

ON COPEPODA AND OTHER CRUSTACEA
*taken in Ireland and on the North East
Coast of England.*

BY GEORGE STEWARDSON BRADY, M.D., LL.D., D.Sc., F.R.S.

(Plates I-IV.)

III.—*On Copepoda and other Crustacea taken in Ireland and on the North East Coast of England.* By GEORGE STEWARDSON BRADY, M.D., LL.D., D.Sc., F.R.S. (Plates I.–IV.)

THE following pages contain descriptions of Copepoda which have been taken at various times and in various localities, but which have hitherto remained undescribed.

I am not aware that any lists have been published of the littoral Entomostraca of the East Coast of Ireland, though the opposite shores of the Irish Sea and of the Isle of Man have been in part investigated, and the results published by members of the Liverpool Marine Biological Association. It may therefore be useful to put on record the species observed by me during a short visit in the autumn of 1900. To these lists I add others referring to a tow-net collection made at Roundstone in 1874, one from Portpatrick in 1900, one from Roker, and one from Filey Brigg—all of them containing species of interest. Though chiefly concerned with the Entomostraca, I have included also some Schizopoda, hitherto unrecorded as inhabitants of those localities. The few Amphipoda and Isopoda which I collected are not here noticed, except as regards the Roker collection.

1.—*Pools at Newcastle, county Down.*

Cythere villosa, G. O. Sars.	Thalestris Clausii, Norman.
„ albomaculata, Baird,	„ longimana, Claus.
„ cyamos, Norman.	Idya furcata, Baird.
Loxoconcha impressa, Baird.	Scutellidium tisboides, Claus.
Cytherura nigrescens, Baird.	„ fasciatum, Boeck.
„ similis, G. O. Sars.	Porcellidium fimbriatum, Claus.
„ cellulosa, Norman.	Harpacticus chelifer, Müller.
Paradoxostoma variabile, Baird.	„ flexus, G. S. Brady.
*Ameira amphibia, G. S. Brady.	Zaus spinatus, Goodsir.
Ectinosoma melaniceps, Boeck.	

* In mussel-beds.

2.—*Off Newcastle, county Down, 5 fathoms, sandy bottom.*

Gastrosaccus sanctus, Van Beneden.	Isias clavipes, Boeck.
Schistomysis arenosa, G. O. Sars.	Harpacticus chelifera, Müller.
	Lichomolgus fucicolus, G. S. Brady.
Acartia longiremis, Lilljeborg.	

3.—*In a deep pool below high-water mark, Dundrum.*

Cytherois Fischeri, G. O. Sars.	Mesochra Lilljeborgii, Boeck.
Cyclops æquoreus, Fischer.	Thalestris Clausii, Norman.
Ectinosoma Normani, Scott.	Idya furcata, Baird.
„ melaniceps, Boeck.	Harpacticus chelifera, Müller (var.)

In brackish pools above high-water mark, Dundrum.

Cythere gibbosa, B. & R.	Laophonte subsalsa, G. S. Brady.
Loxoconcha viridis, Müller.	Tachidius brevicornis, Müller.
Cytherois Fischeri, G. O. Sars.	Dactylopus tisboides, Claus.
Cyclops æquoreus, Fischer.	Idya furcata, Baird.
Mesochra Lilljeborgii, Boeck.	

In surface-net, Roundstone Bay (1874).

Siriella Clausii, G. O. Sars.	Dactylopus Stromii, Baird.
Acartia discaudata, Giesbr.	„ tisboides, Claus.
Diosaccus tenuicornis, Claus.	Thalestris Clausii, Norman.
Pseudocyclops obtusatus, B. & R.	Harpacticus gracilis, Claus.
	Lichomolgus fucicolus, G. S. Brady.

Portpatrick Harbour, Wigtownshire, 2-3 fathoms, among weeds.

Loxoconcha impressa, Baird.	Thalestris Clausii, Norman.
Paradoxostoma variabile, Baird.	Idya furcata, Baird.
Temora longicornis, Müller.	Lichomolgus fucicolus, G. S. Brady.
Parapontella brevicornis, Lubbock.	Acontiophorus elongatus, Scott.
Thorellia brunnea, Boeck.	

In tidal pools, Filey Brigg, Yorkshire.

Cythere albomaculata, Baird.	Laophonte curticauda, Boeck.
Cyclops eboracensis, G. S. Brady.	Idya furcata, Baird.
Temora longicornis, Müller.	Harpacticus chelifera, Müller.
Paratachidius inermis, G. S. Brady.	Zaus spinatus, Goodsir.
Dactylopus tisboides, Claus.	

In pools at extreme low-water mark, Roker, 15th August, 1900.

**Lipura maritima* (Guerin).

Podocerospis excavata, Sp. Bate.

Erichthonius Hunteri, Sp. Bate.

Temora longicornis, Müller.

Acartia longiremis, Lilljeborg.

Ectinosoma melaniceps, Boeck.

Dactylopus platycheles, G. S. Brady.

Thalestris Clausii, Norman.

Zaus spinatus, Goodsir.

Laophonte lamellifera, Claus.

Idya furcata, Baird.

Scutellidium fasciatum, Boeck.

* An apterous insect belonging to the group *Collembola*. It is met with not unfrequently on the surface of tidal pools on many parts of the British coast, but I am not aware of any record of its occurrence in the Northumberland and Durham district.

GENUS *CYCLOPS*, Müller.

Cyclops eboracensis, sp. nov. (Pl. I., figs. 12-14).

Antennules very short and stout, six-jointed (fig. 12), the first three joints extremely thick, last three suddenly much more slender, the first joint is about as broad as long, second three times as broad as long, third considerably longer than broad: the following formula represents the comparative lengths of the joints:

1.	2.	3.	4.	5.	6.
12	4	13	5	2	4

The swimming feet (fig. 13) are short, all the branches are three-jointed, and the marginal spines of the outer branches are long and slender; caudal laminæ (fig. 14) of moderate size, about twice as long as broad, rather longer than the last abdominal segment, bearing two long but unequal terminal setæ, on each side of which are two very delicate short hairs, and on the outer angle a much stronger but short seta; near the middle of the outer margin is a minute seta, and another between it and the apex.

Hab.—In tidal pools at Filey Brigg, Yorkshire, among weeds.

Only one specimen of this curious *Cyclops* was found. There can, I think, be no doubt that it is a perfectly developed adult. It seems to approach very closely *C. christianensis*, Boeck, but differs from that species in having

six-jointed antennules and in some other minor points. The only described species with six-jointed antennules is *C. aquoreus*, Fischer, a brackish water form which differs in many ways from the present species.

GENUS AMEIRA, Boeck.

Ameira amphibia, sp. nov. (Pl. I., figs. 1-11).

In general outline and appearance much like *Canthocamptus* (fig. 1). Head and thorax coalescent; no distinct separation between thorax and abdomen, which are nearly equally stout; caudal segments very short, about half as long as broad and not more than half as long as the last abdominal somite, the posterior margin of which is fringed with spine-like setæ, the preceding segments being setiferous only near the sides (fig. 11): seen laterally the caudal segments are only half as deep as the preceding ones, the last abdominal segment projecting abruptly beyond them dorsally. Antennules (fig. 2) very slender, short, clothed with very delicate setæ, eight-jointed, the joints nearly equal in length, the fifth, however, being somewhat shorter than the rest. Inner branch of the antenna (fig. 3) minute, two-jointed, bearing three short setæ. Mandibles (fig. 4) extremely small, the shaft rather feebly toothed at the apex, palp minute, composed of two joints, each of which bears two or three setæ; maxillæ (fig. 5) and anterior foot-jaws minute, but in general structure similar to those of most *Canthocamptinæ*; posterior foot-jaws (fig. 7) short and rather stout, hand oval, claw slender, slightly curved, and about as long as the hand. All the swimming feet have both branches three-jointed, inner branch of the first pair (fig. 8) longer than the outer branch, the first joint rather stout, and about twice as long as the united lengths of the following two, its inner margin fringed with setæ; second and third joints short, nearly equal, the third bearing three, the second one long apical setæ; outer branch equally three-jointed, spines of the external margin long and slender, as also are the apical setæ, first and second joints marginally ciliated; second,

third, and fourth pairs having the inner branch considerably shorter than the outer (fig. 9), last joint of the outer branch longer and more slender than the preceding, all the joints ciliated on the outer margins, the first two bearing a slender marginal spine a little beyond the middle, last joint with two marginal spines and three apical setæ; the second and third joints have also on their inner margins a single long spiniform seta; the inner branch is clothed in a similar way, but without marginal spines: fifth pair of feet (fig. 10) foliaceous, two-jointed, first joint wide, with a produced subtruncated inner plate which is armed at the apex with five setæ of unequal length, second joint ovate, with ciliated margins and six unequal terminal setæ. The longer of the two principal tail-setæ is about equal in length to the entire body of the animal. Length .46 mm. Male unknown.

Hab.— On a mussel-bed between tide marks on the beach at Newcastle, county Down, September, 1900.

This species, curious both in structure and habitat, agrees in most respects—in all perhaps, except in the structure of the very minute mouth organs—with *Ameira*. These structures, however, are so extremely minute that I have been unable to obtain quite satisfactory view of them, and the drawings here given must be taken as being to a certain extent provisional. It is very likely that when they have been more perfectly investigated a new genus may have to be instituted for the reception of the species. The mussel-beds in which it occurs form elevated patches on the sandy beach at Newcastle, the spaces between the shells being filled up with a sort of friable conglomerate of sand and *débris*. The Copepoda were obtained by washing a small quantity of this *débris* and straining off the swimming or floating microzoa. This was the only species found, but it occurred plentifully.

GENUS PARATACHIDIUS, gen. nov.

Like *Tachidius*, but that only the first swimming foot has both branches three-jointed: the second, third, and fourth

pairs having the outer branch three-jointed, the inner two-jointed; antennules nine-jointed.

Paratachidius inermis, sp. nov. (Pl. II., figs. 12-17;
pl. IV., figs. 13-14).

Like *Tachidius* in general appearance; the penultimate and antepenultimate segments of the abdomen fringed on their distal margins with fine setæ (Pl. II., fig. 16), caudal segments twisted, subsigmoid, somewhat shorter than the last abdominal segment, bearing two principal setæ at the apex, the outermost of which is about half as long as the inner one, and is acutely bent at the base (figs. 16, 17), the lateral margins also bear a few small setæ. Antennules nine-jointed (fig. 12), slender; the joints nearly equal in length (except the last, which is short), but gradually narrowing to the extremity; all the joints bearing fine, but not very long, setæ. Antennæ comparatively large and stout (fig. 13), inner branch consisting of a single joint; posterior footjaws small, the hand ovate and simply unguiculate (fig. 14). Outer branch of the first pair of swimming feet rather shorter than the inner branch (fig. 15), each joint bearing a large apical spine on the outer margin, outer margins of both branches ciliated: outer branches of the second, third, and fourth pairs (Pl. IV., fig. 13) longer, the last joint being about twice as long as the preceding ones; inner branch short, two-jointed, the first joint almost rudimentary. The joints of the fifth pair of feet are narrow and elongated (fig. 14), and bear several unequally long setæ. Length about 5 mm.

Only one example of this species was found in a gathering taken among algæ in tide-pools, Filey Brigg, Yorkshire, August, 1897.

GENUS PSEUDOTHALESTRIS, G. S. Brady.

Pseudothalestris monensis, sp. nov. (Pl. III., figs. 11-16).

Cephalothorax of the *female*, seen laterally (fig. 11) stout, with a strongly convex dorsal curve, abdomen much more

slender and very short, the principal tail setæ at least twice as long as the abdomen. Antennules (fig. 12) of moderate length, very slender, eight-jointed, and rather profusely setiferous, the comparative lengths of the joints as in the following formula

1.	2.	3.	4.	5.	6.	7.	8.
5	7	10	6	4	4	3	3.

inner branch of the antenna three-jointed, about as long as the last joint of the outer branch, hand of the posterior foot-jaw (fig. 13) elongated, subovate, bearing a rather long seta at the proximal end of the inner margin, and a long, slender, slightly curved terminal claw which is slightly pectinated towards its base. The first pair of feet (fig. 14) have both branches bi-articulate, inner branch much the longer, the first joint quite six times as long as broad, bearing a single seta near the middle of the inner margin, and two much smaller ones towards the distal end of the outer margin; terminal joint very small, bearing two slender claw-like setæ, the inner more than twice as long as the outer, the two joints of the outer branch short, stout, and armed with strong marginal spines, one on the first joint, two on the second, which also has three apical setæ; the rest of the swimming feet have both branches three-jointed, with longer and more delicate setæ and less massive spines; fifth pair of feet (fig. 15) short, the first joint broad, truncated, and having five marginal setæ, second joint very small, ovate, with five setæ. Length .46 mm. Male unknown.

Hab.—This species was taken in tidal pools at Port Erin, Isle of Man, in the spring of 1893.

GENUS LAOPHONTE, Philippi.

Laophonte subsalsa, sp. nov. (Pl. II., figs. 1-11).

Body rather stout, with short limbs, abdomen not much more slender than the thorax (figs. 1, 2); caudal laminæ short, scarcely as long as the last abdominal segment, the longest tail-seta about half as long as the body. Antennules of the

female (fig. 3) seven-jointed, rather profusely setose, the comparative length of the joints as follows:

1.	2.	3.	4.	5.	6.	7.
9	10	6	3	4	3	3

Antennæ and mouth-organs normal. Hand of the posterior footjaw (fig. 5) rather elongated, narrow, and angulated near the middle of the outer margin, terminal unguis long, slender, and slightly curved. The first four pairs of feet have the inner branches two-jointed, outer branches three-jointed; in the first pair (fig. 6) the outer branch is about half as long as the first joint of the inner branch, the second joint of the inner branch about one-fourth as long as the first joint, the slender terminal claw fully twice as long as the joint from which it springs; in the second and third pairs of feet (fig. 9) the inner are about half as long as the outer branches; the fourth pair are considerably reduced in size, and the inner branch is smaller than in the preceding pairs (fig. 10); fifth pair (fig. 11) foliaceous, rather short and broad, inner margin of the first joint obliquely subtruncated and bearing five nearly equal setæ, second joint broadly ovate and bearing six subequal setæ, margins of both joints beyond and between the setæ finely ciliated.

Male.—The antennules (fig. 4) are very stout and geniculated as usual in this genus, the feet much the same as in the female, except that the usual slender setæ of the outer branches in the second and third pairs are replaced by stout spines (figs. 7, 8). Length .46 mm.

I took this species plentifully in brackish pools a little above high-water mark at Dundrum, county Down, in September, 1900; also a few years earlier on the muddy sides of the Glen Estuary, west coast of Donegal.

GENUS DACTYLOPUS.

Dactylopus platycheles, sp. nov. (Pl. III., figs. 1-10).

Female.—In general aspect like *D. tisboides* (fig. 1). Antennules very short and rather stout, nine-jointed, first three joints subequal, longer than the rest, but not much longer

than broad, seventh and eighth joints the shortest, fourth, fifth, sixth, and ninth nearly equal (fig. 2). Antennæ (fig. 3) nearly as large as the antennules, very stout, and bearing stout terminal spines, inner branch three-jointed. The mandibles, maxillæ, and anterior footjaws (figs. 4, 5) are in general build similar to those of other species. The hand of the posterior footjaw (fig. 6) is subovate, very stout, and bears a short and stout terminal claw; inner border of the hand indistinctly fringed with short cilia. Branches of the first pair of feet (fig. 7) equal in length, very stout, the terminal claws broad towards the base, flexuously curved and fringed on their concavities with fine cilia; the second joint of the outer branch bears on its inner margin two short proximal and one rather longer distal setæ; the third joint has one long apical seta, two strong apical claws, and two smaller ones on the outer margin; there is a single stout spine on the outer margin of each of the two preceding joints; the first joint of the inner branch is equal in length to the first and second joints of the outer branch, and bears about the middle of its outer margin a single plumose seta; second joint almost obsolete, about as long as the last joint of the outer branch, and armed terminally with two stout claws. The remaining swimming feet (fig. 8) are of the usual type; fifth pair (fig. 9) short and broad, the two joints of nearly equal length, each bearing five or six short marginal setæ. Length .87 mm. Male unknown.

Hab.—A few specimens of this species—all females—were found in a gathering taken amongst weeds at Roker, August 15th, 1900, at low-water mark of an extremely low tide. They seem to be perfectly distinct from all described species.

GENUS HARPACTICUS, M. Edwds.

Harpacticus gracilis, Claus (Pl. IV., figs. 4-12).

- Harpacticus gracilis*, Claus. Die frei lebenden Copepoden,
p. 135, pl. XIX., fig. 20.
? „ „ Kritschagin, Fauna of the Black Sea,
p. 40, pl. III., figs. 34-42 (1877).

In most respects like *H. chelifera*, but smaller and much more slender in all its parts.

Female.—The antennules (fig. 6) are extremely slender and very sparingly setiferous, nine-jointed, the relative lengths of the joints being as follows :—

1.	2.	3.	4.	5.	6.	7.	8.	9.
9	9	10	7	3	3	2	1	1

The hand of the posterior footjaw (fig. 7) is very slender, its width at base being equal to about one-third of the length, whereas in *H. chelifera* the width is one-half of the length; the terminal unguis is also longer and more slender than that of *H. chelifera*. The first four pairs of feet of the two species are alike, except that those of *H. gracilis* are more slender, and have a much more delicate setose and spinous armature (fig. 8). The fifth pair has the terminal joint narrower and more elongated (fig. 12). The ovisacs are remarkably small, containing usually only three or four large eggs.

Male.—The male is smaller and less robust than that of *H. chelifera*, but is not otherwise distinguishable. The spinous prolongation of the inner branch of the second foot (fig. 10) is, however, longer than in *H. chelifera*.

The only examples of this species which have come under my notice are contained in a tow-net gathering made in Roundstone Bay in 1871 by myself and my late friend Dr. David Robertson. These had been overlooked—probably confused with *H. chelifera*—until a recent overhaul of the collection brought them to light. They agree completely with the description and single figure of *H. gracilis* given by Dr. Claus, who, however, does not describe the male; and so far as I am aware the species has not been observed by any other author, unless doubtfully by Kritschagin (*loc. cit.*) in the Black Sea. The figures given by that author are, however, scarcely recognizable, and his memoir being written in Russian, I am unable from the description to form any opinion on the matter.

GENUS MONSTRILLA, Dana.

? *Monstrilla grandis*, Giesbrecht (Pl. IV., figs. 1-3).

1892. *Monstrilla grandis*, Giesbr., Pelagischen Copepoden
des Golfes von Neapel, pp. 586,
588.

1894. " " Timm, Copepoden und Cladoceren
der südöstlichen und östlichen
Nordsee, p. 378, pl. V., fig. 4.

The single specimen here referred to is so much battered and mutilated that it would be useless to attempt a description. The separate parts are as far as possible figured in Pl. IV. I scarcely doubt that it belongs to *Monstrilla grandis* Giesbrecht, though it might also fairly be referred to *M. intermedia*, Kritchagin, which is possibly identical with *M. grandis*. No example of this extremely interesting genus has, so far as I know, been hitherto found on the East Coast of Britain, though it occurs not very uncommonly in the English Channel (*M. anglica*, Lubbock), and on the eastern part of the North Sea at Heligoland (*M. helgolandica*, Claus). I am indebted to my friend I. C. Thompson, Esq., F.L.S., of Liverpool, for specimens of another genus (*Thaumaleus Thompsoni*, Giesbrecht) which is scarcely distinguishable from *Monstrilla*. This species seems to be widely distributed—Isle of Man, Falkland Islands, Mediterranean. In the year 1880 when my Ray Society "Monograph of the British Copepoda" was published I had not seen any specimen of either genus. Sir John Lubbock had described his *Monstrilla anglica* from a single specimen which had unfortunately been lost, and I had to be content with reproducing his drawing of that species. Since that time several other species belonging both to *Monstrilla* and *Thaumaleus* have been described by Mr. Bourne and Mr. Thompson in this country, and by Giesbrecht, Timm, and others abroad. It was early noticed that the animals, though extremely muscular and powerfully limbed, were entirely destitute of alimentary canal and mouth-organs, the mouth being represented at the most by a very small

crateriform opening—this condition seeming to point to a parasitic life. Various hypotheses were put forward, but it was reserved for Professor A. Giard, of Paris, to discover the real host of the parasite in certain annelids belonging to the genus *Polydora*. *Polydora* is a marine worm which builds and lives in, a leathery tube. One of M. Giard's specimens of *Thaumaleus* was found just inside the tube, clasping the body of the worm, others in the body-cavity of the worm itself, which seems to be the normal position. The life-history remains to be worked out, but it seems probable that after hatching from the egg the young *Thaumaleus* finds its way through one of the nephridial pores of the annelid into the body-cavity, there attaining its adult form, after which it escapes, produces and discharges its reproductive cells, and seeing that owing to the absence of alimentary organs it cannot feed, must soon die.

The specimen here noticed was found in a bottom-net gathering made at Cullercoats in July, 1900. It would appear that it is in the warmer months of the year that free-swimming specimens are usually taken.

It may be well here to give the diagnostic characters of the family and of its two genera, according to Giesbrecht.

Fam.—*Monstrillide*.

"Ampharthrandria" in which the hinder antennæ, mandibles, maxillæ, maxillipeds, and rostrum are wanting in both sexes; the eggs of the female borne in a forked process springing from the ventral surface of the genital segment, which in the male forms a process ending in two projections; abdomen of the male incompletely segmented.

Genus *Thaumaleus*, Kröyer.

Between the genital segment and the furca, in the female only one, in the male, two segments; fifth pair of feet wanting in the male; furca bearing three setæ in the female, in the male three or four. *Female*.—Cephalothorax four-segmented, abdomen three-segmented. Anterior antennæ 3-4 jointed,

with numerous long, stout setæ, some of which are branched. First four pairs of swimming feet with three-jointed branches and a voluminous base; fifth pair rudimentary. *Male*.—Anterior antennæ five-jointed, with a geniculation between the fourth and fifth joints, apex of the genital segment elongated.

Genus *Monstrilla*, Dana.

Closely allied to *Thaumaleus*: mouth placed far back; between the genital segment and the furca there are three segments in the male, but in the female the first of the three is incompletely separated or quite coalescent; the fifth pair of feet in the male is in the form of a tolerably long bristle (or a stump); the apex of the genital segment in the male short in comparison with its ordinary-sized base; furca in both sexes with five or six setæ.

EXPLANATION OF PLATES.

PLATE 1.

AMEIRA AMPHIBIA. ♀

- Fig. 1. Female seen from left side $\times 140$.
 2. Antennule
 3. Inner branch of antenna } $\times 300$.
 4. Mandible
 5. Maxilla } $\times 440$.
 6. Anterior footjaw }
 7. Posterior footjaw }
 8. Foot of first pair } $\times 300$.
 9. ,, third pair }
 10. ,, fifth pair }
 11. Last abdominal segment and furca $\times 240$.

PLATE 2.

LAOPHONTE SUBSALSA.

- Fig. 1. Male seen from above }
 2. ,, ,, right side } $\times 140$.
 3. Antennule of female }
 4. ,, male } $\times 300$.
 5. Posterior footjaw }

- | | | |
|-----|--------------------|----------|
| 6. | Foot of first pair | } × 240. |
| 7. | „ second pair ♂ | |
| 8. | „ third pair ♂ | |
| 9. | „ third pair ♀ | |
| 10. | „ fourth pair ♀ | |
| 11. | „ fifth pair ♀ | |

PARATACHIDIUS INERMIS. ♀

12. Antennule × 240.
 13. Antenna × 320.
 14. Posterior footjaw × 320.
 15. Foot of first pair × 240.
 16. Abdomen and tail × 140.
 17. A furcal lamina × 300.

PLATE 3.

DACTYLOPUS PLATYCHELES. ♀

- Fig. 1. Female seen from left side × 84.
 2. Antennule × 240.
 3. Antenna × 320.
 4. Maxilla × 350.
 5. Anterior footjaw × 320.
 6. Posterior footjaw × 240.
 7. Foot of first pair
 8. „ second pair } × 240.
 9. „ fifth pair }
 10. One half of furca with setæ × 240.

PSEUDOTHALESTRIS MONENSIS. ♀

11. Female seen from right side × 110.
 12. Antennule × 260.
 13. Posterior footjaw × 350.
 14. Foot of first pair × 350.
 15. „ fifth pair × 240.
 16. Abdomen and furca × 140.

PLATE 4.

MONSTRILLA GRANDIS. ♂

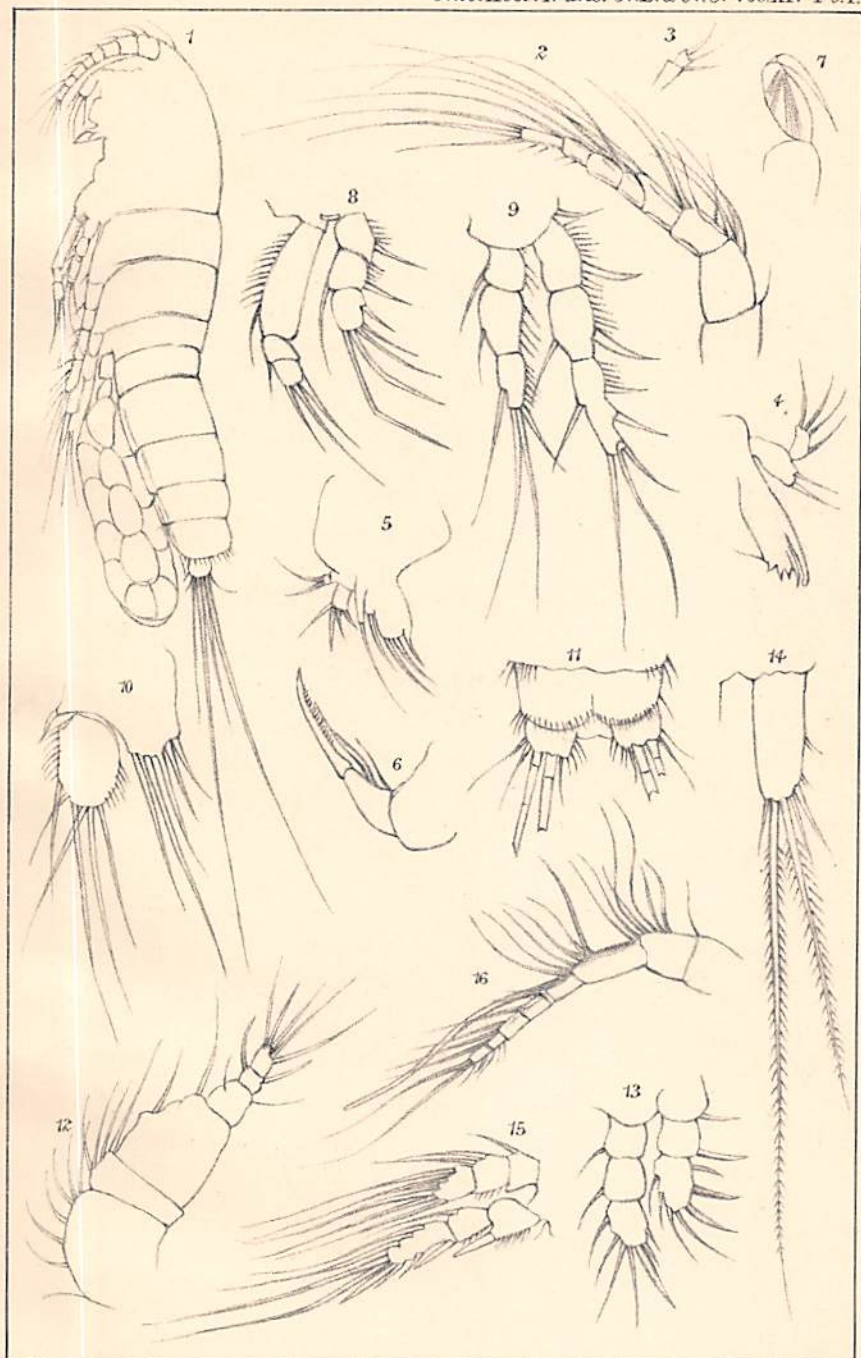
- Fig. 1. Male (somewhat distorted) × 40.
 2. Foot of fourth pair × 84.
 3. Abdomen. *a. a.* testes × 84.

HARPACTICUS GRACILIS.

4. Female seen from left side $\times 84$.
 5. Abdomen and fifth pair of feet δ
 6. Antennule of female
 7. Posterior footjaw
 8. Foot of first pair
 9. ,, third pair ♀
 10. ,, second pair δ
 11. ,, third pair δ
 12. ,, fifth pair ♀
- } $\times 240$.

PARATACHIDIUS INERMIS. ♀

13. Foot of second pair }
 14. ,, fifth pair } $\times 240$.
-



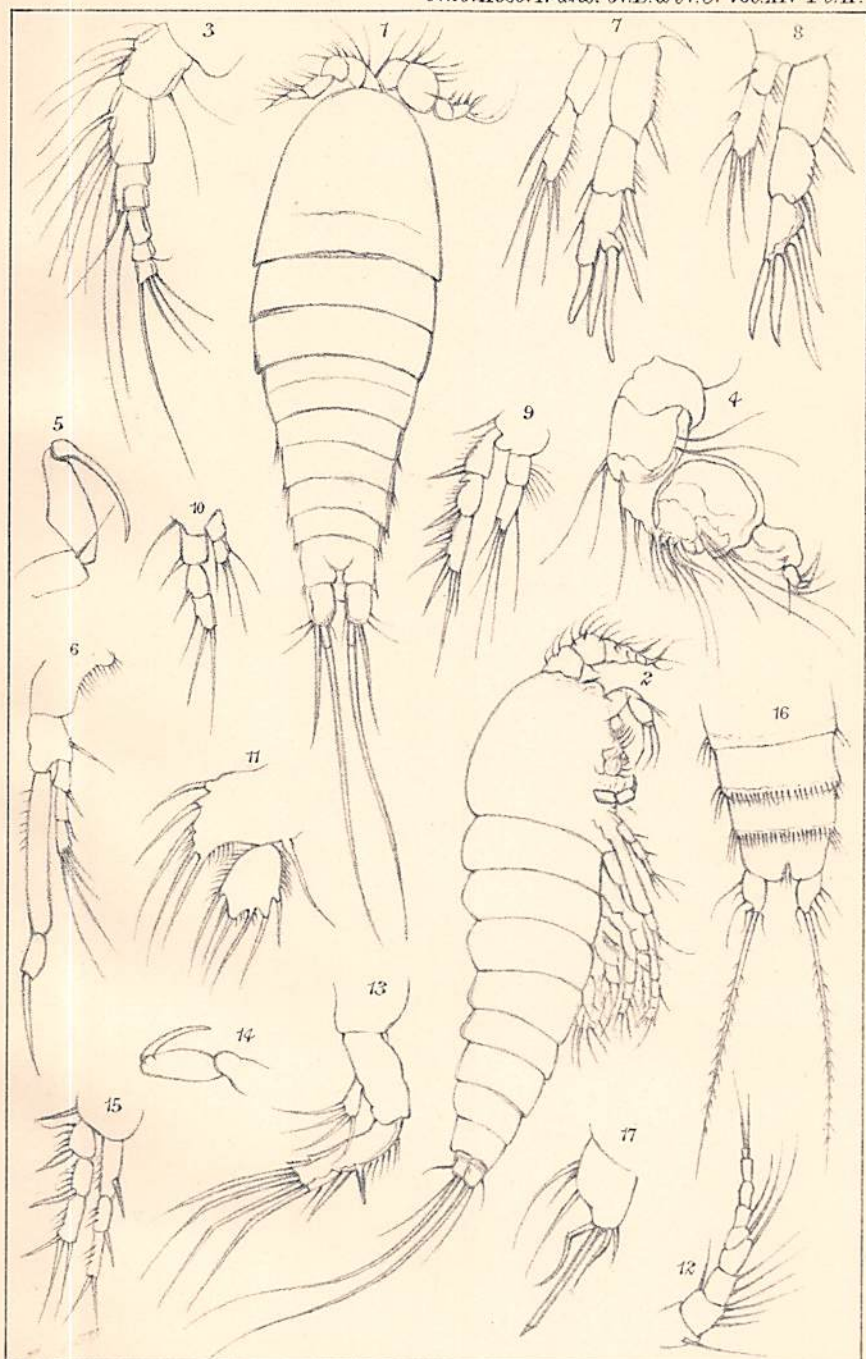
G. S. Brady del.

G. West & Sons lith.

Figs. 1-11 AMEIRA AMPHIBIA ?

" 12-14 CYCLOPS EBORACENSIS ?

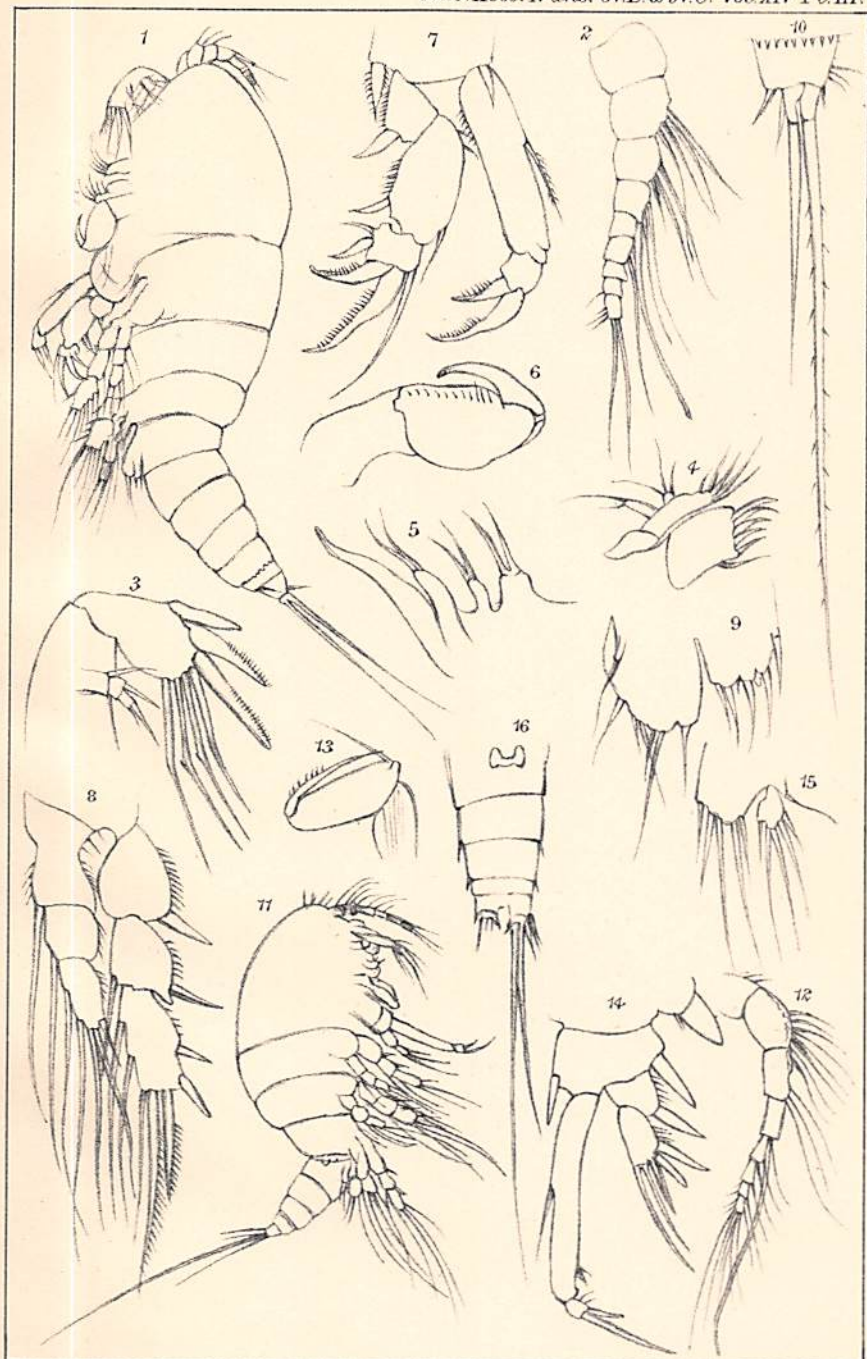
" 15, 16 PSEUDOTHALESTRIS MONENSIS ?



G. S. Brady del.

G. West & Sons lith.

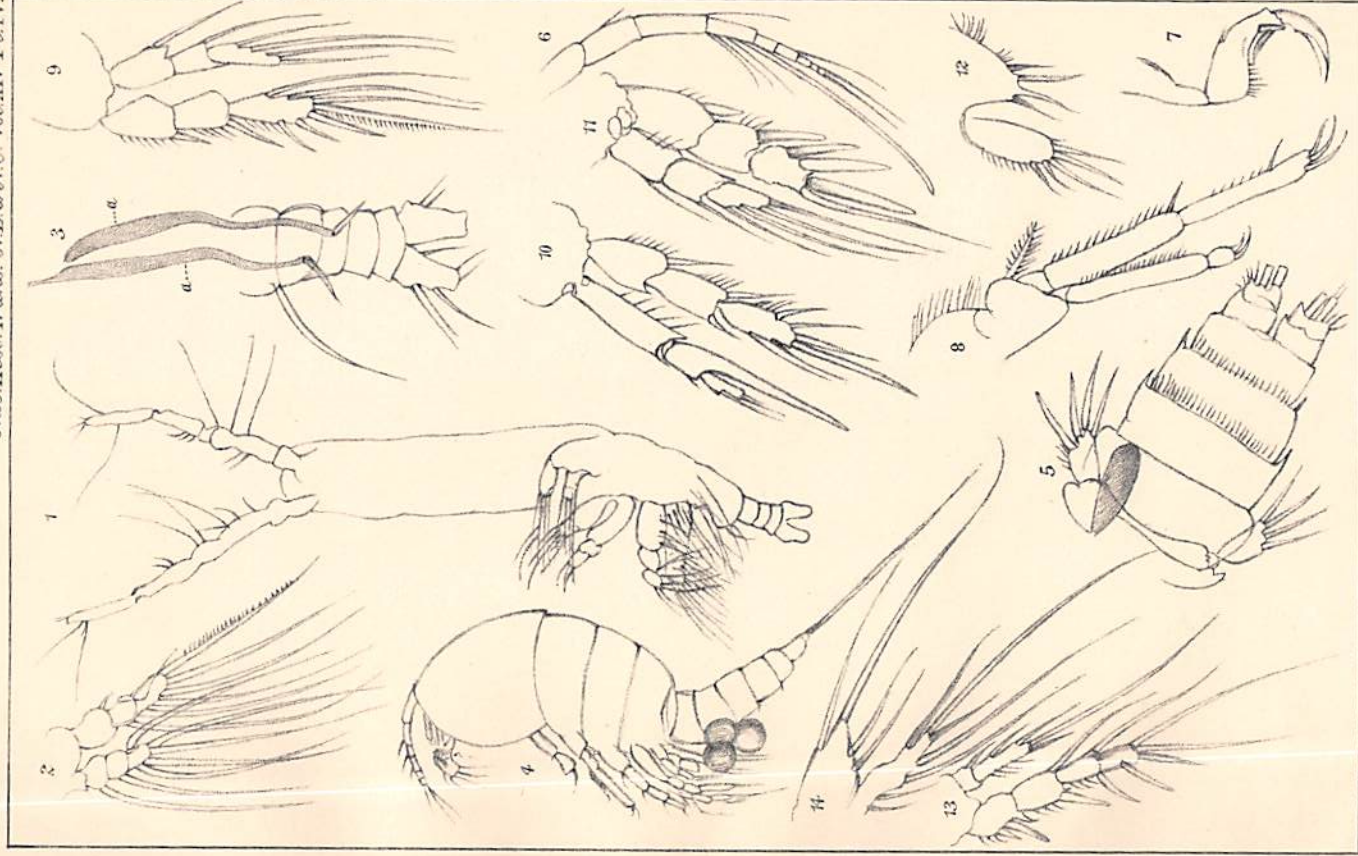
Fig. 1-11 LAOPHONTE SUBSALSA
" 12-17 PARATACHIDIUS INERMIS ♀.



G. S. Brady del.

G. West & Sons lith.

Figs. 1-10 DACTYLOPUS PLATYCHELES ♀
" 11-16 PSEUDOTHALESTRIS MONENSIS ♀.



Figs. 1-3 *MONSTRILLA GRANDIS* ♂

" 4-12 *HARPACTICUS GRACILIS*

" 13, 14 *PARATACHIDIUS INERMIS* ♀.