

## NAVICULA BORY AND ITS RELATIONSHIP WITH SALINITY IN SALT MARSH FROM SOUTHERN BRAZIL

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The greatest amount of saltmarshes in southern Brazil is located adjacent to the Patos Lagoon estuary (32°S-52°W) and occupies an area of 70 Km<sup>2</sup>. It is covered with herbaceous vegetation, mainly *Spartina* species, which are adapted to periodic flooding by saline waters. In this region, *Navicula s. str.* is rich in species number. The aim of this study is to understand the composition and distribution of these species in different salinity zones. The samples were collected using a 10 cm diameter core in sites with salinity between 0,1‰ and 35‰, adjacent to the Patos lagoon estuary, in Rio Grande do Sul state (31°57'S-52°06'W). In the laboratory, the living species were isolated from superficial sediment by the "trapping method", using the Whatman® 105 paper. They were later oxidized using nitric acid for analysis of light and scanning electron microscopes. It was found a total of 12 species and one variety from which only *N. erifuga* Lange-Bertalot, *N. gregaria* Donkin and *N. veneta* Kützing are cosmopolitan taxons. Some species were related to specific salinity zone, such as *Navicula cf. recens* (Lange-Bertalot) Lange-Bertalot, *N. gregaria* Donkin, *N. gregaria* Donkin var. *reductissima* Metzeltin, Lange-Bertalot & Garcia-Rodríguez e *N. veneta*, which only occurred in oligohaline zone, on other hand *Navicula amphiceropsis* Lange-Bertalot & Rumrich were restricted to the polyhaline zone. Whereas *Navicula cf. fernandae* Metzeltin, Lange-Bertalot & Garcia-Rodríguez showed a wide tolerance to salinity, once it maintained high frequency since limnetic zone to euhaline zone. It is interesting to observe that *Navicula cf. fernandae* was abundant (corresponding 30% valves observed) in the limnetica zone, while *Navicula cf. cryptotenelloides* (16%) and *Navicula erifuga* (7.79%) were abundant in oligohaline zone. Illustrations of the morphological and structures characteristics of these species are presented, contributing to the taxonomic knowledge of this genus, fairly unknown in southern Brazil.