

# A NEW ISOPOD

FROM

## THE SWEDISH ARCTIC EXPEDITION OF 1883

DESCRIBED BY

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WITH TWO PLATES.

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STOCKHOLM, 1885.  
KONGL. BOKTRYCKERIET.  
P. A. NORSTEDT & SÖNER.

Among the zoological collections of the last Swedish Arctic expedition there is to be found the beautiful Isopod which I am going to describe in this paper. It belongs to the well defined family of Aegidæ, but differs from the other genera of that family in so important points, that it must be set down as a separate genus. I propose *Aegiochus* as its generic name and *Nordenskiöldii* as its specific name, in honour of the celebrated chief of the expedition. It was captured some few miles south of Cape Farewell, the south-eastern point of Greenland, on the 31th of July 1883, where it was dredged up from a stony bottom at a depth of 120 fathoms. Only a single specimen was obtained. The following diagram will show its place in the family of Aegidæ.

Posterior part of the body	{	<i>shorter than the pereion.</i> These segments of the pereion sub-equal. <i>The eyes.</i>	{	<i>are large.</i> The second pair of antennæ long, with a multi-articulate flagellum. <i>Front</i>	{	<i>without a flattened rostrum.</i> The first joints of the first pair of antennæ distinct from above.	Body convex. 1. Aega. LEACH.
		<i>are small.</i> The second pair of antennæ short, with a few jointed flagellum.	<i>with a flattened rostrum,</i> concealing the first joints of the first pair of antennæ.	Body more flattened. 2. Rocinela. LEACH.			
		<i>equalling the pereion in length.</i> The fifth segment of the pereion longer and deeper than the preceding.	3. Alitropus. MILNE EDWARDS.	4. Aegiochus n. g.			



**Aegiochus n. g.**

Derivatio: Αἰγίοχος, a son of Chronos.

*Corpus* latum ovatum, valde convexum.

*Frons* simplex, acumine procumbente, articulum primum antennarum primi paris totum discernente.

*Oculi* grandes, ocellis magnis.

*Antennæ* primi et secundi paris longæ, flagello multiarticulato.

*Segmenta* pereii inæqvalia; quintum maximum, latissimum, cingulum fere formans.

*Epimera* inæqvalia, non continua.

*Pedes prensorii* robusti, unguis magnis valde curvatis.

*Pedes gressorii* spinulosi, inæqvalis.

*Cauda* longitudine thoracem æqvans.

*Urus* lingulatus.

The *body* is broad ovate, very convex.

The *front* is simple; the middle part of it totally separates the basal joints of the upper antennæ.

The *eyes* are large, with large ocelli.

Both pairs of *antennæ* are long with a multi-articulate flagellum.

The segments of the *pereion* are unequal; the fifth is longest and broadest, somewhat like a girth.

The *epimerals* are unequal; they do not form a continuous row.

The three first pairs of *pereiopoda* are robust, with strong curved claws. The last four pairs are unequal in length, richly provided with spines.

The *pleon* and *urus*, taken together, as long as the pereion.

The *urus* is tongue-shaped.

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Aegiochus is a very well defined genus, easily recognized from all the other Aegidæ by the length and depth of the fifth segment of the pereion, the broken row of the epimerals, and finally by the length of the pleon and the urus, together equalling the length of the pereion. From Aega it is more especially distinguished by the broader body and the non-bisulcated cephalon; from Rocinela by the want of a flattened rostrum and the convexity of the body; from Aliotropus it is distinguished by the large eyes and the multi-articulate flagellum of the second pair of antennæ.



**Aegiochus Nordenskiöldii** n. sp.

Plate I and II.

Diagn. sp. *Corpus* colore albido splendens, non maculatum vel tuberculatum.

*Caput* oculis permagnis, non contiguis.

*Antennæ primi paris* acumen epimeri segmenti secundi haud æquantes, flagello XI-articulato.

*Antennæ secundi paris* longiores, acumen epimeri segmenti tertii thoracis attingentes, flagello XV-articulato.

*Epimera* triangulata.

*Pedes sexti paris* longissimi.

*Urus* grandis, acuminatus, marginibus serratis.

*Pedes anales* non emarginati.

The *body* has a splendid white colour, without spots or tubercles, and is perfectly smooth as if it were polished.

The *eyes* are very large, distant from each other; they do not reach over the anterior margin of the first pereional segment.

The *first pair of antennæ* do not quite extend to the posterior extremity of the epimerals of the second segment. The flagellum consists of eleven joints.

The *second pair of antennæ* are longer; they reach to the posterior extremity of the epimerals of the third segment. The flagellum is 15-articulated.

The *epimerals* are triangulate.

The sixth pair of *pereiopoda* are the longest.

The *urus* is large, ending in a point, with serrated margins.

The *uropoda* are not emarginate.

## Adult male.

The *body* is broadly ovate, convex; the broad, thick and deep fifth segment of the pereion gives the animal a very characteristic habitus; the fifth segment is much the longest and broadest of all; the seventh is the shortest. The animal is twice as long as broad.

The *head* is short and very broad, more than thrice as broad as long [7 : 2]; it is half as broad as the fourth pereional segment, and only little longer than the first [8 . 7]. The front is rounded, its procumbing part totally separates the



basal joints of the first pair of antennæ. The surface of the head is smooth, white as ivory.

The *eyes* are very large, oblong-ovate, separated from each other only by a very narrow strip of the front. The ocelli are large, arranged in eight rows. The pigment is very black.

The *first pair of antennæ* [Pl. I. fig. 2] are long, reaching to two thirds of the second pereionial segment, or to the eighth joint of the flagellum of the inferior antennæ. The last joint of the peduncle is shorter than the two preceding together, and carries a few hairs. The flagellum consists of eleven joints; the first is only a little shorter than the last joint of the peduncle [17:18], and equal to the three following joints of the flagellum together. The flagellum tapers towards its extremity; the last seven joints carry long hairs.

The *second pair of antennæ* [Pl. I. fig. 2.] are longer than the first pair, reaching fully to the hinder point of the epimeral of the third segment. The peduncle reaches to the third joint of the flagellum of the first pair. The fourth joint of the peduncle is the longest, nearly as long as the three preceding together; the fifth is a little shorter and carries some hairs and »auditory» bristles. The flagellum is fifteen-jointed; the first joint is the longest, as long as the two following together; it carries some hairs and one »auditory» bristle. The last joint is the shortest. The last ten joints carry each some few very short hairs.

The *mandibles* [Pl. I. fig. 3.] are highly developed, bent spirally, provided with a chisel-shaped molar process. They carry each a slender three-jointed palp. The second joint of the palp is the longest, the first and third are equal in length, the third carrying a comb-shaped armature of bristles, which are finely serrated at the upper margins [Pl. I. fig. 4 and 5].

The *first pair of maxillæ* [Pl. I. fig. 6] are long, straight, slender, with three large hooked spines at the tip and some small tooth-shaped at the base of the former. It makes a good boring instrument.

The *second pair of maxillæ* are laminar, surrounding the first pair as a tube. At the free margin of the tube are some small hooked spines.



The *maxillipeds* [Pl. I. fig. 7 and 8] consist each of a three-jointed peduncle and a four-jointed palp. The basal joint of the peduncle is very long and broad, linear; the second joint is short, scarcely the fourth of the first; the third is small, narrow, laminar. From the articulation between the second and third joints the thick and robust palp projects. The second joint of the palp is the longest, without spines or bristles; the third joint is short but stout and armed with short, strongly curved hooks. The last joint is armed with four long, ciliated bristles [Pl. I. fig. 9].

The *pereiopod*. The first segment is a little shorter than the head; the second is equal in length with the first, but broader; the third is longer [11:7], increasing in breadth; the fourth is but a little shorter than the third [10:11], and still broader. The fifth segment is *twice* as long as the preceding and much broader [17:14], it is very thick and tumid, and seen from above seems to form a girdle around the body; the sides of the segment descend very deep, interrupting the row of the epimerals, so that the epimerals of the three last segments form a row much deeper down than those of the preceding segments [Pl. II. fig. 22]. The sixth segment is only a little more than the third of the length of the preceding. [7:20], and narrower [31:34], but its sides reach as far down. The seventh segment is the shortest, it is only half as long as the preceding; its breadth is equal to that of the fourth.

The *epimerals* [Pl. II. fig. 22] of the second and third segments are equal in size, occupying the whole length of the segments, triangular, pointed backwards. The epimeral of the fourth segment is a little larger and less acutely pointed. The epimerals of the fifth and sixth segments are much larger, subequal in size, triangular; the epimeral of the fifth segment does not occupy more than two thirds of the length of the segment. The epimeral of the sixth segment, a little deeper than the preceding, occupies a part of the fifth segment and the whole length of the sixth. That of the seventh segment is smaller, but nearly as deep as the preceding; it is longer than the segment itself.

The *first pair of pereiopoda* [= gnathopoda, Spence Bate] [Pl. I. fig. 10]. The *coxa* or epimeral is not distinctly separated from the segment, the anterior corner is obtusely angula-



ted, the hinder sharply pointed. The *femur* is long, broad, three times longer than broad; a little broader at the upper margin than below; without hairs or bristles. At the lower hinder corner is a short excavation for the reception of a part of the genu. The *genu* is long, about half the length of the femur, with a short bristle at the hinder outer corner. The *tibia* is shorter than the preceding joint, with two short bristles at the inner margin, and one more slender at the outer corner. The *carpus* is very short, scarcely half the length of the preceding, with two very short tooth-like spines. The *metacarpus* is long and stout, three times longer than the carpus, with a tooth-like spine at the lower, inner corner. At its lower end it projects into a peculiar, flattened, semi-circular process, expressly adapted for the articulation with the dactylus. At the base of the dactylus is an excavated, rounded prominence, gliding against the metacarpal process. In this way a strong and perfect articulation is obtained. The *dactylus* is longer than the metacarpus, strongly hooked, and very powerful. On its inner concave side is a large prismatic excavation for the reception of the lower inner angle of the metacarpus. The last half of the dactylus is perforated to the tip, probably the ductus of a secretory gland, which is to be seen in the basal part of the dactylus and the nearest part of the metacarpus.

The *second pair of pereopoda* [Pl. I. fig. 11]. The *femur* is a little broader and more rounded than in the first pair, but of the same length. The excavation for the reception of the genu is larger. The *genu* and the *tibia* are like those of the first pair. The *carpus* is half the length of the tibia, it carries a strong curved bristle at the inner lower corner. The *metacarpus* and its process shows exactly the same structure as in the first pair. The *dactylus* is not quite so strongly curved, but very powerful, with the same sort of excavation on its inner side, pretty like the hollowed claw of a cat. [Pl. I. fig. 12].

The *third pair* [Pl. I. fig. 13]. They are a little longer than the preceding ones, but very similar. The *femur* is longer and narrower, linear. The excavation also is a little narrower. The *carpus* is longer than half the tibia. The *dactylus* is less curved and a little more slender.



The *fourth pair* [Pl. II. fig. 14] are scarcely a sixth longer than the third pair. The *femur* is long, narrow and linear, with a few simple and ciliated hairs at the outer margin. There is no excavation at the lower outer corner, but the corner itself is flattened into a narrow lamina. The *genu* is only a third of the length of the femur, and armed with a row of strong bristles round the lower margin. The *tibia* is a little longer than the genu, nearly linear; it carries bristles along the inner side and round the lower margin. The *carpus* is shorter than the tibia, of the same form, and armed in the same way, but the bristles along the inner side are much smaller. The *metacarpus* is narrower, very little longer than the preceding joint, and provided with only two bristles at the lower margin and none at the side. The end of the joint forms a process for the articulation of the dactylus, as in the preceding pairs, but not so strong and well developed. The *dactylus* is indistinctly pedunculated. The excavation at the inner side is not very distinct. The dactylus is shorter than the metacarpus and feebly curved; the indistinct peduncle is more than two times longer than the claw itself.

The *fifth pair* [Pl. II. fig. 15] are nearly a third longer than the fourth pair. The *femur* is long and broad, the inner margin is curved and smooth, with the exception of two small bristles at the lower corner; the outer margin is straight, flattened into a lamina carrying some long simple hairs, and ending at the lower corner in a sharp rounded edge. When the leg is folded up, the genu, tibia and carpus are placed along this lamina. The *genu* is about a fourth of the length of the femur, with two bristles at the inner, and two at the outer lower corner. The bristles are stout, each carrying a hair [Pl. II. fig. 16]. The *tibia* is longer than the genu and carries some bristles at the lower corners. The *carpus* is a little shorter than the preceding joint, with two short bristles at the inner side, and some longer ones round the lower margin. The *metacarpus* is shorter than the carpus but longer than the dactylus. It carries three bristles along the inner side and one at the corner. At the lower outer corner there are three strong bristles and a long ciliated hair [Pl. II. fig. 17]. The lower end is produced into a process of articulation like that in the preceding pair, but stronger. The



*dactylus* is feebly curved and distinctly pedunculated, the peduncular part being a third longer than the claw. At the end of the peduncle are some few short hairs. At the inner side is an excavation as in the three first pairs of pereopoda.

The *sixth pair* of legs [Pl. II. fig. 18] are the longest of all, about a sixth longer than the fifth pair. The *femur* is three times longer than broad; at the inner margin it is curved and armed as in the preceding pair; the outer margin is feebly curved, flattened into a lamina much narrower than the lamina of the fifth pair, armed with 8—9 ciliated hairs. The *genu* is longer than a third of the femur, with two bristles on the inner side, 6—8 at the lower inner corner, and 5 at the outer. The *tibia* is longer than the genu, armed with three bristles along the inner margin, 4 at the lower inner corner, and 6—8 at the outer. The *carpus* and the *metacarpus*, as in preceding pair. The *dactylus* [Pl. II. fig. 19] is shorter than the metacarpus, feebly curved and distinctly pedunculated. The peduncular part is more than two times longer than the claw, with a distinct excavation.

The *seventh pair* [Pl. II. fig. 20] are shorter than the sixth pair, but a little longer than the fifth. The *femur* is feebly curved at the inner and outer margins. The outer margin wants the lamina of the other pairs of walking feet, but is provided with three ciliated and two simple hairs. The *genu* is a little shorter than half the femur, stout, and carries some short bristles at the inner side and at the lower corners. The *tibia* and the *carpus*, as in the sixth pair. The *metacarpus* is longer than the *carpus*, with two pairs of short bristles on the inner side, three longer ones at the lower inner corner, and some short ones at the outer. The process of articulation is well developed. The *dactylus* is about half the length of the metacarpus, pedunculated, broad at the base, feebly curved, with a distinct excavation. The peduncular part is two times longer than the claw.

The *pleon* is narrower than the base of the pereion, and composed of five joints or annuli. The surface is smooth, of the same clear white colour as the pereion. At the hinder margins of the segments two small angular prominences are to be seen. There are no traces of articulated epimerals, but the flanks of the segments extend backwards, ending in sharp points. The flanks are bent inward on the under side of the



pleon, forming a broad embrasure on both sides of the hollow, which contains the pleopoda. The first segment of the pleon is shorter than the following; the middle of it is totally concealed under the last pereional segment; its lateral parts extend backwards, and are sharply pointed. The second, third and fourth segments are equal in length, but decreasing in breadth. The lower parts of the sides are prolonged downwards, but less acutely pointed than in the first segment. The fifth segment is considerably longer than the fourth, the posterior margin is straight.

The *first pair of pleopoda* [Pl. II. fig. 23]. The peduncle is robust, hairy on its inner margin. The outer lamina is a little longer than the inner, and fringed with longer ciliated hairs.

The *second pair* [Pl. II. fig. 24]. The peduncle is shorter than the preceding one, armed at the inner margin with some thick peculiar (secretory?) bristles, not pointed; on the outer margin it carries a row of short hairs. The laminae are longer than those of the first pair and more regularly ovate, fringed with long ciliated hairs. The inner lamina carries a long styliform process, articulating with its upper inner corner. The process is tapering slightly towards the end, which is undulated. At the lateral margins it carries very short bristles, fixed on small prominences of the margins. [Pl. II. fig. 25.]

The *third, fourth and fifth* pairs of pleopoda are subequal, with broader and more rounded laminae. The inner lamina of each foot shows traces of being transversally divided. [Pl. II. fig. 26 and 27.]

The *urus* [Pl. I. fig. 1] is a little broader at the base than long; at the anterior corner on each side is an insertion for the articulation of the uropoda. The lateral margins are feebly curved, and the segment ends in a sharp point. The posterior parts of the lateral margins are serrated, the teeth again serrated, with fine ciliated hairs and short strong spines on and between the teeth. [Pl. II. fig. 30]. On the upper side the urus is provided with very small tubercles, and between these there are smaller granulae, all of the same white colour as the rest of the body.

The *uropoda* [Pl. II. fig. 29]. The peduncle is short, broad at the hinder margin, the inner corner projecting in a triangular process. This process does not reach to the half



of the inner lamina; it is not very sharp-pointed, and carries some long hairs round the tip. The outer lamina is broadly lanceolate, the hinder margins serrated and provided with ciliated hairs. The inner lamina reaches beyond the tip of the outer one and is broader, with the outer margin feebly, the inner one strongly curved. The hinder parts of the margins are serrated and ciliated as in the outer lamina.

*Length.* 10 m. m.

*Colour.* Splendid white as china; the eyes black.

*Habitat.* The only known specimen, a male, was captured at a depth of 120 fathoms, Lat. 59° 33' N., Long. 43° 25' W., south of Cape Farewell, Greenland.

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## Explanation of the plates:

### Plate I.

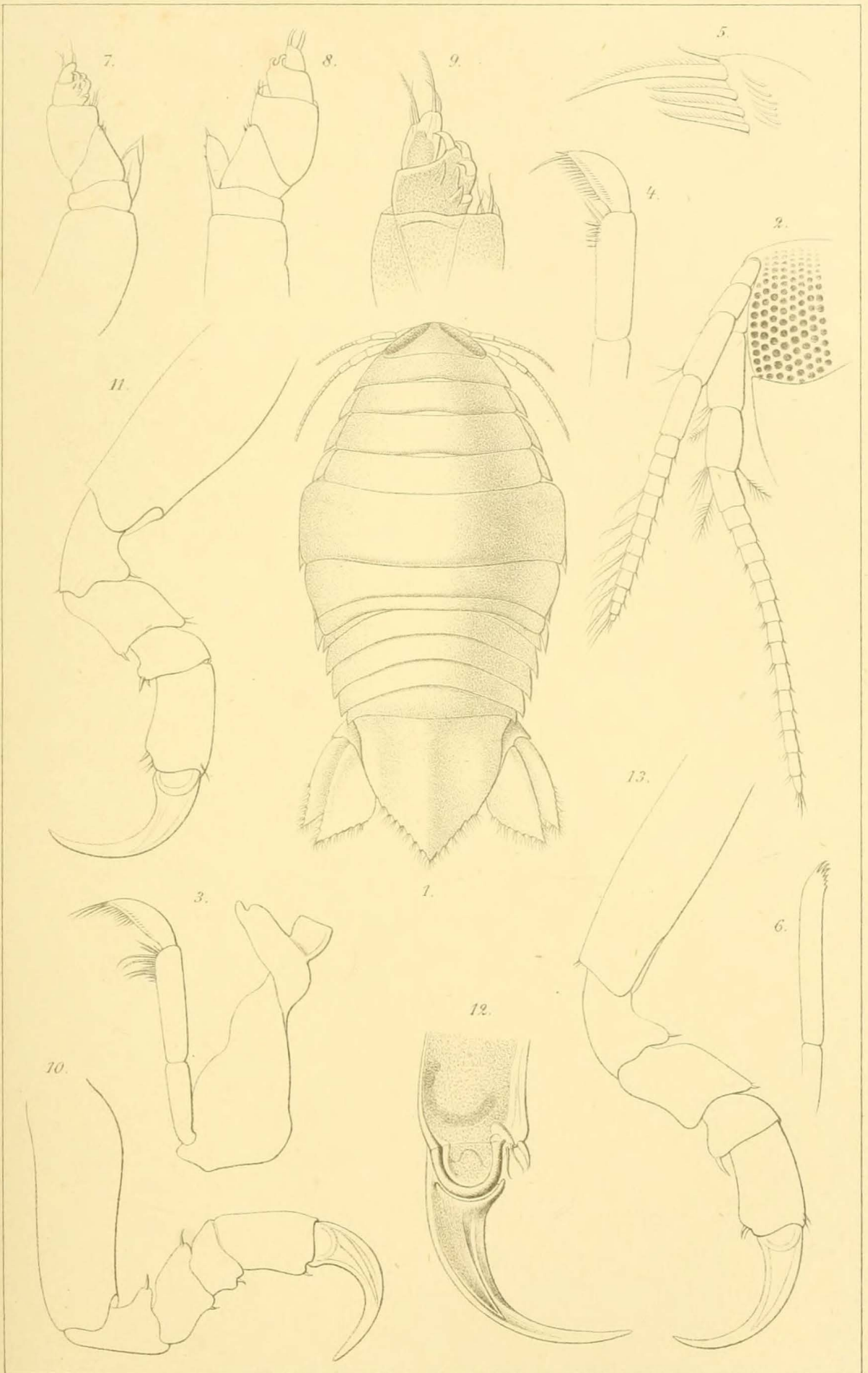
- Fig. 1. The animal seen from above.
- › 2. The antennæ.
  - › 3. The left mandible.
  - › 4. The palp of the same.
  - › 5. The tip of the last joint of the palp.
  - › 6. The left one of the first pair of maxillæ.
  - › 7. } The maxillipeds.
  - › 8. }
  - › 9. The tip of the left one of the maxillipeds.
  - › 10. The left one of the first pair of pereopoda.
  - › 11. The left one of the second pair of pereopoda.
  - › 12. The dactylus of the preceding.
  - › 13. The left one of the third pair of pereopoda.

### Plate II.

- › 14. The right one of the fourth pair of pereopoda.
- › 15. The right one of the fifth pair of pereopoda.
- › 16. Spines from the same.
- › 17. Auditory bristle from the same.
- › 18. The right one of the sixth pair of pereopoda.
- › 19. The dactylus of the same.
- › 20. The right one of the seventh pair of pereopoda.
- › 21. The animal seen from below.
- › 22. The animal seen from the side.
- › 23. One of the first pair of pleopoda.
- › 24. One of the second pair of pleopode.
- › 25. The end of the styliform process of the same.
- › 26. One of the third pair of pleopoda.
- › 27. One of the fourth pair of pleopoda.
- › 28. A ciliated hair from the same.
- › 29. The right one of the uropoda.
- › 30. A piece of the posterior margin of the urus.





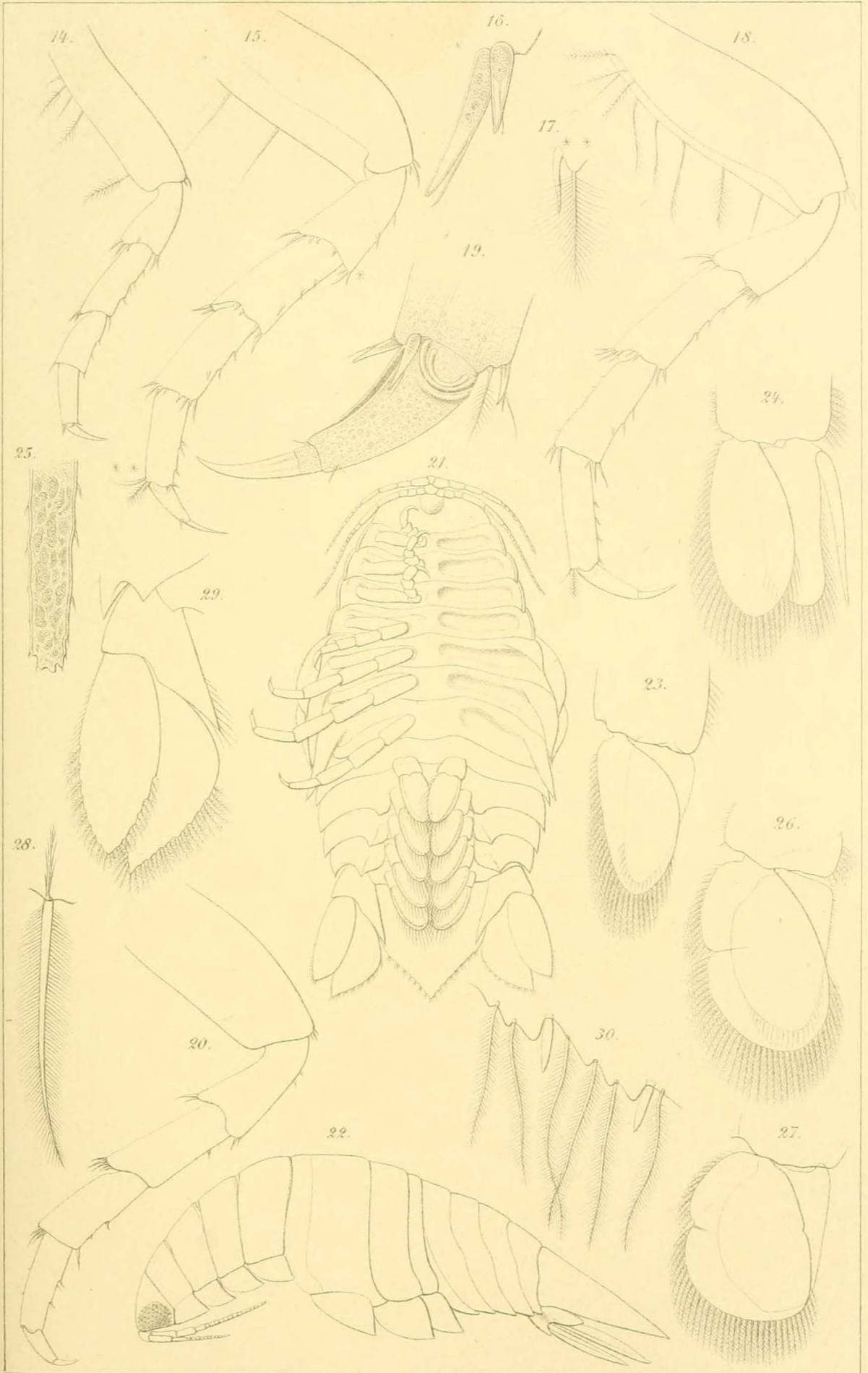


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