

**Zooplankton**

Sheet 124

**ORDER: TINTINNIDA**

**Family: Xystonellidae (2)**

**Genera: Xystonellopsis,  
Xystonella, Parundella**

(By S. M. MARSHALL)

**1969**

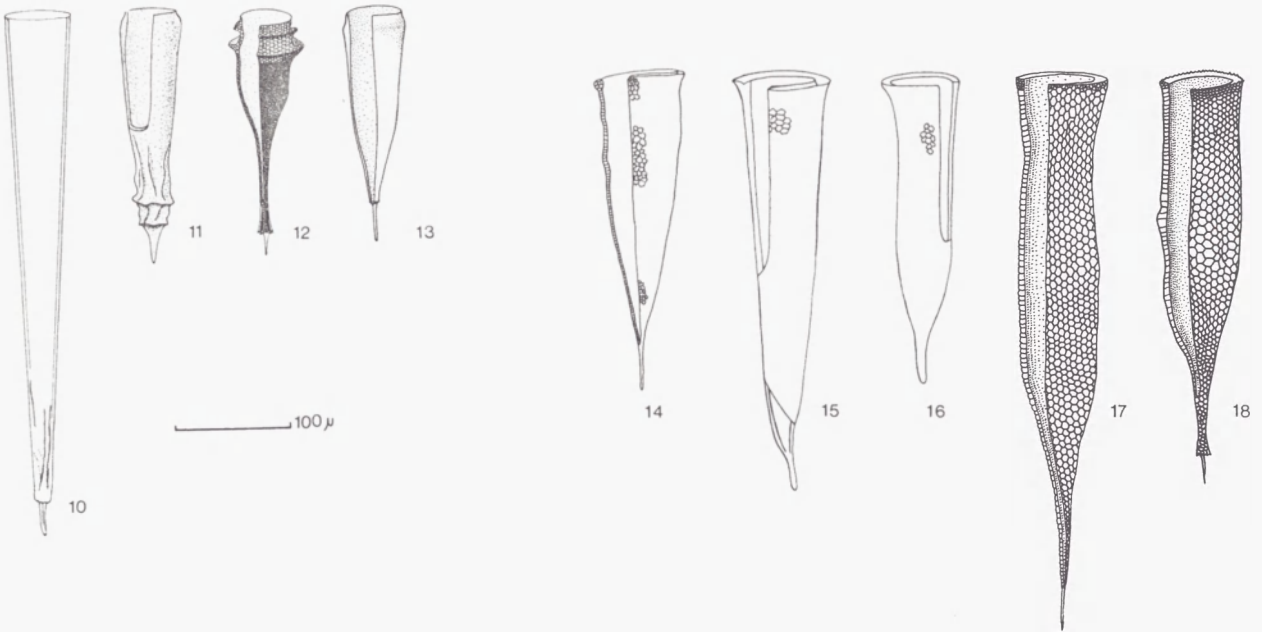
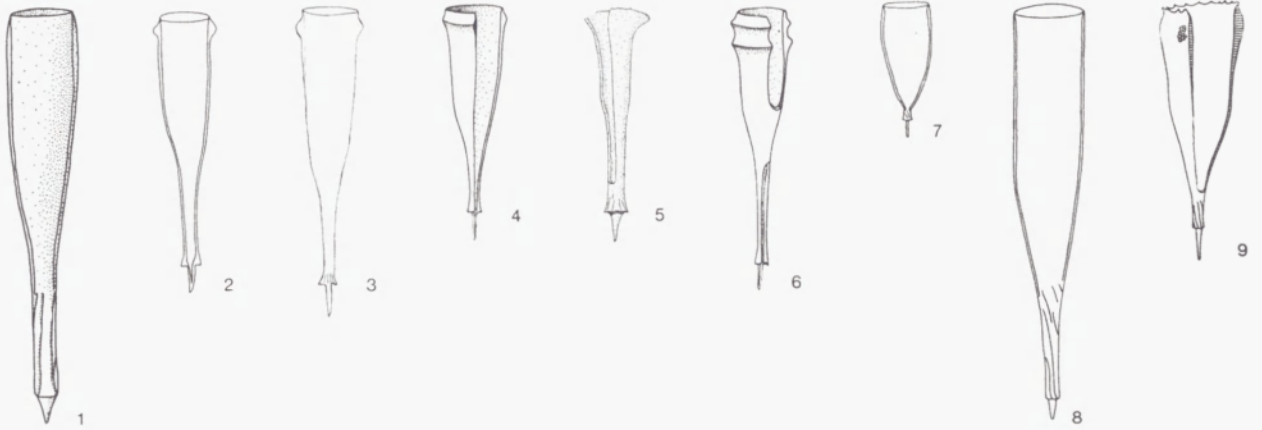


Plate IX.

	Fig.	Length in $\mu$	Oral diam. in $\mu$ (Max. width in brackets)	Approx. ratio L/oral diam.	Distribution	Notes on lorica
Family XYSTONELLIDAE						
Genus <i>Xystonellopsis</i> * JÖRGENSEN, 1924	Plate IX					Elongated, cylindrical, conical, or vase shaped, usually with pedicel. This may be differentiated into a flaring skirt or knob at aboral end, below which is pointed lance. Aboral end of pedicel may have striae or fins. Oral rim simple, rarely denticulate, sometimes with suboral thickening, annular bulges, or fenestration. Wall trilaminate, lamellae feebly double-contoured with one or more layers primary alveoli. Divided into 8 sub-genera. Mainly a warm and warm-temperate water genus.
<i>X. armata</i> (BRANDT, 1906)	1	167-410	30-90	4.8-6.7	13	Cylindrical upper part, contracting with or without a shoulder to a thick pedicel. This widens slightly aborally, has no definite skirt but has 6-8 fins, going half way up pedicel. Lance a short cone, bluntly pointed. Oral rim thin. Cavity of bowl reduced to narrow canal in lower part of pedicel. Secondary meshwork finest near mouth, coarser on pedicel aborally.
<i>X. crassispinosa</i> KOFOID & CAMPBELL, 1929	2	244-265	46-47	4.7-5.3	13	Long, cylindrical in top half, contracting to thick pedicel which ends in slightly flaring skirt, with 8 points and short fins. Lance stout. Oral rim thin, well marked suboral bulge. Wall thickest in bulge and skirt.
<i>X. cyclas</i> KOFOID & CAMPBELL, 1929	3	210-278	43-50	5.0-5.9	13	Long, cylindrical-conical with thick pedicel, flaring skirt with short striae, and slender lance. Oral rim thin, suboral bulge. Lance more slender than in <i>X. crassispinosa</i> .
<i>X. cymatica</i> (BRANDT, 1906)	4	182-251	50-62	3.8-5.8	11, 13	Cylindrical-conical with thickish pedicel, little skirt and slender lance. Oral rim thin, suboral bulge or shelf, sometimes two, the second less marked. Some variations in width of bulges also in width of pedicel and skirt.
<i>X. dicymatica</i> (BRANDT, 1906)	6	231-300	44-47	4.9-5.9	13, 15	Cylindrical-conical, long slender pedicel with slightly flaring skirt and sometimes striae. Lance slender. Oral rim thin, two suboral, equal, bulges separated by vertical space of about $\frac{1}{2}$ oral diameter. Secondary reticulation coarsest on upper part of bowl, finest on pedicel and skirt.
<i>X. dilatata</i> (BRANDT, 1906)	5	204-220	57	3.6	13	Cylindrical, bowl with widely flaring mouth, contracting slightly to wide pedicel about $\frac{1}{2}$ total length. Slightly flaring skirt with striae. Stout lance. Reticulation fine over whole lorica.

	Fig.	Length in $\mu$	Oral diam. in $\mu$ (Max. width in brackets)	Approx. ratio L/oral diam.	Distribution	Notes on lorica
<i>X. epigrus</i> KOFOID & CAMPBELL, 1929	7	123-130	43-44	2.9-3.7	11, 13	Short, conical, with greatest diameter a little below mouth. Contracts to short, skirt-like, striated pedicel and slender lance.
<i>X. gaussi</i> (LAACKMANN, 1909)	8	371-470	60-70	5.6-6.6	13	Long, cylindrical, tapering gradually into stout, spirally striated pedicel. Short stout lance.
<i>X. hastata</i> (BIEDERMANN, 1893)	9	198-280	60-80	3.6-4.2	11, 13	Conical, contracting more sharply at $\frac{1}{2}$ length to a stout pedicel with sometimes spiral fins. Slender lance. Oral rim simple, denticulate, teeth varying in number 12-40. Suboral ledge or thickening of wall. Reticulation coarsest where wall is thickest.
<i>X. heros</i> (CLEVE, 1900)	10	450-475	58-60	7.9-8.3	12, 13	Very long, conical, no alteration in shape between bowl and pedicel which is striated and has no skirt. Slender lance sometimes curved. Oral rim flattened.
<i>X. inaequalis</i> KOFOID & CAMPBELL, 1929	12	216-350	47-60	4.6-7.0	11, 13	Cylindrical in upper $\frac{1}{3}$ contracting gradually to long slender pedicel ending in flaring skirt with 4-6 fins. Slender lance. Oral rim erect or slightly flaring. Two suboral bulges as in <i>X. dicymatica</i> but lower is the larger and projects like a shelf. Wall thickest in these regions and at foot of pedicel. Reticulation coarsest suborally.
<i>X. paradoxa</i> (CLEVE, 1900)	11	180-240	39-50	4.0-5.3	12, 13	Stout, conical, hardly separable into bowl and pedicel. Pedicel with two skirts, sometimes flaring and usually with spiral fins on both. Lance wide at base tapering to aboral point. Wall thick suborally sometimes with one, or two, incipient bulges. Wall thick also in lower pedicel.
<i>X. spicata</i> (BRANDT, 1906)	13	206-220	47-51	4.0-4.6	13	Conical, with taper increasing at about $\frac{1}{2}$ total length. Pedicel not marked off, end truncated without skirt. Long, slender lance. Oral rim erect, wall bulging suborally to a varying extent.
Genus <i>Xystonella</i> * BRANDT, 1907						Elongated, cylindrical, conical, or vase shaped, divided into bowl and pedicel which may be simple or differentiated with knob, skirt, or lance. Oral rim thickened and channelled between lamellae, which distinguishes it from other genera of family. Wall as in family.
<i>X. acus</i> (BRANDT, 1906)	14	255-400	58-87	3.6-5.1	8, 15	Conical, sometimes with slight expansion near foot of bowl and slender pedicel sometimes widening above tip. Inner collar slightly higher than outer everted lip, gutter shallow.

	Fig.	Length in $\mu$	Oral diam. in $\mu$ (Max. width in brackets)	Approx. ratio L/oral diam.	Distribution	Notes on lorica
<i>X. curticauda</i> CAMPBELL, 1942	15	360	59	6.1	13	Long, conical, narrowing to short pedicel. Inner collar slightly contracted, lip slightly flaring and higher than inner collar. Wall thick throughout most of length. Coccoliths may be adherent.
<i>X. flemingi</i> CAMPBELL, 1942	16	229	42	5.5	13	Long, cylindrical-conical with short, stout pedicel. Inner collar hardly apparent, lip flaring asymmetrically and shallow gutter. Hexagonal reticulation visible, coarsest on bowl, finest suborally and on pedicel. Tip of pedicel hyaline.
<i>X. lohmanni</i> (BRANDT, 1906)	17	330-580	60-80	4.1-8.1	11, 12, 13	Long, vase shaped, contracting below mouth at about $\frac{1}{3}$ length, then expanding slightly. Slender pedicel about $\frac{1}{4}$ length. Inner collar low, gutter shallow. Coarse reticulation except suborally and on pedicel.
<i>X. treforti</i> (DADAY, 1887)	18	276-500	40-96	4.4-9.1	11, 12, 13, 15	Long, cylindrical to vase shaped, with pedicel ending in skirt which has 6-8 folds and points. Slender lance, varying in width. Inner collar low, lip slightly flaring and may be denticulate.
Genus <i>Parundella</i> * JÖRGENSEN, 1924						Upper part cylindrical, lower conical, ending in point, spine or pedicel. Oral rim sharp, entire. Wall trilaminar, the lamellae fusing aborally. Intermediate layer hyaline or with primary structure. Genus of small forms, tropical and temperate water.
<i>P. aculeata</i> JÖRGENSEN, 1924	19	110-135	27-47	3.6-4.7	3, 10, 11, 12, 13, 15	Cylindrical, with very slight expansion in lower bowl, contracting to pedicel which is solid at tip and may carry 4 or more short fins joining upper pedicel to foot of bowl. Sometimes covered with acid-soluble particles.
<i>P. acuta</i> KOFOID & CAMPBELL, 1929	20	80-90	34-35	2.3-2.6	11	Short, cylindrical, contracting to sharp point aborally. Wall bulges and is thickened suborally and again where bowl contracts.
<i>P. attenuata</i> KOFOID & CAMPBELL, 1929	21	155-205	42-67	2.9-5.3	10, 11, 12	Long, cylindrical, with stout, striated, pointed pedicel. Oral rim rounded. Wall bulges and is thickened suborally. Surface covered with little pimples like fenestrae.
<i>P. caudata</i> (OSTENFELD, 1899)	22	120-150	30-40	2.9-4.2	3, 4, 7, 10, 11, 12	Cylindrical, then conical, ending in short pedicel. Wall thickens just suborally and thins gradually; lamellae fuse in aboral part of pedicel. 4-5 short fins between bowl and top of pedicel.

	Fig.	Length in $\mu$	Oral diam. in $\mu$ (Max. width in brackets)	Approx. ratio L/oral diam.	Distribution	Notes on lorica
<i>P. difficilis</i> KOFOID & CAMPBELL, 1929	23	96-133	26-39	2.9-3.5	10, 11	Cylindrical, then conical, contracting gradually to short fine pedicel. No fins. Suboral thickening slight or absent. Wall lamellae fuse in tip of pedicel. Sometimes covered with acid-soluble particles.
<i>P. grandis</i> KOFOID & CAMPBELL, 1929	24	89-90	20-29	3.5-4.5	12, 15	Cylindrical, then conical, contracting to blunt point without definite pedicel. Wall thickest suborally and in lower conical part, thins out on lower part of bowl.
<i>P. lachmanni</i> (DADAY, 1887)	25	96-115	27	3.0-4.2	4, 5, 13, 15	Cylindrical but with slight suboral contraction and expansion below this to width of mouth. Pointed aborally with no pedicel. Wall hyaline.
<i>P. lata</i> RINGDAL GAARDER, 1946	26	90-92	47-49	1.9	10	Wide, conical, slightly dilated below mouth, contracting to a slender pointed pedicel more than $\frac{1}{3}$ length. Wall set with acid soluble particles.
<i>P. lohmanni</i> JÖRGENSEN, 1924	27	151-183	38-43	3.9-4.3	3, 10, 11, 12, 13, 14	More or less cylindrical but dilated just below mouth, contracted in middle of bowl, and expanding again slightly before thick pedicel. Wall thick, lamellae well separated except where they fuse in tip of pedicel.
<i>P. longa</i> JÖRGENSEN, 1924	28	169-191	31-41	6.0	7, 11, 12, 13	Long narrow cylinder, contracting in lower half to slender pedicel with fins joining it to foot of bowl. Wall only slightly thicker suborally and at foot of bowl. Lamellae fuse in lower part of pedicel.
<i>P. messinensis</i> (BRANDT, 1906)	29	142-155	42-49	3.0-3.5	11	Stout, cylindrical, bowl contracting abruptly to wide pedicel. Wall with very slight suboral bulge and thickening and another, more marked, where bowl contracts. Lamellae fuse in tip of pedicel. Lower part of bowl and pedicel striated.
<i>P. pellucida</i> (JÖRGENSEN, 1899)	30	85-109	25	4.0	4, 7, 14	Small, cylindrical, contracting in lower half to narrow pedicel. Wall lamellae fuse in lower part of pedicel.

(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).