

**Table S1:** Genetic diversity measures, nucleotide diversity and allelic richness, per main geographic region and further detailed sampling localities in each region together with the host plant on which individuals were found and associated geographic distribution of alleles given for all five gene fragments sequenced. The given nomenclature of alleles corresponds to the one used for the allele networks presented in supplementary information Fig. S1. Frequencies (number of copies) of each allele in each sampled locality are given in brackets.

Main Region	Nucleotide diversity	Allelic richness	Locality (geographic coordinates)	Host plant	nCOI	Allele (nb of copies)	nActin	Allele (nb of copies)	nElfac	Allele (nb of copies)	nRpP0	Allele (nb of copies)	nWg	Allele (nb of copies)
	0.001	3.0												
Ardennes	0.001	3.0	Louette-St_Pierre (49,93°N - 4,934°E)	<i>Sorbus aucuparia</i>	2	h04(1),h05(1)	6	h01(3),h02(7), h10(1), h11(1)	5	h07(10)	5	h03(6),h06(2), h07(2)	6	h01(4),h05(8)
			Rochehaut 49,841°N - 5,002°E	<i>Sorbus aucuparia</i>	2	h02(2)	2	h02(4)	2	h07(4)	2	h06(2),h07(2)	2	h01(3),h05(1), h01(3),h03(3), h05(1), h12(3),h13(4)
			Vivy 49,859°N - 5,023°E	<i>Sorbus aucuparia</i>	5	h02(3),h04(1),h29(1)	2	h01(1),h02(3)	7	h07(14)	4	h03(8)	7	
Carpathians	0.02	3.186	Vratna (Mala Fatra) 49,208°N - 19,042°E	<i>Sorbus aucuparia</i>	5	h03(2),h15(2),h30(1)	4	h01(3),h02(3),h10(1), h11(1)	4	h07(8)	5	h03(2),h06(4), h07(4)	5	h01(4),h07(6)
			Zuberec (Tatry) 49,255°N - 19,678°E	<i>Sorbus aucuparia</i>	2	h04(1),h31(1)	3	h01(1),h02(5)	3	h07(3),h10(2), h17(1)	2	h02(1),h03(1), h06(1), h07(1)	2	h01(2),h05(1), h06(1)
			Telgart (Nizke Tatry) 48,885°N - 20,239°E	<i>Prunus padus</i>		h04(4),h21(1),h22(1), h20(1)	9	h01(4),h02(11),h06(2), h07(1)	9	h02(2),h03(1), h07(14),h08(1)	8	h03(12),h06(2),h07(2)	11	h01(20),h07(2)
			Valea Mare 47,051°N - 25,014°E	<i>Sorbus aucuparia</i>	11	h40(9), h38(2)	9	h01(5),h02(8), h10(2), h11(2),h12(1)	11	h02(4),h03(1), h07(14),h08(1), h12(1),h14(1)	6	h01(5),h03(3), h06(2), h07(2)	10	h01(19),h14(1)
			Kleinsölk 47,335°N - 13,902°E	<i>Sorbus aucuparia</i>	3	h09(1),h11(1),h32(1)	3	h01(1),h03(5)	1	h07(2)	3	h03(2),h04(1), h05(1), h06(1),h07(1)	3	h04(2),h05(3), h08(1)
			Altenmarkt 47,339°N - 13,444°E	<i>Sorbus aucuparia</i>	3	h09(3)	3	h01(1),h03(5)	1	h13(2)	2	h03(2),h06(1), h07(1)	3	h02(2),h03(2), h04(2)
			Interthal 47,404°N - 12,987°E	<i>Sorbus aucuparia</i>	3	h08(1),h09(1),h12(1)	2	h02(1),h03(2),h09(1)	3	h07(6)	2	h03(2),h05(1), h09(1)	2	h04(3),h05(1), h01(1),h02(1), h03(1),h04(4),
Alps	0.004	3.714	Tschiertschen 46,811°N - 9,624°E	<i>P. padus</i> & <i>S. aucuparia</i>	8	h09(4),h28(2),h33(1), h39(1)	7	h01(5),h02(4),h03(1), h04(2),h05(2)	7	h07(12),h08(2)	4	h03(5),h04(1), h05(5),h11(1), h12(1)	7	h04(3),h05(1), h01(4),h02(1), h03(1),h04(4),
			Churwalden 46,778°N - 9,547°E	<i>Prunus padus</i>	9	h09(3),h10(3),h23(1), h24(1),h37(1)	6	H02(8),h03(1), h04(2),h09(1)	6	h07(11),h22(1)	5	h01(1),h03(7)	7	h04(3),h05(4), h08(1),h09(1)
			Praz-de-fort 45,987°N - 7,127°E	<i>Sorbus aucuparia</i>	4	h35(1),h36(3)	2	h01(4)	5	h07(7),h23(1), h01(2)	6	h01(6),h03(2), h06(2),h07(2)	6	h02(5),h03(3), h10(1),h17(1)

			6														
Lourtier		<i>Sorbus</i>															
46,043°N - 7,277°E		<i>aucuparia</i>		h36(6)		1	h14(1),h13(1)		7	h02(1),h07(7),h11(5), h19(1)		7	h01(1),h03(9),h06(2), , h07(2)		h01(3),h02(3), h03(1),h07(2), h09(1),h10(2), h12(1),h15(1)		
Kleinarl		<i>P. padus &amp;</i>															
47,24°N - 13,341°E		<i>S. aucuparia</i>	3	h09(2),h19(1)		3	h01(1),h02(1),h03(4)		4	h07(4)		2	h03(2),h04(1),h05(1) )		3	h04(3),h05(3)	
Matschertal																	
46,714°N - 10,657°E		<i>P. padus &amp;</i>	2	h07(1),h09(2)		2	h03(4)		3	h06(4),h07(2)		2	h04(1),h05(1+1),h09(1)		3	h01(1),h04(3), h05(2)	
Val Genova																	
46,166°N - 10,681°E		<i>P. padus &amp;</i>	5	h09(1),h16(1),h17(1), h18(1),h25(1)		1	h09(2)		5	h05(1),h15(1),h16(2), h20(6)		5	h08(10)		5	h04(10)	
<i>Fennoscandia</i>	0.003	4.13															
Tarvasjoki		<i>Prunus</i>	1														
60,581°N - 22,718°E		<i>padus</i>		h05(1)		1	h01(2)		1	h07(2)		1	h03(2)		1	h01(2)	
Juva																	
61,842°N - 27,950°E		<i>P. padus &amp;</i>	1	h05(1)		1	h01(2)		1	h07(2)		0	x h01(4),h03(2),h06(3), h07(3)		1	h01(2) h01(10),h02(1), h17(1)	
Jaala																	
61,055°N - 26,468°E		<i>S. aucuparia</i>	7														
Sirkka		<i>S. aucuparia</i>															
67,909°N - 24,589°E		<i>Sorbus</i>															
Raattama																	
68,026°N - 24,160°E		<i>aucuparia</i>	4	h13(3), h14(1)		1	h01(2)		4	h02(1),h07(5), h21(2)		3	h01(4),h06(1), h07(1)		5	h01(10)	
Sinettä																	
66,659°N - 25,447°E																	
				1	h27(1)		0	x		0	x		0	x	1	h01(1)	