

MIMONECTES,
A REMARKABLE GENUS OF
AMPHIPODA HYPERIDEA.

BY

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WITH 3 PLATES.

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Mimicry or the faculty of mimicking, or disguising themselves, acquired by certain animals, which are exposed to the attacks of many enemies, or by their slowness, etc., are but little adapted to catch their prey, has long been a well-known fact, and it has been studied in different groups. But, as far as I know, it has never yet been observed among the Amphipoda. The remarkable Hyperids, treated in this paper, presenting, according to my opinion, an instance of mimicry, this circumstance seems to me another reason to publish a description of them.

Among the collections of pelagic Crustacea, brought together during the expedition of H. Swed. M. Frigate *Eugenie*, and kindly entrusted to me by Professor SVEN LOVÉN for determination, a little amphipod attracted my attention by the enormous globular development of its body. Put into a larger glass with spiritus, it offered at the first sight a *striking resemblance to a little jellyfish* by the hyaline, bell-shaped form of the fore-part of the body, and by the straight slender legs and the minute tail, hanging down as filaments. Afterwards I got larger specimens of the same species and some other allied ones in a very valuable collection of Hyperids, sent to me by Professor JAPETUS STEENSTRUP from the University Museum at Copenhagen through the kind intermediation of Professor LOVÉN. Thus provided with a comparatively rich material I submitted it to a closer examination, the results of which are given below.

The examination of the mouth-organs and other parts of the animal showed that it must doubtless be ranged among the Amphipoda Hyperidea, and also that it must be set down as a genus of its own. I propose for it the name of *Mimonectes*.

Its differences from the other Hyperidea being too important to allow of its introduction into any of the old families of that tribe, it may be considered the type of a new family:

MIMONECTIDÆ.

Hyperids with the head and a part or the whole of the pereion developed into an enormous balloon-shaped globe. Ocelli not united but dispersed on each side of the head. The upper antennæ long, more or less straight. The lower small, four-jointed. The mandibles without palp. The maxillipeds well developed.

Mimonectes, n. g.

Derivatio, *Mῖμος*: mimic, imitator, and *νήπιος*: swimmer.

Diagn. *Caput* magnum, latum, valde inflatum, simul cum pereio sphæram formans.
Oculi parvi, dispersi.

Antennæ superiores longæ, rectæ, flagello articulato.

Antennæ inferiores parvæ.

Pleon compressum non inflatum.

Pedes uri duos ramos gerentes.

The *head* and the *pereion* are inflated, forming together an enormous globe.

The *eyes* are small, scattered over the sides of the head.

The *upper antennæ* are long, straight, with articulated flagellum.

The *lower antennæ* are small.

The *pleon* is compressed, not inflated.

The *uropoda* are provided with two rami.

The genus *Mimonectes* is easily distinguished from other Hyperids by its globular shape, with all the legs, branchial sacks, ovigerous lamellæ and the urus hanging down, similar to the filaments of a medusa. But it differs also by some anatomical and morphological characteristics from all or most of the other Hyperids. As important points I mention the structure of the eyes and of the nervous system, and that the interior of the pereion forms a bladder containing a fluid.

With the genus *Lanceola*, SAY¹⁾ it agrees in the strong development of the maxillipeds, with *Cysteosoma*, GUÉRIN and TYRO, MILNE-EDWARDS²⁾ in the form of the upper antennæ, with the true *Hyperia* in the shape of the urus and its appendages.

1) See: CARL BOVALLIUS, On some forgotten genera of the Amphipodous Crustacea. Bihang t. K. Vet.-Akad:s Handl. Tom. 10. N:o 14, pag. 3. Sthm 1885.

2) See CARL BOVALLIUS l. c. pag. 12.

The specimens examined have been distributed into three new species, easily distinguished from one another, as shown by the following diagram.

The sphaerical portion of the body is formed by the <i>head and the . .</i>	}	5 first pereional segments. 1. <i>M. Lovéni</i> , n. sp. The third pair of pereiopoda only a little shorter than half the diameter of the globe.
		6 first pereional segments. 2. <i>M. sphaericus</i> , n. sp. The third pair of pereiopoda as long as one fourth of the diameter of the globe.
		all the pereional segments. 3. <i>M. Steenstrupii</i> , n. sp. The third pair of pereiopoda as long as one eighth of the diameter of the globe.

For the more detailed description I have chosen *Mimonectes Lovéni*, because I have some larger specimens of it at my disposal.

1. *Mimonectes Lovéni*, n. sp.

The name in honour of Professor SVEN LOVÉN.

Diagn. *Sphæra* segmentis quinque primis pereii formata.
Caput quater fere altius quam longius.
Antennæ superiores capite longiores, marginibus serratis.
Antennæ inferiores IV-articulatæ.
 Segmenta sextum et septimum *pereii* non inflata.
Pedes pereii tertii paris dimidium fere diametri sphaeræ longitudine æquantes.
Pedes uri primi paris pedes secundi paris non æquantes.

The *globe* is formed by the head and the five first pereional segments.

The *head* is nearly four times higher than long.

The *upper antennæ* are longer than the head, their margins are serrated.

The *lower antennæ* are four-jointed.

The *sixth and seventh pereional segments* are comparatively compressed, not inflated.

The *third pair of pereiopoda* are nearly as long as half the diameter of the globe.

The *first pair of uropoda* do not reach to the end of the second pair.

The most striking characteristic of the animal is that which characterises the whole genus, viz. the enormous development of the head

and a part of the pereion into a hyaline bell or globe. The interior of this globe consists of a liquid matter, enclosed in a thin, pellucid membrane. As all the specimens I have examined were, since a longer or shorter time, preserved in alcohol, it was impossible to determine if the fluid is specific or the same as the surrounding medium. It was also quite impossible to perceive any connection between this bladder or water-room with the organs of circulation and digestion, or any connection between it and the surrounding medium. How the fluid originates and is maintained in the bladder, is a riddle, probably not to be solved before fresh specimens of the animal can be examined.

From the ganglia in the second, third, and fourth pereional segments fine nerves go up to the wall of the bladder, where they spread out in branches. Beneath the bladder, between it and the under-integument of the body, the vegetative organs are placed.

Uppermost in the second and third segments lies the long narrow *heart*; the ostia were not very distinct. It sends a strong vessel to the head and another backwards. Close to the under-side of the heart runs the *digestive tube*, only feebly inflated in the first segment so as to form a stomach. From the pyloric end of the stomach the alimentary canal passes straight to the base of the telson. In the fifth, sixth, and seventh pereional segments, and in all pleonal and ural segments, the canal is fixed by delicate transversal muscles from the sides of the segments. The canal is very wide; the anal orifice, on the under-side of the last ural segment at the base of the telson, is transversally ovate, surrounded by muscles. No traces could be detected neither of coeca, nor of liver glands.

Under the digestive canal lies the *chain of nervous ganglia*, and on the anterior side of the oesophagus is the uncommonly well developed cephalic ganglion, consisting of a six-lobated, large nervous mass; the two anterior lobes are bent backwards, and attenuated into a stout, semi-circularly bent nerve on each side; these nerves end, a little swollen, in the basal joints of the upper antennæ. From this point the nerve is divided into delicate fibres, passing into a soft glandular substance, which almost fills not only the joints of the peduncle, but also the very long and stout basal joint of the flagellum. This glandular mass is fimbriated corresponding to the serratures at the margins of the joint. Such long fimbriæ run also into the three short terminal joints of the flagellum. From the median lobes of the cephalic ganglion issue the slender nerves for the second pair of antennæ.

The middle part of the ganglion seems to be the optical part of the nervous mass, as fine slender nerves issue from it forwards to the foremost ocelli. The fine nerves going to the other ocelli seem to arise from the commissural cords, connecting the cephalic ganglion with the infraoesophageal ganglion, but perhaps this only seems to be so, the fibres really coming in a stem or cable from the central part of the ganglion and branching off successively one after the other from the common stem along the side of the commissure. However this may be, it is certain that each of these slender nerves runs to one of the ocelli and enters it, being a little thicker or more swollen at the point of entrance. The number of such ocelli is from eight to ten on each side of the head. The third or posterior pair of lobes are nearly as large as the anterior, and directed obliquely forwards. A portion of the nerve originating from the lobe runs to the peduncle of the superior antennæ, another portion goes to the region of the mouth. The principal nerves of the mouth come however from the infraoesophageal and the first pereional ganglion.

The commissural cords, connecting the cephalic and the infraoesophageal ganglia, are very stout and thick. The infraoesophageal ganglion is coalesced with the first ganglion of the ventral chain. From this ganglion, which is not divided longitudinally in the middle into two portions, arise two pairs of nerves; the first pair run to the mouth, the second upwards to the interior of the head. From its hinder part issue the two commissural cords, widely separated at their base, but close together at their entrance into the ganglion of the first pereional segment. This ganglion, as well as the five next following ones, is composed of two distinct ganglia, pressed against each other, but not coalesced. The inter-ganglial parts of the chain, or the commissural cords, are more widely separated. The two lateral ganglia of the seventh pereional segment are totally fused together, so as to form one nervous mass. From every one of the seven ganglia, which form the nervous chain of the pereion, two pairs of strong nerves issue, the anterior pair running to the legs and gills, the posterior upwards to the organs of circulation. From these last nerves branches run up to the walls of the globular bladder, but only in the second, third, and fourth segments. From the commissural cords, between each pair of ganglia, long slender nerves branch off, one on each side; they run to the sides of the corresponding segment. The ganglionic chain continues backwards in the pleon with three pairs of large ganglia, but, as in the last pereional

ganglion, the two ganglia of each pair are fused together or coalesced; the commissural cords are still separated and well developed. The third pleonal ganglion is the biggest, nearly twice as large as the preceding, and probably composed of the last pleonal and all ural ganglia. It supplies the last pleopoda and the whole urus with nerves. Four pairs of strong nerves issue from it, the hindermost run to the anal orifice.

The second to sixth pereional segments carry *branchial sacks*, ovate, very long, filled with a fibrous matter. They are fixed on the under-side of the epimeral behind the point of articulation of the femur.

A little before the same point the *ovigerous lamellæ* or ovitectrices are fixed, but only on the second, third, fourth, and fifth segments. These lamellæ are uncommonly long, fringed with long straight filaments. Those of the second segment are as long as the corresponding legs themselves, those of the third and fourth pair only a little shorter.

In one specimen only I was able to see the *ovaria* as long, thin, flattened bodies, situated in the second, third, and fourth segments, close to the upper side of the digestive canal. An oviduct was not to be detected. The testes could not be observed, which was not unexpected, as the only male specimen I got of *Mimonectes Lovéni* was very young, and not in the best condition, having been preserved in alcohol for more than twenty five years.

The *integument* of the body is transparent, especially on the globe. It is formed of large hexagonal plates, easily to be recognized on the head and some other places.

The *head* is nearly four times higher than long, very broad, forming the forepart of the globe. Through the hyaline integument the cephalic ganglion as well as the mouth-organs is to be seen.

The *eyes* do not form a continuous mass on each side of the head as in the other Hyperids, but consist of 8—10 large ocelli, scattered over the lower side of the head. These do not show such long crystalline elements as in *Phronima*, *Rhabdosoma*, and others, but seem to be composed each of a great many granular, fine, light-breaking corpuscles interspersed with dark-brown pigment.

The *upper antennæ* [Pl. I. fig. 2] consist of two-jointed peduncles. The basal joint is very stout and thick [coalesced of the two first]; the second [viz. the third] is short, not equalling a fourth of the preceding; the stout, straight flagellum issues from it. The flagellum is four-jointed; the first joint is more than twice longer than the peduncle, serrated at the upper margin and ending in a strong double-

pointed tooth; at the under-side it is more coarsely serrated. On the inner side of the joint is a dense row of olfactory(?) hairs. The two following joints are very short, scarcely equalling a twentieth of the length of the first, the upper anterior corner ending in a strong tooth like that of the first joint. [Pl. I. fig. 11]. The fourth or last joint is longer than both the preceding together, with a feeble tooth at the upper anterior corner, and a stronger one at the lower; it carries a stout bristle. In structure the upper antennæ are similar to the same organs in Tyro ¹⁾ and Lanceola.

The *lower antennæ* [Pl. I. fig. 10] are very short. They consist of four joints; the second joint is the longest. They are fixed at the middle of the under-side of the head, and carry very few, minute hairs.

Between the base of the upper and the lower antennæ is a protuberance, at the summit of which is a large round hole covered by a thin membrane; the interior of the protuberance forms a hollow, and I suppose that the whole is an apparatus for hearing.

The *mouth* is not protruding and very small in comparison with the enormous body. The *mandibles* are very simple without palp, a small protuberance represents the molar tubercle, and three or four short bristles or teeth the biting process. The first *pair of maxillæ* [Pl. I. fig. 4] consist of three laminae, the median one is armed with 4—5 strong teeth. The *second pair* [Pl. I. fig. 3] consist of two laminae, each armed with two or three teeth. The *maxillipeds* [Pl. I. fig. 5] consist of a broad basal joint, two semicircular moveable laminae, truncated at the anterior ends, without hairs or bristles, and a large median lobe. This lobe is deeply divided, so that it seems to consist of two laminae.

The *pereion* [Pl. I. fig. 1]. The first segment is a little shorter than the second (11: 13), and does not reach so high. The second, the longest of all, forms the summit of the globe, and is more than thrice as long at the dorsal side as at the ventral. It is twice as high as the fifth segment, and nearly five times higher than the sixth. The third segment is shorter than the second, (9: 13), but as long as the fourth. The sixth segment is a little longer and a third higher than the seventh, but both are comparatively compressed, not inflated. The *epimerals* are large, unequal; that of the third segment is the largest, that of the seventh the smallest, very minute. The more or less circu-

1) See: CARL BOVALLIUS l. c. pag. 13.

lar base of the globe, at the under-side of the body, is formed and bordered by the head and the six first pereional segments; the sixth segment forms the posterior border of it, but is not inflated and does not participate in the forming of the globe.

The *first pair of pereiopoda* [= gnathopoda, Spence Bate] [Pl. III. fig. 21]. The *femur* is broad, nearly ovate, with some hairs at the lower, hinder corner; it is a little more than twice as long as broad (45: 19). The *genu* is short, scarcely a fourth of the length of the femur, with some long hairs at the hinder margin. The *tibia*, about as long as the preceding joint, is bordered with long hairs at the under-margin. The *carpus* equals three fifths of the length of the femur, and is slender, linear, richly provided with hairs at the hinder margin. The *metacarpus* is shorter than the preceding joint (10: 13), beset all around with slender hairs; the tip projecting into a short tooth on the anterior side of the dactylus. The *dactylus* is straight, very delicate, equalling only a fourth of the length of the metacarpus.

The *second pair of pereiopoda* [= gnathopoda, Spence Bate]. [Pl. III. fig. 22]. The *epimeral* is long, with rounded corners, not occupying the whole segment. The *femur* is laminar, narrower than the femur of the first pair, thrice as long as broad, with a few hairs at the lower hinder corner. The *genu* and *tibia* as in the preceding pair. The *carpus* is shorter than half of the femur, with only a few hairs at the lower end. The *metacarpus* is longer than the carpus (6: 5), beset with hairs, the tip projecting into a tooth as in the first pair. The *dactylus* is short and nearly straight, it equals only a sixth of the length of the preceding joint. The *branchial sack* is half as long as the leg, the *ovigerous lamella* equals nearly the whole length of the leg.

The *third pair of pereiopoda* [Pl. III. fig. 23] are the longest of all. The *epimeral* is very large, deep, rounded, not occupying the whole length of the segment. The *femur* is long and narrow, four times as long as broad, without hairs or bristles; it is longer than the three following, the lower part is a little broader than the upper. The *genu* is short and smooth; the *tibia* is long and broad, coarsely serrated at the hinder margin and carrying some short bristles. The *carpus* is longer than the preceding joint (8: 5); it carries three bristles and some hairs at the hinder margin. The *metacarpus* is very slender, shorter than the carpus (11: 16), provided with some very short bristles; in the interior of the joint is a long thin gland, containing a fine granular substance, but without visible ductus. The *branchial sack* is half as long as the leg, the *ovigerous lamella* is only a third shorter than the leg [Pl. III. fig. 25].

The *fourth pair* are very similar to the third, but shorter (13: 15). The *epimeral* is deep, rounded, smaller than the preceding, and does not occupy the whole under-side of the segment. The *femur* is as long as the three following joints together, four times as long as broad. The *branchial sack* is about half as long as the leg, the *ovigerous lamella* only a little shorter than the leg.

The *fifth pair* [Pl. III. fig. 24] are longer than the fourth pair, but shorter than the third (14: 15). The *epimeral* is long and large, with rounded corners and an excavation at the middle of the under-side; it occupies nearly the whole length of the segment. The *femur* is nearly four times as long as broad (50: 13), linear, with some short hairs at the anterior margin. There is a round gland in the lower part of the joint. The *genu* is short, the anterior margin fringed with minute hairs. The *tibia* is broad and long, twice as long as the preceding joint; the anterior margin is finely serrated and fringed with minute hairs. The *carpus* is longer than the tibia, serrated at both margins, carrying at the anterior margin the same kind of hairs as the preceding joint. The interior of the joint is occupied by a row of larger and smaller rounded glands. The *metacarpus* is shorter than the carpus (3: 5), fringed with very minute hairs at the anterior margin. The *dactylus* is short and feebly curved. The *branchial sack* equals half the length of the leg, the *ovigerous lamella* scarcely more than a third.

The *sixth pair* [Pl. II. fig. 18] are more slender than the preceding and of the same length as the fourth pair. The *epimeral* is small, not half as long as the preceding, rounded; it does not occupy more than a third of the length of the segment. The *femur* is more than twice as long as broad (8: 3), without hairs or bristles. Some very small, globular glands are to be seen in the lower part of the joint. The *genu* equals one fourth of the length of the femur, and is smooth. The *tibia* is more than twice as long as the preceding joint, linear, smooth. The *carpus* is longer, linear, smooth, with a small glandular mass in the middle. The *metacarpus* is shorter than the carpus, linear, with some fine hairs at the lower end. The *dactylus* is nearly straight, only a sixth of the length of the metacarpus. The *branchial sack* is shorter than half the leg (5: 13). The *ovigerous lamella* is a little shorter than the branchial sack.

The *seventh pair of pereopoda* [Pl. II. fig. 19] are as long as the first pair. The *epimeral* is very minute, half as long as the preceding, rounded, not occupying more than a fourth of the under-margin

of the segment. The *femur* is more than thrice as long as broad (10: 3), linear, smooth. The *genu* and *tibia* as in the preceding pair. The *carpus* is long and broad, swollen or inflated, containing a row of glands; possibly the secretions of the glands pass into the metacarpus and through a large opening behind the dactylus out into the water [Pl. II. fig. 20]. The *metacarpus* is only half as long as the carpus, broad and wide; the aperture in its lower end, behind the dactylus, is bordered with long hairs, which are bent as hooks at the tips. The *dactylus* is shorter than a fourth of the metacarpus, broad, and feebly curved. Only in one specimen there was a *branchial sack*; this was shorter than the femur.

The *pleon* is built in the ordinary way, not inflated, rather more slender than in the true Hyperidæ. The first segment is the longest and deepest, but not twice higher than the third (3: 2). The third is the shortest. The hinder corners of the segments are rounded. The pleon and urus together are longer than a third of the diameter of the globe.

The *pleopoda*. The peduncles are longer than the flagella. The third pair are much shorter than the preceding. The flagellum of the first pair consists of 9—12 articuli, which carry long plumose hairs or ciliæ. [Pl. III. fig. 26].

The *urus* [Pl. III. fig. 27] consists of two joints, the second and third being coalesced, as usual among the Hyperids. The first joint is a little shorter than the second, but broader. The second, or coalesced one, is a little narrower behind.

The *first pair of uropoda* are long, slender, but do not reach quite to the end of the second pair. The peduncle is shorter than the inner ramus, linear, smooth, with a bristle at the lower inner corner. The inner ramus is twice longer than the outer, and much broader at the base, sharply pointed downwards, and feebly bent; it is serrated along both margins. The outer one is very narrow, very feebly bent at the tip; the outer margin even, the inner finely serrated.

The *second pair*. The peduncle reaches beyond the end of the peduncle of the first pair; it is shorter than the inner ramus, linear, smooth. The inner ramus is a third longer than the outer, and a little broader at the base, straight; the outer margin is even, the inner provided with minute hairs only at the tip. The outer ramus is straight, the outer margin even, the inner armed in the same way as the inner ramus.

The *third pair* are very stout. The peduncles very broad, shorter than the inner ramus, smooth. The inner ramus, broad at the base,

serrated on both margins at the lower end, is longer than the outer. The outer ramus is straight, even at the outer margin, finely serrated at the inner margin.

The *telson* is short, broadly rounded, about a third of the length of the peduncle of the third pair.

Length. 18—28 m.m.

Diameter of the globe. 10—17 m.m.

Colour: Yellowish brown.

Habitat. The Atlantic.

2. *Mimonectes sphaericus*, n. sp.

Diagn. *Sphæra* segmentis sex primis pereii formata.

Longitudo *capitis* tertiam partem altitudinis æquans.

Antennæ superiores longitudinem *capitis* æquantes.

Segmentum sextum *pereii* inflatum, segmentum septimum compressum.

Pedes pereii tertii paris quartam partem diametri sphaeræ longitudine æquantes.

Pedes uri primi paris pedes secundi paris non superantes.

The *globe* is formed by the head and the six first pereional segments.

The *head* is about three times higher than long.

The *first pair of antennæ* are as long as the head.

The *sixth pereional segment* is inflated, the seventh is of the ordinary shape.

The *third pair of pereiopoda* equal about a fourth of the diameter of the globe.

The *first pair of uropoda* do not reach to the end of the second.

In this species the globe is comparatively larger than in *M. Lovéni*, and the legs are much shorter. The circular space at the ventral side of the body is framed by the head and all the pereional segments; but the seventh segment does not participate in the formation of the globe; it has still the more compressed *Hyperia*-like shape. The pleon and urus together do not equal a fourth of the diameter of the globe.

The *head* carries only six ocelli on each side; it is four times higher than long.

The *upper antennæ* are like those of *M. Lovéni*, but less serrated.

The *lower antennæ* are four-jointed.

The third segment of the *pereion* is the longest, the second and third the highest, forming the summit of the globe. The second seg-

ment is scarcely more than a fourth higher than the fifth (41: 29), but eight times higher than the seventh. All pereopoda, with the exception of the first and last pairs, carry *branchial sacks*. The *epimerals* are distinct.

The *first pair of pereopoda* are a little shorter than the second pair. The *femur* is long, laminar. The *carpus* is broad, longer than the *metacarpus*, which is tapering towards the end, with a tuberculous extension at the hinder margin, against which extension the feebly curved *dactylus* impinges. The *dactylus* equals a third of the length of the *metacarpus*.

The *second pair*. The *femur* is a little broader than in the first pair. The *carpus* is shorter than the *metacarpus*. On this joint the extension at the hinder margin is more developed than in the first pair, armed with short strong spines, thus forming a good forfex. The *dactylus* is longer than a third of the *metacarpus*.

Of the other *pereopoda* the fifth pair are the longest. The seventh pair are longer than the first. The *branchial sacks* of the second pair are longer than half the legs (5: 7). Those of the third, fourth, fifth, and sixth pairs are nearly as long as the legs.

The *pleon* is like that of the preceding species.

The outer ramus of the first pair of *uropoda* is longer than half the inner, both are straight. The peduncle of the second pair reaches beyond that of the first pair.

The *telson* is longer than half the peduncle of the third pair of *uropoda*.

Length. 15 m.m.

Diameter of the globe. 12 m.m.

Colour: Hyaline, with red spots.

Habitat. The Atlantic: 28° N.L. 21° V.L., near the Canary Islands.

3. *Mimonectes Steenstrupii*, n. sp.

The name in honour of Professor JAPETUS STEENSTRUP of Copenhagen.

Diagn. *Sphæra* segmentis omnibus pereii formata.

Longitudo *capitis* tertiam partem altitudinis æquans.

Antennæ superiores longitudinem *capitis* superantes, non serratæ.

Segmenta omnia *pereii* inflata.

Pedes pereii tertii paris octavam partem *diametri sphaeræ* longitudine paullo superantes.

Pedes uri primi paris *pedes secundi* paris valde superantes.

The *globe* is formed of the head and all the pereional segments.

The *head* is three times higher than long.

The *first pair of antennæ* are longer than the head, not serrated. All the *pereional segments* are inflated.

The *third pair of pereiopoda* are only a little longer than one eighth of the diameter of the globe.

The *first pair of uropoda* reach far beyond the end of the second pair.

Here the globe is most developed, much larger than in both the preceding species. Also the proportion between the body and the legs is another. The circular space at the ventral side of the body is limited by the head, all the pereional segments, and the first of the pleonal segments, which however does not participate in forming the globe. The pleon and urus together equal a fifth of the diameter of the globe.

The *head* is three times as high as long, but as broad as high. It is broader below than upwards.

The *eyes* are six to eight on each side.

The *upper antennæ* are broad and stout, thick at the base, tapering towards the end, consisting of a two-jointed peduncle; the basal joint is very thick and broad, the second joint larger than in *M. LOVÉNI*. The first joint of the flagellum is broad at the base, tapering towards the end; it carries, on the inner side, at the under-margin, two rows of long olfactory (?) hairs; each hair is fixed on a little button or round disk. The upper margin of the joint is quite even. After the long basal joint of the flagellum follow three short slender joints, the second the longest; all without teeth. The last one carries two long hairs, the preceding one hair each. Beneath the base of the upper antennæ there is on each side a rounded protuberance, at the summit of which there is a hole protected by a thin membrane.

Behind these protuberances the *lower antennæ* are fixed. They are four-jointed, like those of *M. LOVÉNI*. They equal a third of the length of the upper antennæ.

The pereion. The first segment is half as long and half as high as the second, which is the longest of all, and six times longer at the dorsal curvature than at the ventral side. The summit of the globe is formed of the third segment, which is a little more than half as long as the second. The third segment is a fourth higher than the fifth, more than twice higher than the sixth, and more than five times higher than the seventh. The second to sixth segments carry branchial sacks and ovitetrices. The first to sixth segments show small but distinct

epimerals. These do not occupy the whole length of the under-margin of the corresponding segments.

The *first pair of pereopoda* [Pl. II. fig. 13] are shorter than the second. The *femur* is broad, laminar, and carries two long, strong, bristles at the anterior margin; it is more than twice as long as broad. The *genu* is longer than the *tibia*, which carries four or five bristles at the lower corner. The *carpus* is broad and long; at the lower, anterior corner it carries a long spine-like bristle, nearly as long as the metacarpus, and some shorter ones at the hinder margin. The *metacarpus* is shorter than the *carpus* (5: 6), carrying long hairs and bristles at its end, which projects anteriorly a little over the base of the *dactylus*. The *dactylus* is straight, sharp, longer than half the metacarpus (7: 10).

The *second pair*. The *femur* is thrice longer than broad, rectangular, without hairs or bristles. The *carpus* is long and broad. The *metacarpus* is narrow, slender, as long as the preceding joint; it carries a bundle of short hairs at the end. The *dactylus* is half as long as the metacarpus, feebly curved. The *branchial sack* is nearly as long as the leg, the *ovigerous lamella* is quite as long as the leg and very broad, irregularly fringed with long hairs.

The *third pair* are stouter and provided with broader joints than in *M. LOVÉNI*. The *femur* is more than twice as long as broad. The *carpus* is only a little longer than the metacarpus.

The *fourth, fifth, and sixth pairs* are very similar to the third. The fifth pair are the longest.

The *seventh pair* are shorter than the sixth, of the same length as the first.

The *pleon* is like that of *M. LOVÉNI*.

The peduncles of the *pleopoda* are longer than the flagella. The flagellum of the first pair consists of seven joints.

The *uropoda*. The first pair reach far beyond the end of the second pair; the peduncle is even, a little shorter than the inner ramus. The outer ramus is straight, longer than half the interior; the inner one is straight; both are serrated at the margins. The peduncle of the second pair does not reach to the end of the peduncle of the preceding pair. The peduncle of the second pair is shorter than the outer ramus. The inner ramus is a third longer than the outer; both rami are serrated along the inner margins. The peduncle of the third pair is only a little shorter than the inner ramus and quite as long as the outer.

The inner ramus is serrated at both margins, the outer one only at the inner margin.

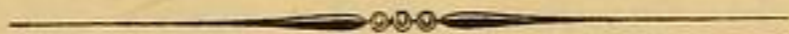
The *telson* is long, ovate, twice as long as broad; it is not quite half the length of the peduncle of the last pair of uropoda.

Length. 9—10 m.m.

Diameter of the globe. 9 m.m.

Colour. White, sprinkled with small red spots.

Habitat. North Atlantic. The mouth of Davis Strait.



EXPLANATION OF THE PLATES. 1)

Plate I.

- Fig. 1. *Mimonectes Lovéni*, n. sp., the animal from the side ($\frac{6}{1}$).
» 2. One of the upper antennæ.
» 3. One of the second pair of maxillæ.
» 4. One of the first pair of maxillæ.
» 5. The maxillipeds.
» 6. One of the ocelli.
» 7. The ganglionic chain.
» 8. The cephalic ganglion.
» 9. The last pereional and the two first pleonal ganglia.
» 10. One of the lower antennæ.
» 11. The extremity of the flagellum of the upper antennæ.

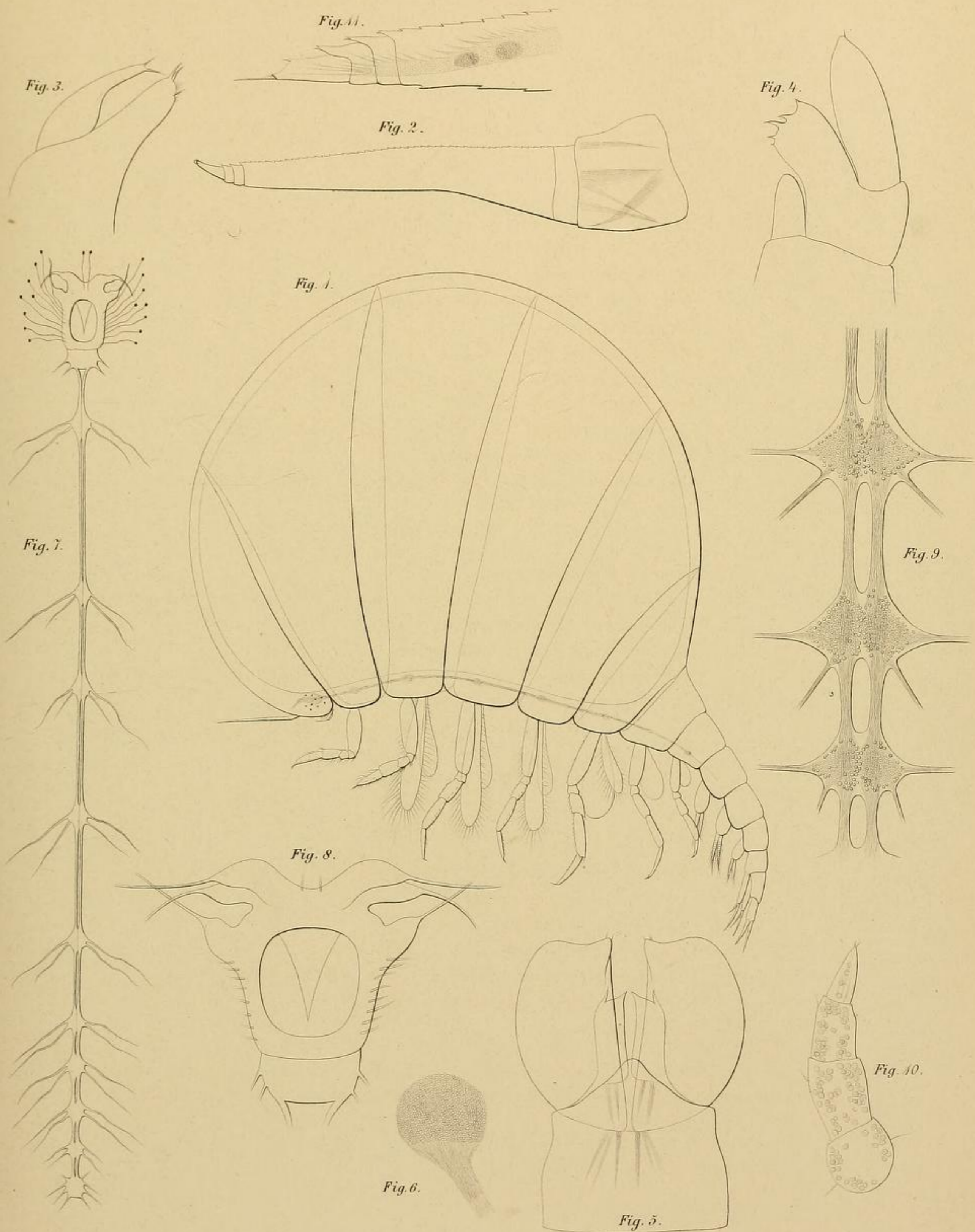
Plate II.

- » 12. *Mimonectes sphæricus*, n. sp. ($\frac{4}{1}$).
» 13. One of the first pair of pereiopoda of *Mimonectes Steenstrupii*.
» 14. *Mimonectes Steenstrupii* n. sp. ($\frac{5}{1}$).
» 15. *Mimonectes Lovéni*, from below.
» 16. The metacarpus of the fifth pair of pereiopoda of *M. Lovéni*.
» 17. The carpus of the same pair.
» 18. One of the sixth pair of pereiopoda of *M. Lovéni*.
» 19. One of the seventh pair of the same.
» 20. The metacarpus of the seventh pair.

Plate III.

- » 21. One of the first pair of pereiopoda of *Mimonectes Lovéni*.
» 22. One of the second pair.
» 23. One of the third pair.
» 24. One of the fifth pair.
» 25. Branchial sack and ovitatrix from the third pair.
» 26. One of the first pair of pleopoda.
» 27. The urus.

1) On account of the plates being engraved some years ago, there are some discrepancies with regard to the segmentation of the body between the descriptions and the figures 1, 12, 14 and 15.



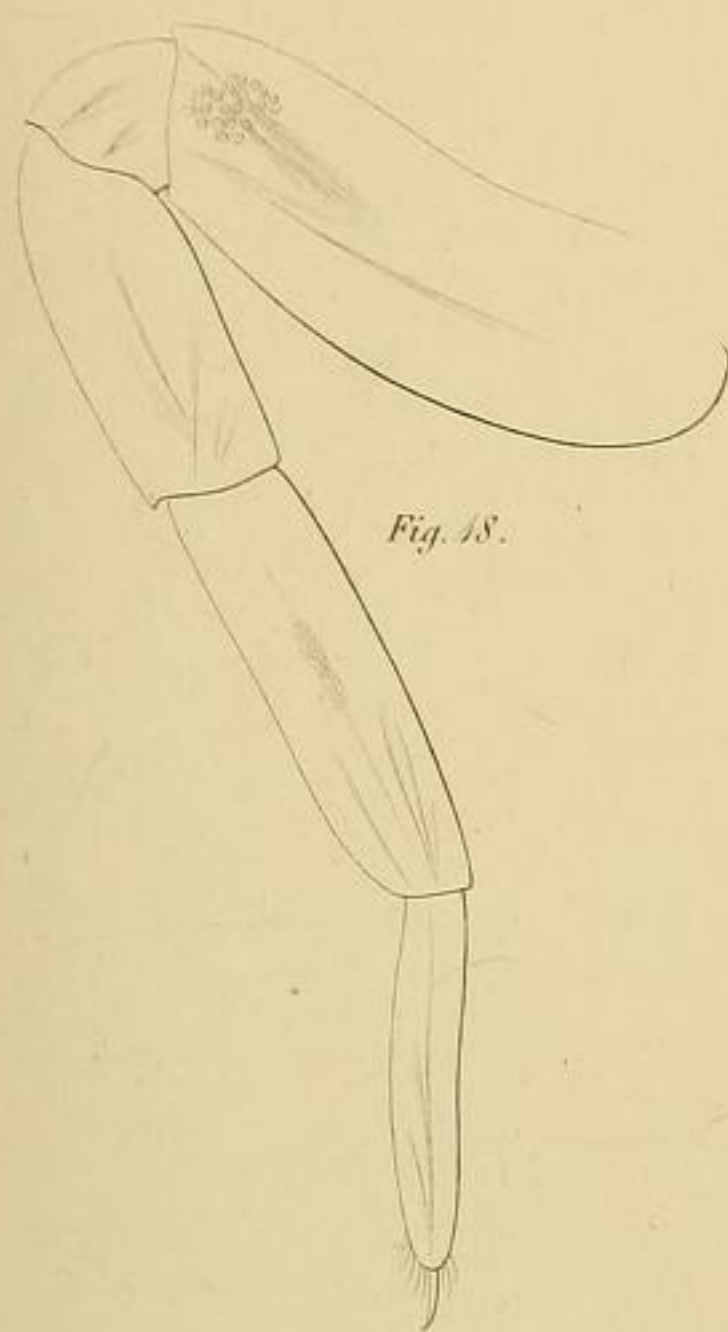


Fig. 18.

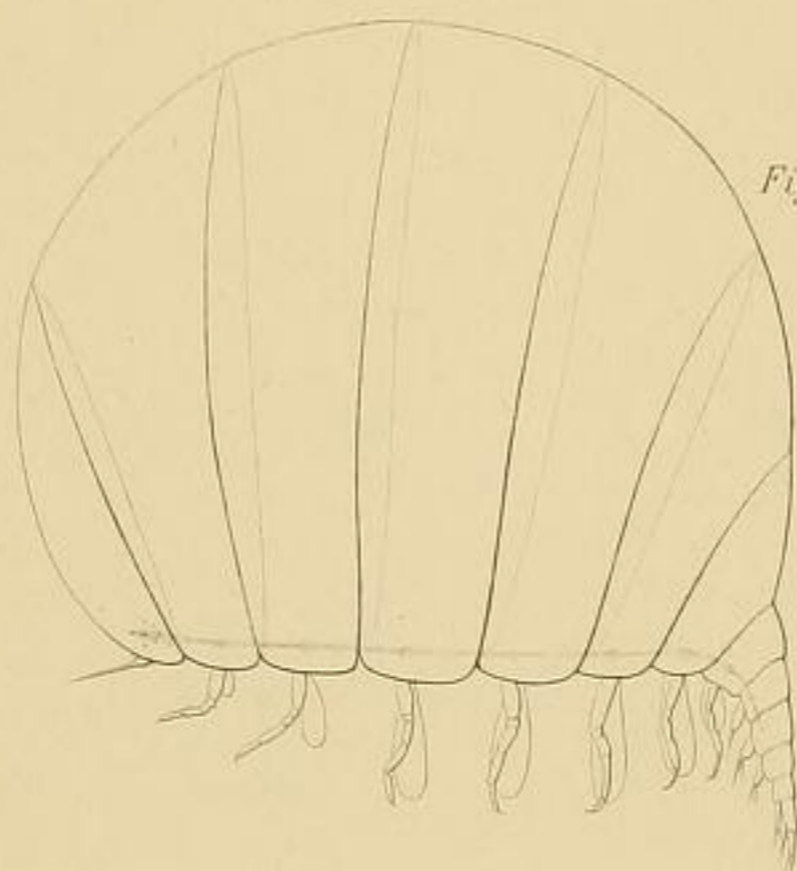


Fig. 12.

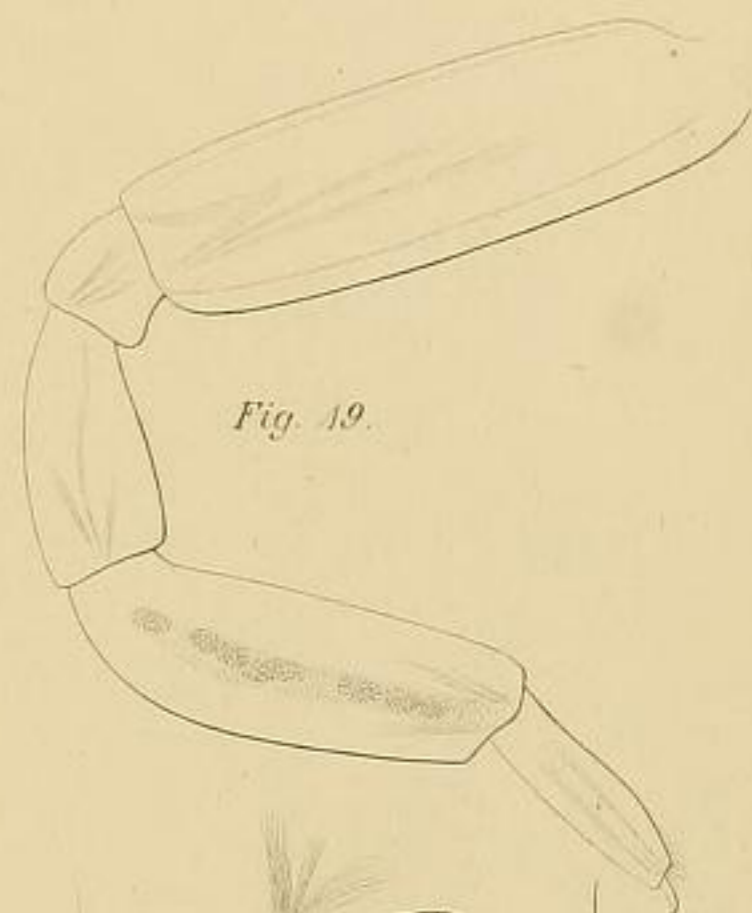


Fig. 19.

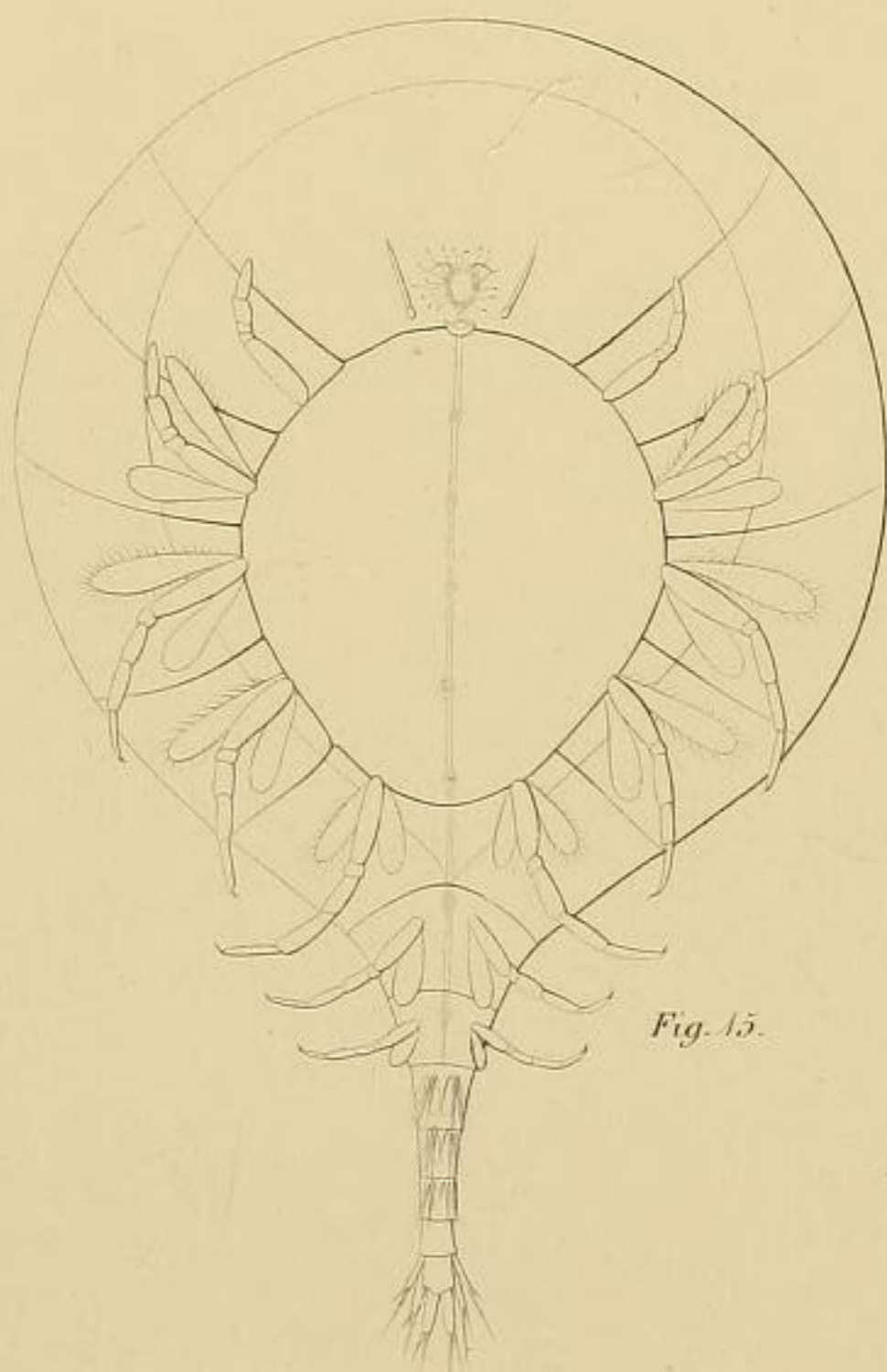


Fig. 15.

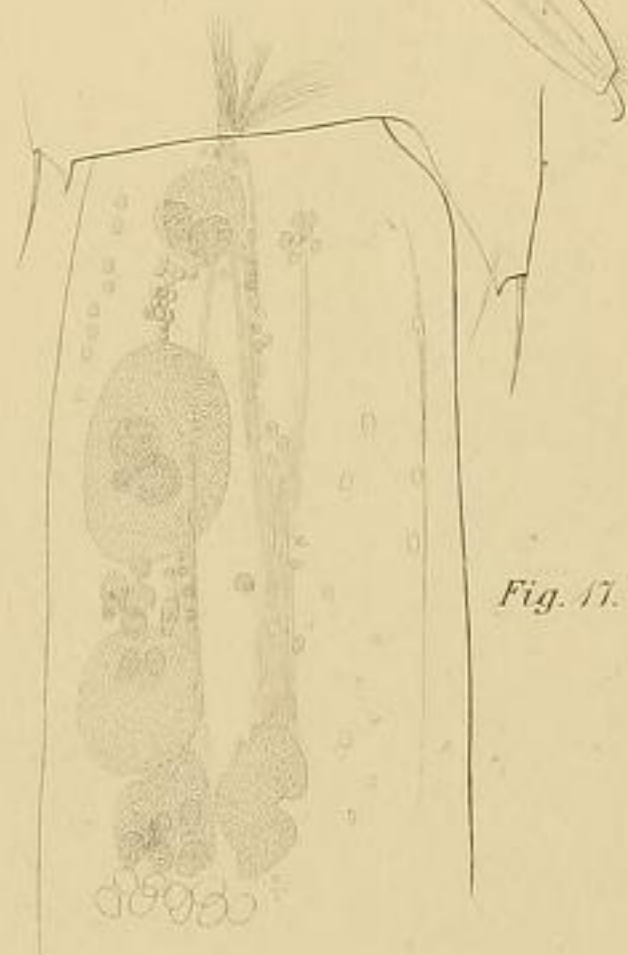


Fig. 17.

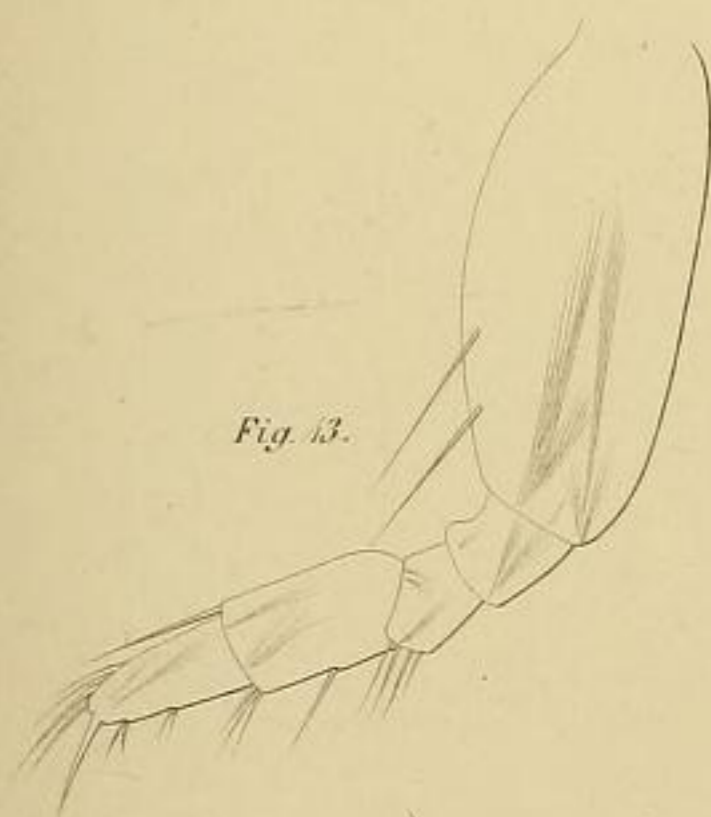


Fig. 13.



Fig. 20.

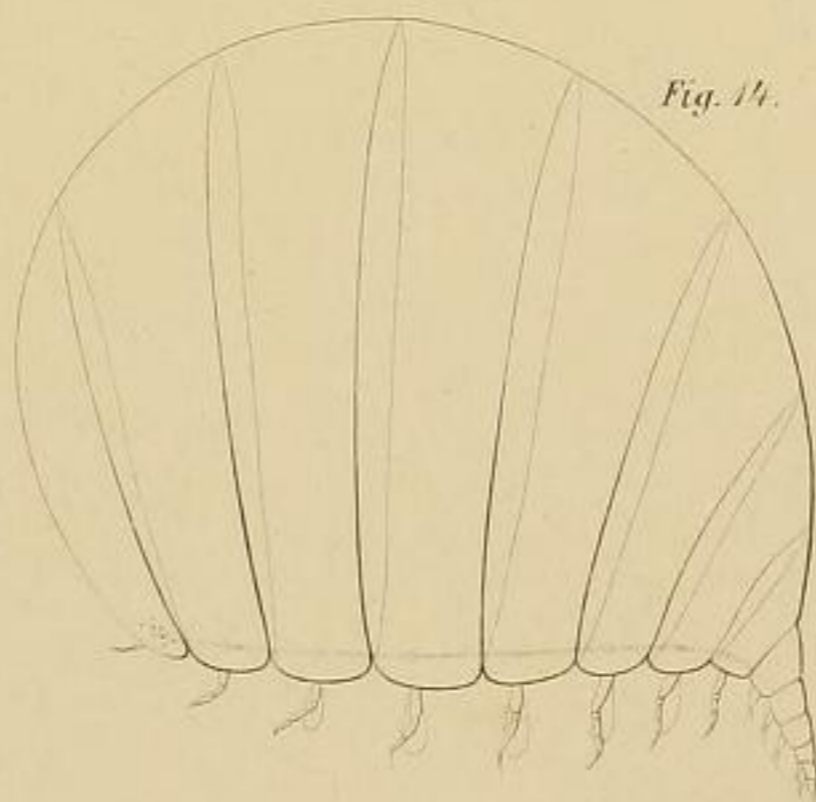


Fig. 14.



Fig. 16.

