

AN ACCOUNT
OF THE
CRUSTACEA
OF
NORWAY

WITH SHORT DESCRIPTIONS AND FIGURES OF ALL THE SPECIES

BY
G. O. SARS

VOL. V
COPEPODA
HARPACTICOIDA

PARTS XXXIII & XXXIV
SUPPLEMENT (continued)

WITH 16 AUTOGRAPHIC PLATES



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1911

Occurrence.—Only a solitary specimen of this form, a fully grown ovigerous female, has hitherto come under my notice. It was found in the same sample as the last-named species.

Page 217.

For *Ameira tenuicornis*, Scott,
read: *Ameira Scotti*, G. O. Sars, n. sp.

Remarks.—Having now examined the true *Ameira tenuicornis* of Scott, which will be described below, I propose to name the present species as above.

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Ameira tau, (Giesbrecht).

Distribution.—Polar Islands north of Grinnell Land (2nd Fram Exp.).

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For *Ameira tenella*, G. O. Sars,
read: *Ameira attenuata*, Thomps.

Ameira attenuata, I. C. Thompson, Revised Report on the Copepoda of Liverpool Bay. Trans. Liv. Biol. Soc. Vol. VII, p. 195, Pl. XXXII.

Remarks.—I think I am right in identifying the form described in the present account on page 220 as *Ameira tenella* with *A. attenuata* of I. Thompson. The figures given by that author are certainly far from being accurate, but there are so many points of agreement that, on a closer comparison, I am led to the conclusion that these 2 forms are in all probability identical.

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Add the following species:

Ameira tenuicornis, Scott.

(Suppl. Pl. 27).

Ameira tenuicornis, Th. Scott, in 20th Ann. Report of the Fishery Board for Scotland, Part III, p. 549, Pl. XXIV, figs. 1—9.

Specific Characters.—*Female.* Body extremely slender and narrow, sub-linear in form, with the anterior division only slightly broader than the posterior, the two being of about equal length. Rostral prominence very small. Last caudal segment a little shorter than the preceding one. Caudal rami shorter than the anal segment and only slightly longer than they are broad, apical setæ however of quite unusual length, the inner medial one being even longer than the whole

body. Anterior antennæ long and slender, fully twice as long as the cephalic segment, and clothed in their outer part with unusually long and slender setæ, 2nd joint the largest, 3rd joint longer than 4th, terminal part scarcely attaining the length of those two joints combined. Posterior antennæ likewise more slender than usual, outer ramus distinctly biarticulate, terminal joint very small. Mandibular palp, as in the other species, simple, biarticulate, basal joint however carrying inside, in place of the usual setæ, a single remarkably strong spiniform appendage minutely denticulated at the end¹⁾, distal joint comparatively small. 1st pair of legs rather slender, outer ramus a little shorter than the 1st joint of the inner, and having its 3 joints of about equal length, last joint of inner ramus fully twice as long as the middle one, both together about half the length of the 1st. The 3 succeeding pairs of legs with the rami slender and narrow, setæ present in the normal number. Last pair of legs with the distal joint comparatively small, oblong oval in form, slightly tapered, and carrying 5 rather unequal setæ, that issuing from the tip very long and slender; inner expansion of proximal joint obtusely rounded at the end, and extending beyond the middle of the distal joint, marginal setæ 4 in number and rather strong, the outermost but one the longest.

Colour whitish, pellucid.

Length of adult female 0.70 mm.

Remarks.—The above-described form is undoubtedly that originally recorded by Th. Scott as *A. tenuicornis*, and is very different from the species so named in the principal part of this account. On the other hand, it has a general resemblance to *A. attenuata* Thompson, exhibiting a similar very slender form of body. It is however of considerably larger size, and moreover easily distinguished by the comparatively shorter caudal rami and the very different form of the last pair of legs. The extraordinary length of the caudal setæ in the present species has quite escaped the attention of Th. Scott, probably because those setæ had accidentally been broken off in the specimen examined by him.

Occurrence.—Several specimens of this form were found last summer at Korshavn in a single locality, which also yielded many other interesting Copepoda, most of them of a remarkably slender form of body. Some of these have already been described in the preceding pages, and several others will be treated of below. The locality was a submarine bank with coarse sandy bottom and located at some distance outside the village at a depth of 30 to 40 fathoms.

Distribution.—Scottish coast (Scott).

¹⁾ This appendage was erroneously considered by Th. Scott to be a particular ramus, and the palp of course described as biramous.

Add the following species:

Parameira propinqva (Scott).

(Suppl. Pl. 28).

Ameira propinqva, Th. Scott, in 20th Ann. Report of The Fishery Board for Scotland, Part III, p. 460, Pl. XXIV, figs. 10—18.

Specific Characters.—*Female.* Body comparatively more slender than in the other species of the genus, with the anterior division scarcely longer than the posterior. Cephalic segment rather deep, with the rostral projection very small. Last caudal segment about the size of the preceding one, anal opercle somewhat prominent and, like the lateral ridges leading to it, finely denticulate. Caudal rami wide apart and rather narrow, being nearly twice as long as they are broad, apical setæ rather slender, the inner medial one exceeding half the length of the body. Anterior antennæ much more slender than in the other species, exceeding in length the cephalic segment, none of the setæ plumose, 2nd joint much the largest, 3rd joint more than twice as long as the 4th, terminal part not attaining the length of those two joints combined. Posterior antennæ likewise more slender than usual, and having the proximal joint distinctly subdivided, outer ramus uniaarticulate, bisetose. Oral parts of the structure characteristic of the genus. 1st pair of legs with the inner ramus considerably longer than the outer, its 1st joint comparatively narrow and about the length of the other 2 combined. The 3 succeeding pairs of legs agreeing in structure with those in the type species. Last pair of legs with the distal joint long and narrow, sub-linear in form, with both edges densely ciliated, tip somewhat obliquely truncated and carrying 5 rather unequal setæ; inner expansion of proximal joint short and somewhat narrowed at the end, which carries 4 spiniform setæ.

Colour whitish.

Length of adult female 0.64 mm.

Remarks.—This is a genuine *Parameira*, agreeing in all essential characters with the other species included in that genus. It is, however, easily distinguished from any of them by its comparatively more slender body and the considerably produced anterior antennæ.

Occurrence.—Some specimens of this form were taken last summer at Korshavn, in the place where *Ameira tenuicornis* occurred.

Distribution.—Scottish coast (Scott).

Add also the following new genus:

Gen. **Pseudameira**, G. O. Sars, n.

Generic Characters.—Body comparatively robust, resembling somewhat that in *Parameira*, though having the posterior division conspicuously narrower than the anterior. Rostral prominence extremely small. Caudal rami more or less produced, with the apical setæ rather strong and conspicuously spinulose. Anterior antennæ short and thick, with the number of joints reduced, and with some of the setæ very strong and spinulose at the edges. Posterior antennæ with the basal joint not subdivided, outer ramus small, uniarticulate. Oral parts resembling in structure those in the genus *Parameira*. 1st pair of legs imperfectly prehensile, inner ramus only slightly longer than the outer and 3-articulate, with the 1st joint comparatively short. The 3 succeeding pairs of legs rather large, with both rami 3-articulate and the number of setæ more or less reduced. Last pair of legs resembling in structure those in the genus *Ameira*.

Remarks.—This new genus is nearly related to *Parameira*, differing, however, conspicuously in the structure of the anterior antennæ and that of the natatory legs. Two species referable to this genus will be described below.*

Pseudameira crassicornis, G. O. Sars (new name).

(Suppl. Pl. 29).

Ameira reflexa, var., Th. Scott, in 20th Ann. Rep. of the Fishery Board for Scotland, Part III Pl. XXIII, figs. 34—42 (without description).

Specific Characters.—*Female.* Body comparatively short and stout, with the anterior division oval in outline and conspicuously broader than the posterior. Cephalic segment of moderate size and narrowly rounded in front; rostral projection almost obsolete. Urosome about the length of the anterior division, and having the hind edges of the segments coarsely spinulose ventrally and laterally; genital segment of moderate size and imperfectly subdivided, last segment about the length of the preceding one, and having the anal opercle comparatively small. Caudal rami scarcely exceeding in length the anal segment, and of somewhat conical shape, apical setæ of moderate length. Anterior antennæ about half the length of the cephalic segment, and composed of only 6 distinctly defined joints, 2 of which belong to the terminal part, the 1st of them very small, the 2nd large and tumid, oblong oval in form, and carrying several strong spinulose setæ in addition to the usual ones. Posterior antennæ with the distal joint about the length of the proximal one, outer ramus somewhat curved and carrying one

rather strong apical seta and 2 lateral ones, the distal of which is very small. Posterior maxillipeds of moderate size. 1st pair of legs with the inner ramus extending somewhat beyond the outer, its joints successively diminishing in length, the 1st one oblong in form and, like the other 2, carrying inside near the end a ciliated seta, last joint moreover armed at the tip with a claw-like spine and a slender seta. The 3 succeeding pairs of legs with the inner ramus scarcely more than half as long as the outer, its 1st joint of normal appearance, and the last shorter than the middle one and only provided with a single seta inside, terminal joint of outer ramus in 2nd and 3rd pairs likewise with a single seta on the inner edge, in 4th pair with 2 setæ, the distal one very strong and denticulated along the edge. Last pair of legs with the distal joint obliquely oval in form and less perfectly defined at the base, marginal setæ only 4 in number, the outer 2 rather strong, inner edge of the joint straight and quite smooth; inner expansion of proximal joint linguiform in shape, and extending as far as the distal joint, marginal setæ 4 in number, all issuing from the obtusely rounded extremity, the outermost but one much elongated.

Colour not yet ascertained.

Length of adult female 0.52 mm.

Remarks.—The above-described form is evidently identical with that figured (but not described) by Th. Scott in the above-quoted journal as *Ameira reflexa* var. It is however quite certainly specifically distinct from the form previously described by that author as *Ameira reflexa*, which seems more properly to be referable to the genus *Parameira*. The specific name here proposed refers to the peculiar inflated shape of the last joint of the anterior antennæ.

Occurrence.—Only a solitary female specimen of this form has hitherto come under my notice. It was found in a sample taken last summer at Kors-havn from a depth of about 20 fathoms, sandy bottom.

Distribution.—Scottish coast (Scott).

Pseudameira furcata, G. O. Sars, n sp.

(Suppl. Pl. 30).

Specific Characters.—*Female.* General form of body resembling that in the preceding species, though perhaps still shorter and stouter. Rostral projection a little more prominent than in that species and acutely pointed. Urosome about the length of the anterior division and distinctly narrower; genital segment very large, fully equalling in length the other 3 segments combined. Caudal rami considerably produced, being about as long as the last 2 segments combined, and narrow linear in form, apical setæ rather strong and conspicu-

ously annulated in their outer part. Anterior antennæ short and stout, 7-articulate, 2nd joint the largest and clothed along the hind curved edge with thin spinules, terminal part short, 3-articulate, with all 3 joints of about equal size. Posterior antennæ almost exactly as in the preceding species. Posterior maxillipeds comparatively smaller than in that species. 1st pair of legs with the inner ramus very slightly longer than the outer, 1st joint comparatively short and broad, scarcely exceeding in length the middle one, last joint considerably longer and linear in form. The 3 succeeding pairs of legs with the inner ramus more fully developed than in the preceding species, being in 2nd pair considerably longer than the outer, and in the 2 other pairs almost of equal length; 1st joint of this ramus in all these pairs rather tumid and carrying inside, near the base, a remarkably stout spiniform seta, terminal joint in 2nd pair very slender, equalling in length the other 2 combined, and having a single seta inside, that of the other 2 pairs of moderate length and, like the terminal joint of the outer, provided inside with 2 setæ. Last pair of legs comparatively small, distal joint well defined and conically oval in form, with 5 moderately long marginal setæ; inner expansion of proximal joint not extending as far as the distal joint, and carrying 5 setæ, 4 issuing from the transversely truncated extremity, the 5th from the inner edge; outermost but one of the setæ, as usual, the longest, the inner 2 rather short and spiniform.

Colour not yet ascertained.

Length of adult female 0.58 mm.

Remarks.—The above-described form is evidently congeneric with the preceding one, though specifically well defined, differing conspicuously in the more produced caudal rami, as also in the structure of the anterior antennæ and legs. It is also of somewhat larger size.

Occurrence.—Two female specimens of this form were found in another sample from Korshavn, taken at a depth of about 12 fathoms, muddy bottom.

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Add the 3 following species:

Ameiropsis nobilis, G. O. Sars, n. sp.

(Suppl. Pl. 31).

Specific Characters.—*Female.* Body slender and graceful in form, with the anterior division only slightly broader than the posterior. Cephalic segment scarcely as long as the 3 succeeding segments combined and not very deep; rostral projection very small, narrow linguiform in shape. Urosome about the

length of the anterior division, and having the hind edges of the segments clothed with delicate spinules. Caudal rami nearly twice as long as they are broad, and slightly divergent; apical setæ exceedingly long and slender, the inner medial one attaining the length of the whole body. Anterior antennæ unusually long and slender, being almost twice as long as the cephalic segment, and composed of 9 joints, the last of which however is so very small as easily to escape attention, 2nd joint the largest, 3rd joint twice as long as the 4th, terminal part about the length of those two joints combined, and clothed with unusually long and slender setæ. Posterior antennæ likewise more slender than usual, outer ramus well developed, with the proximal joint fusiform in shape, its inner edge bulging considerably in the middle, but quite smooth. Mandibles with the masticatory part narrowly exerted, palp distinctly biramous, as in the other species of this genus. Anterior maxillipeds with 3 somewhat unequal setiferous lobes inside the basal joint. 1st pair of legs with the outer ramus about the length of the 1st joint of the inner, its last joint a little longer than the middle one; 1st joint of inner ramus about twice as long as the other 2 combined, and having the seta of the inner edge not far from the end, last joint larger than the middle one. The 3 succeeding pairs of legs exhibiting the structure characteristic of the genus. Last pair of legs comparatively small, distal joint oblong conical in form and densely ciliated on both edges, marginal setæ 6 in number, 2 of them, however, very small, hair-like; inner expansion of proximal joint linguiform in shape, and extending about to the middle of the distal joint, its extremity provided with 4 spiniform setæ increasing successively in length outwards, and at the outer corner with a very small spinule. Ovisac rather small, rounded oval in form.

Colour whitish, pellucid.

Length of adult female 0.94 mm.

Remarks.—This form is at once distinguished from any of the 3 species described in the main part of this work by its slender and graceful body and the much produced anterior antennæ and caudal setæ. It is the largest of the known species.

Occurrence.—Several specimens of this handsome species were found last summer at Korshavn in the same locality as that from which *Ameira tenuicornis* was derived.

Ameiropsis angulifera, G. O. Sars, n. sp.

(Suppl. Pl. 32).

Specific Characters.—*Female.* Body of a similar slender form to that in the preceding species. Urosome, however, somewhat shorter than the anterior

division, and having the last segment smaller than the preceding one. Caudal rami comparatively short, being scarcely longer than they are broad, and of a somewhat unusual form, each exhibiting dorsally a rectangular prominence, best seen in the lateral aspect of the animal; apical setæ slender, though scarcely as long as in the preceding species. Anterior antennæ slender and narrow, exceeding in length the cephalic segment, and, as in the preceding species, composed of 9 well-defined joints, 2nd joint much the largest and subfusiform in shape, 3rd joint considerably longer than 4th, terminal part exceeding in length those two joints combined. Outer ramus of posterior antennæ resembling in shape that in the preceding species, being distinctly biarticulate, with the proximal joint conspicuously dilated in the middle. Oral parts scarcely differing in structure from those in that species. 1st pair of legs with the outer ramus a little shorter than the 1st joint of the inner, the latter joint not quite twice as long as the other 2 combined. The 3 succeeding pairs of legs of same structure as in the other species of this genus. Last pair of legs with the distal joint oval conical in form, inner edge bulging considerably at the base, tip somewhat obliquely truncated and, as in the preceding species, provided with 6 setæ, 2 of which are hair-like; inner expansion of proximal joint not extending to the middle of the distal joint, and carrying on the obtusely truncated extremity 5 spiniform setæ, the outermost one very short, that succeeding it much the longest.

Colour whitish, pellucid.

Length of adult female 0.70 mm.

Remarks.—On account of a certain resemblance in the shape of the caudal rami, I was at first inclined to identify this form with *Ameira exilis* of Scott. On a closer comparison, I find however that such an identification is untenable. *Ameira exilis* is of much larger size, attaining, according to Scott, a length of 1.40 mm.; and the structure of both pairs of antennæ, mandibles and last pair of legs seems also, according to the figures given by Th. Scott, to differ conspicuously in these 2 forms. The specific name here proposed refers to the peculiar shape of the caudal rami, whereby the present species is at once recognised from any of the others.

Occurrence.—Some few specimens of this form were found in the same place in which the preceding species occurred.

Ameiropsis abbreviata, G. O. Sars, n. sp.

(Suppl. Pl. 33).

Specific Characters.—*Female.* Body unusually short and stout, sub-depressed, with all the segments sharply marked off from each other. Cephalic

segment rather large and expanded, equalling in length the 4 succeeding segments combined; rostral projection broadly triangular in form. Urosome somewhat shorter than the anterior division and having the segments coarsely spinulose at the hind edge ventrally and laterally, last segment fully as large as the preceding one. Caudal rami about the length of the anal segment and slightly tapered distally, apical setæ of moderate length. Anterior antennæ comparatively slender, exceeding in length the cephalic segment, and composed of 8 joints, 2nd joint, as usual, the largest, 3rd joint scarcely longer than 4th, terminal part much longer than those two joints combined. Outer ramus of posterior antennæ uniaarticulate, ciliated on the edges and carrying on the tip 3 setæ, the middle one the longest. Mandibular palp comparatively small, but distinctly biramous. Anterior maxillipeds with only 2 setiferous lobes inside the basal joint. Posterior maxillipeds with the hand rather narrow, oblong in form. 1st pair of legs comparatively large, outer ramus shorter than the 1st joint of the inner and having the middle joint the largest; 1st joint of inner ramus more than twice as long as the other 2 combined, apical spine of this ramus rather slender. The 3 succeeding pairs of legs scarcely differing in structure from those in the other species of the genus. Last pair of legs with the distal joint comparatively large, oblong fusiform in shape, and very finely ciliated on the edges, marginal setæ 5 in number, one of them attached at some distance from the others to the outer edge in front of the middle; inner expansion of proximal joint only very slightly produced, and carrying 4 unequal setæ.

Colour not yet ascertained.

Length of adult female 0.52 mm.

Remarks.—This is a somewhat anomalous species, though apparently referable to the genus *Ameiropsis*, according to the structure of the mandibles and legs. It may at once be recognized from any of the other species by the short and stout form of the body.

Occurrence.—Only a solitary female specimen of this form has as yet come under my notice. It was found in a sample taken last summer at Kors-havn from a depth of about 20 fathoms, sandy bottom.

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Add the following species:

Stenocopia spinosa, (Scott).

(Suppl. Pl. 34).

Ameira longicaudata, var. *spinosa*, Th. Scott, Additions to the Fauna of the Firth of Forth, Part IV. 10th Ann. Rep. of the Fishery Board for Scotland, p. 251, Pl. IX, figs 17 & 18.

Specific Characters.—*Female.* Rather like *S. longicaudata*, but of somewhat smaller size and, when viewed dorsally, at once distinguished by the epimeral plates of the 4 anterior segments being expanded laterally, forming together a broad hyaline rim surrounding the anterior part of the body, edges of the plates very finely spinulose. Urosome with the segments very sharply marked off from each other, the lateral parts forming in all of them, except the last, lamellar expansions densely spinulose at the edges. Posterior edges of all the segments of the body somewhat raised dorsally, and clothed with very coarse spinules. Caudal rami, as in the type species, narrow linear in form and exceeding half the length of the urosome, apical setæ long and slender. Anterior antennæ resembling in structure those in *S. longicaudata*, though differing somewhat in the mutual relation of the joints in the proximal part, the 1st joint being only slightly longer than the 2nd, which is fully as long as the 2 succeeding joints combined. Posterior antennæ with the outer ramus comparatively smaller than in that species, though of a very similar structure. 1st pair of legs with the outer ramus much shorter than the 1st joint of the inner, the latter very narrow and somewhat sigmoid in shape. The 3 succeeding pairs of legs comparatively smaller than in the type species, and having the basal part bent in an elbow-like manner, as in *S. setosa*; both rami very narrow. Last pair of legs comparatively small, with the distal joint narrowly exerted at the tip; inner expansion of proximal joint considerably smaller than in *S. longicaudata* and defined outside by an angular sinus.

Colour whitish grey.

Length of adult female 0.80 mm.

Remarks.—This form is closely allied to *S. longicaudata*, and was indeed considered by Th. Scott to be only a variety of that species. Having, however, on a closer comparison of both forms, found several perfectly constant differences, both as regards the external appearance and some of the structural details, I am led to the conclusion that the present form should more properly be separated as a distinct though closely-allied species.

Occurrence.—This form was found last summer rather abundantly at Korshavn in a depth of 30–50 fathoms, coarse sandy bottom. In the same locality *S. longicaudata* also occurred; but it was fairly easy to pick out the present form, on account of its coarsely spinulose body and the laterally expanded epimeral plates of the anterior segments, which, in the dorsal aspect of the animal, give it a rather peculiar appearance.

Distribution.—Scottish coast (Scott).

Add the following new genus:

Gen. **Malacopsyllus**, G. O. Sars, n.

Generic Characters.—Body slender cylindrical in form, with no sharp demarcation between the anterior and posterior divisions. All integuments remarkably thin and soft, partly clothed with delicate hairs. Rostral prominence wholly obsolete. Caudal rami comparatively short. Anterior antennæ slender and narrow, 8-articulate, in male slightly hinged. Posterior antennæ likewise remarkably slender, with the basal joint not subdivided, outer ramus quite rudimentary. Oral parts on the whole resembling in structure those in the genus *Stenocopia*. 1st pair of legs very slender, with the inner ramus the longer and only composed of 2 joints. The 3 succeeding pairs of legs likewise unusually slender, with the 2nd basal joint produced outwards and forming with the 1st an elbow-like bend; inner ramus much smaller than the outer, and composed of only 2 joints, the proximal one very short; natatory setæ of both rami considerably reduced in number. Last pair of legs small, with the distal joint narrowly exerted; proximal joint having outside a long and narrow process tipped with a delicate bristle, its inner expansion very small.

Remarks.—This new genus differs from *Stenocopia*, to which it exhibits a certain affinity, chiefly in the rudimentary condition of the outer ramus of the posterior antennæ, and in the rather different structure of the legs. The generic name here proposed refers to the extremely thin and delicate integuments, which give to the body a peculiarly soft and fragile consistency. Only a single species of this genus has as yet come to my notice.

Malacopsyllus fragilis, G. O. Sars, n. sp.

(Suppl. Pl. 35).

Specific Characters.—*Female.* Body rather narrow, with the anterior division slightly depressed, the posterior perfectly cylindrical. Cephalic segment comparatively small, rounded quadrangular in outline, frontal margin perfectly straight, without any trace of a rostral projection, lateral edges slightly curved, and each exhibiting behind a knob-like prominence clothed with delicate hairs. Lateral parts of the 4 succeeding segments rounded and likewise clothed with delicate diverging hair-like bristles. Urosome about the length of the anterior division and slightly narrower, with the posterior edges of the segments clothed with delicate hairs; last segment fully as large as the preceding one, and having

the anal opercle rather prominent and perfectly smooth. Caudal rami much shorter than the anal segment and conspicuously constricted at the base, each provided dorsally, near the end, with a remarkably large bulbous prominence tipped with a delicate seta, extremity of the ramus somewhat dilated and transversely truncated, carrying at the outer somewhat projecting corner 2 short juxtaposed bristles and at the inner another similar bristle, the 2 median setæ rather slender, the inner one exceeding half the length of the body. Eye wholly absent. Anterior antennæ of rather feeble structure, about half the length of the anterior division, and clothed with comparatively short setæ, joints of the proximal part successively diminishing in length, the 1st scarcely thicker than the others, and densely ciliated along the anterior edge, terminal part exceeding half the length of the proximal, and having the 2nd joint the longest. Posterior antennæ with the distal joint narrow linear in form, outer ramus replaced by a small seta. Mandibular palp comparatively small, basal part only slightly dilated, and carrying inside a single thickish seta, outer ramus smaller than inner and imperfectly defined at the base, with only 2 apical setæ. Posterior maxillipeds rather slender, with the propodus narrow oblong in form, dactylus much elongated. 1st pair of legs with the basal part conspicuously constricted in the middle and carrying at the end on each side a remarkably slender curved seta; outer ramus with the middle joint much longer than the others, last joint armed at the end with 4 somewhat geniculate setæ gradually increasing in length inwards; inner ramus with the proximal joint longer than the outer ramus and very narrow, carrying inside, at some distance from the end, the usual seta; distal joint scarcely exceeding $\frac{1}{3}$ of the length of the proximal one, and provided inside, at about the middle, with a short seta, tip armed with a slender claw-like spine and a still longer seta accompanied inside by a small bristle. The 3 succeeding pairs of legs with the outer ramus long and slender, 1st joint small and without any seta inside, terminal joint exceeding in length the other 2 combined, and having inside in the 2nd pair 2 setæ, in the 2 succeeding pairs only a single seta, spines of outer edge remarkably long and slender; inner ramus narrow linear in form and in the 2 posterior pairs scarcely half as long as the outer, with only a single seta inside the distal joint, in 2nd pair somewhat longer and having 2 setæ inside the distal joint. Last pair of legs with the distal joint long and slender, somewhat fusiform in shape, and exerted at the end to a very narrow process tipped with a hair-like bristle, its outer edge clothed with scattered hair and moreover carrying 3 curved setæ, inner edge with a single somewhat longer seta; outer process of proximal joint remarkably long and slender,

inner expansion of same joint only represented by a small conical projection tipped with 2 setæ. Ovisac comparatively small, rounded.

Male, as usual, considerably smaller than female and having the anterior antennæ slightly transformed and adapted for prehension. Last pair of legs resembling in shape those in female, but still smaller and having only a single seta inside the proximal joint.

Colour whitish, pellucid, with a few irregular patches of a clear orange hue.

Length of adult female 0.93 mm., of male 0.70 mm.

Remarks.—In its outward appearance this form has a general resemblance to *Stenocopia setosa* described in the main part of this work, and at first, therefore, I was inclined to refer it to the same genus. A closer examination has however proved it to differ so materially in some of the structural details, that it can scarcely be included in that genus.

Occurrence.—This peculiar Copepod occurred not unfrequently in the same locality as that in which *Stenocopia spinosa* and many other interesting forms were found. It could at once be distinguished from *Stenocopia setosa*, which also occurred in the same locality, by its comparatively short and peculiarly formed caudal rami.

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Phyllopodopsyllus Bradyi, Scott

(Suppl. Pl. 37, fig. 2).

Male.—Rather unlike the female in its outward appearance, the body being more rapidly attenuated behind, with the segments of the urosome simple cylindrical in form. Caudal rami much more produced than in female, equalling in length the last 2 segments combined, and very slender, gradually tapered distally, apical seta not, as in female, bulbously dilated at the base. Anterior antennæ very strongly built and composed of only 7 joints, those belonging to the proximal part considerably dilated. Legs comparatively less slender than in female, especially those of 4th pair. Last pair of legs very unlike those in female and of much smaller size, each composed of 2 well defined joints, the proximal one somewhat lamellar, conically produced outside, and forming inside a well defined, though short expansion carrying 3 spiniform setæ, distal joint rather narrow and projecting at the end outside to an acute point, outer edge straight and carrying 2 small bristles, inner edge armed at about the middle with a strong spiniform seta and at the end, inside the apical point, with 2 somewhat smaller setæ. Genital lobes each with a strong spine and 2 unequal setæ.

Length of adult male 0.60 mm.

Remarks.—The female of this form has been described and figured in the main part of this work, and I have therefore here confined myself to an indication of the sexual differences exhibited by the adult male. These differences are, as shown above, rather striking.

Occurrence.—The present form, of which previously only 3 female specimens had come under my notice, occurred rather frequently in one locality near Korshavn, at a depth of about 20 fathoms, sandy bottom.

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Add the following genera and species belonging to the family *Canthocamptidae*:

Gen. **Tetragoniceps**, Brady, 1880.

Generic Characters.—Body of narrow cylindrical form, with the posterior division unusually slender. Cephalic segment comparatively large and deep projecting in front in an obtuse rostral prominence. Caudal rami conically tapered. Anterior antennæ well developed, with the 1st joint much the largest and produced at the end outside to a claw-shaped process. Posterior antennæ with the proximal joint distinctly subdivided, outer ramus small, uniarticulate. Anterior lip securiformly produced. Mandibles strongly built, with the palp well developed, biramous. Maxillæ with the epipodal lobe obsolete. Anterior maxillipeds with 3 setiferous lobes inside the basal joint, apical part distinct, biarticulate. 1st pair of legs with the inner ramus much longer than the outer and biarticulate. The 3 succeeding pairs of legs with the inner ramus likewise biarticulate, but shorter than the outer, the latter in 4th pair much elongated; natatory setæ in all 3 pairs much reduced in number. Last pair of legs not very large, distal joint conically produced and in some cases confluent with the proximal one.

Remarks.—This genus was established by Prof. Brady in the year 1880, to include a single species, *T. malleolatus*. The generic name refers to the quadrangular form of the head, as seen laterally, chiefly caused by the very prominent anterior lip. In latter years several additional species of this genus have been described by Th. Scott; but most of these have recently been removed by that author, to constitute the types of separate genera. The form described below ought, I think, to be referred to the original genus.

Tetragoniceps Scotti, G. O. Sars (new name)

(Suppl. Pl. 36 & 37, fig. 1).

Tetragoniceps malleolata, Th. Scott, Additions to the Fauna of the Firth of Forth, Part IV. 10th Ann. Rep. of the Fishery Board for Scotland, p. 252, Pl. VIII, figs. 11 & 12 (not Brady).

Specific Characters.—*Female.* Body very slender and slightly tapered behind, with the anterior and posterior divisions of about equal length. Cephalic segment about as long as the 3 succeeding segments combined, and having the lower edges angularly curved in the middle, rostral prominence short, evenly rounded at the tip. Epimeral plates of the 3 succeeding segments small, rounded; last segment scarcely shorter than the preceding one. Urosome rather narrow, with the segments unarmed at the hind edges; last segment fully as large as the preceding one, and having the anal opercle somewhat prominent and finely denticulated at the edge. Caudal rami about the length of the anal segment and slightly dilated at the base, outer edge with 2 successive slender bristles, dorsal bristle issuing in front of the middle; apical seta simple and not very elongated. Anterior antennæ about the length of the cephalic segment, and composed of 9 well-defined joints, 1st joint attaining almost half the length of the antenna, terminal part scarcely exceeding $\frac{1}{3}$ of the length of the proximal part. Posterior antennæ rather slender, but having the distal joint comparatively short, outer ramus very small, with 3 setæ, 2 apical and one lateral. 1st pair of legs comparatively slender, outer ramus shorter than the proximal joint of the inner, and having the last joint much smaller than the others and armed at the tip with 2 spines and 2 geniculate setæ; proximal joint of inner ramus narrow linear in form, ciliated on both edges and carrying inside, behind the middle, a plumose seta, distal joint not attaining half the length of the proximal one, and armed at the tip with a slender claw-like spine and a still longer seta accompanied inside by a small bristle. The 2 succeeding pairs of legs with the inner ramus a little shorter than the outer, and having the distal joint slender linear in form, with no seta inside, but with a slender spine and one or 2 bristles at the tip. 4th pair of legs with the outer ramus more than twice as long as the inner, and provided at the end with a bunch of setæ, 2 of which are remarkably strong and minutely spinulose at the edges. Last pair of legs with the distal joint well defined and very slender, gradually tapered towards the end and edged with a number of very small hair-like bristles, one of which issues from the narrowly exerted tip; proximal joint somewhat lamellar and forming inside a triangular expansion extending about to the middle of the distal joint and carrying 4 short setæ, 3 inside and one at the tip.

Male much smaller than female, and having the anterior antennæ transformed in the usual manner. Last pair of legs, as in the female, with the distal

joint well defined, but of a rather different shape, being produced immediately inside the tip to a strong spiniform process, inner expansion of proximal joint with only 3 marginal setæ, the innermost one spiniform.

Colour not yet ascertained.

Length of adult female 0.90 mm.

Remarks.—The above-described form is evidently that briefly recorded by Th. Scott as *T. malleolata* Brady. It cannot, however, be referred to that species at all, as the structure of the last pair of legs is very unlike that in the type species, and Th. Scott has also called attention to this essential difference. I propose to name the species in honour of that distinguished naturalist.

Occurrence.—Only a few specimens of this form have come under my notice. They were found in samples taken last summer at Korshavn from depths of about 20 fathoms, sandy bottom.

Distribution.—Scottish coast (Scott).

Gen. *Pteropsyllus*, Scott 1906.

Generic Characters.—General form of body resembling that in *Phyllopodopsyllus*. Rostral projection, however, very prominent and acutely produced at the tip. Genital segment in female very large and somewhat depressed. Caudal rami narrow linear in form. Anterior antennæ with the 1st joint much elongated, but without any unguiform projection outside. Posterior antennæ very slender, with the outer ramus rudimentary. Oral parts resembling on the whole in structure those in the genus *Phyllopodopsyllus*. 1st pair of legs with the inner ramus much longer than the outer, and distinctly 3-articulate. The 3 succeeding pairs of legs all of essentially same structure, being rather small, with the inner ramus somewhat shorter than the outer and biarticulate; natatory setæ much reduced in number. Last pair of legs in female very large, forming together, as in the genus *Phyllopodopsyllus*, beneath the urosome a roomy incubatory chamber, each, however, composed of 2 well-defined lamellar joints; those in male very small, unarticulate.

Remarks.—This genus, established by Th. Scott, is nearly allied to *Phyllopodopsyllus*, but differs conspicuously in the shape of the rostrum and the caudal rami, as also in the structure of the antennæ and legs. Only a single species is as yet known.

Pteropsyllus consimilis, Scott.

(Suppl. Pl. 38).

Tetragoniceps consimilis, Th. Scott, Additions to the Fauna of the Firth of Forth, Part. VI. 12th Ann. Rep. of the Fishery Board for Scotland, p. 244, Pl. VII, figs. 4—12.

Specific Characters.—*Female.* Body moderately slender, with the anterior division somewhat compressed and about the length of the posterior. Cephalic segment rather large, exceeding in length the 4 succeeding segments combined; rostrum resembling in shape that in the genus *Amphiuseus*, being well defined at the base, slightly curved, and terminating in an acute point. Urosome somewhat depressed in its anterior part, with the genital segment fully as long as the other 3 combined, 2nd segment with a small appressed spine on each side, last segment rather narrower than the preceding one, but scarcely shorter, anal opercle comparatively small. Caudal rami narrow linear in form and exceeding in length the anal segment, tip slightly dilated and armed at the outer corner with a strong spine, apical setæ rather slender and of normal structure. Anterior antennæ about equalling in length the cephalic segment, and 8-articulate, 1st joint much elongated and somewhat tapered distally, with the inner edge finely serrate, 2nd joint scarcely half as long and having the inner distal corner conically produced, terminal part only slightly longer than the 2 preceding joints combined. Posterior antennæ with the distal joint very narrow and having the apical setæ unusually short, outer ramus forming a very small knob-like prominence tipped with a delicate seta. 1st pair of legs with the outer ramus shorter and much narrower than the 1st joint of the inner, resembling in structure that in *Tetragoniceps*; 1st joint of inner ramus slightly dilated, and carrying inside near the end a slender seta, last joint longer than the middle one, and both combined not attaining half the length of the 1st, apical spine and seta rather slender. The 3 succeeding pairs of legs with the outer ramus comparatively narrow and without any setæ inside, inner ramus with the proximal joint somewhat dilated and carrying inside a well-developed seta, distal joint scarcely longer and linear in form. Last pair of legs very large, extending to the end of the 2nd caudal segment, proximal joint short, forming inside a conical expansion furnished with 3 or 4 short setæ, distal joint foliaceous, oblong quadrangular in form and somewhat obliquely truncated at the end, which carries 3 short, thick setæ, and in the middle 2 juxtaposed small hair-like bristles, outer edge of the joint having a single small seta about the middle.

Male smaller than female and more regularly attenuated behind. Anterior antennæ hinged in the usual manner. 1st pair of legs with the spine inside the 2nd basal joint remarkably produced, sabre-like; inner ramus apparently composed of only 2 joints. Last pair of legs very small, each forming an undivided

lamella armed with 3 spines, the apical one very strong and denticulated in its outer part.

Colour not yet ascertained.

Length of adult female 0.75 mm.

Remarks.—This form was first described by Th. Scott as a species of the genus *Tetragoniceps*, but has recently been removed by the same author, to constitute the type of a separate genus. In outward appearance it bears a great resemblance to *Phyllopodopsyllus Bradyi*, and it is indeed to this resemblance that the specific name proposed by Th. Scott refers. On a closer examination it may, however, be at once distinguished by the prominent rostrum and the narrow linear caudal rami.

Occurrence.—Some few specimens of this form were found in samples taken last summer at Korshavn from a depth of about 30 fathoms, coarse sandy bottom.

Distribution.—Scottish coast (Scott).

Gen. **Evansia**, Scott, 1906.

Generic Characters.—Body narrow and elongated, with comparatively thin integuments. Rostrum well defined, though less prominent than in *Pteropsyllus*. Caudal rami produced, tapered, with the apical seta distinctly geniculate. Anterior antennæ in female simple, without any armature, in male strongly hinged. Posterior antennæ with the outer ramus small, uniaarticulate. Mandibular palp simple, biarticulate. Maxillæ with the exopodal and epipodal lobes obsolete. Anterior maxillipeds short and stout, with only 2 setiferous lobes inside the basal joint. 1st pair of legs slender, with the inner ramus much longer than the outer and biarticulate. Inner ramus of the 3 succeeding pairs of legs very small, uniaarticulate; that of 3rd pair in male transformed. Last pair of legs small, uniaarticulate.

Remarks.—This genus was established by Th. Scott, to include the form previously described by him as *Tetragoniceps incerta*. Another species *T. pygmaea* is also referred by Th. Scott to this genus. The chief differences from the 3 preceding genera are the unarmed condition of the female anterior antennæ, the simple biarticulate mandibular palp, and the very small uniaarticulate inner rami of the 2nd to 4th pairs of legs. Only one of the 2 species is known to me.

Evansia incerta, Scott.

(Suppl. Pl. 39).

Tetragoniceps incerta, Th. Scott, Additions to the Fauna of the Firth of Forth, Part I . .
10th Ann. Rep. of the Fishery Board for Scotland, p. 254, Pl. XII, figs. 1—17.

Specific Characters.—*Female.* Body slender, cylindrical in form, with the anterior division scarcely broader than the posterior. Cephalic segment comparatively short, but rather deep, with the lower edges angularly curved in the middle; rostrum rather small, but well defined, and acutely produced at the tip. Urosome nearly as long as the anterior division and having the segments quite smooth, the genital one of moderate size and not subdivided, last segment about the length of the preceding one. Caudal rami almost as long as the anal segment and gradually tapered distally, each exhibiting dorsally in front of the middle a short dentiform prominence accompanied by a delicate bristle, outer edge with 2 successive slender setæ, apical seta having the proximal part remarkably strong, spiniform, and sharply defined from the thin hair-like terminal part. Anterior antennæ slender, considerably exceeding in length the cephalic segment, and composed of only 7 joints, the first 2 of which are much larger than the others and of about equal length, terminal part about the length of the 2 preceding joints combined. Posterior antennæ moderately strong, with the distal joint widening somewhat distally, outer ramus very small, with 2 bristles at the tip. Mandibular palp with the proximal joint narrow linear in form, with a small seta at the inner distal corner, distal joint short curved. 1st pair of legs with the outer ramus very narrow and much shorter than the proximal joint of the inner, the latter linear in form and carrying inside, near the base, a delicate seta, distal joint of this ramus quite short and armed at the tip with a claw-like spine and a somewhat longer seta. The 3 succeeding pairs of legs with the outer ramus comparatively narrow and without any setæ inside, inner ramus very small, with 2 setæ at the tip, and in 4th pair with 2 additional setæ on the inner edge. Last pair of legs forming each a small triangular lamella terminating in a strong spine and having outside 3, inside 4, slender bristles.

Male with the anterior antennæ strongly hinged, 4th joint considerably dilated and projecting angularly in front. Inner ramus of 3rd pair of legs conspicuously transformed, biarticulate, proximal joint imperfectly defined from the basal part and produced at the end inside to a strong deflexed spiniform process. Last pair of legs with the apical spine not defined at the base, inner

edge armed with a single rather strong spine, outer with a much smaller spine in addition to the marginal bristles.

Colour not yet ascertained.

Length of adult female 0.84 mm.

Remarks.—This form was also at first described by Th. Scott as a species of the genus *Tetragoniceps*, though the specific name proposed would seem to indicate the doubt he had felt in referring it to that genus. In its external appearance the present form more resembles the type species of *Tetragoniceps* than do the other 2 forms treated of in the preceding pages.

Occurrence.—Only very few specimens of this form have as yet come under my notice. One of these, a fully developed male, was found in a sample kindly sent to me by Mr. Nordgaard, who procured it from the Trold Fjord, inside the Lofoten islands. The other specimens were derived from samples taken last summer at Korshavn from depths of from 30 to 50 fathoms.

Distribution.—Scottish coast (Scott).

Gen. **Leptastacus**, Scott, 1906.

Generic Characters.—Body very narrow, but with rather hard integuments. Rostrum small, but well defined. Caudal rami more or less produced. Anterior antennæ slender, unarmed. Posterior antennæ with the proximal joint not subdivided, outer ramus very small, unarticulate. Anterior lip very prominent. Mandibles with the masticatory part securiformly dilated and coarsely dentate, palp small, simple. Maxillæ with the palp unusually prolonged and without any traces of exopodal and epipodal lobes. Anterior maxillipeds more slender than usual, and having the apical part well defined. Posterior maxillipeds powerfully developed, with the basal joint short and unarmed, propodos exceedingly large and tumid, dactylus thin and accompanied at the base outside by a slender bristle. 1st pair of legs very small and imperfectly prehensile, inner ramus shorter than usual, and biarticulate. The 3 succeeding pairs of legs very slender, with the inner ramus of moderate size and biarticulate; outer ramus of 4th pair much more elongated than in the other pairs. Natatory setæ in all pairs much reduced in number. Last pair of legs comparatively small and acutely produced inside, distal joint very small or quite wanting.

Remarks—This genus established by Th. Scott is especially distinguished by the powerful and peculiar development of the posterior maxillipeds. It also differs conspicuously in the structure of the other oral parts and in that of the

legs, though otherwise exhibiting a general relationship to the 3 preceding genera. In addition to the typical species described below, the form recorded by Th. Scott as *Mesochra spinicauda* is evidently referable to the present genus.

Leptastacus macronyx, Scott

(Suppl. Pl. 40).

Tetragoniceps maeronyx, Th. Scott, Additions to the Fauna of the Firth of Forth. 10th Ann. Rep. of the Fishery Board for Scotland, Part. IV, p. 253, Pl. X. figs. 19—28.

Specific Characters.—*Female.* Body slender and narrow, sub-linear in form. Cephalic segment of moderate size and rather deep; rostrum comparatively short and obtuse at the tip. Urosome about the length of the anterior division and slightly attenuated behind, genital segment of moderate size and not subdivided, last segment smaller than the preceding one. Caudal rami considerably longer than the anal segment and somewhat divergent, tapering slightly distally, outer edge armed close to the end with a slender spine tipped with a thin bristle, apical setæ very unequal, the inner medial one much the strongest and having the proximal part thickened, spiniform; dorsal seta issuing close to the end of the ramus. Anterior antennæ very slender, equalling in length the 3 first segments combined, and composed of 7 joints, the first 3 nearly of equal length, the 4th much smaller, terminal part about $\frac{1}{3}$ as long as the proximal. Posterior antennæ with the distal joint scarcely dilated at the end and having the apical setæ comparatively short, outer ramus represented only by a small knob-like prominence tipped with a delicate bristle. Mandibular palp distinctly biarticulate. Posterior maxillipeds of quite unusual size, propodos somewhat fusiform in shape and perfectly smooth, dactylus exceedingly slender and somewhat flexuous, being clothed in the outer part with thin spinules, accompanying bristle about half the length of the dactylus. 1st pair of legs with the inner ramus only slightly longer than the outer, its proximal joint slightly dilated and carrying inside, a little in front of the middle, a slender seta, distal joint narrow linear and exceeding half the length of the proximal one, apical spine and seta very slender. The 2 succeeding pairs of legs of essentially equal structure, both rami very slender, the inner one the shorter and having its 2 joints of about equal length, tip armed with only a single spine accompanied outside by a small dentiform projection. 4th pair of legs with the outer ramus much elongated, being fully twice as long as the inner, middle joint the largest and provided inside near the base with a well-developed seta, terminal joint carrying inside 2 rather strong setæ and at the tip 3 unequal spines. Last pair of legs without the slightest trace of a distal joint, each forming a somewhat triangular piece, produced outside at

the base to a conical prominence tipped with a delicate bristle, inner portion exerted to a strong spiniform projection flanked inside by 2 slender bristles and outside by a single smaller one.

Colour not yet ascertained.

Length of adult female 0.70 mm.

Remarks.—This is another form at first described by Th. Scott as a species of the genus *Tetragoniceps*, but recently removed from that genus. Indeed, the present form exhibits several very striking peculiarities, which seem fully to justify its separation from any of the 4 preceding genera. It may here be noted, that the 5 genera treated of in the preceding pages, though apparently well defined, exhibit a certain relationship to each other distinguishing them from the other genera included in the family *Canthocamptidae*. It therefore appears not improbable that in future it will be found appropriate to combine these genera into a separate family, which in some respects would seem to approach that of the *Cylindropsyllidae*.

Occurrence.—Only 2 female specimens of this form have as yet come under my notice. They were found in the same samples as those from which the 3 preceding forms were derived.

Distribution.—Scottish coast (Scott).

Gen. **Leptomesochra**, G. O. Sars, n.

Generic Characters.—Body narrow and elongated, with rather thin integuments. Rostrum obsolete. Genital segment in female not subdivided. Caudal rami comparatively short, with the apical setæ of normal structure. Anterior antennæ very slender and quite unarmed; those in male slightly hinged. Posterior antennæ with the proximal joint distinctly subdivided, outer ramus small, bi- or uniarticulate. Mandibles with the masticatory part narrowly exerted, palp well developed, biarticulate, with the basal joint more or less expanded and in some cases carrying a rudiment of an outer ramus. Maxillæ small, with the exopodal and epipodal lobes imperfectly developed. Anterior maxillipeds short and stout, with the distal joint produced inside to a very long claw-like spine, basal setiferous lobes imperfectly developed, apical part inconspicuous. Posterior maxillipeds normal. 1st pair of legs of comparatively feeble structure, though distinctly prehensile, inner ramus longer than the outer and in most cases biarticulate. The 3 succeeding pairs of legs well developed, with the outer ramus rather large, inner much shorter and biarticulate, except in the 4th pair, where it is more generally composed of 3 well-defined joints; natatory setæ in both

rami considerably reduced in number. Last pair of legs comparatively small, foliaceous, distal joint well defined or in some cases confluent with the proximal one.

Remarks.—In this new genus I propose to include 4 species, 2 of which have been previously described, but erroneously referred to as many known genera. One of these, not yet examined by myself, is *Mesochra Macintoshi*, Th. Scott, the other *Normanella attenuata*, A. Scott. These 2 species are undoubtedly congeneric, but certainly cannot be referred either to the genus *Mesochra* or to *Normanella*, differing, as they do very materially, from both these genera. A new genus is therefore required to include these 2 species as also 2 new ones to be described below. The generic name here proposed refers to the extremely slender form of the body and the delicate structure of the several appendages.

Leptomesochra attenuata, (A. Scott).

(Suppl. Pl. 41).

Normanella attenuata, A. Scott, Description of some new and rare Copepoda from Liverpool Bay. Report on the Lancashire Sea-Fisheries Laboratory f. 1895, p. 16, Pl. IV, figs. 8—20.

Specific Characters.—*Female.* Body very slender and elongated, cylindrical in form, with the anterior division scarcely broader than the posterior. Cephalic segment about the length of the 2 succeeding segments combined, and not very deep; rostral prominence very small, knob-like. Urosome unusually elongated, being even longer than the anterior division, and having the segments perfectly smooth, genital segment rather large, last segment exceeding in length the preceding one and somewhat narrowed distally, anal opercle comparatively small and perfectly smooth. Caudal rami a little longer than they are broad, and slightly tapering, apical setæ rather slender, the inner medial one equalling in length the urosome. Anterior antennæ slender and narrow, exceeding half the length of the anterior division, and composed of 8 joints, the 2nd of which is the largest, 3rd joint somewhat longer than 4th, terminal part scarcely attaining the length of those two joints combined. Posterior antennæ with the outer ramus bi-articulate, distal joint however extremely small and tipped with a single seta. Mandibular palp comparatively large, with the basal joint fusiform in outline and carrying outside, close to the base, a very small knob-like outer ramus. Anterior lip conically tapered. 1st pair of legs rather small, outer ramus considerably shorter than the 1st joint of the inner, its terminal joint somewhat smaller than the middle one, and armed at the end with 2 spines and 2 geniculate setæ; inner ramus biarticulate, with the proximal joint long and slender, carrying inside, in front of the middle, a ciliated seta, distal joint comparatively small, with a claw-like spine and a moderately long seta at the tip. The 3 succeeding pairs of legs

with the outer ramus more than twice as long as the inner, and having a well-developed seta inside the middle joint, inner ramus without any seta inside the 1st joint, that of 4th pair distinctly 3-articulate. Last pair of legs with the distal joint well defined and broadly oval in form, with 5 thin setae issuing from the somewhat obliquely truncated apex; inner expansion of proximal joint only slightly produced, and carrying 4 slender setae. Ovisac oval, flattened, and containing only a limited number of ova.

Male differing only slightly from female, though having the anterior antennae transformed in the usual manner.

Colour not yet ascertained.

Length of adult female 0.86 mm.

Remarks.—This form was first described by A. Scott in the above-quoted paper, and was erroneously referred by him to the genus *Normanella* of Brady, to which genus it in reality has only a very remote affinity. On the other hand, it is evidently closely allied to *Mesochra Macintoshi* of Th. Scott, though apparently specifically distinct.

Occurrence.—Several specimens of this form were found in samples taken last summer at Korshavn from a depth of from 30 to 50 fathoms, coarse sandy bottom.

Distribution.—Liverpool Bay (A. Scott), Scottish coast (T. Scott).

Leptomesochra tenuicornis, G. O. Sars, n. sp.

(Suppl. Pl. 42).

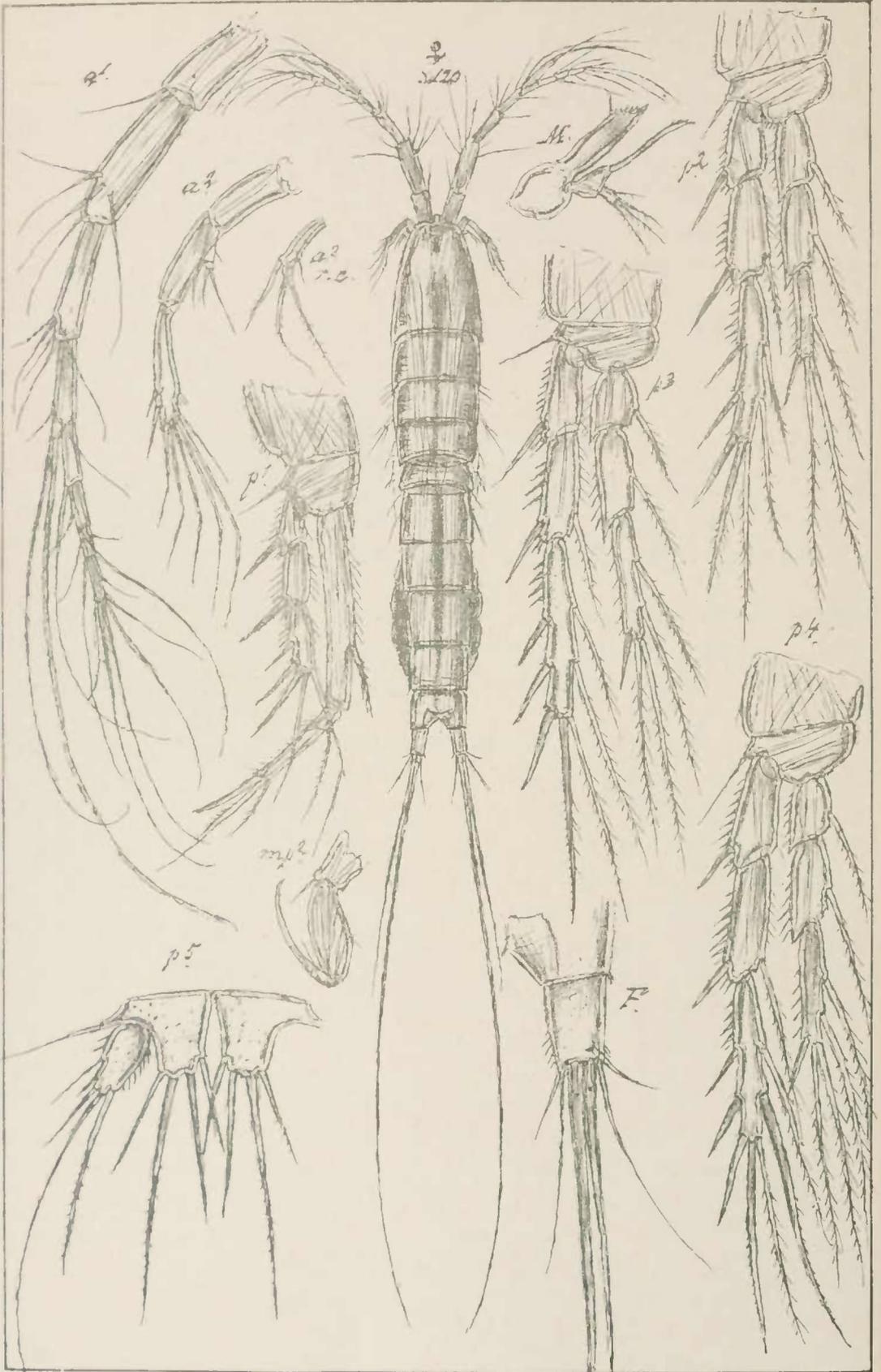
Specific Characters.—*Female.* Body somewhat less slender than in the preceding species, though of a similar narrow cylindrical form. Cephalic segment slightly exceeding in length the 2 succeeding segments combined; rostral projection almost obsolete. Urosome not attaining the length of the anterior division and slightly tapered behind, with the segments minutely spinulose at the hind edges ventrally, last segment much smaller than the preceding one. Caudal rami short, being scarcely longer than they are broad, apical setae rather elongated, the inner medial one exceeding $\frac{2}{3}$ of the length of the body and somewhat thickened in its proximal part, outer medial seta very distinctly spinulose outside. Anterior antennae exceedingly slender, being about twice as long as the cephalic segment, and composed of only 7 joints, 3rd joint longer than either of the 2 preceding joints and more than twice the length of the 4th, terminal part not attaining half the length of the proximal. Posterior antennae with the outer ramus comparatively larger than in the preceding species, biarticulate, with 3 thickish setae, 2 of them issuing from the small distal joint. Mandibular palp less fully developed than in the preceding species and without any trace of an

Copepoda

Canthocamptidæ

Harpacticoida

Suppl. Pl. 27



G.O. Sars, autogr.

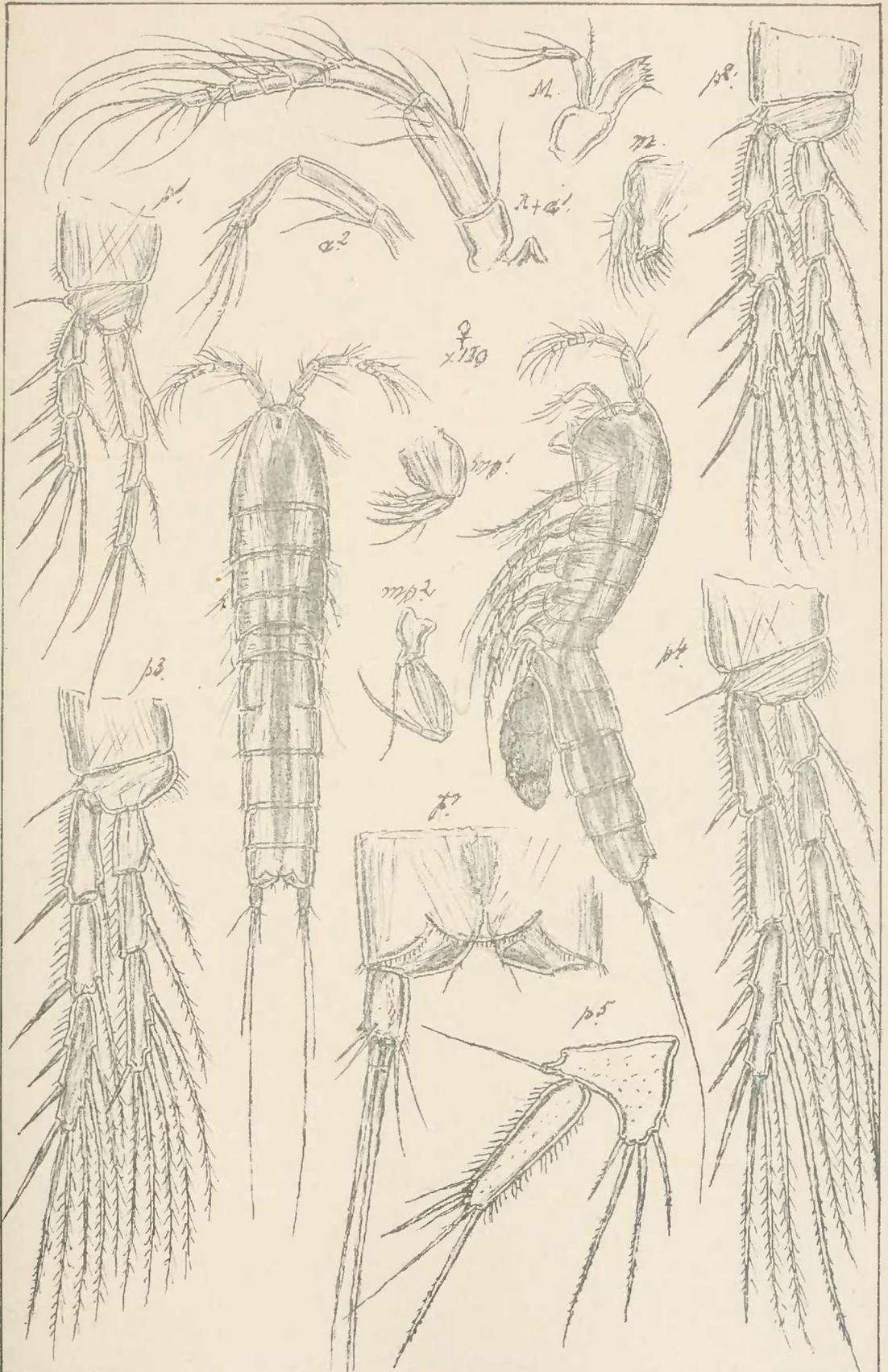
Norsk Lithgr. Officin.

Ameira tenuicornis, Scott.

Copepoda

Canthocamptidæ Harpacticoida

Suppl. Pl. 28



G.O. Sars, autogr.

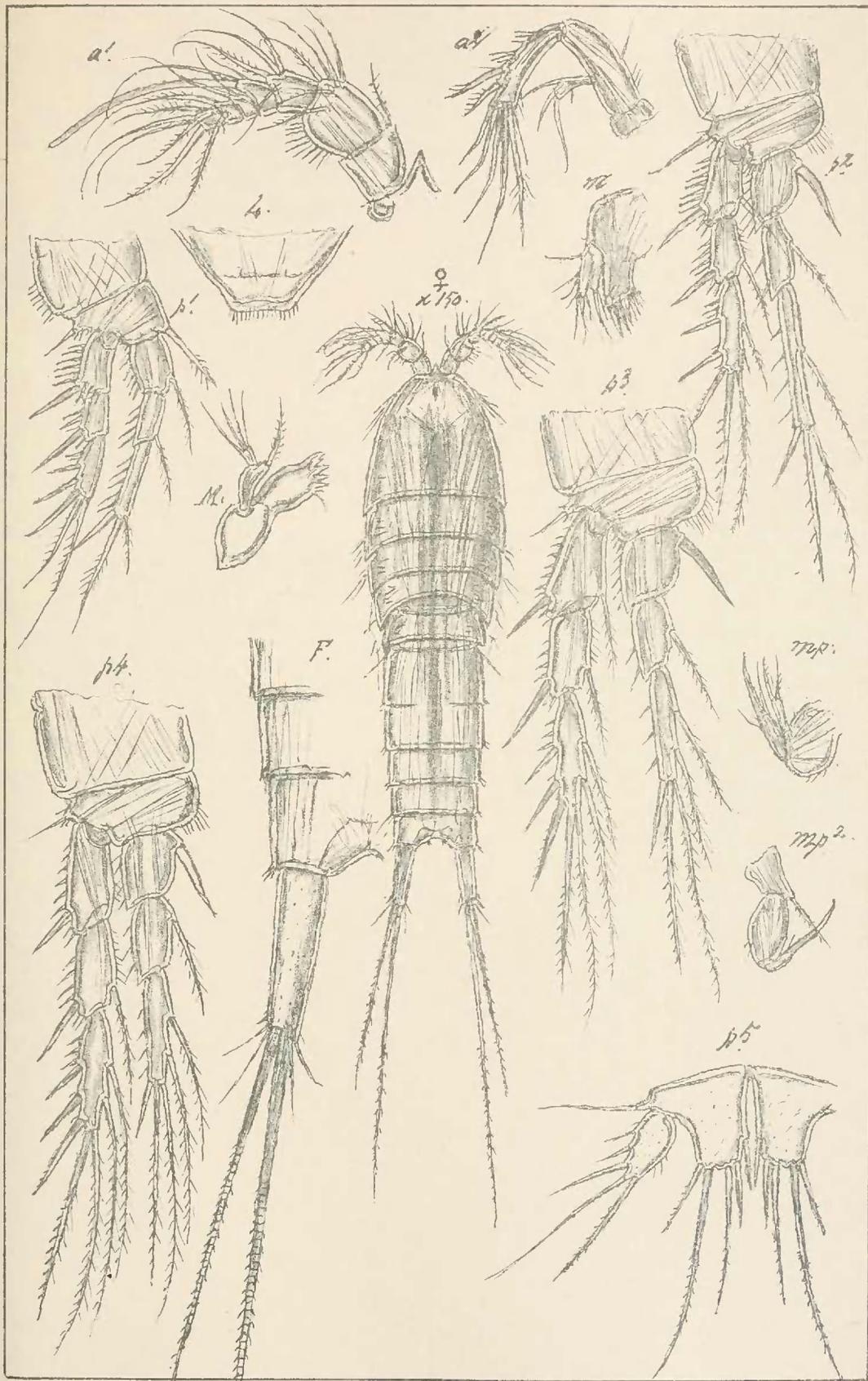
Norsk Lithogr. Officin

Parameira propinqua (Scott)

Copepoda

Canthocamptidæ Harpacticoida

Suppl. Pl. 30



G.O. Sars, autogr.

Norsk Lithgr. Officin.

Pseudameira furcata, G.O. Sars.

Copepoda

Canthocamptidae Harpacticoida

Suppl. Pl. 31



G.O. Sars, autogr.

Norsk Lithgr. Officin.

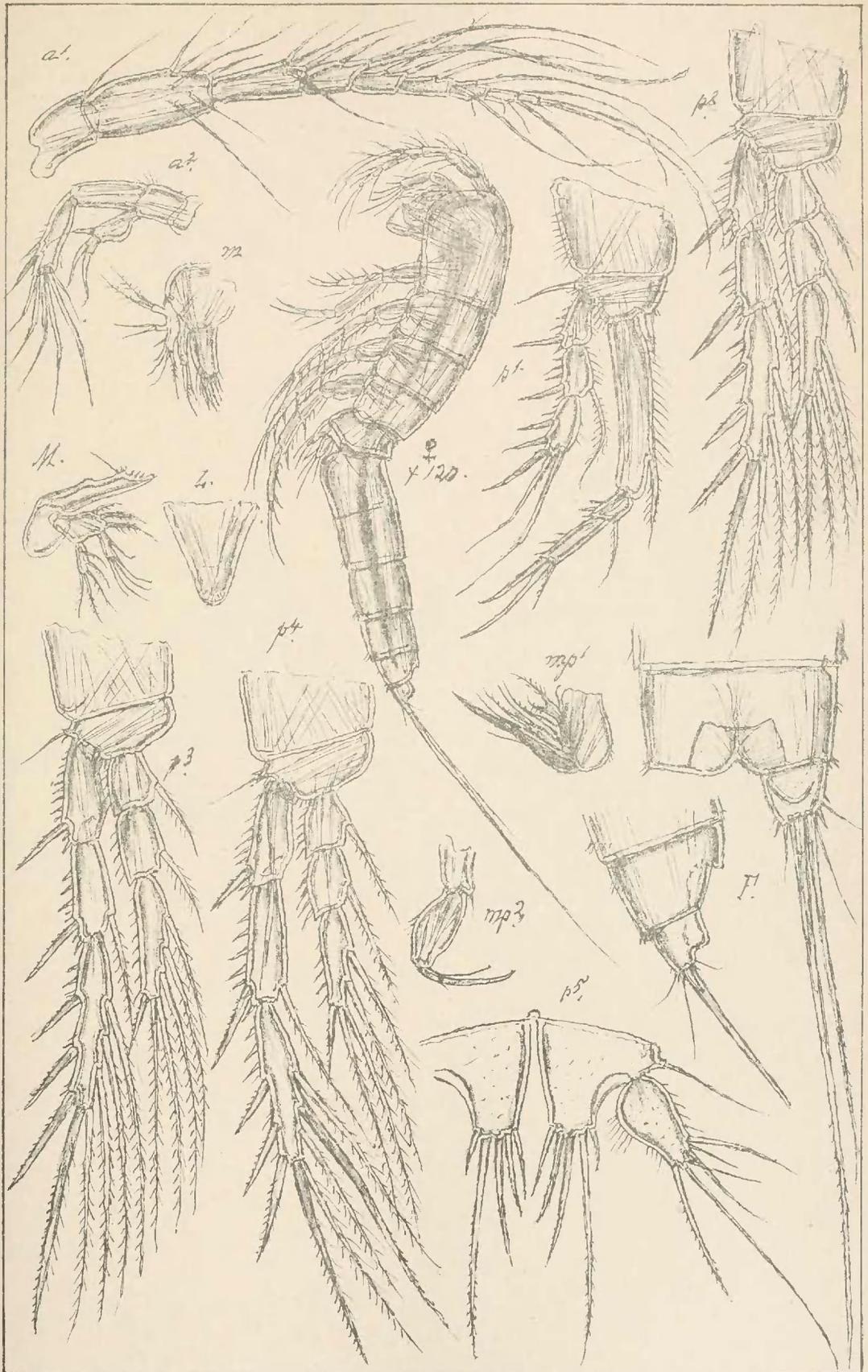
Ameiropsis nobilis, G.O. Sars.

Copepoda

Canthocamptidæ

Harpacticoida

Suppl. Pl. 32



G.O. Sars, autogr.

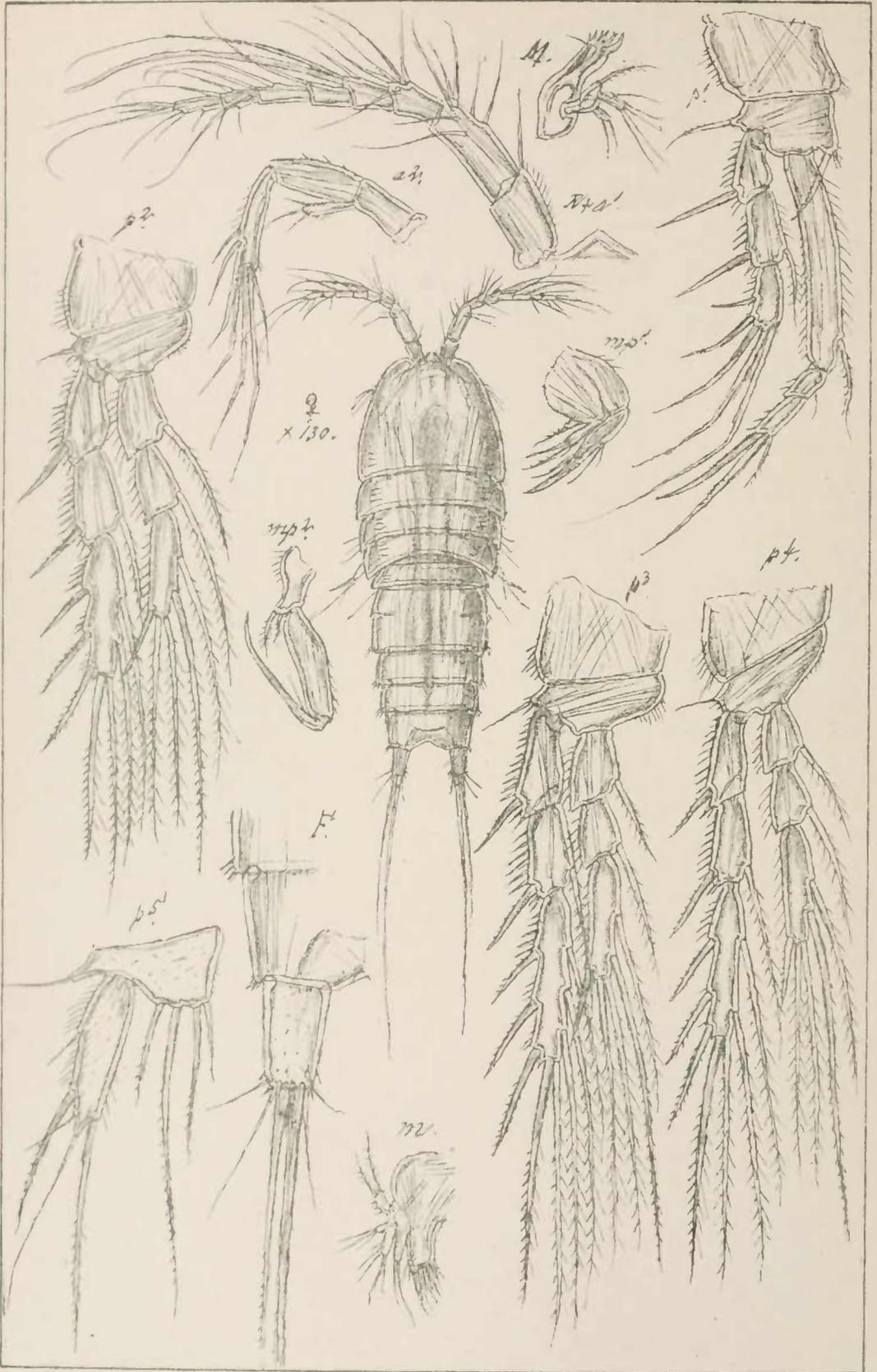
Norsk Lithgr. Officin.

Ameiropsis angulifera, G.O. Sars.

Copepoda

Canthocamptidæ Harpacticoida

Suppl. Pl. 33



G.O. Sars, autogr.

Norsk Lithgr. Officin.

Ameiropsis abbreviata, G.O. Sars.

Copepoda

Canthocamptidæ

Harpacticoida

Suppl. Pl. 34



G.O. Sars, autogr.

Norsk Lithgr. Officin.

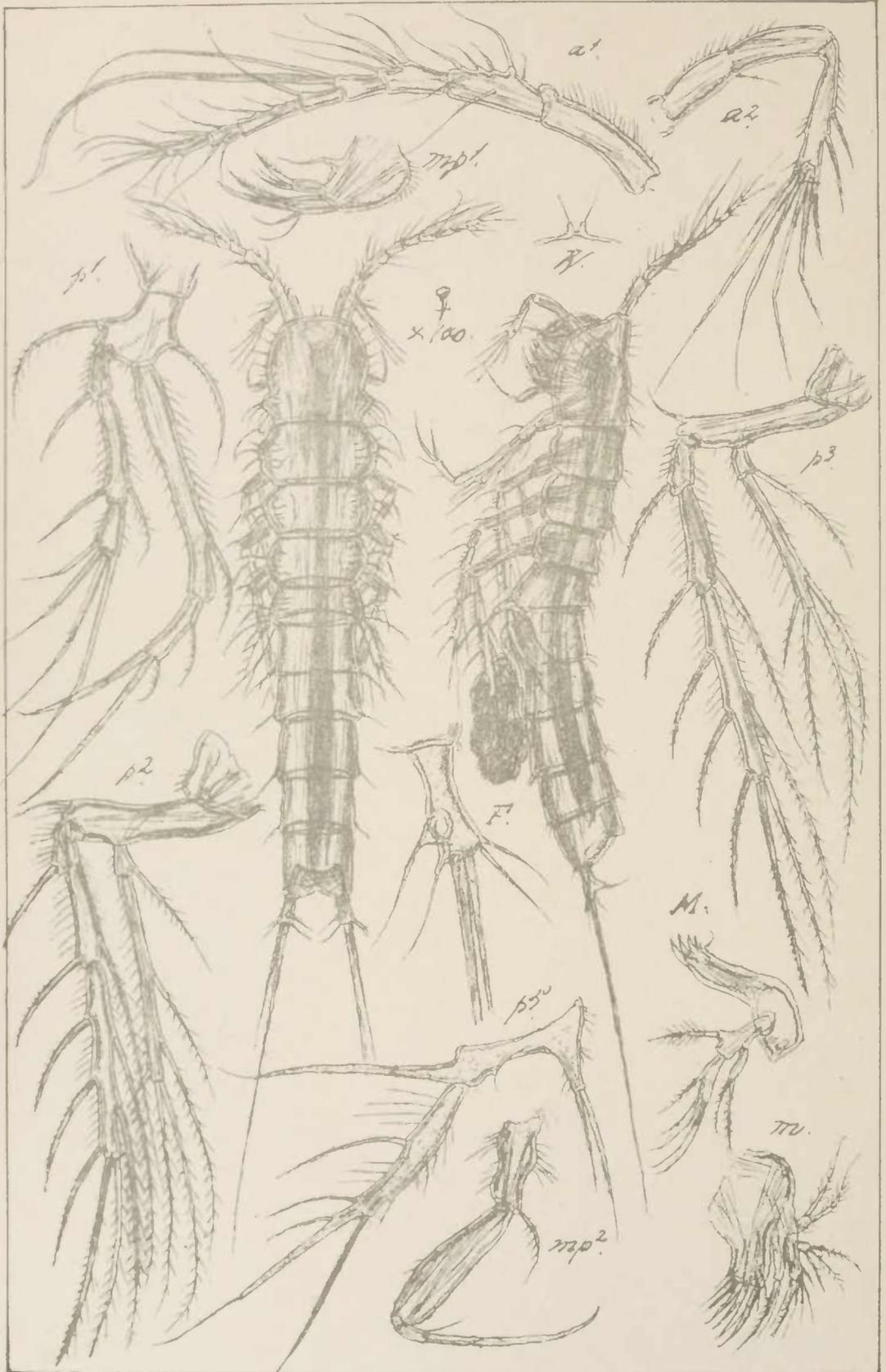
Stenocopia spinosa, (Scott).

Copepoda

Canthocamptidæ

Harpacticoida

Suppl. Pl. 35



G.O. Sars, autogr.

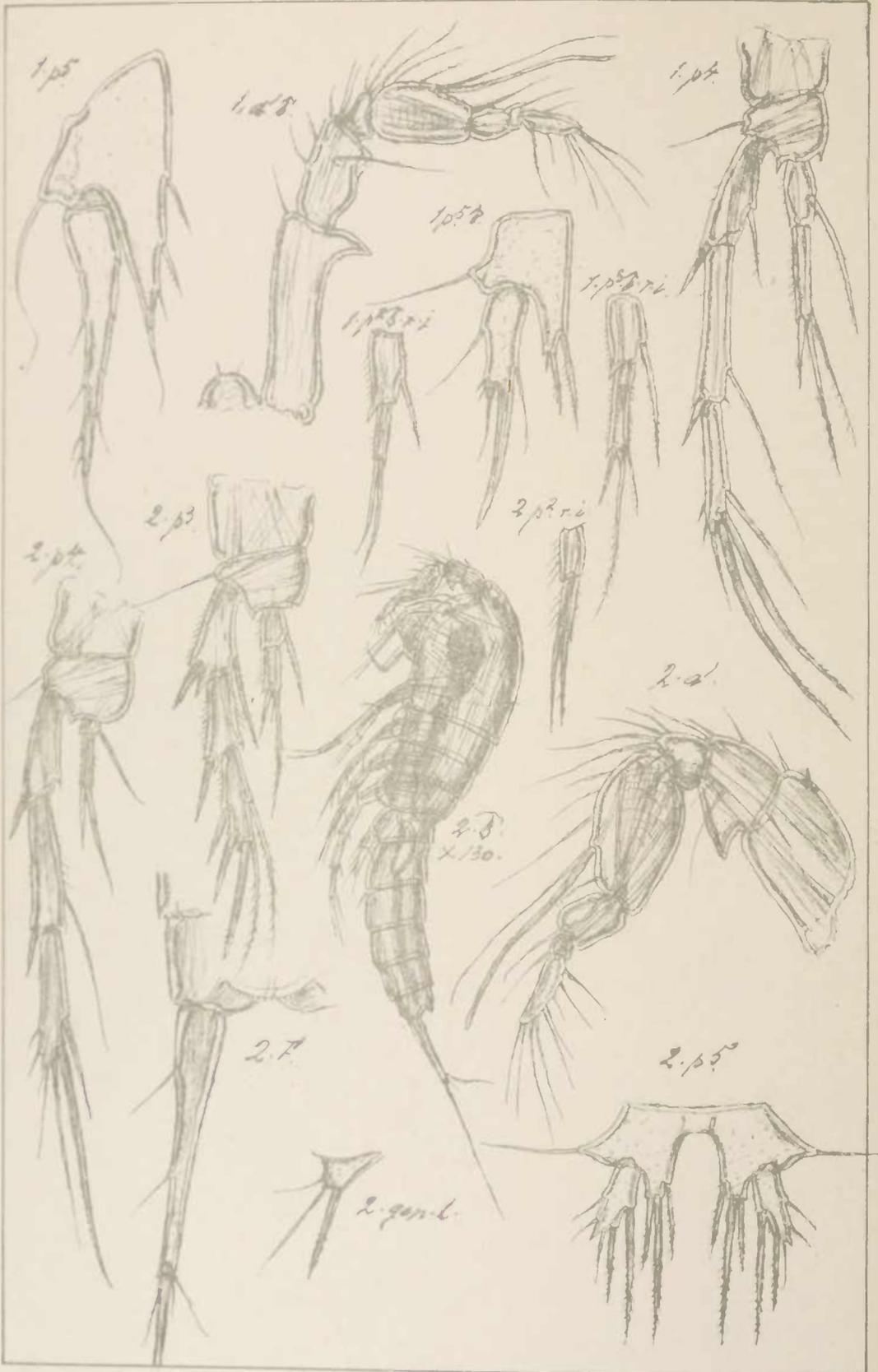
Norsk Lithgr. Officin.

Malacopsyllus fragilis, G.O. Sars.

Copepoda

Canthocamptidae Harpacticoida

Suppl. Pl. 37



G.O. Sars, autogr.

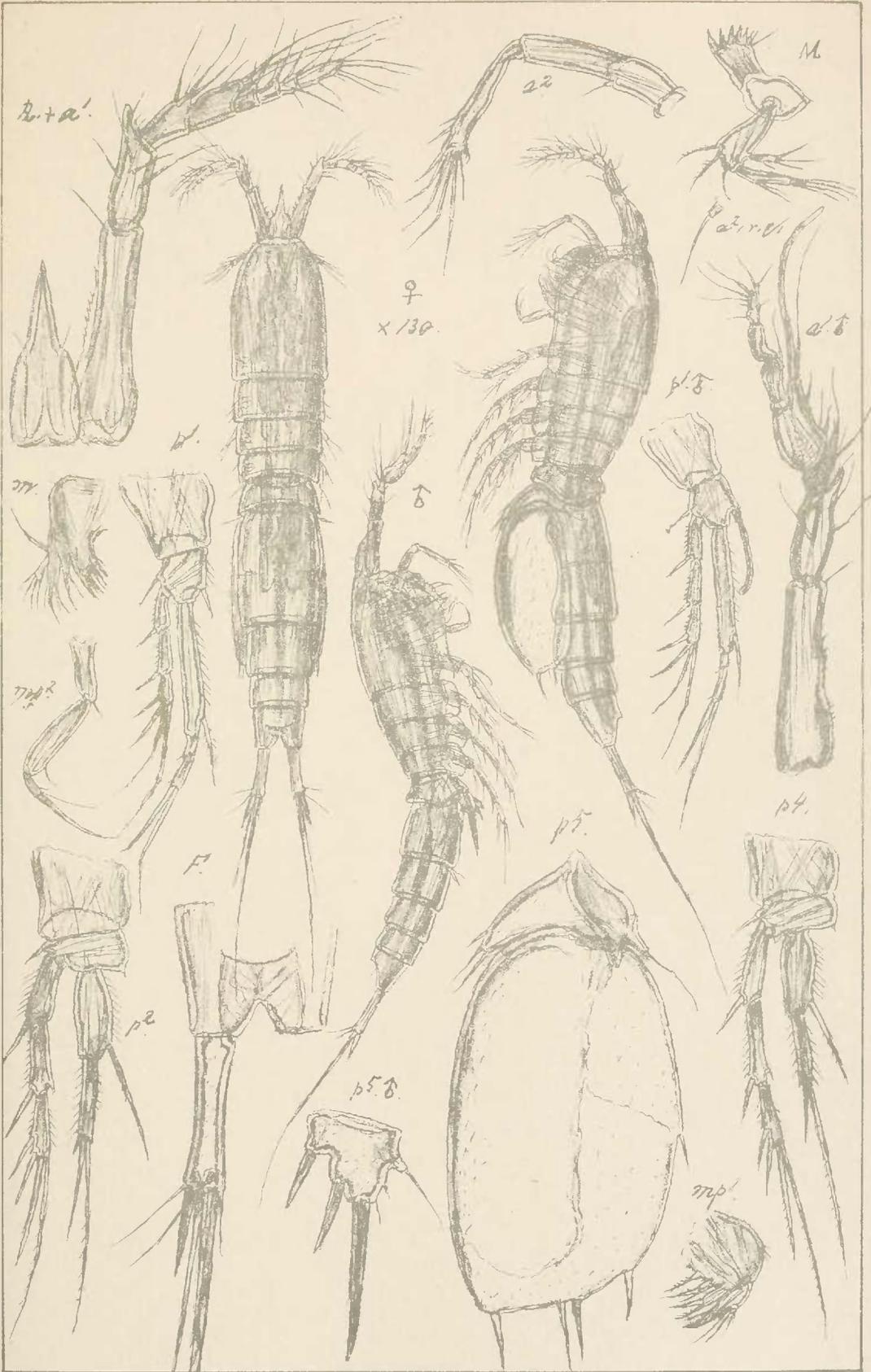
Norsk Lithgr. Officin.

1. *Tetragoniceps Scotti*, G.O. Sars (continued)
2. *Phyllopodopsyllus Bradyi*, Scott, male.

Copepoda

Canthocamptidæ Harpacticoida

Suppl. Pl. 38



G.O. Sars, autogr.

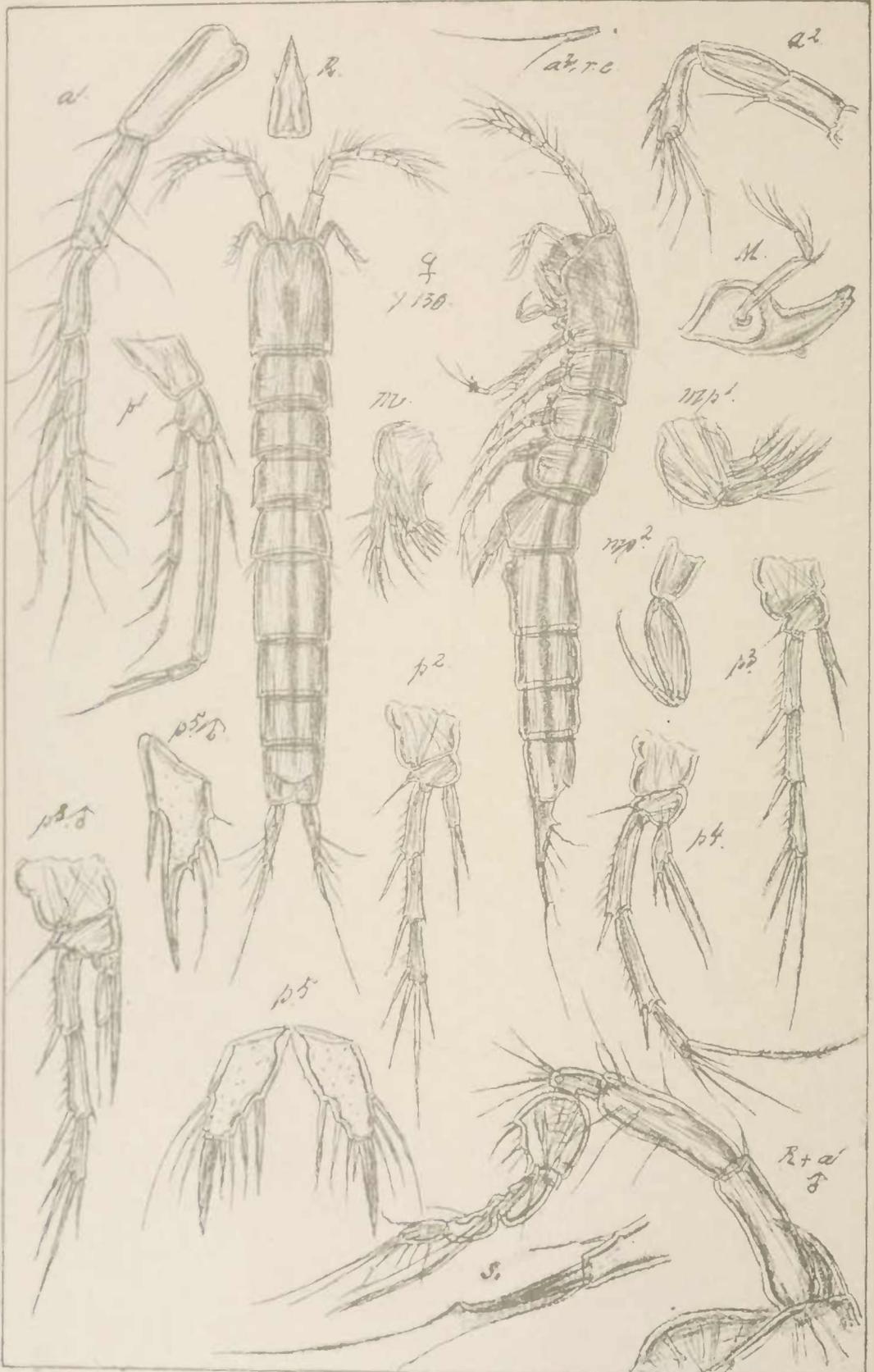
Norsk Lithgr. Officin.

Pteropsyllus consimilis, Scott.

Copepoda

Canthocamptidæ Harpacticoida

Suppl. Pl. 39



G.O. Sars, autogr.

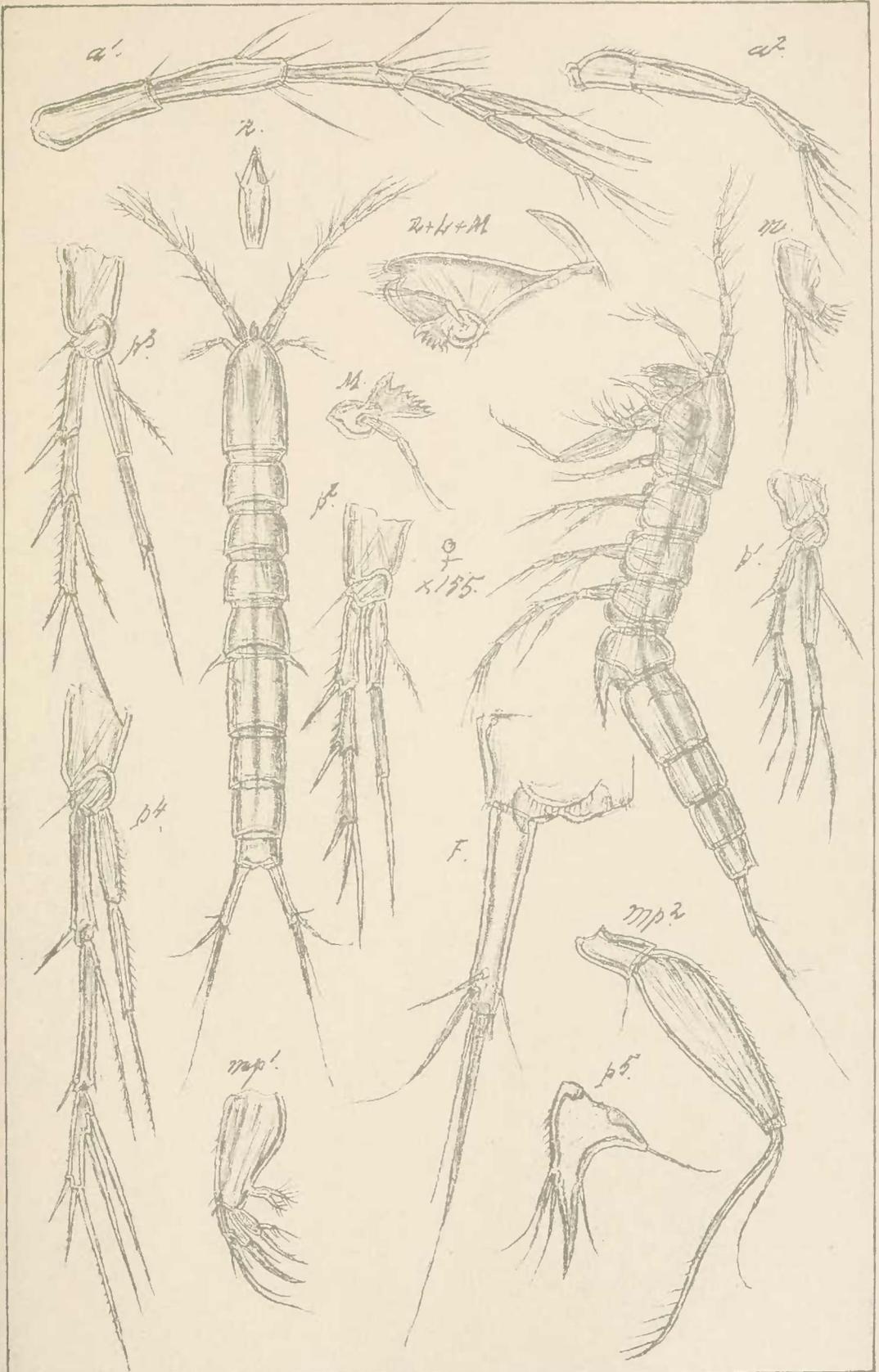
Norsk Lithgr. Officin.

Evansia incerta, Scott.

Copepoda

Canthocamptidæ Harpacticoida

Suppl. Pl. 40



G.O. Sars, autogr.

Norsk Lithgr. Officin.

Leptastacus macronyx, Scott.

Copepoda

Canthocamptidæ

Harpacticoida

Suppl. Pl. 41



G.O. Sars, autogr.

Norsk Lithgr. Officin.

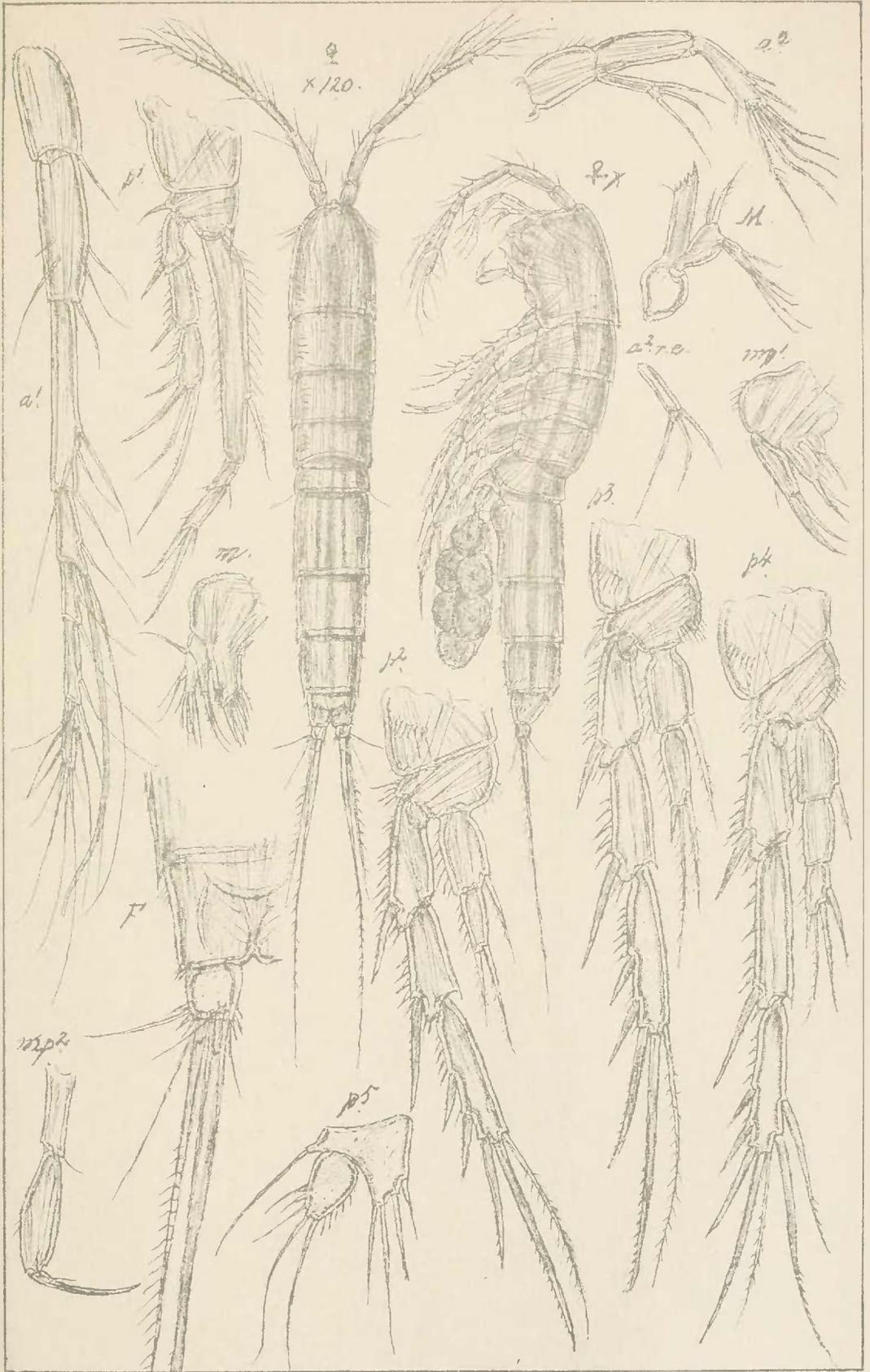
Leptomesochra attenuata, (Scott)

Copepoda

Canthocamptidæ

Harpacticoida

Suppl. Pl. 42



G.O. Sars, autogr.

Norsk Lithgr. Officin.

Leptomesochra tenuicornis, G.O. Sars.