

Supplementary Materials

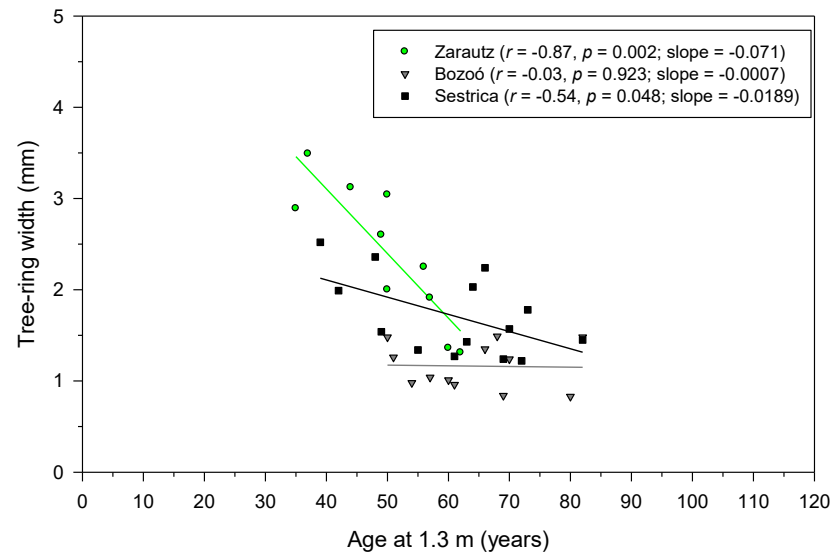


Figure S1. Associations found between tree age (estimated at 1.3 m) and mean growth rate (TRW, tree-ring width) in the sampled cork oak populations. The slopes of the age-growth relationships calculated in Zarautz and Sestrica significantly differed according to ANCOVA tests ($F = 9.83$, $p = 0.005$).

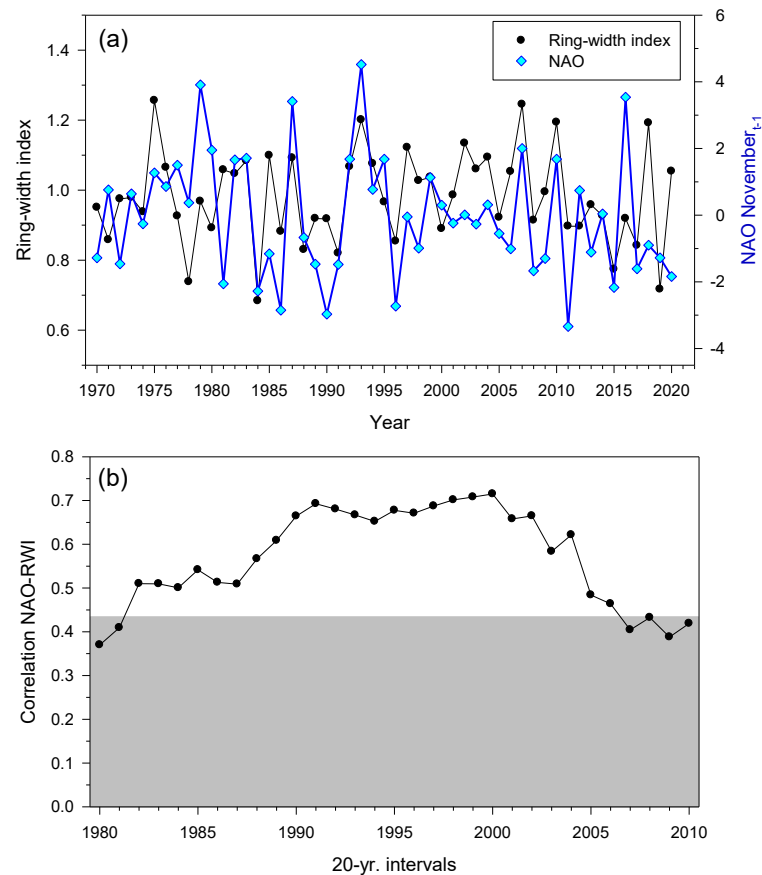


Figure S2. (a) Series of ring-width indices from Zarautz and the previous (year $t-1$) November NAO index. (b) Moving correlations between the NAO and ring-width indices based on 20-year moving intervals. The grey box includes non-significant ($p > 0.05$) correlation coefficients.

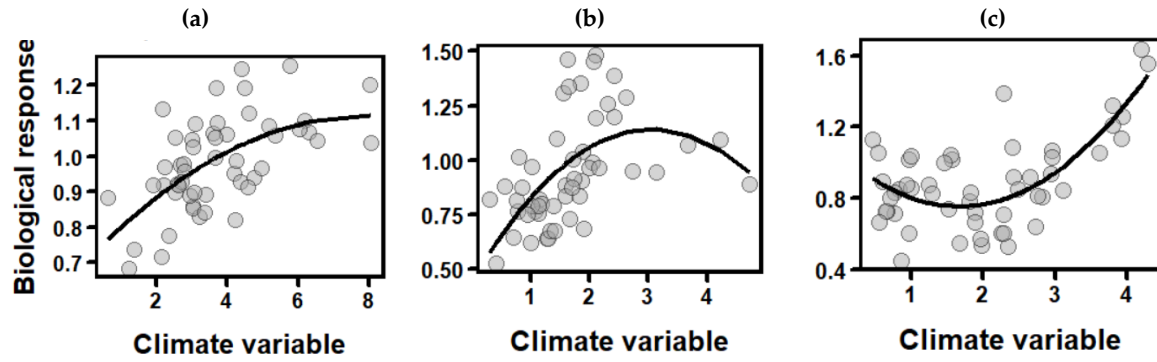


Figure S3. Quadratic relationships observed between precipitation (standardized climate variable, x axes) and cork oak series of ring-width indices (biological response, y axes) in (a) Zarautz ($R^2 = 0.34$), (b) Bozoó ($R^2 = 0.21$), and (c) Sestrica ($R^2 = 0.41$). Plots show the best fitted models using daily climate data and the best supported window obtained with climwin. The best climate window was obtained for each type of function.