THE

VOYAGE OF H.M.S. CHALLENGER.

ZOOLOGY—VOL. XXIV.

PLATES.
REPORT
ON THE
SCIENTIFIC RESULTS
OF THE
VOYAGE OF H.M.S. CHALLENGER
DURING THE YEARS 1873-76
UNDER THE COMMAND OF
CAPTAIN GEORGE S. NARES, R.N., F.R.S.
AND THE LATE
CAPTAIN FRANK TOURLE THOMSON, R.N.
PREPARED UNDER THE SUPERINTENDENCE OF
THE LATE
Sir C. WYVILLE THOMSON, Knt., F.R.S., &c
REGUS PROFESSOR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH
DIRECTOR OF THE CIVILIAN SCIENTIFIC STAFF ON BOARD
AND NOW OF
JOHN MURRAY
ONE OF THE NATURALISTS OF THE EXPEDITION

ZOOLOGY—VOL. XXIV.
PLATES

Published by Order of her Majesty's Government

PRINTED FOR HER MAJESTY'S STATIONERY OFFICE
AND SOLD BY
LONDON—EYRE & SPOTTISWOOD, EAST HARDING STREET, LITTLE LAMB
EDINBURGH—ADAM & CHARLES BLACK
DUBLIN—HODGES, FIGGIS, & CO

1880
CONTENTS.

Report on the Crustacea Macrura dredged by H.M.S. Challenger during the years 1873-1876.

By C. Spence Bate, F.R.S., &c.
EDITORIAL NOTE.

These Plates illustrate the text of Mr. Spence Bate's Report on the Crustacea Macrura, and number in all 157—two of them illustrating Dr. Hooch's Appendix to the Report on a parasitic Cirriped.

John Murray.

Challenger Office, 32 Queen Street,
Edinburgh, 8th May 1888.
PLATE I.
PLATE I.

The same letters represent homological parts on all the plates.

Cheiroplatea cenobita (p. 12).

Fig. 12. Lateral view; enlarged twice.

1a. Ophthalmopod or eye.
1b. First antenna.
1c. Second antenna.
1d. Siagon or mandible.
1e. First siagnopod or maxilla.
1f. Second siagnopod or maxilla.
1g. Third siagnopod or maxilla (injured?).
1h. First gnathopod.
1i. Second gnathopod.
1k. First pair of pereiopoda, chelae.
1n. Fourth pereiopod; terminal joints.
1o. Fifth pereiopod; terminal joints.
1br. Branchial plume.
1r. String of ova.
1rzv. Rhipidura; z, telson; v,v, posterior pair of pleopoda.

Cheramus orientalis (p. 30).

2. Lateral view; enlarged four times.
2c. Cephalon and carapace (dorsal view).
2a. Ophthalmopod or eye.
2b. First antenna. Flagella.
2i. Second gnathopod.
2o. Fifth pereiopod; terminal joints.
2q. Second pleopod.
2r. Third pleopod.
2s. Fourth pleopod; ms, stylamblys, cincinnuli, and hair: magnified.
2br. Branchial plume.
2br. Section of branchia.
2v. Posterior pleopoda, margin; magnified.
2z. Telson.
PLATE II.
PLATE II.

*Cheramus occidentalis* (p. 32).

Fig. 1. Lateral view; enlarged two and a half times.

1c. Cephalon, lateral view of carapace, with ophthalmopod, first antenna, and peduncle of second.

1z. Telson: r, sixth pair of pleopoda.

*Callianassa occidentalis* (p. 29).

2k. First pereiopod: natural size.

*Scallasis amboinæ* (p. 34).

3. Lateral view; enlarged four times.

3a,a. Ophthalmopoda.

3b. First antenna.

3i. Second pair of gnathopoda (attached).

3o. Fifth pereiopod.

3r. Third pleopod.

3v.ms. Stylamblys; magnified.

3br. Branchial plume.

3rzv. Rhipidura; z, telson; r,v, posterior pair of pleopoda.

4. Ventral aspect; enlarged six times. Posterior somites of pleon and rhipidura reversed.
PLATE III.
PLATE III.

*Thalassina scorpionoides*. nat. size (p. 19).

c. Peduncle of first antenna; $c''$, coxal joint seen in section, showing the acoustic apparatus; $c'''$, arrangement of hairs within the chamber; $c''''$, one of the hairs magnified.

d. Siagon or mandible.

e. First siagnopod.

f. Second siagnopod, with one of the hairs of the mastigobranchial lash magnified in sections.
THALASSINA
FOSSUMONDOSE
PLATE IV.
Fig. 1. Pereion, showing the form and arrangement of the branchiae: lateral wall of the carapace removed.

"h. First gnathopod with rudimentary mastigobranchia, with podobranchia and arthrobranchia attached; h". arthrobranchial plume (detached): enlarged.

"i. Second gnathopod with rudimentary mastigobranchia, with podobranchia attached; i". arthrobranchial plume detached, showing the under side; enlarged.

"k. Coxa of first pereiopod with rudimentary mastigobranchial lash, with the podobranchial plume attached; k". anterior arthrobranchia detached, showing under side; k". posterior arthrobranchia, showing upper surface; k". under surface of the base of the same; enlarged.
PLATE V.
PLATE V.

Paraxius altus (p. 37).

Fig. 1. Lateral view; enlarged three times.
.. 1. Rostrum, upper surface.
.. 1d. Siagon or mandible.
.. 1g. Third siagonpod.
.. 1h. First gnathopod.
.. 1i. Second gnathopod (with podobranchia and mastigobranchia detached)
.. 1k. First pereiopod.
.. 1l. Second pereiopod.
.. 1o. Fifth pereiopod (extremity).
.. 1q. Second pleopod (part).
... 1rz. Rhipidura; z, telson; c.r, pleopoda.
.. 1br. Branchial plumes.

Eiconaxius acutifrons (p. 40).

.. 29. Lateral view; enlarged three and a half times.
.. 2z. Upper surface of rostrum, female.
.. 2a. Rostrum, male.
.. 2d. Siagon or mandible.
.. 2g. Third siagonpod.
.. 2h. First gnathopod.
.. 2i. Second gnathopod.
.. 2kl. First pereiopod; from the left side.
.. 2q. Third pleopod, with stylamblys and a cincinnulus detached and magnified.

Eiconaxius kermoderi, female (p. 43).

.. 3z. Lateral view of a female specimen; enlarged twice.
.. 3kl. First pereiopod; from the left side.
.. 3kr. First pereiopod; from the right side.
.. 3l. Second pereiopod.

Eiconaxius parvus (p. 44).

.. 4. Lateral view of a female specimen; enlarged four times.
.. 5. Brephalos extracted from the ovum, seen from the ventral surface; magnified about thirty times.
1 PARAXIUS ALTUS
2 EICONAXIUS ACUTIFRONS
3 EICONAXIUS PERMARG.
4 EICONAXIUS PARUS
5 EICONAXIUS PARVUS BREPHALUS
PLATE VI.
PLATE VI.

*Thaumastocheles zaleucus* naut. size (p. 47).

c. Ventral aspect of the cephalon.
d'. Frontal aspect of the same.
b. First antenna.
c. Second antenna.
h. First gnathopod.
i. Second gnathopod.
j'. First pereiopod, showing the propodos.
k'. First pereiopod, showing the articulation of the dactylos.
k'''. First pereiopod, showing the articulation of the ischium with the basis.
n. Fourth pereiopod; terminal joints.
o. Fifth pereiopod; terminal joints.
p. First pleopod.
q. Second pleopod.
PLATE VII.

*Thaumastochelis zaleuca* (p. 47).

Fig. 1. Percion; lateral view, with part of carapace removed to show the arrangement of the branchiae.

1br. Diagram of the vertical arrangement of a section of the branchial apparatus.

1c. First siagnopod.

1f. Second siagnopod.

1y. Third siagnopod.

1h. First gnathopod.

*Ibacus verdi* (p. 58).

2. Dorsal aspect of the percion with the carapace removed to show the branchiae; left side with the branchiae intact, right shown in section.

2d. Siagones or mandibles; *ff* shows the position of the extremities of the second pair of siagnopoda.

2e. First pair of siagnopoda.

2f. Second pair of siagnopoda.

2y. Third pair of siagnopoda.

2k. First pereiopod; showing the coxa with mastigobranchia and podobranchia attached.

plo'. Upper surface of the pyloric apparatus.

plo". Under surface of the pyloric apparatus.
PLATE VIII.
PLATE VIII.

Nonius cerdi, nat. size (p. 58).

2. Male, showing ventral aspect.

3. Female, showing dorsal aspect.

c. Cephalon; dorsal aspect: d, first antennae: e, second antennae.

6. Fifth pereiopod of the male.

62. Fifth pereiopod of the female.

p. First pleopod of the male.

p2. First pleopod of the female.

q. Second pleopod of the male.

q2. Second pleopod of the female.
PLATE IX.

Ibaccus brevipes. (p. 62).

Fig. 1. Dorsal aspect of the animal, male; nat. size.
   1♂. Second somite of pleon.
   1♀. Second pleopod.

Ibaccus alticrenatus (p. 63).

   2♀. Dorsal view of a female; nat. size.

Arctus sordidus (p. 66).

   3. Dorsal view of a female; nat. size.
   3♂. One side of the ventral aspect of pereion; enlarged.
   3♀♂. Second pleopod of the male.
   3♀♀. Second pleopod of the female.
   3♂♂. Third pleopod of the male.
   3♀♀. Third pleopod of the female.

Arctus orientalis (p. 68).

   4. Dorsal view of the female; nat. size.
   4♂. One side of the ventral aspect of pereion; enlarged.
   4♂♂. Extremity of posterior pereiopod of the male.
   4♀♀. Extremity of posterior pereiopod of the female.
1 IBACCUS BREVIPES
2 ALTICRENA NTUS
3 ARCTUS VRRIDUS
4 ORIENTALIS
PLATE X.
PLATE X.

*Arctus tuberculatus* (p. 70).

Fig. 1. Lateral view; natural size.

,, 2. Dorsal view; enlarged three times.

,, 1o 3. Fifth pair of pereiopoda of the male.

,, 1o 3. Fifth pair of pereiopoda of the female.

*Arctus imperatorius* (p. 71).

,, 3. Dorsal aspect of a specimen; enlarged four times.

,, 3". Ventral aspect of pereion.

*Arctus pygmaeus* (p. 73).

,, 4? Dorsal aspect of a female; enlarged four and a half times.

,, 4c. Second antenna.

,, 4q. Third pleopod and stylamblys; the latter detached and magnified.

,, 4c. Brephalos; extracted from the ovum.
PLATE Xa.
PLATE Xa.

Panulirus guttatus, var., nat. size (p. 78).

c. Part of second antenna, showing the stridulating organ.
PANULIRUS GUTTATUS
PLATE XI.
PLATE XI.

Palinostus lalandii (p. 86).

(Palinosus lalandii on Plate.)

Fig 1. A young specimen: twice the natural size.

1q. Second pleopod.

Panulirus angulatus (p. 81).

2. Ventral aspect of a young and imperfect specimen; enlarged two and a half times.

2q. Second pleopod.

3. Dorsal aspect.

4. Lateral aspect.
1. PALINURUS LALANDII
2. PANULIRUS ANGULATUS (VENTRAL)
3. PANULIRUS ANGULATUS (DORSAL)
4. PANULIRUS ANGULATUS (LATERAL)
PLATE XI A.
PLATE XIA.

*Palinostus lalandii*, nat. size (p. 86).
Fig. 1. Lateral view, with part of the carapace removed to show the arrangement of the branchiae.

1h. First gnathopod.
1i. Second gnathopod.

Fig. 2. Lateral view of pereion, with part of the carapace removed to show the arrangement of the branchiae; slightly enlarged.

2h. First gnathopod.
2i. Second gnathopod.
1. Palinurus Linn. 2. Panulirus P. s. 3.
PLATE XIIa.
PLATE XIIa.

PALINURIIDÆ—Development.

Fig. 1. Brephalos of *Palinurus vulgaris*, extracted from the ovum; magnified twenty-five times (p. 89).

2. Brephalos of a *Palinurus (?)*, taken off Samboangan; magnified twenty-eight times (p. 90).

3. Phyllosoma of a *Panulirus (?)*, taken off the Celebes Islands; magnified nine times (p. 91).

4. Cephalon of fig. 2; *a,a.* bases of ophthalmopoda; *b,b.* bases of first pair of antennæ; *c,c.* bases of second pair of antennæ.
PLATE XII.
PLATE XIIb.

 Palinuridæ—Development (p. 89).

Fig. 1. Phyllosoma of a Panulirus (?), taken off the Fiji Islands: magnified seven times (p. 91).

  2. Pleon of the same: c, posterior pleopod.

  3. Nervous system of a Phyllosoma of Panulirus (?) (p. 91).
     a.a. Ophthalmopoda.
     b.b. First antennae.
     c.c. Second antennae.
     c'. The phymacerite.
     g.g. Green gland (g.g shows structure enlarged).
     d. Mandibles.
     e. First pair of siagnopoda.
     v-v. Ganglia of thorax.
     v.o. Ganglia of pereion.
     a.o. Posterior pair of pereiopoda.
     v-t. Ganglia of pleon.
     v. Sixth somite of pleon.
     z.c. Rhipidura.

 Scyllaridæ—Development (p. 95).

  4b. Second antenna of a Phyllosoma of one of the Scyllaridæ (p. 96).

  4e. First siagnopod.

  4f. Second siagnopod.

  4g. First gnathopod (†).

  4h. Second gnathopod (†).

  4j. Podobranchia and mastigobranchia of pereiopod: not yet escaped from the embryonic sac.
1-3 PAULUNIDAE: PHYLLOSUMA DEVELOPMENT
4 SCYLLARIDA
PLATE XIIc.
PLATE XIIc.

PALINURIDÆ and SCYLLARIDÆ—Development (p. 95).

Fig. 1. Phyllosoma of Panulirus (?), from the West Indies; enlarged three times (pp. 94, 97).

,, 2. Phyllosoma of one of the Scyllaridæ; enlarged eight times (p. 96).
PLATE XII.

(ZOO. CHALL. EXP.—PART II. —1886.)—Eff.
PLATE XII.

Scyllaride—Development

Fig. 1. *Phyllosoma furcivandalum*. Young of one of the Scyllaridae; enlarged fifteen times (p. 98).

2f. Second siagunopod of *Phyllosoma verrucose*; enlarged (p. 98).

2z. Telson of the same.

3p. Pleon of *Phyllosoma philippinense*; z, telson; m, posterior pair of pereiopoda (p. 99).
PLATE XIIe.
PLATE XIIe.

_Eryoniceus caecus_ (p. 122).

Fig. 1. Dorsal aspect; enlarged five and a half times.

... 2. Ventral aspect; enlarged seven times.

b. First antenna.
c. Second antenna.
l. First pereiopod.
f. Second pereiopod.
m. Third pereiopod.
n. Fourth pereiopod.
o. Fifth pereiopod.
r. Pleon.
p. First pleopod.
z. Telson.
h. Branchial plume.
PLATE XIII.

Polycheles crucifera (p. 127).

Fig. 1. Dorsal aspect: enlarged two and a half times.

c. Anterior portion of the dorsal surface of the cephalon; considerably enlarged, showing both pairs of antennae (b, c), and the ophthalmopoda.

r. Pleon; lateral view.

a. Ophthalmopod seen from the front when the antennae, b and c, are removed.

b. First antenna, the peduncle, viewed laterally.

j. Second gnathopod.

o. Terminal joints of the posterior pair of pereiopoda.

p. First pleopod of male.

q. Second pleopod with two stylamblydes of male.
PLATE XIV.
PLATE XIV.

*Polycheles baccata* (p. 131).

Fig. 1. Dorsal view of male; enlarged one-fourth.

,, 1c. Anterior portion of cephalon, showing a, ocular notch; b, first antenna; c, second antenna.

,, 1p. Pleon; lateral view.

,, 1o, ♀. Posterior pereiopod of female.

,, 1q, oo. Posterior pair of pereiopoda of male; pp, first pair of pleopoda of same.

,, 1p, ♀. First pleopod of female.

,, 1q, ♦. Second pleopod of male, with two stylamblydes.

,, 1q, ♀. Second pleopod of female, with one stylamblys.

*Polycheles helleri* (p. 138).

,, 2. Dorsal view; enlarged three times.

,, 2c. Anterior portion of cephalon, showing a, ocular notch; b, first antenna; c, second antenna.

,, 2p. Pleon; lateral view.

,, 2o, ♦. Posterior pereiopod of male.

,, 2p, ♦. First pleopod of male.
PLATE XV.
PLATE XV.

*Polycheles helleri* (p. 138).

(*Pentacheles helleri* on Plate.)

Fig. 1. Anterior portion of the dorsal surface of the cephalon, showing the ophthalmopoda and both pairs of antennae (b, c).

*Pentacheles obscura* (p. 143).

, 2, ♀. Dorsal aspect of the female; enlarged twice.

, 2p. Pleon; lateral view.

, 2o, ♀. Posterior pereiopod, chelate in female.

*Stereomastis suhmi* (p. 154).

(*Pentacheles suhmi* on Plate.)

, 3c. Dorsal view of the animal, male; enlarged twice.

, 3c. Lateral half of the anterior dorsal portion of cephalon, showing ocular notch, ophthalmopod (c), and first antenna (b).

, 3c. First antenna.

, 3o, ♀. Posterior pereiopod of male, showing elongation of the vas deferens.

, 4. Lateral view of the same animal.

*Pentacheles levis* (p. 144).

, 4c. Anterior portion of cephalon; dorsal surface, showing ocular notch with ophthalmopod.

, 5♀. Dorsal view of female; enlarged twice.

, 5p. Pleon; lateral view.

, 5o, ♀. Posterior pair of pleopoda in female.
PLATE XVI.
PLATE XVI.

Pentacheles gracilis (p. 146).

Fig. 1, ♀. Dorsal view of the female; enlarged one and three-quarter times.

,, 1c. Part of the anterior portion of the cephalon; enlarged, showing the ocular notch (a), with the position of the ophthalmopod traced beneath; first antenna (b); second antenna (c).

,, 1o. Posterior pair of pereiopoda of female.

,, 2. Lateral view of the same animal.

Stereomastis auriculata (p. 159).

(Pentacheles auriculata on Plate.)

,, 3, ♀. Dorsal view of the female.

,, 3c. Anterior portion of the dorsal surface of the cephalon, showing the ocular notch with the ophthalmopod (a).

,, 3o". Anterior portion of the cephalon, showing the lateral and under view, ophthalmopod (a), and second antenna (c).

,, 3o. Chela of posterior pereiopod; female.

,, 3q. Second pair of pleopoda.

,, 4. Lateral view of the same animal.
PLATE XVII.
PLATE XVII.

*Pentacheles euthrix*, female; enlarged one and three-quarter times (p. 149).

(*Pentacheles euthrix* on Plate).

**c.** Cephalon, showing ophthalmopoda (*a, a*); first pair of antennae (*b, b*); second pair of antennae (*c, c*).

**c'.** Cephalon, one side of frontal aspect: *a*, ophthalmopoda; *b, c*, antennae removed.

**c''*.** Cephalon, under surface, showing ophthalmopod (*a*); first antenna (*b*); second antenna (*c*); phymacerite (*op*).

- **c.** Second antenna: *op*, phymacerite.
- **c'.** Fifth pereiopod, under surface of terminal chela.
- **c''.** Fifth pereiopod, upper surface of terminal chela.

**p.** Pleon; lateral view.

**p, q.** First pleopod.

**q.** Second pleopod.
PLATE XVIII.

*Willemesia leptodactyla*; enlarged one and a half times (p. 163).

r. Pleon; lateral view.
d. Siagon or mandible; from the inside.
e. First siagnopod or first maxilla.
f. Second siagnopod or second maxilla.
g. Third siagnopod or maxillipod.
h. First gnathopod.
i. Second gnathopod.
j. Coxa and basis of first pereiopod, showing mastigobranchial lash and podobranchial plume.
k'. Chela of first pereiopod.
k". Podobranchia; enlarged.
k"'. Series of small plates on the inner margins of pollex and dactylos.
PLATE XIX.
PLATE XIX.

Willemaesia leptodactyla (p. 163).

c. Cephalon, dorsal aspect. Large variety; enlarged (p. 169).

c". Cephalon, dorsal aspect. Type specimen.

c"". Inferior aspect of the anterior extremity of cephalon, showing first and second pairs of antennae, siagon, third pair of siagnopoda, and first pair of gnathopoda, all in position.

c""". Metope or facial region, showing ophthalmopoda (a, c), position of first pair of antennae (b, b), position of second pair of antennae (e, e).

b. Coxa of first antenna with ophthalmopod (a), in position.

b. The same enlarged, having upper surface partially removed to show the internal structure of the auditory apparatus (ac).

c. Second antenna; view from the upper surface, showing the reversed position of the extremity of the phymacerite (ot).

a. Posterior pair of pereiopoda of male, showing the foramen in the coxa for the passage of the vas deferens.

p, ♂. First pleopod of male, in relative position.

q, ♂. Second pleopod of male, showing two stylamblydes.

q, ♀. Second pleopod in female, showing one stylamblys.

p. Pleon; lateral view.

ple. Internal dental apparatus at the pyloric extremity of stomach.
PLATE XX.
PLATE XX.

*Willemæcia leptodactyla* (p. 163).

Fig. 1. Perceion, with lateral wall of the carapace removed to show the position and arrangement of the branchiae.

_c._ Metope or facial region, showing on one side the relative positions of the ophthalmopod (*a*), and first (*b*) and second antennæ (*c*), from within.

d, d. Siagones or mandibles (the synaphipod should have only two joints).

d″, d‴. Metastomata.

_m._ Cheiloglossa, as seen between the mandibles.

_r._ Third pair of pereiopoda with mastigobranchial lapp and podobranchial plume.

_m″._ One of the hairs and spines from the mastigobranchia; enlarged.

_m‴._ Section of a podobranchial plume.


2. Ovum enlarged, showing advanced condition of the embryo.
PLATE XXI.

*Phoberus tenuimanus*, nat. size (p. 171).

(*Acanthacaris tenuimanus* on Plate.)

1. a,a. Ophthalmopoda.
2. c. Cephalon; b, first antenna, left side; e, second antenna, right side.
3. e. Peduncle of second antenna, seen on the lower side.
4. k. Chela of first pereiopod, left side.
5. k'. Mastigobranchial leaf of same with podobranchial plume attached.
6. k'*. Section of branchial plume.
7. o. Chela of posterior pereiopod.
9. q. Second pleopod.
10. v,z,v. Rhipidura; z, telson; vv, posterior pair of pleopoda.
PLATE XXII.
PLATE XXII.

*Phoberus tenuimanus* (p. 171).

(*Acanthocaris tenuimana* on Plate.)

Percion, with the lateral wall of the carapace removed to show the natural position and arrangement of the branchiae; *i*, second gnathopod; *k-o*, pereiopoda.

Section of a set of branchial plumes and mastigobranchiae; *mb*, mastigobranchiae; *pdb*, podobranchia; *arb, arth*, anterior and posterior arthrobranchiae; *plbr*, pleurobranchia. Above this figure are seen portions of the anterior and posterior arthrobranchia, showing their approximation, *in situ*.

*d*. Siagon (or mandible); from the inside.

c. First siagnopod.

*f*. Second siagnopod.

g. Third siagnopod.

*h*. First gnathopod, with basephysis, mastigobranchial plate and podobranchial plume.

*i*. Second gnathopod, with basephysis, mastigobranchial plate, and podobranchial plume.
ACANTHOCARIS TENTIVANA
PLATE XXIII.
PLATE XXIII.

*Nephropsis rosea* (p. 178).

Fig. 1. Lateral view of a specimen; enlarged one and a half times.

2. Dorsal view.

1c. First siagnopod.

1f. Second siagnopod.

1g. Third siagnopod.

1h. First gnathopod; one of the apical spines enlarged.

1i. Second gnathopod.

*Nephropsis subani* (p. 181).

3. Lateral view of the specimen; enlarged one and a half times.

3e. First siagnopod.
1. 2. **Nephropsis Rosea**
3. " **SuHmi**
PLATE XXIV.
PLATE XXIV.

_Nephropsis rosea_ (p. 178).

Fig. 1. Ventral view; enlarged.

- _b._ First antenna.
- _c._ Peduncle of the second antenna, showing the phymacerite and diagram of its extremity.
- _d._ Siagon or mandible; seen from within.
- _m._ Coxa of the third pereiopod, having the mastigobranchia with the podobranchial plume attached.
- _p._ First pleopod, probably of male.
- _q._ Second pleopod, with stylamblys.
- _r.;z._ _Rhipidura_; _z._ telson; _v,v_, posterior pair of pleopoda.

_Nephropsis suhni_ (p. 181).

,, 2_r.;z._ _Rhipidura_; _z._ telson; _v,v_, posterior pair of pleopoda.
1 Nephropsis Rosea
2 . . . . Suhmi
PLATE XXV.
PLATE XXV.

*Nephrops thomsoni*, nat. size (p. 185).

Fig. 1. ♂.  Dorso-lateral view of the male.

2. ♀.  Dorso-lateral view of the female.

3. *v.z.r.* Rhipidura; *vv*, sixth pair of pleopoda; *z*, telson.
PLATE XXVI.
PLATE XXVI.

*Nephrops thomsoni* (p. 185).

Fig. 1. Carapace, with the lateral wall removed to show the branchiae.

1. Siagon.
2. First siagnopod (basal plate probably wanting).
4. Third siagnopod.
5. First gnathopod.

7. Mastigobranchia with podobranchial plume of same.
8. Section of the plume.
9. Apex of the posterior pleurobranchial plume.
10. First pleopod of male, exhibiting cincinnuli.
11. Second pleopod with stylamblys.
PLATE XXVII.
PLATE XXVII.

*Astacopsis paramattensis* (p. 202).

Fig. 1.  Dorso-lateral view, natural size.

,, 1e.  First siagnopod; 1, 2, 3, 4, homologues of the four respective joints of the typical limb—coxa, basis, ischium, and meros; spines and hairs enlarged.

,, 1f.  Second siagnopod, figures as before.

,, 1g.  Third siagnopod, figures as before; ec, baseephysis.

,, 1h.  First gnathopod, figures as above; 5 carpos, 6 propodos, 7 dactylos; pb, podobranchial plume; arb, arthrobranchial plume; ec, ephysis.

,, 1i.  Second gnathopod, figures as before; pb, podobranchia; arb, arthrobranchia.

,, 1m'.  Podobranchia of third pereiopod attached to the mastigobranchial plate.

,, 1m''.  Section of the mastigobranchial plate and podobranchia of third pereiopod, with hairs from the surface of the former; magnified.

*Astacopsis sydneyensis* (p. 204).

,, 2.  Dorsal view of the specimen; enlarged twice.
PLATE XXVIII.
PLATE XXVIII.

*Astacopsis spinifer* (p. 194).

The lateral wall of the carapace has been removed to show the branchial arrangement; podobranchiae removed to show the plan of the branchiae beneath; arthrobranchiae removed from the first two pairs of pereiopoda to show their position and that of the pleurobranchiae.

- **k.** First pair of pereiopoda.
- **pdb.** Podobranchiae.
- **arb.** Arthrobranchiae.
- **plb.** Pleurobranchiae.
- **mt.** Movable appendages, probably the rudiments of the foliaceous appendages that form the ventral incubatory pouch in certain genera.
- **d.** Siagon or mandible; 1 coxa, 2 basis, 3 terminal joint.
- **e.** First siagnopod; 1 coxa, 2 basis, 3 ischium, 4 terminal joint.
- **f.** Second siagnopod; 1 coxa, which carries the mastigobranchial plate; other numerals as before.
- **g.** Third siagnopod; numerals as before; *cc* a multiarticulate ephysis of the basis.
- **h.** First gnathopod; 1, 2, 3, as before; 4 meros, 5 carpos, 6 propodos.
- **i.** Second gnathopod; numerals as before; *cc*, ephysis; *pdb*, podobranchia.
- **pdb.** Podobranchia.
- **arb.a.** Anterior arthrobranchia.
- **arb.p.** Posterior arthrobranchia. Arranged in a diagrammatic section.
- **plb.** Pleurobranchia.
PLATE XXIX.
PLATE XXIX.

_Spongicola venusta_ (p. 213).

Fig. 1, ♀.  Lateral view (length, 25 mm.); enlarged four times.

,, 2v.  Brephalos, in Zoea form (p. 216).
,, 3c.  Cephalon. The lateral wall of carapace removed to show branchiae in position.
,, e.  First gnathopod.
,, f.  Second gnathopod.
,, g.  Third gnathopod.
,, h.  First gnathopod.
,, i.  Second gnathopod.
,, j".  Coxa, basis, and part of ischium of the same enlarged; _ec_, rudimentary basecephysis; _mb_, rudimentary mastigobranchia; _arthb_, arthrobranchia.
,, i.  Branchiae of same; _mb_, mastigobranchiae; _a,p_, anterior and posterior arthrobranchiae; _pl_, pleurobranchia; _pdb_, podobranchia.
,, k.  Branchiae of first pereiopod, letters as before.
,, l.  Branchiae of second pereiopod, letters as before.
,, m.  Branchiae of third pereiopod, letters as before.
,, n.  Branchiae of fourth pereiopod, letters as before.
,, o, pl.  Pleurobranchia of the fifth pereiopod.
,, r, z, v.  Rhipidura; _v,v_, sixth pair of pleopoda; _z_, telson.
PLATE XXX.

*Stenopus hispidus*, female (length, 45 mm.); enlarged twice (p. 211).

e. First siagnopod.
f. Second siagnopod.
g. Third siagnopod.
h. First gnathopod.
i. Basal part of second gnathopod; enlarged, showing basccephysis, mastigobranchia, and arthrobranchial plume.
p. First pleopod.
q. Second pleopod.
h-o. Diagrammatic plan of the branchial arrangement and proportions.
PLATE XXXI.
PLATE XXXI.

Penaeus canaliculatus, var. japonicus (p. 245).

a. Ophthalmopod.
b. First antenna.
c. Second antenna.
d. Mandible or siagon.
e. First siagnopod or first maxilla.
f. Second siagnopod or second maxilla.
g. Third siagnopod or first maxillipede.
h. First gnathopod.
i. Second gnathopod.
j. ee. Section of the basecphysis of same.
PLATE XXXII.
PLATE XXXII.

*Penaeus canaliculatus* (p. 243).

Fig. 1, ♂. Male specimen; lateral view, enlarged twice.

" 1", ♂. Ventral surface, showing first pair of pleopoda, with petasma.

" 2, ♀. Female specimen; lateral view.

" 2", ♀. Ventral surface of female, showing thelycum.

*Penaeus canaliculatus*, var. *australiensis* (p. 248).

" 3, ♀. Female specimen.

" 3", ♀. Ventral surface of female.

*Penaeus canaliculatus*, var. *japonicus* (p. 247).

" 4, ♀. Ventral surface of female, showing thelycum.
PLATE XXXIII.
PLATE XXXIII.

*Penaeus velutinus* (p. 253).

Fig. 1. Lateral view, enlarged twice.

,, 1". Ventral aspect of male; *p, p*, first pair of pleopoda, with petasma attached.

,, 1"'. Ventral aspect of female; *p, p*, first pair of pleopoda.

,, 1z. Telson.

*Penaeus indicus* (p. 248).

,, 2. Lateral view of male.

,, 2, *p, p*. First pair of pleopoda detached, with petasma connected.

,, 2v, *z, v*. Rhipidura; *z*, telson; *v, v*, sixth pair of pleopoda.
PLATE XXXIV.
PLATE XXXIV.

Penaeus monodon (p. 250).

Fig. 1. Lateral view.
,, 1". ♂. Ventral surface of male, showing petasma.
,, 1". ♀. Ventral surface of female, showing thelycum.

Penaeus incisipes (p. 257).
,, 2, ♂. Lateral view of male.
,, 2". ♂. Ventral surface of male, showing petasma.
,, 2". ♀. Ventral surface of female, showing thelycum.
PLATE XXXV.
PLATE XXXV.

_Peneus anchoralis_ (p. 258).

Fig. 1. Lateral view, enlarged twice.

,, 1". Ventral aspect of male, with the first pair of pleopoda and petasma attached.

,, 1"'. Ventral aspect of female, showing thelycum.

,, 1z. Telson.

_Peneus philippinensis_ (p. 261).

,, 2. Female specimen.

,, 2". Ventral aspect of female, with first pair of pleopoda thrown back.

,, 3. Male specimen.

,, 3". Ventral aspect of male, with first pair of pleopoda and petasma attached.
PLATE XXXVI.
PLATE XXXVI.

Penaeus fissurus (p. 263).

Fig. 1. Female specimen.

", 1". Ventral aspect of female, showing thelycum.

", 1p. First pleopod, detached.

", 1z. Telson.

Penaeus rectacutus (p. 266).

", 2. Female specimen.

", 2". Ventral aspect of female, showing thelycum.

", 2p. First pleopod, detached.

", 2z,v. Rhipidura, seen laterally; z, telson; v, sixth pleopod.
PLATE XXXVII.
PLATE XXXVII.

_Peneus serratus_ (p. 268).

Fig. 1. Lateral view.

„ 1a. Ophthalmopod.
„ 1b. First antenna.

„ 1'r, ♂. Ventral aspect of male, with first and second pairs of pleopoda attached and thrown back, with petasma attached to former.

„ 1q. Part of second pair of pleopoda, detached.

„ 1'' ♂. Ventral aspect of female.

„ 1z. Telson.

„ 1'br. Branch of branchial plume, and secondary branch; detached.

_Peneus canaliculatus_, var. _japonicus_ (p. 245).

„ 2'br. Branch of branchial plume, and secondary branch; detached.

_Hemipeneus speciosus_ (p. 303).

„ 3'br. Branch of branchial plume, and secondary branch; detached.
1 Penæus Serratus  2 Penæus Canaliculatus  Japonicus
3 Hemipenæus Speciosus.
PLATE XXXVIII.
PLATE XXXVIII.

Pl.onicus pectinatus, male (p. 279).

Fig. 6, 6. Posterior pair of pleopoda; basal portion; p., p., first pair of pleopoda, with petasma expanded and united in the median line.

z. Telson.

br. Branchial plume, seen in section.

br". Secondary branch of same; taken from the base.

br"". Secondary branch of same; taken from the apex.

mb. Mastigobranchi.
PHILONICUS PECTINATUS.
PLATE XXXIX.

(ZOOL. CHALL. EXP. — PART LII. — 1887.) — Ill.
PLATE XXXIX.

Phidonicus mülleri (p. 275).

Fig. 1. Female specimen.

" 1°. Ventral aspect of female; p, p, first pair of pleopoda.

" 2. Male specimen.

" 2°. First pair of pleopoda of male, with petasma folded and attached.

br. Primary branch of branchial plume.

br". Secondary branch of branchial plume.
PLATE XL.
PLATE XL.

_Artemia longinaris_ (p. 281).

Fig. 1. Lateral view.

,, 2, ? Ventral aspect of female.

d. Mandible or siagon.

e. First maxilla or first siagnopod.

f. Second maxilla or second siagnopod.

g. First maxillipede or third siagnopod.

h. First gnathopod.

i. Second gnathopod.

p, p. First pair of pleopoda of male, with petasma attached.

br. Branchial plume.
The Voyage of H.M.S. "G-address"

ARTEMESIA LONGINARIS

2  D°  D°  VENTRAL
PLATE XLII.
PLATE XLI.

_Haliporus equalis_ (p. 285).

Fig. 1. Lateral view.

,, 1", \( \delta \). Ventral aspect of male. First pair of pleopoda, with petasma attached and thrown back.

,, 1"', \( \delta \). Ventral aspect of female, showing thelycum.

br. Branchiae, seen in position.

br". Last three somites of the pleon; the arthrobranchiae of the third and fourth pairs of pereiopoda removed, to show the peculiar ducts that connect the pleurobranchiae with their somites; _mb_, mastigobranchia of the third and fourth somites.

_Haliporus obliquirostris_ (p. 286).

,, 2. Lateral aspect.

,, 2"', \( \varphi \). Ventral aspect of female.
Haliporus curvirostris (p. 288).

Fig. 1. Lateral view.

Haliporus laevis (p. 289).

" 2. Lateral view.

Haliporus neptunus (p. 291).

" 3. Lateral view.

" 3"♀. Ventral aspect of male. First pair of pleopoda with petasma, thrown forwards; second pair, directed backwards.

" 3"♂. Ventral surface of pereion of female, showing thelycum.

Philonicus lucasii (p. 277).

" 4. Lateral aspect.
1. HALIPORUS CURVIROSTRIS
2. Dorsal View
3. HALIPORUS NEPTUNUS
4. PHILONICUS LUCASH
PLATE XLIII.

(2001. CHALL. EXP.—PART II. — 1887.)—Fff
PLATE XLIII.

*Sicyonia sculpta* (p. 294).

Fig. 1. Lateral view of female; enlarged two and a half times.

,, 1". Rostrum.

,, 1z. Telson.

*Sicyonia carinata* (p. 294).

,, 2. Lateral view of male; enlarged twice.

,, 3. Dorsal view of same; enlarged twice.

,, 3b. First antenna.

,, 3c'. Second antenna, base of scaphocerite; under surface.

,, 3c''. Second antenna, base of scaphocerite; upper surface.

,, 3c'''. Second antenna; margin of scaphocerite.

,, 3br. Branchiae; extremity of plumes, showing structure.

,, 3q. Second pleopod.

*Sicyonia lanceifer* (p. 297).

,, 4. Lateral view of female; enlarged two and a quarter times.

,, 4", 5. Ventral aspect of pereion of female, showing thelycum.

,, 4z. Telson.

*Sicyonia levis* (p. 298).

,, 5. Lateral view of female; enlarged two and a half times.
PLATE XLIV.
PLATE XLIV.

_Hemipeneus spinidorsalis_ (p. 301).

Fig. 1. Lateral view; one-half enlarged.

,, 1". Branchiae, seen in position.

,, 1". Mastigobranchia, with podobranchial plume attached.

_Hemipeneus gracilis_ (p. 302).

,, 2. Lateral view; one-half enlarged.

_Hemipeneus speciosus_ (p. 303).

,, 3. Lateral view.

_Hemipeneus virilis_ (p. 303).

,, 4. Lateral view.
PLATE XLV.
PLATE XLV.

*Aristeus armatus* (p. 312).

Fig. 1. Lateral aspect of male.

,, 2. Ventral aspect of another specimen.

\(p\). First pleopod.

\(q\). Second pleopod.

\(r\). Third pleopod.
PLATE XLVI.

*Aristeus armatus* (p. 312).

d. Mandible or siagon.

ma. Metastomata.

e. First maxilla or first siagnopod.

f. Second maxilla or second siagnopod.

g. Maxillipede or third siagnopod.

br. Branchial plume, seen in section.

br". Secondary branch of branchial plume.

Fig. 1. *Aristeus*? (young) (p. 240).
Fig. 1. *Aristeus* (?), in Megalopa stage (p. 241).

,, 1k. First pair of pereiopoda.

,, 2. *Aristeus* (?), younger Megalopa stage (p. 239).

,, 2v. Fifth somite and rhipidura.

,, 3. *Aristeus* (?), older Megalopa stage (p. 238).

,, 3b. First antenna.

,, 3d. Mandible, showing attachment of muscles.

,, 3k. First pereiopod.
The image contains illustrations of small aquatic creatures, possibly shrimps or krill, which are common in marine environments. These organisms are often studied in the fields of marine biology and ichthyology. The diagrams show various details of the creatures, including their appendages and body structures, which are typical features used for identification and study in these fields.
PLATE XLVIII.
Fig. 1. *Penaeus*; Zoea stage (p. 237).

2. *Penaeus*; Megalopa stage. v. v. Sixth pair of pleopoda.

2g. Third siagonpod or first maxillipede.

2h. First gnathopod.

2m. Third pereiopod.

3br. Branchiae of a young *Penaeus*.

3v, z, v. Rhipidura of same.

4. A young *Penaeus*.

4m. Chela of third pereiopod.

br. Early condition of branchial plume.
Penidae, as described by H. M. S. Challenger, Volume XXVII (1884).
PLATE XLIX.
PLATE XLIX.

Hemipedes semidentatus (p. 305).

Fig. 1. Lateral view of female.
,, 1br. Branch of branchial plume.

Hemipenes tomentosus (p. 307).
,, 2,♀. Ventral aspect of female, showing hollow between pereiopoda.
,, 3,♀. The same hollow part, containing a gelatinous mass; from another specimen.
,, 3". Section of the inferior portion of the wall of the carapace overlying the branchial chamber.
PLATE L.

*Hemipenaeus tomentosus* (p. 307).

Lateral view of female.


*br*. Branchial plume in section.
HEMIPENEUS TOMENTOSUS
PLATE LI.
PLATE LI.

*Aristeus rostridentatus* (p. 317).

Fig. 1. Lateral view of female.

,, 1". Ventral aspect; p, p, first pair of pleopoda.

d. Siagon or mandible.

br. Branchial plume in section.

£. Spine from the carpos of the first pair of pereiopoda.
PLATE LII.
Fig. 1. Lateral view of female.

1°. Ventral aspect of pereion, showing the thelycum.

ea. Epistoma.

d. Siagon or mandible.

ma. Metastomata.

g. Third siagonpod or first maxillipede.

br. Branchial plume in section.
HEPOMADUS GLACIALIS
PLATE LIII.
PLATE LIII.

*Peteinura gubernata* (p. 324).

Lateral view; enlarged eight times.

b. First antenna.
i. Second gnathopod.
k. First pereiopod.
l. Second pereiopod.
PLATE LIV.
PLATE LIV.

*Benthesicymus crenatus* (p. 329).

Lateral view.

a. Ophthalmopod.
b. First antenna; upper surface.

b'. First antenna; under surface.
c. Second antenna.
c''. Second antenna; second joint of peduncle showing the ancecerite and base of the scaphocerite.
d. Siagon or mandible, with metastoma, d'', in position.
e. First siagnopod.
f. Second siagnopod.
g. Third siagnopod.
h. First gnathopod.
i. Second gnathopod.
PLATE LV.

*Benthesicymus crenatus* (branchiae) (p. 329).

Fig. 1. Pereion, with side of the carapace removed to show the arrangement and position of the branchiae.

2. Branchial plume.

3. Branch of the same; attached to the central stalk.
PLATE LVI.

*Benthesicymus iridescens* (p. 335).

Fig. 1. Outer branch of sixth pleopod; arterial vessels, red; venous, blue; nerve-filaments, yellow; muscles, brown.

,, 2. Ventral nerve-cord of same.

*Eucopia australis.*

,, 3. Ventral nerve-cord.

*Sergestes atlanticus.*

,, 4. Arrangement of muscles in the sixth somite of the pleon.
PLATE LVII.
PLATE LVII.

_Benthesicymus brasiliensis_ (p. 332).

Fig. 1. Lateral view.

"1br. Section of a branchial plume.

_Benthesicymus pleocanthus_ (p. 334).

2. Lateral view.

"2br. Section of branchial plume.

_Benthesicymus iridescens_ (p. 335).

3. Lateral view.

"3α. Ophthalmopod.

"3α". Diagrammatic section of eye.

"3br. Branch of a branchial plume.
PLATE LVIII.
PLATE LVIII.

*Benthesicymus altus* (p. 336).

Fig. 1. Lateral view.
'' 1a. Ophthalmopod.
'' 1z. Telson.
'' 1br. Section of branchial plume.

*Benthesicymus mollis* (p. 339).

'' 2. Lateral view.
'' 2z. Telson.
'' 2br. Section of branchial plume.

*Gennadas intermedius* (p. 343).

'' 3. Lateral aspect.
'' 3z. Telson.
'' 3br. Section of branchial plume.
1. Benthescymus Altus
2. D. Mollis
3. Genndadas Intermedius
PLATE LX.
PLATE LIX.

_Gemmadas parvus_, male (p. 340).

Fig. 1. Lateral view.

2. Another specimen containing a parasitic (?) worm.

i. Second gnathopod; with dactylos enlarged.

k. First pereiopod.

m. Third pereiopod; with chela enlarged.

p.p. Basal joint of first pair of pleopoda showing the petasmata hooked together in the middle by small cincinnuli.

p''. Cincinnulus.

q. Appendages attached to the second pleopod.

t. Telson and sixth pleopod.

b'. Section of a branchial plume.
Fig. 1. Lateral view; enlarged twice.

2. Oral apparatus; \(d, d\), distal joints of the synaphipod of the mandibles; \(d'\), epistoma; \(d'',d''\), metastoma; \(e,e\), first pair of siagnopoda.

d. Siagon or mandible.

c. First siagnopod; detached.

f. Second siagnopod; detached.

g. Third siagnopod; detached.

3. Branchiae, shown in position.

4. A foliaceous branchial plate.
PLATE LXI.

*Sergeres*—Development.

_Elaphocaris Zoea* (p. 355).

Fig. 1. Dorsal view; enlarged thirty-two times.

,, 2z. Telson.

,, 3. Rostrum of another specimen.

_Elaphocaris crassus* (p. 362).

,, 4. Dorsal view; enlarged fifty times.

,, 4b. First antenna.

,, 4c. Second antenna.
PLATE LXII.

*Sergestes*—Development.

*Elaphocaris dohron* (pp. 357-360).

Dorsal view; enlarged fifty-three times.

b. First antenna.

c. Second antenna.

g. Third signopod or first maxillipede.

h. First gnathopod.
PLATE LXIII.
PLATE LXIII.

Sergestes (?)—Development.

Platysacus crenatus (p. 363).

Fig. 1. Dorsal view; enlarged seventy times.

,, 2. Rostrum of carapace and of epistoma.

,, b. First antenna.

,, c. Second antenna.

,, i. Second gnathopod.
PLATE LXIV.

Sergestes—Development.

Acanthosoma brevitelsonis (p. 367).

Fig. 1. Dorsal view; enlarged thirty-five times.

Acanthosoma tynitelsonis (p. 369).

" 2. Latero-dorsal view; enlarged twenty times.

Acanthosoma longitelsonis (p. 371).

" 3. Latero-dorsal view; enlarged forty times.
PLATE LXV.
PLATE LXV.

Sergestes—Development.

_Acanthosoma dorsispinalis_ (370).

Fig. 1. Lateral view; enlarged twenty-five times.

_Acanthosoma levirostratis_ (p. 374).

, 2. Lateral view; enlarged twenty-eight times.

_Mastigopus dorsispinalis_ (p. 375).

, 3. Lateral view; enlarged twenty times.

, _i.k.l._ Branchiae attached to the second gnathopod, and first and second pereiopoda.

_Mastigopus tenuis_ (p. 428).

, 4. Lateral view; enlarged twenty times.

, 4b. Base of peduncle of first antenna, with otolith.

, 4c. Second antenna.

, 4l. Third pereiopod; extremity.

_Habitat._—North of Admiralty Islands, between Stations 221 and 222. Associated with _Acanthosoma dorsispinalis_ and _Mastigopus dorsispinalis_. Length, 3 mm. (0·12 in.).
PLATE LXVI.

Sergestes—Development.

_Acanthosoma macrotelsonis_ (p. 373).

Fig. 1. Dorsal view; enlarged forty times.

_Mastigopus submi_ (p. 378).

" 2. Dorsal view; enlarged twenty-five times.
PLATE LXVII.
PLATE LXVII.

Serestes semiarmis (p. 423).

Fig. 1. Lateral view; enlarged eight times.
   " 1i. Second gnathopod; distal extremity.
   " 1l. Second pereiopod; chela.
   " 1m. Third pereiopod; chela.

Serestes semiarmis, var. (p. 424).

" 2c. Second antenna; scaphocerite.
" 2k. First pereiopod; distal extremity.
" 2l. Second pereiopod; chela.
" 2u, o. Fourth and fifth pereiopoda.
" 2z. Telson.

Serestes levicentralis (p. 425).

" 3. Lateral view; enlarged thirteen times.
" 3l. Second pereiopod; chela.
" 3u, o. Fourth and fifth pereiopoda.

Mastigopus spinicentralis (p. 379).

" 4. Lateral view; enlarged twelve times.
" 4z. Telson.

Serestes spinicentralis (p. 426).

" 5a. Ophthalmopod and rostrum.
" 5l. Second pereiopod; chela.
" 5e. Sixth pleopod; outer branch.

Serestes spinicentralis, var.

" 6a. Ophthalmopod; b, first antenna; c, second antenna.
" 6u, o. Fourth and fifth pereiopoda.

1 Habitat.—West Pacific.
PLATE LXVIII.
PLATE LXVIII.

*Sergestes atlanticus*, male (p. 389).

Lateral view; enlarged twice.

b $\delta$ First antenna of male.

b $\varphi$ First antenna of female; flagella.

c Second antenna; scaphocerite and terminal joints of peduncle.

d Mandible.

e First siagnopod.

f Second siagnopod

g Third siagnopod.
Crustacea macrura, ?!

SERGESTES ATLANTICUS
PLATE LXIX.
PLATE LXIX.

Sergestes atlanticus (p. 393).

p,p. First pair of pleopoda of male, with petasmeta united in the median line.

q z. Second pleopod; appendages attached to the base of the flagella.

q?? Second pleopod; appendage attached to the base of the flagella.

v. Sixth pleopod.

z. Telson.
PLATE LXX.
PLATE LXX.

_Sergestes japonicus_ (p. 387).

Fig. 1. Lateral view; enlarged twice.

,, 1a, a. Ophthalmopoda, and b, b, first pair of antennæ; c, c, scaphocerites in position, dorsal view.

,, 1b. First antenna.

,, 1h. Second gnathopod.

,, 2. Branchiæ; seen in natural position.

_Sergestes kroyeri_ (p. 388).

,, 3. Lateral view; enlarged twice.

,, 3a. Ophthalmopod in position, with first antenna.

,, 4. Branchiæ; in natural position.
PLATE LXXI.

*Sergestes prehensilis* (p. 383).

Fig. 1. Lateral view; enlarged twice.

a. Ophthalmopod

b. First antenna.

d. Mandible or siagon.

e. First siagnopod.

f. Second siagnopod.

g. Third siagnopod.

k. First pereiopod; showing the prehensile character of the ultimate articulation.

P. Percion detached, with gnathopoda *h, i,* and pereiopoda *k, l, m, n, o,* connected, the larger branchial plumes removed to show the position of their attachment to the somite and the rudimentary form of the pleurobranchia.
PLATE LXXII.
PLATE LXXII.

*Sergestes dorsispinalis* (p. 394).

Fig. 1. Lateral view; enlarged fifteen times.

,, 1c. Second antenna; otolith.

*Sergestes nasidentatus* (p. 398).

,, 2. Lateral aspect; enlarged twelve times.

,, 2k. First pereiopod; ultimate articulation.

,, 2l. Second pereiopod; chela.

*Sergestes diapontius* (p. 399).

,, 3. Lateral view; enlarged six times.

,, 3i. Second gnathopod; ultimate joints.

,, 3k. First pereiopod; ultimate articulation.

,, 3l. Second pereiopod; chela.
1 SERGESTES DORSISPINALIS
2 D Nasidentatus
3 D Diapontius
PLATE LXXIII.
PLATE LXXIII.

*Sergestes armatus* (p. 401).

Fig. 1. Lateral aspect; enlarged nine times.

,, 1b. First antenna.

,, 1z. Telson.

*Sergestes edwardsii* (p. 403).

,, 2. Lateral view; enlarged twelve times

,, 2c. Second antenna; scaphocerite.

,, 2k. First pereiopod.

,, 2br. Branchial plume.

,, 2br'. Branch of branchial plume.

*Sergestes rinkii* (p. 404).

,, 3. Lateral view; enlarged twelve times.

,, 3z. Telson.
Gedaura aequilis

A

B

C

D
PLATE LXXIV.
PLATE LXXIV.

_Sergestes oculatus_ (p. 406).

Fig. 1. Lateral view; enlarged twenty times.
" 1b. First antenna.
" 1c. Second antenna; scaphocerite.
" 1c'. Extremity of scaphocerite.

_Sergestes ovatoculus_ (p. 408).

" 2. Lateral view; enlarged ten times.
" 2z. Telson; extremity.

_Sergestes parvidens_ (p. 409).

" 3. Lateral aspect; enlarged fifteen times.
" 3b. First antenna; flagella.
" 3c. Second antenna; extremity of scaphocerite.
" 3k. First pereiopod; ultimate articulation.
1. SERGESTES Oculatus
2. OVATOCULUS
3. PARVIDENS
PLATE LXXV.
PLATE LXXV.

*Sergestes corniculum* (p. 410).

Fig. 1. Lateral view; enlarged nine times.

,, 1z. Telson.

*Sergestes ancylops* (p. 413).

,, 2. Lateral view; enlarged thirty times.

*Sergestes longirostris* (p. 415).

,, 3. Lateral view; enlarged fifteen times.

,, 3z. Telson.
PLATE LXXVI.
PLATE LXXVI.

*Sergestes junci*us* (p. 416).

Fig. 1. Lateral view; enlarged twenty times.

*Sergestes longispinus* (p. 417).

,, 2. Lateral view; enlarged sixteen times.
,, 2b. First antenna; outer flagellum.
,, 2c. Second antenna; extremity of scaphocerite.
,, 2k. First pereiopod; distal joints.

*Sergestes penerinkii* (p. 418).

,, 3. Enlarged sixteen times.

*Sergestes fermerinkii* (p. 419).

,, 4. Enlarged twenty-three times.
PLATE LXXVII.
PLATE LXXVII.

*Sergestes longicollus* (p. 421).

Fig. 1. Lateral view; enlarged ten times.

*Sergestes praeclitus* (p. 423).

" 2. Lateral aspect; enlarged ten times.

" 2m. Third perciopod; chela.
1. SERGESTES LUNGCOLLUS
2. DO  PRECOLLUS.
PLATE LXXVIII.

*Sciacaris telsonis* (p. 438).

Fig. 1. Ventro-lateral aspect; enlarged twenty times.

1m. Third perciopod; chela.

1p. First pleopod; appendage at base of flagellum.

1z. Telson; dorsal view.

2. Mastigopus stage of same; enlarged eighteen times (p. 439).

2c. Second antenna; extremity of scaphocerite.

2z. Telson; dorsal view.

3. Acanthosoma stage of same; enlarged twenty-one times (p. 441).

3z. Telson; side view.
PLATE LXXIX.
PLATE LXXIX.

Development and Structure of *Lucifer* (p. 452).

Fig. 1. Zoea of *Lucifer*; enlarged sixty times.

b. First antenna.

c. Second antenna; e", scaphocerite and one hair magnified.

e. First siagnopod or first maxilla.

f. Second siagnopod or second maxilla.

g. Third siagnopod or maxillipede.

h. First gnathopod.

i. Second gnathopod.

k. First pereiopod.

l. Second pereiopod.

m. Third pereiopod; m", chela of same.
PLATE LXXX.

L. lucifer—Structure of male.

Fig. 1. Lateral view, showing vas deferens on left side, containing ripe spermatophore.

2. Lateral view, showing vas deferens on right side.

ptm. Petasma.

c. Cephalon, anterior portion; showing the convolution of the green gland.

d. Mandible.

m. Third pereiopod; chela.

q. Second pleopod.
PLATE LXXXI.
PLATE LXXXI.

Organs of generation of *Lucifer* (p. 444).

Fig. 1♀. Female, showing ovaries with spermatophore inserted into the oviduct; also neural cord and muscular arrangement.

.. 2♀. Female with ovum approaching extrusion, with spermatophore inserted.

.. 3♂. Male, showing spermatophore ready for expulsion. Testes in outline.

.. 4♂. Male, showing testes in position, with spermatophore in outline. Another in the process of formation.
LUCIFER
PLATE LXXXII.
PLATE LXXXII.

*Lucifer*—Development of male (p. 463).

Figs. 1–4. Males of different ages.
PLATE LXXXIII.
PLATE LXXXIII.

Lucifer typus.

Fig. 1. Lateral view of male (p. 464). Enlarged twenty-two times.

2. Lateral view of female (p. 466). Enlarged twenty-two times.

3. Cephalon, showing ophthalmopod and antennae; the second pair with the long scaphocerite and styliform phymacerite.

m. Terminal extremity or minute chela of the third pair of pereiopoda.
PLATE LXXXIV.

Lucifer reynaudi.

Fig. 1. Lateral view of male (p. 466). Enlarged twenty-two times.

,, 2. Lateral view of female (p. 467). Enlarged twenty-two times.

,, 3. Cephalon, showing the cerebral ganglion and the neural branch leading to the second pair of antennæ.

,, 4. Cephalon, showing the cerebral ganglion and neural cord, also the green gland and its long winding duct connecting it with the second pair of antennæ.

,, 5. Male, posterior portion of the sixth somite of the pleon, sixth pair of pleopoda and telson, showing the arrangement of the muscles and position of the sixth pleonic gland.

m. Chela of the third pair of pereiopoda.
PLATE LXXXV.
PLATE LXXXV.

Acetes indicus (p. 442).

Fig. 1. Lateral view; enlarged twice.

Lucifer (young) (p. 457).

2. Lateral view.

Zoontocaris galathea (p. 474).

3. Dorsal view; enlarged thirty times.

Zoontocaris approximans (p. 475).

4. Dorsal view; enlarged twenty-four times.

Sestertius duplicidentes (p. 477).

5. Lateral view; enlarged eighteen times.

5c. Second antenna.

5g. Third gnathopod.

5h. First gnathopod.

5i. Second gnathopod.

5k–5o. Pereiopoda.

5z. Telson.
1 ACETES INDICUS  3 ZOONTOCARIS GALATHEA
2 LUCIFER  4 DE APPRIMUS
5 SESTERTIUS DUPLICIDENTES
PLATE LXXXVI.
PLATE LXXXVI.

*Crangon affinis* (p. 484).

Fig. 1. Carapace, dorsal view; enlarged twice.

,, 1b. First antenna.

,, 1d. Mandible; e, first sigmopod; f, second sigmopod; shown in their natural position.


,, 3. Rhipidura.

*Crangon vulgaris* (p. 483).

,, 4. Brephalos, lateral view.

,, 4z. Telson of same.

*Pontocaris propensalata* (p. 496).

PLATE LXXXVII.
Plate LXXXVII.

Pontophilus gracilis (p. 487).

Fig. 1. Ventral aspect; enlarged four times.

2. Dorsal view; enlarged four times.

3. Branchiae, in natural position; br, section of plume.

p♂. First pleopod of male.

p♀. First pleopod of female.

q♂. Second pleopod of male.

q♀. Second pleopod of female.
PLATE LXXXVIII.
PLATE LXXXVIII.

Pontophilus profundus (p. 490).

Fig. 1. Lateral view; enlarged four times.

" 1a. Section of the ophthalmus, showing the form of the ocular facets.

" 1i. Second gnathopod.

" 1k. First pereiopod; chela.

" 1l. Second pereiopod; chela.

" 1p 3. First pleopod of male.

" 1z. Telson.

Pontophilus junceus (p. 491).

" 2. Lateral view; enlarged twice.

" 3. Dorsal view of carapace.

" 4. Rhipidura.
Crustacea

PONTOPHILUS PROFUNDUS

PONTOPHILUS JUNCEUS ET PHALON.

D' JUNCEUS

D' PHALON

D' PILDRA
PLATE LXXXIX.

(ZOOL. CHALL. EXP. — FALT III. — 1887.) — Fff.
PLATE LXXXIX.

Crangon vulgaris (p. 483).

Fig. 1. Structure of the pereion visceral organs of the brephalos; a, ophthalmus; b, first joint of first antenna; c, first joint of second antenna; d, mandible; e, first signopod; f, second signopod; g, third signopod; h, first gnathopod; i, second gnathopod; k, l, m, n, buds of four successive pereiopoda; gc, stomach, the outer double line showing its area when dilated, the inner or convoluted double line showing its contour in rhythmical contraction; cd, heart.

,, 1a". Lenses of the ophthalmus, showing the numerical increase during development.

Sabinea septemcarinata (p. 493).

,, 2. Dorsal view; enlarged twice.

Parathanas decorticus (p. 530).

,, 3. Lateral view; enlarged twelve times.

,, 3c. Second antenna; scaphocerite as seen within its exuvium.

,, 3k–3n. First four pairs of pereiopoda within their exuvium.

,, 3v. Fifth pleopod; portion of outer branch within its exuvium.

,, 3v". Fifth pleopod; one of the hairs enlarged.

Alpheus (Brephalos) (p. 538).

,, 4. Lateral view. From a specimen of Alpheus hatched by Dr. Power.

,, 4b. First antenna.

,, 4c. Second antenna.

,, 4z. Telson.

Latreutes planus (p. 584).

,, 5. Lateral view; enlarged twelve times.

Latreutes unidentatus (p. 586).

,, 6. Lateral view; enlarged twelve times.
1. *CRANGON*
2. *SABINEA SEPTEMCARINATA*
3. *PARATHANA DECORTICUS*
4. *ALPHEUS*
5. *LATREUTES PLANUS*
6. *DUNIO UNIDENTATUS*
PLATE XC.

_Sabinea septemcarinata_ (p. 493).

Fig. 1. Ventral surface of pereion.

,, 1a. Ophthalmopoda; b, first pair of antennae.
,, 1b. Second pereiopod.
,, 1p. First pleopod of male.
,, 1p. First pleopod of female.
,, 1z. Telson; c, sixth pleopod.

_Pontocaris propensalata_ (p. 496).

,, 2. Dorsal view; enlarged twice.
,, 2b. First antenna.
,, 2c. Second antenna; part of flagellum enlarged.
,, 2i. Second gnathopod.
,, 2k. First pereiopod.
,, 2k. First pereiopod; chela, enlarged.
,, 2p. First pleopod.
,, 2q. Second pleopod.
,, 3. Ventral surface of pereion; k, l, m, n, o, first to fifth pairs of pereiopoda.
PLATE XCI.
PLATE XCI.

*Pontocaris pennata* (p. 499).

Fig. 1. Dorsal view; enlarged twice.

2. Ventral aspect; enlarged four times.

   a. Mandible; a', upper surface of molar process; a", lower surface of molar process.

   g. Third sagnopod.

   h. First gnathopod.

   i. Second gnathopod.

   k. First pereiopod; k", anterior margin of the palm.

   l. Second pereiopod.

   m. Third pereiopod.

   p. First pleopod.

   q. Second pleopod.
PLATE XCII.
PLATE XCII.

_Glypchoeragon granulosis_ (p. 507).

Fig. 1. Dorsal aspect.

,, 2. Lateral view.


   b ♂. First antenna of male.

   b ♀. First antenna of female; b''♀, first joint of same showing the acoustic aperture.

   c ♀. Second antenna of female.

   d. Mandible.

   e. First gnathopod.

   f. Second gnathopod.

   g. Third gnathopod.

   h. First pereiopod.

   i. Second pereiopod.

   k. First pleopod.

   l. Second pereiopod.

   p ♂. First pleopod of male; p''♂, margin of inner ramus.

   p ♀. First pleopod of female.

   q ♂. Second pleopod of male.

   q ♀. Second pleopod of female.

PLATE XCIII.
PLATE XCVIII.

*Glyphocrangon granulosis* (p. 507).

Fig. 1. Branchiae, in natural position (p. 506).

" 1br. Section of branchial plume.

*Glyphocrangon pedager* (p. 516).

" 2. Dorso-lateral view.

" 2m. Third pereiopod; dactylos.

" 2o. Fifth pereiopod; dactylos.

*Glyphocrangon regalis* (p. 517).

" 3. Dorso-lateral view.

" 3m. Third pereiopod; dactylos.

" 3o. Fifth pereiopod; dactylos.

" 4. Dorso-lateral view of a smooth variety.

" 4m. Third pereiopod; dactylos.

" 4o. Fifth pereiopod; dactylos.

*Glyphocrangon hastacauda* (p. 519).

" 5. Dorso-lateral view.

" 5m. Third pereiopod; dactylos.

" 5o. Fifth pereiopod; dactylos.
PLATE XCIV.
PLATE XCIV.

*Glyphocrangon aculeata* (p. 521).

Fig. 1. Dorsal view.

,, 1m. Third pereiopod; dactylos.
,, 1o. Fifth pereiopod; dactylos.
,, 1gc. Gastric spines; gc', one of the spines isolated.

*Glyphocrangon acuminata* (p. 522).

,, 2♂. Lateral view of male.
,, 2m. Third pereiopod; dactylos.
,, 2o. Fifth pereiopod; dactylos.
,, 3♀. Lateral view of female.
,, 3m. Third pereiopod; dactylos.
,, 3o. Fifth pereiopod; dactylos.
,, 3p♂. First pleopod of male.
,, 3p♀. First pleopod of female; ova attached.

*Glyphocrangon rimapes* (p. 523).

,, 4. Dorso-lateral view.
,, 4m. Third pereiopod; dactylos.
,, 4o. Fifth pereiopod; dactylos.
PLATE XCV.

*Nika processa* (p. 527).

Fig. 1. Lateral view; enlarged three and a half times.

b. First antenna.

c. Second antenna, scaphocerite.

d. Mandible.

e. First siagnopod.

f. Second siagnopod.

g. Third siagnopod.

h. First gnathopod.

i. Second gnathopod.

l. Second pereiopod of right side.

ov. Ovum.
PLATE XCVI.
PLATE XCVI.

_Athanas celoculus_ (p. 529).

Fig. 1. Lateral view; enlarged fifteen times.

_Cheirothrix parvimanus_ (p. 533).

1. Lateral view; enlarged six times.

2a, a. Ophthalmopoda.

2b. First antenna.

2c. Second antenna.

2d. First gnathopod.

2i. Second gnathopod.

2l. Second pereiopod.

2l'. Second pereiopod; enlarged.

2l''. Second pereiopod; chela, more enlarged.

2l'". Second pereiopod; one hair, magnified.
PLATE XCVII.
PLATE XCVII.

*Alpheus edwardsii* (p. 542).

Fig. 1. Lateral view; enlarged three times.

,, 1d. Mandible.

,, 1h. First gnathopod.

,, 1i. Second gnathopod.

,, 1k. First pereiopod; larger chela.

,, 1m. Third pereiopod; terminal joints.

,, 1mb. Mastigobranchia.

*Alpheus acuto-femoratus* (p. 545).

,, 2. Lateral view; enlarged three times.

,, 2k. First pereiopod; larger chela.

*Alpheus cristidigitus* (p. 546).

,, 3. Lateral view; enlarged four times.

,, 3k. First pereiopod; smaller chela.

*Alpheus megacheles* (p. 547).

,, 4. First pereiopod; larger chela.
PLATE XCVIII.

*Alpheus leviusculus*, var. (p. 549).

Fig. 1. Lateral view; enlarged three times.
   1c. Cephalon; *b*, first antenna; *c*, second antenna.
   1k. First pereiopod; left side.
   1k'. First pereiopod; left side, pollex.
   1m. Third pereiopod; terminal joints.
   1z. Telson.

*Alpheus crinitus* (p. 548).

2. Lateral view; enlarged four times.
   2c. Cephalon with first and second antennæ; left side.

*Alpheus bermudensis* (p. 547).

3. Lateral view; enlarged three times.
   3k. First pereiopod; larger chela.

*Alpheus longimanus* (p. 551).

4. Lateral view; enlarged three times.
   4c. Cephalon; frontal margin.
   4c. Second antenna; scaphocerite.
   4k. First pereiopod; larger chela.
   4k'. First pereiopod; smaller chela of left side.
PLATE XCIX.
PLATE XCIX.

Alpheus rapax (p. 552).

Fig. 1. Lateral view; enlarged twice.

1c. Cephalon; b, first antenna, left side; c, second antenna, right side.

1k. First pereiopod; larger chela.

1k'. First pereiopod; showing dactylos and pollex, enlarged.

1z. Telson.

Alpheus crassimanus (p. 554).

2. Lateral view; enlarged twice.

2k. First pereiopod; larger chela.

Alpheus levis (p. 555).

3. Lateral view; enlarged three times.

3c. Cephalon, with first and second antennae.

3c'. Carapace, showing vessels of circulation.

3k. First pereiopod; larger chela.

Alpheus prolificus (p. 556).

4. Lateral view; enlarged three times.

4c. Cephalon, with first and second antennae.

4m. Third pereiopod.
PLATE C.

*Alpheus intrinsecus* (p. 557).

Fig. 1. Lateral view; female, enlarged three times.

1c. Cephalon, frontal region.

1c". Cephalon; b, first antenna; c, second antenna.

1k. First pereiopod; smaller chela.

1q. Second pleopod, with ova attached.

1z. Telson.

*Alpheus minus* (p. 558).

2. Lateral view; enlarged four times.

2k. First pereiopod; larger chela.

2k". First pereiopod; pollex and dactylos.

*Alpheus spiniger* (p. 560).

3. Lateral view; enlarged three times.

3c. Cephalon, with first and second antennæ.

3k. First pereiopod; larger chela.

3k'. First pereiopod; smaller chela, left.

3k". First pereiopod, showing form of dactylos.

3m. Third pereiopod; dactylos.

3z. Telson.
1 ALPHEUS INTRINSECUS
2 ALPHEUS MINUS
3 ALPHEUS SPINIGER
PLATE CL.
PLATE CI.

*Alpheus avarus* (p. 544).

Fig. 1. Lateral view; enlarged twice.

*Alpheus neptunus* (p. 563).

,, 2. Lateral view; enlarged twice.
,, 2k. First pereiopod; larger chela, left.
,, 2k'. First pereiopod; smaller chela, right.

*Alpheus gracilipes* (p. 561).

,, 3. Lateral view; enlarged three times.
,, 3c. Cephalon, frontal region.
,, 3k. First pereiopod; larger chela.
,, 3m. Third pereiopod; terminal joints.
,, 3z. Telson.

*Alpheus bianguiculatus* (p. 562).

,, 4. Lateral view; enlarged three times.
,, 4o. Fifth pereiopod; terminal joints.
,, 4z. Telson.

*Betis malleodigitus* (p. 565).

,, 5. Lateral view; enlarged three times.
,, 5c. Cephalon, frontal region.
,, 5c. Second antennæ; scaphocerite.
,, 5k. First pereiopod; larger chela.
,, 5l. Second pereiopod.
,, 5p. First pleopod, with parasites attached to peduncle; stylamblys detached and enlarged.
,, 5par. Parasitic vesicle, detached; escaped ovum, enlarged.
,, 5z. Telson.

*Betis microstylus* (p. 566).

,, 6. Lateral view; enlarged three times.
,, 6c. Cephalon, frontal region and scaphocerites.
,, 6c. Second antennæ; scaphocerite, enlarged.
,, 6z. Telson.
PLATE CII.
PLATE CII.

Paralpheus diversimanus (p. 568).

Fig. 1. Lateral view; enlarged three times.
  b. First antenna.
  c. Second antenna.
  d. Mandible.
  e. First sigmapod.
  f. Second sigmapod.
  g. Third sigmapod.
  h. First gnathopod.
  i. Second gnathopod.
  k. First pereiopod; smaller chela.
  p. First pleopod.
  q. Second pleopod.
  r. Third pleopod.

vzv. Rhipidura.
PARALPHELUS DIVERSIMANUS
PLATE CHI.

(zoöl. chäll. exp.—part lii.—1887.)—Fif.
PLATE CIII.

*Synalpheus falcatus* (p. 574).

Fig. 1. Lateral view; enlarged three times

c. Cephalon, frontal region; with b, first, and c, second antenna.
d. Mandible.
e. First siagnopod.
f. Second siagnopod.
g. Third siagnopod.
h. First gnathopod.
i. Second gnathopod.
j. First pereiopod; larger chela, left.
k'. Chela open to show the form of the dactylos.
l''. First pereiopod; smaller chela, right side.
m. Third pereiopod: terminal joints.
g. Second pleopod, bearing ova.
zr. Rhipidura.
SYNAPHEUS FALCATUS
PLATE CIV.
PLATE CIV.

*Latreutes ensiferus* (p. 583).

Fig 1. Lateral view; enlarged six times.

,, 1d. Mandible.
,, 1c. First sagnopod.
,, 1f. Second sagnopod.
,, 1g. Third sagnopod.
,, 1h. First gnathopod.
,, 1i. Second gnathopod.
,, 1k. First pereiopod.
,, 1l. Second pereiopod.
,, 1m. Third pereiopod; distal joints.
,, 1q. Second pleopod, with ova attached.

*Platybema rugosum* (p. 579).

,, 2. Lateral view; enlarged six times.
,, 2d. Mandible.
,, 2h. First gnathopod.
,, 2k. First pereiopod.
,, 2l. Second pereiopod.
,, 2q. Second pleopod, with ova attached, and stylamblys detached and magnified.
,, 2r-z. Rhipidura.
PLATE CV.
PLATE CV.

_Hippolyte bidentatus_ (p. 591).

Fig. 1. Lateral view of male; enlarged three times.

1b. First antennae.
1c. Mandible.
1d. First gnathopod.
1g. Third gnathopod.
1h. First pereiopod.
1i. Second pereiopod.
1k. First pereiopod.
1l. Second pereiopod.
1m. Third pereiopod; distal joints.

2. Lateral view of female; enlarged three times.
2c'. Rostrum; magnified.

_Hippolyte projecta_ (p. 594).

3. Lateral view; enlarged three times.
3a. Ophthalmopod.
3b. First antenna.
PLATE CVI.
PLATE CVI.

*Spirontocaris spinus* (p. 596).

Fig. 1. Rostrum, after Leach, var. α.

,, 2. Lateral view of animal, after Owen, var. β.

,, 3. Lateral view of var. γ.

,, 4. Lateral view of var. ε.

,, 5. Ventral aspect of same, with saccular parasite attached.

,, 6. Ventral aspect of same, with *Phrycus* attached.

,, 7. Lateral view of var. ζ; ophthalmopoda removed.

,, 8. Rostrum of var. η.


,, 10. Parasite from fig. 5; enlarged.
PLATE CVII.
**PLATE CVII.**

*Spirontocaris spinus*, var. δ (p. 599).

Fig. 1. Lateral view; enlarged three times.

- a. Ophthalmopod.
- b. First antenna.
- c. Second antenna; scaphocerite.
- d. Mandible.
- e. First siagnopod.
- f. Second siagnopod.
- h. First gnathopod.
- i. Second gnathopod.
- k. First pereiopod.
- l. Second pereiopod.
- m. Third pereiopod; distal joints.
- mb. Mastigobranchia.
PLATE CVIII.
Fig. 1. Lateral view; enlarged twice.

a. Ophthalmopod.
b. First antenna.
c. Second antenna, scaphocerite.
d. Mandible.
e. First siagnopod.
f. Second siagnopod.
g. Third siagnopod.
h. First gnathopod.
i. Second gnathopod.
j. Second gnathopod; mastigobranchia.
l. Second perciopod.
v. Sixth somite; v", articulated process at the infero-posterior angle.
vz. Rhipidura; lateral view.

" 2. Branchial apparatus in situ.
NAUTICARIS MARIO
PLATE CIX.
PLATE CIX.

_Nauticaris futilirostris_ (p. 606).

Fig. 1. Lateral view; enlarged twice.

_Hetairus guimardii_ (p. 611).

2. Lateral view; enlarged four times.

2d. Mandible.

2g. Third siagnopod.

2h. First gnathopod.

_Hetairus tenuis_ (p. 613).

3. Lateral view; enlarged three times.

_Hetairus debilis_ (p. 615).

4. Lateral view; enlarged four times.
PLATE CX.

Nauticaris unirecedens (p. 608).

Fig. 1. Lateral view; enlarged five times.

Chorismus tuberculatus (p. 617).

2. Lateral view.
2a. Ophthalmopod.
2d. Mandible.

Amphiplectus depressus (p. 623).

3. Lateral view; enlarged twice.
3d. Mandible.
3i. First gnathopod.

Merhippolyte agulhasensis (p. 619).

4. Lateral view; enlarged twice.
4a. Ophthalmopod.
4d. Second gnathopod.
1. Nauticaris unirecedens
2. Chorismus tuberculatus
3. Amphiplectus depressus
4. Merhippolyte agulhasensis
PLATE CXI.

(zool. chal. exp.—part iii.—1887.)—Fff.
PLATE CXI.

*Heterocarpus dorsalis* (p. 630).

Fig. 1 ♀. Lateral view of female.

b. First antenna.
c. Second antenna; scaphocerite.
d. Mandible; synaphipod detached.
f. Second siagnopod.
g. Third siagnopod.
h. First gnathopod.
i. Second gnathopod.
j. First pereiopod.
k. Second pereiopod.
l. Third pereiopod.
m. Third pereiopod.
p. First pleopod.
q. Second pleopod.
r. Rhipidura.

" 2. Branchiae in natural position.
PLATE CXII.
PLATE CXII.

*Heterocarpus alphonsi* (p. 632).

Fig. 1. Lateral view.

" 1l, 1l'. Second pereiopod; right and left.

*Heterocarpus gibbosus* (p. 634).

" 2. Lateral view; enlarged twice.

" i. First gnathopod.

" k, l, m. First three pereiopoda.

" 2z. Telson.

*Heterocarpus lasvigatus* (p. 636).

" 3. Lateral view.

*Heterocarpus ensifer* (p. 638).

" 4. Lateral view.

*Dorodotes levicarina* (p. 680).

" 5. Lateral view; enlarged twice.

" 5l. Second pereiopod.
PLATE CXIII.

Plesionika uniproducita (p. 641).

Fig. 1. Lateral view.
.. 1a, a. Ophthalmopoda.
.. 1b. First antenna.
.. 1c. Second antenna; scaphocerite.
.. 1ant., 1post. Epistoma and metastomata in relative position.
.. 1d. Mandible.
.. 1e. First gnathopod.
.. 1f. Second gnathopod.
.. 1g. Third gnathopod.
.. 1h. First pereiopod.
.. 1i. Second pereiopod.
.. 1l. Second pereiopod, right.
.. 1l'. Second pereiopod, left.

Plesionika spinipes (p. 646).
.. 2. Lateral view; enlarged twice.
.. 2b. First pereiopod, terminal joints.
.. 2m. Third pereiopod, articulation of mero-carpal joint.

Plesionika semilaevis (p. 644).
.. 3. Lateral view; slightly enlarged.
.. 3b. First antenna.

Plesionika unidens (p. 648).
.. 4. Lateral view; slightly enlarged.

Plesionika brevirostris (p. 650).
.. 5. Lateral view.
.. 5l. Second pereiopod.
PLATE CXIV.

*Nothocaris rostricrescentis* (p. 653).

Fig. 1. Lateral view.

,, 1r.c. Rostral crest.
,, 1a. Ophthalmopod.
,, 1b. First antenna.
,, 1d. Mandible.
,, 1k. First gnathopod.
,, 1l. Second gnathopod.
,, 1k". First pereiopod, terminal joints.
,, 1z. Telson.

*Nothocaris binoculus* (p. 656).

,, 2. Lateral view.
,, 2r.c. Rostral crest.
,, 2a. Ophthalmopod.

*Nothocaris ocellus* (p. 657).

,, 3. Lateral view.
,, 3r.c. Rostral crest.

*Pandalus modestus* (p. 670).

,, 4. Lateral view; enlarged four times.
,, 4b. First antenna.
,, 4k. First pereiopod.
,, 4l. Second pereiopod, right.
,, 4l'. Second pereiopod, left.
,, 4m. Third pereiopod.
PLATE CXV.
PLATE CXV.

*Pandalus magnoculus* (p. 667).

Fig. 1. Lateral view; enlarged twice.

```
1a. Ophthalmopod.
1b. First antenna.
1z. Telson.
```

*Pandalus falcipes* (p. 668).

```
2. Lateral view; enlarged twice.
2a. Ophthalmopod.
2b. First antenna.
2z. Telson.
```

*Pandalopsis amplus* (p. 671).

```
3. Lateral view.
3a. Ophthalmopod.
3b. First antenna.
3i. Second gnathopod.
3k. First pereiopod.
3z. Telson.
```
PANDALUS MACNOCULUS
2. FALCITAE
3. PANDALOPSIS AMPLUS
PLATE CXVI.

Chlorotocus incertus (p. 674).

Fig. 1. Lateral view; enlarged twice.

,, 1a. Ophthalmopod.
,, 1b. First antenna.
,, 1c. Second antenna.
,, 1d. Mandible.
,, 1e. First signopod.
,, 1f. Second signopod.
,, 1g. Third signopod.
,, 1h. First gnathopod.
,, 1i. Second gnathopod.
,, 1k. First pereiopod.
,, 2. Pereion, showing branchial arrangement.

Dorodotes reflexus (p. 678).

,, 3. Lateral view.
,, 3a. Ophthalmopod.

Nothocaris geniculatus (p. 661).

,, 4. Lateral view of female.
,, 4a. Ophthalmopod.
,, 4q. Second pleopod; stylamblys detached.
PLATE CXVII.

(zool. chal. exp.—part lii.)—1887.—Vff.
PLATE CXVII.

_Thalassocaris danæ_ (p. 683).

Fig. 1. Lateral view; enlarged ten times.

,, 1b. First antenna.

,, 1c. Second antenna; 1c”, inner margin of scaphocerite, enlarged.

_Thalassocaris stimpsoni_ (p. 684).

,, 2. Dorsal view; enlarged ten times.

__Diaphoropus versipellis_ (p. 687).

,, 3. Lateral view; enlarged ten times.

,, 3k. First pereiopod.

,, 3l. Second pereiopod.

,, 3m. Third pereiopod.

,, 3o. Fourth pereiopod.

__Diaphoropus longidorsalis_ (p. 688).

,, 4. Lateral view; enlarged eighteen times.
PLATE CXVIII.

_Atya sulcatipes_ (p. 694).

Fig. 1. Lateral view; slightly enlarged.

  b. First antenna.
  c. Second antenna, with three articuli of the flagellum enlarged.
  d. Mandible.
  f. Second siagnopod.
  g. Third siagnopod.
  h. First gnathopod.
  i. Second gnathopod.
  k. First perciopod.
  r, z, v. Rhipidura.
PLATE CXIX.

(Zool. Chal. exp. — part li. — 1888.) — FH.
Atya sulcatipes (p. 694).

Fig. 1. Lateral view, showing branchiae.

1p. First pleopod.
1q. Second pleopod.

Atya serrata (p. 699).

2. Lateral view; enlarged twice.
2a. Ophthalmopod.

Caridina typus (p. 704).

3. Part of pereion, with appendages.
3d. Mandible.
3i. Second gnathopod.
3k. First pereiopod.
3l. Second pereiopod.
3m. Third pereiopod.
I. ATYA SULCATIPES
2. D. SERRATA
3. CARIDINA TYPUS
PLATE CXX.

*Atya bisulcata* (p. 700).

Fig. 1. Lateral view; enlarged twice.

b. First antenna.

c. Second antenna.

d. Mandible; inner and outer surfaces.

e. First signopod.

f. Second signopod.

g. Third signopod.

h. First gnathopod.

i. Second gnathopod.

j. First pereiopod.

k. Fifth pereiopod.
PLATE CXXI.
PLATE CXXI.

*Kryptocaris stylofrontalis* (p. 690).

Fig. 1. Lateral view; enlarged twelve times.

1i. Second gnathopod.
1k. First pereiopod.
1l. Second pereiopod.
1m. Third pereiopod.

*Caricyphus cornutus* (p. 712).

2. Lateral view; enlarged twenty-four times.
2i. Second gnathopod.
2k. First pereiopod.

*Caricyphus serramarginis* (p. 714).

3. Lateral view; enlarged twelve times.

*Caricyphus gibberosus* (p. 716).

4. Lateral view; enlarged ten times.

*Caricyphus turgidus* (p. 717).

5. Lateral view; enlarged twenty-two times.
5c. Lateral view of rostral crest.

*Caricyphus angulatus* (p. 718).

6. Lateral view; enlarged eight times.
PLATE CXXII.

_Alpheus_ (Brephalos) (p. 538).

Fig. 1. Megalopa stage, lateral aspect; enlarged twenty times.

1c. Second antenna; 1f, second siagnopod; 1g, third siagnopod; 1h, first gnathopod; 1i, second gnathopod; 1k, first pereiopod, right side; 1k', first pereiopod, left side.

_Atya_ (Brephalos) (p. 692).

2. Ventral aspect; enlarged twenty times.

2ov. Ovum; enlarged twenty times.

_Campylonotus vagans_ (p. 775).

3. Lateral view.

3b. First antenna.

3c. Second antenna.

3d, 3d'. Mandible; inner and outer aspects.

3e. First siagnopod.

3f. Second siagnopod.

3g. Third siagnopod.

3h. First gnathopod.

3i. Second gnathopod.
PLATE CXXIII.
PLATE CXXIII.

*Anebocaris quadriculus* (p. 722).

Fig. 1. Lateral view; enlarged nine times.

,, 1k. First pereiopod.
,, 1l. Second pereiopod.
,, 1o. Fifth pereiopod.

*Rhomboecarid hamulatus* (p. 720).

,, 2. Lateral view; enlarged nine times.
,, 2c. Rostrum.
,, 2c'. Antennal tooth.
,, 2k. First pereiopod.

*Bentheocaris exuens* (p. 724).

,, 3. Lateral view; enlarged five times.
,, 3c. Rostrum; magnified.
,, 3a. Ophthalmopod.
,, 3b. First antenna.
,, 3c'. Margin of scaphocerite.
,, 3m. Third pereiopod.
,, 3n. Fourth pereiopod.
,, 3o. Fifth pereiopod.

*Bentheocaris stylorostratis* (p. 726).

,, 4. Lateral view; enlarged three times.
,, 4a. Ophthalmopod.
,, 4d. Mandible.
,, 4o. Fifth pereiopod.
PLATE CXXIV.

Pononio melagrinx (p. 707).

Fig. 1. Lateral view; enlarged three times.
,, 2. Dorsal view.
,, 1b. First antenna.
,, 1c. Scaphocerite.
,, 1d. Mandible.
,, 1e. First gnathopod.
,, 1f. Second gnathopod.
,, 1g. Third gnathopod.
,, 1h. First pleopod.
,, 1i. Second gnathopod.
,, 1p. First pleopod.

Acanthephyra purpurea (p. 733).
,, 3. Lateral view; enlarged twice.

Acanthephyra longidens (p. 735).
,, 4. Lateral view; enlarged twice.
,, 4a. Ophthalmopod.

Acanthephyra media (p. 736).
,, 5. Lateral view; enlarged twice.
,, 5c. Rostrum of another specimen.

Acanthephyra angusta (p. 737).
,, 6a. Ophthalmopod.

Systellaspis lanceocaudata (p. 758).
,, 7. Lateral view; enlarged a half.
,, 7z. Telson.
1. PONTONIA MELEAGRINA
2. ACANTHEPHYRA PURPUREA
3. DOLONECANDA
4. ACANTHEPHYRA MEDIA
5. ACANTHEPHYRA ANGUSTA
6. ACANTHEPHYRA ANGUSTA
7. SYSTELARSPIS LANCEOCAUDATA
PLATE CXXV.

PLATE CXXV.

*Acanthephyra sica* (p. 739).

Fig. 1. Lateral view of female.

1a. Ophthalmopod.

1b. First antenna.

1c. Second antenna; under surface of scaphocerite.

1c". Upper surface of scaphocerite.

1d. Mandible; *ch.α*, cheiloglossa; *d*, mandible; *ma*, metastoma.

1e. First siagnopod.

1f. Second siagnopod.

1g. Third siagnopod.

1i. Second gnathopod.

1z. Telson.

*Acanthephyra armata* (p. 744).

2. Lateral view of male.

2μ. First pleopod.

*Acanthephyra acanthitelsonis* (p. 745).

3. Lateral view of male.

3b. First antenna.

3c. Second antenna, showing the scaphocerite with the flagellum undergoing reproduction.

3z. Telson.
1 ACANTHEPHYRA SICA
2 0° ARMATA
3 0° ACANTHITELSONIS
PLATE CXXVI.

_Acanthephyra edwardsii_ (p. 747).

Fig. 1. Lateral view of male.

1z. Telson.

_Acanthephyra carinata_ (p. 748).

2. Lateral view of male.

2a. Ophthalmopod.

2z. Telson.

_Acanthephyra acutifrons_ (p. 749).

3. Lateral view of male.

3a. Ophthalmopod.

3z. Telson.

_Acanthephyra kingsleyi_ (p. 751).

4. Lateral view of male.

4a. Ophthalmopod.

4z. Telson.

_Acanthephyra brevirostris_ (p. 751).

5. Lateral view of male.

6. Lateral view of a variety (p. 752).

6a. Ophthalmopod.

6p. First pleopod.

6z. Telson.

_Acanthephyra brachytelsonis_ (p. 733).

7. Lateral view of female.

7a. Ophthalmopod.

_Acanthephyra approxima_ (p. 755).

8. Lateral view of male.

8a. Ophthalmopod.

8z. Telson.
PLATE CXXVII.
PLATE CXXVII.

Oplophorus typus (p. 762).

Fig. 1. Lateral view of female; enlarged twice.

,, 1a. Ophthalmopod.
,, 1b. First antenna.
,, 1c. Second antenna.
,, 1d. Mandible.¹
,, 1g. Third signopod.
,, 1h. First gnathopod.
,, 1i. Second gnathopod.
,, 1k. First pereiopod.
,, 1z. Telson.

Oplophorus longirostris (p. 765).

,, 2. Lateral view of female; enlarged twice.

Oplophorus brevirostris (p. 766).

,, 3. Lateral view; enlarged twice.

Procetes biangulatus (p. 884).

,, 4. Lateral view; enlarged four times.
,, 4c. Dorsal view of carapace; a, ophthalmopod; b, first, and c, second antenna.

¹ The mandible is drawn from an imperfect specimen; the synaphipod is triarticulate.
PLATE CXXVIII.

*Campylonotus semistriatus* (p. 768).

Fig. 1. Lateral view of female; enlarged.

,, 2. Ventral aspect of pereion.

*Campylonotus capensis* (p. 773).

,, 3. Lateral view of female.

*Palaemonella orientalis* (p. 787).

,, 4. Lateral view; enlarged twenty times.

,, 4i. Second gnathopod.

*Palaemon affinis* (p. 782).

,, 5. Lateral view of female; enlarged three times.

,, 5a. Ophthalmopod.

,, 5d. Mandible.

,, 5i. Second gnathopod.

*Palaemon natator* (p. 784).


,, 7. Lateral view of male; enlarged two and a half times.
PLATE CXXIX.
PLATE CXXIX.

_Bithynis bar_ (p. 789).

Fig. 1. Lateral view of male.

_Bithynis grandimanus_ (p. 793).

,, 2. Lateral view.

,, 2'. Second pereiopod, left.

,, 3. Lateral view of variety (p. 795).

_Brachycarpus savignyi_ (p. 795).

,, 4. Lateral view; enlarged twice.

_Brachycarpus audonini_ (p. 798).

,, 5. Lateral view of female; enlarged eight times.

,, 5k. First pereiopod, right.
PLATE CXXX.
PLATE CXXX.

*Nematocarcinus undulatipes* (p. 801).

Fig. 1. Lateral view of female; enlarged half.

*d.* Mandible.

*e.* First signopod.

*f.* Second signopod.

*g.* Third signopod.

*h.* First gnathopod.

*i.* Second gnathopod, terminal joints.

*k.* First pereiopod, terminal joints.

*l.* Second pleopod, with ova attached.
H. acrura
PI CXXX
V
"^.
\r
C
5
J
C
RicKAr
U
JCARCINUS REDULATIPES

NEMATOLCARCINUS UNDULATIPES
PLATE CXXXI.
PLATE CXXXI.

Nematocarcinus lanceopes (p. 804).

Fig. 1. Lateral view.

♀. Ventral surface of pereion of female.

♂. Ventral surface of pereion of male.

k. First pereiopod; chela.

m. Third pereiopod; coxal and basal joints, with arthrobranchial plumes and ephysis attached.

n. Fourth pereiopod; ischio-mæral articulation, inner surface; n', outer surface.

o. Fifth pereiopod; terminal joints.

p♀. First pleopod of male.

p♂. First pleopod of female.

q♀. Second pleopod of female, with ova attached.
NEMATOCARCINUS LANCEOPES
PLATE CXXXII.
PLATE CXXXII.

Nothocaris spiniserratus (p. 663).

Fig. 1. Lateral view; enlarged sixteen times.

1c. Rostrum; magnified.

Nematocarcinus longirostris (p. 806).

2. Carapace, lateral view.

Nematocarcinus proximatus (p. 808).

3. Carapace, lateral view.

Nematocarcinus altus (p. 809).

4. Carapace, lateral view.

Nematocarcinus productus (p. 810).

5. Carapace, lateral view.

Nematocarcinus tenuiipes (p. 812).

6. Carapace, lateral view.

Nematocarcinus parvidentatus (p. 814).

7. Carapace, lateral view.

Nematocarcinus gracilis (p. 815).

8. Carapace, lateral view.

Nematocarcinus paucidentatus (p. 819).

9. Carapace, lateral view.

Nematocarcinus tenuirostris (p. 817).

10. Carapace, lateral view.

Nematocarcinus serratus (p. 819).

11. Rostrum.

Nematocarcinus hiatus (p. 821).

12. Carapace, lateral view.

Nematocarcinus intermedius (p. 821).

13. Carapace, lateral view.

Stebastiosus exilis (p. 823).

14. Lateral view; enlarged three times.

14i. Second gnathopod.
PLATE CXXXIII.
PLATE CXXXIII.

Notostomus patentissimus (p. 826).

Fig. 1. Lateral view.

d. Mandible.
e. First siagnopod.
f. Second siagnopod.
g. Third siagnopod.
h. First gnathopod.
i. Second gnathopod.
j. Third pereiopod; with arthrobranchia, mastigobranchia, and basecephysis attached.
o. Fifth pereiopod; terminal joints.
p. First pleopod.
q. Second pleopod.
br. Section of a branchial plume.
PLATE CXXXIV.

*Notostomus patentissimus* (p. 826).

Fig. 1. Ventral surface.

" 1a. Ophthalmopod.

" 1b. First antenna; 1b'', portion of flagellum; 1b''', section of flagellum.

" 1c. Second antenna.

" 2. Branchiae in position.

*Notostomus murrayi* (p. 829).

" 3. Lateral view; enlarged twice.
PLATE CXXXV.

PLATE CXXXV.

*Notostomus japonicus* (p. 830).

Fig. 1. Lateral view of male.

*Notostomus perlatus* (p. 831).

,, 2. Lateral view of female.

*Notostomus brevirostris* (p. 832).

,, 3. Lateral view of male.

*Notostomus longirostris* (p. 833).

,, 4. Lateral view of female.
PLATE CXXXVI.

*Tropiocaris planipes* (p. 835).

Fig. 1. Lateral view; enlarged twice.

*Tropiocaris tenuipes* (p. 836).

Fig. 2. Lateral view; enlarged twice.

*Hymenodora duplex* (p. 843).

Fig. 3. Lateral view; enlarged one and a half times.

Fig. 3c. Second antenna; scaphocerite.

Fig. 3d. Mandible.

Fig. 3f. Second gnathopod.

Fig. 3g. Third gnathopod.

Fig. 3h. First gnathopod.

Fig. 3i. Second gnathopod; basal joints with branchiae attached.

Fig. 3o. Fifth pereiopod; terminal joint.

*Hymenodora rostrata* (p. 847).

Fig. 4. Lateral view; enlarged twice.

*Hymenodora mollis* (p. 841).

Fig. 5. Lateral view; enlarged twice.
1 TROPIOCARIS PLANIPES  J HYMENODORA DUPLEX
2.  D° TENUIPES  4  D° ROSTIPATA
5 HYMENODORA MOLLIS.
PLATE CXXXVII.
PLATE CXXXVII.

_Hymenodora glauca_ (p. 847).

Fig. 1. Lateral view; enlarged twice.

,, 1d. Mandible.
,, 1m.a. Metastoma.
,, 1e. First siagnopod.
,, 1f. Second siagnopod.
,, 1g. Third siagnopod.
,, 1h. First gnathopod.
,, 1i. Second gnathopod.
,, 1k. First pereiojpod.
,, 1m. Third pereiopod.
,, 1o. Fifth pereiopod; terminal extremity.

_Hymenodora mollicutis_ (p. 848).

,, 2. Lateral view; enlarged a half.
,, 2i. Second gnathopod.
,, 2k. First pereiopod; chela.
,, 2br. Section of branchia.
PLATE CXXXVIII.
PLATE CXXXVIII.

*Stylodactylus discissipes* (p. 851).

Fig. 1. Lateral view of male; enlarged twice.

```
1c. Second antenna; peduncle and part of frontal margin.
1d. Second gnathopod; 1'd', dactylos.
1e. First pereiopod.
1f. First pereiopod; articulation of chela reversed.
```

1vzv. Rhipidura.

*Stylodactylus orientalis* (p. 854).

```
2. Branchiae in position.
2d. Mandible.
2e. First siagnopod.
2f. Second siagnopod.
2g. Third siagnopod.
```

*Stylodactylus bimaxillaris* (p. 855).

```
3. Lateral view of female; enlarged twice.
3e. First gnathopod.
```
1 STYLODACTYLUS DISCISSIPES
2 D⁰ ORIENTALIS
3 D⁰ BIMAXILLARIS
PLATE CXXXIX.

*Leptochela serratorbita* (p. 859).

Fig. 1. Lateral view; enlarged five times.

,, 1c. Frontal margin of carapace, showing ophthalmo pod in position.
,, 1d. Mandible.
,, 1e. First siagnopod.
,, 1f. Second siagnopod.
,, 1h. First gnathopod.
,, 1i. Second gnathopod.
,, 1k. First pereiopod; chela.
,, 1o. Fifth pereiopod.
,, 1z. Telson.

*Leptochela gracilis* (p. 860).

,, 2. Lateral view of male; enlarged.
,, 2o. Fifth pair of pereiopoda.
,, 2br. Branchial plume; br", section of same.

*Leptochela robusta* (p. 862).

,, 3. Lateral view of female; enlarged three times.
,, 4. Lateral view of male; enlarged three times.
1. LEPTOCHELA SERRATORBITA
2. D^6 GRACILIS
3, 4. D^6 ROBUSTA
PLATE CXL.
PLATE CXL.

Pasiphaea cristata (p. 865).

Fig. 1. Lateral view of female; enlarged a half.

k. First pereiopod; chela.

k′. First pereiopod; extremity of pollex and dactylos magnified.

m. Third pereiopod.

n. Fourth pereiopod.

o. Fifth pereiopod.

p. First pleopod; inner ramus in position.

q. Second pleopod with stylamblys.

v. Sixth pleopod; portion enlarged, showing the diciresis.

br. Section of branchial plume.

" 2. Branchiae in position.

" 3. Parasite; 3′, the same, enlarged.
1 PASIPHAEA CRISTAIA
2 D\sex B RANCHIÆ
PLATE CXLI.
PLATE CXLI.

*Pasiphea cristata* (p. 865).

Fig. 1d. Mandible.

,, 1c. First siagnopod.

,, 1f. Second siagnopod; 1f", two hairs, enlarged.

,, 1g. Third siagnopod.

,, 1h. First gnathopod.

*Pasiphea amplidens* (p. 870).

,, 2. Lateral view of carapace.

*Pasiphea acutifrons* (p. 871).

,, 3. Lateral view.

,, 3z. Telson.

*Orphania tenuimana* (p. 872).

,, 4. Lateral view; enlarged.

,, 4k. First pereiopod.

,, 4l. Second pereiopod.

,, 4z. Telson.
1. PASIPHEA CRISTATA  
2. D\* AMPLIDENS  
3. PASIPHEA ACUTIFRONS  
4. ORPHANIA TENUIMANA
PLATE CXLII.

_Oodeopus geminidentatus_ (p. 876).

Fig. 1. Lateral view; enlarged twenty-five times.

,, 1z. Telson.

_Oodeopus serratus_ (p. 877).

,, 2. Lateral view; enlarged twenty-five times.

,, 2z. Telson.

_Oodeopus serratus, var._ (p. 878).

,, 3. Lateral view; enlarged fifteen times.

_Oodeopus armatus_ (p. 879).

,, 4. Lateral view; enlarged twenty times.

_Oodeopus longispinus_ (p. 881).

,, 5. Lateral view; enlarged twenty times.

,, 5z. Telson.
1 OODEOPUS GEMINIDENTATUS  2 OODEOPUS SERRATUS 3
2 D³ SERRATUS  4 D⁴ ARMATUS
5 OODEOPUS LONGISPINUS
PLATE CXLIII.

*Oodeopus intermedius* (p. 879).

Fig. 1. Lateral view; enlarged twenty times.

,, 1v.z.v. Rhipidura.

*Oodeopus duplex* (p. 880).

,, 2. Lateral view; enlarged twenty times.

*Oodeopus gibbosus* (p. 882).

,, 3. Lateral view; enlarged twenty-two times.

,, 3v.z.v. Rhipidura.

PLATE CXLIV.

*Icotopus arcuatrostris* (p. 886).

Fig. 1. Lateral view; enlarged ten times.

"1d. Mandible.

"1f. Second siagnopod.

"1g. Third siagnopod.

"1br. Branchial plume.

"1c. Cephalon.

*Hectarthropus exilis* (p. 889).

"2. Lateral view; enlarged ten times.

"2t. Fifth somite; dorsal aspect.

*Hectarthropus compressus* (p. 891).

"3. Lateral view; enlarged eleven times.

*Hectarthropus expansus* (p. 892).

"4. Dorsal view; enlarged twelve times.

"5. Lateral view; enlarged twelve times.

*Hectarthropus tennis* (p. 893).

"6. Lateral view; enlarged ten times.
PLATE CXLV.
PLATE CXLV.

*Eretmocaris remipes*  (p. 895).

Fig. 1. Lateral view; enlarged ten times.

*Eretmocaris longicaulis* (p. 897).

,, 2. Lateral view; enlarged eighteen times.

*Eretmocaris stylorostris* (p. 898).

,, 3. Lateral view; enlarged fifteen times.

*Eretmocaris corniger*  (p. 900).

,, 4. Lateral view; enlarged eighteen times.
1 ERETMOCARIS REMIPES
2 D³ LONGICAULUS
3 ERETMOCARIS STYLOROSTRIS
4 D³ CORNIGER
PLATE CXLVI.

*Amphion*-Development (p. 902).

Fig. 1. Zoea with two pairs of legs; ventral aspect; enlarged thirty times; *h*, first gnathopod; *i*, second gnathopod.

,, 2z. Telson of a second specimen (pp. 903, 915).

,, 3. Young with three pairs of legs; ventral aspect of cephalon and pereion: *ph*, *ph*, phymacerite (pp. 903, 915).

,, 3d. Oral appendages.

,, 4. Young with fourth pair of legs (*l*) in process of development; ventral aspect; enlarged twenty times (pp. 905, 915).

,, 5. A second specimen; portion of pereion showing the fourth pair (*l*) biramose (p. 905).

,, 6. Cephalon of a specimen with five pairs of legs attached to the pereion; ventral surface, magnified; *ph*, *ph*, phymacerite.
PLATE CXLVII.
PLATE CXLVII.

*Amphion reynaudii* (p. 906).

Fig. 1. Female with six pairs of legs; ventral aspect; enlarged thirteen times; $h, i$, first and second gnathopods; $k, l, m, n$, first to fourth pereiopods; *n.c.* nucleated cells near the fourth pair of legs; $n.c'$, the same more magnified.

,, 1br. Branchial plume.
,, 1d. Mandible.
,, 1c. First siagnopod.
,, 1f. Second siagnopod.
,, 1g. Third siagnopod.
,, 1z. Telson.

,, 2. Cephalon and perion of a specimen (adult male ?) with seven pairs of legs; ventral aspect; enlarged sixteen times; $h, i$, first and second gnathopods; $k-o$, pereiopoda; $te$, testes (?); $te''$, structure believed by Suhm to be testes; *h.c.*, hepatic cells; *h.c''.*, the same, magnified (p. 910).

,, 2br. Branchial plume, enlarged.
PLATE CXLVIII.
PLATE CXLVIII.

*Amphion provocatoris* (p. 913).

Fig. 1. Ventral aspect; enlarged seven times.

,, 2. Cephalon of the same; dorsal aspect.

,, c. Tooth on dorsal surface of carapace.

,, p. First pleopod of male (?).

,, q. Second pleopod of same.

,, z. Telson; extremity.
Fig. 1. *Sylon challenger*, attached to *Spirentocaris spinus*, a part of the right side of the Shrimp having been taken away; $x$, the injured part at the surface of the sac; I., II., III., IV., and V., the first to the fifth pleopods of the left side of the Shrimp; $V_a$, the fifth pleopod of the right side. Magnified 13 diameters.

2. *Sylon challenger*, seen from below, with a part of the wall of the host attached; $c$, the ovary of the parasite. Magnified 12 diameters.

3. *Sylon challenger*, front view; $x$, the injured part at the surface. Magnified 12 diameters.

4. *Sylon schneideri*, front view; $a$, openings leading into the mantle-cavity; $B$, transverse section of *Hippolyte pusioila*. Magnified 12 diameters.

5. *Sylon schneideri*, seen from the side, the lateral parts of the exoskeleton of the second and third abdominal segment of the *Hippolyte* being taken away; $a$ and $B$ as in fig. 4; II.–IV., second to fourth pleopod. Magnified 12 diameters.
The Voyage of H.M.S. "Challenger."
Fig. 1. *Sylon challengerii*, part of a transverse section, passing through the ovary, *e*, and the "Eikittdruse," *A*; *a*, connective tissue of the mantle; *b*, epithelium surrounding the visceral mass; *c*, ramified tubes of the gland; *d*, female genital pore. Magnified 136 diameters.

2. Part of the mantle and visceral mass of *Sylon Schneideri*; *a*, connective tissue of the mantle; *b*, epithelium surrounding the visceral mass; *e*, ovary; *f*, chitinous outer wall of the mantle; *g*, thickening of the chitinous outer wall at the place where later on the openings of the mantle-cavity occur; *h*, epithelium of the outer side of the mantle; *i*, epithelium at the inner side of the mantle; *l*, blood-plasma (?); *n*, nervous system. Magnified 136 diameters.

3. Part of the visceral mass of *Sylon Schneideri*; *b* and *e* as in fig. 2; *c*, connective tissue; *l*, blood-plasma (?). Magnified 136 diameters.

4. Section through a part of *Hippolyte pusiola*, with *Sylon Schneideri* attached to it; *e*, ovary of the parasite; *n*, nervous system of the *Hippolyte*; *B*, biliary membrane; *r*, roots of the *Sylon*; *m*, abdominal flexor muscles of the host. Magnified 30 diameters.

5. Section in front of the attachment of *Sylon Schneideri* to *Hippolyte pusiola*; *c*, *m*, *n*, and *r* as in fig. 4; *t*, testis. Magnified 30 diameters.

6. Section of the same *Sylon* as in the two foregoing figures; *e*, *t*, as in fig. 5; *t'*, communication of the interior of the testis with the mantle-cavity. Magnified 41 diameters.
I SYLON CHALLENGERI  2-6 SYLON SCHNEIDERI.