

TRANSFER OF THE BRYOPHYTIC DIATOM SPECIES *NAVICULA CATARACTARUM* HUSTEDT TO *HYGROPETRA* AND COMPARISON WITH *FRANKOPHILA* SPECIES

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The detailed ultrastructural morphology and identity of *Navicula cataractarum* Hustedt are presented here. This species was originally described by Hustedt from bryophytes collected in a waterfall in 'Los Chorros' village in El Salvador (Central America) as a massive dominant species and is, until now only known from the type locality. The taxon is small sized and characterized by rectangular frustules in girdle view and by elliptic to slightly rhombic valves with bluntly rounded apices. Raphe branches are externally located on the valve face, straight and subpolar in both halves of the valve, with internally slightly deflected terminal fissures. Biseriate striae are short, radiate, and sometimes slightly asymmetric along the apical axis, extending shortly to the valve mantle. The outer openings of the areolae are circular and slightly smaller than the inner openings, which are occluded by a scarcely domed membrane (hymenes). Based on the combination of characters the species belongs to the recently described genus *Hygropetra* Krammer & Lange-Bertalot. This genus is relatively small and comprises only three species restricted to bryophytic habitats, namely: *Hygropetra balfouriana* (Grunow ex Cleve) Krammer & Lange-Bertalot, *H. elongata* Krammer & Lange-Bertalot and the recently described *H. gelasina* Mayama & M. Idei. The genus is characterized by naviculoid small cells, and is similar to *Pinnularia* Ehrenberg, but can be distinguished from it by the position of the areola occlusions and the presence of serrated valvocopula extensions. The genus possesses some similarities to *Frankophila* Lange-Bertalot, which is characterized by even shorter raphe branches, but similar in the overall characteristics. Indeed, in the same sample two closely related populations of *Frankophila* were also discovered and investigated. We present light and scanning electron microscopy micrographs of the internal and external morphology and ultrastructure, along with the morphometry of the distinct populations. Current investigations compared the ultrastructure of the valves and girdle bands of both genera in detail and suggested a close relationship between them with raphe reduction and facultative raphe loss as well as spine formations as genetic control. Similarities with some Neotropical *Planothidium* Round & Bukhtiyarova species are also discussed.