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REPORTS ON THE CRINOIDS, OPHIURANS, BRACHYURA, TANIDACEA AND ISOPODA, AMPHIPODS, & ECHINOIDEA *of the Barbados-Antigua Expedition of 1918*

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REPORT ON THE BRACHYURA

Collected by the Barbados-Antigua Expedition from the University of Iowa in 1918

MARY J. RATHBUN

Associate in Zoology, U. S. National Museum

INTRODUCTION

Hughes in his "Natural History of Barbados", 1750,[1] enumerates fifteen kinds of crabs, but the descriptions are so brief and the names so trivial that it is impossible to determine most of the species with any great degree of certainty. Only two of the brachyuran crabs are figured; one, the Horned Crab (pl. XXV, fig. 3) is an undoubted *Stenocionops furcata*, the other, the Lazy Crab, (pl. XXV, fig. 1) is a composite, having the chelipeds and ambulatory legs of *Mithrax spinosissimus* attached to the body of a Parthenopid crab, *Daldorfia horrida* (= *Parthenope horrida* of authors), an Indo-Pacific species.

From the dredgings of the U. S. Coast Survey steamers "Blake" and "Hassler", A. Milne Edwards[1] in 1880 published a list which includes thirty-eight species of brachyuran crabs from the waters about Barbados. This is supplemented by the later report (1902) on the Oxystomes of the same collection by Milne Edwards and Bouvier,[1] which adds three species to the earlier list.

The present expedition obtained ninety-three species of brachyurans of which only one species is found to be undescribed. The range of twenty-nine species is extended by their capture at Barbados.

LIST OF SPECIES

Tribe ***Brachyura***

Subtribe ***Oxystomata***

Family **Dromiidæ**

DROMIA ERYTHROPUS (George Edwards)

Rathbun, Ann. Inst. Jamaica, vol. I, 1897, p. 39.

[1] See bibliography on page 89.

Carlisle Bay, Barbados; in fish pot; 1 ♀.

Brought up by diver off Pelican Island, Barbados; 1 ♀ ovigerous.

DROMIDIA ANTILLENSIS Stimpson

Rathbun, Ann. Inst. Jamaica, vol. I, 1897, p. 39.

Barbados; 1 ♀ ovigerous.

Family **Dorippidæ**

CYCLODORIPPE PERPUSILLA (Rathbun)

Clythrocerus perpusillus Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 90, text-fig. 4.

One mile S. W. of Pelican Island, Barbados; 38 fathoms; bottom of fine coral fragments; May 13; sta. 1; 1 ♀, the same size as the type.

Known only from the type specimen, off Vieques.

Family **Raninidæ**

RANINOIDES LŒVIS (Latreille)

Ranina loevis Latreille, Encyc. Méth., Entom., vol. X, 1825, p. 268.

Raninoides levis Milne Edwards, Hist. Nat. Crust., vol. II, 1837, p. 197.

Barbados; W. by N. of Pelican Island 2¾ miles and drifting off shore; 107 fathoms; bottom of fine sand; tangles; May 16; sta. 10; 1 small ♂, 1 young.

In the young specimen, carapace 6 mm. long, the supra-orbital margin between the two fissures is not produced in a spine but is obliquely truncate.

Family **Calappidæ**

CALAPPA ANGUSTA A. Milne Edwards

Bull. M. C. Z., vol. VIII, 1880, p. 18.

Barbados; Lazaretto E. by N. ½ N., Pelican Island S. E.; bottom of fine sand; June 7; sta. 88; 1 juv.

Taken at Barbados by the "Hassler," 100 fathoms, and by the "Blake," 103 fathoms.

CALAPPA GALLUS (Herbst)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 85.

Pelican Island, Barbados; in fish pot; 1 ♀.

CYCLOES BAIRDII Stimpson

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 85.

English Harbour, Antigua; 1 ♀, 10.4 mm. long.

One mile S. W. of Pelican Island, Barbados; 38 fathoms; bottom of fine coral fragments; May 13; sta. 1; 1 juv.

In the West Indies, this species seems not to have been reported south of Guadeloupe; although it occurs in the Pacific at Panama.

Family **Leucosiidæ**

EBALIA STIMPSONII A. Milne Edwards

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 87.

Barbados; Cable Station E. S. by E., Paynes Bay Church N. E., off shore ¾ mile; 35–75 fathoms; bottom alternate sand and rocks; sta. 78; 1 ♂.

Described from off Barbados, 7 to 50 fathoms, "Blake."

ILIACANTHA SUBGLOBOSA Stimpson

Bull. M. C. Z., vol. II, 1871, p. 155.

W. by N. of Pelican Island, Barbados, 2 miles; 75–80 fathoms; sand bottom; sta. 3; 1 ♀ juv.

S. of St. Mathias Church, Barbados, 1 mile; 60 fathoms; bottom of coarse sand; May 20; sta. 21; 1 ♂.

W. by N. of Telegraph Station, Barbados, ½ mile or more off shore, about edge of drop off; 50–70 fathoms; bottom rocky; tangles; June 1; sta. 66 and 67; 2 ♀ juv.

Dredged by the "Blake" at Barbados, 56 to 94 fathoms.

Subtribe ***Brachygnatha***

Superfamily *Brachyrhyncha*

Family **Portunidæ**

PORTUNUS (PORTUNUS) SULCATUS (A. Milne Edwards)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 45.

English Harbour, Antigua; by electric light; July; 1 juv., 3.2 mm. long.

Bathsheba, Barbados; 1 ♂ juv.

Pelican Island, Barbados; tide pool; May 13; 1 ♂ juv.

PORTUNUS (ACHELOUS) ORDWAYI (Stimpson)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 46.

English Harbour, Antigua; electric light; July, 1918; 1 juv.

CALLINECTES ORNATUS Ordway

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 48.

Barbados; 1 adult ♀.

CRONIUS RUBER (Lamarck)

Charybdella rubra Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 51.

Antigua; 1 juv.

Family **Xanthidæ**

LIOMERA LONGIMANA A. Milne Edwards

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 25.

Barbados; May 15; 10 ♂ 9 ♀ ovig. On old coral; May 31; 8 ♂ 15 ♀. On old coral heads; June 4; 12 ♂ 11 ♀ (1 ovig.).

Needham Point, Barbados; May 18; 3 ♂ 1 ♀.

One mile S. of sta. 19, off Needham Point; 84 fathoms; rocky bottom; sta. 20; 2 ♂ 4 ♀.

Okra Reef, Barbados; May 13; 35 ♂ 44 ♀ (35 ovig.) 8 juv.

Not previously noted south of Guadeloupe.

LIOMERA DISPAR (Stimpson)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 25.

Pillars of Hercules, Antigua; 1 ♀.

Barbados; May 15; 6 ♂ 21 ♀ (8 ovig.). On old coral, May 31; 3 ♂ 13 ♀ 2 juv. On old coral heads; June 4; 4 ♂ 4 ♀.

One mile S. of sta. 19, off Needham Point, Barbados; 84 fathoms; rocky bottom; sta. 20; 2 ♂ 4 ♀ (2 ovig.).

Okra Reef, Barbados; May 13; 3 ♂ 14 ♀ (7 ovig.).

Not previously recorded south of Porto Rico.

PLATYPODIA SPECTABILIS (Herbst)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 26.

Needham's Point, Barbados; May 18; 1 ♂ 1 ♀ ovig.

LEPTODIUS FLORIDANUS (Gibbes)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 27.

Pillars of Hercules, Antigua; 1 ♀.

Barbados; 8 ♂ 3 ♀ ovig.

Pelican Island, Barbados; tide pools; 2 ♂. May 11; 3 ♂. May 13; 4 ♀ (3 ovig.). Shallow; 1 ♂ 1 ♀ juv.

Okra Reef, Barbados; May 13; 1 juv.

XANTHODIUS PARVULUS (Fabricius)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 27.

Pelican Island, Barbados; shallow; 2 ♂. In tide pool; May 11; 1 ♂ juv. 1 ♀.

Barbados; 1 ♂.

No label; 1 ♂.

CYCLOXANTHOPS DENTICULATUS (White)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 27.

Pillars of Hercules, Antigua; 1 ♂ juv.

Pelican Island, Barbados; tide pool; 1 ♂.

Bathsheba, Barbados; 2 juv.

PANOPEUS HERBSTII Milne Edwards

Eupanopeus herbstii Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 28.

English Harbour, Antigua; 1 ♂ juv.

Pillars of Hercules, Antigua; 1 ♂ thin shell, 2 juv.

Barbados; 2 ♂ 1 ♀.

PANOPEUS OCCIDENTALIS Saussure

Eupanopeus occidentalis Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 29.

Pillars of Hercules, Antigua; 1 ♀.

PANOPEUS AMERICANUS Saussure

Eupanopeus americanus Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 29.

Pillars of Hercules, Antigua; 1 ♂ small.

PANOPEUS HARTTII Smith

Eupanopeus harttii Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 29.

Pillars of Hercules, Antigua; 1 ♀.

Pelican Island, Barbados; shallow; 1 ♂.

EURYPANOPEUS ABBREVIATUS (Stimpson)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 30.

Pillars of Hercules, Antigua; 1 ♂ 1 ♀ 1 juv.

HEXAPANOPEUS HEMPHILLII (Benedict and Rathbun)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 31.

Barbados; from old coral head; June 4; 1 ♂ of medium size, identified with some doubt, as both sides of the body are infested with an isopod parasite which has so distorted the carapace that the lateral teeth are abnormal and unlike on the two sides.

Not before found south of St. Thomas and Porto Rico.

MICROPANOPE LOBIFRONS A. Milne Edwards

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 32.

S. W. of Pelican Island, Barbados, 1 mile; 38 fathoms; bottom of fine coral fragments; May 13; sta. 1; 2 ♂ 2 ♀.

One-half mile W. of sta. 17; 40 fathoms; bottom coarse sand; May 18; sta. 18; 1 ♀.

W. N. W. of Lazaretto, Barbados; N. N. W. of Pelican Island; 33 fathoms; bottom rocky; dredge; May 27; sta. 51; 9 ♀ (1 ovig., 3 with Rhizocephalids).

Cable station, Barbados, bears E. by S., Lazaretto, E. S. E. ½ S.; 35–60 fathoms; bottom mostly rocky, on steep slope; tangles; June 3; sta. 75; 1 ♂.

Cable station E. S. by E., Paynes Bay Church N. E., off shore ¾ mile; 35–75 fathoms; bottom alternate sand and rocks; June 3; sta. 78; 1 ♀ with a small Rhizocephalid under the abdomen.

W. by N. of Telegraph Station, Barbados; little more than a half mile off; 30–65 fathoms; bottom of rocks and sand; June 5; sta. 79; 3 ♀ (2 with a Rhizocephalid larger than the abdomen but attached under it).

Taken at Barbados by the "Blake" in 94 fathoms.

ACTAEA RUFOPUNCTATA NODOSA Stimpson

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 33.

1¼ miles due W. from white lighthouse at Needham Point, Barbados; in line with red house; 67–70 fathoms; bottom stony; May 17; sta. 11; 1 ♂ juv.

Taken at Barbados by the "Blake" in 94 fathoms.

ACTAEA SETIGERA (Milne Edwards)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 34.

Pillars of Hercules, English Harbour, Antigua; 2 ♂.

English Harbour, Antigua; 1 ♂ 1 juv.

Okra Reef, Barbados; May 13; 1 ♂ 3 juv.

Pelican Island, Barbados; 1 ♀ juv.

Needham Point, Barbados; 1 ♂ juv. May 18; 1 ♀ juv.

Barbados; 1 ♂. May 15; 1 ♂ 4 juv. From old coral head; May 31; 1 ♀ juv., 1 juv. From coral heads; June 4; 1 ♂ 1 ♀ juv.

Not before recorded from so far south.

ACTAEA BIFRONS Rathbun

Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 34.

Barbados; 1 ♂.

Shoal Bank, Barbados; 30 fathoms; bottom rough; June 12; sta. 96; 1 ♂.

Shoal Bank, about 3 miles W. of Needham Point; 20–40 fathoms; sponge bottom; sta. 101; 1 ♂.

This species has been found only off Porto Rico and Colon.

XANTHIAS NUTTING Rathbun

Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 35.

Barbados; 1 small ♂.

XANTHIAM GRANULIMANUS (Stimpson)

Plate II, figs. 2 and 3.

Rathbun, Bull. Lab. Nat. Hist. State Univ. Iowa, vol. IV, 1898, p. 271.

Barbados; from coral heads; June 4; 1 ♀ ovigerous.

Known previously from Bahamas and Cuba.

Carapace suboval, front slightly advanced, regions indicated by shallow furrows; anterior and antero-lateral regions irregularly granulated, the coarser granules forming short lines near the lateral teeth. Edge of front bow-shaped, a short median slit. Upper margin of orbit transverse and a little sinuous. Four antero-lateral teeth beside the angle of the orbit, first tooth low, remote from orbit, remaining teeth sharp-pointed, edge of orbit and teeth granulate. Lower surface of carapace densely granulate, lower margin of orbit more advanced than upper, with a V-shaped outer sinus and a thick, triangular tooth at inner angle.

Chelipeds unequal, exposed surfaces of carpus, manus and proximal ends of fingers coarsely granulate; fingers deeply grooved, the granules extending more than half the length of the intervening ridges in the smaller chela. Legs hairy, especially the last three segments, upper margin of merus and upper surfaces of carpus and propodus denticulate.

The above description was made from a Bahama specimen (♀) in the U. S. National Museum. The Barbados specimen is much smaller but ovigerous. Length of carapace 3.7 mm., width 5.2 mm.

CHLORODIELLA LONGIMANA (Milne Edwards)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 36.

Barbados; May 15; 3 ♂ 7 ♀ (1 ovig.) 2 juv.

Coral heads; May 31; 1 ♂. On old coral heads; June 4; 3 ♂ 2 ♀.

Okra Reef, Barbados; May 13; 2 ♂ 2 ♀.

One mile S. of sta. 19, off Needham Point, Barbados; 84 fathoms; bottom rocky; sta. 20; 1 ♂.

Not previously recorded from Barbados; known from Guadeloupe and Curaçao.

OZIUS RETICULATUS (Desbonne and Schramm)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 37.

Barbados; 1 ♀.

Not previously recorded from Barbados; the nearest points are Guadeloupe and Puerto Colombia.

PILUMNUS CARIBAEUS Desbonne

In Desbonne and Schramm, Crust. Guadeloupe, 1867, p. 32.

Needham Point, Barbados; May 18; 1 ♀.

In this species the lateral spines are 4, including the spine at the outer

angle of the orbit; the first and often the second spine is bifid. In the Barbados specimen, there is a spine immediately following the orbital spine, which is subequal to it, and the second spine also is double, composed of 2 separate spines, the hinder of the two being smaller; in short, the margin appears to be 6-spined. Two spines on the dorsal surface of the hepatic region and one on the branchial region near by, are larger than usual. The outer surface of the larger as well as of the smaller palm is rough all over.

Not previously known south of Guadeloupe.

Pilumnus barbadensis, sp. nov.

Plate I

Type-locality.—Barbados; from old coral heads; May 31; 3 ♂ 2 ♀; the largest ♂ has been selected as the holotype. (Cat. No. ——, Mus. Univ. Iowa.)

Additional lots.—Okra Reef, Barbados; May 13; 2 young. Barbados; from coral heads; June 4; 5 small.

Measurements.—Male holotype, length of carapace 6.7, width 9.4 mm. The largest ♀ is 12.3 mm. wide and too broken to permit measurement of the length; figured ♀, length 7.6, width 10.7 mm.

Description.—Carapace suboval, antero-lateral margin arched but shorter than the postero-lateral margin. Surface covered with a short, soft, sparse pubescence which does not conceal the carapace. Furrows between regions and gastric subregions well marked. Surface minutely roughened, especially along the front and antero-lateral regions where the granules are acutely pointed. The lobes of the front are oblique, slightly convex save at outer end which is right angled; edge crenulate. Inner orbital angle acute, elevated; upper orbital margin sloping obliquely outward and backward to a slight outer tooth. Edge of orbit finely denticulate. Antero-lateral margin armed with 3 slender, acuminate spines, each set in a stout, triangular, denticulate base. The carapace is widest at the posterior pair of these spines; the two interspaces are subequal; between the anterior spine and the orbital angle there is a spinule, little larger than the sharp denticles of the neighboring surface, and confused in dorsal view with several subhepatic spinules. Suborbital region covered with coarse, acute granules. Lower orbital region more advanced than upper, its spinules more elongate; spinule at inner angle a little larger and more pronounced.

Chelipeds very unequal, thinly clothed with longer hairs than the carapace; carpus covered with acute granules, and with two spinules, one above the other at the inner angle. Only the proximal third or less of the major palm is rough with granules, the roughness forming an oblique band bordering the carpus but stopping short of the lower margin; the proximal two-

thirds of the lower edge is separately roughened; remainder of palm smooth and naked; fingers of ♂ dark brown with light tips, color not reaching quite to base of immovable finger, color line vertical; a narrow interdigital gape. In the minor cheliped the entire outer surface of the palm is very rough, the granules arranged for the most part longitudinally; the fingers are less gaping and are deeply grooved, the ridges very rough.

In the female, the fingers are a lighter brown and in the largest female the roughness on the major palm is less extensive.

Ambulatory legs slender, bordered with long hair; merus slightly enlarged, upper margin edged with slender spines. Dactyli noticeably slender.

Relationships.—Of the *Pilumnus* in the West Indian fauna, this approaches nearest to *P. spinipes* (= *Micropanope spinipes* A. Milne Edwards[1]) in many details such as the ornamentation of the antero-lateral margin, the partial roughness of the major palm, the slender legs. On the other hand, the carapace of *barbadensis* is more oval and more convex, front more deflexed, and the minor palm rough all over, while in *spinipes* the granulation is similar on the two palms.

P. andrewsii Rathbun[2] is a broad species with antero-lateral margin similar to that of *barbadensis,* but the interregional furrows are deeper, the upper orbital border has two small but distinct emarginations, the major palm is smooth, the minor one nearly so.

Pilumnus floridanus Stimpson

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 40.

W. N. W. of Lazaretto, N. N. W. of Pelican Island, Barbados; dredged in from 80–100 fathoms to where rocks begin at about 35 fathoms; bag full of coarse sand; sta. 53; 1 ♀ ovig.

Not previously known south of Porto Rico and St. Thomas.

Heteractaea ceratopus (Stimpson)

Pilumnus ceratopus Stimpson, Ann. Lyc. Nat. Hist. N. Y., vol. VII, 1860, p. 215.

Needham Point, Barbados; by diver; 1 ♀.

Barbados; May 22; 1 juv. From coral heads; June 4; 1 ♂ 4 ♀.

Not recorded south of Guadeloupe.

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1 Crust. Rég. Mex., 1880, p. 326, pl. LIV, fig. 3.
2 Bull. Lab. Nat. Hist. State Univ. Iowa, vol. IV, 1898, p. 266, pl. V, fig. 2.

ERIPHIA GONAGRA (Fabricius)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 42.

Pillars of Hercules, English Harbour, Antigua; 1 juv.

Barbados; 1 ♂ 3 ♀ (all small).

Bathsheba, Barbados; 3 ♂ (the largest one with abnormal abdomen, which is intermediate in width between ♂ and adult ♀).

Needham Point, Barbados; 3 ♀ (1 ovig.).

Pelican Island, Barbados; tide pool; May 11; 1 ♀, 1 juv.

No label; 3 ♂ 4 ♀ (3 ovig.).

MELYBIA THALAMITA Stimpson

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 43.

Barbados; 2 ♂ 1 ♀ ovig. From broken coral; May 27; 1 ♀ ovig.

S. W. of Pelican Island, Barbados, 1 mile; 38 fathoms; bottom of fine coral fragments; May 13; sta. 1; 1 ♀ ovig., 2 juv.

Not previously recorded from Barbados; found at Porto Rico and Colon.

DOMECIA HISPIDA Eydoux and Souleyet

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 43.

Barbados; May 15; 1 ♀ ovig. May 22; 1 juv. In coral heads; May 31; 1 ♀. From coral heads; June 4; 1 ♂. Living in *Acropora;* 1 ♂ 3 ♀ ovig. 1 young.

Okra Reef, Barbados; May 13; 1 ♂ 6 ♀ (4 ovig.).

Needham Point, Barbados; May 18; 1 ♂.

One mile S. of sta. 19, off Needham Point; 84 fathoms; bottom rocky; sta. 20; 1 ♂ 4 ♀ (2 ovig.).

W. by N. of Pelican Island, 1½ miles; 80 fathoms; bottom rocky; tangles without weight; May 16; sta. 7; 1 young.

Family **Goneplacidæ**

GONEPLAX BARBATA (A. Milne Edwards)

Rathbun, Bull. U. S. N. M., No. XCVII, 1918, p. 26, pl. IV, figs. 1 and 3; pl. V.

W. by N. of Pelican Island, Barbados, 2 miles; 75–80 fathoms; sand bottom; May 15; sta. 3; 1 ♀ immature.

This specimen unites the characters of *G. barbata*[1] and *G. sigsbei*,[2] as given in my monograph (pp. 26–27). It will be noted there that all the specimens (4) of *barbata* recorded are male, while both those of *sigsbei* are female. The specimen in hand has the lateral dentation of *barbata*, as shown in plate V, while lacking a branchial ridge, an orbital notch, and a patch of hair on the cheliped, which three characters link it to *sigsbei*. There is a very small but sharp spine on the upper margin of the arm and the inner angle of the wrist, not the prominent, curved spine of typical *barbata*, nor the blunt tooth of *sigsbei*.

Both *barbata* and *sigsbei* are recorded from off Grenada, and *barbata* also from Gulf of Mexico and Straits of Florida.

Panoplax depressa Stimpson

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 47, pl. XII, figs. 1 and 2, text-fig. 21.

Barbados; 1 ♂ 1 ♀. From broken coral; May 27; 1 ♂.

Not previously noted south of Porto Rico.

Family **Pinnotheridæ**

Parapinnixa hendersoni Rathbun

Bull. U. S. Nat. Mus., No. XCVII, p. 109, 1918, pl. XXVI, figs. 1–5.

English Harbour, Antigua; by electric light; July; 1 ♂ 2 ♀.

This extends the range of the species, which heretofore has been found in N. W. Cuba and on the west coast of Florida.

Family **Cymopoliidæ**

Cymopolia affinis (A. Milne Edwards and Bouvier)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 196, pl. XLVI, pl. XLVII, fig. 3, text-fig. 121.

S. W. of Pelican Island, Barbados, 1 mile; 38 fathoms; bottom of fine coral fragments; May 13; sta. 1; 1 ♂ 1 ♀, both immature.

Previously taken off Barbados in 68 fathoms by the U. S. C. S. Str. "Blake."

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1 Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 26, pl. IV, figs. 1 and 3, pl. V.

2 *Op. cit.*, p. 26, pl. IV, figs. 2 and 4.

CYMOPOLIA BAHAMENSIS (Rathbun)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 200, pl. XLVII, figs. 1 and 2.

Barbados; Lazaretto bears S. E. by E., ½ mile off shore; 35 fathoms; bottom rocky; tangles; May 24; sta. 42; 1 ♀ ovig.

Known only from the Bahamas.

CYMOPOLIA SICA A. Milne Edwards

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 208, pl. XL, figs. 3 and 4, text-fig. 127.

1¼ miles W. of Telegraph Station, Barbados; 118 fathoms; bottom of fine sand; May 30; sta. 60; 1 ♀ ovig.

Taken by the "Blake" off Barbados in 82 fathoms.

Family **Grapsidæ**

GRAPSUS GRAPSUS (Linnaeus)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 227, pls. LIII and LIV, text-fig. 135.

Barbados; 3 ♂ 4 ♀ (2 ovig.).

GEOGRAPSUS LIVIDUS (Milne Edwards)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 232, pl. LV.

Pelican Island, Barbados; May 18; 1 ♀; nocturnal; color in life, light olive brown, marbled on carapace with dark Van Dyke brown; legs faintly spotted.

GONIOPSIS CRUENTATA (Latreille)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 237, pl. LVII, text-fig. 136.

Bridgetown, Barbados; mangrove swamp; 2 ♂ 1 ♀; 1 ♂ is shedding.

N. of Bridgetown, mangrove swamp; 1 ♀.

PACHYGRAPSUS TRANSVERSUS (Gibbes)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 244, pl. LVI, figs. 2 and 3.

Pillars of Hercules, Antigua; 4 ♂ 4 ♀ (3 ovig.).

English Harbour, Antigua; 1 ♂ 1 ♀ ovig.

Bathsheba, Barbados; 1 ♂.
Needham Point, Barbados; 1 ♀.
Barbados; 1 ♀ ovig.

EUCHIROGRAPSUS AMERICANUS A. Milne Edwards

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 282, pl. LXXIV, text-fig. 144.

W. of Telegraph Station, Barbados, 1 mile; 86 fathoms; bottom rocky; May 30; sta. 59; 1 ♂.

Cable station, Barbados, bears E. by S., Lazaretto E. S. E. ½ S.; 35–60 fathoms; bottom mostly rocky, working on steep slope; tangles; June 3; sta. 75; 1 ♀ 1 juv.

The type-locality is off Barbados, 69 fathoms, "Blake."

ARATUS PISONII (Milne Edwards)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 323, pl. XCVI.

English Harbour, Antigua; 1 ♀.
Pillars of Hercules, Antigua; 2 ♀ (1 ovig.).

PLAGUSIA DEPRESSA (Fabricius)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 332, pl. C1, text-fig. 154.

Barbados; 1 old male.
Bathsheba, Barbados; 1 small but mature ♀.

PERCNON GIBBESI (Milne Edwards)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 337, pl. CV.

Pillars of Hercules, Antigua; 2 ♂ 3 ♀ (1 juv.).
English Harbour, Antigua; 2 ♂ juv.
Okra Reef, Barbados; May 13; 1 ♂ juv.

Family **Gecarcinidæ**

CARDISOMA GUANHUMI Latreille

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 341, pls. CVI and CVII, text-fig. 155.

Bridgetown, Barbados; 1 large, well-developed ♂, 1 adult ♀.
Mangrove swamp, north of Bridgetown; 1 young ♀.

UCIDES CORDATUS (Linnaeus)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 347, pls. CX–CXIII, pl. CLIX, figs. 3 and 4, text-fig. 158.

Barbados; 1 ♂ small.

Antigua; mangrove swamp; 2 large ♂. The larger has a carapace 73.7 mm. long, 100 mm. wide. The greatest width compared to the length is intermediate between that given in my monograph for a smaller specimen of *cordatus* and the width of *occidentalis.*

This Antigua specimen lacks the first ambulatory leg on the right side; the first leg on the left side is shorter than the second leg, but may not be normal.

The smaller specimen of the two has the ambulatory legs of the right side normal; the first leg on the left side is no longer than, indeed, a trifle shorter than the second leg.

Both these specimens have the palm straighter below than in the specimens previously described by me. In spite of these variations in *cordatus,* there is no likelihood of confusion with *occidentalis,* as the palms of the latter are longer and slenderer than any of the *cordatus* examined, and the carapace is narrower behind in proportion to its greatest width.

GECARCINUS LATERALIS (Freminville)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 355, pls. CXIX and CXX, text-fig. 161.

Barbados; 1 ♂ 1 ♀ 1 juv.

Family **Ocypodidæ**

OCYPODE ALBICANS Bosc

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 367, pls. CXXVII and CXXVIII.

Barbados; beach on south coast; 2 ♂.

Pelican Island, Barbados; 1 ♀.

UCA MORDAX (Smith)

Rathbun, Bull. U. S. Nat. Mus., No. XCVII, 1918, p. 391, pl. CXXXIV, figs. 3 and 4, text-fig. 166.

English Harbour, Antigua; 2 ♂. In mangrove swamp; 1 ♂, large.

N. of Bridgetown, Barbados; mangrove swamp; 7 ♂ 6 ♀, of medium size.

Superfamily *Oxyrhyncha*

Family **Parthenopidæ**

PARTHENOPE (PLATYLAMBRUS) FRATERCULUS (Stimpson)

Lambrus fraterculus Stimpson, Bull. M. C. Z., vol. II, 1871, p. 130.

Off Lazaretto, Barbados; 20 fathoms; bottom rough; tangles; June 6; sta. 87; 1 ♂.

This specimen has the dorsal projections more acute than customary, and the chelipeds a little longer, with sharper teeth or spines.

Not before known from the West Indies. Its southern boundary has been Yucatan in the west, Miami in the east.

SOLENOLAMBRUS TENELLUS Stimpson

Bull. M. C. Z., vol. II, 1871, p. 134.

Barbados; Lazaretto bears S. E. by E., ½ mile off shore; 35 fathoms; bottom rocky; tangles; May 24; sta. 42; 1 ♀ ovig.

Dredged off Barbados by the "Hassler," 100 fathoms, and by the "Blake" in 56 to 103 fathoms.

Family **Inachidæ**

Subfamily **Inachinæ**

STENORYNCHUS SAGITTARIUS (Fabricius)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 53.

N. W. ½ N. of Pelican Island, Barbados, W. ½ S. of Lazaretto; 80 fathoms; bottom fine sand; May 27; sta. 49; 1 ♂.

Shoal Bank, Barbados, about 3 miles W. of Needham Point; 20–40 fathoms; sponge bottom; sta. 101; 1 ♂.

Taken at Barbados by the "Blake" in 94 fathoms.

PODOCHELA HYPOGLYPHA (Stimpson)

Podonema hypoglypha Stimpson, Bull. M. C. Z., vol. II, 1871, p. 127.

Barbados; Paynes Bay Church bears E. N. E. and the Laza-

retto S. E. by S., off shore ½ mile; 50 fathoms; bottom rocky; tangles; May 31; sta. 64; 1 small but adult male.

Not before noted south of Guadeloupe.

PODOCHELA GRACILIPES Stimpson

Bull. M. C. Z., vol. II, 1871, p. 126.

Lazaretto, Barbados, bears S. E. by E., ½ mile off shore; 35 fathoms; bottom rocky; tangles; May 24; sta. 42; 1 ♂.

Cable station, Barbados, bears E. by S., Lazaretto E. S. E. ½ S.; 35–60 fathoms; bottom mostly rocky, working on steep slope; tangles; June 3; sta. 75; 1 ♂.

Not before found in the lesser Antilles, although off Yucatan and Colombia.

BATRACHONOTUS FRAGOSUS Stimpson

Bull. M. C. Z., vol. II, 1871, p. 122.

S. W. of Pelican Island, Barbados, 1 mile; 38 fathoms; bottom of fine coral fragments; May 13; sta. 1; 1 ♂.

EUPROGNATHA GRACILIPES A. Milne Edwards

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 58.

2 miles due W. of Pelican Island, Barbados; 80 fathoms; bottom coarse sand; May 17; sta. 13; 1 small ♂.

Dredged by the "Blake" at Barbados in 69 to 76 fathoms.

ARACHNOPSIS FILIPES Stimpson

Bull. M. C. Z., vol. II, 1871, p. 121.

Barbados; W. N. W. of Lazaretto; N. N. W. of Pelican Island; 33 fathoms; bottom rocky; dredge; May 27; sta. 51; 1 ♀.

Subfamily **Pisinæ**

CHORINUS HEROS (Herbst)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 61.

Pelican Island, Barbados; tide pool; May 11; 1 ♀ immature.

HERBSTIA DEPRESSA Stimpson

Plate II, fig. 4.

Ann. Lyc. Nat. Hist. N. Y., vol. VII, 1860, p. 57.

Barbados; May 15; 1 ♀ ovig.; median length of carapace 14, width 12, length to tip of rostral horns 14.8 mm.

Besides the tubercles on the carapace mentioned by Stimpson there are 4 tubercles or granules forming a transverse oblong on the branchial region, 2 of the granules near the inner angle of this region and the other 2 granules in a line posterior to the middle of the cardiac region. There is also a granule on the dorsal surface which forms a triangle with the 2 marginal spines at the widest part of the carapace. The row of spines on the merus of the cheliped is on its upper margin.

Not before found south of St. Thomas.

LISSA BICARINATA Aurivillius

Plate II, fig. 1.

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 64.

S. W. of Pelican Island, Barbados, 1 mile; 38 fathoms; bottom of fine coral fragments; May 13; sta. 1; 1 ♀ ovig.; carapace concealed dorsally by a calcareous coating which does not disguise the characteristic elevations.

Subfamily **Schizophrysinæ**

THOE PUELLA Stimpson

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 63.

Pillars of Hercules, Antigua; 2 ♂ 3 ♀ (1 ovig.).

MITHRAX SPINOSISSIMUS (Lamarck)

The Lazy Crab Hughes, Nat. Hist. Barbados, 1750, p. 262, pl. XXV, fig. 1 (part: chelipeds and legs only).

Mithrax spinosissimus Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 66.

Barbados: W. N. W. of Lazaretto; N. N. W. of Pelican Island; 33 fathoms; bottom rocky; dredge; May 27; sta. 51; 3 young.

The largest of these, about 9 mm. long in the median line, shows a small spine on the basal antennal segment at the base of the next segment.

MITHRAX ACUTICORNIS Stimpson?

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 66.

Barbados; May 22; 1 juv. with carapace less than 6 mm. long. Agrees in the main with *M. acuticornis* but the carapace is smoother than usual, the tubercles being fewer and lower.

MITHRAX PILOSUS Rathbun

Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 66.
Pillars of Hercules, English Harbour, Antigua; 1 ♂ juv.
Barbados; 1 ♂.
Not before noted from Barbados, but occurring at Guadeloupe and Caracas.

MITHRAX HEMPHILLI Rathbun

Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 69.
English Harbour, Antigua; shore; 1 ♂.

MITHRAX VERRUCOSUS Milne Edwards

Mag. Zool., vol. II, 1832, cl. VII, pl. IV and explanation.
Pillars of Hercules, English Harbour, Antigua; 1 ♂, medium size.
Fort Barclay, English Harbour; July 9; 1 ♀ juv.
English Harbour; shore; 1 ♀ juv.
Pelican Island, Barbados; 1 ♂ juv.
Not previously recorded from Barbados; occurs at Guadeloupe, Martinique and on the coast of Brazil.

MITHRAX DEPRESSUS A. Milne Edwards

Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 68.
English Harbour, Antigua; shore; 1 ♂ medium, 1 juv.

MITHRAX PLEURACANTHUS Stimpson

Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 68.
Barbados; 1 ♂ juv. From coral heads; May 27; 2 ♂ 1 ♀ ovig., all small.
Not recorded previously from Barbados, or farther south than Martinique.

MITHRAX CARIBBAEUS Rathbun

Plate III

Proc. Biol. Soc. Washington, vol. XXXIII, 1920, p. 23.
Barbados; 2 ♀, one rather large, the other middling small.

Length of carapace of larger ♀ on median line 53.5, extreme width 71 mm. Length of smaller ♀ 20.8, width 24.4 mm.

Approaches *M. hispidus* in its large size and general shape, but the carapace is a little narrower, and the crenulation of the prehensile edges of the fingers in the gape persists in the old, while it disappears in old *hispidus*.

Differs from all its allies in the arrangement of tubercles or tubercles and spines on the postero-lateral region. There is a postero-lateral spine in the young and middle-sized, which becomes a tubercle in the old; it is situated not far behind the spine at the lateral angle of the carapace, and forms the outermost of a transverse row of three, which is subparallel to another row of three tubercles.

Barbados is the furthest east for this species; it has been taken at Porto Rico, St. Thomas and Venezuela.

Mithrax (Mithraculus) sculptus (Lamarck)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 71.

Pillars of Hercules, English Harbour, Antigua; 14 ♂ 6 ♀ (4 ovig.).

English Harbour; 1 ♂.

Pelican Island, Barbados; 4 ♂.

Barbados; under sea anemone; 3 ♂ 1 ♀.

M. sculptus is usually olivaceous, the color persisting in alcohol. The 4 specimens taken from under sea anemones are an exception, as they are reddish brown, in alcohol.

Mithrax (Mithraculus) coryphe (Herbst)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 71.

Pillars of Hercules; English Harbour, Antigua; 6 ♂ 7 ♀ (4 ovig.).

Ft. Barclay, English Harbour; July 9; 1 ♂.

Pelican Island, Barbados; 2 ♂ 1 ♀. Tide pool; May 11; 1 ♂ 2 ♀ ovig.

Barbados; 1 ♂. From coral head; June 4; 1 ♂. Shore; 1 ♀ ovig. Under sea anemones; 3 ♂ 5 ♀ (4 ovig.) 1 juv.

MITHRAX (MITHRACULUS) FORCEPS (A. Milne Edwards)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 70.

1 mile S. of sta. 19, off Needham Point, Barbados; 84 fathoms; bottom rocky; sta. 20; 1 ♀ ovig.

Barbados; 2 ♂ 3 juv.

MITHRAX (MITHRACULUS) RUBER (Stimpson)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 69.

Pelican Island, Barbados; 1 ♂ 1 ♀ juv.

Needham Point, Barbados; May 18; 3 ♂ 1 ♀ immature. By diver; 1 ♂.

1 mile S. of sta. 19, off Needham Point; 84 fathoms; bottom rocky; sta. 20; 2 ♂ 3 ♀.

Okra Reef, Barbados; May 13; 6 ♂ 6 ♀, all small.

Barbados; shore; 1 ♀. May 15; 7 ♂ 4 ♀ (2 ovig.) 2 juv. May 22; 1 ♂. On old coral; May 31; 1 ♂ 1 ♀ immature. From coral heads; June 4; 4 ♂ 1 ♀ ovig. 1 juv.

Not heretofore known south of Guadeloupe.

MITHRAX (MITHRACULUS) CINCTIMANUS (Stimpson)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 70.

English Harbour, Antigua; shore; 1 ♀, immature.

MICROPHRYS BICORNUTUS (Latreille)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 72.

Pillars of Hercules, English Harbour, Antigua; 10 ♂ 5 ♀ (2 ovig.) 1 juv.

English Harbour, Antigua; shore; 4 ♂ 2 ♀ (1 ovig.).

Antigua; 1 ♀ ovig., with the slender, slightly divergent, incurved horns figured by A. Milne Edwards, in Crust. Rég. Mex., 1873, pl. XIV, fig. 2.

Bathsheba, Barbados; 3 ♀ ovig., 1 juv.

Pelican Island, Barbados; May 11; 3 ♀ (1 ovig.) 1 juv. Tide pool; May 11; 2 ♂. May 13; 1 ♂.

Needham Point, Barbados; May 18; 1 ♀ juv.

Barbados; 4 ♂ 2 ♀ ovig. Under sea anemones: 1 ♂, soft shell.

MICROPHRYS INTERRUPTUS Rathbun

Plate II, fig. 5.

Proc. Biol. Soc. Washington, vol. XXXIII, 1920, p. 24.

Fort Barclay, English Harbour, Antigua, July 9; 1 ♂ 1 ♀ juv.

Needham Point, Barbados; May 18; 1 ♂.

Known previously only from Cuba, the type locality.

Measurements.—The male from Needham Point is only slightly larger than the type male; the male from Fort Barclay is considerably larger, total length of carapace 16.7, length of horns 2.4, width of carapace without spines 13.6, with spines 13.3 mm. The carapace is widest above the bases of the first ambulatory legs where it exceeds slightly the width between the tips of the postero-lateral spines, which are above the bases of the second ambulatory legs. The egg-bearing female is about the same size as the male and is concealed beneath a mass of algae and other small organisms.

Relationships.—*M. bicornutus* is very widespread and abundant, and a very variable species, but the form which I call *interruptus* appears to be consistently different. It differs from *bicornutus* in being wider in proportion to its length, and wider across the orbits in proportion to its posterior width; in the greater prominence of the oblique branchial protuberances which are in line with the postero-lateral spine; in the more transverse direction of the arch of four tubercles on the intestinal region; in the shorter and more transverse tooth at the antero-external angle of the basal antennal segment, which is very little advanced in dorsal view beyond the preorbital angle, and in ventral view gives the segment much greater relative width than in *bicornutus;* in the presence of a small but well-developed tooth or lobe on the infra-orbital margin, just outside the antennal segment; this tooth is lacking in *bicornutus.*

STENOCIONOPS FURCATA (Olivier)

The Horned Crab, Nat. Hist. Barbados, 1750, p. 266, pl. XXV, fig. 3.

Stenocionops furcata Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 73.

Barbados; in shore 200 yards from sta. 22 (¼ mile E. of sta. 21, in shore 400 to 500 yards); 35 fathoms; bottom rocky; tangles; May 20; sta. 24; 1 ♂.

MACROCOELOMA TRISPINOSUM (Latreille)

Milne Edwards, Hist. Nat. Crust., vol. I, 1834, p. 336.

English Harbour, Antigua; shore; 1 ♀ ovig., overgrown with sponge.

MACROCOELOMA TRISPINOSUM NODIPES (Desbonne)

In Desbonne and Schramm, Crust. Guadeloupe, 1867, p. 15, pl. V, fig. 13.

English Harbour, Antigua; shore; 1 ♂, 1 juv.

MACROCOELOMA SUBPARALLELUM (Stimpson)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 74.

Bathsheba, Barbados; 1 ♀ ovig.

Pelican Island, Barbados; tide pools; May 11; 1 ♀ immature.

Barbados; 1 ♀. Shallow water; under large anemone; 1 ♀ ovig.

The specimens are almost concealed by seaweed, alcyonarians and other foreign substances.

First occurrence at Barbados; known from Guadeloupe and Old Providence.

MACROCOELOMA EUTHECA (Stimpson)

Pericera eutheca Stimpson, Bull. M. C. Z., vol. II, 1871, p. 112.

S. W. of Pelican Island, Barbados, 1 mile; 38 fathoms; bottom of fine coral fragments; May 13; sta. 1; 1 ♂.

W. by N. of Telegraph Station, Barbados; ½ mile off shore about edge of drop off; 60–70 fathoms; tangles; June 1; sta. 66; 1 ♀.

First occurrence at Barbados, though taken at St. Croix and Colon.

MACROCOELOMA INTERMEDIUM Rathbun

Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 75.

Off Lazaretto, Barbados; 20 fathoms; bottom rough; tangles; June 6; sta. 87; 1 ♀ immature.

First record at Barbados, though taken at Dominica and Colon.

PICROCEROIDES TUBULARIS Miers

Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 76.

Shoal Bank, Barbados, about 3 miles W. of Needham Point; 20–40 fathoms; sponge bottom; sta. 101; 1 juv.

Not before taken near Barbados, but off St. Thomas and the coast of Brazil.

PITHO MIRABILIS (Herbst)

Rathbun, Bull. U. S. F. C., vol. XX for 1900, part 2, 1901, p. 78.

Pillars of Hercules, English Harbour, Antigua; 1 ♀.

BIBLIOGRAPHY

DESBONNE and SCHRAMM. Crustacés de la Guadeloupe d'après un manuscrit du Docteur Isis Desbonne comparé avec les échantillons de crustacés de sa collection et les dernières publications de MM. Henri de Saussure et William Stimpson. 1re partie. Brachyures. Basse-Terre. 1867. [Edited by Alphonse Schramm.]

EDWARDS, A. MILNE. Reports on the Results of Dredging under the Supervision of ALEXANDER AGASSIZ, in the Gulf of Mexico, and in the Caribbean Sea, 1877, '78, '79, by the U. S. Coast Survey Steamer "Blake", Lieut.-Commander C. D. Sigsbee, U. S. N., and Commander J. R. Bartlett, U. S. N., Commanding. VIII. Etudes préliminaires sur les Crustacés.
Bull. Mus. Comp. Zoöl. at Harvard College, vol. VIII, No. 1, Cambridge, 1880, pp. 1–68, pls. I and II.

EDWARDS, A. MILNE. Recherches Zoologiques pour servir a l'histoire de la faune de l'Amérique Centrale et du Mexique, 5e partie, Paris, 1881. Etudes sur les Xiphosures et les Crustacés de la Région Mexicaine, 1873–1880. 368 pp., 61 pls.

EDWARDS, A. MILNE, and E. L. BOUVIER. Reports on the Results of Dredging under the Supervision of Alexander Agassiz, in the Gulf of Mexico (1877–78), in the Caribbean Sea (1878–79), and along the Atlantic Coast of the United States (1880), by the U. S. Coast Survey Steamer "Blake", Lieut.-Com. C. D. Sigsbee, U. S. N., and Commander J. R. Bartlett, U. S. N., Commanding. XXXIX. Les Dromiacés et Oxystomes.
Mem. Mus. Comp. Zoöl. at Harvard College, vol. XXVII, No. 1, Cambridge, 1902, pp. 1–127, pls. I–XXV.

EDWARDS, H. MILNE. Sur les Crustacés du genre Mithrax.
Mag. Zool., vol. II, Paris, 1832, classe VII, pls. I–V.

EDWARDS, H. MILNE. Histoire Naturelle des Crustacés, vol. I, Paris, 1834, xxxv and 468 pp.

HUGHES, GRIFFITH. The Natural History of Barbados. London, 1750. Book IX. Of Crustaceous Animals. Pp. 261–266, pl. XXV.

RATHBUN, MARY J. List of the Decapod Crustacea of Jamaica. Ann. Inst. Jamaica, vol. I, No. 1, 1897, pp. 1–46.

RATHBUN, MARY J. The Brachyura of the Biological Expedition to the Florida Keys and the Bahamas in 1893.
Bull. Lab. Nat. Hist. State Univ. Iowa, vol. IV, 1898, pp. 250–294, pls. I–IX.

RATHBUN, MARY J. The Brachyura and Macrura of Porto Rico.
Bull. U. S. Fish Comm., vol. XX for 1900, part 2, 1901, pp. 1–137, pls. I and II.

RATHBUN, MARY J. The Grapsoid Crabs of America.
Bull. U. S. Nat. Mus., No. XCVII, 1918, pp. 1–461, pls. I–CLXI.

RATHBUN, MARY J. New species of Spider Crabs from the Straits of Florida and Caribbean Sea.
Proc. Biol. Soc. Washington, vol. XXXIII, 1920, pp. 23–24.

STIMPSON, WILLIAM. Notes on North American Crustacea, Nos. I and II.
Ann. Lyc. Nat. Hist. N. Y., vol. VII, New York, pp. 49–93 (1859), pp. 176–246 (1860), pls. I, II and V.

STIMPSON, WILLIAM. Preliminary Report on the Crustacea dredged in the Gulf Stream in the Straits of Florida.
Bull. Mus. Comp. Zoöl. at Harvard College, vol. II, Cambridge, 1871, pp. 109–160.

EXPLANATION OF PLATES

Plate III and plate II, fig. 1, are from photographs loaned by the U. S. National Museum. The other photographs on plate II were made by Mr. Clarence R. Shoemaker and retouched by Mr. Seward H. Rathbun who made the drawings on plate I.

Plate I

Pilumnus barbadensis, ♀, Barbados

Fig. 1. Major chela, × 8.
2. Minor chela, × 9.4.
3. An ambulatory leg, × 8.
4. Carapace, with eyes and antennae, × 7.

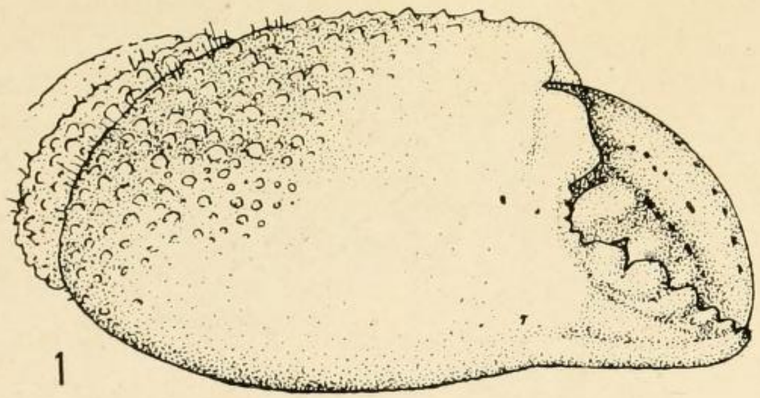
Plate II

Fig. 1. *Lissa bicarinata*, ♀, Cat. No. 24120, U. S. N. M., dorsal view, carapace 9.6 mm. long.
2. *Xanthias granulimanus*, ♀, Cat. No. 20052, U. S. N. M., ventral view, × 3. Carapace 9.2 mm. wide.
3. Same, dorsal view, × 3.
4. *Herbstia depressa*, ♀, Barbados, × 2 2-3.
5. *Microphrys interruptus*, ♂, Fort Barclay, × 3. Carapace, including horns, 16.7 mm. long.

Plate III

Mithrax caribbaeus, ♂ holotype, Cat. No. 50363, U. S. N. M., dorsal view, carapace, including horns, 66.3 mm. long.

PLATE I



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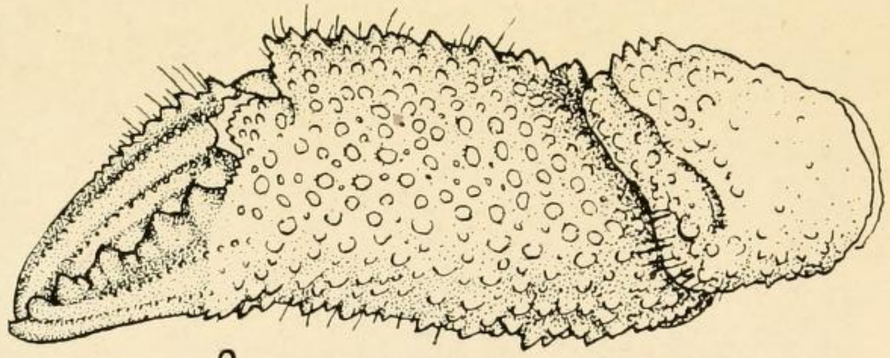

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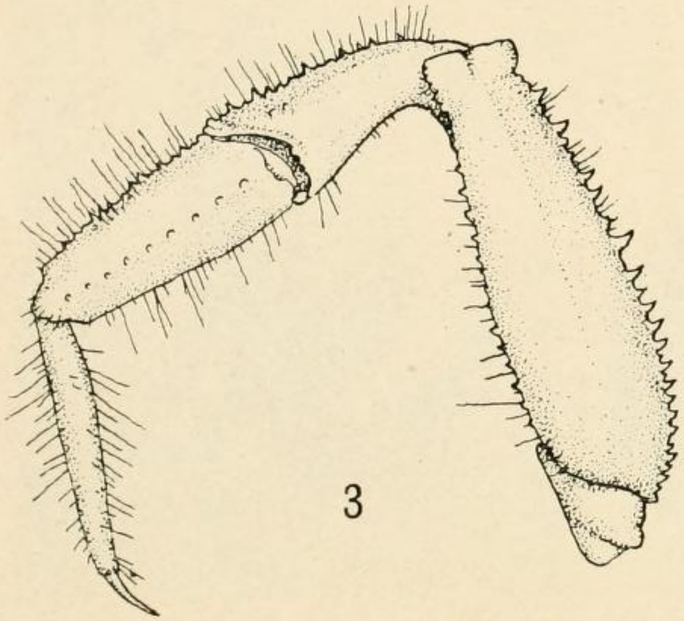
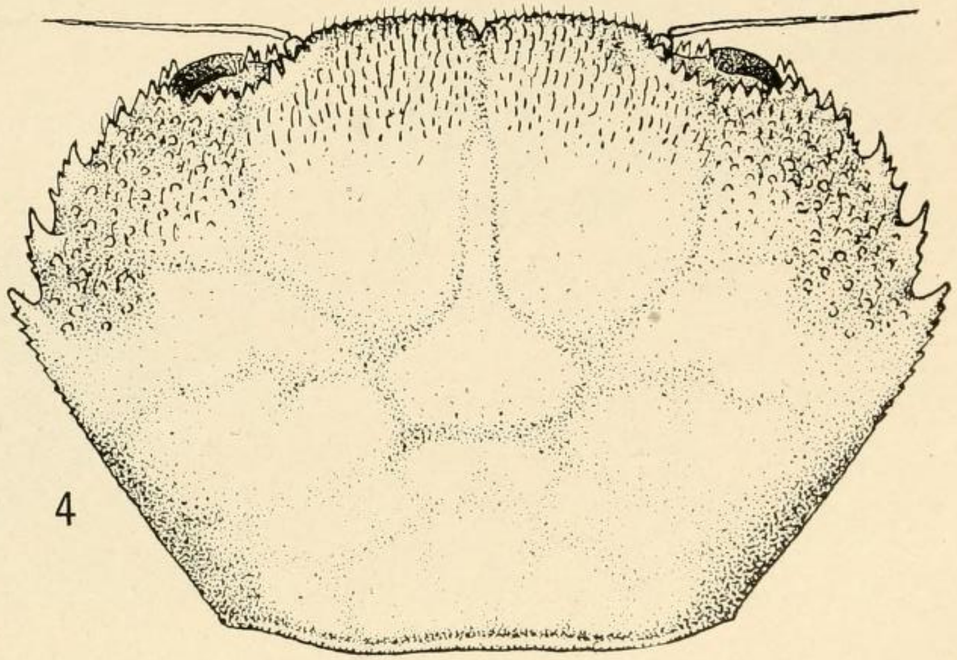


3



4

PLATE II

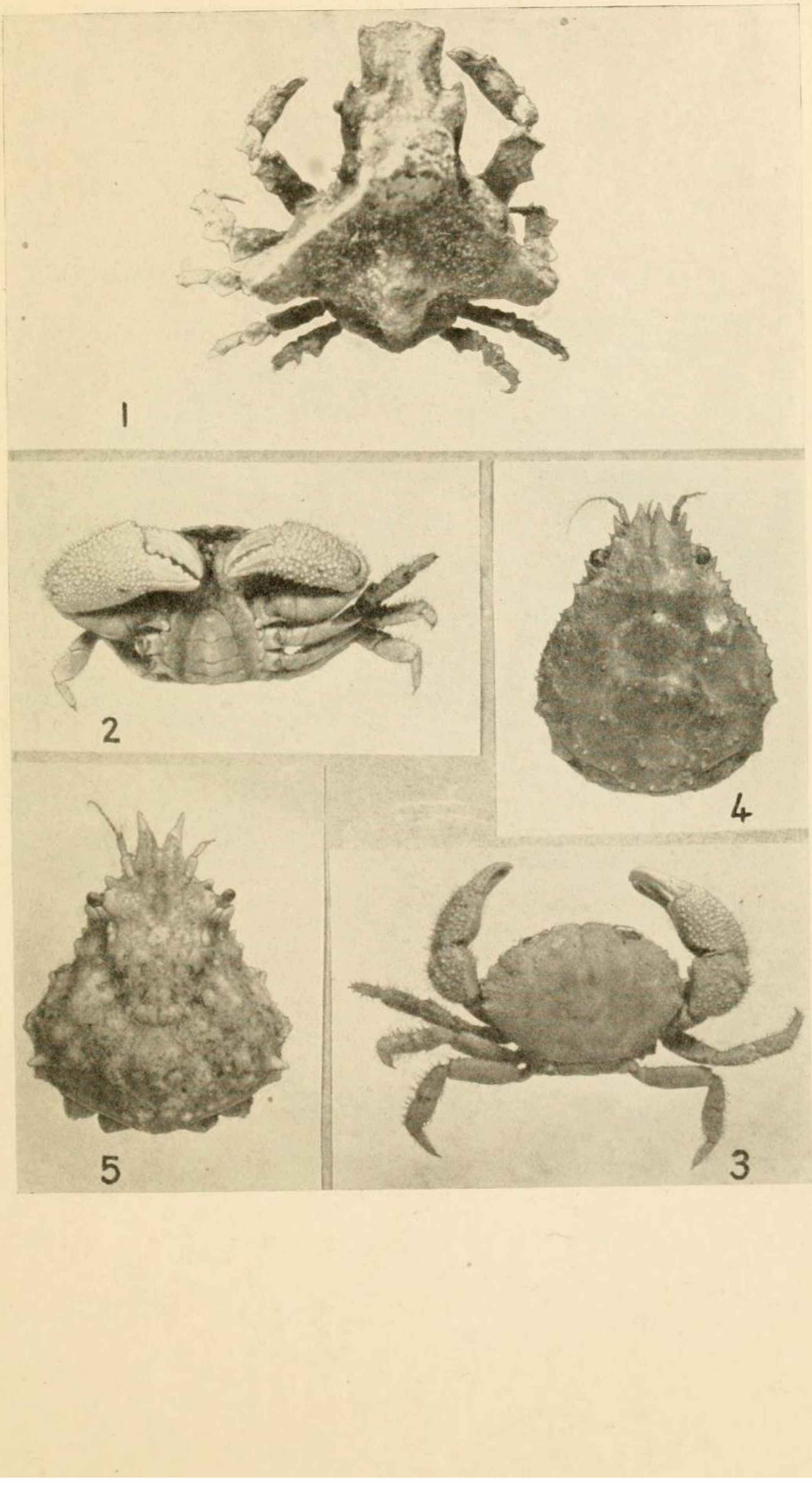
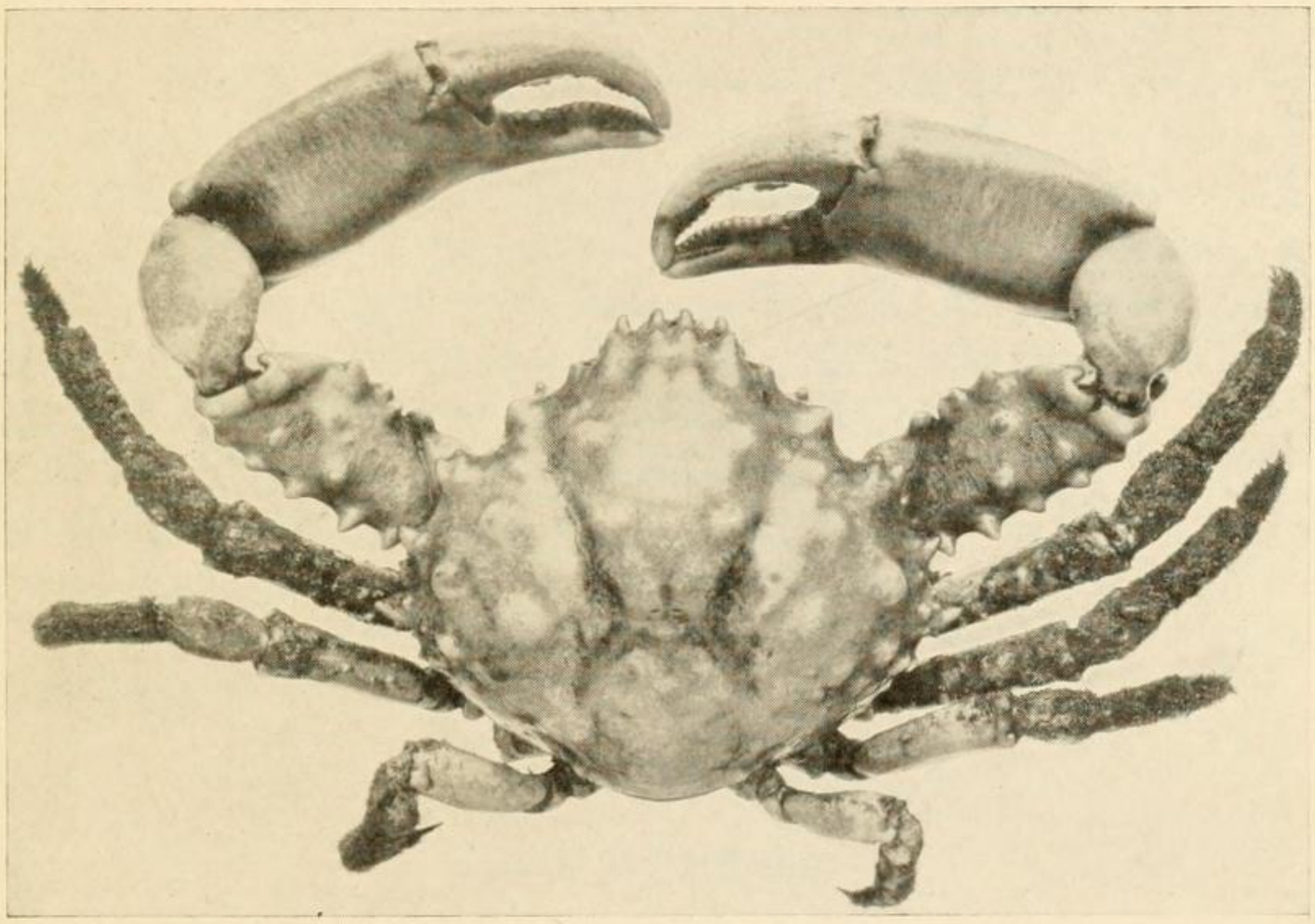



PLATE III