CONSEIL INTERNATIONAL POUR L'EXPLORATION DE LA MER

Zooplankton
Sheet 120

ORDER: TINTINNIDA
Family: Coxliellidae
Genera: Coxliella, Climacocylis, Metacylis, Helicostomella

(By S. M. MARSHALL)

1969

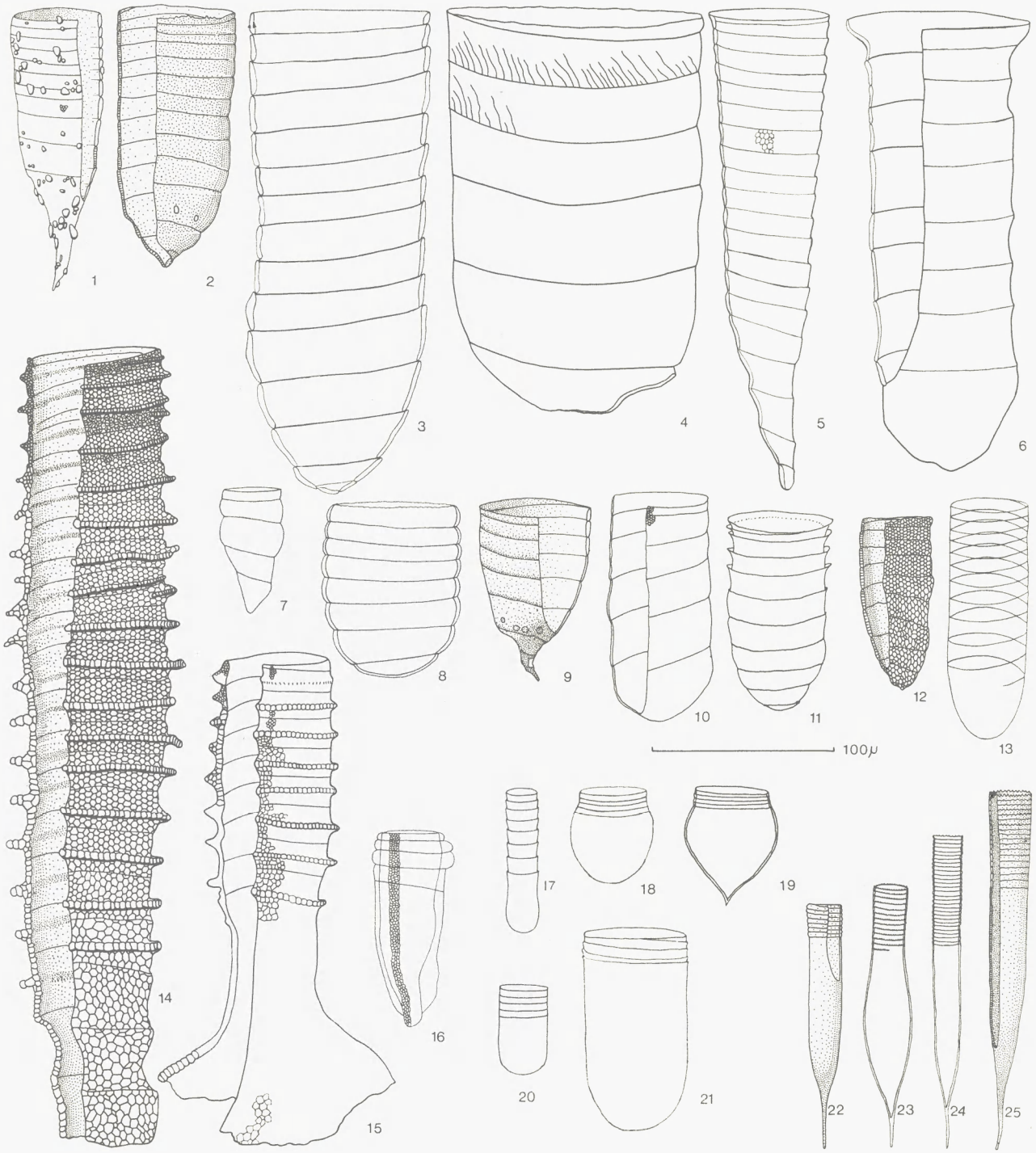

Plate V.

	Fig.	Length in μ	Oral diam. in μ (Max. width in brackets)	Approx. ratio L/oral diam.	Distribution	Notes on lorica
Family COXLIELLIDAE KOFOID & CAMPBELL, 1929						Spirally coiled band forms all or part of lorica. Oral edge smooth or irregular, never regularly denticulate. No collar except in *Metacylis*. Aboral end open or closed. Wall trilaminate with well marked alveoli (except in *C. ampla*) No agglomerated particles except in *C. helix*.
Sub-family Coxliellinae KOFOID & CAMPBELL, 1939						Spiral extending to aboral end, always when this is closed, sometimes when it is open.
Genus *Coxliella* BRANDT, 1907	Plate V					Spiral band forms whole of lorica which is more or less cylindrical or cup-shaped. No collar. Aboral end closed. Spiral band widens gradually from mouth to aboral end. Trilaminate wall has intermediate layer of coarse or fine alveoli.
C. ampla (JÖRGENSEN, 1899)	8	(36) 81–197	62–97	1.4–2.0	1, 4, 6, 7, 10, 11, 13	Short, wide, hemispherical aboral end. Two small specimens (36 μ) near Azores had oral edge of 2 top turns of spiral band everted. Wall structure indistinct.
C. annulata (DADAY, 1886)	3	269–332	100–128 (120–129)	2.7–3.0	11	Tubular but very slightly wider towards aboral end, bluntly pointed aborally. Spiral turns slightly overlapping. Wall structure indistinct.
C. calyptra (CLEVE, 1899)	7	70	33	2.1	1, 2, 12	A doubtful form seen only in Arctic. Irregular cone with 4 or 5 spiral turns. Possibly a radiolarian.
C. cymatiocoides KOFOID & CAMPBELL, 1929	4	195–220	130–147	1.5	11	Wide tube, oral rim irregular, 6-7 spiral turns. Wall with close-set striae from lower edge of spiral band extending leftwards over half its width.
C. fasciata (KOFOID, 1905)	5	260–312	68–86	3.8–5	13	Long cone, narrowing more abruptly in lower third to blunt point. Oral rim smooth sometimes everted. Spiral turns slightly overlapping. Wall structure irregularly polygonal.
C. frigida (LAACKMANN, 1907)	6	245–290	90–105	2.4–3.4	11	Long, cylindrical, top spiral turn flaring to mouth with irregular hemispherical aboral end.
C. helix (CLAPARÈDE & LACHMANN, 1858)	1	115–400	42–58	2.1–8.1 (usually 3.4)	4, 5, 6, 7, 12, 14	More or less cylindrical or acutely angled cone, lower third narrowing gradually to stout irregular pedicel, sometimes widening a little above pedicel. Wall has scattered agglomerated particles, thicker near aboral end. Species very like *Tintinnopsis lindeni* but structure is finer with several layers of alveoli between inner and outer laminae of wall.

	Fig.	Length in μ	Oral diam. in μ (Max. width in brackets)	Approx. ratio L/oral diam.	Distribution	Notes on lorica
C. intermedia (LAACKMANN, 1907)	10	120–167	58–62	2.1–2.7	1	Tube shaped with 6-8 spiral turns extending to rounded aboral end and getting wider aborally.
C. laciniosa (BRANDT, 1907)	9	75–140	50–91	1.4–2.3	11, 13, 15	Short cup-shaped, ending aborally in point or short pedicel. Spiral band varies much in width between individuals. Fenestrae often present especially towards aboral end.
C. longa (BRANDT, 1906)	2	130–144	62–70	2.1	13	Cylindrical, narrowing aborally to blunt point. Oral rim irregular. Fenestrae may be present.
C. meunieri KOFOID & CAMPBELL, 1929	11	103	60	1.7	1	Tube shaped with about 10 spiral turns, the oral edge everted in first three or four. Spiral continues to rounded aboral end.
C. pseudannulata (JÖRGENSEN, 1899)	12	97–153	40–60	2.5–3.4	1, 2, 3, 4, 7, 11, 12, 14, 15	Narrow cylinder in top half, blunt-ended cone in lower half, oral rim irregular. About 9-10 spiral turns. One layer coarse alveoli between laminae of wall.
C. tubularis (MEUNIER, 1910)	13	125	43	3.0	1	Tubular, with regular spiral band reaching almost to rounded aboral end. Not enough detail in drawing to be sure that it is valid species.
Genus *Climacocylis* JÖRGENSEN, 1924	Plate V					Very delicate, flaccid, translucent, tubular lorica. Spiral band extending over at least the upper third, sometimes over whole. Spiral shelf usually projecting from middle of band. Aboral end usually open often wide and irregular. Wall trilaminate, middle layer of large alveoli. Mainly tropical.
C. elongata KOFOID & CAMPBELL, 1929	14	355–460	50–69	6.3–6.8	13	Cylindrical, tapering a little towards open aboral end, but not expanded. Spiral band with 17-21 turns, has well developed shelf disappearing in last 3 turns. Shelf may bifurcate or be interrupted. Alveoli in wall increase in size from oral to aboral end. Lorica very difficult to see because of its transparency.
C. scalaria (BRANDT, 1906)	15	246–449	46–63	6.9–10	13	Form very variable especially at aboral end. Spiral band, about 3-13 turns, occupies anterior part and bears spiral shelf, lowest shelf often widest. Aboral end usually open, flaring into wide skirt or irregular flaps which may even close it. Alveoli in wall increasing in size from oral to aboral end. Transparency as in *C. elongata*.

	Fig.	Length in μ	Oral diam. in μ (Max. width in brackets)	Approx. ratio L/oral diam.	Distribution	Notes on lorica
C. scalaroides KOFOID & CAMPBELL, 1929	16	90–271	21–42	2.6–6	10, 15	Short, finger shaped, tapering to aboral end. Spiral band has 3-17 turns and shelf is reduced to a bulge in top 2 or 3. Aboral end ragged or closed by local thickening. Wall very thick at aboral end, size of alveoli much the same throughout. Transparency as in previous 2 species.
Sub-family Metacylidinae KOFOID & CAMPBELL, 1929						Spiral (or annuli) limited to anterior part. Aboral end closed, sometimes with point or pedicel.
Genus *Metacylis* JÖRGENSEN, 1924						Short, wide, tubular or ovoid, divided into collar and bowl. Oral rim smooth and simple. Some doubt whether collar is spiral or annular in form but in most spp. it appears annular. Aboral end rounded, pointed, or with short pedicel. Wall trilaminate with indistinct structure, simple alveoli, or hyaline. Usually pelagic.
M. annulata (MEUNIER, 1910)	17	55	11	5.0	1	Tubular with rounded aboral end. About 7 annuli in collar, their upper edges slightly overlapping the one above.
M. corbula KOFOID & CAMPBELL, 1929	18	50	36	1.4–1.5	11	Short, cup-shaped, collar narrowing slightly to cylinder below mouth. Rounded aborally. 4 annuli. Wall hyaline.
M. jörgensenii (CLEVE, 1902)	19	50–61	44–50	1.3–1.9	4, 6, 7, 10, 11	Short, ovoid, with slightly, or sharply, pointed aboral end. Collar short with 2-5 annuli, cylindrical or slightly flaring, narrower than bowl. Wall hyaline.
M. lucasensis KOFOID & CAMPBELL, 1929	20	47	27	1.8	13	Small, tubular, with hemispherical aboral end. Collar same width as bowl, with 4 annuli. Wall thin, hyaline.
M. mereschkowskii KOFOID & CAMPBELL, 1929		50–53	45–48	1.1	11	Small, bowl-shaped. Low-erect collar with two annuli.
M. vitreoides KOFOID & CAMPBELL, 1929	21	123–200	57–66	2.0–3.5	1, 2	Wide, tubular with hemispherical aboral end, with or without low point. Collar same width as bowl with 5-14 spiral turns slightly overlapping.
Genus *Helicostomella* JÖRGENSEN, 1924						Lorica cylindrical, elongated and narrow. Upper part formed of 3-60 spiral turns. Mouth and upper edge of band sometimes denticulate. Aboral end narrowing to a pedicel, closed. Wall thin, trilaminate with fine uniform primary structure. Mainly neritic. MARGALEF & DURAN have studied large populations off

	Fig.	Length in μ	Oral diam. in μ (Max. width in brackets)	Approx. ratio L/oral diam.	Distribution	Notes on lorica
						Vigo and find great variability of form and transitions between *H. edentata*, *H. kiliensis*, *H. longa* and *H. subulata* which they would unite as *H. subulata*. Their figures also cover forms like *H. annura* (SILVA, 1952) which is therefore omitted. Denticulation of oral rim variable and not a good systematic character.
H. edentata (FAURÉ-FREMIET, 1908)	22	140–213	19–24	6.9–10.9	5, 7, 10, 11	Narrow, cylindrical, tapering to slender pedicel, 5–12 spiral turns in upper part. Oral rim smooth. Differs from *H. subulata* in absence of teeth, fewer spiral turns and less taper of bowl.
H. fusiformis (MEUNIER, 1919)	23	124–180	20–29	5.2–7	1, 7, 10	Cylindrical in top (spiral) part, swelling below to about 1.3 oral diameter and decreasing to slender pedicel. Shorter, and with maximum width nearer middle of bowl, than *H. subulata*.
H. kiliensis (LAACKMANN, 1906)	25	97–240	15–19	6.2–15.2	4, 5, 7, 11	Long narrow cylinder contracting to slender pedicel. Oral rim sinuous or denticulate. 5–32 spiral turns of equal width below mouth. Aboral end contracts more rapidly than in *H. subulata* or *H. edentata*.
H. subulata (EHRENBERG, 1833)	24	200–516	21–26	8–16	1, 3, 4, 5, 6, 7, 8, 10, 11, 14	Long narrow cylinder contracting gradually to slender, often slightly curved, pedicel. 5–30 spiral turns in upper part. Oral rim denticulate and sometimes upper edge of spiral band.

(For introduction to Plankton Sheets 117–127, Key to numbers used in the tables for distribution, and Sources of illustrations, please refer to Sheet No. 117, pp. 2 and 11–12).