

fourteen joints. The joints are covered with numerous fine pores; but commonly one much larger pore on each side, below the middle, is very conspicuous in the middle joints of the antennæ, principally in the sixteenth and preceding joints. Such a large pore contains the insertion of a sensitive hair.

No other order of insect proper seems to be represented on Kerguelen Island than those already mentioned. Neither was any member of the class *Myriapoda* observed. Spiders of the wandering sort are abundant, their tents being numerous under almost every large stone. There are no web-builders, however, and, although individuals are numerous, the variety in form is slight. The collection has been sent to Mr. William Holden, of Marietta, Ohio, for identification.

A small red acarinus was very plentiful upon the leaf-stalks of the Kerguelen cabbage, and, indeed, wherever succulent vegetation was luxuriant. Broad yellow bands, observed on the sides of rocks frequented by cormorants, were found to consist almost entirely of another variety of acarinus, yellow in color, and spotted on the back, somewhat like the "lady-bird" (*Coccinella*).

## CRUSTACEANS.

DESCRIBED BY S. I. SMITH.

### DECAPODA.

#### PINNOTHERIDÆ.

##### HALICARCINUS PLANATUS, White.

*Cancer planatus*, J. C. Fabricius, *Entomologia Systematica*, ii, 446, 1793.

*Leucosia planata*, J. C. Fabricius, *Supplementum Entomologiæ Systematicæ*, 350, 1798.

*Hymenosoma tridentatum*, Lucas, in Hombron et Jacquinot, *Voyage de l'Astrolabe au pôle sud*, 60, pl. 5, figs. 27-33.

*Halicarcinus planatus*, White, *Annals and Magazine Nat. Hist.*, vol. xvii, 178, 1846, pl. 2, fig. 1; *Catalogue Crust. British Museum*, 33, 1847.—Dana, *United States Exploring Expedition, Crust.*, 385, pl. 24, fig. 7, 1852.—Edwards, *Annales des Sciences naturelles*, 3me série, xx, 1853, 223.—Heller, *Reise der österreichischen Fregatte Novara um die Erde, Crust.*, 66, 1865.

Specimens of this species were collected at Kerguelen Island, on rocky beaches, and others were dredged in five fathoms. It was previously known from Tierra del Fuego and New Zealand. The males are nearly equal in size to the females, and have very much stouter chelipeds.



## AMPHIPODA.

## ORCHESTIDÆ.

HYALE VILLOSA, Smith, s. n.

Of this species there is in the collection only a single somewhat mutilated specimen, from which the following description is taken :

*Male* : Second and third segments of the peduncle of the antennula subequal in length, very slightly shorter than the first ; flagellum imperfect. Ultimate segment of the peduncle of the antenna longer than the penultimate, and almost as long as the last two segments of the peduncle of the antennula ; flagellum nearly twice as long as the peduncle, and composed of about seventeen segments ; the last segments of the peduncle and the proximal portion of the flagellum quite thickly villose.

First pair of gnathopods with the carpus short and triangular ; the propodus not quite twice as long as broad, of the same breadth at each end, the palmary margin slightly oblique and a little convex in outline, armed with a slender spine on the inside at the rounded posterior angle, and clothed with a few hair-like setæ, as is also the distal portion of the posterior margin ; the dactylus long and strongly curved, so as to reach round upon the posterior margin. Second pair of gnathopods with the propodus caudate in outline, about five-sevenths as broad as long, and narrowed rapidly distally ; the palmary and posterior margins forming a continuous curve of nearly the same convexity as the anterior margin, densely villose throughout, and armed on the inside, at the tip of the closed dactylus, with a single stout spine ; dactylus about half as long as the propodus, stout and strongly curved. Posterior pair of pereopods only slightly longer than the fourth pair, which are considerably longer than the third pair ; the bases of these three pairs, with the posterior margins expanded, evenly arcuate and unarmed. Infero-posterior angles of the second and third segments of the pleon right-angled but not produced. Uropods all short ; the bases of the first and second pairs reaching to the same point, and the inner rami in both slightly longer than the outer ; third pair about as long as the bases of the second, and with the ramus about as long as the base.

Length, excluding antennæ, nearly 10<sup>mm</sup>.

Rocky beaches, Kerguelen Island.

This species is evidently very closely allied to *Hyale hirtipalma* (Allor-



*chestes hirtipalma*, Dana, Crustacea United States Exploring Expedition, p. 888, pl. 60, fig. 4, 1852) from the coast of Peru. According to the description and figures, however, the propodus in the first pair of gnathopods in that species is much narrowed proximally, the propodus in the second pair is twice as long as broad, the palmary margin is slightly emarginated in the middle, and there is no mention made of any spine. The maxillæ and maxillipeds agree well with the figures of those appendages given by Dana.

## LYSIANASSIDÆ.

### LYSIANASSA KIDDERI, Smith, s. n.

Eyes of moderate size, oval and black. Antero-lateral margin of the head produced, nearly right-angled, with the angle very slightly rounded. Basal segment of the peduncle of the antennula stout and about as long as the head; second and third segments very short; flagellum scarcely longer than the peduncle; secondary flagellum about half as long. Antenna in the female scarcely longer than the antennula; all the segments of the peduncle very short; the flagellum tapering rapidly, and composed of only seven or eight segments. In the young males the antenna is much longer than the antennula, and the flagellum is composed of twelve to fifteen segments, and furnished along the upper side with vase-shaped sensory organs.

First pair of gnathopods, not subcheliform, short; carpus much stouter than the propodus and nearly as long; propodus tapering distally to scarcely more than the breadth of the dactylus, which is stout, and not more than a third as long as the propodus. Second gnathopods slender; carpus fully a third as broad as long, slightly narrowed distally; propodus almost as wide but not as long as the carpus; the extremity truncated, with the posterior angle produced into a small tooth opposed to the minute hooked dactylus, which arises at its base and below the middle of the terminal margin; the posterior edge is armed with short and acute spines, while the anterior edge and the sides are clothed with slender setæ, and the terminal margin, above the base of the dactylus, with longer and stouter setæ, curved at the tips. Coxæ of the third pair of pereopods broader than long. Posterior edges of the bases of the third to the fifth pair evenly curved, with only very slight emarginations at the insertions of the very minute and widely-separated marginal hairs; the meral segments of the same appendages broad, and their



postero-inferior angles strongly produced. Infero-posterior angles of the second and third segments of the pleon obtusely rounded and not produced. Uropods all short; the posterior pair especially so; the base as thick as long; the outer ramus slender and shorter than the base; the inner minute, not more than half as long as the outer. Telson as broad as long, narrowed toward the extremity, which is truncated and slightly excavated.

Length, excluding antennæ, 3<sup>mm.</sup> to 4<sup>mm.</sup>

Rocky beaches, with the last species.

All the specimens received are apparently immature, and the males evidently, and very likely the females also, have not attained the adult characters. The species does not agree fully with the characters assigned by Boeck to the genus *Lysianassa* as restricted by him, and I therefore subjoin a description of the appendages of the mouth.

The mandibles are slender, with the molar area half-way from the tip to the attachment of the long and slender palpus which arises near the base. The inner lobe of the first maxilla is large, reaches more than two-thirds of the way to the tip of the outer lobe, and is furnished with two very minute setæ at the tip and numerous fine hairs along the inner margin; the palpus is very slender and tapers to a point, near which it is armed with a very few slender spines. The inner lobe of the second maxilla is broad and nearly or quite as long as the outer lobe. The inner lobe of the maxillipeds is elongated, armed at the tip with three obtuse teeth, and reaches to the distal extremity of the second segment of the palpus; the outer lobe is very large, unarmed, and reaches beyond the middle of the third segment of the palpus; the palpus is slender, the ultimate segment styliform and less than half as long as the penultimate.

The antennulæ, mandibles, second maxillæ, maxillipeds, and posterior uropods are more like some of the species of *Orchomene* than they are like the species of *Lysianassa*, as described and figured by Boeck, and the characters assigned to *Lysianassa* by this author would require considerable modification to admit our species.

*Lysianassa kergueleni*, Miers (Annals and Magazine Nat. Hist., iv, vol. xvi, p. 74, 1875), collected at Kerguelen by the Rev. A. E. Eaton, judging from the very short description, is quite a different species and not a *Lysianassa*, even in the unrestricted sense in which that generic term is used by Kroyer and Bate, for the first pair of gnathopods are said to be "subchelate."



## GAMMARIDÆ.

## ATYLUS (?) AUSTRALIS, Miers (?)

? *Paramœra australis*, Miers, Annals and Magazine Nat. Hist. iv, vol. xiv, 75, July, 1875.

? *Atylus australis*, Miers, loc. cit., 117, Aug., 1875.

There are, in Dr. Kidder's collection, a considerable number of specimens of an *Atylus*-like amphipod which I very hesitatingly refer to this species described by Miers from specimens collected at Kerguelen Island by the Rev. A. E. Eaton. Dr. Kidder's specimens differ in several points from the very brief description given by Miers. The most important of these differences is the existence of minute secondary flagella upon the antennulæ of our specimens, while Miers's species is said to have "exappendiculate" antennulæ. Although the secondary flagellum has usually been said to be wanting in all the *Atylinae*, it exists, according to Bate, in the young of the typical *Atylus carinatus*, Leach, and it has very likely been overlooked in the adults of some of the species of the group. Its minute size might have caused it to be overlooked by Miers in the present case. This species cannot be referred to the genus *Atylus* as restricted by Boeck, but, on account of the doubt in regard to the identity of our specimens with the species described by Miers, and the doubt whether *Paramœra* should be retained for Miers's species if a distinct genus, I content myself on the present occasion with the following description of the species in my possession:

The eyes are very large, oval, and black. The anterior margin of the head projects in a slight obtuse angle, between the bases of the antennulæ. The antennulæ are furnished with a minute secondary flagellum of a single segment, considerably shorter than the diameter of the first segment of the primary flagellum, but tipped with two slender setæ several times as long as the segment itself.

The gnathopods of the male are subequal, but those of the second pair are somewhat larger than the first. The carpus in each pair is about half as long as the propodus, and the distal portion of the posterior margin is armed with numerous setæ. The propodus in the first pair is about a third as broad as long; the edges are nearly parallel, but both slightly convex in outline; the posterior margin is furnished with fascicles of short, setiform hairs; the palmary margin is furnished with a narrow lamellar edge, is slightly oblique, evenly convex in outline, and the posterior angle is broadly rounded and continuous with the posterior margin, which, however, is armed, each side, with several stout



spines. The dactylus fits closely to the palmary margin. The propodus in the second pair is in all respects similar, but stouter, being fully half as broad as long; the palmary margin is a little more oblique, not quite as convex in outline, and the spines at the posterior angle are stouter. The dactylus is so much curved that it does not fit closely the middle part of the palmary margin. The gnathopods of the female are similar to those of the male, but much weaker and nearly equal in size, and the setæ of the posterior margins of the carpi and propodi are very much longer. The propodus in each pair is only a little longer than the carpus, about half as broad as long, and slightly narrowed proximally, and the palmary margin is very nearly transverse, with its posterior angle only very slightly rounded.

The inferior margins of the first three segments of the pleon are slightly arcuate and armed on the outside with a submarginal series of short spines, but the edge is not serrate. The posterior margins of the first and second segments are nearly straight and make nearly a right angle, very slightly rounded, with the inferior margins, while the posterior margin of the third segment is arcuate with the inferior angle broadly rounded. The peduncles of the second uropods do not reach to the tips of the peduncles of the first pair, and the outer rami in both these pairs are much more slender and considerably shorter than the inner, which reach nearly or quite to the tips of the third pair. The rami of the posterior uropods are subequal, longer than the peduncles, taper regularly to acute points, and are armed along each margin with stout spines and long setiform hairs, the latter principally upon the outer margins. The telson is about two thirds as broad as long, narrowed distally, divided two-thirds of the way to the base, and armed with a slender spine at the tip of each lobe, and often with one or two additional spines on each side.

Length of the largest specimens, excluding the antennæ, in the females about 9<sup>mm</sup>; in the males a little less.

The mouth-appendages agree very well with those of *Atylus carinatus*, as figured by Kroyer (Voyages en Scandinavie, en Laponie, etc., pl. 11, fig. 1), but the mandibular palpus is considerably stouter than represented in the figures referred to, and the second and third segments are very nearly equal in length, the second segment somewhat stouter than the third.

Rocky beaches, Kerguelen Island.



## ISOPODA.

## ASELLIDÆ.

## JÆRA PUBESCENS, Dana.

*Jæra pubescens*, Dana, United States Exploring Expedition, Crustacea, 744, pl. 49, fig. 9, 1852.

Associated with the following species upon rocky beaches, Kerguelen Island. Dana's specimens were from Nassau Bay, Tierra del Fuego.

## SPHÆROMIDÆ.

## SPHÆROMA GIGAS, Leach.

*Sphæroma gigas*, Leach, Dictionnaire des Sciences naturelles, vol. xii, 346 (*teste* Desmarest and Edwards).—Desmarest, Considérations générales sur la classe des Crust., 301, 1825.—Edwards, Histoire naturelle des Crust., vol. iii, 205, 1840.—White, List of Crustaceans in British Museum, 102, 1847.—Dana, United States Exploring Expedition, Crustacea, 775, pl. 52, fig. 1, 1852.

A large series of specimens of all sizes from 5<sup>mm</sup> to 29<sup>mm</sup> in length were obtained, all the larger specimens from the gullets of terns, the smaller ones from rocky beaches. All the specimens agree with the typical *gigas*, and do not seem to approach the *S. lanceolata*, White, (Annals and Magazine Nat. Hist., vol. xii, p. 345, 1843, and List of Crustaceans in British Museum, p. 102, 1847).

## SEROLIDÆ.

## SEROLIS LATIFRONS, White.

*Serolis latifrons*, White, List of Crust. British Museum, 106, 1847 (no description); Voyage of the Erebus and Terror, Crust., pl. 6, fig. 12.—Miers, Annals and Magazine Nat. Hist. iv, vol. xvi, 74, 1875.

Rocky beach, Kerguelen Island.

Only one specimen was obtained. This is a female, and considerably larger than the British Museum specimen. Our specimen differs somewhat in outline and proportions from White's figure; but the differences are very likely due to sex, although the sex of White's specimen is not stated. The antennæ are smaller than given in White's figure, the peduncle being scarcely longer than the head and the first thoracic segment. The peduncle of the antennula reaches beyond the lateral angle



of the first thoracic segment; the first three segments are scarcely longer than broad, the fourth about as long as the second segment of the antenna, and the fifth about twice as long as the fourth; the third, fourth, and fifth segments are flattened above, with the margins slightly raised, and with a strong median carina.

Length from front of head to tip of pleon, 37<sup>mm</sup>; length of pleon, 13<sup>mm</sup>; breadth of first thoracic segment, 24.5<sup>mm</sup>; greatest breadth at third thoracic segment, 26.5<sup>mm</sup>; breadth at last thoracic segment, 21.5<sup>mm</sup>.

## ANNELIDS AND ECHINODERMS.

BY A. E. VERRILL.

### ANNELIDA.

Very few species of annelids were collected, and only two species are represented by sufficiently well preserved specimens to warrant full descriptions. One of these is a large terebelloid worm belonging to a genus hitherto seldom met with and but imperfectly known.

#### NEREIS ANTARCTICA, Verrill, s. n.

One specimen of a *Nereis*, about two inches long, lacks some of the caudal segments and part of the tentacular cirri, but is otherwise pretty well preserved in glycerine.

The body is moderately stout and tapers from near the head backward. The cephalic lobe is rather narrow, and suddenly more narrowed in front of the eyes, which are large and prominent, those on the same side almost in contact and nearly in the same line; the frontal antennæ are rather long and slender; the upper tentacular cirri are wanting, but the lower ones are rather long and slender, those of the posterior pair reaching back to the sixth body-segment. The buccal segment is narrower but considerably longer than the following ones, and has a median obtuse angle projecting forward over the posterior border of the cephalic lobe. The lateral appendages of the anterior segments are rather stout, with a longer, slender dorsal cirrus. The upper ramus consists of two short, stout, obtusely rounded lobes, which are nearly equal in length and form, the upper one bearing the dorsal cirrus at about the middle of its upper side, on a slight swelling, while a fascicle of slender compound setæ comes out from between them; these setæ project about twice the length of the setigerous lobes, and all have a moderately