

Cyclic Changes along *Posidonia oceanica* Rhizomes (Lepidochronology): Present State and Perspectives

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Abstract. Leaf sheaths in the seagrass *Posidonia oceanica* can persist for millenia and they show, according to their insertion rank, cyclic variations in parameters such as thickness and tissue structure. The principal cycles are always annual, but pluriannual cycles can also be detected. Annual cycles may be changed by environmental parameters such as light, temperature, or water movement. In a fashion analogous to the study of annual tree rings (dendrochronology), the study of cyclic changes in *Posidonia oceanica* sheaths is thus a technique allowing the study of past yearly changes in the near-shore environment.