CONSEIL PERMANENT INTERNATIONAL POUR L'EXPLORATION DE LA MER

Zooplankton
Sheet 110

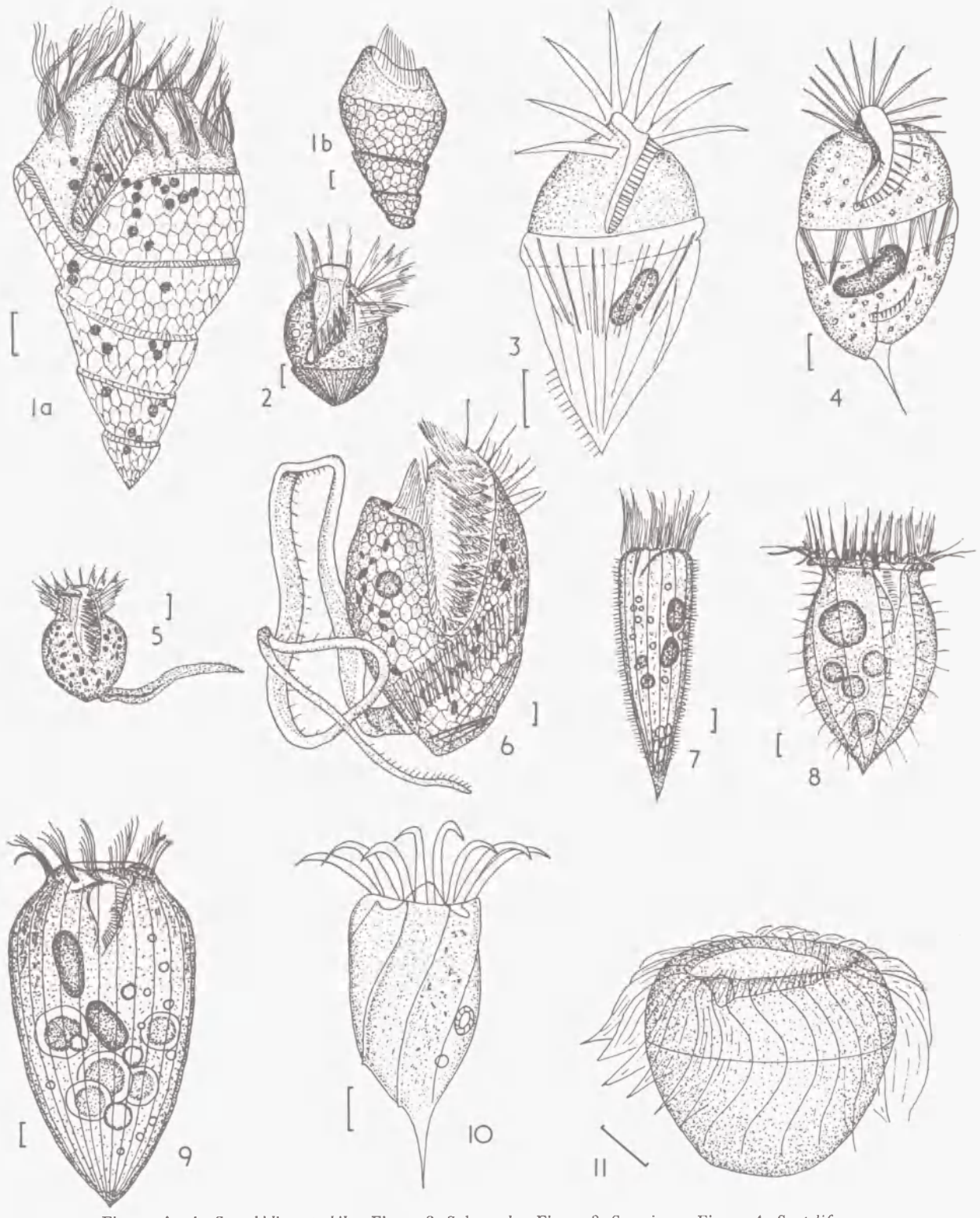
PROTOZOA

ORDER: OLIGOTRICHIDIA

Families: Halteriidae, Strobiliidae

(By K. J. Bock)

1967



Figures 1 a, b, *Strombidium strobilus*. Figure 2, *S. lagenula*. Figure 3, *S. conicum*. Figure 4, *S. styliferum*. Figure 5, *Tontonia gracillima*. Figure 6, *T. appendiculariformis*. Figure 7, *Strobilidium acuminatum*. Figure 8, *S. marinum*. Figure 9, *S. pelagicum*. Figure 10, *S. caudatum*. Figure 11, *Lohmanniella spiralis*. The scale in each figure is 10 μ.

Figure 1 a, after WULFF. Figures 3, 4 and 10 after KAHL. Figures 1 b, 2, 5, 6, 7, 8 and 9 after FAURÉ-FREMIET. Figure 11, after LEEGAARD.

CILIATA

The present sheet includes only a selection of the very numerous genera and species of Ciliata in the marine plankton. A detailed account is published in the comprehensive monographs by KAHL (Ciliata, in: DAHL, Tierwelt Deutschlands, Jena, 1930–1935) and by CORLISS (The Ciliated Protozoa, in: Intern. Series of Monographs on Pure and Applied Biology, Div. Zool., Vol. **7**, Oxford, 1961). KAHL has published a synopsis of the marine Ciliata (in: Tierwelt der Nord- und Ostsee, Leipzig, 1933, Vol. 2c, 3). These publications constitute an essential part of the taxonomic literature, so that further references should not be necessary.

For identification of planktonic Ciliata even today KAHL's books are essential. All Ciliata known at that time are well described in tables and figures. Since the publication of the works above only a very few taxonomic papers on the marine planktonic ciliates have appeared. Because of space limitations treatment of all the known species is not possible in the present sheet.

For identification of ciliates careful microscopic observations on living specimens are necessary. Preservation can only be considered a supplement to and never a replacement for observation of specimens in vivo. Many ciliates are deformed by preservatives – i.e., by formalin – to the extent that they can not be identified.

OLIGOTRICHIDIA Bütschli 1887

The body cilia greatly reduced or absent or transformed into bristles. The strongly developed rows (zones) of membrannelles function as locomotory structures. A short oral part usually demarcated by distinct short membrannelles, which transport food into the entoplasm. A row of membrannelles is found from 2/3 to all the way around the peristome. Usually small organisms 30–100μ.

In addition to the genera *Strombidium* and *Tontonia* of the family Halteriidae, listed here, the genera *Cephalotrichium*, *Meseres*, and *Metastrombidium* are also found in the sea. The largest number of species belong to the genus *Strombidium*; more than 50 species are marine. The family Strobiliidae comprises the genera *Strobilidium* and *Lohmanniella*, listed here, and additionally *Ciliospina*, *Parastrombidium*, and *Sphaerotrichium*. Most of the described species of the family belong to the genus *Strobilidium*; about 15 are marine.

KEY

1(2) Cilia around peristome extend to an open oral area on the ventral surface ..... Family Halteriidae
2(1) Cilia around the peristome anterior, in form of a closed spiral encircling the oral area ..... Family Strobiliidae

Family HALTERIIDAE Claparède and Lachmann 1858

1(7) With girdle of trichocysts. Anterior part of peristome area enclosing an apically protuding collar. Posterior part without an elongated plasm projection, but possibly terminating into a spine..... 2

Genus Strombidium Schewiakoff 1893

2(3) Girdle of trichocysts spiraling several times around the organism ..... *Strombidium strobilus,* (Lohmann 1908) Size 65–110μ. Macronucleus divided into many single spherical bodies (36–72). General occurrence in the North Sea, Baltic and Atlantic. Figure 1a after WULFF, 1b after FAURÉ-FREMIET).

3(2) Girdle of trichocysts raised and forming a complete circle.

4(5) Posterior end rounded without projecting spine. Raised trichocyst girdle near posterior end... *Strombidium lagenula,* Fauré-Fremiet 1924. Size 60 μ. Atlantic. (Figure 2 after FAURÉ-FREMIET).

5(6) Posterior end pointed. Raised trichocyst girdle near anterior end..... *Strombidium conicum,* (Lohmann 1908). Size 20–75 μ, usually 50–70 μ. North Sea and Baltic, also brackish water. (Figure 3, after KAHL).

6 Posterior end with a spiny projection. Raised trichocyst girdle near middle of organism..... *Strombidium styliferum,* Levander 1894. Spine, a plasm projection trough a fissure in posterior skeleton, may be resorbed. Euryhaline form, Baltic, North Sea coasts. Size 70–90 μ. (Figure 4 after KAHL).

7(1) Posterior end with an elongated plasm projection, longer than the body..... 8

Genus Tontonia Fauré-Fremiet 1924

8(9) With apical collar and circular zone of cilia..... *Tontonia gracillima,* Fauré-Fremiet 1924.
Size 50 μ. Elongated projection 250–300 μ. Atlantic.
(Figure 5 after FAURÉ-FREMIET).

9(8) Without apical collar and circular zone of cilia..... *Tontonia appendiculariformis,* Fauré-Fremiet 1924.
Size 140 μ. Elongated projection about 400 μ.
(Figure 6 after FAURÉ-FREMIET).

Family STROBILIIDAE Kahl 1932

1(6) Non-spherical slender, small to medium sized strobiliids..... 2

Genus Strobilidium Schewiakoff 1893

2(3) Body densly ciliated. Very slender form..... *Strobilidium acuminatum,* Fauré-Fremiet 1924.
Size 110–115 μ. Atlantic. (Figure 7 after FAURÉ-FREMIET).

3(4) Body sparsely ciliated. Peristome enlarged..... *Strobilidium marinum,* Fauré-Fremiet 1924.
Size 100 μ. Atlantic. (Figure 8 after FAURÉ-FREMIET).

4(5) Body non-ciliated. The posterior end without a spiny projection..... *Strobilidium pelagicum* Fauré-Fremiet 1924.
Size 135–170 μ. Atlantic. (Figure 9 after FAURÉ-FREMIET).

5(4) Posterior end prolonged into a spiny projection..... *Strobilidium caudatum* Kahl 1932.
Size 65 μ. Ectoplasm with spiral stripes. (Figure 10 after KAHL).

6 Spherical, non-ciliated strobiliids with distinctly developed circular peristome.

Genus Lohmanniella Leegaard 1915

Peristome cilia in several turns, the inner with free cilia..... *Lohmanniella spiralis* Leegaard 1915.
Size 35–60 μ. (Figure 11 after LEEGAARD).