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Supplementary file 1

Table_S1.pdf: Years with frost ring formation by slope, elevation and timing of the frost event. Dark grey > 30% of trees affected by frost event, medium grey >15%, but <30% of trees affected by frost event, light grey < 15% of trees affected by frost event. X denotes the periods excluded from the analysis due to low sample numbers.

year	Ring zone	NE			SW			year	Ring zone	NE			SW			year	Ring zone	NE			SW									
		1	2	3	1	2	3			1	2	3	1	2	3			1	2	3	1	2	3							
2001	GP1				■			1993	GP1				■			1984	GP1						1977	GP1						
2001	GP2							1993	GP2				■	■		1984	GP2		■				1977	GP2						
2001	GP3							1993	GP3				■	■		1984	GP3						1977	GP3						
2001	GP4							1993	GP4		■		■	■		1984	GP4		■		■		1977	GP4			■			
1999	GP1	■	■		■	■	■	1992	GP1		■		■	■		1983	GP1	■			■		1975	GP1	■					
1999	GP2				■		■	1992	GP2							1983	GP2		■	■			1975	GP2						
1999	GP3		■					1992	GP3							1983	GP3						1975	GP3	■	■	■	■	■	
1999	GP4							1992	GP4							1983	GP4						1975	GP4		■				
1998	GP1							1989	GP1							1982	GP1	■	■	■	■		1974	GP1		■			■	
1998	GP2				■			1989	GP2		■					1982	GP2						1974	GP2		■				
1998	GP3							1989	GP3							1982	GP3						1974	GP3						
1998	GP4							1989	GP4							1982	GP4			■			1974	GP4						
1997	GP1							1988	GP1							1981	GP1		■				1973	GP1						
1997	GP2				■			1988	GP2							1981	GP2						1973	GP2			■			
1997	GP3							1988	GP3							1981	GP3						1973	GP3		■				
1997	GP4	■						1988	GP4		■			■		1981	GP4						1973	GP4						
1996	GP1							1987	GP1		■	■		■		1980	GP1						1972	GP1		■				
1996	GP2							1987	GP2		■			■		1980	GP2		■	■			1972	GP2						
1996	GP3							1987	GP3							1980	GP3		■				1972	GP3		■				
1996	GP4						■		1987	GP4						1980	GP4		■				1972	GP4						
1995	GP1	■	■	■	■	■	■	1986	GP1							1979	GP1	■			■	■	1970	GP1	■	■	■	■	■	
1995	GP2	■	■	■	■	■	■	1986	GP2		■		■			1979	GP2						1970	GP2		■	■			
1995	GP3	■			■			1986	GP3		■					1979	GP3						1970	GP3			■			
1995	GP4				■			1986	GP4							1979	GP4						1970	GP4		■				
1994	GP1							1985	GP1							1978	GP1					■	1969	GP1	■				■	
1994	GP2							1985	GP2							1978	GP2			■			1969	GP2				■		
1994	GP3				■			1985	GP3							1978	GP3		■	■			1969	GP3		■		■		
1994	GP4							1985	GP4		■					1978	GP4		■				1969	GP4		■	■	■	■	

1968	GP1			1960	GP1			1952	GP1			1944	GP1		
1968	GP2			1960	GP2			1952	GP2			1944	GP2		
1968	GP3			1960	GP3			1952	GP3			1944	GP3		
1968	GP4			1960	GP4			1952	GP4			1944	GP4		
1967	GP1			1959	GP1			1951	GP1			1943	GP1		
1967	GP2			1959	GP2			1951	GP2			1943	GP2		
1967	GP3			1959	GP3			1951	GP3			1943	GP3		
1967	GP4			1959	GP4			1951	GP4			1943	GP4		
1966	GP1			1958	GP1			1950	GP1			1942	GP1		
1966	GP2			1958	GP2			1950	GP2			1942	GP2		
1966	GP3			1958	GP3			1950	GP3			1942	GP3		
1966	GP4			1958	GP4			1950	GP4			1942	GP4		
1965	GP1			1957	GP1			1949	GP1			1941	GP1		
1965	GP2			1957	GP2			1949	GP2			1941	GP2		
1965	GP3			1957	GP3			1949	GP3			1941	GP3		
1965	GP4			1957	GP4			1949	GP4			1941	GP4		
1964	GP1			1956	GP1			1948	GP1			1940	GP1		X
1964	GP2			1956	GP2			1948	GP2			1940	GP2		X
1964	GP3			1956	GP3			1948	GP3			1940	GP3		X
1964	GP4			1956	GP4			1948	GP4			1940	GP4		X
1963	GP1			1955	GP1			1947	GP1			1939	GP1		X
1963	GP2			1955	GP2			1947	GP2			1939	GP2		X
1963	GP3			1955	GP3			1947	GP3			1939	GP3		X
1963	GP4			1955	GP4			1947	GP4			1939	GP4		X
1962	GP1			1954	GP1			1946	GP1			1938	GP1		X
1962	GP2			1954	GP2			1946	GP2			1938	GP2		X
1962	GP3			1954	GP3			1946	GP3			1938	GP3		X
1962	GP4			1954	GP4			1946	GP4			1938	GP4		X
1961	GP1			1953	GP1			1945	GP1			1937	GP1		X
1961	GP2			1953	GP2			1945	GP2			1937	GP2		X
1961	GP3			1953	GP3			1945	GP3			1937	GP3		X
1961	GP4			1953	GP4			1945	GP4			1937	GP4		X

1936	GP1		X		1930	GP1		X		1922	GP1		X		1914	GP1	x		X	
1936	GP2		X		1930	GP2		X		1922	GP2		X		1914	GP2	X		X	
1936	GP3		X		1930	GP3		X		1922	GP3		X		1914	GP3	X		X	
1936	GP4		X		1930	GP4		X		1922	GP4		X		1914	GP4	X		X	
1935	GP1		X		1927	GP1		X		1921	GP1		X		1913	GP1	X		X	
1935	GP2		X		1927	GP2		X		1921	GP2		X		1913	GP2	X		X	
1935	GP3		x		1927	GP3		X		1921	GP3		X		1913	GP3	X		X	
1935	GP4		X		1927	GP4		X		1921	GP4		X		1913	GP4	X		X	
1934	GP1		X		1926	GP1		X		1920	GP1		X		1912	GP1	X		X	
1934	GP2		X		1926	GP2		X		1920	GP2		X		1912	GP2	X		X	
1934	GP3		X		1926	GP3		X		1920	GP3		X		1912	GP3	X		X	
1934	GP4		X		1926	GP4		X		1920	GP4	X	X		1912	GP4	X		X	
1933	GP1		X		1925	GP1		X		1919	GP1	X	X		1910	GP1	X		X X	
1933	GP2		X		1925	GP2		X		1919	GP2	X	X		1910	GP2	X		X X	
1933	GP3		X		1925	GP3		X		1919	GP3	X	X		1910	GP3	X		X X	
1933	GP4		X		1925	GP4		X		1919	GP4	X	X		1910	GP4	X		X X	
1932	GP1		X		1924	GP1		X		1918	GP1	X	X		1909	GP1	X		X X	
1932	GP2		x		1924	GP2		X		1918	GP2	X	X		1909	GP2	X		X X	
1932	GP3		X		1924	GP3		X		1918	GP3	X	X		1909	GP3	X		X X	
1932	GP4		X		1924	GP4		X		1918	GP4	X	X		1909	GP4	X		X X	
1931	GP1		X		1923	GP1		X		1916	GP1	X	X		1905	GP1	X		X X	
1931	GP2		X		1923	GP2		X		1916	GP2	X	X		1905	GP2	X		X X	
1931	GP3		X		1923	GP3		X		1916	GP3	X	X		1905	GP3	X		X X	
1931	GP4		X		1923	GP4		X		1916	GP4	X	X		1905	GP4	X		X X	