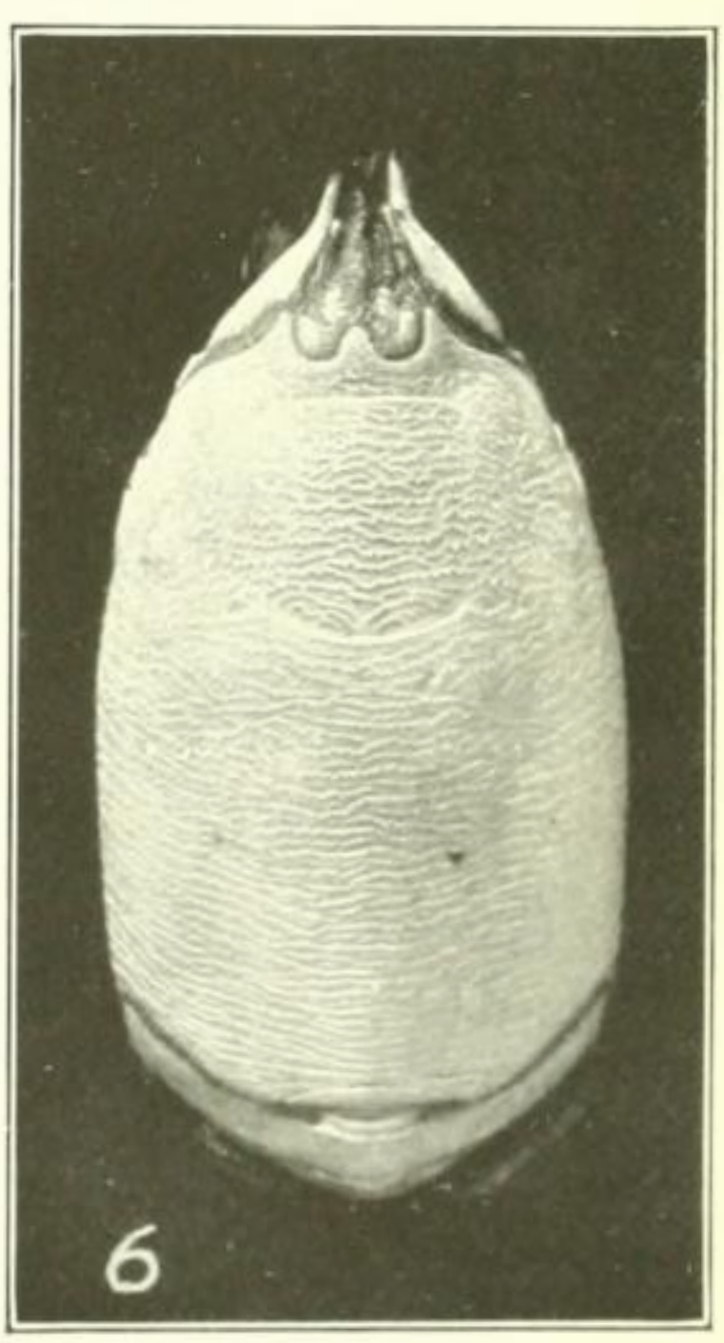
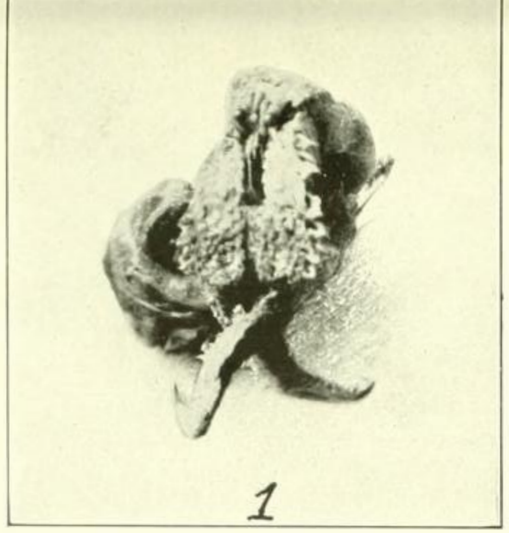
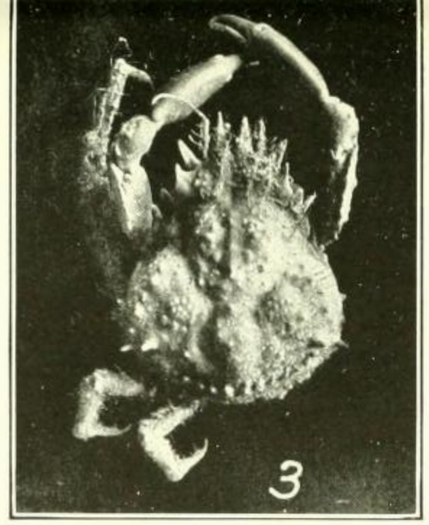
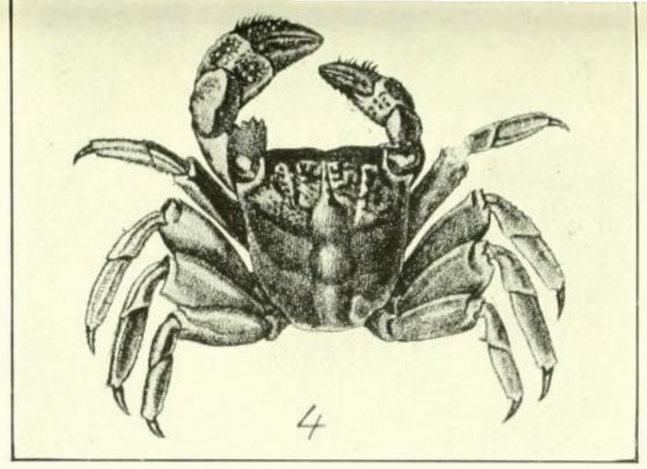


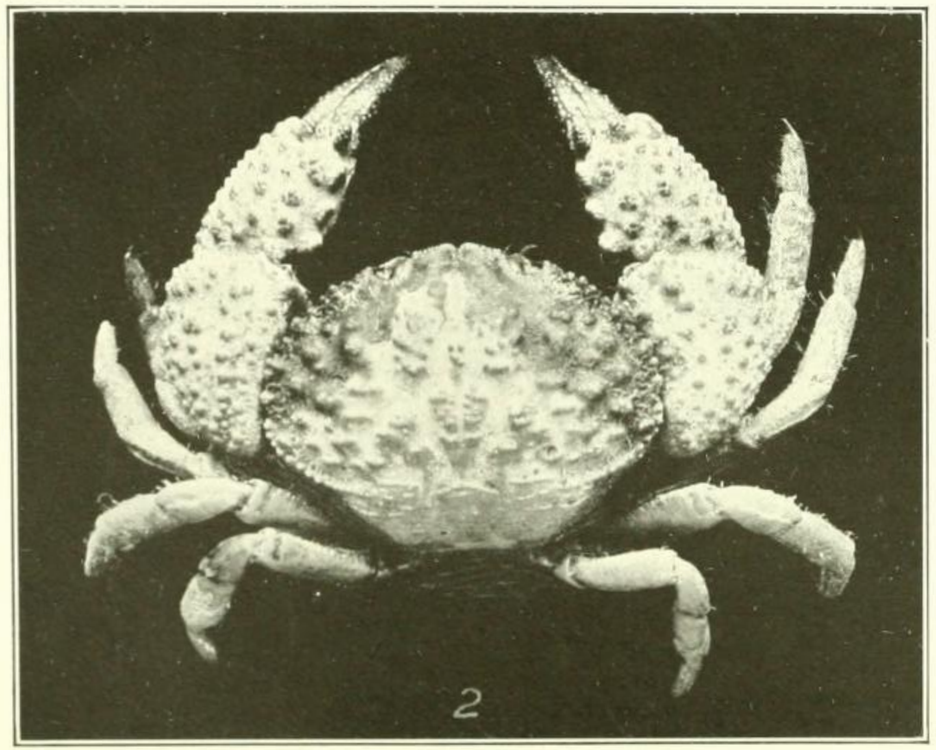
FIG. 1.—EMERITA ANALOGA.
FIG. 2.—DARDANUS SINISTRIPES.
FIG. 3.—DARDANUS IMBRICATUS.
FIG. 4.—PORTUNUS (PORTUNUS) ACUMINATUS.
FIG. 5.—EUPLEURODON TRIFURCATUS.
FIG. 6.—EMERITA EMERITA.

FOR EXPLANATION OF PLATE SEE PAGE 620.









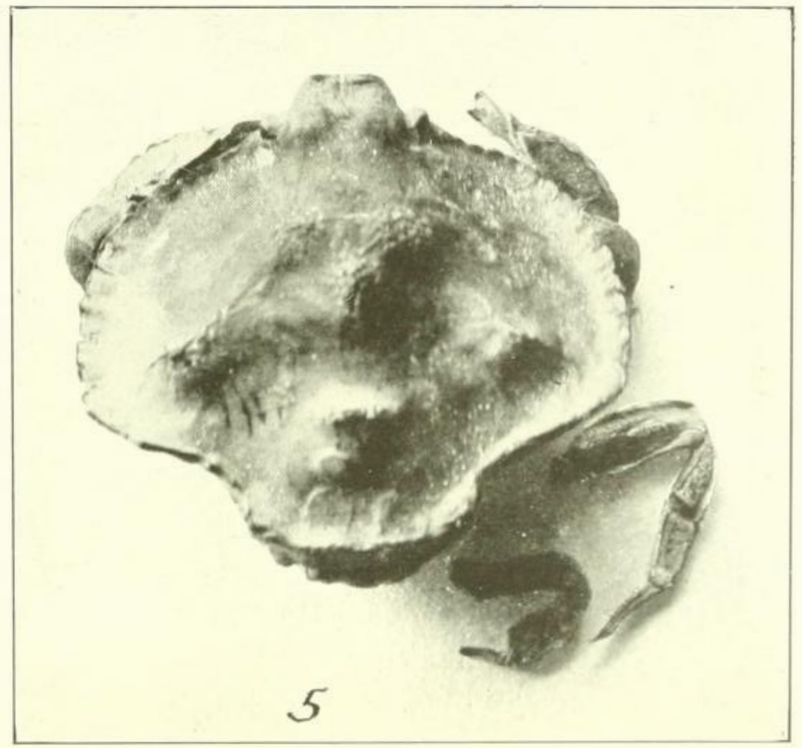
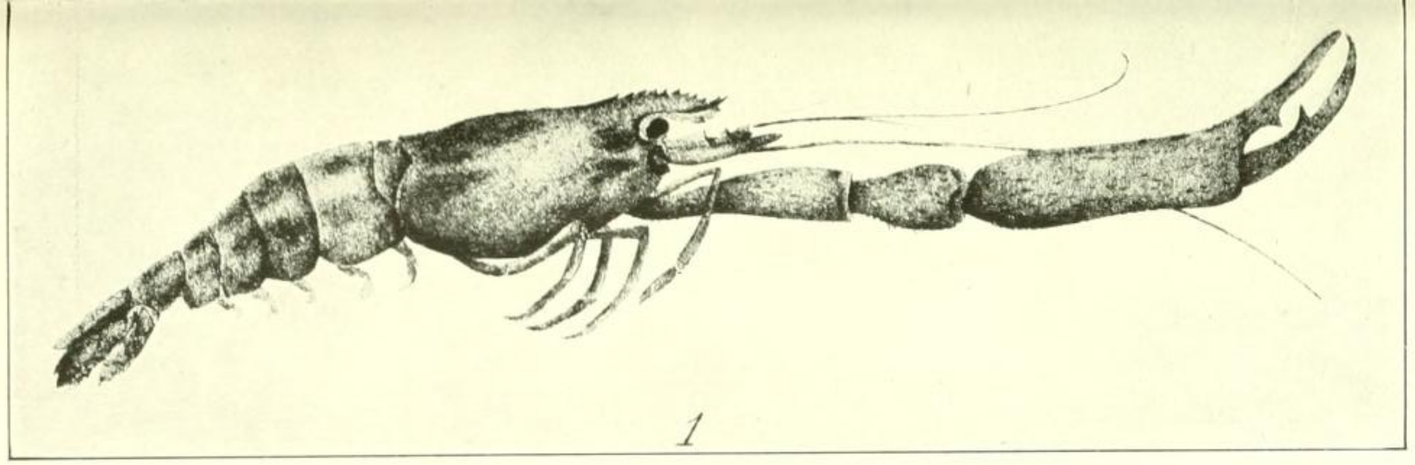


FIG. 1.—PAGURISTES TOMENTOSUS. FIG. 2.—PILUMNOIDES PERLATUS. FIG. 3.—MICROPHRYS PLATYSOMA.
FIG. 4.—ARATUS PISONI. FIG. 5.—HEPATELLA AMICA.

FOR EXPLANATION OF PLATE SEE PAGE 620



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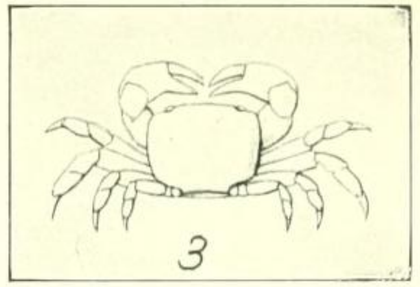

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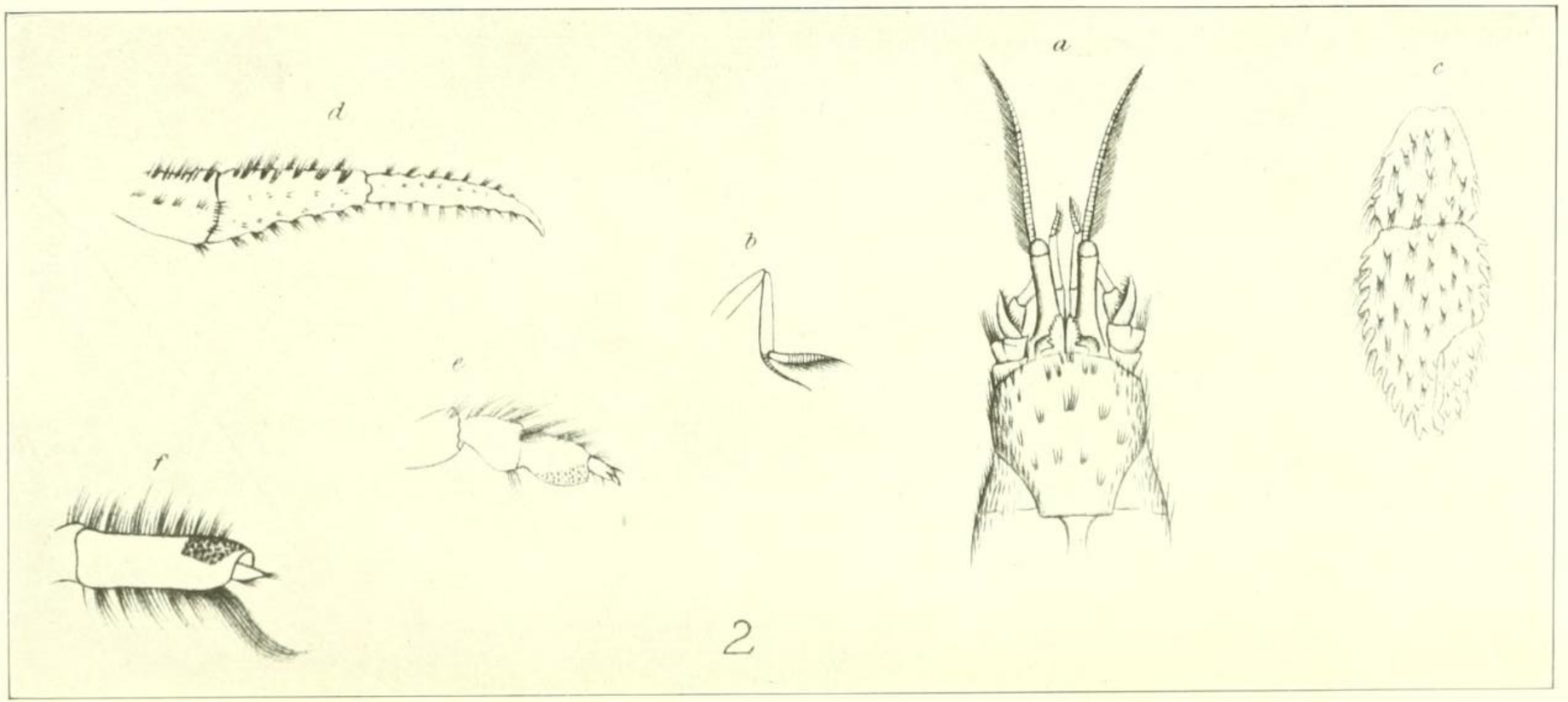


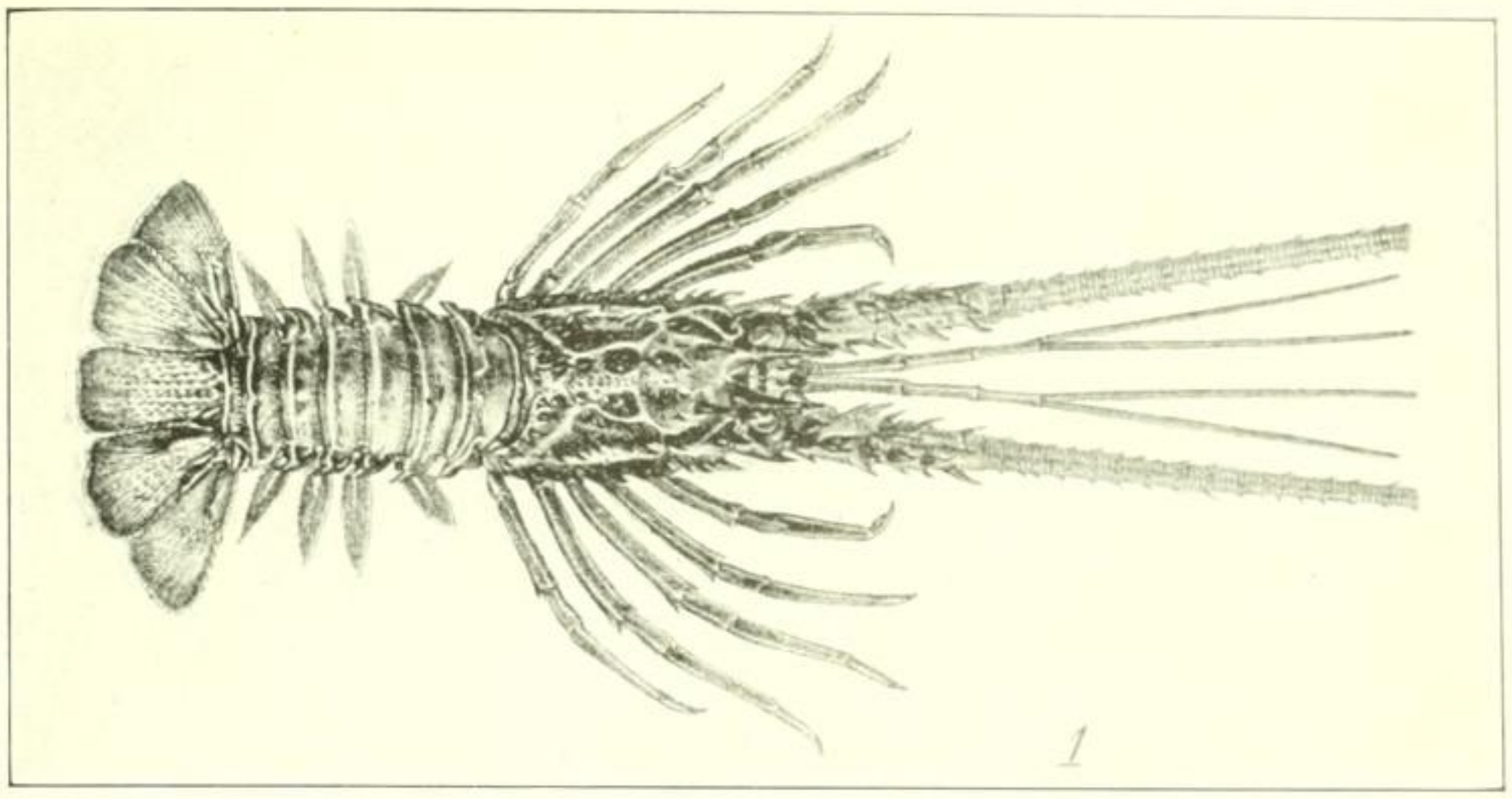
2

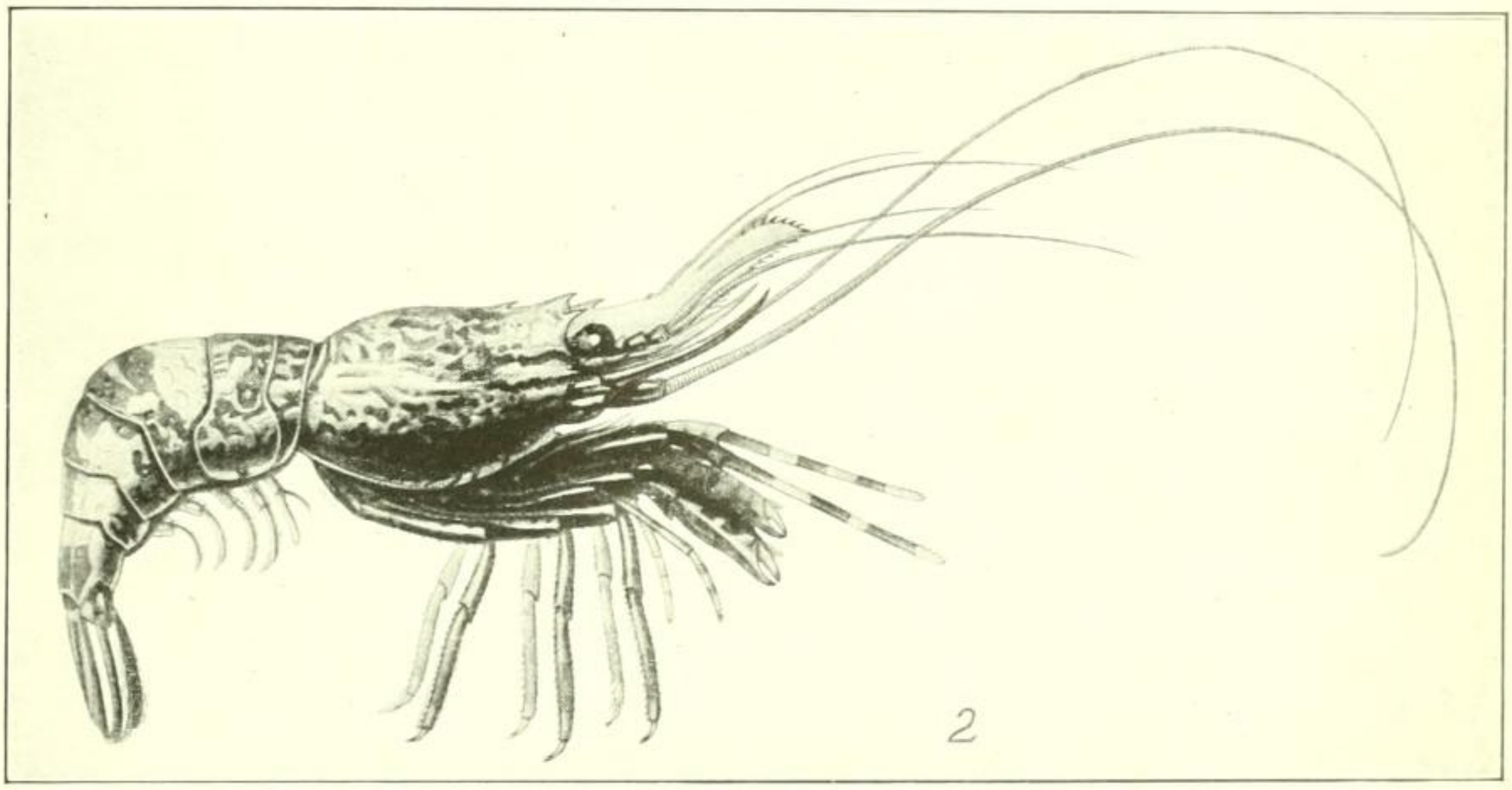
FIG. 1.—MACROBRACHIUM JAMAICENSE.

FIG. 2.—PAGURISTES HIRTUS.

FIG. 3.—PINNOTHERELIA LÆVIGATA.

FOR EXPLANATION OF PLATE SEE PAGE 620.





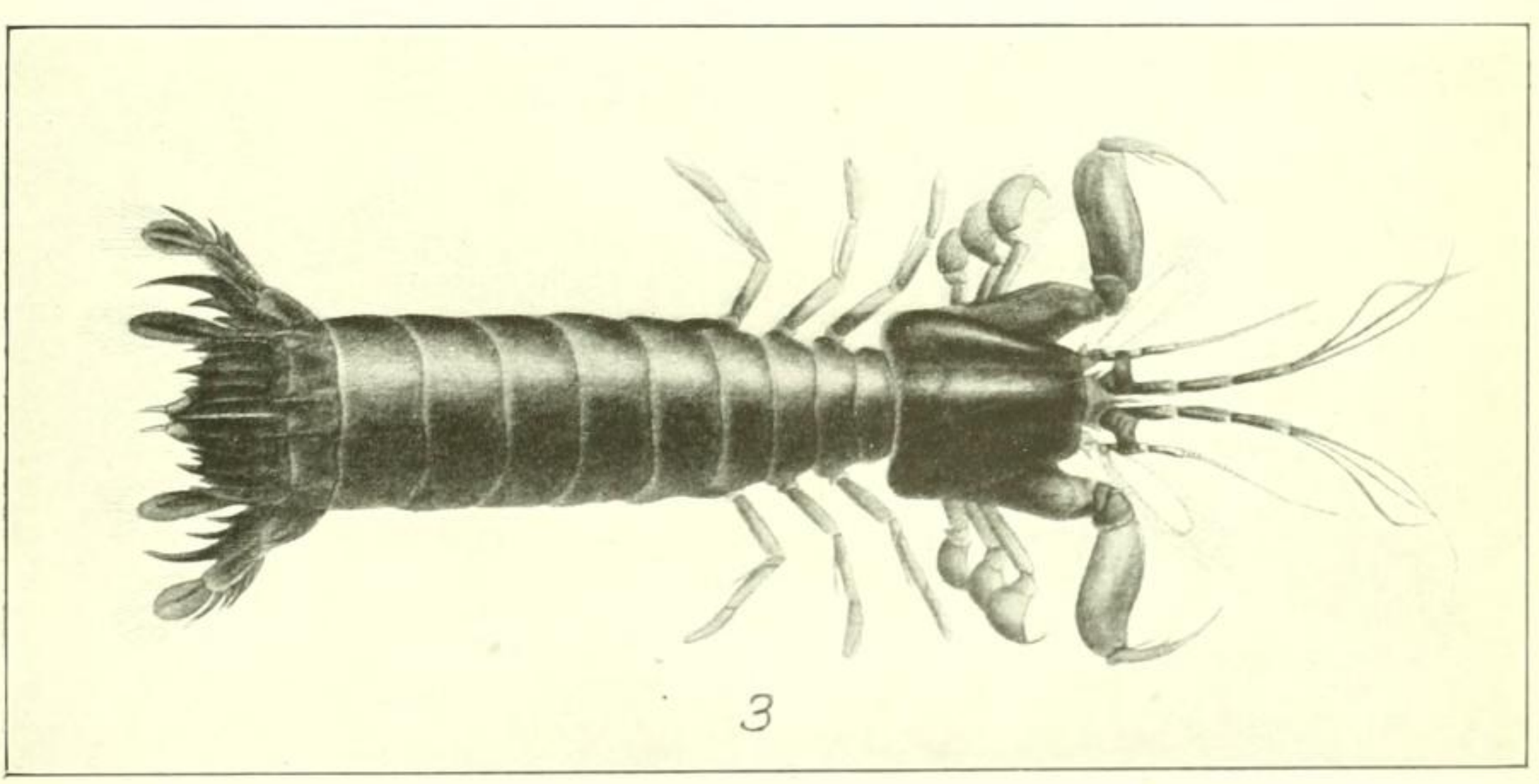
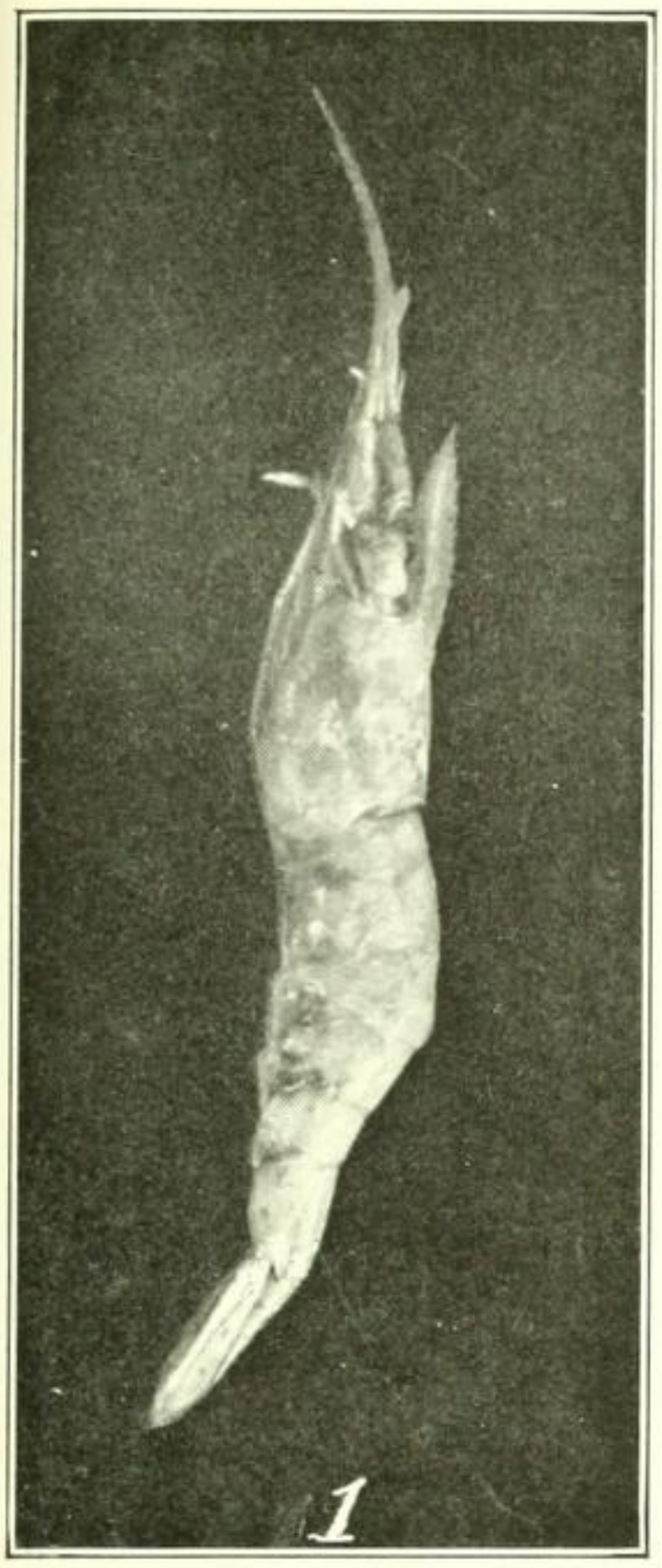


FIG. 1.—PANULIRUS ORNATUS.
FIG. 2.—RHYNCHOCINETES TYPUS.
FIG. 3.—PSEUDOSQUILLA LESSONII.

FOR EXPLANATION OF PLATE SEE PAGE 620.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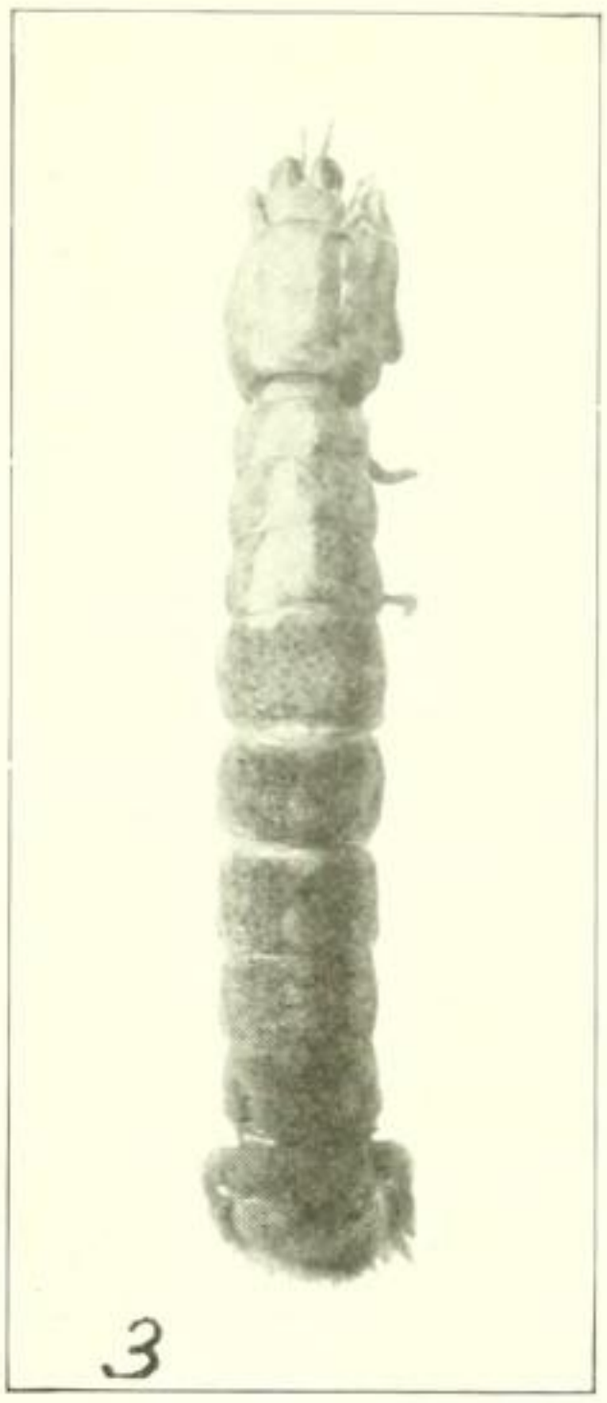
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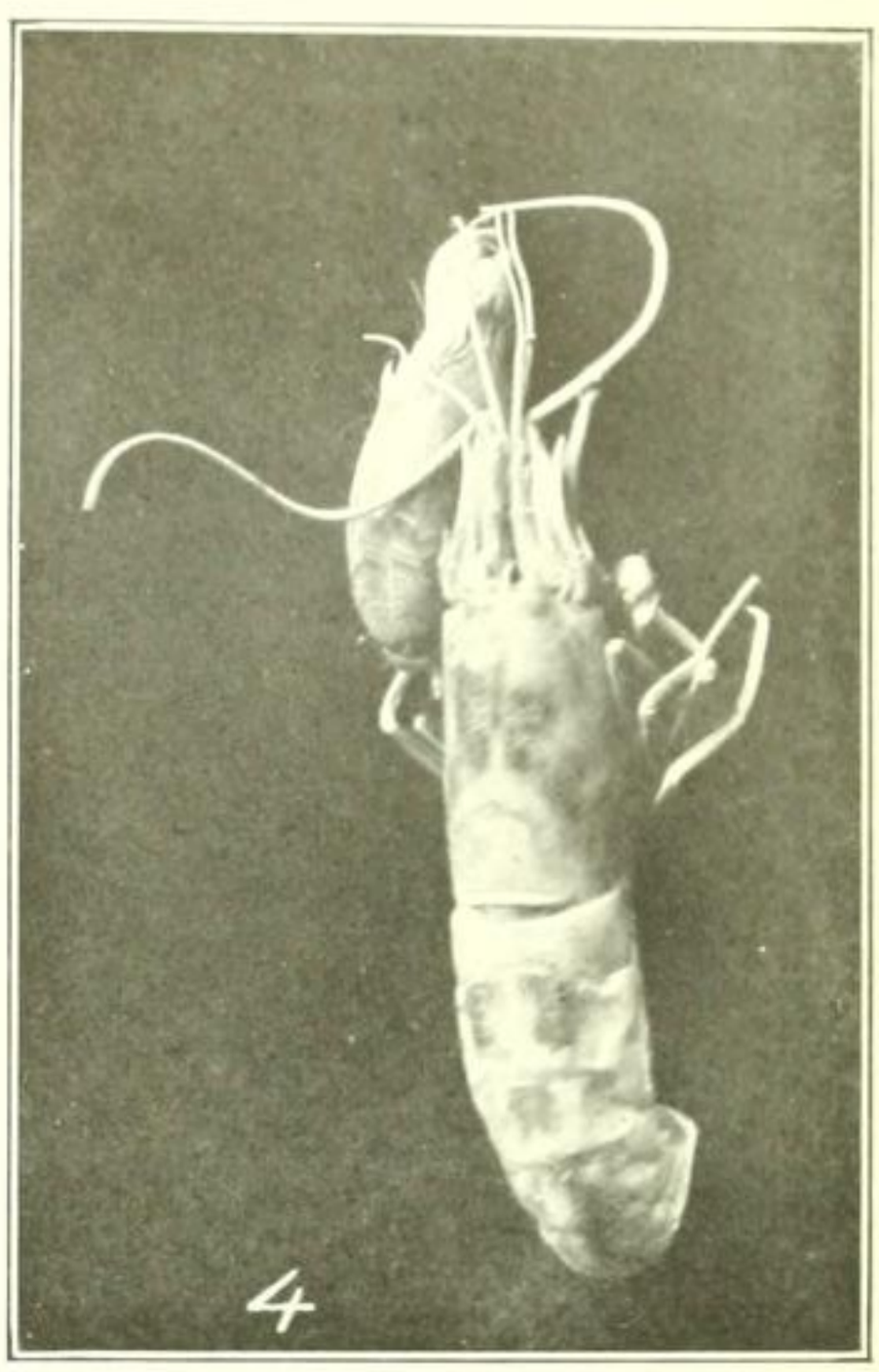
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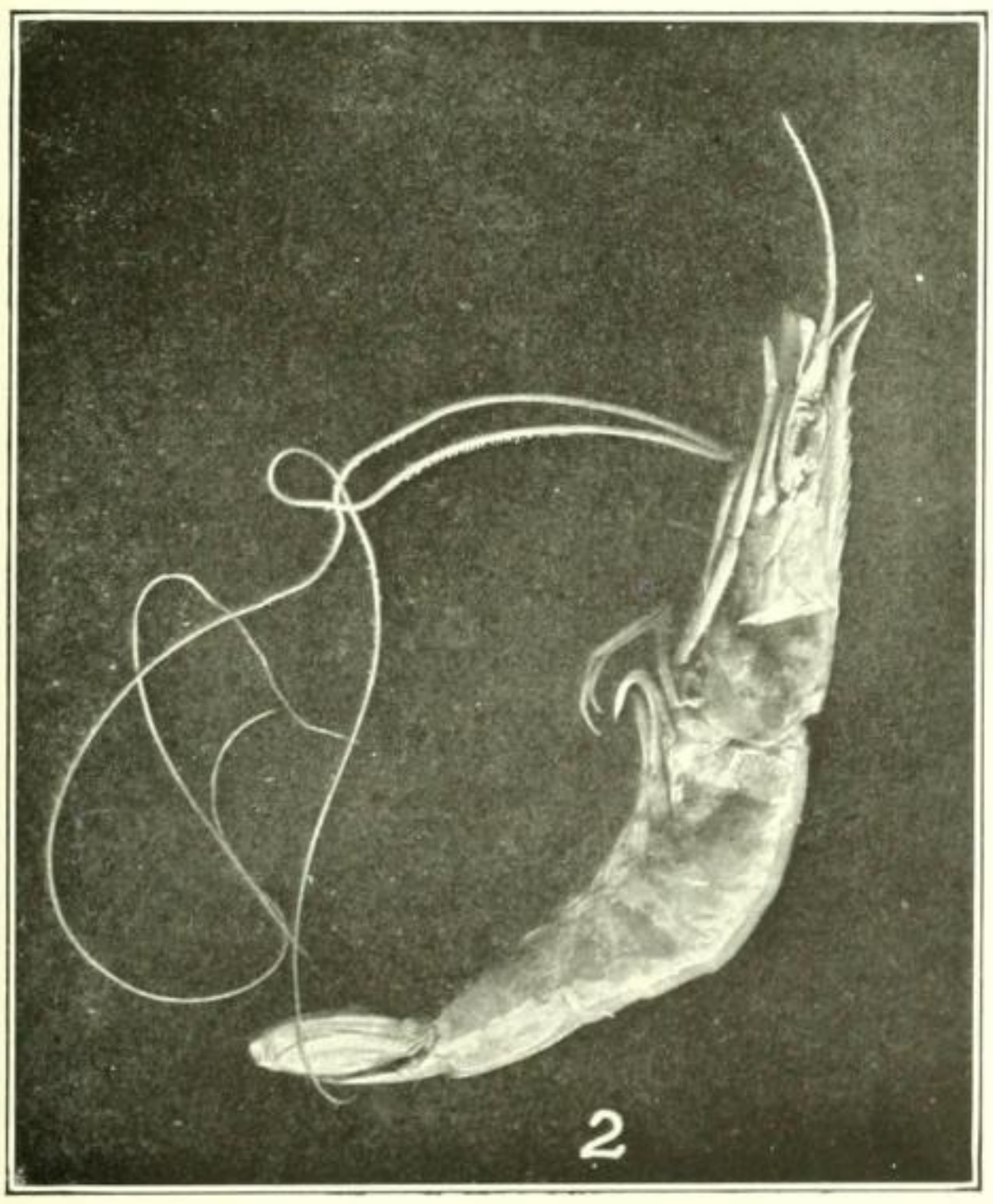
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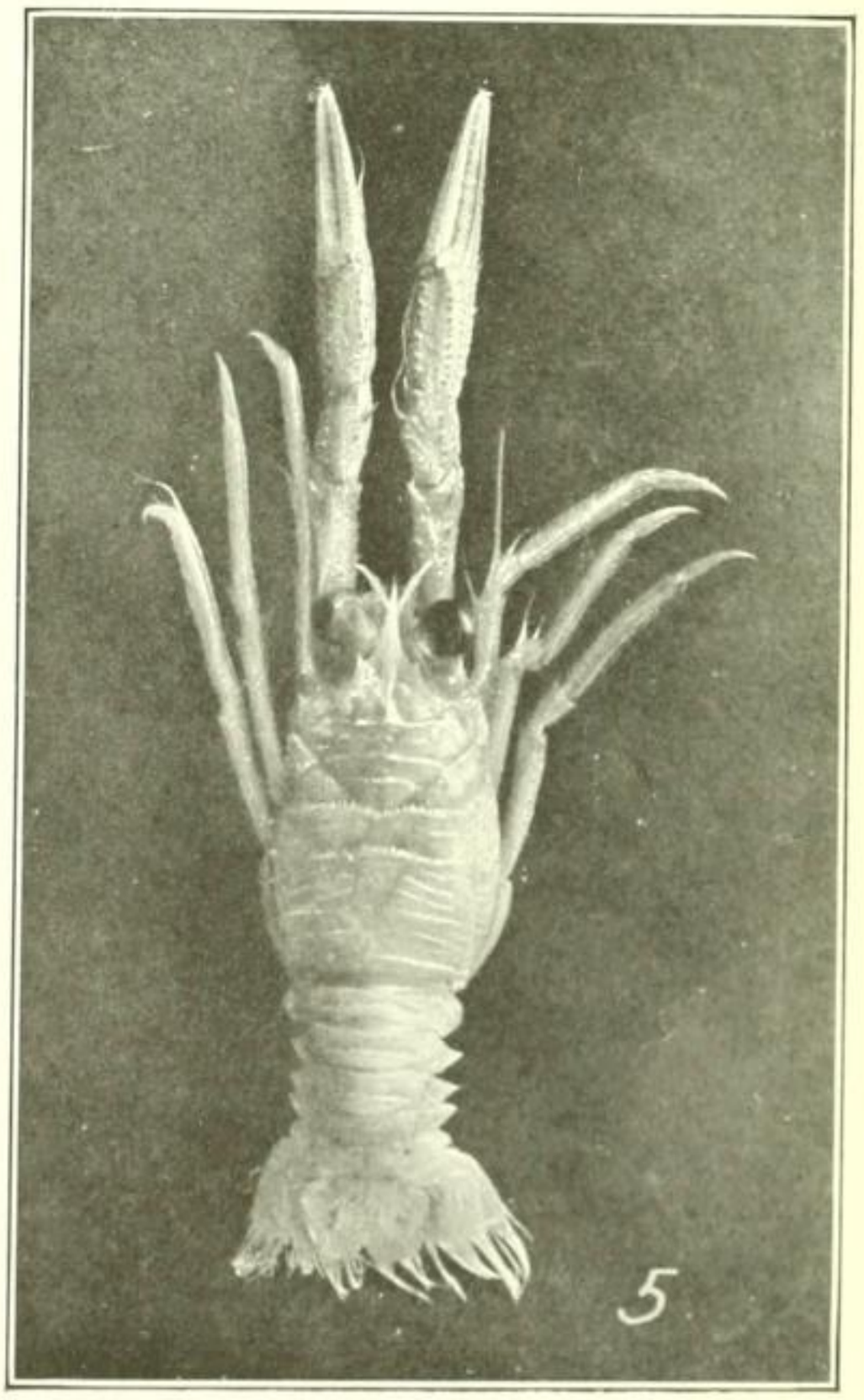

5

FIG. 1.—PALÆMON RITTERI. FIG. 2.—PENEUS STYLIROSTRIS.
FIG. 3.—LYSIOSQUILLA DECEMSPINOSA. FIG. 4.—SYNALPHEUS TOWNSENDI PERUVIANUS.
FIG. 5.—MUNIDA COKERI.

FOR EXPLANATION OF PLATE SEE PAGE 620.

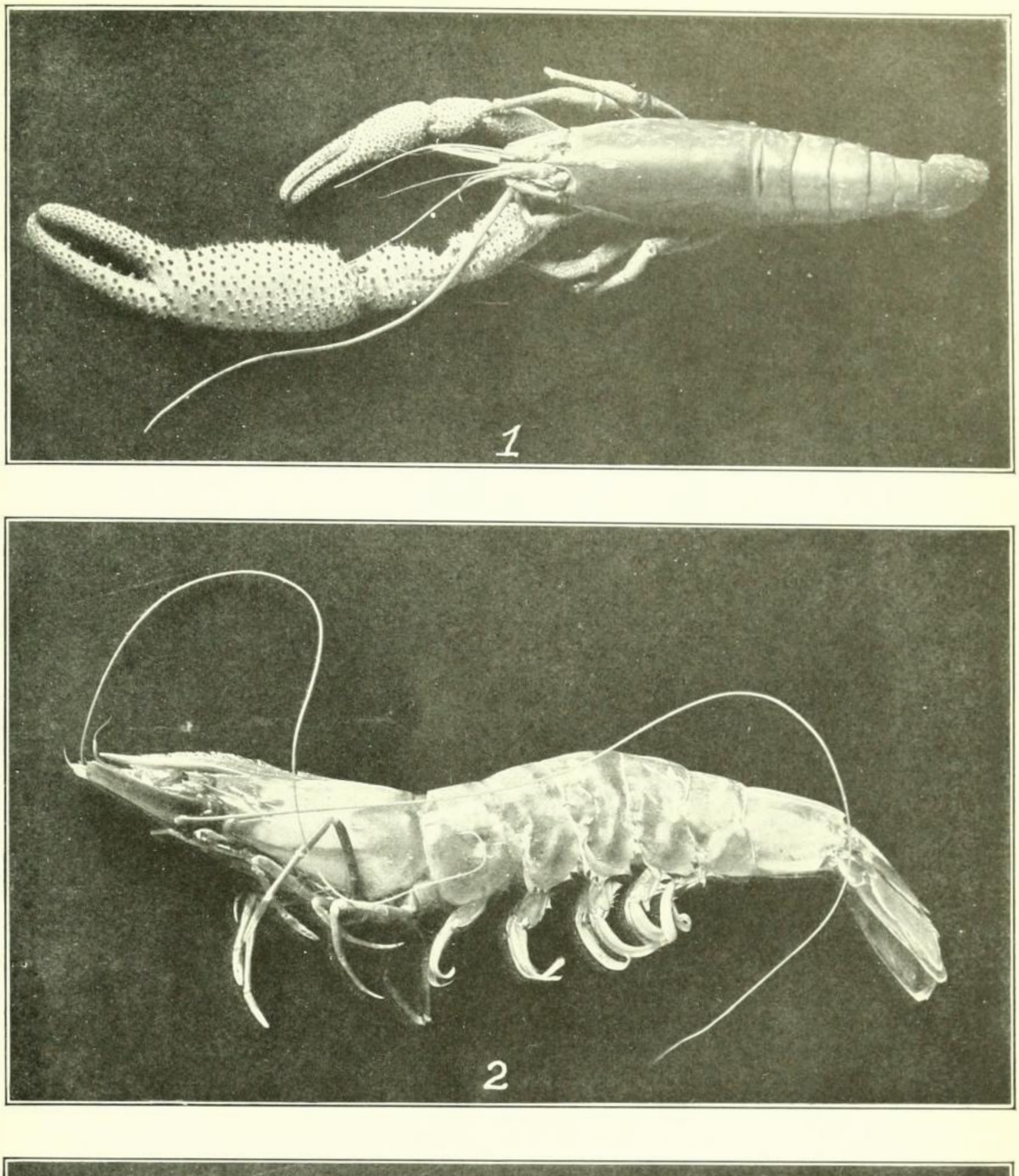
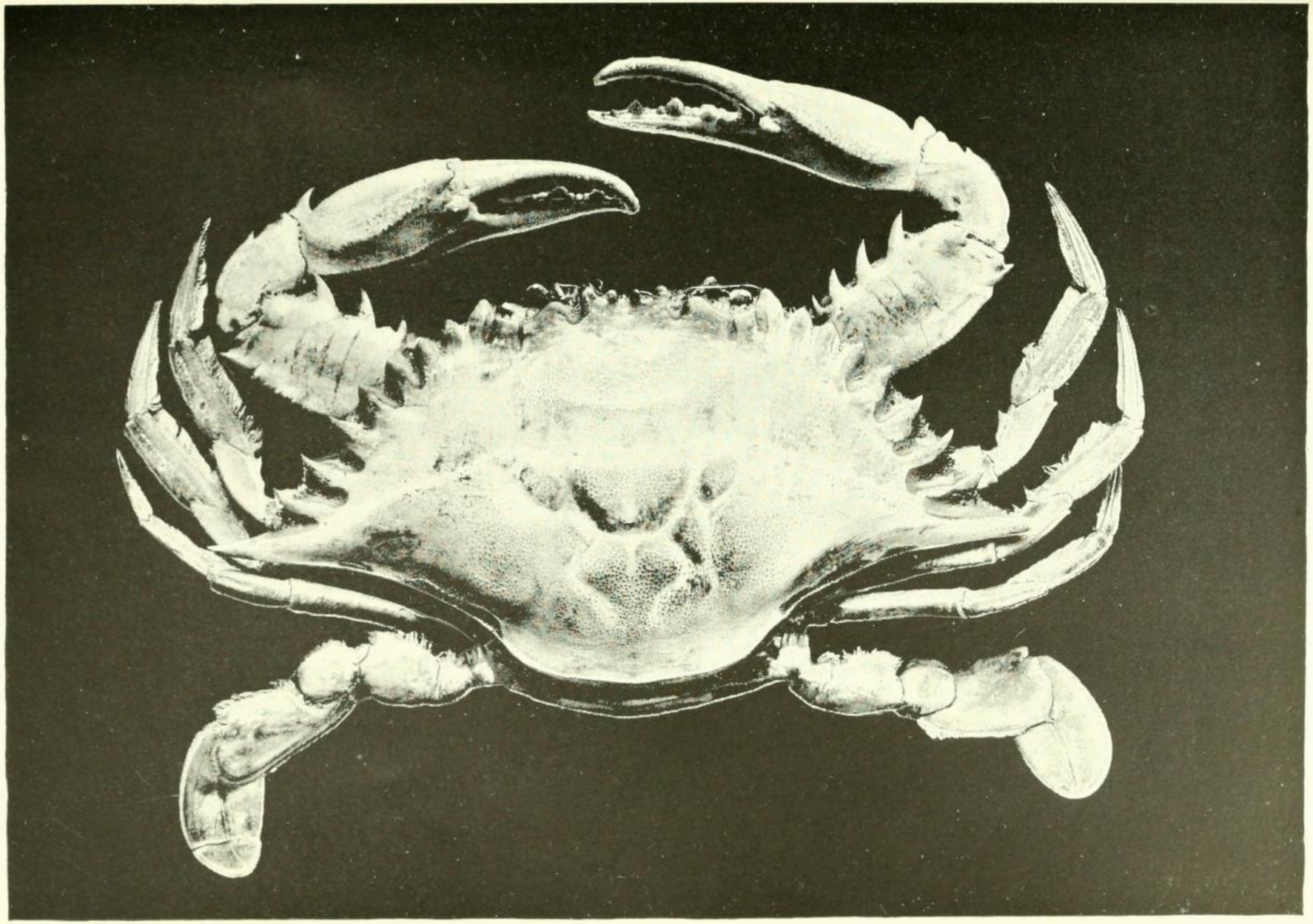


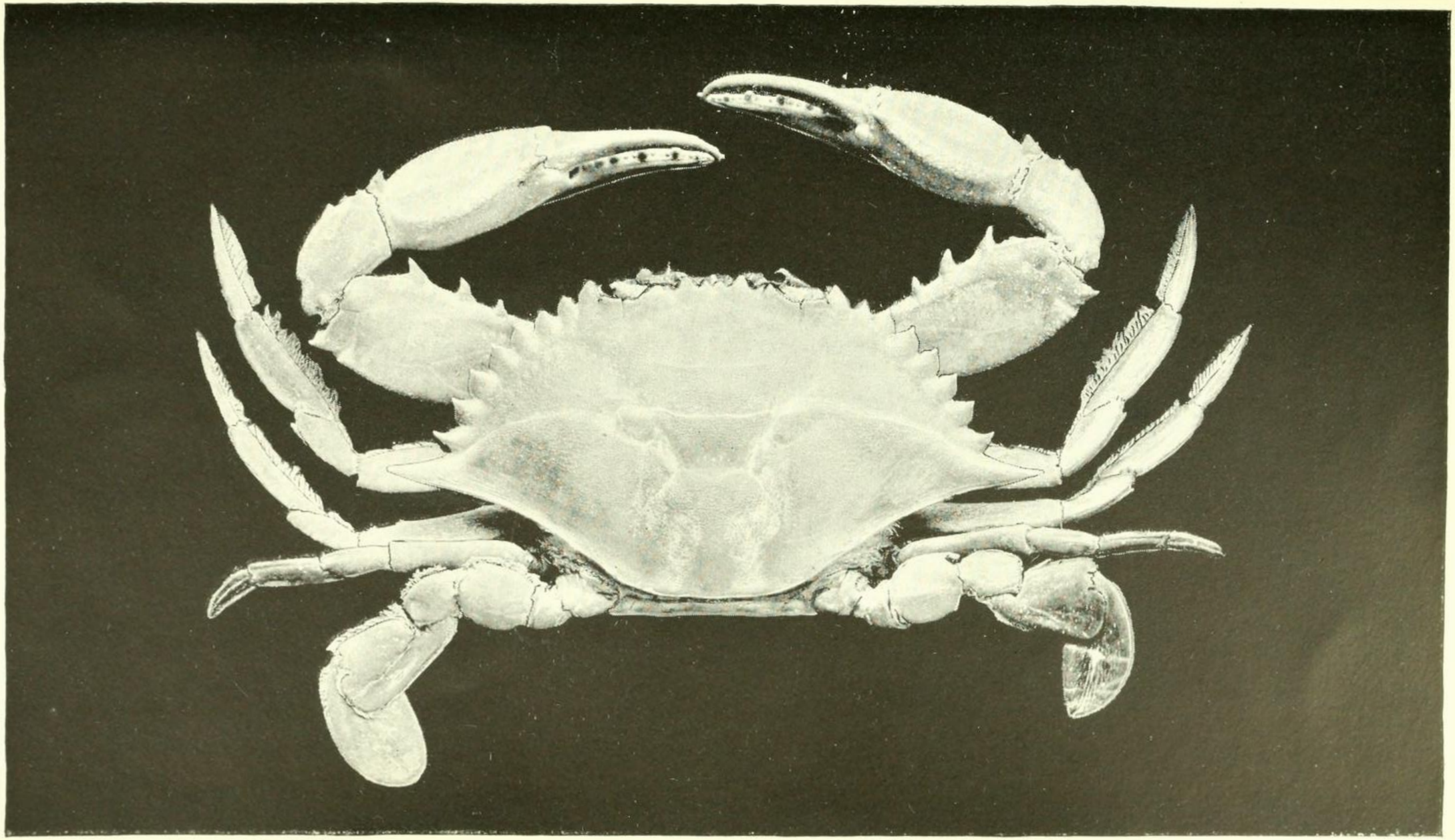
FIG. 1.—BITHYNIS CÆMENTARIUS GAUDICHAUDII.
FIG. 2.—PENEUS BREVIROSTRIS.
FIG. 3.—CHLORIDELLA DUBIA.

FOR EXPLANATION OF PLATE SEE PAGE 620.



CALLINECTES TOXOTES.

FOR EXPLANATION OF PLATE SEE PAGE 620.



CALLINECTES ARCUATUS.

FOR EXPLANATION OF PLATE SEE PAGE 620.