Proceeding Book of ISESER 2023

O 56. MORPHOLOGICAL DIVERSITY OF SALICORNIA EUROPEAE POPULATIONS

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ABSTRACT: Salicornia europea L, also known as glasswort is a halophyte plant belonging to the Amaranthaceae family, known for its high plasticity. It grows in regions characterized by extremely high salinity as well as in the marginal areas. In the present study, S. europeae populations were collected from four different areas, aiming to investigate the morphological diversity and identify key traits affected by different salinity levels. The growth and the biomass development of glasswort populations were evaluated through nineteen morphological traits. Our findings showed significant variation within the majority of the measured traits related to plant growth, while no variation was observed in the root architecture across the studied populations. Morphological traits had higher values in populations grown in environments characterized by high salinity levels, indicating that this species grows optimally in such saline habitats. Conversely, reduction of plant growth was observed in the populations grown in low salinity areas and those of extremely high salinity. Our results expanded the knowledge on the morphological diversity and the traits that are strongly influenced by soil salinity.

Keywords: Salicornia Europeae, Halophyte, Morphologic Diversity