

## On some new Species of Edriophthalma from the Irish Seas.

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[Read 15th April, 1897.]

(PLATES 17 &amp; 18.)

OF the four species described in this paper, two, viz. *Leucopsis ensifer* and *Stenothoë crassicornis*, were taken during the dredging and trawling operations of the Liverpool Marine Biological Committee in April 1896, in the Lancashire Sea Fisheries' steamer 'John Fell.' The steamer was at the time engaged in taking fish for the purpose of obtaining ova for the experimental fish-hatchery at Port Erin, and it was found that by attaching a tow-net with a light cane ring to the back of the trawl-net a short distance behind the "foot rope" many small Crustacea were taken, including the above. The same mode of fishing has also been successfully employed by Mr. R. L. Ascroft, in a trip made by him, in the steam-trawler 'Britannia,' to the northern part of the Bay of Biscay; and it resulted in the capture of some new and rare species of Cumacea and Amphipoda.

Of the other two species, *Apseudes hibernicus* was taken during a week's collecting at Valentia by Mr. F. W. Gamble; while *Parapleustes megacheir* was obtained in the expedition of the Royal Irish Academy, in 1888, and came under my notice while naming the collection of Amphipoda in the Dublin Museum of Science and Art. Until the publication of the Report of the Committee on the Marine Zoology of the Irish Sea, in the British Association Report, 1896, very little had been done in investigating the Edriophthalma of the Irish Seas, except in the neighbourhood of the Isle of Man, where the Liverpool Marine Biological Committee's station at Port Erin had enabled me to collect a large number of species during the last 10 years, all of which (including those taken on the English and Welsh coasts of Liverpool Bay) are published in the above Report. I must not omit to mention an important paper by the Rev. A. M. Norman, F.R.S., on the Cumacea of the 'Lightning,' 'Porcupine,' and 'Valorous' Expeditions, in the Ann. & Mag. Nat. Hist. ser. 5, vol. iii. (1879) p. 54, in which several species from the Irish seas are described or mentioned. I may add that I hope shortly to publish a list of Crustacea from Valentia, with the Isopoda and Amphipoda in the Dublin Museum of Science and Art.

## CUMACEA.

## Fam. LEUCONIDÆ.

## LEUCONOPSIS, n. gen.

*A. O. Walker*, Report on the Marine Zool. of the Irish Sea, Brit. Assoc. Report for 1896, p. 419 (1897).

Female with a distinct two-jointed appendage to the fourth pair of feet, not furnished with natatory setæ. Lower antennæ short, with the third joint conical, with three minute one-jointed rudimentary flagella. Rami of uropoda subequal.

Male with the third pair of feet each provided on the second joint with a pair of curved blade-like processes.

Remaining characters as in *Leucon*.

LEUCONOPSIS ENSIFER, *A. O. Walker*. (Pl. 17. figs. 1-1 h.)

*Female*. Carapace about as long as the free thoracic segments; dorsal crest of fourteen teeth beginning about the middle of the upper margin and curving down to the base of the rostrum; a small tooth on the upper and near the posterior margin; lower margin with the anterior half coarsely toothed and forming with the anterior margin an acute angle, the upper portion of which is finely toothed. Rostrum about a quarter the length of the carapace, obliquely truncate, almost horizontal; lower margin with two or three teeth near the extremity and two or three near the base.

Fourth pair of legs with an exopodite or imperfect natatory appendage, two-jointed, reaching nearly to the end of the first joint, which is as long as the remaining four.

Telson triangular, as in *Leucon*.

Uropoda with peduncle and both rami subequal in length; peduncle almost spineless, inner ramus with six unequal spines on the inner and two on the outer side of the first joint; second joint with two very short spines on the inside; outer ramus obliquely truncate, with five plumose setæ on the inner side and four at the end.

Length  $5\frac{1}{2}$  mm.

*Male*. Upper margin of carapace as long as the free segments; lower margin with five or six teeth on the anterior half, increasing in size anteriorly, forming a right angle with the anterior margin,

which has five teeth just below the rostrum, the second from the rostrum being the largest; rostrum horizontal, blunt, about one-sixth the length of the carapace, with five small teeth on the lower margin.

First pair of legs with seven teeth on the lower margin of the first joint. Second pair with a large spine at the distal end of the second, and two unequally long spines at the end of the third joint. Third pair with an appendage on the second joint, consisting of two parallel curved blades, twice as long as the succeeding three joints.

Length  $8\frac{1}{2}$  mm.

The above interesting species has a general resemblance to *Leucon*, from which genus, however, it may be at once distinguished by the appendages on the fourth pair of legs in the female and the third pair in the male. It was taken in the tow-net, attached to the back of the trawl-net, on April 22, 12 miles S.W. of Chicken Rock, 33 fathoms.

Also noticed in the Tenth Annual Report of the Liverpool Marine Biology Committee, and their Biological Station at Port Erin (Isle of Man), p. 14 (1897).

## ISOPODA.

### Tribe CHELIFERA.

#### Fam. APSEUDIDÆ.

APSEUDES HIBERNICUS, n. sp. (Pl. 17. figs. 2-2 *d*; Pl. 18. figs. 2 *e*, 2 *f*.)

*Female*. Rostrum triangular, blunt, and depressed at the point, sulcate on the upper surface, without a spine at the point; margins nearly straight. Ocular lobes well developed; eyes rather indistinct. Epistome provided with a strong spine.

Peræon (mesosome) having the 1st segment rather narrower than the cephalosome, with a strong tooth directed forwards on the antero-lateral corner; the dorsal plates of next four segments widely separated; no spines on the ventral surface.

Pleon (metasome) less than  $\frac{1}{4}$  the length of the whole animal, about equal to that of the three preceding peræon-segments; epimeral projections obliquely truncate at the ends.

Telson about equal in length to the four preceding pleon-segments, widest in front.

The last three peræon-segments, pleon, and limbs are densely clothed with plumose hairs.

Upper antennæ.—The first joint more than twice as long as the two next, finely granulated on the inner side of the proximal half; flagellum rather longer than the peduncle, 15-jointed; accessory appendage 11-jointed.

Lower antennæ.—First joint more than half as long as the second, 3rd very small, 4th and 5th equal, three times as long as the 3rd; flagellum 11-jointed; antennal scale with 14 setæ.

First legs (chelipedes) as in *A. spinosus* (M. Sars), except that the tooth on the lower margin of the 1st joint is much smaller.

The remaining legs closely resemble those of *A. talpa* (Mont.) and *A. spinosus*, as figured by G. O. Sars respectively in "Middelhavets Saxisopoder" (Archiv for Mathematik og Naturv., B. xi. 1886, p. 263, pl. 2), and 'Crustacea of Norway,' vol. ii. Isopoda, p. 7, pls. i. & ii. The number of spines on the fossorial legs is apt to vary—in the specimen described they differed on each leg.

Uropoda much as in *A. spinosus*; the first three joints of the appendages are much longer than the succeeding ones.

Length 10 mm.

This species is nearest *A. talpa* (Mont.), from which it differs in the form of the rostrum (which wants the spiniform tip figured by G. O. Sars, *l. c.*), in the absence of ventral spines, by the comparative shortness and width of the pleon and telson, and in the form of the latter, which is wider in front than behind, while in *A. talpa* and *A. spinosus* it is the reverse.

A single female was taken by Mr. F. W. Gamble between tide-marks on Church Island, Valentia Harbour, in August 1896. There are also two specimens in the Dublin Museum of Science and Art from the West Coast of Ireland, the exact locality of capture not being known.

## AMPHIPODA.

### Fam. STENOTHOÏDÆ.

STENOTHOÏ CRASSICORNIS (Pl. 18. figs. 3-3 e), *A. O. Walker*, Brit. Assoc. Rep. for 1896, p. 420 (1897). Also in the Tenth Annual Report of the Liverpool Marine Biology Committee, and their Biological Station at Port Erin (Isle of Man), p. 16 (1897).

Mandibles without a palp.

Maxillipedes with the basal lobe very small, divided to its base.

Antennæ stout, the flagellum of the lower but little longer than the last joint of the peduncle; its first joint almost as long as the remaining four together.

First gnathopods as in *S. marina*.

Second gnathopods with the palm of the propodos defined near the base by a triangular tooth, the distal extremity expanded and cut into four blunt lobes, of which the proximal is much the largest; dactylus with a prominence on the inner margin, coinciding with the palmar lobus.

Peræopods short and strong, the third (meros) joint in the last three pairs much produced backwards, as in *Probolium calcaratum*, G. O. Sars.

Third uropods with four spines on the upper surface of the peduncle, which is twice as long as the first joint of the ramus.

Telson with three pairs of dorsal spines on its proximal half, the first pair the smallest.

Length 2 mm.

In the form of the hand of the second gnathopods this species approaches *S. tenella*, G. O. S., and *S. Dollfusi*, Chevreux; but both these (perhaps identical) species are remarkable for the length and slenderness of their antennæ and peræopods.

Three males taken in the bottom tow-net 6 miles W.S.W. of Calf of Man, in 23 fath., April 22, 1896.

#### Fam. PARAMPHITHOIDÆ.

##### PARAPLEUSTES MEGACHEIR, n. sp. (Pl. 18. figs. 4-4c.)

Body smooth; second segment of pleon (metasome) having a small dorsal tooth, the next three segments dorsally depressed.

Head nearly as long as the first two segments of the peræon (mesosome), lateral and post-antennal angles slight and obtuse. Eyes wanting.

Coxal plates of the first two segments of the peræon small and rhomboidal, with the anterior angle acute, especially in the first; 4th coxal plate wide and as deep as the segment. Third pleon-segment with the lower margin strongly and the hind margin slightly curved; hinder angle obtuse as in *P. pulchellus*, G. O. Sars.

Upper antennæ about two-thirds the length of the body; 1st

joint thick and as long as the next two, 3rd joint much more slender and about one-third the length of the second.

Lower antennæ about three-quarters the length of the upper; last joint of the peduncle rather shorter than the preceding joint.

Maxillipedes strong; dactylus of the palp longer than the preceding joint, very strong, and with a fringe of minute setules on the upper margin; 5th joint much shorter than the 4th.

Gnathopoda very unequal, the propodos of the 1st being about one-fourth of the size of that of the 2nd pair. The first pair have the anterior margin of the 5th joint (propodos)  $\frac{1}{3}$  longer than that of the 4th; dactylus about  $\frac{2}{3}$  the length of the propodos, the distal half serrate; posterior margin curved, the distal third being minutely crenate, with a spine about one-third of the length from the carpus. The 1st joint is as long as the 5th, the 2nd and 3rd very short; the carpus has the posterior margin convex, setose, with a minute tubercle in the middle.

The second pair have the propodos ovate, longer than the other joints together, having the palm defined by a small tooth two-fifths of the distance from the carpus to the base of the dactylus; the distal portion of the palm is divided into three lobes with crenate edges by two deep sinuses. The setæ on the lobes are of a peculiar form, being divided at some distance from their base into two unequal branches. The first joint is about half as long again as the next three, the carpus being very short, hollowed to receive the base of the propodos, and produced posteriorly.

The peræopoda and third uropoda resemble those of *P. pulchellus*, Sars.

The telson is spoon-shaped and notched at the tip to about one-fourth of its length. This last feature does not agree with Sars's definition of the family (Paramphithoidæ) as having the telson "with the tip not incised." Since, however, the telson itself in other respects, as well as the entire animal, agrees with Sars's description of *Parapleustes*, I am not disposed to make a new genus of it.

Length 8 mm.

This species may be at once distinguished from all others of the genus by the shape and large relative size of the 2nd gnathopods, the disproportion between these and the first pair being much greater even than in *P. latipes* (M. Sars).

Four specimens in the collection of the Dublin Museum of

Science and Art, taken during the expedition of the Royal Irish Academy, 1888, in 750 fath. off the S.W. of Ireland.

EXPLANATION OF THE PLATES.

PLATE 17.

Fig. 1. *Leuconopsis ensifer*, n. sp., male (telson wanting). 2 in. objective. (Only one exopodite is shown.)

1 a. Anterior margin of cephalothorax, male. 1 in. obj.

1 b. Third peræopod without the exopodite, male. 1 in. obj.

1 c. Upper antenna of female ( $\frac{1}{2}$  in.), with the extremity highly magnified ( $\frac{1}{6}$  in.).

1 d. Lower antenna of female.  $\frac{1}{2}$  in.

1 e. First peræopod „ 1 in.

1 f. Second „ „ 1 in.

1 g. Fourth „ „  $\frac{1}{2}$  in.

1 h. Telson and uropoda „ 1 in.

Fig. 2. *Aapseudes hibernicus*, n. sp., female. 2 in.

2 a. Chelipede of the same. 1 in.

2 b. Second (fossorial) leg. „

2 c. Third leg. „

2 d. Fifth leg. „

PLATE 18.

Fig. 2 e. Seventh leg of *Aapseudes hibernicus* (1 in.), with propodos ( $\frac{1}{2}$  in.).

2 f. Last pleon-segment and telson from below. 1 in.

Fig. 3. *Stenothoë crassicornis*, n. sp. Upper and lower antenna.

3 a. Maxillipedes, with basal portion.  $\frac{1}{6}$  in.

3 b. First gnathopod.

3 c. Second gnathopod.

3 d. Last peræopod.

3 e. Urus.

All with  $\frac{1}{2}$  in. objective.

Fig. 4. *Parapleustes megacheir*, n. sp. (peræopods and pleopods omitted). 2 in.

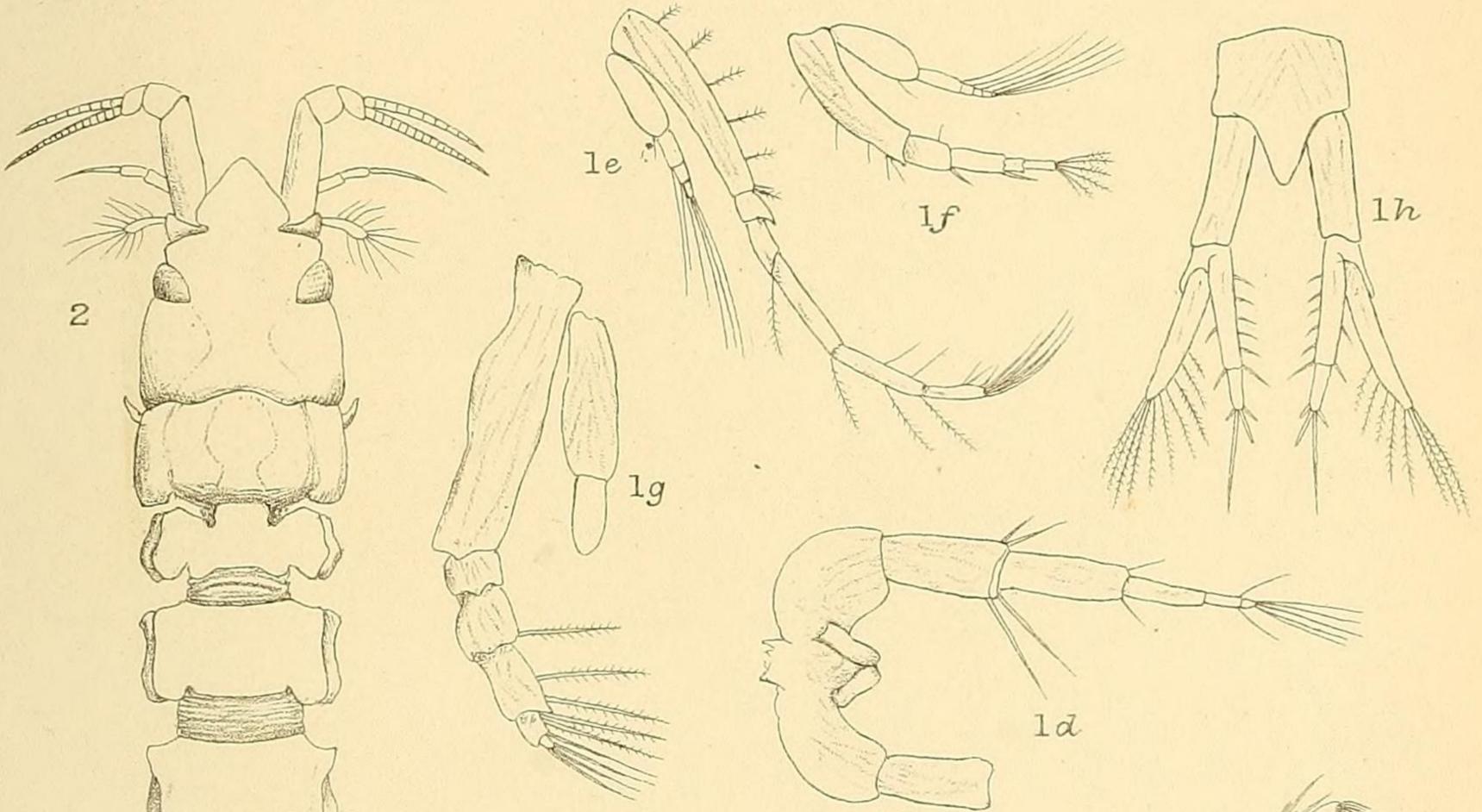
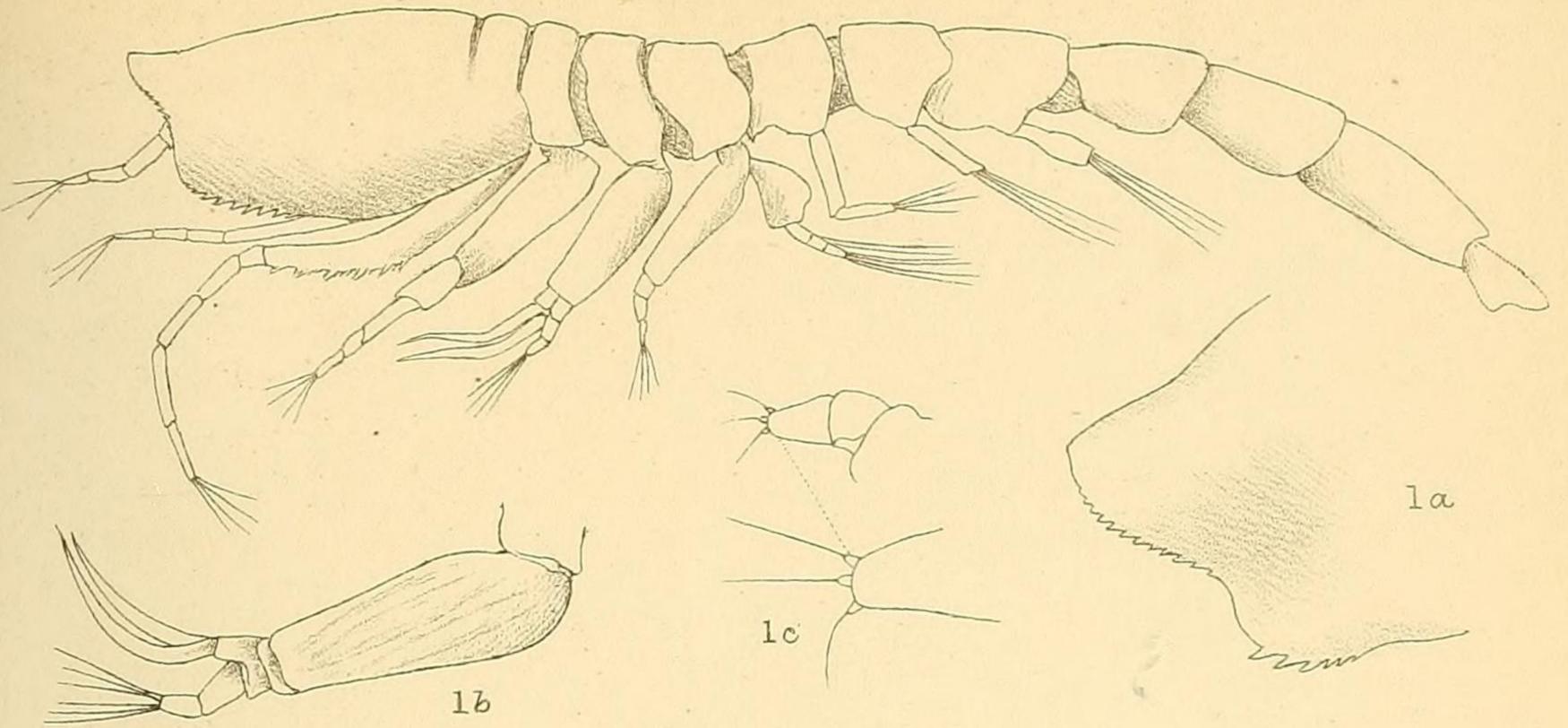
4 a. First gnathopod. 2 in.

4 b. Second gnathopod. 2 in. 4 bb. Distal part of palm.  $\frac{1}{6}$  in.

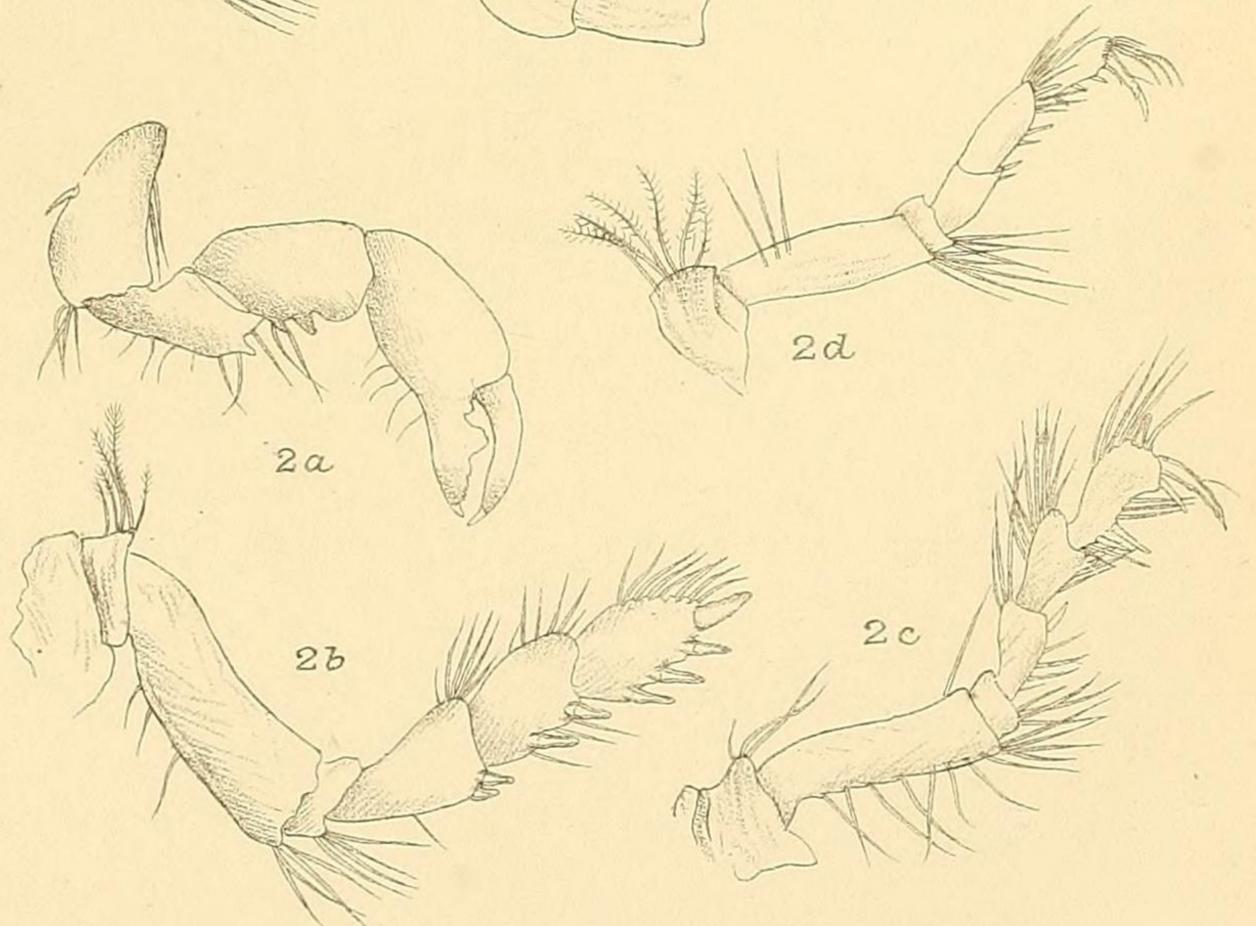
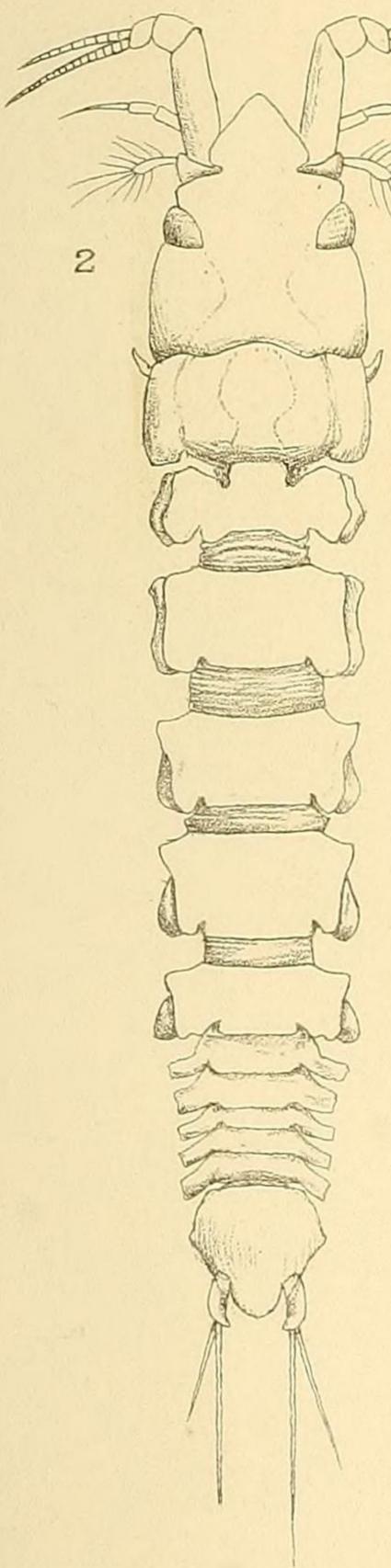
4 c. Telson and 3rd uropod. 1 in.

Figs. 2, 2 f, 3-3 e, 4, and 4 bb are drawn on a reduced scale.

1



2

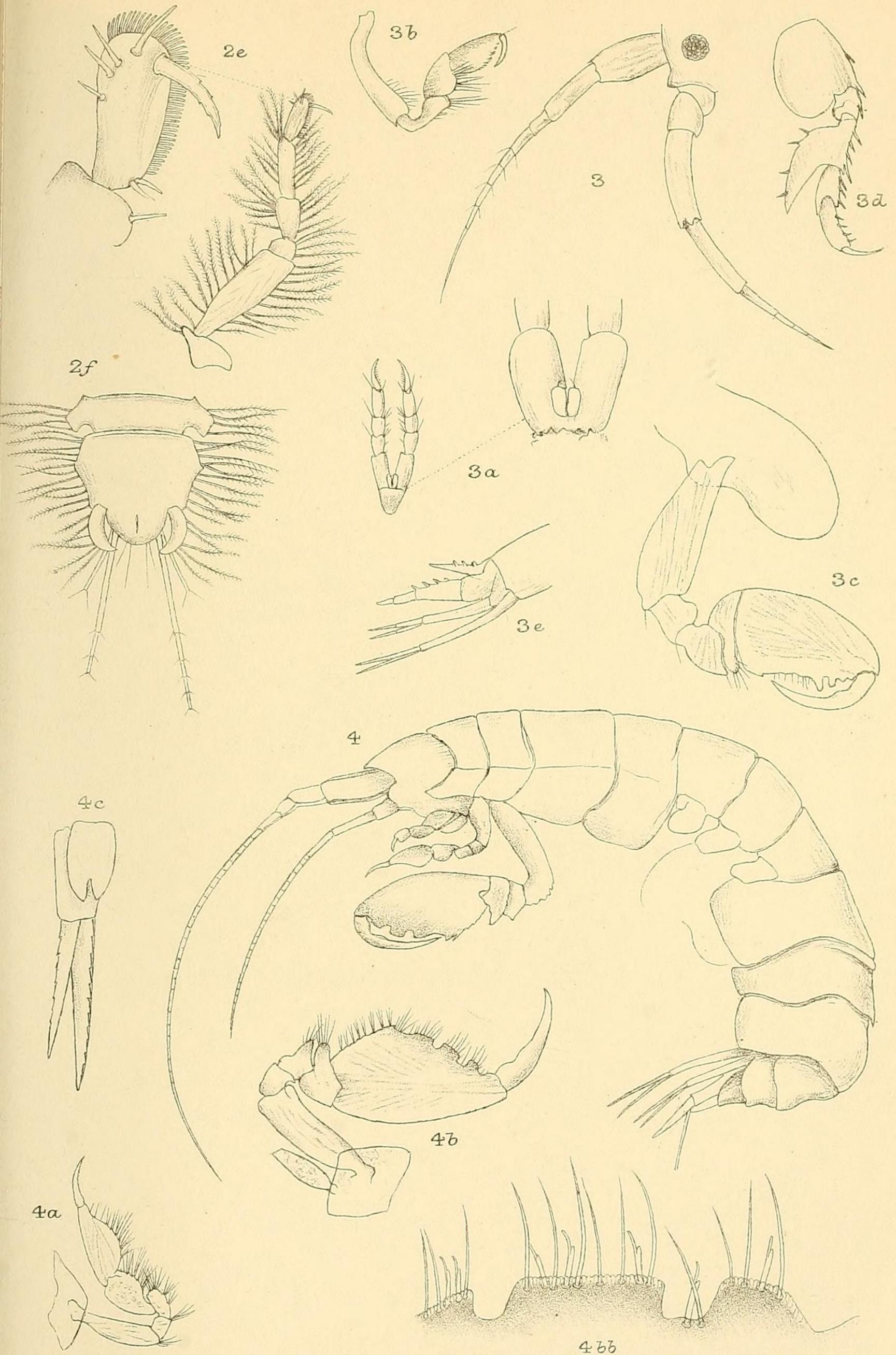


A.R. Hammond lith.

West, Newman imp.

NEW SPECIES OF EDRIOPHTHALMA.





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West, Newman imp.

NEW SPECIES OF EDRIOPHTHALMA.