

## MORPHOLOGICAL STUDY OF THE MARINE DIATOM *BERKELEYA CAPENSIS* GIFFEN (BACILLARIOPHYCEAE)

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The genus *Berkeleya* was first proposed by Greville in 1827. Since then Cox (1975) established that the genus *Berkeleya* has indistinctive boundary with regards to their morphological characteristics: forming mucilage tubes, having linear to linear-lanceolate valves, a distance of the central nodule, parallel striae in the central area, radial striae in the apical area and a mature cingulum. *B. capensis* was described by Giffen in 1970, but has been reported only once since then. This species was collected from Cape Town in South Africa. Valves are linear to linear-lanceolate with obtusely rounded ends, 20-36 µm long, 5-6 µm broad. Raphe branches are about one third of the length of the valve, central pores somewhat enlarged, terminal pores distant from the ends of the valve. The central area is absent. In girdle view, short pseudosepta are seen at the ends of the valve. 2-3 girdle segments are observed, punctate along the margins.

The materials used in this study were collected from a stipe of *Eisenia bicyclis* in Japan. Valves are linear to linear-lanceolate with obtusely rounded ends, 12-22 µm long, 3-4 µm broad. Central pores are enlarged. Terminal fissures are hooked, meeting a transverse furrow near the valve margin and producing a T-shape. Internal raphe endings terminate in helictoglossae at the poles, while the central endings are hooked to the same side. Valve mantle produced slight pseudoseptae at either pole. The valvocopula bears one transverse row of round poroids. These characters are different from the genus *Berkeleya*, based on pseudosepta, internal central endings and external raphe endings. The genus *Cuneolus* Giffen is classified in the family *Rhoicospheniaceae*. Valves are slightly heteropolar and lanceolate. Raphe-slits are unequal in length. But we find similar characters between the genus *Cuneolus* and *B. capensis*. Therefore, the aim of this study was to verify the difference among the genus *Berkeleya* and *B. capensis*, and reassign *B. capensis* to the other group.