

Two new species of Decapods.

By

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With one Plate.

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In the collection of Decapods belonging to the State Museum of Sweden at Stockholm I have found two new arctic species of Decapods, one of them a *Spirontocaris*, the other an *Eupagurus*, which will be described in the following.

I am indebted to G. LILJEVALL Esq. for the skilful way in which he has executed the illustrations.

Spirontocaris recurvirostris n. sp.

Fig. 1.

Diagnosis:

Rostrum long, sharply bent with its upper edge dentated. The base of the rostrum is free from spinæ over the orbits.

The rostrum is well developed and makes a sharp curvature upwards. The upper margin of the rostrum is provided with two or three teeth, the lower edge with four to five, of which one is situated near the apex of the rostrum, so that it looks almost bifid. On the carapace behind the eyes there are generally teeth. Below the orbits there is a spina on each side, whereas on other spina is found in the anterior, lateral part of the carapace. The basal part of the scaphocerit (the peduncel) carries several well developed teeth.

The internal antennæ are short with two filaments of which one is considerable longer than the other one. All articulations of the peduncels of these carry small spinæ. The lateral tooth of the internal antennæ is large. The filaments of the external antennæ are divided into a large number of joints. The mandibels are provided with a two-jointed palpus.

The two anterior periopods (chelipeds) are typically cheletæ. The first pair is shorter and more thick-set than the second pair, which has a narrow carpus, divided into seven articulations. The periopods are all without exopodites. The pleurobranchies are found but the arthrobranchies are missing.

The third abdominal segment has a bent spina directed backwards. In order to protect the roe the anterior epimera are very large especially the second one, which is shaped like a saddle. The 4th and 6th epimera carry a spina on each side at their lower edge. The 6th segment has one pair of teeth in its upper anterior margin. The telson is broad and very powerful.

All the specimens are females and carry roe; of the five specimens in the collection the largest one has the following dimensions.

| | |
|--|--------|
| Total length of the specimen | 88 mm. |
| Length from the posterior margin of the carapace to the apex of the rostrum | 33 mm. |
| Length of the rostrum | 16 mm. |
| » of the carapace | 17 mm. |

These specimens were found at Vaigattet, Greenland: depth 315 m.; bottom: clay with stones. Sofia exp. ¹³/₈ 1883.

This species is easily recognised owing to its long and strong rostrum with the sharp teeth and is no doubt a new species of *Spirontocaris*. It is a remarkable fact, that this species has not hitherto been described as it belongs to a region, where the fauna of Decapods is very well known.

It is not uncommon within the genus *Spirontocaris*, that the males differ from the females in several of their morphological characteristics. The males of the *Spirontocaris polaris* (SABINE) have often no teeth on the upper edge of the rostrum (= *Hippolyte borealis* KRÖYER), the males of

the *Spirontocaris Gaimardi* very often and in certain regions carry a spina on their third abdominal segment (= *Hippolyte Gibba* KRÖYER). A similar spina is also found on the third abdominal segment on the investigated specimens of the *Spirontocaris recurvirostris*, which also has their epimera very strongly developed. It appears to me that these features may only be sexual distinctions, which will not be found on the other sex of this species.

Spirontocaris recurvirostris is closely related to *Spirontocaris Gaimardi* and *Spirontocaris Fabricii*, particularly to the latter. *Spirontocaris Fabricii* is exclusively a littoral animal along the westcoast of Greenland, whereas *Spirontocaris recurvirostris* and also *S. Gaimardi* and *S. polaris* are found at greater depths. *S. recurvirostris* belongs to deeper regions than any other species of the genus *Spirontocaris* in the westcoast of Greenland.

Spirontocaris recurvirostris like *S. groenlandica* (FABR.), *S. Fabricii* (KRÖYER), *S. macilenta* (KRÖYER) and *S. microceros* (KRÖYER) belongs to a western American group of the genus *Spirontocaris*.

Synopsis of the *Spirontocaris* SPENCE BATE.

- A. The base of the rostrum without spina over the orbits.
1. Rostrum as long as the scaphocerit or longer.
 - a. Rostrum slowly tapering to a fine point.
 - *. Rostrum straight, generally with teeth
S. Gaimardi M. EDWARDS.
 - ** . Rostrum curved
 - †. The upper edge of the rostrum with one tooth at the base
S. Fabricii KRÖYER.
 - ††. The upper edge of the rostrum with two or three teeth
S. recurvirostris n. sp.
 - b. Rostrum with a broad, obtuse point, the lower edge with a few teeth
S. macilenta KRÖYER.
 2. Rostrum shorter than the scaphocerit.
 - a. Rostrum without a bifid apex
S. pusiola KRÖYER.
 - b. Rostrum with a bifid apex
S. cranchi LEACH.
- B. One spina over the orbits at the base of the rostrum.
1. The upper edge of the rostrum with 4 or 5 teeth
S. polaris SABINE.

2. The upper edge of the rostrum with only two teeth
S. microceros KRÖYER.
- C. Two spinæ over the orbits at the base of the rostrum.
1. Upper edge of the rostrum with two or three strong teeth
S. groenlandica I. C. FABRICIUS.
2. Upper edge of the rostrum with numerous teeth (more than five).
- a. The lower edge with 4—6 teeth *S. turgida* KRÖYER
- b. » » » » 2—3 »
- *. Rostrum shorter than the scaphocerit, extending backwards almost to the posterior margin of carapace
S. spinus SOWERBY.
- ** . Rostrum of the same length as the scaphocerit, extending backwards to $\frac{2}{3}$ of the length of the carapace
S. spinus var. *Lilljeborgi* DANIELSEN.

Eupagurus porcellanus n. sp.

Fig. 2.

Diagnosis:

The hand of the right cheliped is entirely smooth and of rectangular shape. The carpus is strongly developed on the right cheliped. The peduncels of the external antennæ are longer than the eyes.

The most specific character of this species is the completely smooth surface of the carpus and of the hand of the chelipeds and also their shape. The carpus of the right cheliped is well developed, length and breadth equal, with its inner and upper margin dentated. The hand of the right cheliped is rectangular and very powerful. The hand of the left cheliped is oval in shape, the carpus is oblong, only its inner edge is dentated.

The second and the third pairs of legs are large but without chelæ. The fourth and the fifth pairs are small and serve to keep the animal within its shell; this is also the case with the only abdominal pair of legs, which is almost rudimental.

The surface of the carapace is smooth and has no tubercles or groups of hairs.

The internal antennæ are short and with small filaments, the peduncels have three joints. The external antennæ have long filaments and three-jointed peduncels.

In other morphological respects this species resembles the other members of the genus.

There are only two specimens, which were taken in littoral region of Behring Sea, Behring Island, Vega exp. ¹⁵/₈ 1879.

The largest specimen of these has the following dimensions.

| | | |
|---|-----|-----|
| Total length of the specimen | 40 | mm. |
| length of the carapace | 14 | mm. |
| length of the right cheliped | 27 | mm. |
| length of the carpus of the right cheliped | 9 | mm. |
| length of the hand of the right cheliped | 13 | mm. |
| breadth of the carpus of the right cheliped | 11 | mm. |
| breadth of the hand of the right cheliped | 9 | mm. |
| length of the carpus of the left cheliped | 6 | mm. |
| length of the hand of the left cheliped | 6,5 | mm. |
| breadth of the carpus of the left cheliped | 3,5 | mm. |
| breadth of the hand of the left cheliped | 4,5 | mm. |

Other Eupagurids in Behring Sea.

Eupagurus Bernhardus (LINNÉ).

Habitat.

Behring Island, littoral region 1 sp. Vega exp. ¹⁵⁻¹⁷/₈ 1879.

BRANDT consider the North-Pacific form of the *Eupagurus Bernhardus* as a special variety (*granulato-denticulata*) and BENEDICT as a species (*Alaskensis*). The specimen, which I have investigated, shows in all cases complete conformity to those of the European Seas. I can not admit, that the hands of its chelipeds are especially tuberosus and any other characters, which can be used as distinctions between different species, I have not been able to discover.

The *Eupagurus Bernhardus* is to be found in three different regions, the West Atlantic, the East Atlantic and the North Pacific. All these regions are well separated and any transmigration between them is now impossible. The depth of the Atlantic Ocean separates the inhabitants of its west and its east coasts, the arctic water those of the European Seas from those in the Behring Sea. ORTMAN assumes that a

postglacial change in the physical circumstances, causes an extension of the *Eupagurus Bernhardus* in Behring Sea and North Atlantic. In the separating regions the species now can not exist. ORTMAN therefore assumes, that there was across the Atlantic a tertiary bridge, which *E. BERNHARDUS* has followed. It is remarkable, that the specimens from Behring Sea resemble the European specimens more than those of the West Atlantic (*E. acadianus* BENEDICT).

Eupagurus Middendorffii BRANDT.

Habitat.

Behring Island, littoral region 2 sps. Vega exp. $^{15/8}$ 1879.
 » » several sps. » $^{15-17/8}$ 1879.
 » 9—19 m.; hard bottom with clay 1 sp.
 Vega exp. $^{15-16/5}$ 1879.

Eupagurus splendescens OWEN.

Habitat.

Port Clarence 7—11 m.; stony bottom with algæ 1 sp. (The length of the carapace 33 mm., the length of the hand of the right cheliped 30 mm.) Vega exp. $^{22-25/7}$ 1879.

Behring Island 117 m.; sand mixed with clay. Vega exp. 1 sp. $^{24/8}$ 1879.

Behring Sea 32 m.; clay 1 sp. $^{28/7}$ 1879.

Eupagurus pubescens KRÖYER.

Habitat.

Lat. $66^{\circ} 58'$ N. Long. $171^{\circ} 35'$ W. 38 m.; sand mixed with clay; several sps. Vega exp. $^{19/7}$ 1879.

Lat. $65^{\circ} 14'$ N. Long. $168^{\circ} 36'$ W. 52 m.; stone; 2 sps. Vega exp. $^{27/7}$ 1879.

Lat. $62^{\circ} 39'$ N. Long. $177^{\circ} 6'$ W. 99 m.; clay; 5 sps. Vega exp. $^{5/8}$ 1879.

Behring Island littoral region; 1 sp. Vega exp. $^{15/8}$ 1879.

Behring Island 135 m.; sand mixed with clay; 5 sps. Vega exp. $^{13/8}$ 1879.

General distribution.

Eupagurus Bernhardus boreal, atlantic, north pacific distribution.

- » *pubescens* arctic, boreal distribution.
- » *porcellanus* north pacific »
- » *Middendorffii* » »
- » *splendescens* » »



Tryckt den 16 oktober 1914.

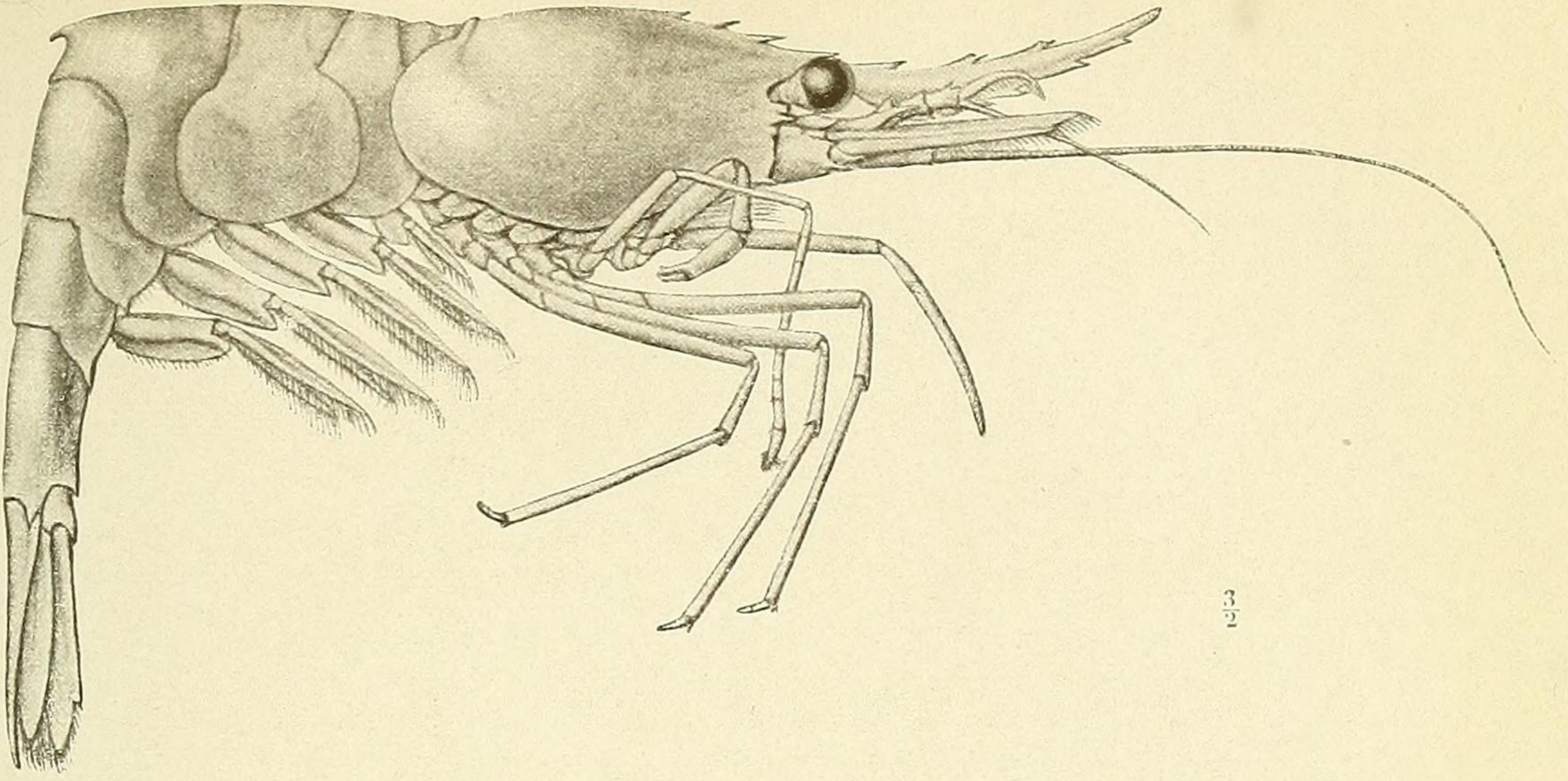


Fig. 1. *Spirontocaris recurvirostris* n. sp.

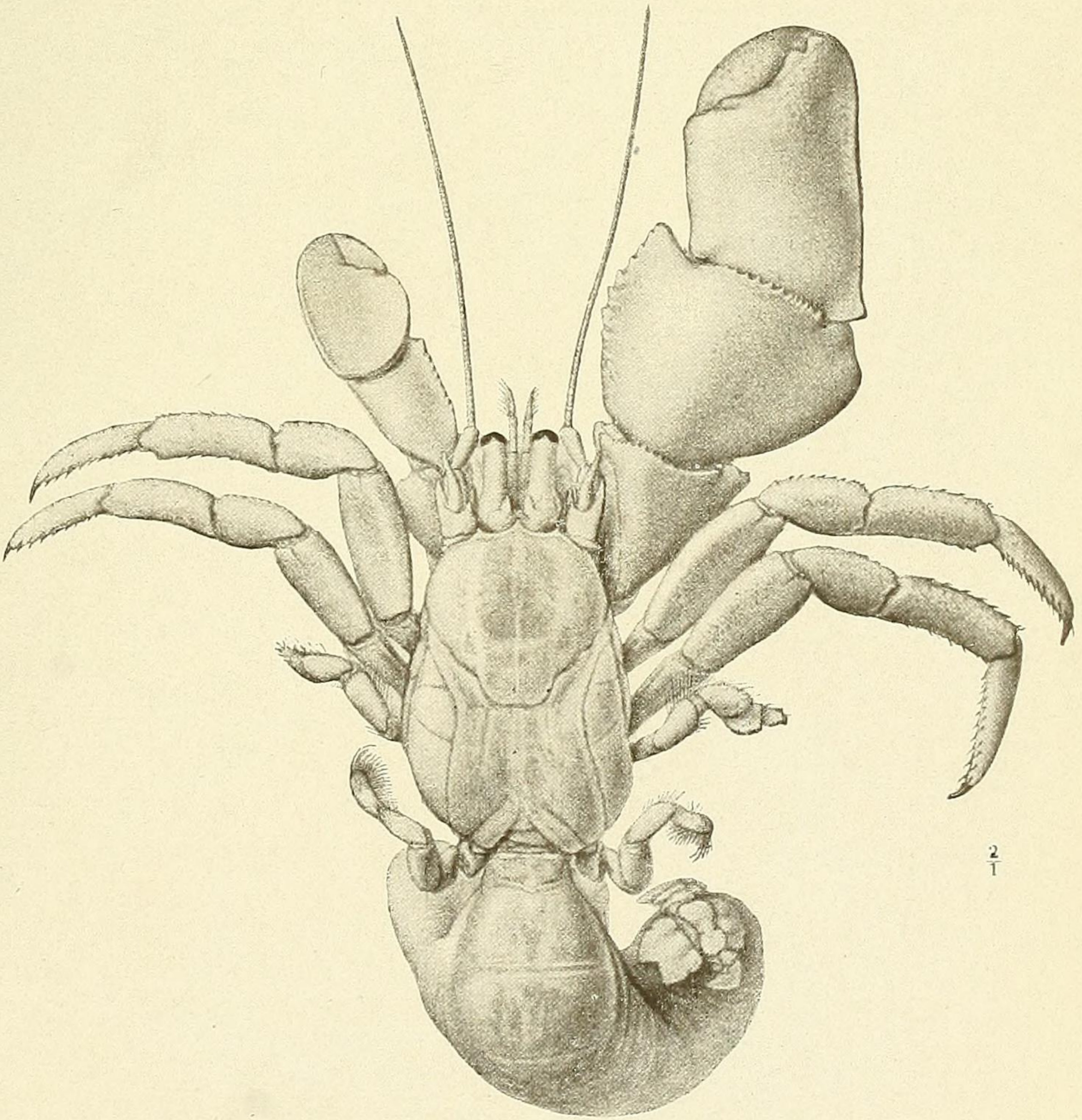


Fig. 2. *Eupagurus porcellanus* n. sp.

