

AUSTRALASIAN ANTARCTIC EXPEDITION  
1911-14.

UNDER THE LEADERSHIP OF SIR DOUGLAS MAWSON, D.Sc., B.E.

---

SCIENTIFIC REPORTS.  
SERIES C.—ZOOLOGY AND BOTANY.  
VOL. V. PART 4.

---

**CLADOCERA AND HALOCYPRIDÆ**

BY

G. STEWARDSON BRADY, M.D., LL.D., D.Sc., F.R.S.

WITH TWO PLATES.

---

PRICE : TWO SHILLINGS.  
TO SUBSCRIBERS : ONE SHILLING AND SIXPENCE.

---

Printed by William Applegate Gullick, Government Printer, Phillip-street, Sydney.—1918.

ISSUED MAY, 1918.

**Series C.—REPORTS ALREADY ISSUED.**

Vol.	Part.	PRICE.
		s. d.
III.	1. FISHES. By Mr. EDGAR R. WAITE, F.L.S., South Australian Museum, Adelaide ... ..	8 6
IV.	1. MOLLUSCA :—PELECYPODA AND GASTROPODA. By Mr. C. HEDLEY, F.L.S., Australian Museum, Sydney	8 6
IV:	2. MOLLUSCA :—CEPHALOPODA. By Dr. S. STILLMAN BERRY, Redlands, Cal. ... ..	3 6
V.	1. ARACHNIDA FROM MACQUARIE ISLAND. By Mr. W. J. RAINBOW, F.E.S., Australian Museum, Sydney	1 0
V.	2. BRACHYURA. By Miss MARY J. RATHBUN, U.S. National Museum, Washington ... ..	1 0
V.	3. COPEPODA. By Dr. G. STEWARDSON BRADY, F.R.S. ... ..	5 6

AUSTRALASIAN ANTARCTIC EXPEDITION  
1911-14.

UNDER THE LEADERSHIP OF SIR DOUGLAS MAWSON, D.Sc., B.E.

---

SCIENTIFIC REPORTS.  
SERIES C.—ZOOLOGY AND BOTANY.  
VOL. V. PART 4.

---

CLADOCERA AND HALOCYPRIDÆ

BY

G. STEWARDSON BRADY, M.D., LL.D., D.Sc., F.R.S.

WITH TWO PLATES.

---

PRICE : TWO SHILLINGS.  
TO SUBSCRIBERS: ONE SHILLING AND SIXPENCE.

---

Printed by William Applegate Gullick, Government Printer, Phillip-street, Sydney.—1913.

# CONTENTS.

---

	PAGE
Cladocera ... ..	5
Ostracoda—Halocypridæ ... ..	6
Explanation of Plates ... ..	9
Index ... ..	11

Plates XVI and XVII.

# CLADOCERA AND HALOCYPRIDÆ.

By G. STEWARDSON BRADY, M.D., LL.D., D.Sc., F.R.S.

(Plates XVI and XVII.)

## CLADOCERA.

Genus SIMOCEPHALUS *Schoedler*, 1858.

SIMOCEPHALUS GELIDUS *sp. nov.*

(Plate XVI, figs. 10-13.)

Seen laterally the shell is elongated, fully twice as long as broad; head rounded in front and produced ventrally in a straight line to a sharply prominent backward-pointed beak. Dorsal margin almost straight throughout, ending abruptly in an obtuse angle; ventral margin gently arched in front and continued with a distinct curvature to the well-marked postero-dorsal angle. Seen dorsally or ventrally the outline of the shell is almost circular, the head forming a very prominent rounded segment in front. Dorsal processes of the abdomen well developed, the two proximal ones stout and strongly curved in opposite directions; pre-anal spines twelve in number, separated into two distinct series of six each; terminal unguis slender, without serratures or marginal fringe. Length, 2.5 mm.

Taken plentifully in fresh water on Macquarie Island by Mr. H. Hamilton.

The Rev. R. L. King in a paper on the Daphniadæ of New South Wales\* describes very shortly, and figures *Daphnia Elizabethæ*, a species which evidently approaches very closely that now described under the specific name *gelidus*, but the shape of the shell as also the spinous armature of the postabdomen do not allow of identification with that species.

*Daphnia cavicervix*, described by Dr. Sven Ekman† bears some resemblance to this species, but the furcate spines of the postabdomen together with the conspicuously fringed terminal claws sufficiently distinguish it from *S. gelidus*.

Genus CHYDORUS *Leach*.

CHYDORUS MACQUARIENSIS *sp. nov.*

(Plate XVII, figs. 17-19.)

This might very readily be taken on a casual glance for *Chydorus piger*, G. O. Sars, as figured by Prof. Lilljeborg in his work on the Swedish Cladocera. But it

\*Papers and Proceedings of the Royal Society of Van Diemen's Land, 1853.

†Cladoceren aus Patagonien (Zoologisches Jahrbuch, 1900).

seems to differ very essentially in the marginal armature of the caudal laminæ; these tufts, which with a magnifying power seem to be separate spines, consisting really of fascicles of minute setæ; the terminal claw is well developed and bears at its base a single spine. Females only were found, length 0.66 mm.

A few specimens found in a fresh-water gathering from Macquarie Island (H. Hamilton).

## OSTRACODA.

### Family HALOCYPRIDÆ.

#### Genus CONCHOECIA Dana.

#### 1. CONCHOECIA BOREALIS, G. O. Sars.

1865. *Conchoecia borealis* G. O. Sars—Oversigt af Norges marine Ostracoda, p. 119.
1886. „ „ Brady and Norman—Ostracoda of the North Atlantic and North-western Europe, p. 685, Plate LXI, figs. 9-19.

Taken in gatherings from off Maria Island, Tasmania, in depths of 100 fathoms (10th January, 1914) and (9th January, 1914), and in 50 fathoms (6th January, 1914) and (11th January, 1914).

These specimens differ from the typical Greenland specimens of Prof. G. O. Sars, in having no distinct reticulated sculpture of the shell and in the absence of teeth on the postero-ventral margin. In these characters they are more like *C. maxima* Brady and Norman.

#### 2. CONCHOECIA SERRULATA Claus.

(Plate XVII, figs. 10-16.)

1874. *Conchoecia serrulata* Claus—Die Familie der Halocypriden, Taf. 1 and Taf. 2.
1890. *Pseudoconchoecia serrulata* Claus—Die Gattungen und Arten der Mediterraenen und Atlantischen Halocypriden, p. 20.
1880. *Halocypris atlantica* Lubbock, Brady—Report on Ostracoda of the "Challenger" Expedition, Plate XL, figs. 1-15, Plate XLI, figs. 11, 12.
1906. *Conchoecia serrulata* G. W. Müller—Ostracoda der deutschen Tiefsee Expedition auf der Dampfer Valdivia, p. 97, Taf. XXII, fig. 24, Taf. XXIII, figs. 20-30.

Taken in tow-net gatherings from off Maria Island, Tasmania, from off Macquarie Island, 2 fathoms (21st June, 1912) and by tow-net at night, Lusitania Bay, Macquarie Island (11th January, 1912).

3. CONCHOECIA HETTACRA *G. W. Müller*:

(Plate XVII, figs. 1-5.)

1906. *Conchoecia hettacra* *G. W. Müller*—L.C., Taf. XXIX, figs. 11-19.

Length 2-30 mm. Seen laterally the width of the shell is equal to one half of the length, the subrostral sinus is fairly well developed. The anterior and posterior extremities are obliquely rounded, and the posterior ventral angle is obtuse and toothless; the peculiar nodulated principal seta of the anterior antenna of the male is a sufficiently distinctive character of the species; the capitulum of the frontal tentacle is broadly dilated at the base, and clubbed at the apex; secondary branch of the posterior antenna bearing two small lateral setæ and a strong rectangularly bent falciform claw; in the female only two small setæ and an almost obsolete wart-like process.

*C. hettacra* occurred in the following localities—probably also in others where it may have escaped notice:—

Off Maria Island, Tasmania, tow-net in 45 fathoms (4th January, 1914), 30 fathoms (6th January, 1914), 100 fathoms (9th January, 1914), and 10th January, 1914).

4. CONCHOECIA PARTHENODA *G. W. Müller*.1906. *Conchoecia parthenoda* *G. W. Müller*—Taf. XVI, figs. 24-29.

(Plate XVII, figs. 6-9.)

*Female*.—Length 1 mm. Seen laterally the width is equal to considerably more than half the length; rostrum very sharp and prominent, postero-ventral angle obtuse, subrostral sinus very shallow. Frontal tentacle stylet-shaped, with sharp apex, capitulum scarcely separate from the stem.

Dr. Müller points out that this species is very closely related to *C. obtusata* and *C. spinirostris*—being in fact only doubtfully separated from them. The only specimens I have seen—not more than one or two—are from a tow-netting at a depth of 100 fathoms (10th January, 1914).

*Genus* ARCHICONCHOECIA *G. W. Müller*, 1894.\*1. ARCHICONCHOECIA MÜLLERI *sp. nov.*

(Plate XVI, figs. 1-6.)

*Female*.—Length 0.6 mm. Seen laterally the width is equal to three-fourths of the length; dorsal margin slightly convex towards the front, ventral very strongly convex throughout; rostrum short and sharply pointed, the subjacent sinus very wide and shallow; posterior extremity wide and truncate, almost straight, with rather prominent dorsal and ventral angles; seen dorsally the outline is oval, widest in the

\*Die Ostracoden des Golfes von Neapel.

middle, scarcely twice as long as broad. The anterior antenna bears six long sensory setæ, springing from three quite separate digitiform processes; frontal tentacle club-shaped, reaching not beyond the extremity of the antenna; inner branch of the posterior antenna bearing five long terminal setæ, and a small wart-like process with two very small spine-like setæ. Male unknown.

Several specimens—all females— were taken by the tow-net in a depth of 2 fathoms off Macquarie Island.

This species is separated from other members of the genus by the three distinct processes of the anterior antennæ, each of them bearing two sensory setæ.

2. ARCHICONCHOECIA AURORÆ *sp. nov.*

(Plate XVI, figs. 7-9.)

*Female*.—Length 2.2 mm. Seen laterally the width is equal to half the length; dorsal margin slightly sinuated in the middle, ventral very slightly arched; rostrum stout, prominent, and sharply pointed; anterior margin of the shell moderately rounded ventrally, posterior rounded off ventrally, abruptly rounded dorsally. Anterior antenna bearing two long terminal setæ and six shorter sensory ones, all rising from the terminal joint. Capitulum of the frontal tentacle pointed and slightly emarginate at the apex, its lower margin finely ciliated throughout.

One specimen only, taken in the tow-net, depth 30 fathoms (6th January, 1914).



## EXPLANATION OF PLATES.

## PLATE XVI.

*Archiconchoecia Mülleri* ♀.

- Fig. 1. Shell, seen laterally.  $\times 84$ .  
 2. „ dorsally.  $\times 84$ .  
 3. Anterior antenna with frontal stylet.  $\times 240$ .  
 4. Inner branch of posterior antenna.  $\times 240$ .  
 5. Biting portion of mandible.  $\times 240$ .  
 6. Post-abdominal lamina.  $\times 240$ .

*Archiconchoecia Aurora* ♀.

7. Shell of female, seen laterally.  $\times 30$ .  
 8. Anterior antenna and frontal stylet.  $\times 84$ .  
 9. Inner branch of posterior antenna.  $\times 84$ .

*Simocephalus gelidus* ♀.

10. Female, seen laterally.  $\times 40$ .  
 11. „ ventrally.  $\times 30$ .  
 12. Post-abdomen.  $\times 84$ .  
 13. Spines of the same.  $\times 240$ .

## PLATE XVII.

*Conchoecia hettacra*.

- Fig. 1. Shell, seen laterally, male.  $\times 33$ .  
 2. Anterior antenna and tentacle, male.  $\times 84$ .  
 a. „ seta, more highly magnified.  
 3. Inner branch of posterior antenna, male.  $\times 84$ .  
 4. „ „ „ female.  $\times 84$ .  
 5. Biting portion of mandible.  $\times 84$ .

*Conchoecia parthenoda* ♀.

6. Shell of female, seen laterally.  $\times 84$ .  
 7. Anterior antenna and tentacle, female.  $\times 240$ .  
 8. Inner branch, posterior antenna.  $\times 240$ .  
 9. Biting portion of mandible.  $\times 240$ .

*Conchoecia serrulata*.

10. Shell of female, seen laterally.  $\times 40$ .  
 a. Portion of ventral margin.  $\times 84$ .  
 11. Shell, seen dorsally.  $\times 40$ .

12. Anterior antenna of male. + 84.
13. Capitulum of tentacle, male. × 240.
14. Inner branch, posterior antenna, male. × 240.
15. „ „ „ female. × 240.
16. Copulatory organ, male. × 240.

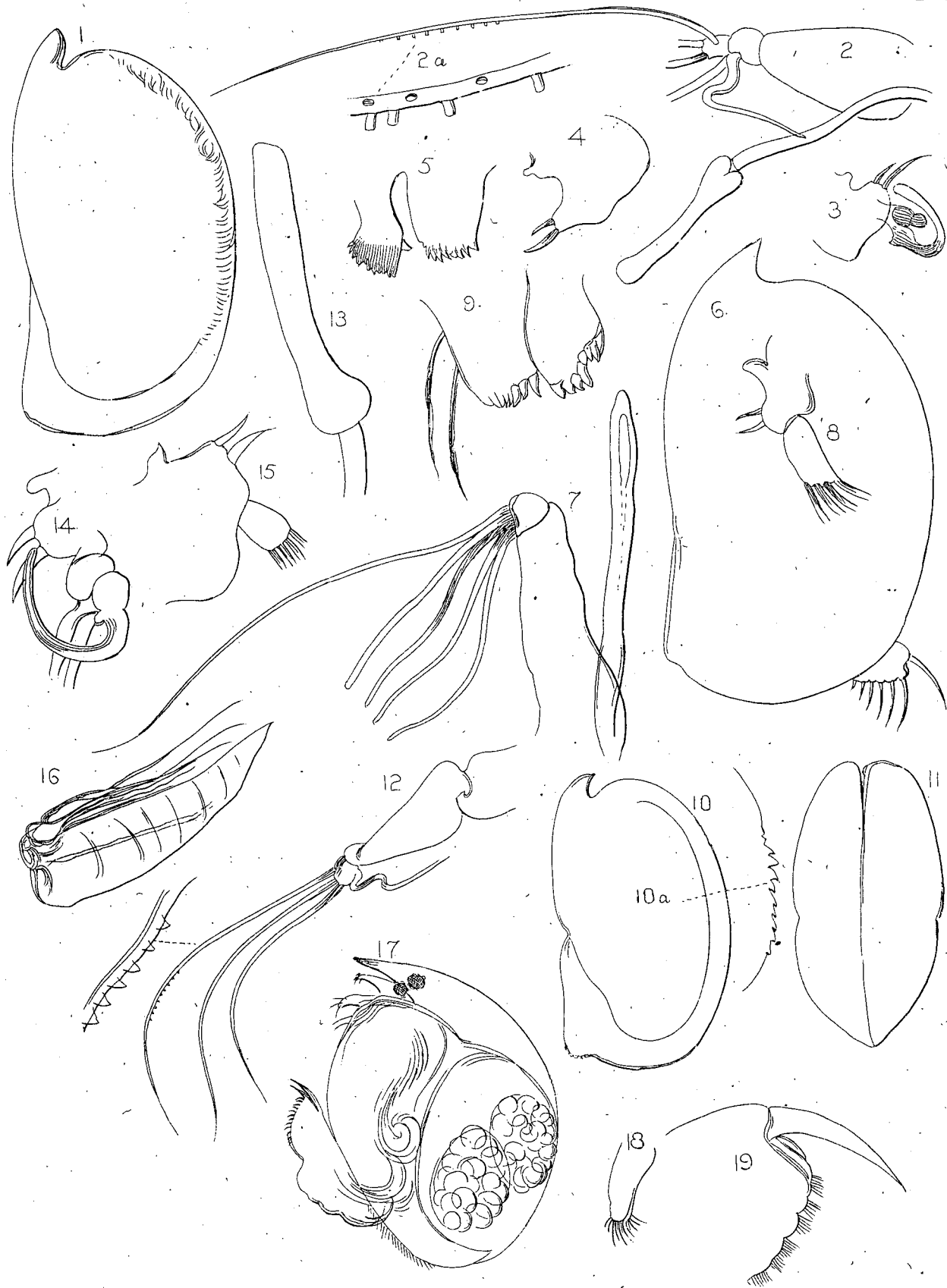
*Chydorus macquariensis.*

17. Female, seen laterally. × 84.
18. „ anterior antenna. × 240.
19. Caudal lamina. × 440.

## INDEX.

	PAGE.
ARCHICONCHOECIA <i>Aurora</i> ... ..	8
ARCHICONCHOECIA <i>Mülleri</i> ... ..	7
<i>Aurora</i> , ARCHICONCHOECIA ... ..	8
<i>borealis</i> , CONCHOECIA ... ..	6
CHYODORUS <i>macquariensis</i> ... ..	5
CLADOCERA ... ..	5
CONCHOECIA <i>borealis</i> ... ..	6
CONCHOECIA <i>hettæra</i> ... ..	7
CONCHOECIA <i>parthenoda</i> ... ..	7
CONCHOECIA <i>serrulata</i> ... ..	6
<i>gelidus</i> , SIMOCEPHALUS ... ..	5
HALOCYPRIDÆ ... ..	6
<i>macquariensis</i> , CHYODORUS ... ..	5
<i>hettæra</i> CONCHOECIA ... ..	7
<i>Mülleri</i> , ARCHICONCHOECIA ... ..	7
OSTRACODA ... ..	6
<i>parthenoda</i> , CONCHOECIA ... ..	7
<i>serrulata</i> , CONCHOECIA ... ..	6
SIMOCEPHALUS <i>gelidus</i> ... ..	5





**Series C.—REPORTS IN COURSE OF PREPARATION.**

**ZOOLOGY.**

FORAMINIFERA ... ..	Mr. F. CHAPMAN, A.L.S., F.R.M.S., National Museum, Melbourne.
MONAXONID SPONGES AND TETRAxonID SPONGES.	Mr. E. F. HALLMANN, B.Sc., University, Sydney.
HEXACTINELLID SPONGES ... ..	Prof. I. IJIMA, College of Science, Tokyo, Japan.
CALCAREOUS SPONGES ... ..	Prof. A. S. DENDY, F.R.S., D.Sc., F.Z.S., King's College, London.
HYDROZOA ... ..	Mr. E. A. BRIGGS, B.Sc., Australian Museum, Sydney.
ACTINOZOA ... ..	Prof. J. ARTHUR THOMSON, F.R.S., University, Aberdeen.
TREMATODES ... ..	Dr. S. J. JOHNSTON, University, Sydney.
CESTODES ... ..	Dr. T. HARVEY JOHNSTON, University, Brisbane.
NEMATODES (FREE) ... ..	Dr. N. A. COBB, Bureau of Plant Industry, Washington, U.S.A.
CHÆTOGNATHA AND ACANTHOCEPHALA...	Dr. T. HARVEY JOHNSTON, University, Brisbane.
ROTIFERA AND TARDIGRADA ... ..	Mr. J. SHEPHARD, Melbourne.
ECHINOIDEA ... ..	Prof. R. KOEHLER, Université, Lyon, France.
ASTEROIDEA AND OPHIUROIDEA ... ..	Prof. R. KOEHLER, Université, Lyon, France.
CRINOIDEA AND HOLOTHUROIDEA ... ..	Prof. M. VANEY, Université, Lyon, France.
ANNULATA (EXCEPT LEECHES) ... ..	Prof. W. B. BENHAM, M.A., D.Sc., F.R.S., University of Otago, Dunedin, New Zealand.
LEECHES ... ..	CHAS. BADHAM, B.Sc., University of Sydney.
CRUSTACEA CUMACEA ... ..	Dr. W. T. CALMAN, British Museum, London.
CRUSTACEA SCHIZOPODA ... ..	Dr. W. M. TATTERSALL, University Museum, Manchester, England.
CRUSTACEA AMPHIPODA AND C. ISOPODA	Prof. C. CHILTON, M.A., D.Sc., F.L.S., Canterbury College, Christchurch, New Zealand.
CRUSTACEA MACRURA AND C. CIRRIPEDA	Miss F. BAGE, M.Sc., F.L.S., University, Brisbane.
MALLOPHAGA ... ..	Dr. T. HARVEY JOHNSTON, University, Brisbane, and Mr. L. HARRISON, B.Sc., Sydney.
TICKS ... ..	Mr. L. HARRISON, B.Sc., Sydney.
PYCNOGONIDA ... ..	Prof. T. T. FLYNN, B.Sc., University of Tasmania, Hobart.
BRACHIOPODA ... ..	Dr. J. A. THOMSON, Dominion Museum, Wellington, N.Z.
TUNICATES ... ..	Prof. W. A. HERDMAN, F.R.S., University, Liverpool, England.
CEPHALODISCUS ... ..	Mr. R. RIDWOOD, B.Sc., British Museum, London.
BIRDS ... ..	Mr. H. HAMILTON, Dominion Museum, Wellington, N.Z., and Mr. R. BASSET HULL, Sydney.
MAMMALS ... ..	Mr. H. HAMILTON, Dominion Museum, Wellington, N.Z.

**BOTANY.**

MOSSES. ... ..	Rev. W. W. WATTS, Sydney.
PHYTOPLANKTON AND FRESH-WATER ALGÆ.	Prof. F. E. FRITSCH, University of London.
LICHENS AND FUNGI... ..	Mr. E. CHEEL, Botanic Gardens, Sydney.
MARINE ALGÆ ... ..	Mr. A. H. S. LUCAS, M.A., B.Sc., Grammar School, Sydney.
VASCULAR PLANTS ... ..	Mr. T. F. CHEESEMAN, F.L.S., F.Z.S., Auckland Museum, N.Z.