

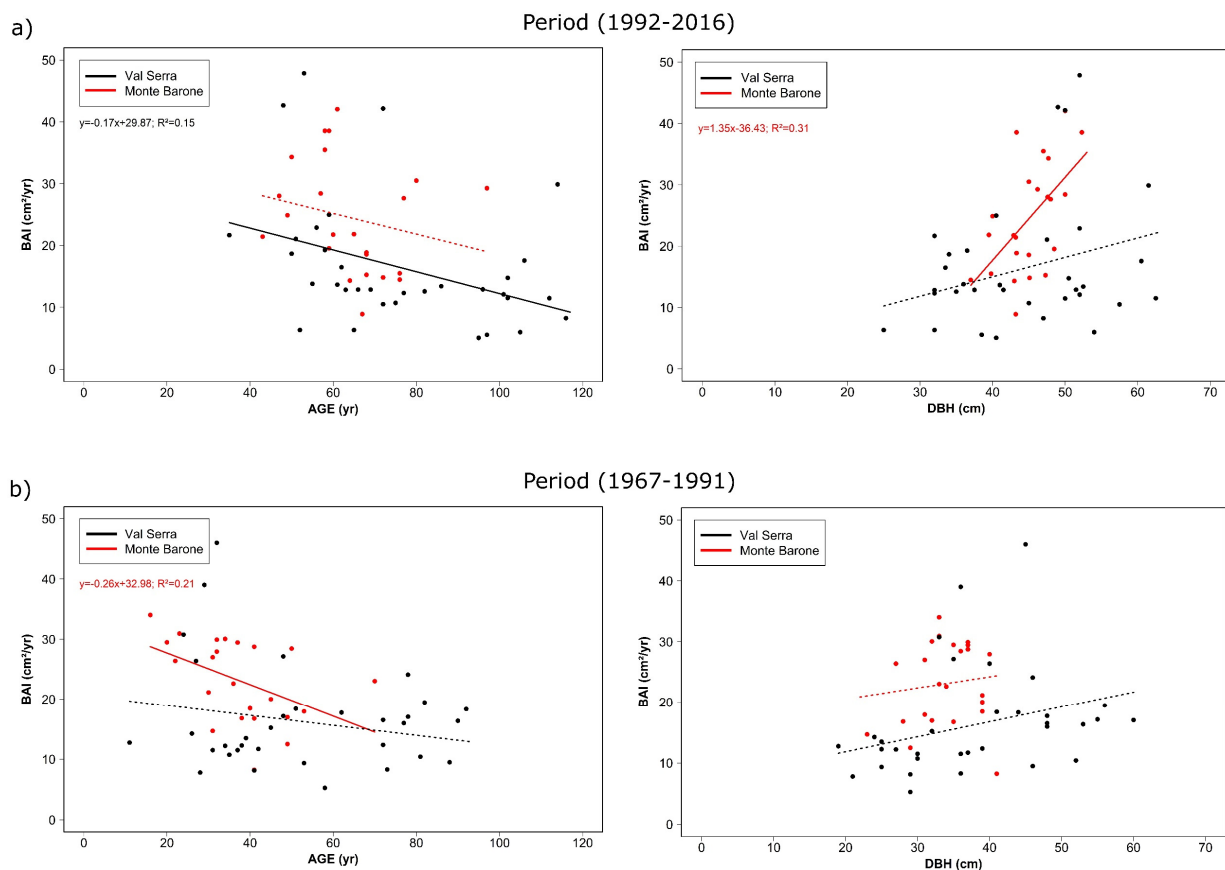


Figure S1. Relationship between average basal area increment (BAI) vs. trees age (left) or diameter at breast height (DBH; right), modelled by a simple linear regression ($p < 0.05$), for the periods 1992–2016 (a), 1967–1991

Table S1. Absolute minimum annual temperatures and number of days in years with temperature falling below -10 °C or -5 °C in Val Serra and Monte Barone, respectively. Correspondence between years with low temperatures and frost rings are highlighted.

Year	Minimum temperature (°C) - N° of days	
	Monte Barone	Val Serra
1901	-7.9 (1)	
1905	-6.4 (1)	-11.1 (3)
1909	-5.4 (1)	-10.8 (2)
1911	-5.3 (1)	
1925	-5.4 (1)	
1927	-7.5 (2)	
1929	-8.0 (8)	-12.2 (6)
1932	-7.1 (3)	
1935	-7.1 (2)	
1938		-11.5 (3)
1939		-12.6 (1)
1940	-5.9 (1)	-10.8 (2)
1941	-5.8 (1)	
1942	-7.2 (2)	-12.6 (1)
1945	-6.2 (3)	-13.0 (3)
1947	-7.8 (3)	-11.8 (1)
1954		-10.2 (1)
1956	-6.4 (2)	-11.0 (1)
1957	-5.6 (1)	
1963	-6.9 (3)	-10.7 (2)
1968		-10.8 (1)
1969	-6.3 (1)	
1979	-7.7 (3)	-10.3 (1)
1985		-13.3 (6)



Figure S2. Example of Aleppo pine trees and their cause of death: fire scar at Monte Barone (left, photograph by Alfredo Di Filippo), stem decay fungus at Val Serra (right, photograph by Edoardo Esposito).