

Environmental Impact of Cysts of Some Dinoflagellates Species in the Bizerta Lagoon

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Abstract : The specific composition and abundance of dinoflagellate resistance cysts in relation to environmental factors were studied from the superficial sediment at 123 stations in the Bizerte lagoon. 48 morphotypes of dinoflagellate cysts were identified, mainly dominated by *Brigantidinium simplex*, *Votadinum spinosum*, *Alexandrium pacificum*, *Alexandrium pseudogonyaulax*, and *Lingulodinium machaerophorum*. The density of cysts ranged from 1276 to 20126 cysts g⁻¹ dry sediment. Significant differences in the distribution pattern of the cysts were recorded, which allowed us to distinguish two areas; thus the inner areas of the lagoon have an abundance of cysts greater than the areas with marine influence. Ballast water discharges and shellfish culture may be incriminated as potential sources of introduction of species, particularly potentially toxic ones such as *A. pacificum* and *Polysphaeridium zoharyi*, without neglecting the role of currents in cyst distribution. Cyst mapping can be used as an indicator of potential foci of future toxic species blooms in this ecosystem.

Keywords : Bizerta Lagoon, cysts, dinoflagellates, mapping

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