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Germinative response of *Lotus creticus* to different temperatures and salinity conditions

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The flora at the coastal dunes ecosystems in the Valencian Community has a great biological interest. These ecosystems are suffering in the last decades a strong harassment and urban pressure, leading to their massive and continuous destruction. Therefore, all studies towards the knowledge of the vegetal species living in these dunes, and their conservation, are of great interest (Harris and Davy, 1986; Jusaitis *et al.*, 2004; Carter and Ungar, 2004). The dunes cords are important, for they receive the direct impact of wind protecting the ecosystems placed behind. Dunes plants are specialized as a function of their proximity to the seacoast. Factors most influencing this specialization are the soil mobility, salinity (Katembe *et al.*, 1998; Gulzar and Khan, 2001; Debez *et al.*, 2004), abrasive effect of wind and low retention of water in sandy soils (Khan and Ungar, 1984; Khan *et al.*, 2000; Zia *et al.*, 2004). The distribution of the species in the different areas of the dunes results from their physiological requirements and their interaction with other species (Costa *et al.*, 1982). Thus, *Lotus creticus* belongs to the association *Medicagini mariane-Ammophiletum australis,* found in the embryonic dunes and in those in movement. The aim of the study performed was to find the values of temperature and salinity leading to optimal germination. To this end, scarified seeds were germinated in Petri dishes during one month. A wide set of temperature and salinity conditions were applied. The percentage of germinated seeds is close to 100% in all the conditions studied, with very low variance, with the exception of the extreme conditions corresponding to the alternating temperatures 40º/20ºC, and the low constant temperature 10ºC. The same trend is observed in the velocity of germination. With the exception of the extreme conditions mentioned, there is a high correlation between the percentage of germination and its velocity. Though *Medicago marina* is the representative plant in the association *Medicagini mariane-Ammophiletum australis, Ammophila arenaria* the dominant, and *Lotus creticus* an accompanying one, it turns out that it presents higher velocities of germination than *M. marina* in a wider range of conditions. Thus, for instance, *Lotus creticus* covers the void left by *M. marina* in extreme conditions. Concerning tolerance to different salt concentrations, a high percentage and velocity of germination is observed at 100mM. At 200 mM the percentage of germination remains high, yet the velocity of germination decreases notably. At higher salt concentrations both percentage and velocity of germination are very low. More details about the experimental conditions, indices used, and results obtained will be presented complementary.

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