

of *C. maculatus*. The ventral and the pectoral are not longer in our specimens than they are made to appear in the figure of the alleged new species.

The notion seems to have got abroad among some of the European ichthyologists that North America is a comparatively benighted and barbarous country, whose natural history is still in its infancy; it is perhaps owing to this impression that we are startled by information concerning the supposed occurrence of *Cottus* within the tropics, and of a species of *Platycephalus*\* in the Potomac River.

Our common little *Cottus aneus* of Mitchill also has been redescribed, from a New York specimen, under the name of *Cottus* (*Acanthocottus*) *anceps*.†

As a general rule it will be safe to intrust the novelties of fish distribution in our country to its resident ichthyologists

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## DESCRIPTION OF A NEW CRUSTACEAN ALLIED TO HOMARUS AND NEPHROPS.

By SIDNEY I. SMITH.

Any additions to the small number of known types of existing Homaridæ are of special interest on account of the relations of the group to the Astacidæ and to several fossil forms, and for this reason it seems desirable to give a special notice of the following species recently taken in the Caribbean sea by the Fish Commission steamer Albatross.

*Eunephrops*, gen. nov.

The species for which this generic name is proposed agrees with *Homarus* and differs from *Nephrops* and *Nephropsis* in the number and arrangement of the branchiæ, and in the evenly swollen branchial regions; it agrees with *Nephrops* and *Homarus* and differs from *Nephropsis* in possessing antennal scales and well-developed eyes; it agrees with *Nephropsis* and differs from *Homarus* and *Nephrops* in having very large antennal spines, and in being without any spine on the second segment of the peduncle of the antenna; and it agrees with *Nephrops* and differs from *Homarus* and *Nephropsis* in having slender and carinated chelæ.

*Eunephrops Bairdii*, sp. nov.

*Female*.—The carapax is nearly as broad as high, and the branchial regions and the dorsum, except in front, are evenly convex and rounded. The cervical suture is conspicuous and very deep, extends round beneath the narrow lateral lobe of the gastric region and joins the middle

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\* *Platycephalus americanus*, Sauvage, Nouv. Archiv. Mus. (2), i, 148, pl. ii, f. 3 (head only). Potomac River.

† *Cottus* (*Acanthocottus*) *anceps*, Sauvage, Nouv. Archiv. Mus. Hist. Nat., Paris (2), i, 1878, p. 145, pl. i, f. xiii.

of a conspicuous regularly semicircular suture limiting the hepatic region below and behind. The inferior edge of the rostrum is sharp and slightly roughened but not distinctly dentate. From the sides of the rostrum two low rounded carinæ extend back a little way upon the gastric region, and are each armed with two spines somewhat smaller than the lateral spines of the rostrum, while much farther back, upon the posterior margin of the cervical suture, there is a pair of similar subdorsal spines much nearer together. The anterior margin projects either side in a great vertically compressed dentiform spine reaching in an acute point as far forward as the eyes, and recalling similar spines in some of the Crangonidæ. Just back of the base of the antennal spine there is a small spine on the hepatic region, and between this and the posterior subdorsal spine of the gastric region, and back of the orbit, there is a similar spine. The carapax is everywhere roughened with minute tubercles between which the surface is beset with very short hairs.

The eyes, though not quite as large, are nearly like those of *Nephrops Norvegicus*, being vertically compressed, reniform, and black.

The antennulæ are like those of *Nephrops Norvegicus*. The general form and proportions of the bodies of the segments of the peduncle of the antennæ are almost exactly as in *Nephrops Norvegicus*, but the second segment is evenly convex externally and without any trace of a tooth or spine at the base of the very small antennal scale, which is very little more than half as long as the fourth segment, about half as wide as long, oblong-ovate, with a minute tooth at the tip and with the inner edge ciliated. The flagellum is considerably longer than the body of the animal and very nearly as in *Nephrops Norvegicus*.

The oral appendages agree very closely in every detail with those of *Nephrops Norvegicus*, except that there is a well-developed podobranchia, fully as large as in *Homarus Americanus*, at the base of the first gnathopod.

In the single specimen seen the right cheliped is in process of reproduction and very rudimentary. The left cheliped agrees in general form very closely with the more slender of the chelipeds of *Nephrops Norvegicus*: the inferior and superior edges of the merus, though roughened with somewhat spiniform granules, bear only one real spine each and that at the distal end; the spines of the carpus are slightly fewer, but arranged nearly as in *Nephrops Norvegicus*; the chela itself is very slightly broader than in *Nephrops Norvegicus*, the spines of the carinæ are a little less prominent, though the carinæ are spinulose or minutely tuberculose nearly to the tips of the digits, and the spaces between the carinæ are thickly tuberculose and not pubescent. The remaining pæropods are very nearly as in *Nephrops Norvegicus*.

The pleon is in general very much like that of *Nephrops Norvegicus*, but the whole dorsum is pubescent, and the second, third, and fourth somites have only an inconspicuous, transverse, dorsally interrupted

and densely pubescent sulcus in place of the much broader and conspicuous sulci upon all the somites of *Nephrops Norvegicus*. The depressions on the bases of the pleura are deeper than in *Nephrops Norvegicus*, and the inferior angles are more obtuse, and not distinctly hooked, as in that species. The second to the fifth pleopods are smaller and their lamellæ much narrower than in the *Homarus Americanus* or the male of *Nephrops Norvegicus*. [I have had no female *Nephrops* for comparison.]

*Measurements in millimeters.*

Length from tip of rostrum to tip of telson.....	142.0
Length of carapax, including rostrum.....	69.5
Length of rostrum .....	24.3
Length of rostrum in front of spines .....	13.0
Breadth between tips of antennal spines .....	21.5
Greatest breadth, at branchial regions.....	25.0
Height of carapax .....	26.0
Length of eye-stalk and eye.....	6.0
Greatest diameter of eye.....	7.0
Length of antennal scale .....	4.1
Breadth of antennal scale.....	2.0
Length of left cheliped .....	112.0
Length of merus .....	32.0
Length of carpus.....	22.0
Length of chela.....	54.0
Breadth of chela .....	12.5
Length of dactylus.....	24.0
Length of second peræopod.....	69.0
Length of merus .....	23.0
Length of carpus.....	10.5
Length of chela .....	18.5
Breadth of chela .....	3.0
Length of dactylus.....	6.0
Length of third peræopod .....	65.0
Length of merus .....	19.5
Length of carpus.....	9.6
Length of chela .....	20.5
Breadth of chela .....	2.8
Length of dactylus .....	6.0
Length of fourth peræopod .....	67.0
Length of propodus .....	15.6
Length of dactylus.....	8.7
Length of fifth peræopod .....	58.0
Length of propodus .....	15.0
Length of dactylus.....	7.0
Length of sixth somite of pleon.....	13.0
Length of telson .....	16.0
Breadth of telson .....	13.3
Length of inner lamella of nropod .....	14.0
Breadth of inner lamella of uropod .....	13.3
Length of outer lamella of uropod .....	19.0
Breadth of outer lamella of uropod .....	14.0

Station 2143, March 23, 1884; Gulf of Darien; north latitude  $9^{\circ} 30' 45''$ , west longitude  $76^{\circ} 25' 30''$ ; 155 fathoms, green mud. One female (6939).

NEW HAVEN, CONN., April 29, 1885.

ON SOME GENERA AND SPECIES OF PENÆIDÆ, MOSTLY FROM RECENT DREDGINGS OF THE UNITED STATES FISH COMMISSION.

By SIDNEY I. SMITH.

*Penæus* Fabricius (restricted).

Unfortunately I have not been able to examine either of the species referred to the genus by Fabricius, but in *P. carimonte*, *canaliculatus*, *Brasiliensis*, *semisulcatus*, *setiferus*, and *stylirostris* the antennular flagella are very short; the distal segment of the mandibular palpus is much larger than the proximal, very broad, and not prolonged into a narrow tip; the endognath of the first maxilla is greatly elongated and segmented; the endopod of the maxilliped is slender and composed of four segments, and the exopod is lamellar and unsegmented; both pairs of gnathopods have well-developed epipods and large exopods; all the peræopods have small exopods, but only the first, second, and third are furnished with epipods; there is a well-developed pleurobranchia on the fourteenth somite. The number and arrangement of the branchiæ and epipods are the same for all these species, and is indicated in the following formula:

Somites.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XIV.	Total.
Epipods.....	1	1	1	1	1	1	0	0	(6)
Podobranchiæ.....	0	1	0	0	0	0	0	0	1
Arthrobranchiæ.....	r.	2	2	2	2	2	1	0	11 + r.
Pleurobranchiæ.....	0	0	1	1	1	1	1	1	6
									18 + r. + (6)

These species also agree in having well-developed antennal and hepatic spines and conspicuous antennal and hepatic sulci; but these characters are not regarded as of generic value.

*Parapenæus*, gen. nov.

The species referred to the genus here proposed are at once distinguished from the species of *Penæus* proper in having the endognath of the first maxilla short and unsegmented, the second gnathopod without an epipod, and the fourteenth somite (posterior somite of the peræon) wholly without branchiæ. The species examined further agree in having none of the sulci of the carapax conspicuous except the cervical, and in having the antennular flagella shorter than the carapax. In the first three species here referred to the genus the mandibular palpi