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Gas exchange in the salt marsh species *Atriplex portulacoides* L. and *Limoniastrum monopetalum* L. in Southern Portugal.

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Salt marshes are ecosystems subjected to a variety of environmental stresses like high salinity, water deficit, intense radiation or high temperatures. Field measurements were conduced in two halophyte species, *Atriplex portulacoides* L. and *Limoniastrum monopetalum* L., in the Reserva Natural do Sapal de Castro Marim, to compare their physiological response, i.e., water potential (w), net photosynthetic rate (A), stomatal conductance (gs) under natural conditions. Both species demonstrated marked variations in w throughout the year, with very low values in the summer, the period of higher salinity, drought and temperature. Deficit water potential (Dw = wmidday _ wpredawn) was lower in the summer than in other seasons in *A. portulacoides* but not in *L. monopetalum*. The highest values for A and gs in *L. monopetalum* were observed in autumn and for *A. portulacoides* in winter, presenting both lowest values in spring and summer. Amax was particularly high for *L. monopetalum* than for *A. portulacoides* in summer and autumn, despite gsmax was similar in both species. Diurnal pattern ofAand gs were similar in both species, with higher values in the morning, decreasing throughout the day.