



Morphology and infraciliature of a new marine ciliate, *Cinetochilum ovale* n. sp. (Ciliophora: Oligohymenophorea)

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Abstract

The morphology and infraciliature of a new oligohymenophorean ciliate, *Cinetochilum ovale* n. sp., isolated from the littoral sediment of the Bohai Sea, northern China, were investigated using live observations and silver impregnations. This new species as follows: size about 20–30 × 15–25 µm *in vivo*, body oval in outline, with 12–13 bipolar somatic kineties; scutica consisting of two short rows of kinetosomes, positioned near the end of somatic kinety 1; the anterior-most row of its membranelle 1 is distinctly detached from the remaining two rows; three postoral kinetofragments and a cyrtos-like structure at the deep portion of the buccal cavity always present; one macronucleus and one micronucleus; single contractile vacuole terminally located. A key to all known *Cinetochilum* species is updated.

Key words: Scuticociliatida; benthos; morphological description; new species

Introduction

Ciliates within the genus *Cinetochilum* Perty, 1849 are usually small forms with the following features: body dorsoventrally flattened; somatic cilia are mostly limited to ventral side and lie in deep horseshoe-shaped grooves; buccal area relatively big, mostly located posterior part of body, with an infraciliature typical of *Tetrahymena*, that is, three adoral membranelles and one paroral membrane (Carey 1992; Dragesco & Dragesco-Kernéis 1986; Foissner *et al.*, 1994).

Several *Cinetochilum* species have been reported from freshwater, marine and saline soil worldwide, and only the type species, *C. margaritaceum* (Ehrenberg, 1831) Perty, 1849, and *C. australiense* Foissner *et al.*, 1994 (originally reported as *C. marinum* by Pomp and Wilbert 1988) have been studied using silver impregnations (Puytorac *et al.* 1974; Dragesco and Dragesco-Kernéis 1986; Foissner *et al.* 1994; Gelei 1940; Hamburger & Buddenbrock-Heidelberg 1920; Jones 1974; Kahl 1931; Penard 1922; Perty 1849; Pomp & Wilbert 1988; Shibuya 1930; Wang 1925; Wang & Nie 1935). Here we describe the morphology and infraciliature of a new member of this genus, *Cinetochilum ovale* n. sp., which was discovered from the littoral sediment of the Bohai Sea, north China.

Material and methods

Samples of sediment were taken from the top 5 cm of sandy littoral area near Tianjin, Bohai Sea, north China (39°10'N; 117°10'E) during ebb-tide in July 2003. The water temperature was 18°C, and salinity 30‰. Sub-samples of 5–10 g were maintained in Petri dishes with boiled seawater, cooled to room temperature (20°C),