

Materials and Methods

Leaf area, total leaf area per shoot and leaf area ratio

Leaf area (LA, cm²), total leaf area per shoot (cm²) and leaf area ratio (LAR, cm² g⁻¹) were measured in 15 oak species growing in a common garden located at CITA de Aragón (41°39'N, 0°52'W, Zaragoza, Spain). Specifically we measured these parameters in five Mediterranean evergreen oaks (MED EVE) (*Q. ilex* subsp. *rotundifolia*, *Q. ilex* subsp. *ilex*, *Q. coccifera*, *Q. suber*, *Q. chrysolepis*), five Mediterranean deciduous oak (MED DEC) (*Q. faginea*, *Q. canariensis*, *Q. frainetto*, *Q. cerris*, *Q. lobata*) and five Temperate deciduous oaks (TEM DEC) (*Q. petraea*, *Q. muehlenbergii*, *Q. shumardii*, *Q. robur*, *Q. macrocarpa*). Five current-year shoots per species were randomly sampled from the south face of the crown from two individuals per species. Leaf area and total leaf area per shoot were measured by digitalizing the leaves and using the ImageJ image analysis software (<http://rsb.info.nih.gov/nih-image/>). The LAR was calculated in by dividing the total leaf area per shoot by the dry weight of the shoot after oven-dried at 70 °C for 3 days. Average values for MED-EVE, MED-DEC and TEM-DEC were calculated from the average values obtained for each oak species. One-way ANOVAs were performed to identify the effect of the type of oak species (MED-EVE, MED-DEC and TEM-DEC) on LA, total leaf area per shoot and LAR. Multiple comparisons were carried out among types of oak species using post hoc Tukey's Honest Significant Difference test. All statistical analyses were performed in the R software environment (version 4.0.0, R development Core Team, 2020).