

Distribution of Australian saltmarsh plants

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Characteristics of saltmarshes and the saltmarsh environment

Coastal (intertidal) saltmarsh has been defined by Adam (1996) as an intertidal plant community dominated by herbs and low shrubs. The plants that comprise coastal saltmarsh are not exclusively intertidal, a characteristic that sets saltmarsh plants apart from mangrove. Most saltmarsh species take advantage of inland saline environments, both aquatic and arid, and their intertidal occurrence is sometimes best understood as a continuation of a network of saline aquatic environments. This is particularly true of the South Australian saltmarsh flora.

The characteristics which suit plants to this harsh environment are a tolerance of extreme ranges of salinity and soil water content. The periodic inundation of the intertidal environment by seawater salinises the soil, and salts will subsequently concentrate by processes of evaporation and transpiration. While this phenomenon occurs the world over, in Australia the range of salinity encountered is enhanced by the extremes of climatic variability and, in the tropics, seasonality (Adam 1996).

Plants occupying the saltmarsh must be able to withstand periodic soil salinity and inundation. There is a range of strategies amongst the 100 or more species found in Australian saltmarshes. The adaptations to saline conditions are often at the expense of growth rate, and it is this that explains the narrow penetration of saltmarsh plants into upslope freshwater terrestrial environments (Adam 1990).

Two-thirds of the 103 Australian saltmarsh plant species listed in Appendix 2.1 belong to five families; Chenopodiaceae; Poaceae; Cyperaceae, Aizoaceae and Asteraceae. While there is a high degree of endemism at a species level amongst Australian saltmarshes, at a generic and family level there are numerous commonalities with the saltmarshes of other continents (Adam 1990; Chapter 1, this volume). In this sense the saltmarshes of Australia are not as distinctly Australian as the terrestrial vegetation communities, though there are unique features of the Australian saltmarsh ecologically.

Description of common saltmarsh plants

For those beginning their interest in coastal saltmarsh, there are some excellent keys and field guides available, notably:

- *Field Guide to Common Saltmarsh Plants of Queensland* (2006) by Louise Johns, and available through the Queensland Department of Primary Industries.