

**Table S1:** Characterization of the sampling localities according to the geographical coordinates, the species sampled and the forest types.

Stand (name)	Latitude/Longitude	Species	Samples	Forest type
Ancares	42.824/-6.956	<i>Q. pyrenaica</i>	12	Mono-specific
Cabañeros National Park	39.336/-4.502	<i>Q. faginea</i> <i>Q. pyrenaica</i>	24	Mixed Forest
Fermoselle	41.299/-6.423	<i>Q. faginea</i>	12	Isolated trees
Font-Roja Park	38.758/-0.622	<i>Q. faginea</i>	12	Mixed Forest ( <i>Q. ilex</i> )
Izki Park	42.692/-2.419	<i>Q. faginea</i>	12	Mono-specific
	42.673/-2.503	<i>Q. pyrenaica</i>	12	Mono-specific
Liébana	43.090/-4.635	<i>Q. pyrenaica</i>	12	Mono-specific
Monasterio de La Sierra	42.048/-3.186	<i>Q. pyrenaica</i>	12	Mixed-Forest ( <i>Q. petraea</i> )
Montejo de La Sierra Park	41.106/-3.495	<i>Q. pyrenaica</i>	12	Mixed-Forest ( <i>Q. petraea</i> )
Rio Lobos Park	41.729/-3.040	<i>Q. faginea</i>	12	Mixed Forest ( <i>Juniperus thurifera</i> )
Serranía Cuenca	39.825/-2.007	<i>Q. faginea</i>	12	Mixed Forest ( <i>Pinus nigra</i> , <i>Q. ilex</i> )
Sierra Nevada National Park	37.102/-3.452	<i>Q. faginea</i>	12	Mixed Forest ( <i>Q. ilex</i> )
	37.100/-3.443	<i>Q. pyrenaica</i>	12	Mono-specific
Talayuela	39.999/-5.696	<i>Q. faginea</i> <i>Q. pyrenaica</i>	24	Mixed Forest