

The taxonomy of *Fragilaria construens* var. *subsalina* and two morphologically related new taxa

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Fragilaria construens var. *subsalina* is a common diatom found in a wide variety of aquatic systems throughout the world. This taxon was described by Hustedt from brackish waters from Oldesloe, Germany, presenting four drawings and in 1987 Simonsen lectotypified this taxon presenting some light microscopy photographs. In the present study we analyze the ultrastructure of several specimens from Hustedt's type material by means of light microscopy (LM) and scanning electron microscopy (SEM) images, showing that this taxon should be better placed in the genus *Pseudostaurosira* as *P. subsalina* and not as a variety of *F. construens*. This combination was yet provided by Morales in 2005 on the basis of LM images from a North American population found in waters with low electrolyte content, though a reexamination of this material using SEM proved to be a new species. We also describe another closely related taxon from Spain found in waters with moderate conductivity, that could also have been frequently confused with *P. subsalina*. Geometric morphometry analysis of the valve shape corroborate the morphological disjunction between these species. This study clarifies the taxonomy, ecology and systematic position of these three related taxa providing a basis to improve water quality assessments based on diatom indices.