

MORPHOLOGY AND TAXONOMY OF *PLEUROSIGMA EXEMPTUM* MANN
(BACILLARIOPHYCEAE). COMPARISON WITH TYPE MATERIAL OF *P. FORMOSUM* W. SMITH
AND *P. DECORUM* W. SMITH.

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This study is devoted to analyze the fine morphology of *Pleurosigma exemptum* Mann, *P. decorum* W. Smith and *P. formosum* W. Smith. The materials examined were samples collected from San Matías Gulf, the published figures of the holotype of *P. exemptum* and the lectotypes and unmounted type materials of *P. decorum* and *P. formosum*. Based on this analysis we conclude that the taxon from San Matías Gulf is conspecific to *P. exemptum*, species that has never been reported after its description. This species shares several ultrastructural features with *P. formosum* and *P. decorum* such as a thick saddle-shaped central raphe nodule, very long overlapping of the central raphe fissures, short hook-shaped terminal raphe fissures, general morphology of the internal hymen-occluded pore crossed by a lower-level bar and presence of some scattered pairs of pores more depressed in the siliceous layer lacking bar. Nevertheless, it differs from both species by size range, some details of the internal hymen-occluded pore of the areolae, the presence of an unperforate area around the helictoglossa expanded toward the concave side, the almost parallel to each other symmetrical bars delimiting the central nodule and the densely arranged row of small areolae bordering the raphe sternum. Taking into account that we expand the species concept by providing the first insight into its ultrastructure, we emend the description of *P. exemptum* and we enlarge its biogeographic distribution.

Pleurosigma formosum and *P. decorum* were differentiated up to date by size range, valve shape and striae density. Based on our LM analysis we were not able to determine differences in stria density between these species. In contrast, our SEM analysis of both type materials allow us to reveal a difference in the internal morphology of the areolae pores, circular and rimmed in the former and subcircular to elliptical, not rimmed in the latter.