

Supporting Information**Table S1.** Alleles, in bp, detected for all EST-SSR in the data set

alleles	PIE020	PIE223	PIE152	PIE242	PIE102	PIE243	PIE267	PIE215	PIE239	PIE227	PIE271
97	197	228	102	139	206	86	185	69	156	184	
99	200	230	104	141	208	90	188	71	159	186	
101	203	232	106	143	210	92	191	73	162	188	
103	206	234	108	145	212	96	194	75	165	190	
105	209	236	110	147	214	98	197	77	-	192	
107	212	238	112	149	216	100	200	79	-	194	
109	216	240	114	151	218	102	203	81	-	196	
113	219	242	116	153	220	104	206	83	-	198	
115	222	244	118	155	222	106	209	85	-	200	
-	225	246	120	157	224	-	212	87	-	202	
-	228	248	122	159	-	-	215	89	-	204	
-	-	250	124	161	-	-	218	91	-	-	
-	-	252	-	163	-	-	221	93	-	-	
-	-	254	-	165	-	-	-	94	-	-	
-	-	256	-	167	-	-	-	-	-	-	
-	-	258	-	169	-	-	-	-	-	-	
-	-	259	-	-	-	-	-	-	-	-	
-	-	260	-	-	-	-	-	-	-	-	
Tot	9	11	18	12	16	10	9	13	14	4	11

Table S2. Characteristics of alleles

Species	Locus	N	Na	Ne	I	Ho	He	UHe	F
<i>Q. frainetto</i>	PIE020	56	3	2.463	0.970	0.571	0.594	0.599	0.038
	PIE223	55	6	3.680	1.503	0.582	0.728	0.735	0.201
	PIE152	54	7	2.471	1.243	0.593	0.595	0.601	0.005
	PIE242	56	10	6.722	2.032	0.875	0.851	0.859	-0.028
	PIE102	56	9	2.779	1.474	0.679	0.640	0.646	-0.060
	PIE243	46	6	3.260	1.427	0.674	0.693	0.701	0.028
	PIE267	54	6	2.957	1.354	0.704	0.662	0.668	-0.063
	PIE215	55	8	3.436	1.477	0.727	0.709	0.715	-0.026
	PIE239	55	7	2.840	1.322	0.673	0.648	0.654	-0.038
	PIE227	54	3	1.390	0.486	0.222	0.281	0.283	0.208
	PIE271	56	8	4.041	1.653	0.661	0.753	0.759	0.122
	Mean	54.273	6.636	3.276	1.358	0.633	0.650	0.656	0.035
	SE	0.864	0.664	0.405	0.118	0.048	0.043	0.044	0.030
<i>Q. petraea</i>	PIE020	96	7	3.555	1.389	0.688	0.719	0.722	0.043
	PIE223	96	11	2.825	1.520	0.688	0.646	0.649	-0.064
	PIE152	89	14	6.930	2.183	0.742	0.856	0.861	0.133
	PIE242	96	11	7.248	2.121	0.802	0.862	0.867	0.070
	PIE102	95	11	4.054	1.635	0.726	0.753	0.757	0.036
	PIE243	92	6	3.202	1.353	0.663	0.688	0.691	0.036
	PIE267	96	6	4.074	1.469	0.698	0.755	0.759	0.075
	PIE215	96	12	5.333	1.932	0.885	0.813	0.817	-0.090
	PIE239	96	8	1.174	0.398	0.156	0.148	0.149	-0.053
	PIE227	77	4	2.294	1.037	0.571	0.564	0.568	-0.013
	PIE271	96	9	4.398	1.660	0.813	0.773	0.777	-0.052
	Mean	93.182	9	4.099	1.518	0.676	0.689	0.692	0.011
	SE	1.757	0.924	0.557	0.152	0.058	0.060	0.061	0.021
<i>Q. pubescens</i>	PIE020	55	7	1.877	0.943	0.527	0.467	0.471	-0.129
	PIE223	55	9	5.515	1.899	0.818	0.819	0.826	0.001
	PIE152	53	14	9.379	2.389	0.868	0.893	0.902	0.028
	PIE242	55	11	6.700	2.045	0.891	0.851	0.859	-0.047
	PIE102	55	13	5.402	2.047	0.782	0.815	0.822	0.041
	PIE243	52	7	3.702	1.526	0.827	0.730	0.737	-0.133
	PIE267	54	6	4.142	1.525	0.722	0.759	0.766	0.048
	PIE215	55	11	4.082	1.790	0.745	0.755	0.762	0.013
	PIE239	54	13	5.006	1.977	0.741	0.800	0.808	0.074
	PIE227	55	4	1.252	0.445	0.182	0.201	0.203	0.096
	PIE271	55	9	5.926	1.887	0.818	0.831	0.839	0.016
	Mean	54.364	9.455	4.817	1.679	0.720	0.720	0.727	0.001
	SE	0.310	0.976	0.675	0.167	0.061	0.062	0.062	0.023

Table S2. (continuation)

Species	Locus	N	Na	Ne	I	Ho	He	UHe	F
Hybrids	PIE020	61	9	2.829	1.308	0.623	0.646	0.652	0.036
	PIE223	61	11	6.249	2.062	0.836	0.840	0.847	0.005
	PIE152	57	14	7.690	2.247	0.825	0.870	0.878	0.052
	PIE242	61	12	8.352	2.251	0.934	0.880	0.888	-0.062
	PIE102	61	15	6.171	2.112	0.705	0.838	0.845	0.159
	PIE243	57	8	3.067	1.436	0.684	0.674	0.680	-0.015
	PIE267	60	6	4.157	1.536	0.783	0.759	0.766	-0.031
	PIE215	61	11	4.975	1.881	0.705	0.799	0.806	0.118
	PIE239	60	11	3.009	1.580	0.650	0.668	0.673	0.026
	PIE227	51	4	1.575	0.722	0.314	0.365	0.369	0.141
	PIE271	61	9	5.855	1.871	0.836	0.829	0.836	-0.008
	Mean	59.182	10	4.902	1.728	0.718	0.743	0.749	0.038
	SE	0.942	0.982	0.653	0.141	0.049	0.045	0.046	0.022
Total	Mean	65.250	8.773	4.274	1.571	0.687	0.700	0.706	0.021
	SE	2.534	0.474	0.298	0.074	0.027	0.026	0.026	0.012

Note. Abbreviations: N - number of individuals, Na - mean number of alleles per loci, Ne - effective allelic number, I - Shannon's information index, Rs - mean allelic richness over loci obtained after rarefaction to 46 diploid individuals, He - expected heterozygosity unbiased for sample size, Ho - observed heterozygosity, Fis - inbreeding coefficient obtained by 9999 bootstraps of the individuals within species.

Table S3. Summary of private alleles by species

Species	Locus	Allele	Freq
<i>Q. frainetto</i>	pie243	206	0.054
<i>Q. frainetto</i>	pie267	104	0.028
<i>Q. frainetto</i>	pie271	204	0.045
<i>Q. petraea</i>	pie020	97	0.005
<i>Q. petraea</i>	pie223	228	0.005
<i>Q. petraea</i>	pie152	230	0.022
<i>Q. petraea</i>	pie152	258	0.017
<i>Q. petraea</i>	pie152	259	0.017
<i>Q. petraea</i>	pie152	260	0.006
<i>Q. petraea</i>	pie102	145	0.321
<i>Q. petraea</i>	pie267	86	0.005
<i>Q. petraea</i>	pie215	185	0.156
<i>Q. petraea</i>	pie215	218	0.021
<i>Q. petraea</i>	pie239	94	0.005
<i>Q. petraea</i>	pie271	200	0.005
<i>Q. pubescens</i>	pie020	115	0.045
<i>Q. pubescens</i>	pie152	234	0.019
<i>Q. pubescens</i>	pie152	236	0.019
<i>Q. pubescens</i>	pie242	104	0.018
<i>Q. pubescens</i>	pie102	141	0.018
<i>Q. pubescens</i>	pie102	147	0.018
<i>Q. pubescens</i>	pie102	167	0.018
<i>Q. pubescens</i>	pie243	222	0.038
<i>Q. pubescens</i>	pie267	106	0.009
<i>Q. pubescens</i>	pie215	221	0.009
<i>Q. pubescens</i>	pie239	81	0.037
<i>Q. pubescens</i>	pie239	83	0.009
<i>Q. pubescens</i>	pie239	85	0.009
<i>Q. pubescens</i>	pie239	87	0.074
<i>Q. pubescens</i>	pie239	89	0.019
<i>Q. pubescens</i>	pie271	188	0.018