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 œneus* 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

* *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 peræopods 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 uropod	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° 30′ 45″, west longitude 76° 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

are as in the typical species of *Penæus*, there are no exopods at the bases of any of the peræopods, and the branchio-epipodal formula is—

Somites.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XIV.	Total.
Epipods	1	1	0	1	1	1	0	0	(5)
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	0	5
									17+r.+(5)

In *P. constrictus* and a Japanese species here doubtfully referred to the *P. barbatus* (De Haan) the distal segment of the mandibular palpus is slightly elongated and narrowed distally; there are very small narrow lamellar exopods at the bases of all the peræopods; and there is no pleurobranchia on the thirteenth somite, the branchio-epipodal formula being—

Somites.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XIV.	Total.
Epipods	1	1	0	1	1	1	0	0	(5)
Podobranchiæ	0	1	0	0	0	0	0	0	1
Arthrobranchiæ	0	2	2	2	2	2	1	0	11
Pleurobranchiæ	0	0	1	1	1	1	0	0	4
									16+(5)

These characters might be considered of generic value, but I prefer not to propose a new genus for these two species, and I am confirmed in this from the examination of two other species: a Japanese species (possibly the *P. affinis* (M.-Edwards), but evidently not the species figured by Bate as the male of that species) which closely resembles the *constrictus* and *barbatus* in general appearance, but has no exopods at the bases of the posterior peræopods and has the epipods and branchiæ as in *P. longirostris;* and *P. Goodei*, described beyond, which, though resembling the *constrictus* and *barbatus* in external characters, has the mandibular palpi, epipods, and branchiæ as in *P. longirostris*, and long and slender exopods at the bases of all the peræopods.

Parapenæus longirostris.

Penæus longirostris Lucas, Explor. Algérie, Crust., p. 46, pl. 4, fig. 6, 1849.

Penæus membranaceus Heller, Sitzungsber. Akad. Wiss. Wien, xlv, p. 423, pl. 2, fig. 49, 1862; Crust. südlichen Europa, p. 296, pl. 10, fig. 11, 1863.

Penæus Bocagei Johnson, Proc. Zool. Soc. London, 1863, p. 255; *ibid.*, 1867, p. 900 (< *longirostris*).

I take this Mediterranean species, of which I have examined a specimen received from the Rev. A. M. Norman, as the type of the genus.

Judging from his description, this is apparently not Risso's *Peneus membranaceus* (Crust. de Nice, p. 98, 1816), which is probably indeterminable. He describes the rostrum as short, and again as "un petit rostre aplati et denté," which would apply better to the Mediterranean