

AN ACCOUNT
OF THE
CRUSTACEA
OF
NORWAY

WITH SHORT DESCRIPTIONS AND FIGURES OF ALL THE SPECIES

BY
G. O. SARS

VOL. VII
COPEPODA
SUPPLEMENT

PARTS V & VI
HARPACTICOIDA (continued)

WITH 16 AUTOTYPIC PLATES



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Antennæ and oral parts built on the very same type as in the 2 other known species. 1st pair of legs likewise of a very similar structure, the inner ramus being considerably longer than the outer, and only composed of 2 joints very sharply defined from each other, the distal one slightly shorter and much narrower than the proximal one, and armed at the tip with 2 exceedingly slender claw-like spines accompanied inside by a small bristle; inner edge of this joint carrying 2 somewhat larger setæ. The 3 succeeding pairs with the basal part rather broad and flattened, rami slender and of nearly equal length. Last pair of legs very narrow, with the proximal joint simple cylindrical in shape, not expanded inside, distal joint a little longer than the proximal one, and conically tapered, with 3 small setæ on the tip and another somewhat larger seta inside near the base.

Colour of the living animal not yet ascertained.

Length of adult female 0.58 mm.

Remarks.—The above-described form is unquestionably referable to the genus *Idyella*, as defined by the present author, exhibiting, as it does, a structure of the several appendages very similar to that found in the 2 other known species. It is however of considerably larger size than either of them and also of a comparatively more robust form of the body.

Occurrence.—A solitary female specimen only of this form has as yet come under my notice. It was found in a sample taken some years ago outside Christiansand from a depth of about 30 fathoms.

42. *Idyella exigua*, G. O. Sars.

See Vol. V, p. 101, Pl. LVIII, fig. 2.

(Pl. XXXIII, fig. 2).

Remarks.—The female of this species has been described and figured in Vol. V from some specimens taken at Bukken, south west coast of Norway. I have subsequently found this form not unfrequently in several places on the south coast, Korshavn, Lillesand, Risør, in depths ranging from 20 to 60 fathoms. Male specimens are very rarely met with, and may also easily escape attention on account of their small size. On the accompanying plate I have given some detail-figures of such a specimen, elucidating the rather well-marked sexual differences in the structure of the anterior antennæ and the 2nd and last pairs of legs.

Gen. **Idyanthe**, G. O. Sars.

Remarks.—This name was proposed by the present author in 1909, to replace *Idyopsis*, the latter name having been preoccupied.

43. **Idyanthe dilatata**, G. O. Sars.

See Vol. V, p. 98, Pl. LVII, fig. 1.

(Pl. XXXIII, fig. 3).

Remarks.—Of this form also only the female sex has been described. The male, of which a solitary specimen was obtained at Risør, differs from the female in a much similar manner to that found in *Idyella*. On the accompanying plate the inner ramus of a leg of the 2nd pair from this male specimen is figured.

Fam. **Diosaccidæ**.Gen. **Stenheliopsis**, G. O. Sars.

Remarks.—Three well-defined species of this genus have been recorded in Vol. V, and a 4th species, nearly allied to the typical one, is now added, and will be described below.

44. **Stenheliopsis affinis**, G. O. Sars, n. sp.

(Pl. XXXIV).

Specific Characters.—*Female.* General form of body resembling that in *S. divaricata*, being comparatively rather short and stout, with the anterior division considerably broader than the posterior. Cephalic segment large and evenly rounded in front; rostral plate prominent, linguiform, blunted at the tip. Urosome about the length of the anterior division and quite smooth. Caudal rami still more abruptly divergent than in the type species, but comparatively less slender, scarcely exceeding in length the last 2 caudal segments combined, each ramus armed at the somewhat thickened base with a transverse row of small denticles; innermost but one of the apical setæ very strong and closely annulated in the middle, curving abruptly outwards and forwards in a sigmoid

manner and crossing the neighbouring seta at some distance from its base. Anterior antennæ composed of 5 joints, the first 2 of which are much the largest, outer part of the antenna, as in the type species, abruptly recurved and densely clothed with strong curved setæ. Posterior antennæ and oral parts built on the same type as in *S. divaricata*. Natatory legs likewise rather similar in structure, the inner ramus being in all of them only composed of 2 joints. Last pair of legs resembling in shape those in the type species, though having the inner expansion more distinctly defined and the marginal setæ considerably longer. Ovisacs small, each containing only a single ovum.

Colour whitish.

Length of adult female 0.63 mm.

Remarks.—The present form is closely allied to the type species, *S. divaricata* G. O. Sars, but of somewhat larger size, differing moreover in the comparatively less slender caudal rami, as also somewhat in the structure of the anterior antennæ and the last pair of legs.

Occurrence.—Some specimens of this form, all of the female sex, were found at Risør in depths ranging from 30 to 50 fathoms, muddy bottom.

Fam. Canthocamptidæ.

Gen. *Attheyella*, Brady.

45. *Attheyella Schmeili*, (Mrázek).

(Pl. XXXV).

Canthocamplus Schmeilii, Mrázek, Beitrag zur Kenntniss der Harpacticidenfauna des Süßwassers. Zool. Jahrb. Vol. 7, p. 116, Pl. 7, figs. 107—117.

Specific Characters.—*Female.* Body comparatively slender and only slightly tapered behind, with all the segments distinctly denticulated along the hind edge dorsally. Cephalic segment about the length of the 3 succeeding segments combined, and broadly rounded in front, without any distinctly defined rostral projection. Urosome almost as long as the anterior division; genital segment somewhat shorter than the 2 succeeding segments combined; last segment well developed and of about same size as the preceding segment; anal opercle only slightly prominent, and obtusely truncated at the end, with the edge very finely denticulated. Caudal rami comparatively large, exceeding

somewhat in length the anal segment, and obpyriform in outline, being rather broad at the base and gradually tapered distally, inner edge considerably bulged at the base and, like the outer, coarsely ciliated; seta of outer edge attached far in front; dorsal seta well developed and issuing a little farther behind; apex provided with only a single well-developed seta flanked by 2 small bristles. Anterior antennæ a little shorter than the cephalic segment, with the joints rather sharply marked off from each other, terminal part a little shorter than the proximal one. Posterior antennæ with the outer ramus comparatively small, though distinctly biarticulate, distal joint short, carrying on the tip a stout spine and a short seta. Mandibles with the palp very small, uniarticulate, with 2 apical setæ. Maxillæ and maxillipeds of normal structure. 1st pair of legs with the inner ramus considerably longer than the outer, though only composed of 2 joints; middle joint of outer ramus wanting the usual seta inside. The 3 succeeding pairs of legs having the outer ramus rather strongly built, with the spines very coarse; inner ramus, as usual, poorly developed, biarticulate, with the distal joint very narrow and only carrying a single apical seta. Last pair of legs of moderate size, with the distal joint oval in form and edged with 5 setæ, the middle one small and not ciliated; inner expansion of proximal joint narrow linguiform and not extending as far as the distal joint, marginal setæ 5 in number.

Male smaller than female and exhibiting the usual sexual differences, being moreover distinguished by the much smaller size of the caudal rami. Inner ramus of 2nd pair of legs comparatively larger than in female, extending about to the middle of the terminal joint of the outer; that of 3rd pair transformed in the usual manner, being distinctly 3-articulate, with the middle joint produced at the end outside to a strong mucroniform process. 4th pair of legs with the spine attached to the middle joint of the outer ramus very strong and somewhat twisted; inner ramus very small and tipped with a strong spiniform seta and a much smaller bristle. Last pair of legs, as usual, much reduced in size.

Colour whitish gray, with a faint yellow tinge.

Length of adult female 0.63 mm.

Remarks.—This form, first described by Mrázek as a species of *Canthocamptus*, ought evidently to be referred to the present genus, as defined in Vol. V. It is easily recognised by the comparatively large size of the caudal rami, which however, unlike what is generally the case, exhibit a somewhat different appearance in the two sexes.

Occurrence.—Like the other known species of the present genus, this form is exclusively an inhabitant of fresh water. The only locality where I as yet have met with it, is the lake Vansjø near Moss. It occurred here occasionally, together with *Morararia brevipes* G. O. Sars, in a depth of 3—6 fathoms, muddy bottom.

Distribution.—Bohemia (Mrázek), British Isles (Scott), Sweden (Lilljeborg).

Gen. *Ameira*, Boeck.

46. *Ameira dubia*, G. O. Sars, n. sp.

(Pl. XXXVI).

Specific Characters.—*Female.* Body comparatively slender, with the anterior division conspicuously dilated in its anterior part. Cephalic segment large, equalling in length the 3 succeeding segments combined, frontal edge slightly angular, but without any distinctly defined rostrum. Urosome rather narrow, equalling in length about $\frac{3}{4}$ of the anterior division; genital segment longer than the 2 succeeding segments combined; last segment fully as large as the preceding one. Caudal rami short, being only slightly longer than they are broad, and somewhat divergent; apical setæ well developed. Anterior antennæ fully as long as the cephalic segment and distinctly 8-articulate, terminal part exceeding half the length of the proximale one. Posterior antennæ and oral parts of normal structure. 1st pair of legs imperfectly prehensile, the inner ramus being only slightly longer than the outer, with the 1st joint scarcely longer than the other 2 combined. The 3 succeeding pairs of legs of normal appearance, except that the terminal joint of the outer ramus in the 3rd and 4th pairs has inside 3, instead of 2 setæ. Last pair of legs with the distal joint rather narrow, oblong in form, and somewhat constricted at the base, marginal setæ 6 in number; inner expansion of proximal joint comparatively large, broadly linguiform, and extending beyond the middle of the distal joint; marginal setæ rather strong and 5 in number.

Colour not yet ascertained.

Length of adult female 0.90 mm.

Remarks.—This is a somewhat anomalous form, differing from the more typical species of the present genus by the imperfectly prehensile character of the 1st pair of legs and the greater number of setæ on some of the succeeding pairs. In these respects it agrees with the aberrant species, *A. simplex* Scott, and should perhaps, together with this species, be included in a

particular genus intermediate between *Ameira* and *Parameira*. It is of rather large size, as compared with the other known species.

Occurrence.—Two female specimens of the present form were found in a sample taken at Risør from a depth of about 30 fathoms.

47. *Ameira exilis*, Scott.

(Pl. XXXVII).

Ameira exilis, Scott, Twelfth Ann. Report of the Fishery Board for Scotland, Part 111, p. 242, Pl. X, figs. 1–12.

Specific Characters.—*Male*. Body exceedingly slender and narrow, linear in form, with the anterior division scarcely broader than the posterior. Cephalic segment about the length of the 2 succeeding segments combined and obtusely blunted in front, rostral projection inconspicuous. Urosome fully as long as the anterior division, with the segments subequal in size and almost perfectly smooth. Caudal rami comparatively short, being scarcely more than half as long as the anal segment; apical setæ of moderate length. Anterior antennæ about the length of the first 2 body-segments combined, and very conspicuously hinged, the middle portion being considerably dilated; terminal part composed of 3 elongated joints, the last clothed with long curved setæ. Posterior antennæ with the outer ramus biarticulate, distal joint however very small and less distinctly defined at the base. Mandibles with the palp of unusual size, its proximal joint forming inside a broad lamellar expansion armed with 3 strong, spiniform setæ; distal joint narrow, sublinear in form. Maxillæ and maxillipeds of normal structure. 1st pair of legs distinctly prehensile, the inner ramus being much longer than the outer, with the last 2 joints bent inwards, and combined about the length of the 1st joint; middle joint of outer ramus with a well-defined seta inside, wanting in the other known species; spine issuing from the inner corner of the 2nd basal joint very strong and sub-hamate at the tip. The 3 succeeding pairs of legs of normal structure and rather slender, especially the 4th pair, the outer ramus of which is fully twice as long as the inner. Last pair of legs more fully developed than is generally the case in male specimens; distal joint oval in form and provided with 6 marginal setæ, 4 of which issue from the obtusely blunted end, one of the latter (the innermost but one) very much elongated; inner expansion of proximal joint well developed and rather prominent, extending about to the middle of the distal joint, marginal setæ 5 in number, the outermost but one the longest.

Colour whitish, pellucid.

Length of the specimen examined 1.12 mm.

Remarks.—The above described form is evidently referable to the large species recorded by Scott as *A. exilis* and observed by that author in both sexes. Mr. Scott states the length of the adult female to be no less than 1.40 mm., and the present form accordingly grows to a size far exceeding that in any of the other known species of *Ameira*.

Occurrence.—A solitary male specimen only of this form has as yet come under my notice. It was captured at Risør from a depth of about 20 fathoms.

Distribution.—Scottish coast (Scott).

Gen. **Parameira**, G. O. Sars.

Remarks.—Of this genus 4 well-defined species have been recorded by the present author, 3 from the Norwegian coast and one from the Polar Islands North of Grinnels Land (2nd Fram Expedition). Two additional species, both of which have been previously observed by Scott, will be described below.

48. **Parameira longiremis**, (Scott).

(Pl. XXXVIII, fig. 1).

Ameira longiremis, Scott, Twelfth Annual Report of the Fishery Board for Scotland, Part 111, p. 241, Pl. V, figs. 29–32; Pl. VI, figs. 1–5.

Specific Characters.—*Female.* Body comparatively short and robust, with the 2 chief divisions rather sharply marked off from each other. Cephalic segment about the length of the 2 succeeding segments combined and evenly rounded in front, rostral projection inconspicuous. Urosome much shorter than the anterior division and almost of equal width throughout; genital segment large, exceeding somewhat in length the 2 succeeding segments combined; last segment scarcely shorter than the preceding one, with the anal opercle considerably prominent and narrowly rounded at the end. Caudal rami very small and remote from each other; apical setæ of moderate length. Anterior antennæ comparatively short and stout, not attaining the length of the cephalic segment, 2nd joint only slightly longer than it is broad. Posterior antennæ with the outer ramus very small, unarticulate, carrying 2 short setæ, the one apical, the other lateral. Oral parts normal. 1st pair of legs with the inner ramus considerably longer than the outer, its 1st joint rather dilated

and about the length of the terminal joint, middle joint comparatively short. The 3 succeeding pairs of legs exhibiting the structure characteristic of the genus. Last pair of legs with the distal joint exceedingly slender and narrow, sublinear in form, being fully 5 times as long as it is broad, and clothed on both edges with scattered hairs; marginal setæ 5 in number, all issuing from the end of the joint; inner expansion of proximal joint triangular in form and carrying 5 strong setæ.

Colour not yet ascertained.

Length of adult female 0.58 mm.

Remarks.—Though rather inferior in size, the above-described form agrees pretty well with the description and figures given by Scott of his *Ameira longiremis*, and its identity with that species seems to me therefore to be beyond doubt. It is unquestionably referable to the genus *Parameira*, as defined by the present author, and may be recognised from the other species of that genus by the comparatively robust form of the body, and more particularly by the very slender and narrow distal joint of the last pair of legs.

Occurrence.—Some few specimens of this form, all of the female sex, were picked up from samples taken at Korshavn in depths ranging from 30 to 50 fathoms, muddy sand.

49. *Parameira intermedia*, (Scott).

(Pl. XXXVIII, fig. 2).

Ameira longiremis. var. *intermedia*, Scott, Twelfth Annual Report of the Fishery Board for Scotland, Part 111, p. 242, Pl. VI, figs. 6–14.

Specific Characters.—*Female.* Body considerably more slender than in the preceding species, with the anterior and posterior divisions of nearly equal length. Last caudal segment a little shorter than the preceding one, with the anal opercle less prominent and evenly rounded at the end. Caudal rami a little longer than they are broad; apical setæ of moderate length. Anterior antennæ comparatively shorter than in the preceding species, otherwise of a very similar structure. Posterior antennæ with the outer ramus, as in that species, very small, unarticulate, but rather narrower, with both setæ issuing from the end. 1st pair of legs resembling in structure those in *P. longiremis*, inner ramus however comparatively shorter, with all 3 joints of about equal length. Last pair of legs with the distal joint not nearly so elongated as in the preceding species and oblong oval in form; inner expansion

of proximal joint extending about to the middle of the distal joint, and having the marginal setæ less unequal in length than in the preceding species.

Colour not yet ascertained.

Length of adult female 0.62 mm.

Remarks.—The present form is considered by Scott to be only a variety of the preceding species. I think however that the differences indicated in the above diagnosis may suffice for warranting its specific distinctness.

Occurrence.—Of this species also only a small number of specimens have as yet come under my notice. They were obtained from the same samples as the preceding species.

Distribution.—Scottish coast (Scott).

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

Remarks.—This genus was established by the present author in the year 1911, to comprise 2 well defined species, both obtained at Korshavn. I am now enabled to add 2 new species of this genus from another locality of the Norwegian coast.

50. **Pseudameira gracilis**, G. O. Sars, n. sp.

(Pl. XXXIX).

Specific Characters.—*Female.* Body much more slender and elongated than in either of the 2 previously described species, with the anterior division only slightly broader than the posterior. Cephalic segment equalling in length the 3 succeeding segments combined and rounded in front; rostral prominence small, but well defined, acuminate. Urosome about the length of the anterior division and nearly smooth; genital segment comparatively large, equalling in length the 3 succeeding segments combined, and distinctly subdivided in the middle; last segment much shorter than the preceding one. Caudal rami considerably produced, equalling in length the last 2 caudal segments combined, and narrow linear in form; apical setæ not much elongated. Anterior antennæ short and stout, not nearly attaining the length of the cephalic segment, but composed of 8 well defined joints, the 2nd of which is the largest and of rounded oval form, with the outer edge arcuate and clothed with stiff hairs; terminal part, comprising the 4 outer joints, short, scarcely exceeding the 2 preceding joints combined, and clothed with long curved setæ. Posterior

antennæ with the outer ramus very narrow, bisetose. Oral parts normal. 1st pair of legs with the inner ramus scarcely longer than the outer, its terminal joint somewhat exceeding the middle one in length. The 3 succeeding pairs of legs comparatively strongly built, and resembling somewhat in structure those in *P. furcata*, the inner ramus being rather produced and extending beyond the outer, its 1st joint rather dilated and, as in *P. furcata*, armed inside near the base with a strong spine, replacing the usual seta, inner edge of the joint beyond the spine densely spinulose; middle joint produced at the end inside to a well developed spiniform process. 2nd basal joint of these legs armed inside with 4—5 coarse denticles. Last pair of legs of comparatively small size; distal joint oval quadrangular in form and remarkably constricted at the base, inner edge bulging and fringed with long cilia; marginal setæ 5 in number, the 2 innermost ones rather slender; inner expansion of proximal joint short and broad, with 5 marginal setæ.

Male, as usual, smaller than female and easily recognisable by the distinctly hinged anterior antennæ; none of the legs transformed.

Colour whitish.

Length of adult female 0.75 mm.

Remarks.—The present form is nearly allied to *P. furcata*, but of considerably larger size, and moreover at once distinguished by the much more slender and elongated form of the body. It also exhibits some well-marked differences in the structural details, as indicated in the above diagnosis.

Occurrence.—I have found this form not unfrequently at Risør in depths ranging from 30 to 60 fathoms, muddy sand.

51. *Pseudameira mixta*, G. O. Sars, n. sp.

(Pl. XL).

Specific Characters.—*Female*. Body of a similar slender form to that of the preceding species, with the anterior division only slightly broader than the posterior. Rostral prominence well marked, but very small, acute. Urosome nearly as long as the anterior division, its last segment of about same size as the preceding one. Caudal rami less produced than in the preceding species, being scarcely longer than the anal segment; apical setæ rather slender. Anterior antennæ still shorter than in the said species and only composed of 6 joints, 2nd joint with the outer edge perfectly smooth. Posterior antennæ with the outer ramus slightly widening distally and carrying 3 setæ, 2 apical and one lateral. 1st pair of legs with the inner ramus distinctly longer than the

outer, its joints of about equal length. The 3 succeeding pairs of legs rather slender, with the inner ramus longer than the outer (at least in 2nd and 3rd pairs), its 1st joint moderately dilated, with the seta of the inner edge very small, not spiniform, and attached beyond the middle, being accompanied behind by a number of thin spinules; 2nd joint not produced at the end inside. Last pair of legs with the distal joint comparatively small, rounded oval in form, and only provided with 4 marginal setæ; inner expansion of proximal joint more produced than in the preceding species, extending almost as far as the distal joint, and obtusely truncated at the end, marginal setæ 4 in number.

Colour whitish.

Length of adult female 0.60 mm.

Remarks.—The present form looks rather like *P. gracilis* in its outward appearance, but is of much smaller size, and moreover at once distinguished by the comparatively less produced caudal rami. In the structure of the several appendages it exhibits a somewhat mixed character; hence the specific name here proposed.

Occurrence.—Only very few specimens of this form have as yet come under my notice. They were taken at Risør from a depth of about 50 fathoms, muddy bottom.

Gen. *Stenocopia*, G. O. Sars.

Remarks.—The type of this genus is the form described by Scott as *Ameira longicaudata*, which however, as pointed out by the present author, must be discarded from the genus *Ameira*, as defined by Boeck. Two other well-defined species of the present genus have been recorded in Vol. V, and I now am enabled to add another species, to be described below.

52. *Stenocopia minor*, G. O. Sars, n. sp.

(Pl. XLI).

Specific Characters.—*Female.* Body comparatively less slender than in the type species, with the anterior division slightly broader than the posterior. Cephalic segment about the length of the 3 succeeding segments combined, and projecting in front to a triangular rostral plate. Trunkal segments perfectly smooth. Urosome (including the caudal rami) fully as long as the anterior division and only slightly tapered behind, its segments minutely denticulate at the hind edge; genital segment of moderate size and imperfectly

subdivided in the middle; last segment considerably larger than the preceding one, with the anal opercle somewhat prominent and broadly rounded at the end. Caudal rami slender and narrow, though less elongated than in the other known species, scarcely exceeding in length the anal segment; apical setæ moderately slender. Anterior antennæ rather narrow, exceeding somewhat in length the cephalic segment, and composed of 9 well defined joints clothed with comparatively long curved setæ; 2nd joint the largest and about equalling in length the 2 succeeding joints combined; penultimate and antepenultimate joints very small, but distinctly defined. Posterior antennæ with the outer ramus narrow, biarticulate, and only provided with 2 setæ. Oral parts agreeing in structure with those in the other species. 1st pair of legs with the inner ramus very slender, being fully twice as long as the outer; terminal joint of the latter only armed with 4 spiniform setæ. The 3 succeeding pairs of legs exhibiting the slender form characteristic of the genus; inner ramus however comparatively shorter than in the other species, with the terminal joint less produced and the number of setæ somewhat reduced. Last pair of legs with the distal joint narrow oblong in form, and less exerted at the tip than in the other species; marginal setæ rather unequal in length and 5 in number; inner expansion of proximal joint comparatively broad, but only very slightly produced, and edged with 4 setæ, the outermost one very small.

Colour whitish grey.

Length of adult female 0.70 mm.

Remarks.—The present form is nearly allied to the type species, *S. longicaudata* (Scott), but is rather inferior in size, and moreover at once distinguished from that species by the comparatively less elongated caudal rami. In the structural details also some well-marked differences are found, as indicated in the above diagnosis.

Occurrence.—Some few female specimen of this form were taken at Risør from a depth of about 50 fathoms, muddy bottom.

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

Generic Characters.—Body as a rule short and stout, with the anterior division more or less dilated. Cephalic segment of moderate size, and provided in front with a prominent triangular rostral plate defined behind by a well-marked transverse suture. Caudal rami small and widely apart. Anterior antennæ comparatively short and stout, being only composed of 5 joints partly

clothed with pectinate setæ, last joint large, conically produced at the end. Posterior antennæ with the outer ramus distinctly biarticulate. Mandibular palp likewise biarticulate, with the outer ramus small or wanting. Maxillæ with the exopodal lobe well defined, bisetose. 1st pair of legs with both rami 3-articulate, the inner one imperfectly prehensile, being far less produced than in *Mesochra*, and scarcely bent at the end; middle joint of outer ramus without any seta inside. The succeeding pairs of legs comparatively slender, with the outer ramus much longer than the inner, which is only composed of 2 joints. Last pair of legs with the distal joint more or less produced; inner expansion well developed.

Remarks.—This new genus is established to include the form described in Vol. V, p. 395, as *Mesochra exigua*. The rather aberrant characters of this small species were noted in that place, and it was therefore only with some doubt referred to the genus *Mesochra* of Boeck. Having now had an opportunity of examining some other forms agreeing pretty well in the more general characters with the above-mentioned species, I think that the establishment of the present genus may be fully justified. The most conspicuous differences from *Mesochra* are found in the structure of the anterior antennæ and in that of the 1st pair of legs. The generic name here proposed alludes to the agreement in structure of the anterior antennæ to those in some of the *Cleto-didæ*. 3 new species referable to the present genus will be described below.

53. *Cletomesochra major*, G. O. Sars, n. sp.

(Pl. XLII).

Specific Characters.—*Female.* Body comparatively more slender than in the type species, with the anterior division only slightly broader than the posterior. Cephalic segment about the length of the 3 succeeding segments combined; rostral plate rather prominent and narrowly truncated at the tip. Urosome shorter than the anterior division and only very slightly tapered behind, its segments minutely denticulate at the hind edge; genital segment not fully attaining the length of the 2 succeeding segments combined; last segment nearly as large as the preceding one, with the anal opercle broadly rounded and perfectly smooth. Caudal rami very small, quadrangular in form, with the apical setæ comparatively short. Anterior antennæ scarcely exceeding half the length of the cephalic segment; the first 3 joints rather thick and gradually somewhat diminishing in size, the other 2, representing the terminal part of the antenna, very unequal in size, the proximal one being quite short,

the distal one large and conically produced at the end. Posterior antennæ with the basal part not subdivided, outer ramus provided with 4 setæ, 2 apical and 2 lateral. Mandibular palp comparatively small, with the proximal joint not expanded and without any trace of an outer ramus. 1st pair of legs with the inner ramus only slightly longer than the outer, and having all 3 joints of about equal length; terminal joint of outer ramus with only 2 spines and 2 geniculated setæ. The 3 succeeding pairs of legs agreeing in structure with those in the type species. Last pair of legs with the distal joint of comparatively smaller size, oblong oval in form, and having the edges nearly smooth, marginal setæ 5 in number; inner expansion of proximal joint rather broad and obtusely truncated at the end, extending beyond the middle of the distal joint; marginal setæ rather strong and successively increasing in length outwards.

Colour whitish grey.

Length of adult female 0.57 mm.

Remarks.—The present species is unquestionably congeneric with *C. exigua*, but of considerably larger size and somewhat more slender form of the body, differing moreover somewhat in the structure of the 1st and last pairs of legs, as also in the less perfectly developed mandibular palp.

Occurrence.—A solitary female specimen of this form was obtained last summer (1918) at Hvalør, outside the Christiania Fjord, from a depth of about 6 fathoms.

54. *Cletomesochra nana*, G. O. Sars, n. sp.

(Pl. XLIII).

Specific Characters.—*Female.* Body short and stout, resembling in shape that in the type species. Rostral plate somewhat less prominent than in *C. major*, but of a very similar form. Urosome much shorter than the anterior division, and of about equal width throughout. Caudal rami small, quadrangular in form, with the inner corner somewhat prominent. Anterior antennæ almost exactly of same appearance as in the preceding species. Posterior antennæ with the outer ramus slightly widening distally and carrying 5 setæ, 3 apical and 2 lateral. Mandibular palp with the basal part rather narrow, but having outside a well-marked small joint tipped with a ciliated seta and representing the rudimentary outer ramus. 1st pair of legs with the inner ramus distinctly longer than the outer, its middle joint shorter than either of the other 2, which are of about equal length. The 3 succeeding pairs of

legs exceedingly slender, with the terminal joint of outer ramus narrower than in the preceding species and almost as long as the other 2 combined. Last pair of legs with the distal joint narrow oblong in form and slightly tapered towards the end, 2 of the outer-edge setæ attached near the base of the joint at some distance from the 3 other setæ; inner expansion of proximal joint short and broad, transversely truncated at the end, and scarcely extending beyond the middle of the distal joint; marginal setæ rather slender, the outermost one the longest.

Colour not yet ascertained.

Length of adult female 0.41 mm.

Remarks.—This form is still more closely allied to the type species, and may on the first sight easily be confounded with it. It is however of smaller size and, on a closer examination, exhibits also some well-marked differences in the structural details, as indicated in the above diagnosis.

Occurrence.—Some few female specimens of this dwarfed species were picked up from samples taken at Risør in depths ranging from 30 to 50 fathoms.

55. *Cletomesochra rostrata*, G. O. Sars, n. sp.

(Pl. XLIV).

Specific Characters.—*Female.* Body moderately slender, with the anterior division conspicuously broader than the posterior. Cephalic segment comparatively large, occupying more than half the length of the anterior division; rostral plate greatly prominent and acutely produced at the end. Urosome somewhat shorter than the anterior division, with the segments rather sharply marked off from each other and distinctly spinulose at the hind edge; last segment of about same size as the preceding one and somewhat widening distally; anal opercle finely denticulate at the edge. Caudal rami oblong quadrangular in form, being somewhat longer than they are broad; apical setæ rather slender. Anterior antennæ of somewhat larger size than in the other species, though not nearly as long as the cephalic segment, 3rd joint remarkably produced at the end anteriorly. Posterior antennæ with the outer ramus of moderate size and carrying 4 setæ, 2 apical and 2 lateral. Mandibular palp with the basal part somewhat dilated and carrying outside a distinctly developed outer ramus. 1st pair of legs with the inner ramus slightly longer than the outer; terminal joint of the latter with 3 outer-edge spines. The 3 succeeding pairs of legs exceedingly slender, with the terminal joint of both rami narrow linear in form. Last pair of legs rather unlike those in the other species, distal joint narrow linear in form, with the 2 outermost setæ much

longer than the other 3; inner expansion of proximal joint narrowly produced at the end and extending about to the middle of the distal joint; marginal setæ only 4 in number.

Colour not yet ascertained.

Length of adult female 0.67 mm.

Remarks.—This is a very distinct and easily recognisable form, differing conspicuously from the other species both in the outward appearance and in the structure of some of the appendages, though, according to the structure of the antennæ and of the 1st pair of legs, apparently referable to the present genus.

Occurrence.—A solitary female specimen of this form was found in a sample taken at Risør from a depth of about 50 fathoms.

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

Generic Characters.—Body sub-clavate in form, being conspicuously tumefied in its anterior part and attenuated behind. Rostral plate small and deflexed, not sharply defined behind. Segments of urosome coarsely spinulose at the hind edge. Caudal rami of moderate size. Anterior antennæ short and stout, 5-articulate, with some of the setæ on the proximal part coarsely pectinate, last joint comparatively large, but not conically produced at the end and with some of the setæ ciliated. Posterior antennæ with the outer ramus very small, uniaarticulate. Mandibles very strong, with the cutting edge imperfectly dentate; palp well developed, but without any distinctly defined outer ramus. Maxillæ with the exopodal lobe obsolete. 1st pair of legs not prehensile, the inner ramus being very short and only composed of 2 joints. The 3 succeeding pairs of legs of a structure similar to that in *Mesochra*. Last pair of legs likewise built on the same type as in that genus, the distal joint being very small, not produced at the end.

Remarks.—This new genus is only founded on a single species, which however exhibits certain peculiarities in the structural details forbidding its reception into any of the known genera of the present family, though in some respects it would seem to approach somewhat the genus *Cletomesochra*.

56. *Hemimesochra clavularis*, G. O. Sars, n. sp.

(Pl. XLV).

Specific Characters.—*Female.* Body moderately slender, with the anterior division conspicuously inflated in front, almost clavate in form. Cephalic segment large and tumid, evenly rounded in front, with the rostral plate abruptly deflexed, so as not being visible in the dorsal view of the animal. Urosome comparatively narrow and somewhat shorter than the anterior division, with the segments sharply marked off from each other and distinctly spinulose at the hind edge, the spinules being arranged in small groups; last segment nearly as large as the preceding one, and having the anal opercle small and perfectly smooth. Caudal rami about the length of the anal segment and somewhat divergent, edges partly spinulose; apical setæ of moderate length. Anterior antennæ scarcely half as long as the cephalic segment, with the first 2 joints comparatively short and combined scarcely longer than the 3rd; last joint rather large and clothed with long and slender setæ. Posterior antennæ with the basal part distinctly subdivided, outer ramus carrying 3 setæ, 2 apical and one lateral. Mandibular palp with the basal joint rather large, though not much expanded, and provided in the middle of the outer edge with a strong ciliated seta replacing the outer ramus. 1st pair of legs much smaller than the succeeding pairs, with the inner ramus scarcely extending beyond the middle of the terminal joint of the outer, its proximal joint somewhat expanded and carrying inside the usual ciliated seta, distal joint of about same length, but much narrower, and armed at the tip with a strong spine accompanied inside by 2 unequal setæ; outer ramus without any setæ inside, terminal joint with only 2 outer-edge spines. The 3 succeeding pairs of legs well developed, with the inner ramus somewhat exceeding half the length of the outer and resembling in shape that in *Mesochra*. Last pair of legs with the distal joint very small, sub-quadrangular in form, and only provided with 4 setæ, the innermost of which is much elongated, the other 3 comparatively short; inner expansion of proximal joint extending far beyond the distal joint and obtusely truncated at the end; marginal setæ 4 in number and of very unequal length, the outermost but one much the largest.

Colour not yet ascertained.

Length of adult female 0.53 mm.

Remarks.—The present form may be easily recognised from any of the other known *Canthocamptidæ* by the peculiar clavate shape of the body, a character which has given rise to the specific name here proposed.

Occurrence.—Two female specimens only of this peculiar form have as yet come under my notice. They were taken at Risør from a depth of about 50 fathoms, muddy bottom.

Fam. Laophontidæ.

Gen. Laophonte, Philippi.

57. *Laophonte brevifurca*, G. O. Sars, n. sp.

(Pl. XLVI).

Specific Characters.—*Female.* Body moderately slender and slightly attenuated behind, with all the segments well marked off from each other. Cephalic segment nearly half the length of the anterior division; rostral prominence comparatively short, triangular, and obtusely pointed at the end. Urosome shorter than the anterior division, and having the lateral expansions of the anterior segments well marked and densely spinulose at the edge; last segment about twice as broad as it is long, anal opercle rounded and distinctly denticulate at the edge. Caudal rami very short, being scarcely longer than they are broad at the base; apical setæ of moderate length. Anterior antennæ comparatively short and only composed of 6 joints, the last 2 being confluent; 2nd joint rather broad, of rounded form, and without any projection of the outer edge. Posterior antennæ and oral parts of normal structure. 1st pair of legs less strongly developed than usual, with the outer ramus distinctly 3-articulate and extending beyond the middle of the proximal joint of the inner. The 3 succeeding pairs of legs with the inner ramus scarcely half as long as the outer, and only provided with 3 setæ at the end. Last pair of legs with the distal joint comparatively small, narrow sub-quadrangular in form, and carrying 5 marginal setæ, all issuing from the nearly transversely truncated end, one of the setæ (the innermost but one) much longer than the others; inner expansion of proximal joint rather produced, extending almost as far as the distal joint; marginal setæ 4 in number.

Colour whitish grey, with a faint yellow tinge.

Length of adult female 0.70 mm.

Remarks.—The above-described form, though not exhibiting any more prominent peculiarity in its structure, does not agree fully with any of the

numerous species of the present genus as yet known. It may be best recognised by the very small size of the caudal rami, a character which indeed has given rise to the specific name here proposed.

Occurrence.—A solitary female specimen of this form was found last summer (1918) at Hvalør, outside the Christiania Fjord, in a depth of about 6 fathoms.

58. *Laophonte tenera*, G. O. Sars, n. sp.
(Pl. XLVII).

Specific Characters.—*Female.*—Body rather slender and narrow, rapidly tapered behind, with the segments sharply marked off from each other. Cephalic segment large and tumid, occupying fully half the length of the anterior division; its postero-lateral corners produced in a peculiar manner and curved upwards; rostral projection rather prominent, triangular, and minutely bilobular at the tip. Urosome almost as long as the anterior division, and having the lateral expansions of the segments rather prominent and densely spinulose at the edges; last segment scarcely broader than it is long and slightly widening distally, anal opercle finely denticulate at the edge. Caudal rami about twice as long as they are broad and considerably divergent; apical setæ of moderate length. Anterior antennæ more slender than in the preceding species, though not nearly attaining the length of the cephalic segment, and composed of 7 well defined joints; 2nd joint the largest and oblong oval in form, with a very small prominence of the outer margin. Posterior maxillipeds comparatively larger than in the preceding species. 1st pair of legs likewise more powerfully developed; outer ramus however rather small, not extending to the middle of the proximal joint of the outer, and only composed of 2 joints. The 3 succeeding pairs of legs of normal structure. Last pair of legs with the distal joint well developed, broadly spatulate in form, and provided with 5 marginal setæ, the innermost but one the longest and issuing from a digitiform process of the joint; inner expansion of proximal joint short and broad, obtusely rounded, and not extending to the middle of the distal joint; marginal setæ 4 in number.

Male of smaller size than female and having the anterior antennæ very strongly hinged. 2nd pair of legs with one of the setæ attached to the distal joint of the inner ramus transformed in a similar manner to that found in *L. brevisrostris* and allied species. 3rd pair of legs, as usual, much more strongly built than in female, with the inner ramus distinctly 3-articulate and

having the middle joint acutely produced at the end outside. Last pair of legs much reduced in size, distal joint rather narrow and only provided with 4 setæ; inner expansion of proximal joint obsolete.

Colour not yet ascertained.

Length of adult female 0.60 mm.

Remarks.—This form seems to be nearest allied to *L. macera* G. O. Sars, but is of somewhat larger size, and moreover at once distinguished by the less elongated caudal rami. The shape of the last pair of legs is also rather different.

Occurrence.—Several specimens of this form, both males and females, were picked up from samples taken at Korshavn at depths ranging from 30 to 50 fathoms.

59. *Laophonte abbreviata*, G. O. Sars, n. sp.

(Pl. XLVIII).

Specific Characters.—*Female.* Body quite unusually short and stout, and pronouncedly depressed in its anterior part. Cephalic segment of very large size, far exceeding in length the remaining part of the trunk, being broadest behind and gradually somewhat contracted in front; rostral projection rather prominent and somewhat blunted at the end, which appears slightly bilobular. Urosome somewhat tapered behind, and about the length of the cephalic segment; lateral expansions of the segments comparatively small, but well defined and densely spinulose at the edges; last segment, as usual, not expanded and about twice as broad as it is long; anal opercle distinctly denticulate at the edge. Caudal rami of moderate size, about the length of the anal segment, and somewhat divergent; apical setæ rather slender. Anterior antennæ moderately long and composed of 7 well defined joints, the 2nd of which is the largest and oval in form, without any distinct projection of the outer edge. Posterior antennæ with the outer ramus normally developed, somewhat widening distally and provided with 4 subequal ciliated setæ. Posterior maxillipeds rather powerful. 1st pair of legs likewise comparatively strongly built, with the outer ramus distinctly 3-articulate, and extending considerably beyond the middle of the proximal joint of the inner. The 3 succeeding pairs of legs of normal structure. Last pair of legs, however, rather peculiar; distal joint comparatively large and almost perfectly orbicular in outline, carrying 6 rather short setæ, 2 of which are attached somewhat inside the edge; inner expansion of proximal joint quite short, with 5 marginal setæ, the outermost one very small.

Copepoda

Idyæidæ

Suppl. Volume

Pl. XXXIII



G. O. Sars def.

1. *Idyella major*, G. O. Sars
2. " *exigua*, G. O. Sars
3. *Idyanthe dilatata*, G. O. Sars

Copepoda

Diosaccidæ

Suppl. Volume

Pl. XXXIV



G. O. Sars, del.

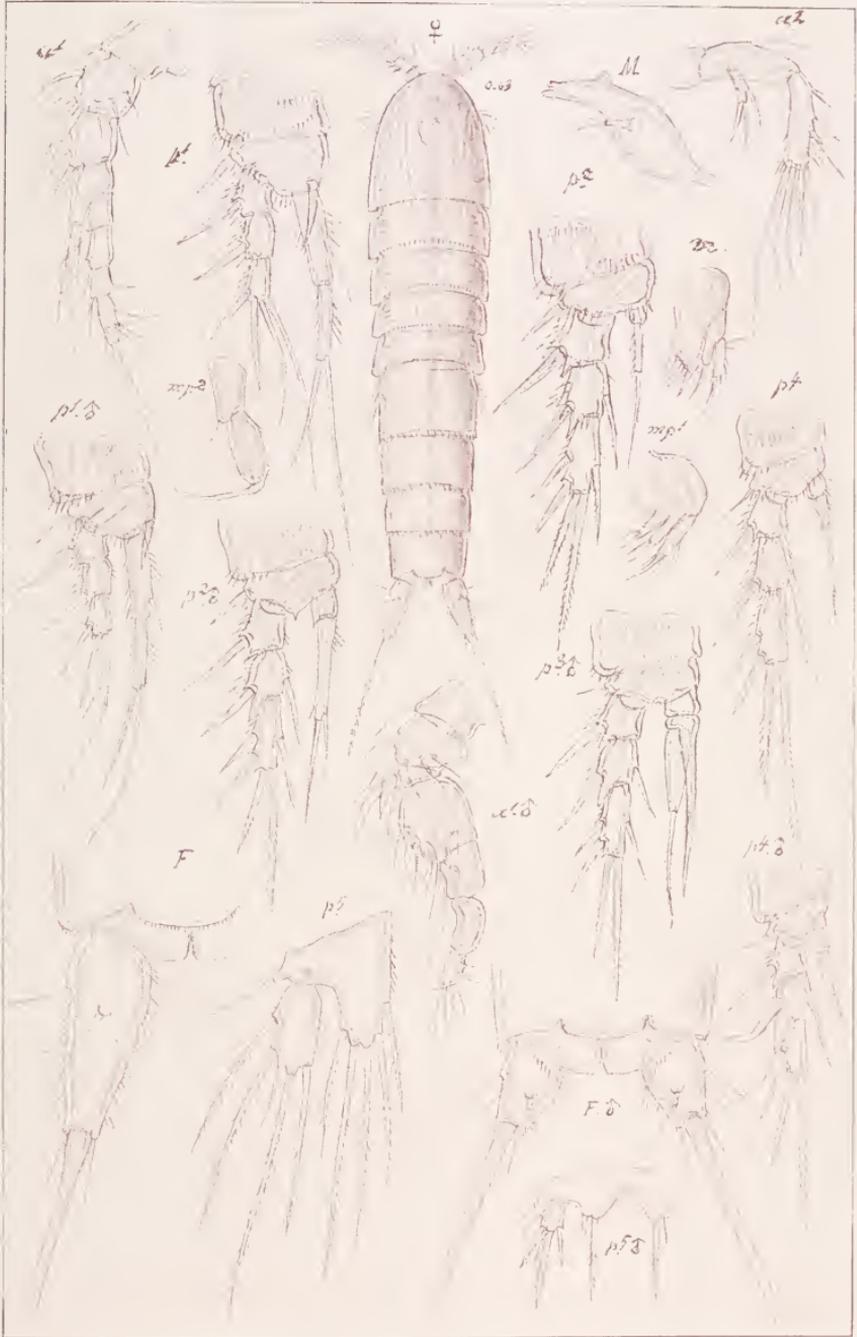
Stenheliosis affinis, G. O. Sars

Copepoda

Canthocamptidæ

Suppl. Volume

Pl. XXXV



G. O. Sars, del.

Attheyella Schmeili (Mrázek)

Copepoda

Canthocamptidæ

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Pl. XXXVI



G. O. Sars, del.

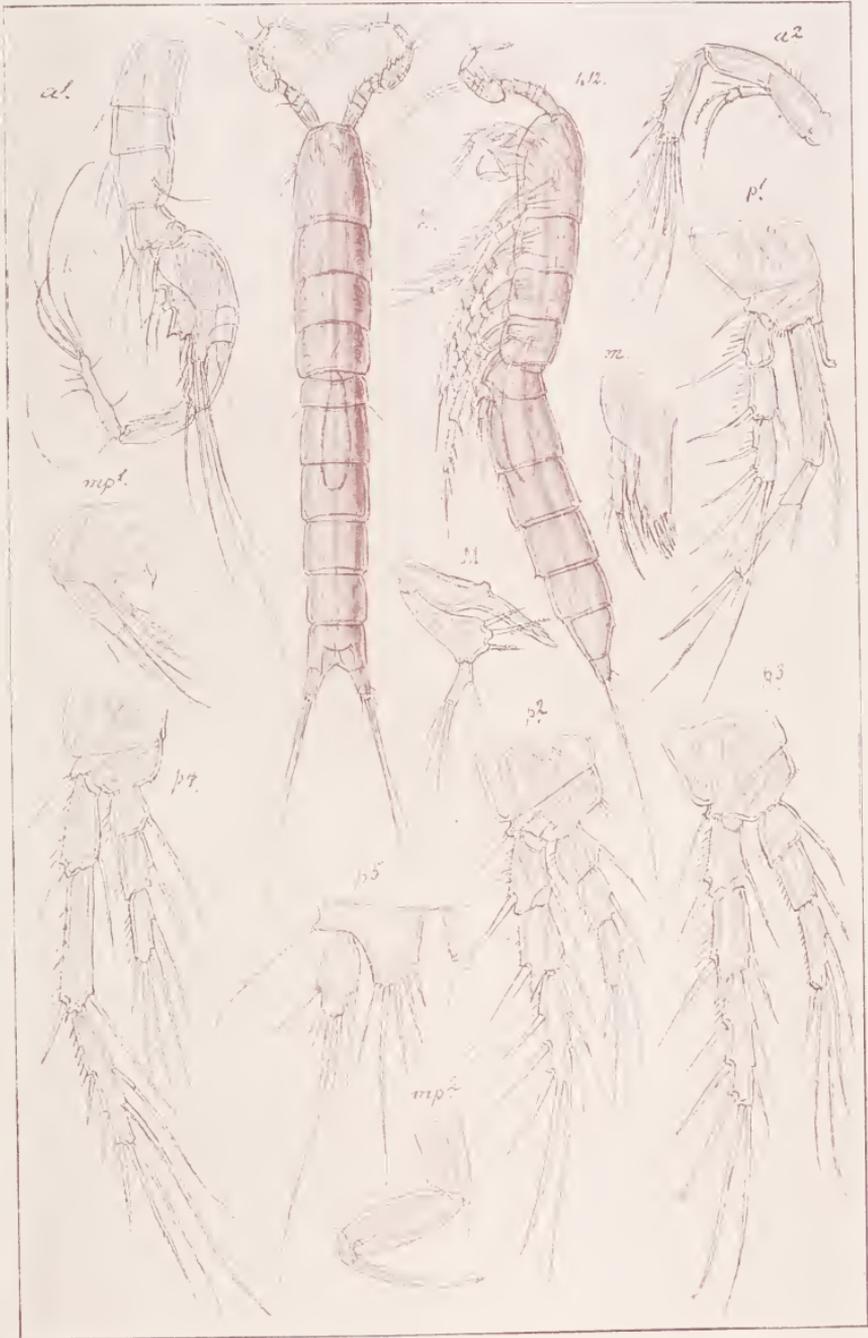
Ameira dubia, G. O. Sars

Copepoda

Suppl. Volume

Canthocamptidæ

Pl. XXXVII



G. O. Sars, del.

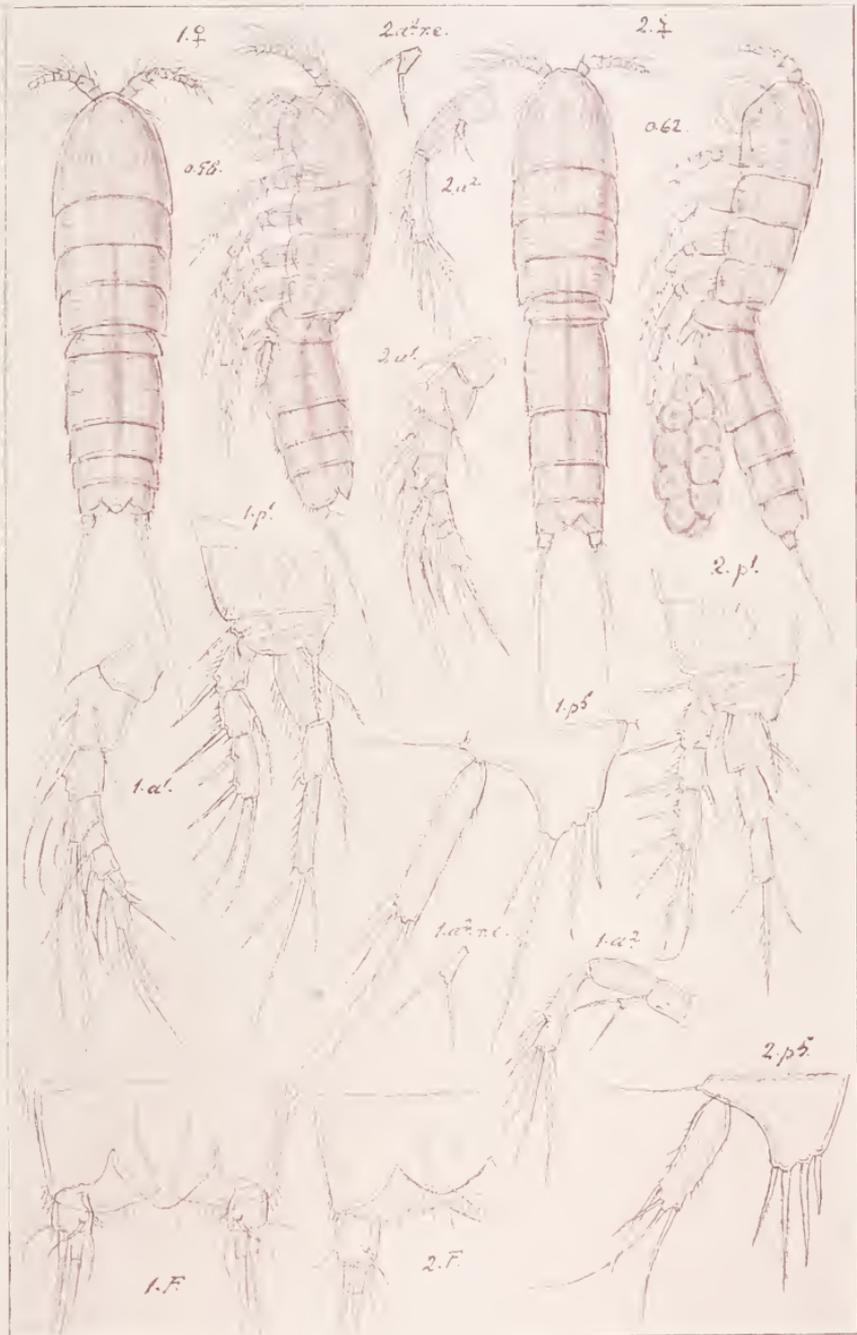
Ameira exilis, Scott

Copepoda

Canthocamptidae

Suppl. Volume

Pl. XXXVIII



G. O. Sars, del.

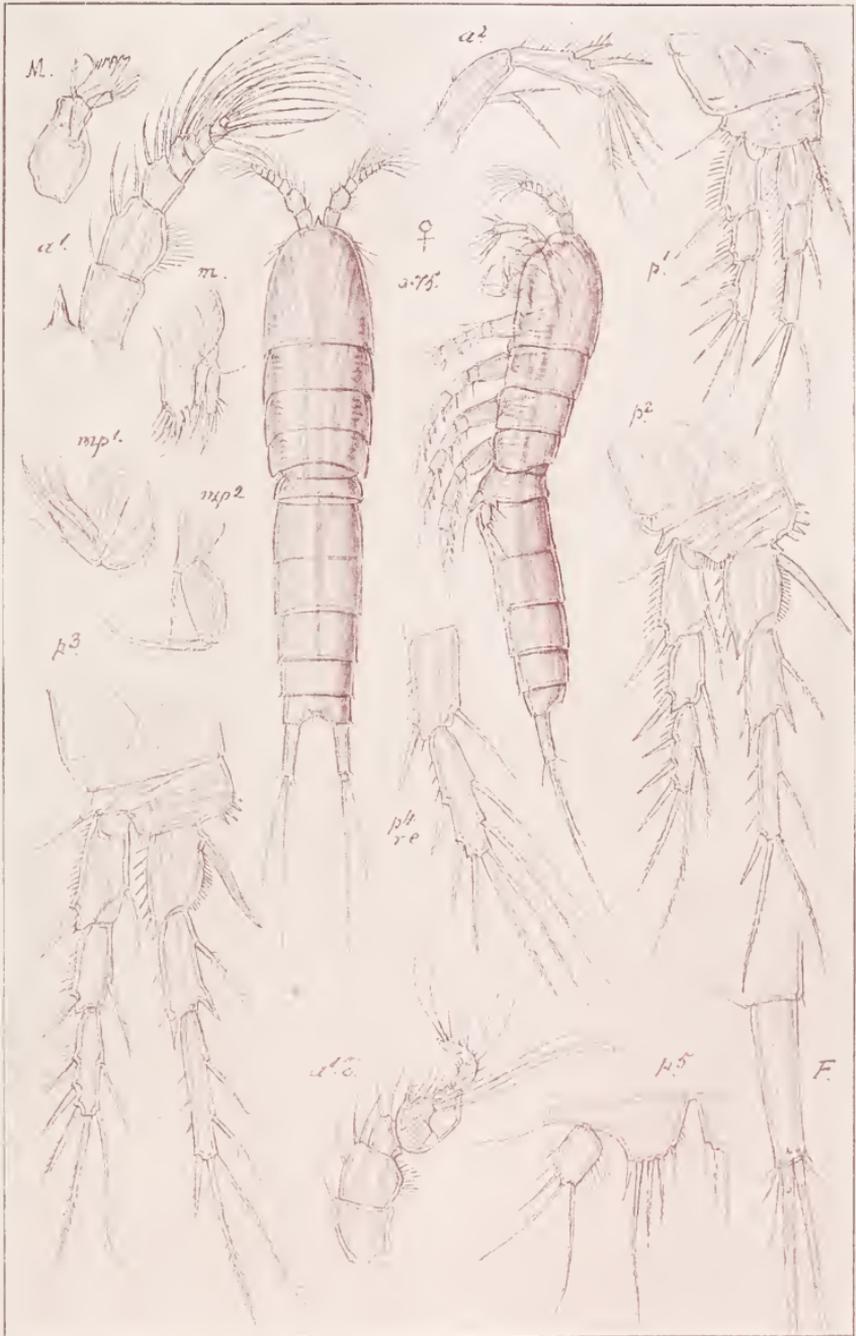
1. *Parameira longiremis* (Scott)
2. " *intermedia* (Scott)

Copepoda

Canthocamptidæ

Suppl. Volume

Pl. XXXIX



G O Sars, del.

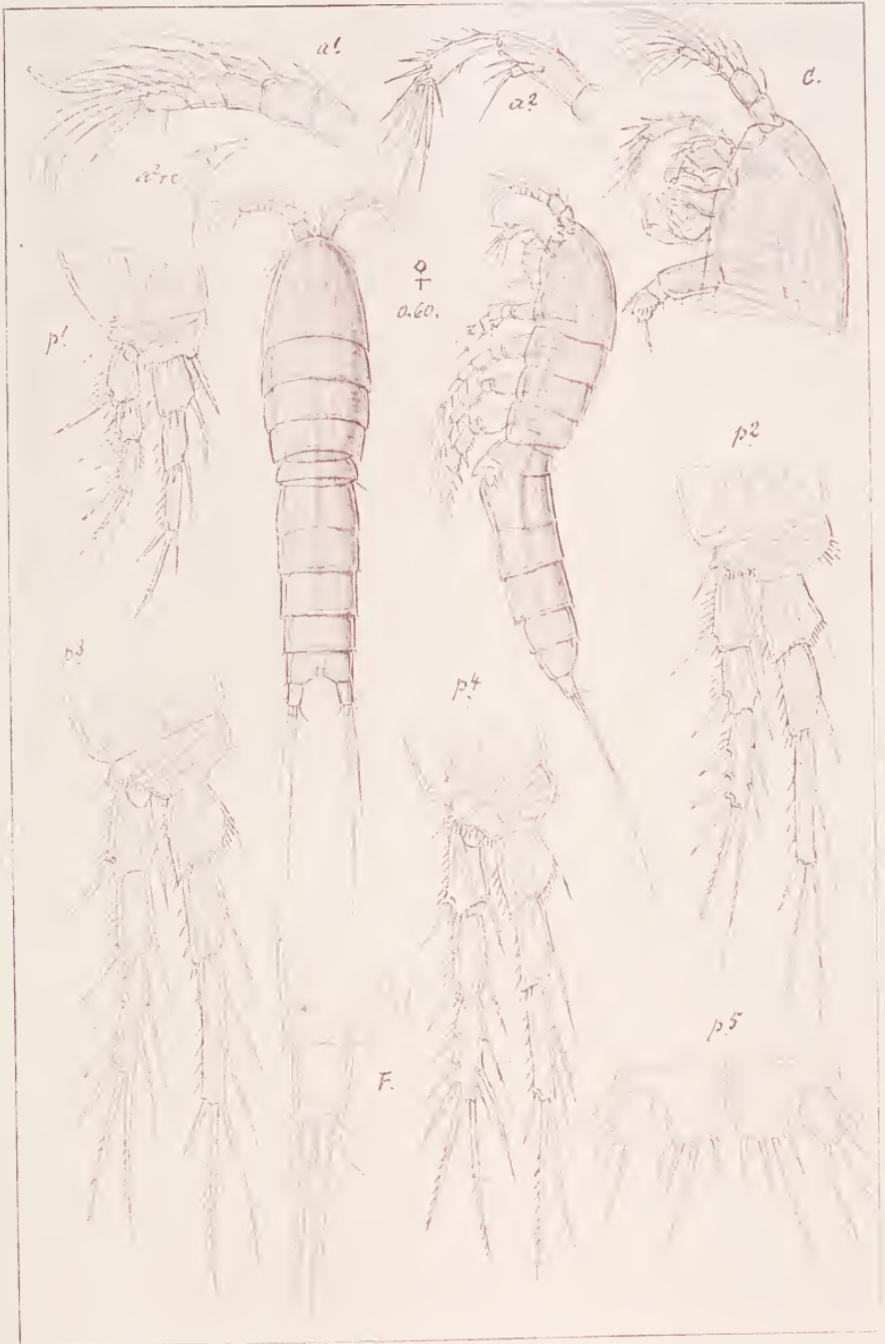
Pseudameira gracilis, G. O. Sars

Copepoda

Canthocamptidæ

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Pl. XL



G. O. Sars, del.

Pseudameira mixta, G. O. Sars

Copepoda

Canthocamptidæ

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Pl. XLI



G. O. Sars, del.

Stenocopia minor, G. O. Sars

Copepoda

Canthocamptidæ

Suppl. Volume

Pl. XLII



G. O. Sars, del.

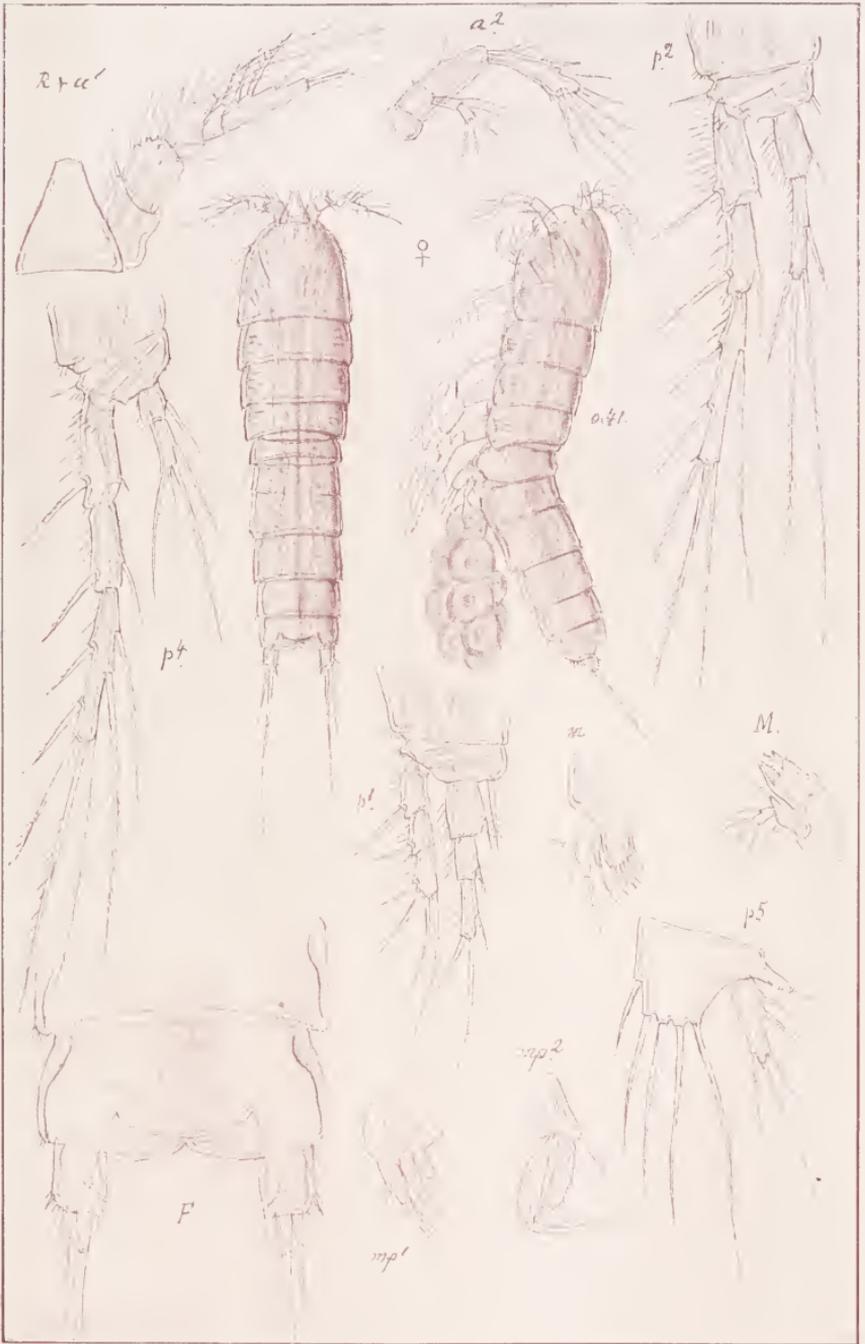
Cletomesochra major, G. O. Sars

Copepoda

Canthocamptidæ

Suppl. Volume

Pl. XLIII



G. O. Sars, del.

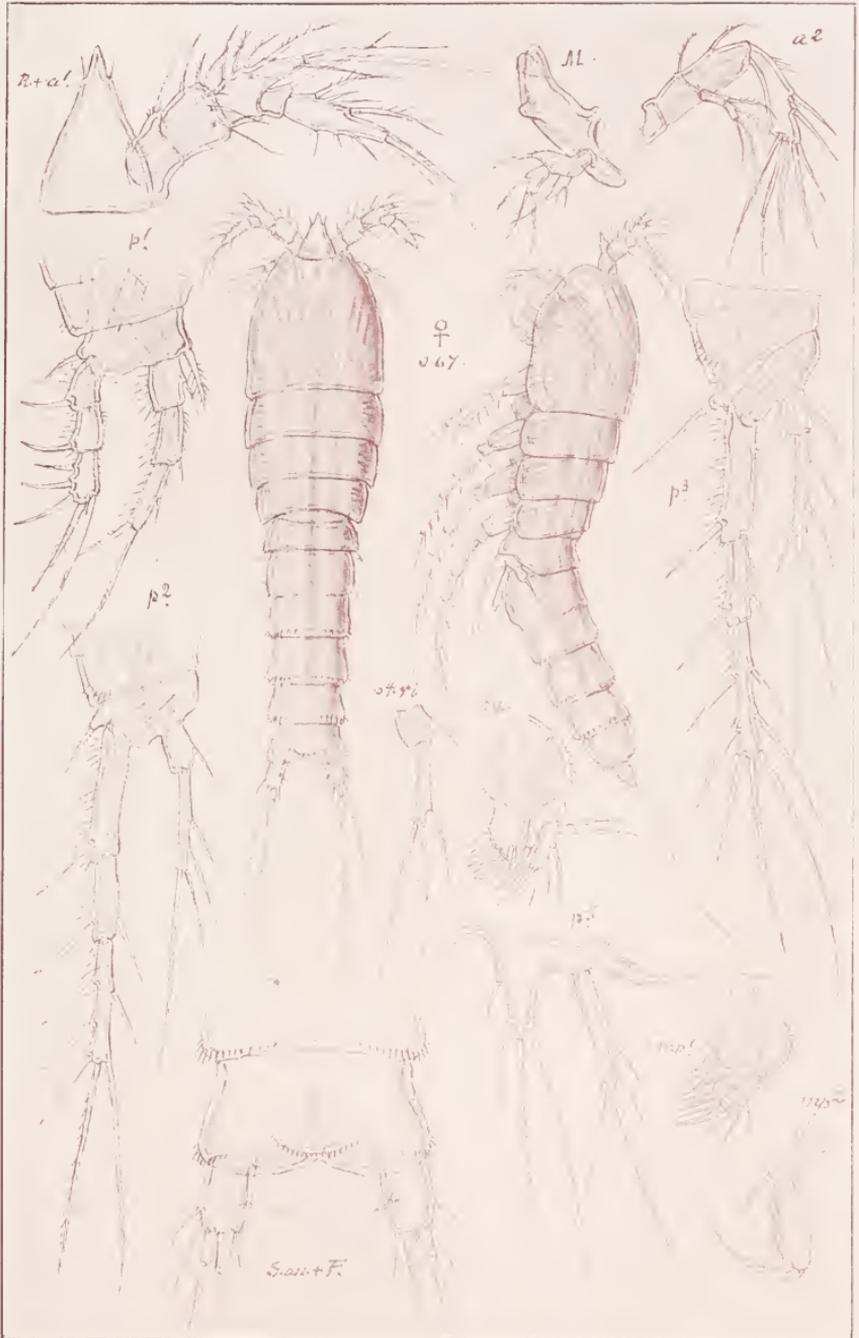
Cletomesochra nana, G. O. Sars

Copepoda

Canthocamptidæ

Suppl. Volume

Pl. XLIV



G. O. Sars, del.

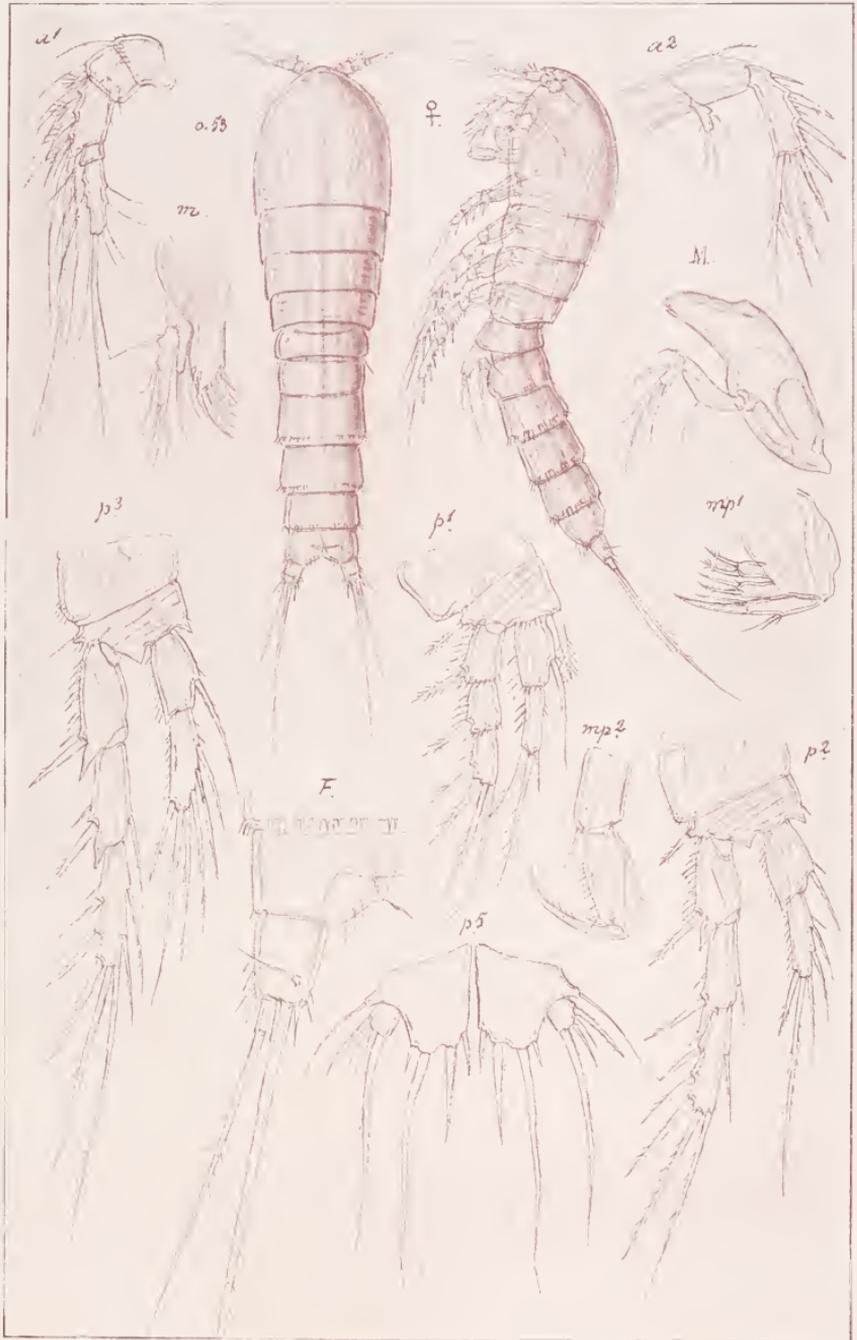
Cletomesochra rostrata, G. O. Sars

Copepoda

Canthocamptidæ

Suppl. Volume

Pl. XLV



G. O. Sars, del.

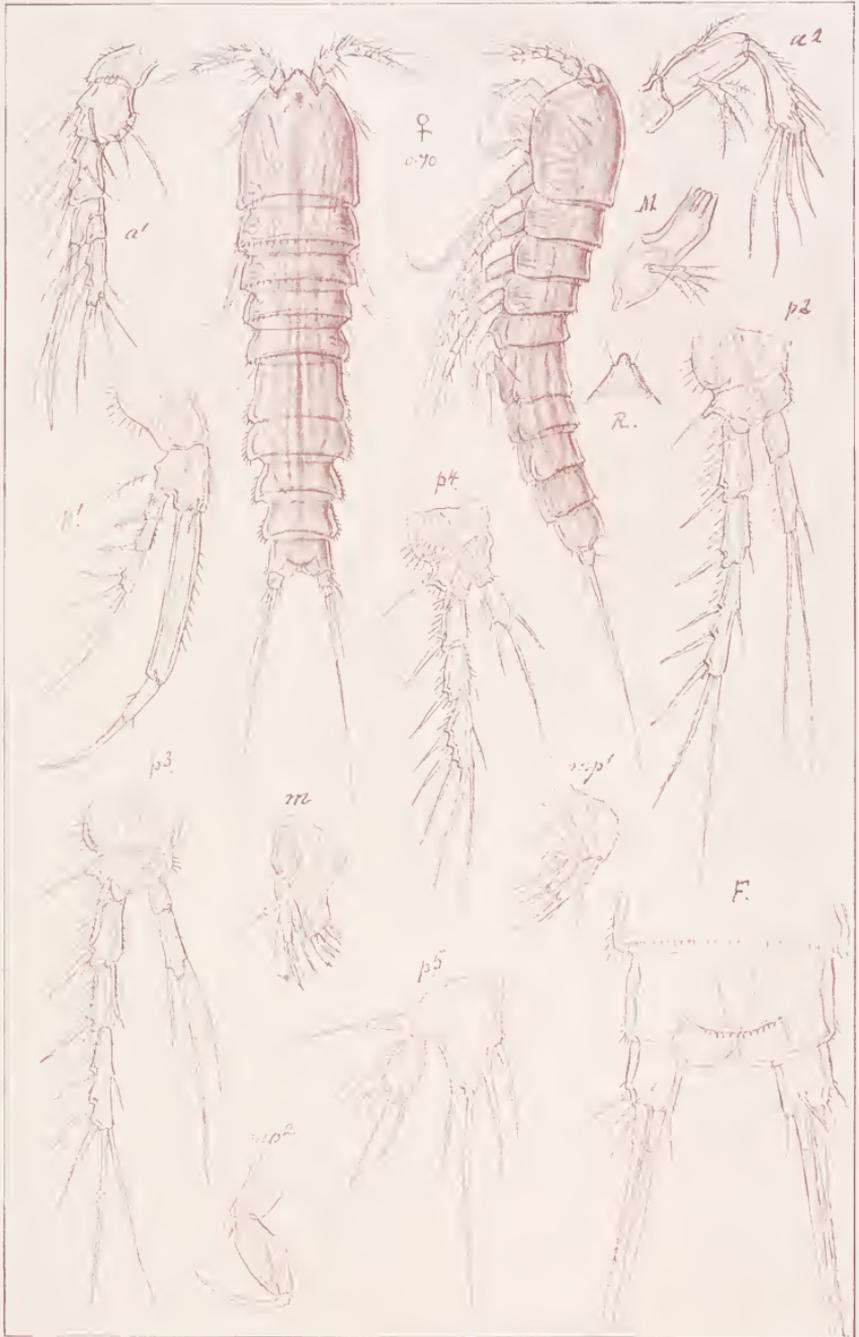
Hemimesochra clavularis, G. O. Sars

Copepoda

Laophontidæ

Suppl. Volume

Pl. XLVI



G. O. Sars, del.

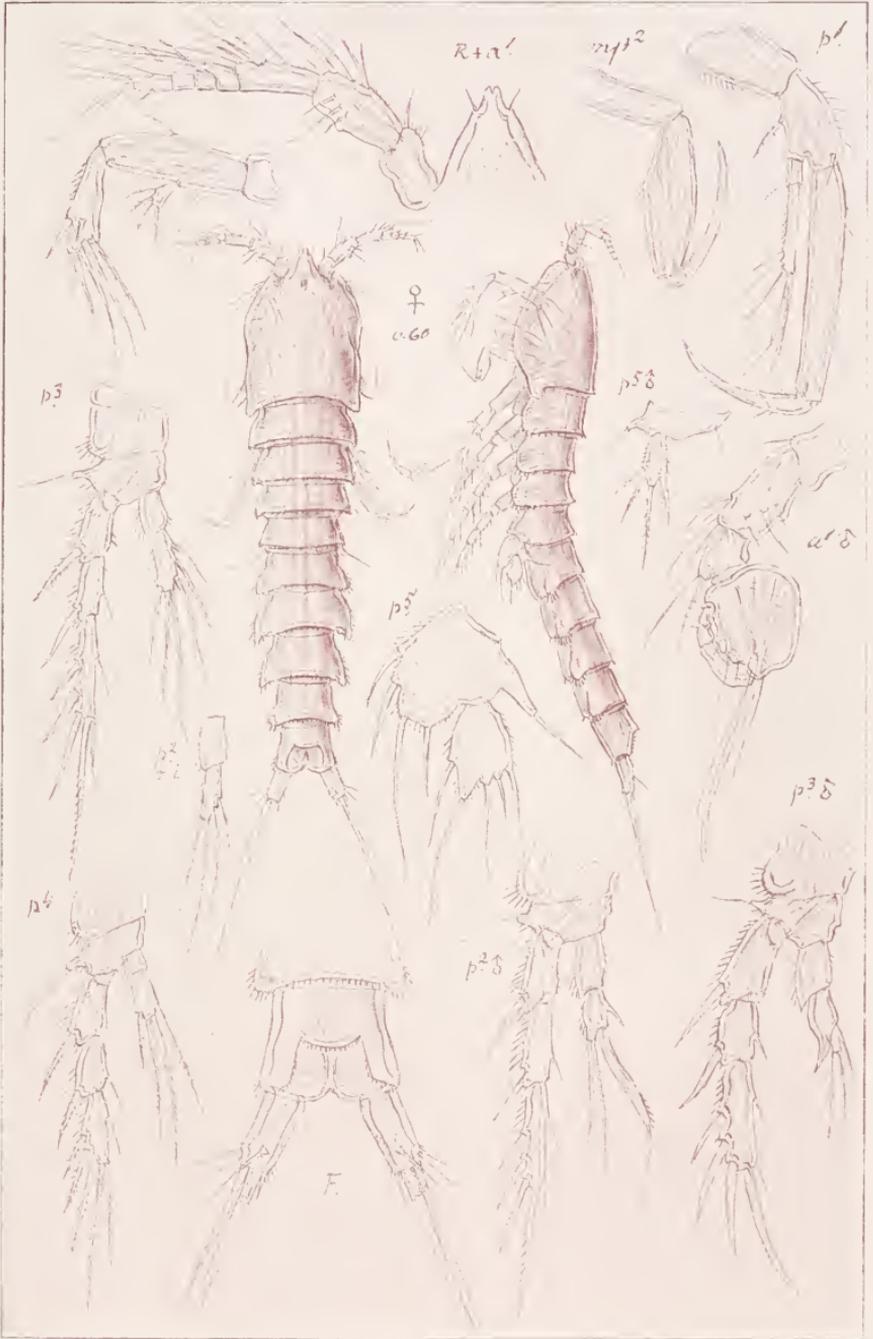
Laophonte brevifurca, G. O. Sars

Copepoda

Laophontidæ

Suppl. Volume

Pl. XLVII



G. O. Sars, del.

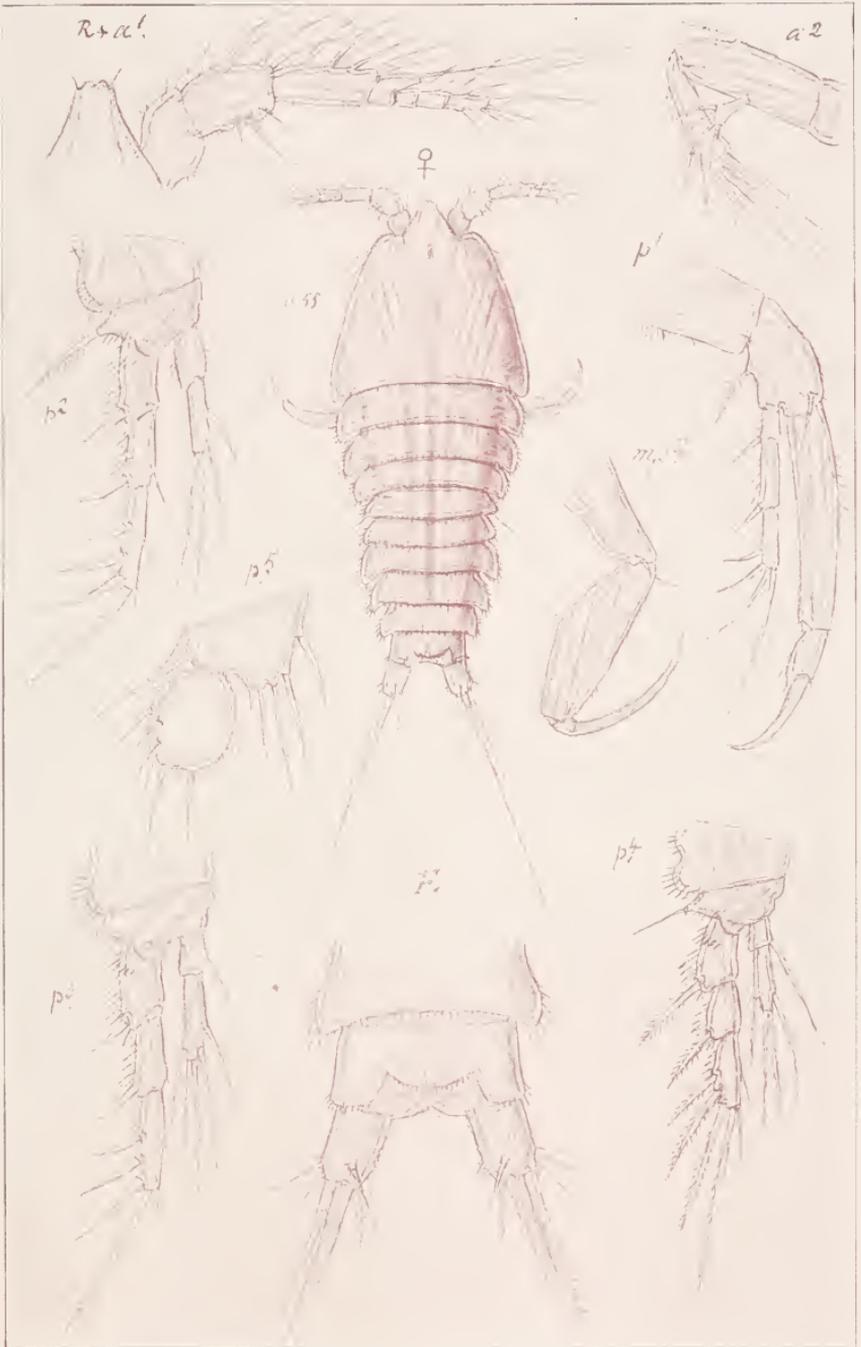
Laophonte tenera, G. O. Sars

Copepoda

Laophontidæ

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G. O. Sars, del.

Laophonte abbreviata, G. O. Sars