

Genetic diversity and structure of *Alnus cordata* and *Quercus trojana* populations in the native range of southern Italy: an essential step towards the definition of management and conservation strategies

C. Mattioni, A. Marchesini, M. Gaudet, F. Chiocchini, L. Leonardi, M. Cherubini, P. Pollegioni P.

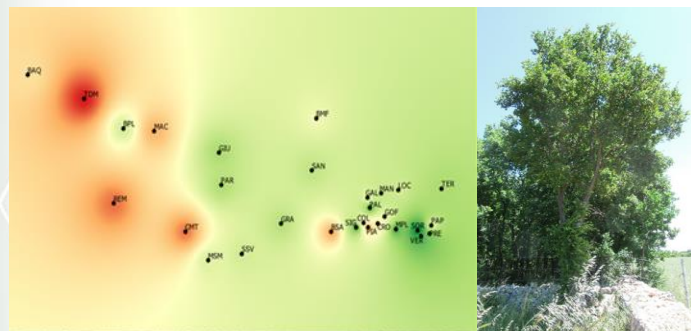
Microsatellite genotyping for:

- Understanding demography and genetic structure of natural populations
- Identify hot spots of neutral diversity and conservation units
- Reconstruct evolutionary history
- integrate the genetic/genomic data with climatic and topographic data

Priority conservation areas

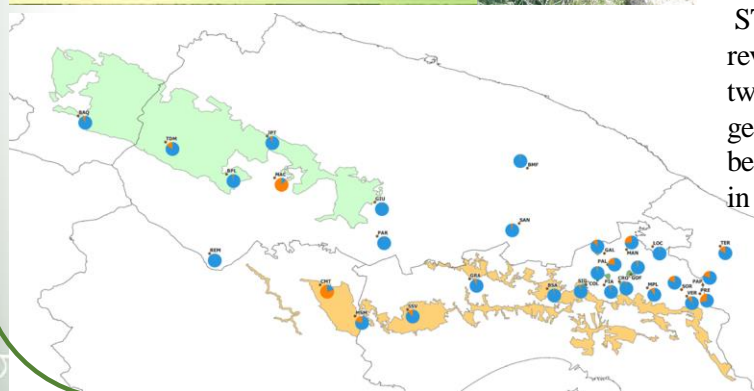
Management strategies

Quercus trojana



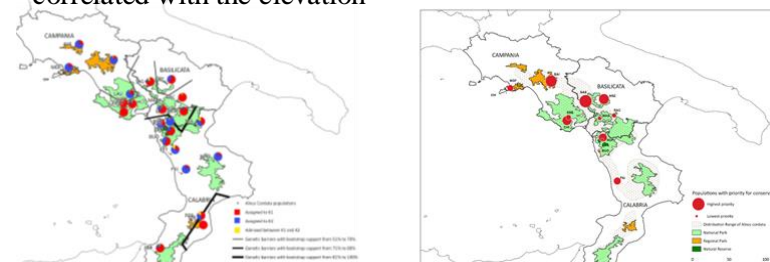
30 populations,
552 samples,
12 SSRs markers

STRUCTURE analysis revealed the presence of two main gene pools, genetic divergence between two populations in the core of distribution



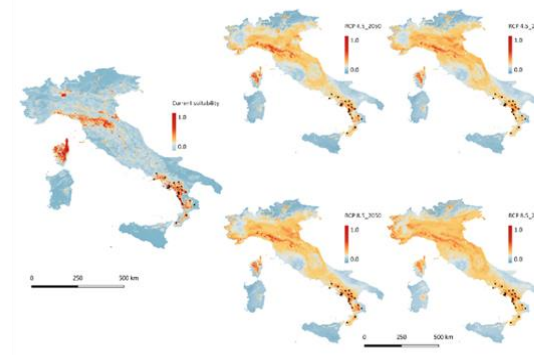
STRUCTURE identified two genetic clusters weakly correlated with the elevation

Alnus cordata



23 populations,
517 samples,
10 SSRs markers

Indication of priority conservation areas



Predicted current (A) and future potential geographic distribution of *Alnus cordata* by 2050 (range 2041-2060) and 2070 (range 2061-2080) according to the climate CMIP6 model under RCP4.5 and RCP 8.5 scenarios

Claudia Mattioni