

v.3

2

98891

Smith

5

JOURNAL OF ENTOMOLOGY AND ZOOLOGY

VOLUME VIII, 1916

PUBLISHED QUARTERLY BY THE
DEPARTMENT OF ZOOLOGY OF POMONA COLLEGE
CLAREMONT, CALIFORNIA, U. S. A.



Crustacea From Laguna Beach

The following notes are on Crustacea collected by general and special students during the past several years. In cases where the forms were especially valuable or rare the name of the collector is indicated. Most of the specimens here recorded were collected during the past two years, a few earlier ones are also included in this report. Those marked U.S.M. were determined for us by the United States National Museum at Washington. The photographs are by Robbins, drawings by Baillard and Macdonald.

Callianassa longimana Stimp.

These "ghost shrimps" are fairly common under stones in tide pools. The median prominence of the front subacute, cornea behind middle of eye stalk. Cheliped of male elongate. Carpus nearly twice as long as broad (Fig. 14).

C. californiensis Dana, U.S.M.

Similar to the other species in general, but the exact distribution of each not yet determined. Specimens of this species were taken at Balboa bay by Mr. Daniels. These showed red in the center of the body and yellow at the sides due to the internal organs showing through. According to Rathbun there are the following differences from the other species: "Median prominence of front rounded; cornea in middle of eye-stalk; large cheliped of male very broad, the carpus very little longer than broad, but longer than palm." Those we have found are smaller than the large of the other species.

Pagurus hirsutiusculus Dana, U.S.M.

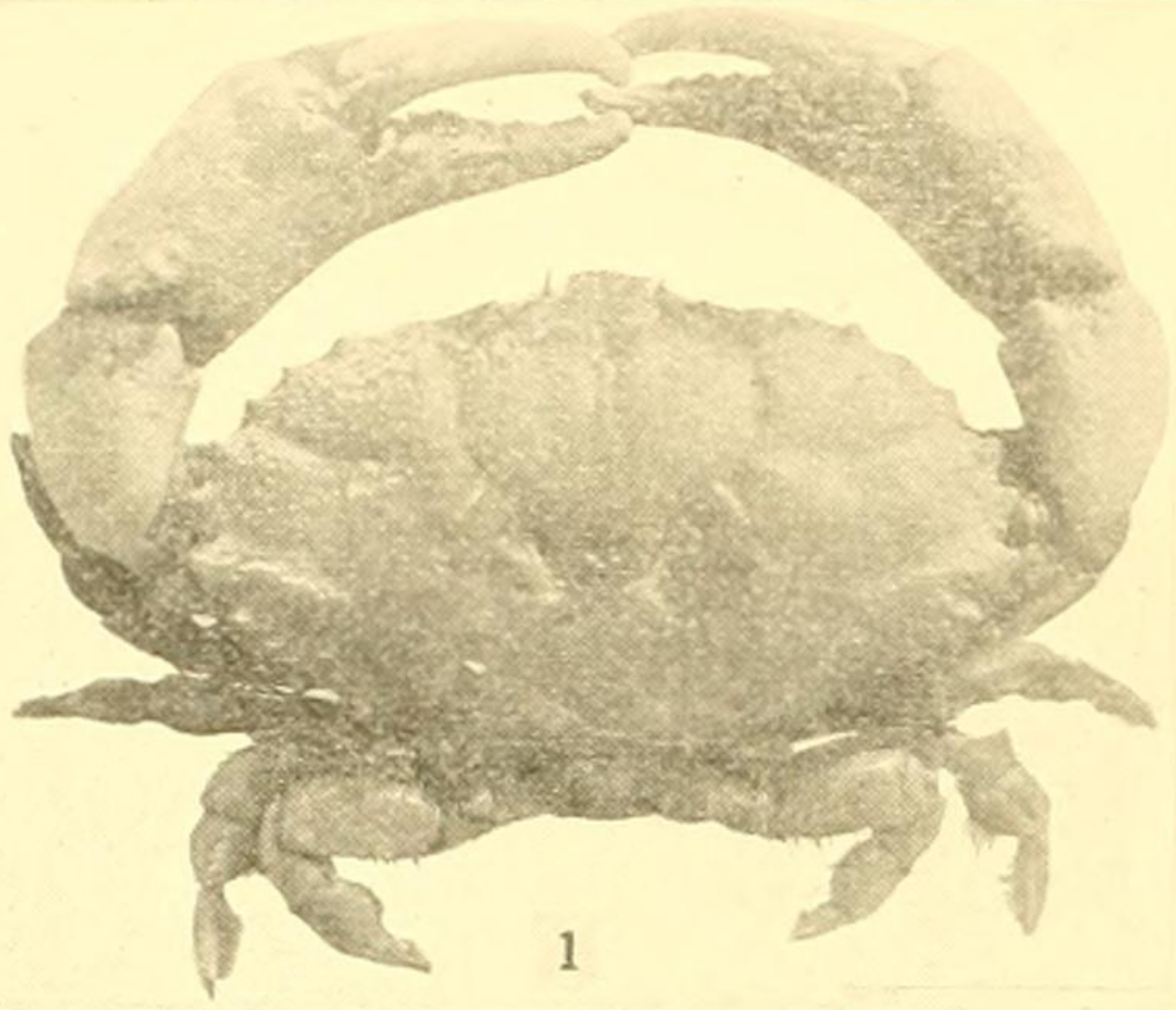
This small hermit crab was found in the tide pools. It was collected by La Follette, Macdonald, Hilton and others. Speckled and banded legs.

P. samuelis Stimp., U.S.M.

This small hermit crab was found abundantly in the tide pools. Specimens were larger than the other species as a rule. Blue legs.

Paguristes bakeri Holmes, U.S.M.

This large hermit crab was dredged off the coast of Laguna Beach by Prof. A. M. Bean and W. F. Hamilton. It was found



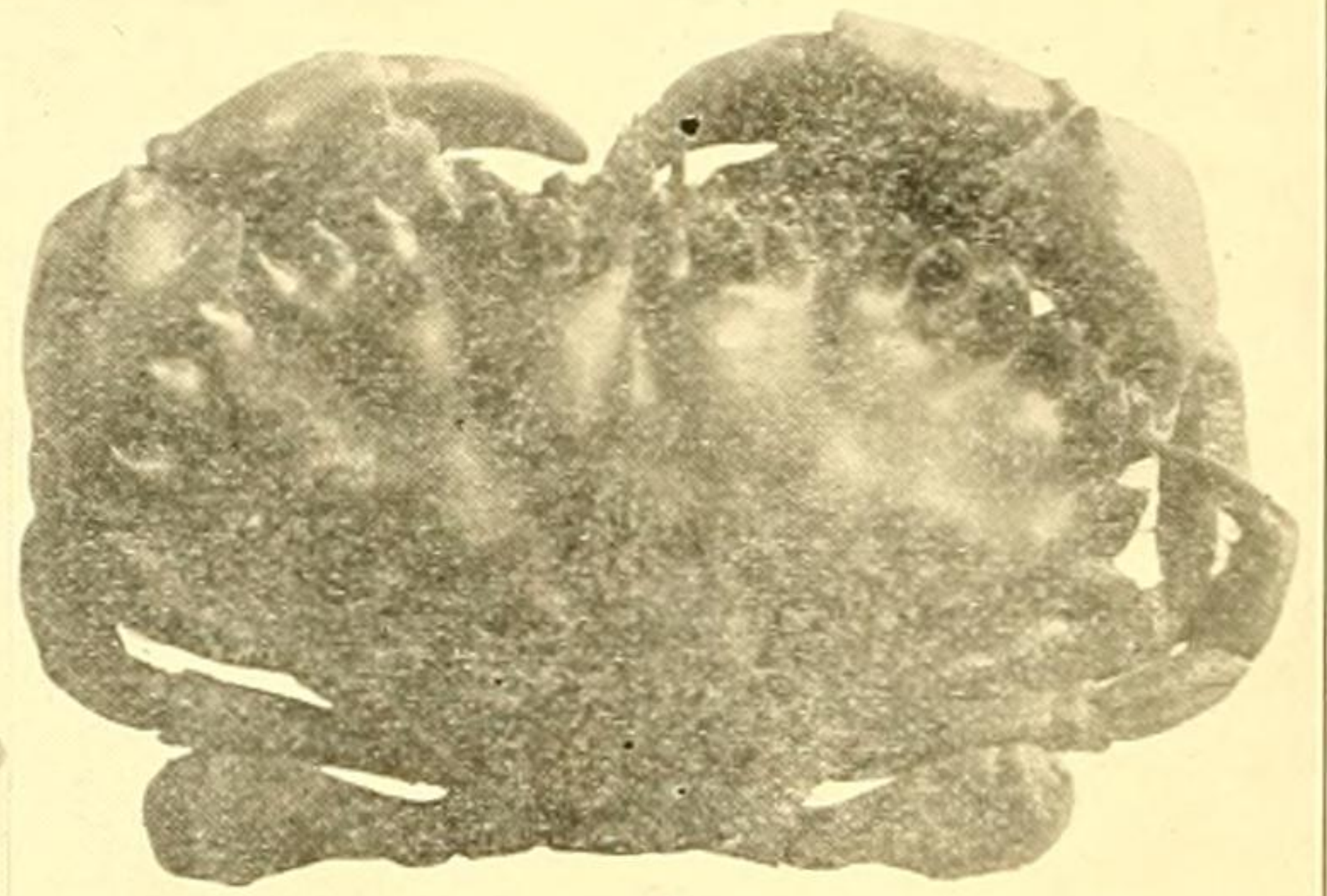
1



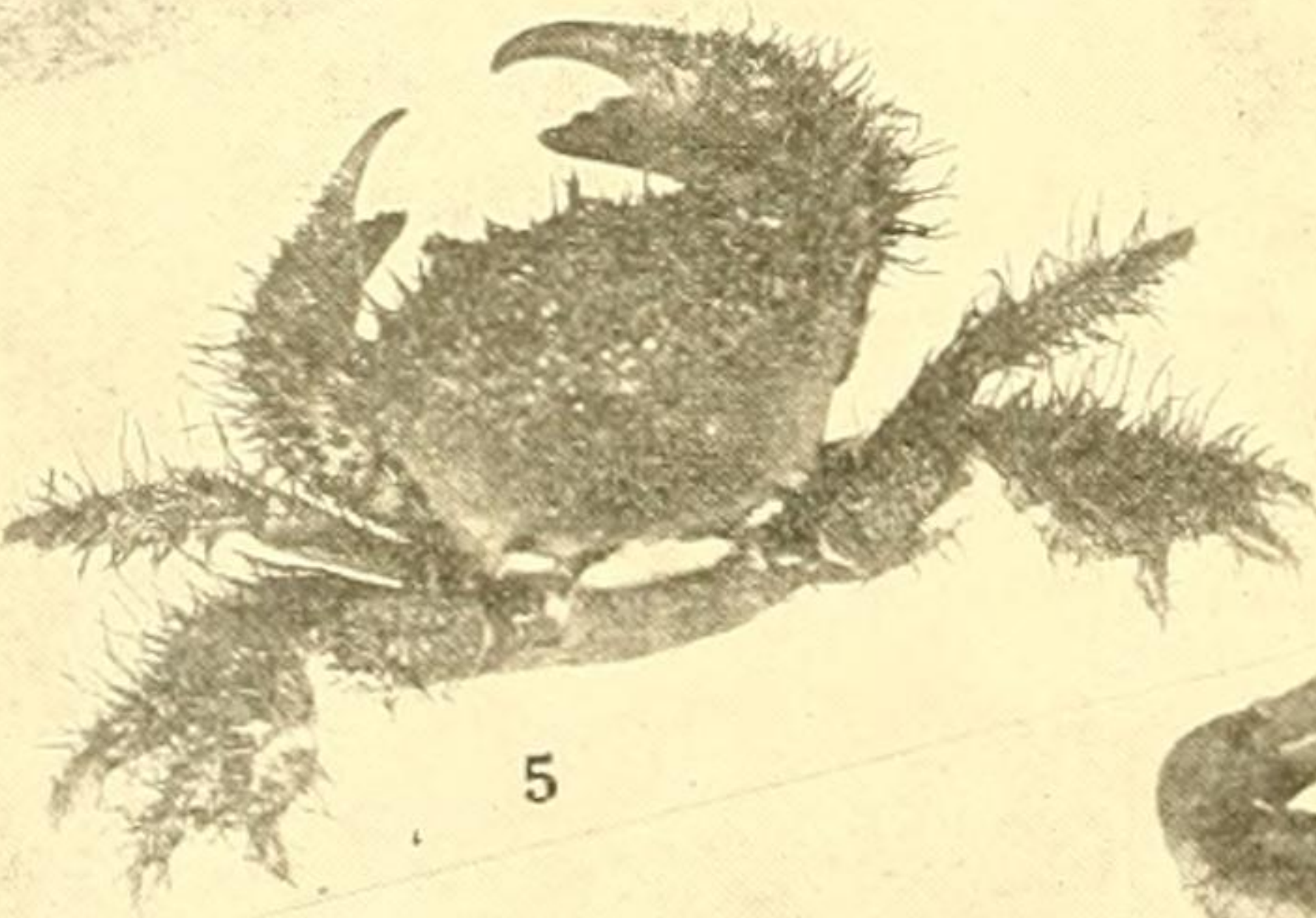
2



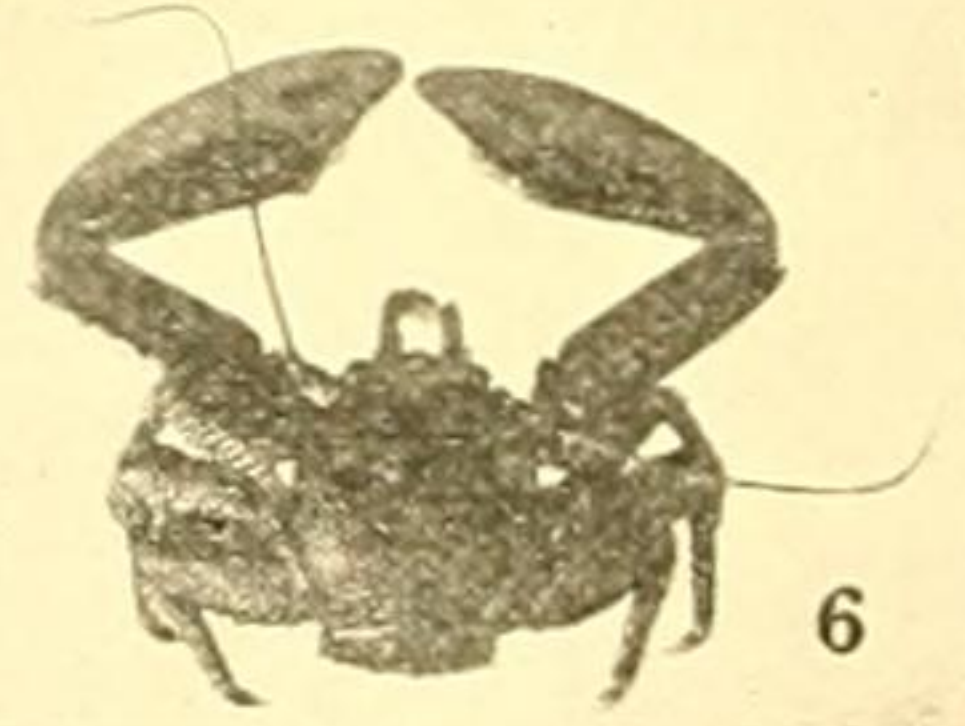
3



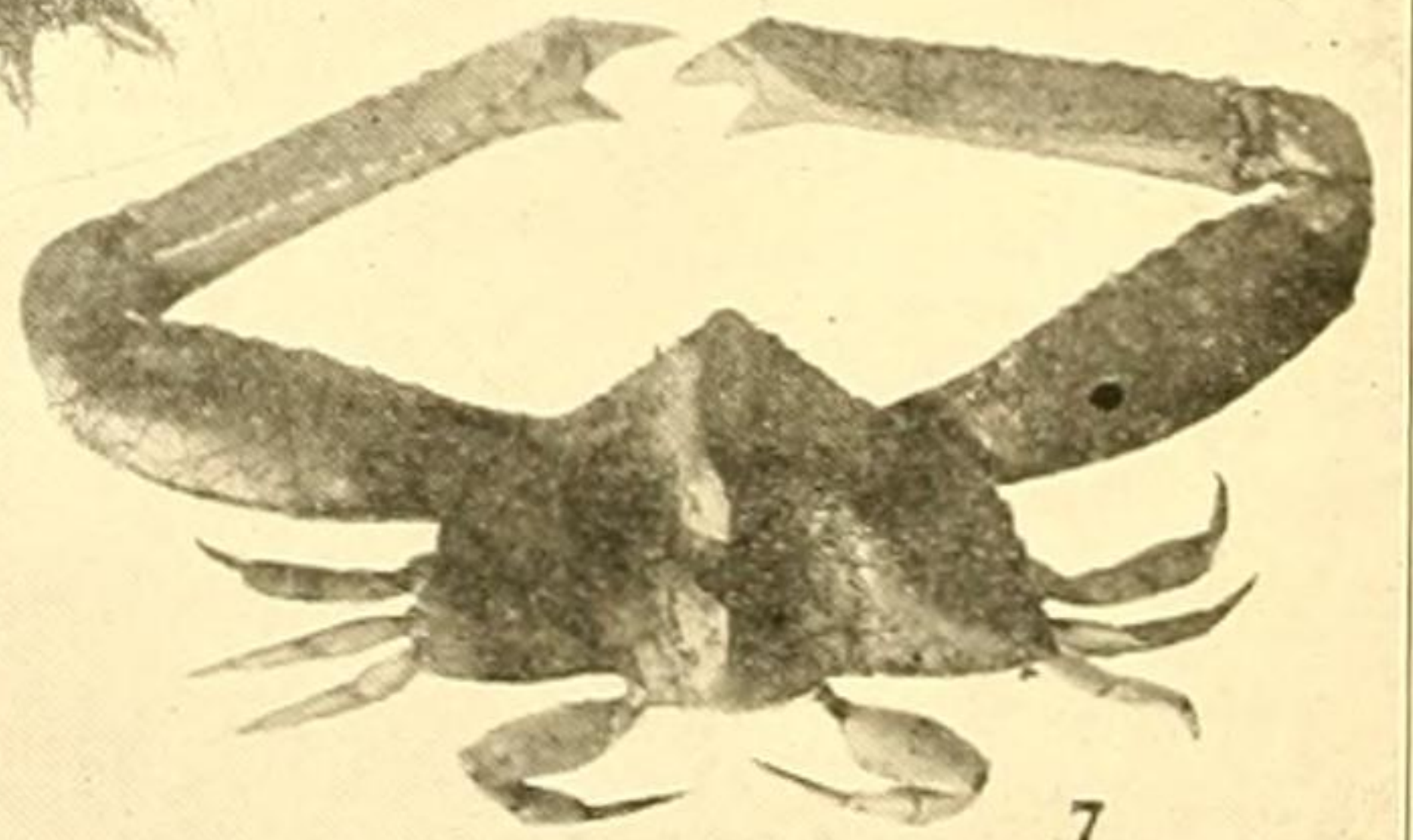
4



5



6



7

living in several of the larger shells such as those of *Trophon triangulatus* Cpr and *T. belcheri* Hds. (Figs. 11 and 12).

Lepidopa myops Stimp.

We have but one specimen of this sand crab collected by L. Gardner several years ago.

Blepharipoda occidentalis Randall

Numbers of these large sand crabs much like the last in general appearance were taken at all times on sandy shores.

Emerita analoga Stimp.

This is the smaller very common sand crab.

Panulirus interruptus Randall

Young of the "lobster" were often found in tide pools.

Alpheus (Cragon) dentipes Guerin

These have been taken in sponge masses and in holdfasts. These interesting little snapping shrimps were collected a number of times especially during the last summer. When placed in aquarium jars they snapped the claws in such a manner as to make one believe the jars were cracking. The left claw open and closed is shown in Fig. 19 from Miss Macdonald's drawing.

Cragon nigromaculatus Sm

Translucent white, with small black dots, a larger dark spot on either side near the caudal end of the body. Found commonly in sandy tide pools.

Betæus longidactylus Lock., U.S.M.

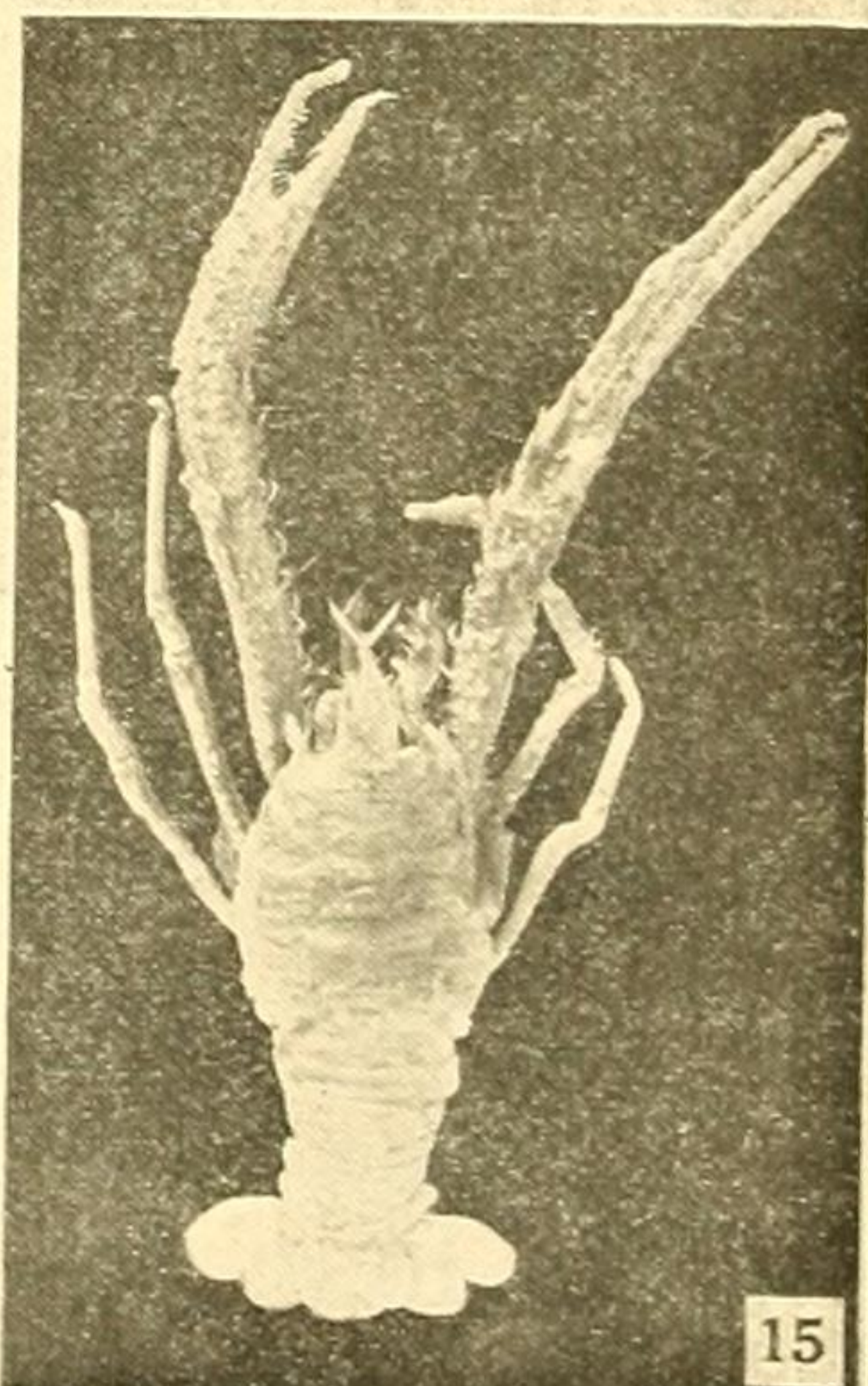
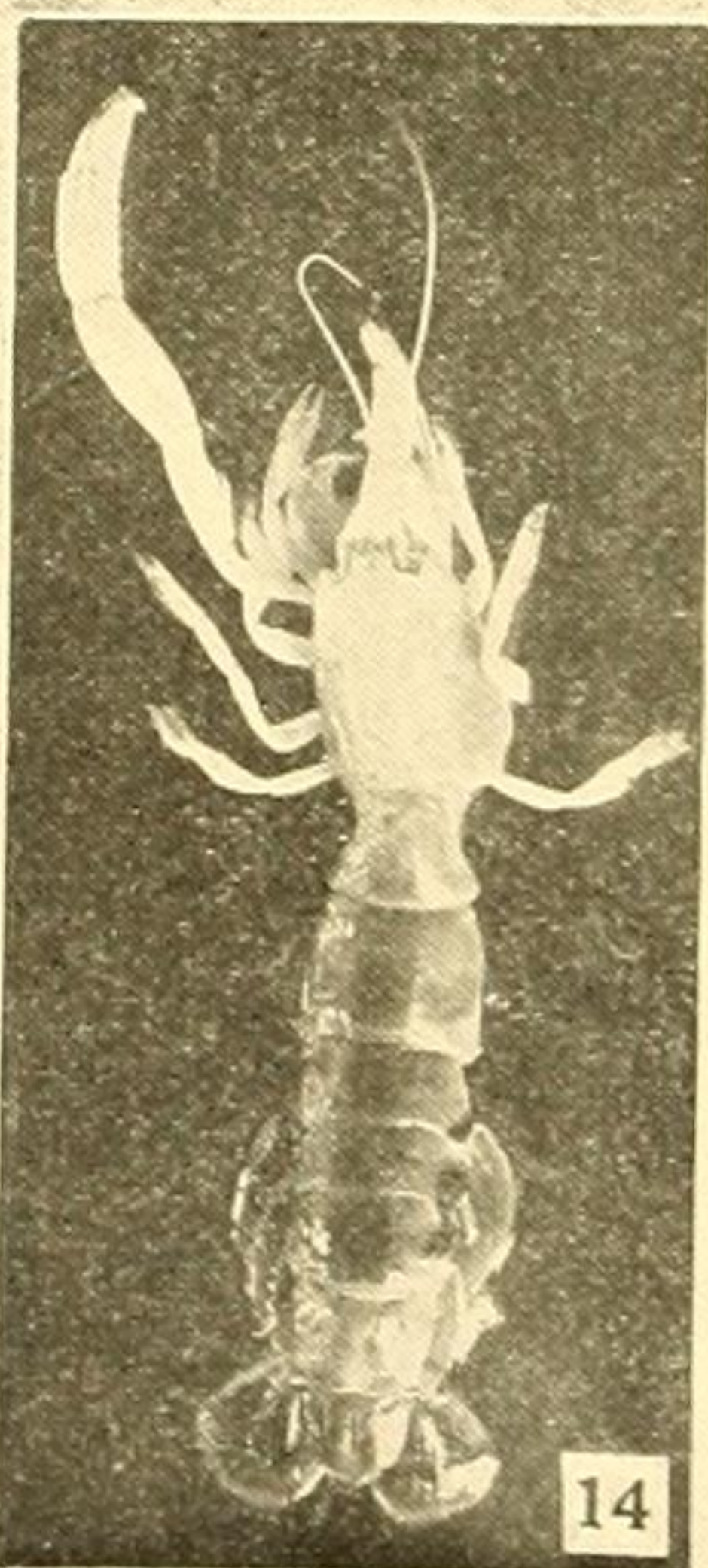
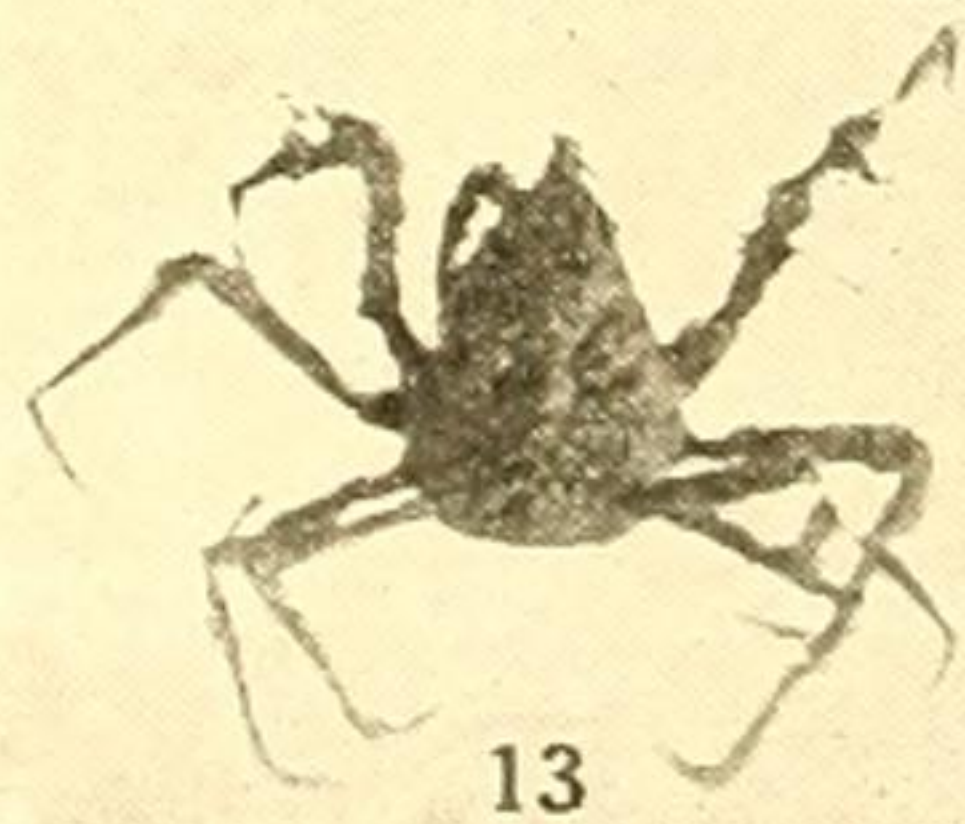
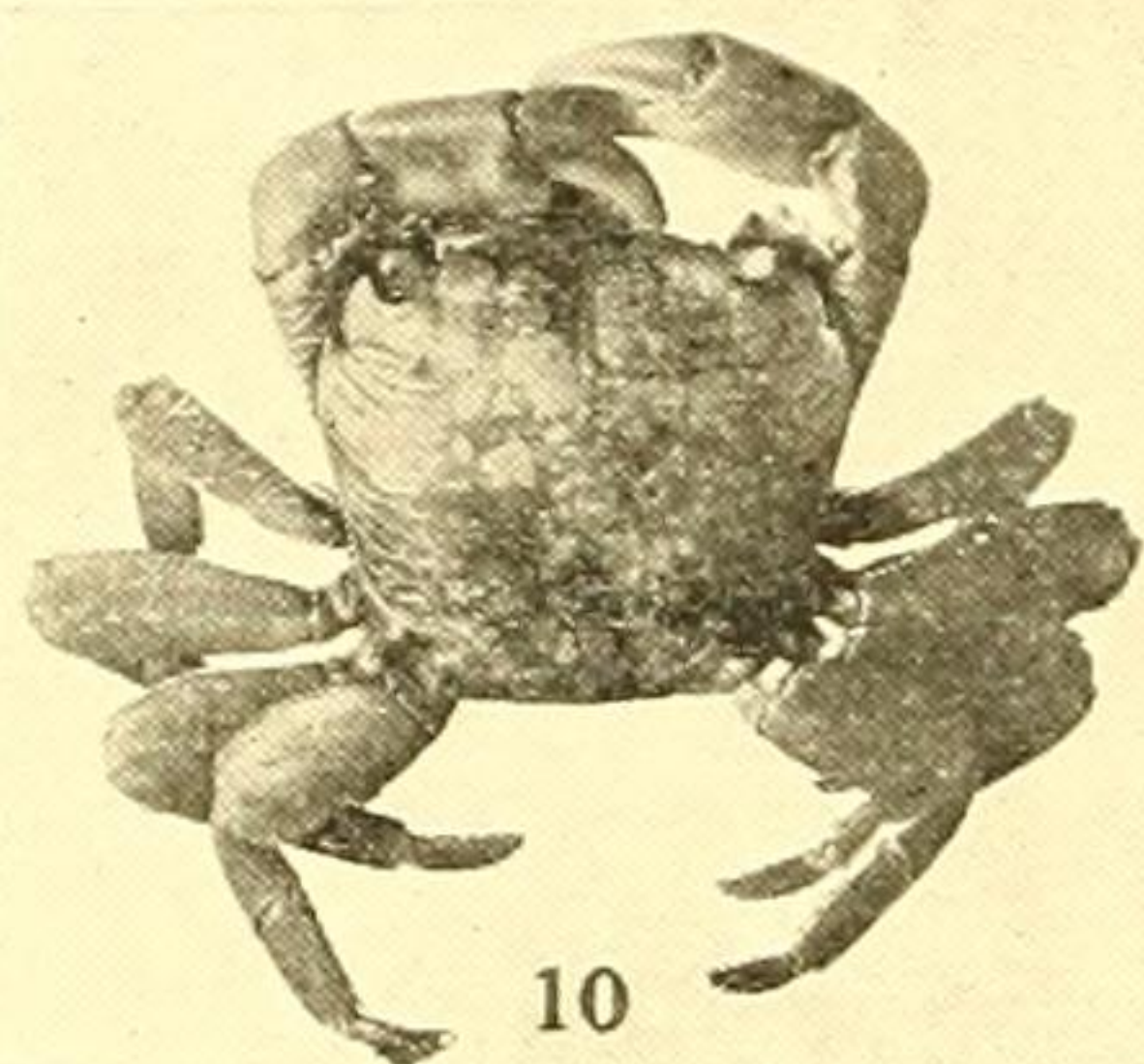
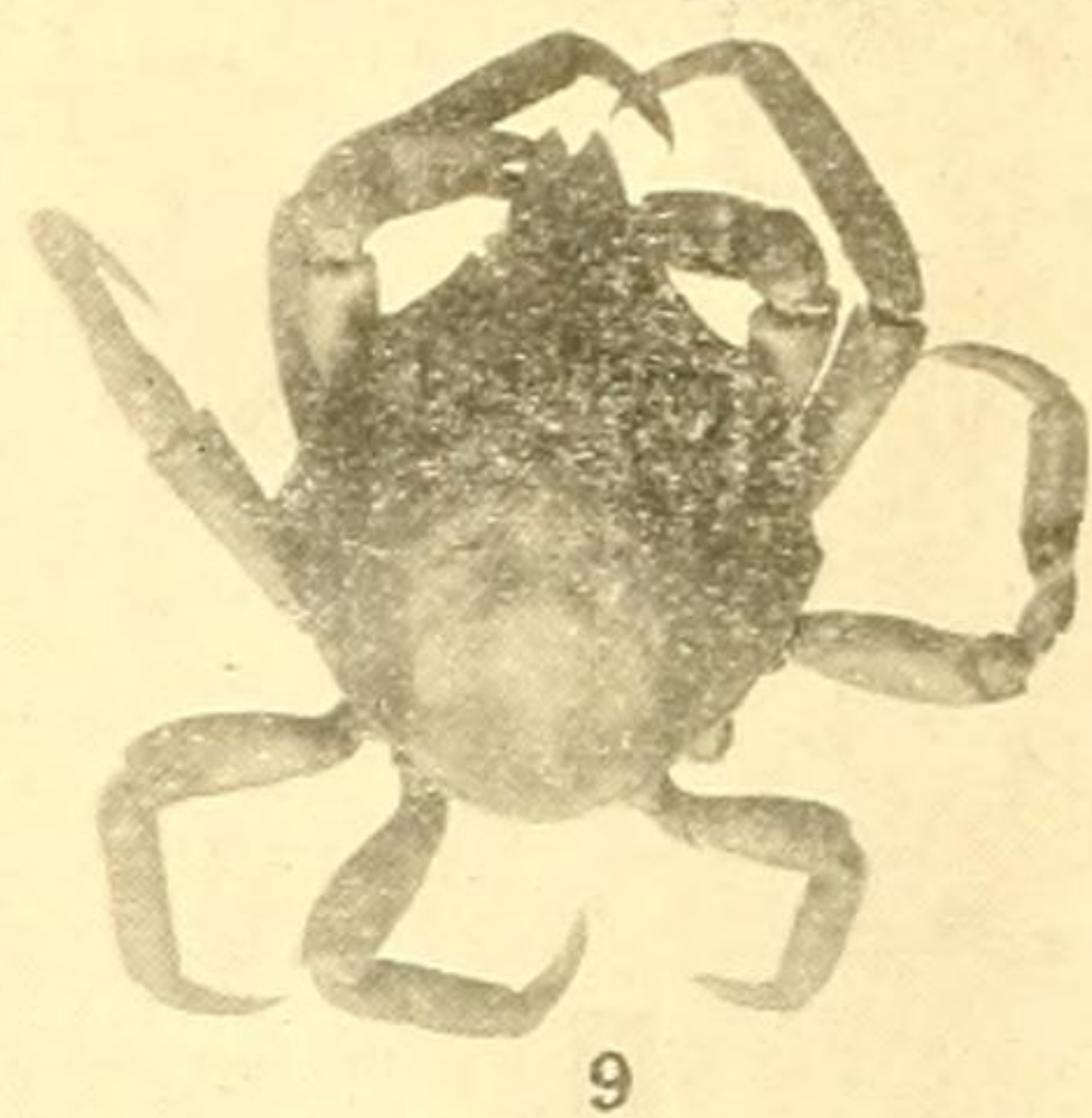
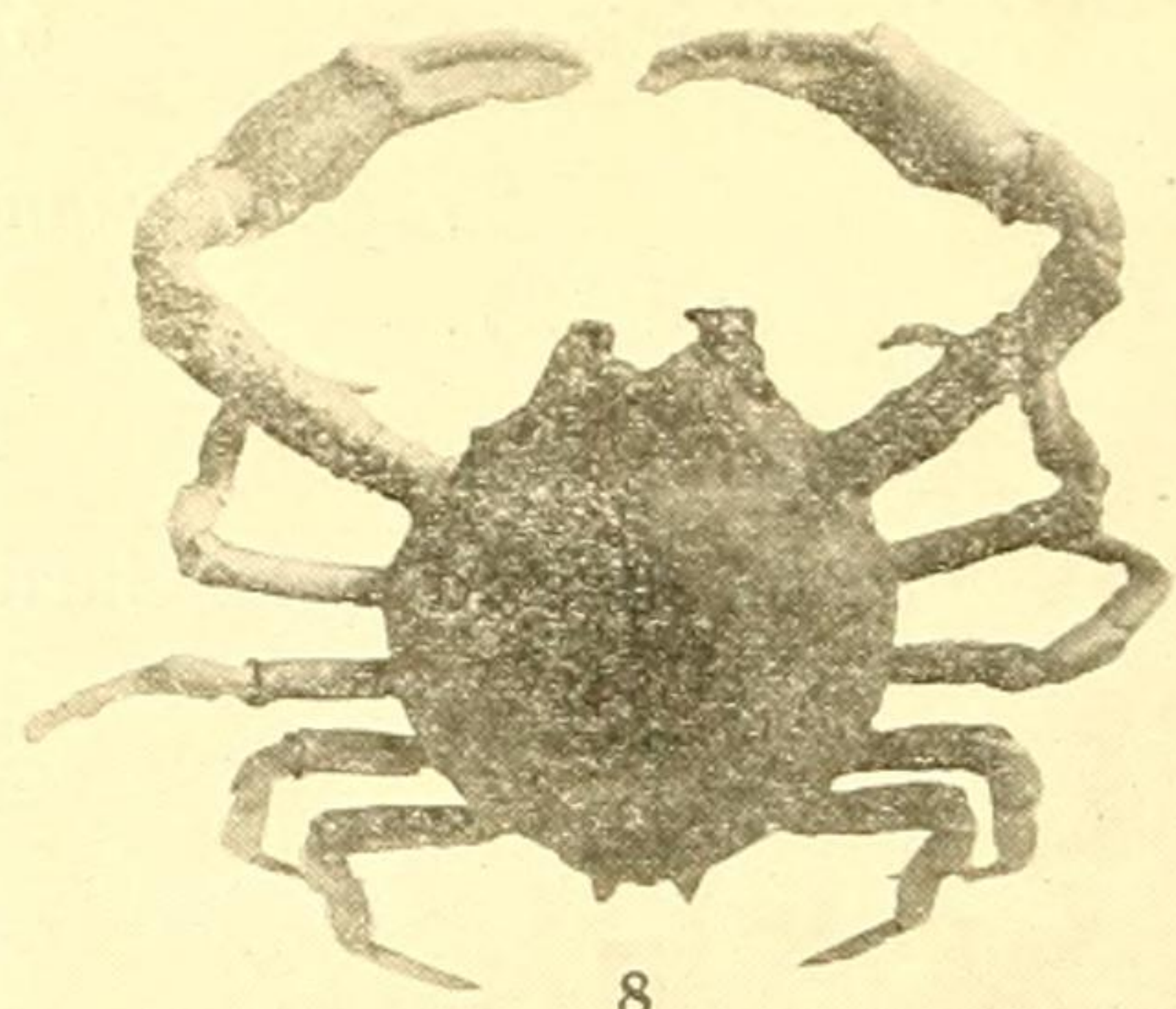
This is the most common lobster-like species found in the tide pools. It is of a uniform dark red brown.

B. harfordi Kingsley, U.S.M.

Found in kelp holdfasts. Pale olive green, eggs translucent green. Stout, Stafford, La Follette and others.

Spirontocaris palpator Osen

Antennal scale longer than the telson, maxilliped without exopod. Rostrum with superior margin not strongly convex, but nearly



straight over the eyes. Rostrum not reaching the second segment of the antennular peduncle. Rostrum reaching as far as or beyond the cornea. Upper and lower limbs of rostrum not both convex. Almost transparent, red on the thorax. Kelp holdfasts from deep water.

S. picta Stimp., U.S.M.

Antennal peduncle reaching the end of the antennular peduncle. Upper margin of the rostrum straight, reaching beyond the middle of the antennal scale. Greenish with oblique reddish marks.

S. taylori Stimp.

Rostrum not reaching as far as the cornea. Collected several years ago Baker and Metz.

Hippolysmata californica Stimp.

Irregular nearly longitudinal red stripes. These are found quite abundantly in the tide pools.

Palæmonetes hiltoni Schmitt (MSS) U.S.M.

These probably occur off Laguna beach although the specimens described by Schmitt were collected Stout and Stafford at San Pedro.

BRACHYURA

Randallia ornata Randall

These beautiful crabs usually came to us from deeper water, but one was obtained from Balboa bay (Fig. 8).

Epialtus productus Randall, U.S.M.

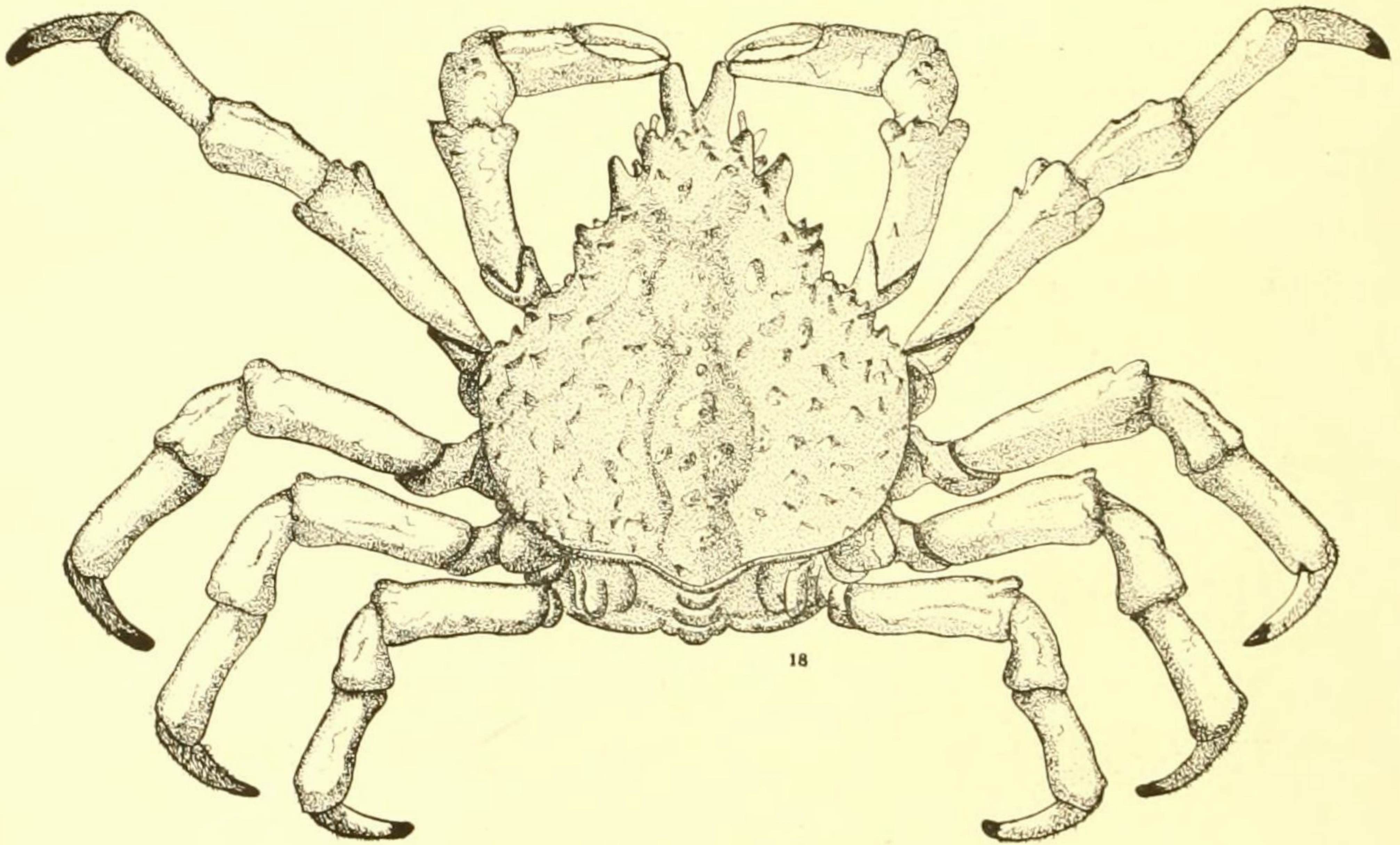
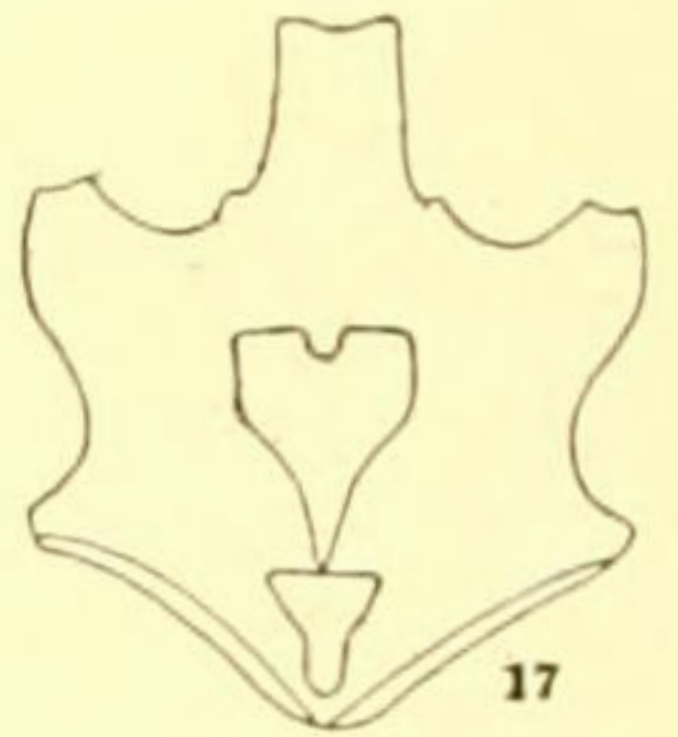
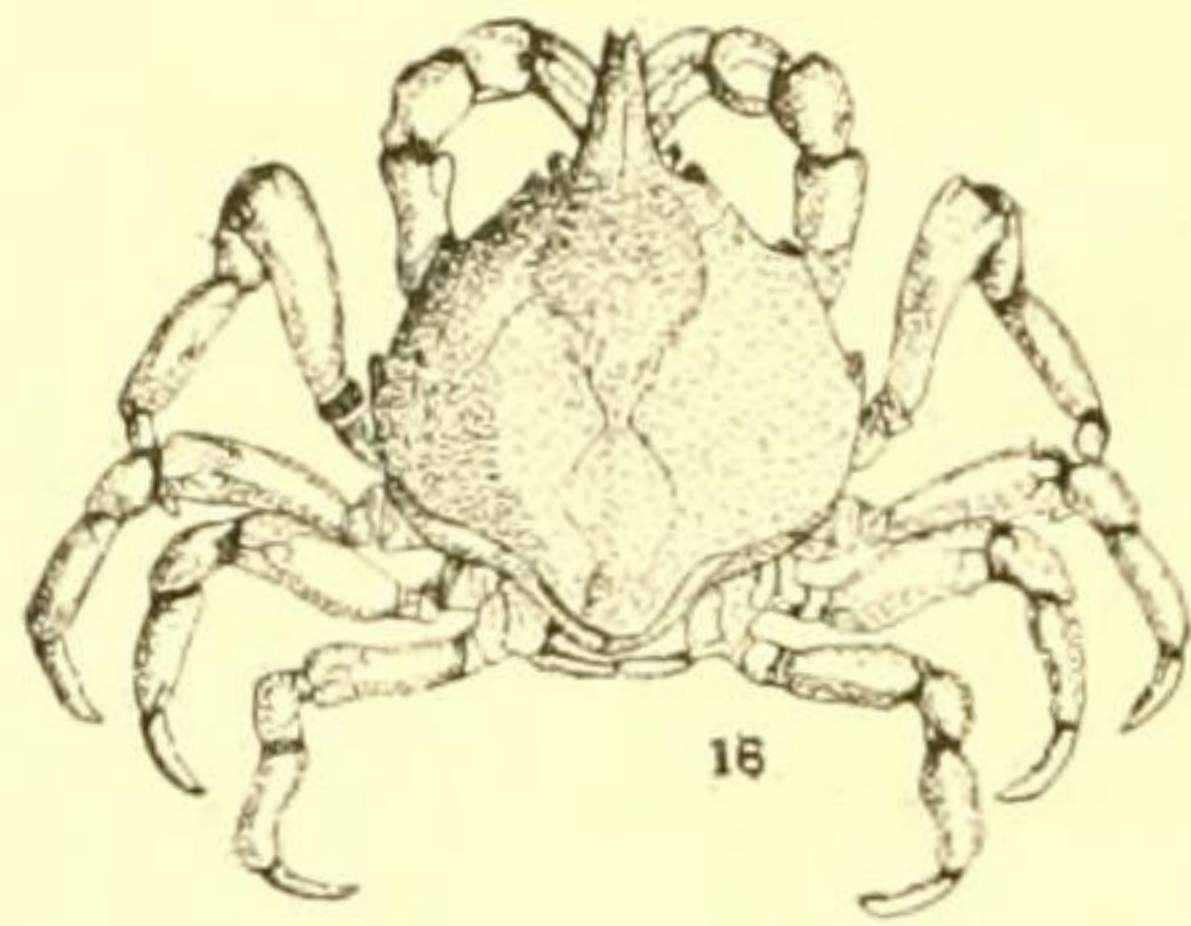
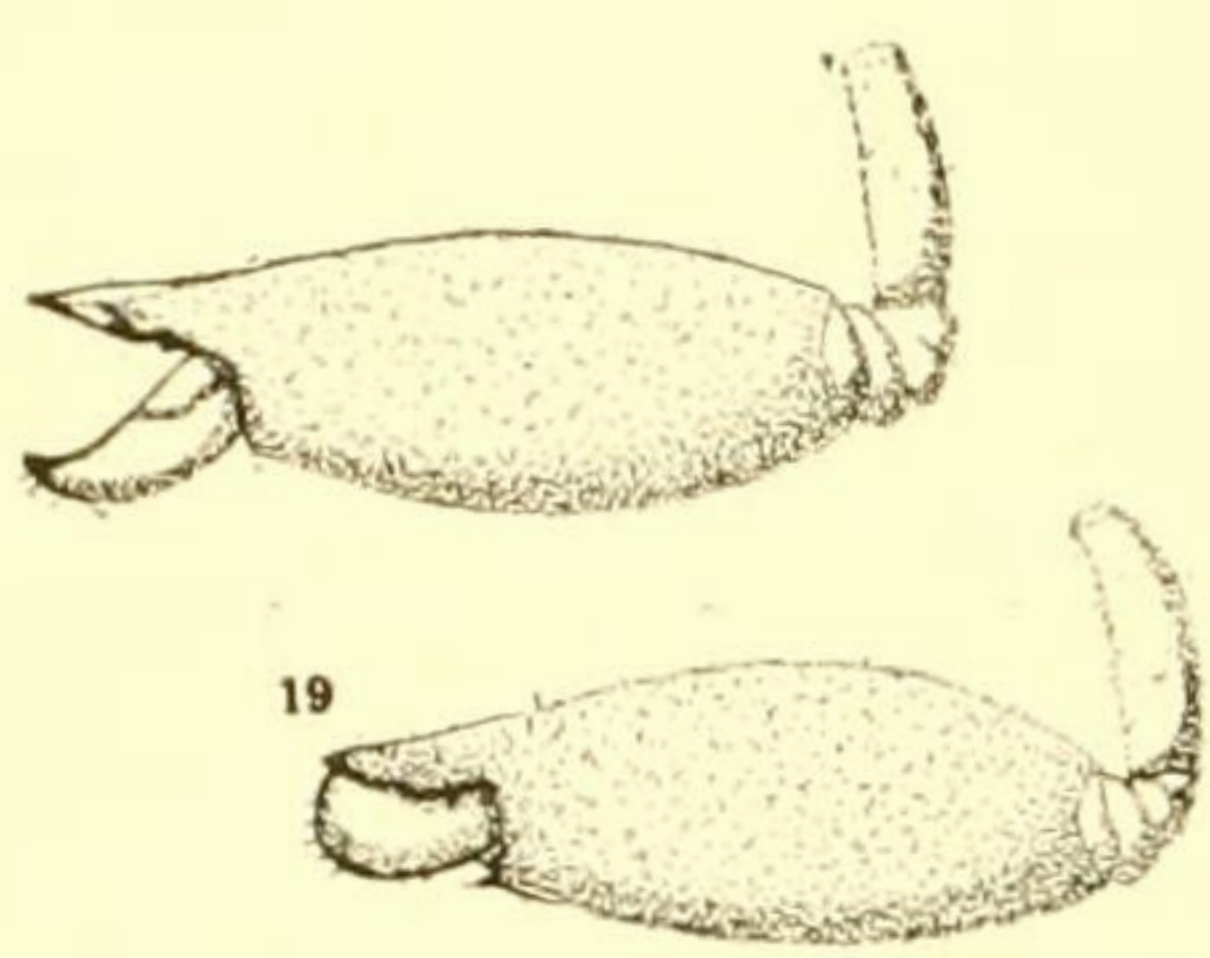
The common kelp crab was found at all times (Fig. 16).

E. nuttallii Randall, U.S.M.

This was the largest kelp crab which we obtained. Fig. 9 is from a smaller specimen than that sent to Washington.

E. bituberculatus Milne Edw. *forma minima* Lockington, U.S.M.

Only one specimen collected at low tide by Hilton. Fig. 17, redrawn from Miss Ballard's color drawing, shows the position of the lighter spots on the dorsal surface.



Loxorhynchus grandis Stimp.

A number of these large deep water forms come in every year. Fig. 18 is from Miss Ballard's drawing of a fairly perfect specimen.

L. crispatus Stimp.

One specimen of this moss crab was dredged just off shore by Prof. A. M. Bean and W. F. Hamilton (Fig. 3).

Cycloxanthops novemdentatus Lock, U.S.M.

Fig. 2 of a small one. Fig. 1 larger. These rather large crabs with the dark tipped claws were sometimes taken inshore at low tide.

Cancer antennarius Stimp. Fig 4. U.S.M.

Found under the same conditions as the one just mentioned.

Pilumnus spinohirsutus Lock.

One poorly preserved specimen we took to be this species (Fig. 5).

Heterocrypta occidentalis Dana

Our specimen is from Hermosa Beach. Others have been reported from San Diego. We may yet find it at Laguna (Fig. 7).

Pachygrapsus crassipes Randall

The shore crab is found in great abundance on any rocky shore or in the nearer tide pools (Fig. 10).

Lophopanopeus heathii Rath., U.S.M.

The young of these were often found in masses of *Polyzea* under rock ledges. A young male was marked as follows: white claws with dark tips, last legs white, other legs and body dark red. A young female had red claws, hind legs white, body darker. Another young male was white.

L. leucomanus Lock.

Adults of these found under stones measured 14 mm. across. Young were found under rock ledges among algæ and polyzoans. Young were found with red claws and a red mouth region.

Dasygygius tuberculatus Lock., U.S.M.

The hydroids on the Balboa piles were swarming with these peculiar spider-like crabs (Fig. 13).

Pachycheles rudis Stimp., U.S.M.

This little crab is found most abundantly in the cavities of the large white sponge.

Petrolisthes eriomerus Stimp., U.S.M.

This is a little flat crab.

P. cinctipes Randall

This has been reported from Laguna by Baker.

P. rathbunæ Schmitt (MSS), U.S.M.

This is the largest flat crab that we have found. One specimen. Hilton, 1913 (Fig. 6 somewhat reduced).

Xanthias taylori Stimp., U.S.M.

This is one of the most common of the crabs found among red sea weeds which it resembles in color and in the little knobs on the anterior parts of the appendages and body.

Herbistia parvifrons Randall, U.S.M.

Moderate sized, narrow headed flat forms. Lateral margin of rostrum not involuted. Second joint of antenna slender subcylindrical. Legs of moderate length.

Pelia clausa Rath., U.S.M.

Found hiding among sponges, polyzoans hydroids and sea weeds. Fragments cling to the animals. A young specimen had blue claws.

Scyra actifrons Dana, U.S.M.

Much as above.

Pugettia richii Dana, U.S.M.

Found much as *P. clausa*.

P. richii Dana, U.S.M.

Found much as the others just mentioned.

Pelia tumida Lock, U.S.M.

This was the largest decorator which we found.

During the Summer of 1913 a minute elongate crustacean was found by Hilton in Coward's cove near shore.

The U. S. M. determined this to be an immature specimen of *Cyathura*, of probably a new species. In November of 1915 a larger elongate specimen was secured not far from Balboa. This was also determined to be an immature specimen of the genus *Cyathura*.

Munidia quadrispina Benedict

A specimen of what was taken to be this species was taken from the stomach of a baracuda caught just off the coast of Laguna Beach (Fig. 15).

W. A. HILTON.

(*Contribution from the Zoological Laboratory of Pomona College*)