

Supplementary material

Table S1. List of SSR markers selected for transfer to application in *Chaenomeles* germplasm analysis

Marker	Organism	Size range	Mapped in	Linkage group	Reference
CH01a09	<i>Malus × domestica</i>	198-384	<i>Malus, Pyrus</i>	14	Liebhard et al. 2002
CH01B12	<i>Malus × domestica</i>	125-178	<i>Malus, Pyrus</i>	3, 4, 10, 12, 13, 17	Liebhard et al. 2002
CH01c06	<i>Malus × domestica</i>	146-188	<i>Malus</i>	1, 2, 8, 15	Liebhard et al. 2002
CH01d03	<i>Malus × domestica</i>	136-160	<i>Malus, Pyrus</i>	4,12	Liebhard et al. 2002
CH01D08	<i>Malus × domestica</i>	238-290	<i>Malus, Pyrus</i>	15	Liebhard et al. 2002
CH01d09	<i>Malus × domestica</i>	134-172	<i>Malus, Pyrus</i>	12	Liebhard et al. 2002
CH01E12	<i>Malus × domestica</i>	246-278	<i>Malus, Pyrus</i>	1, 8 ,15	Liebhard et al. 2002
CH01F02	<i>Malus × domestica</i>	174-206	<i>Malus, Pyrus</i>	12	Liebhard et al. 2002
CH01F03	<i>Malus × domestica</i>	210-224	<i>Malus, Pyrus</i>	9	Liebhard et al. 2002
CH01f03b	<i>Malus × domestica</i>	139-183	<i>Malus, Pyrus</i>	9	Liebhard et al. 2002
CH01f07a	<i>Malus × domestica</i>	174-206	<i>Malus, Pyrus</i>	10	Liebhard et al. 2002
CH01f09	<i>Malus × domestica</i>	125-160	<i>Malus</i>	8	Liebhard et al. 2002
CH01f12	<i>Malus × domestica</i>	145-162	<i>Malus, Pyrus</i>	10	Liebhard et al. 2002
CH01g05	<i>Malus × domestica</i>	140-188	<i>Malus, Pyrus</i>	14	Liebhard et al. 2002
CH01h01	<i>Malus × domestica</i>	114-134	<i>Malus, Pyrus</i>	17	Liebhard et al. 2002
CH01h02	<i>Malus × domestica</i>	236-256	<i>Malus, Pyrus</i>	9	Liebhard et al. 2002
CH01H10	<i>Malus × domestica</i>	94-114	<i>Malus, Pyrus</i>	8	Liebhard et al. 2002
CH02a03	<i>Malus × domestica</i>	144-170	<i>Malus, Pyrus</i>	16	Liebhard et al. 2002
CH02A08	<i>Malus × domestica</i>	133-177	<i>Malus, Pyrus</i>	5, 10	Liebhard et al. 2002
CH02b03b	<i>Malus × domestica</i>	77-109	<i>Malus, Pyrus</i>	10	Liebhard et al. 2002
CH02b10	<i>Malus × domestica</i>	121-159	<i>Malus, Pyrus</i>	2, 6	Liebhard et al. 2002
CH02b11	<i>Malus × domestica</i>	114-158	<i>Malus</i>	7	Liebhard et al. 2002
CH02B12	<i>Malus × domestica</i>	101-143	<i>Malus, Pyrus</i>	5	Liebhard et al. 2002
CH02c02a	<i>Malus × domestica</i>	129-176	<i>Malus, Pyrus</i>	2, 15	Liebhard et al. 2002
CH02c02b	<i>Malus × domestica</i>	78-126	<i>Malus, Pyrus</i>	4	Liebhard et al. 2002
CH02C06	<i>Malus × domestica</i>	216-254	<i>Malus</i>	2	Liebhard et al. 2002
CH02C09	<i>Malus × domestica</i>	233-257	<i>Malus, Pyrus</i>	15	Liebhard et al. 2002
CH02C11	<i>Malus × domestica</i>	219-239	<i>Malus, Pyrus, Rosa</i>	10	Liebhard et al. 2002
CH02D08	<i>Malus × domestica</i>	210-254	<i>Malus, Pyrus</i>	3, 11	Liebhard et al. 2002
CH02D11	<i>Malus × domestica</i>	118-148	<i>Malus, Pyrus</i>	15	Liebhard et al. 2002
CH02D12	<i>Malus × domestica</i>	177-199	<i>Malus, Pyrus</i>	11	Liebhard et al. 2002
CH02F06	<i>Malus × domestica</i>	135-158	<i>Malus, Pyrus</i>	2	Liebhard et al. 2002
CH02g01	<i>Malus × domestica</i>	198-238	<i>Malus, Pyrus</i>	13	Liebhard et al. 2002
CH02g09	<i>Malus × domestica</i>	98-138	<i>Malus</i>	8	Liebhard et al. 2002
CH02h11a	<i>Malus × domestica</i>	104-132	<i>Malus, Pyrus</i>	4	Liebhard et al. 2002
CH03a02	<i>Malus × domestica</i>	124-184	<i>Malus, Pyrus</i>	14	Liebhard et al. 2002
CH03a08	<i>Malus × domestica</i>	146-218	<i>Malus, Pyrus</i>	13	Liebhard et al. 2002
CH03a09	<i>Malus × domestica</i>	125-143	<i>Malus, Pyrus</i>	5	Liebhard et al. 2002
CH03b06	<i>Malus × domestica</i>	111-131	<i>Malus, Pyrus</i>	15	Liebhard et al. 2002
CH03b10	<i>Malus × domestica</i>	99-121	<i>Malus</i>	15	Liebhard et al. 2002
CH03c02	<i>Malus × domestica</i>	116-136	<i>Malus, Pyrus</i>	12	Liebhard et al. 2002
CH03d01	<i>Malus × domestica</i>	95-115	<i>Malus</i>	2	Liebhard et al. 2002
CH03d02	<i>Malus × domestica</i>	201-223	<i>Malus, Pyrus</i>	11	Liebhard et al. 2002

CH03d07	<i>Malus × domestica</i>	186-226	<i>Malus, Pyrus</i>	6	Liebhard et al. 2002
CH03d08	<i>Malus × domestica</i>	129-161	<i>Malus, Pyrus</i>	14	Liebhard et al. 2002
CH03d10	<i>Malus × domestica</i>	166-182	<i>Malus, Pyrus</i>	2	Liebhard et al. 2002
CH03d11	<i>Malus × domestica</i>	115-181	<i>Malus, Pyrus</i>	10	Liebhard et al. 2002
CH03d12	<i>Malus × domestica</i>	108-154	<i>Malus, Pyrus</i>	6	Liebhard et al. 2002
CH03e03	<i>Malus × domestica</i>	106-216	<i>Malus, Pyrus</i>	3	Liebhard et al. 2002
CH03g06	<i>Malus × domestica</i>	139-171	<i>Malus, Pyrus</i>	14	Liebhard et al. 2002
CH03g07	<i>Malus × domestica</i>	119-181	<i>Malus, Pyrus</i>	3	Liebhard et al. 2002
CH03g12	<i>Malus × domestica</i>	154-200	<i>Malus, Pyrus</i>	1, 3	Liebhard et al. 2002
CH04a12	<i>Malus × domestica</i>	158-196	<i>Malus</i>	11	Liebhard et al. 2002
CH04c06	<i>Malus × domestica</i>	155-186	<i>Malus, Pyrus</i>	10, 17	Liebhard et al. 2002
CH04d02	<i>Malus × domestica</i>	118-146	<i>Malus, Pyrus</i>	12	Liebhard et al. 2002
CH04e02	<i>Malus × domestica</i>	143-163	<i>Malus</i>	4	Liebhard et al. 2002
CH04e03	<i>Malus × domestica</i>	179-222	<i>Malus, Pyrus</i>	5	Liebhard et al. 2002
CH04e05	<i>Malus × domestica</i>	174-227	<i>Malus, Pyrus</i>	7	Liebhard et al. 2002
CH04f06	<i>Malus × domestica</i>	159-179	<i>Malus, Pyrus</i>	14	Liebhard et al. 2002
CH04f10	<i>Malus × domestica</i>	144-254	<i>Malus</i>	16	Liebhard et al. 2002
CH04g04	<i>Malus × domestica</i>	170-186	<i>Malus, Pyrus</i>	12	Liebhard et al. 2002
CH04g07	<i>Malus × domestica</i>	149-211	<i>Malus, Pyrus</i>	11	Liebhard et al. 2002
CH04g09	<i>Malus × domestica</i>	141-177	<i>Malus, Pyrus</i>	5, 8, 10	Liebhard et al. 2002
CH04h02	<i>Malus × domestica</i>	162-262	<i>Malus, Pyrus</i>	11	Liebhard et al. 2002
CH05a02	<i>Malus × domestica</i>	111-135	<i>Malus, Pyrus</i>	8, 15	Liebhard et al. 2002
CH05a03	<i>Malus × domestica</i>	182-220	<i>Malus, Pyrus</i>	9	Liebhard et al. 2002
CH05a04	<i>Malus × domestica</i>	159-189	<i>Malus, Pyrus</i>	16	Liebhard et al. 2002
CH05a05	<i>Malus × domestica</i>	198-230	<i>Malus, Pyrus</i>	6	Liebhard et al. 2002
CH05c06	<i>Malus × domestica</i>	104-126	<i>Malus, Pyrus</i>	13, 16	Liebhard et al. 2002
CH05c07	<i>Malus × domestica</i>	111-149	<i>Malus, Pyrus</i>	9	Liebhard et al. 2002
CH05d02	<i>Malus × domestica</i>	203-225	<i>Malus</i>	4	Liebhard et al. 2002
CH05d03	<i>Malus × domestica</i>	152-187	<i>Malus, Pyrus</i>	14	Liebhard et al. 2002
CH05d04	<i>Malus × domestica</i>	174-214	<i>Malus, Pyrus</i>	12, 13, 14	Liebhard et al. 2002
CH05d08	<i>Malus × domestica</i>	91-143	<i>Malus</i>	9, 17	Liebhard et al. 2002
CH05d11	<i>Malus × domestica</i>	171-211	<i>Malus, Pyrus</i>	12	Liebhard et al. 2002
CH05e03	<i>Malus × domestica</i>	158-190	<i>Malus</i>	2	Liebhard et al. 2002
CH05e06	<i>Malus × domestica</i>	125-222	<i>Malus, Pyrus</i>	5	Liebhard et al. 2002
CH05f04	<i>Malus × domestica</i>	160-172	<i>Malus, Pyrus</i>	13	Liebhard et al. 2002
CH05f06	<i>Malus × domestica</i>	166-184	<i>Malus</i>	5	Liebhard et al. 2002
CH05g01	<i>Malus × domestica</i>	236-276	<i>Malus</i>	11	Liebhard et al. 2002
CH05g03	<i>Malus × domestica</i>	135-192	<i>Malus, Pyrus</i>	17	Liebhard et al. 2002
CH05g07	<i>Malus × domestica</i>	149-197	<i>Malus, Pyrus</i>	12, 14	Liebhard et al. 2002
CH05g08	<i>Malus × domestica</i>	161-179	<i>Malus, Pyrus</i>	1	Liebhard et al. 2002
CH05g11	<i>Malus × domestica</i>	201-255	<i>Malus, Pyrus</i>	14	Liebhard et al. 2002
CH05h05	<i>Malus × domestica</i>	168-184	<i>Malus, Pyrus</i>	13, 16	Liebhard et al. 2002
CH-Vf1	<i>Malus × domestica</i>	129-173	<i>Malus, Pyrus</i>	1	Vinatzer et al. 2004
CH-Vf2	<i>Malus floribunda</i>	87-115	<i>Pyrus</i>	1	Vinatzer et al. 2004
GD12	<i>Malus × domestica</i>	141-191	<i>Malus</i>	3	Hokanson et al. 1998
GD15	<i>Malus × domestica</i>	144-147	n/a	n/a	Hokanson et al. 1998
GD96	<i>Malus × domestica</i>	152-197	<i>Malus</i>	17	Hokanson et al. 1998
GD100	<i>Malus × domestica</i>	223-242	<i>Malus</i>	10, 15	Hokanson et al. 1998

GD103	<i>Malus × domestica</i>	90-133	<i>Malus</i>	4, 5, 14	Hokanson et al. 1998
GD142	<i>Malus × domestica</i>	123-158	<i>Malus</i>	9	Hokanson et al. 1998
GD147	<i>Malus × domestica</i>	124-156	<i>Malus, Pyrus</i>	13	Hokanson et al. 1998
GD162	<i>Malus × domestica</i>	215-254	<i>Malus</i>	4	Hokanson et al. 1998

Table S2. Characterization of a set of 25 SSR markers based on groups of *Chaenomeles* samples identified through Principal Coordinates Analysis (PCoA)

Group	Locus	Na	Ne	I	Ho	He	uHe	PIC	Allele range, bp
<i>C. japonica</i>	CH01a09	7	2.963	1.436	0.537	0.663	0.669	0.630	183-223
	CH01d03	2	1.018	0.051	0.018	0.018	0.018	0.020	130-140
	CH03d01	7	2.420	1.191	0.571	0.587	0.592	0.540	96-108
	CH05e03	9	4.423	1.683	0.768	0.774	0.781	0.738	135-164
	CH-Vf1	9	5.097	1.846	0.800	0.804	0.811	0.778	131-157
	CH01d09	10	2.395	1.350	0.667	0.582	0.588	0.557	119-167
	CH03d10	7	3.636	1.526	0.679	0.725	0.731	0.691	161-192
	CH01f03b	7	3.303	1.365	0.804	0.697	0.704	0.644	170-218
	CH04f06	7	2.440	1.154	0.696	0.590	0.595	0.539	168-196
	CH01F02	10	3.847	1.673	0.667	0.740	0.747	0.710	161-202
	CH01h02	5	4.070	1.457	0.185	0.754	0.761	0.714	220-234
	CH01g05	10	5.511	1.948	0.911	0.819	0.826	0.804	142-168
	CH02c02b	5	2.562	1.114	0.589	0.610	0.615	0.556	114-144
	CH02g01	6	2.743	1.274	0.660	0.635	0.642	0.635	183-205
	CH02a03	4	2.339	0.979	0.571	0.572	0.578	0.504	113-136
	CH03b10	5	1.886	0.939	0.464	0.470	0.474	0.445	87-106
	CH03b06	9	4.314	1.689	0.821	0.768	0.775	0.738	88-136
	CH03g06	8	3.513	1.538	0.340	0.715	0.722	0.684	123-140
	CH04g07	9	3.519	1.528	0.320	0.716	0.723	0.674	152-172
	CH05h05	5	2.823	1.277	0.824	0.646	0.652	0.606	145-161
	CH05c06	7	4.152	1.528	0.774	0.759	0.766	0.721	91-113
	CH05d03	2	1.975	0.687	0.472	0.494	0.498	0.371	160-162
	CH05a02_a	3	2.967	1.093	0.600	0.663	0.669	0.589	108-111
	CH05g11	2	2.000	0.693	1.000	0.500	0.505	0.375	175-229
	CH05g07	8	5.681	1.861	0.885	0.824	0.832	0.803	156-174
	Mean	<i>6.52</i>	<i>3.264</i>	<i>1.315</i>	<i>0.625</i>	<i>0.645</i>	<i>0.651</i>	<i>0.603</i>	<i>n/a</i>
<i>Chaenomeles spp.</i>	CH01a09	5	4.000	1.474	0.875	0.750	0.800	0.709	187-207
	CH01d03	6	5.120	1.700	1.000	0.805	0.858	0.775	108-137
	CH03d01	4	2.723	1.143	1.000	0.633	0.675	0.570	96-108
	CH05e03	9	6.737	2.047	0.875	0.852	0.908	0.835	135-174
	CH-Vf1	10	8.533	2.220	0.625	0.883	0.942	0.871	127-151
	CH01d09	5	3.879	1.461	0.750	0.742	0.792	0.701	125-149
	CH03d10	3	2.415	0.984	0.625	0.586	0.625	0.521	170-180
	CH01f03b	6	3.282	1.473	0.625	0.695	0.742	0.665	194-218
	CH04f06	7	5.333	1.787	1.000	0.813	0.867	0.787	168-196
	CH01F02	4	3.161	1.240	0.571	0.684	0.736	0.624	161-189
	CH01h02	3	1.471	0.602	0.375	0.320	0.342	0.296	220-226
	CH01g05	5	3.200	1.332	0.875	0.688	0.733	0.635	144-168
	CH02c02b	8	6.095	1.927	1.000	0.836	0.892	0.813	107-158
	CH02g01	7	2.844	1.450	0.875	0.648	0.692	0.625	183-205
	CH02a03	3	2.327	0.947	0.375	0.570	0.608	0.499	113-128
	CH03b10	2	1.882	0.662	0.750	0.469	0.500	0.359	84-93
	CH03b06	5	2.667	1.244	0.750	0.625	0.667	0.586	94-133

<i>C. cathayensis</i>	CH03g06	6	4.267	1.576	0.750	0.766	0.817	0.728	125-151
	CH04g07	3	2.246	0.882	0.125	0.555	0.592	0.453	154-160
	CH05h05	3	1.556	0.656	0.429	0.357	0.385	0.321	137-153
	CH05c06	3	2.723	1.043	0.125	0.633	0.675	0.556	141-153
	CH05d03	4	2.560	1.125	0.750	0.609	0.650	0.559	92-110
	CH05a02_a	3	2.246	0.882	1.000	0.555	0.592	0.453	108-111
	CH05g11	10	8.000	2.187	0.750	0.875	0.933	0.862	173-229
	CH05g07	8	5.765	1.909	0.714	0.827	0.890	0.806	173-192
	Mean	<i>5.28</i>	<i>3.801</i>	<i>1.358</i>	<i>0.704</i>	<i>0.671</i>	<i>0.716</i>	<i>0.624</i>	<i>n/a</i>
	CH01a09	1	1.000	0.000	0.000	0.000	0.000	0.000	213
	CH01d03	1	1.000	0.000	0.000	0.000	0.000	0.000	125
	CH03d01	1	1.000	0.000	0.000	0.000	0.000	0.000	106
	CH05e03	1	1.000	0.000	0.000	0.000	0.000	0.000	158
	CH-Vf1	2	1.471	0.500	0.400	0.320	0.337	0.269	125-135
	CH01d09	1	1.000	0.000	0.000	0.000	0.000	0.000	162
	CH03d10	1	1.000	0.000	0.000	0.000	0.000	0.000	174
	CH01f03b	1	1.000	0.000	0.000	0.000	0.000	0.000	196
	CH04f06	1	1.000	0.000	0.000	0.000	0.000	0.000	173
	CH01F02	1	1.000	0.000	0.000	0.000	0.000	0.000	192
	CH01h02	1	1.000	0.000	0.000	0.000	0.000	0.000	220
	CH01g05	1	1.000	0.000	0.000	0.000	0.000	0.000	154
	CH02c02b	1	1.000	0.000	0.000	0.000	0.000	0.000	107
	CH02g01	1	1.000	0.000	0.000	0.000	0.000	0.000	190
	CH02a03	1	1.000	0.000	0.000	0.000	0.000	0.000	115
	CH03b10	2	1.471	0.500	0.400	0.320	0.337	0.269	84-93
	CH03b06	1	1.000	0.000	0.000	0.000	0.000	0.000	115
	CH03g06	1	1.000	0.000	0.000	0.000	0.000	0.000	143
	CH04g07	1	1.000	0.000	0.000	0.000	0.000	0.000	163
	CH05h05	1	1.000	0.000	0.000	0.000	0.000	0.000	137
	CH05c06	1	1.000	0.000	0.000	0.000	0.000	0.000	104
	CH05d03	1	1.000	0.000	0.000	0.000	0.000	0.000	161
	CH05a02_a	2	2.000	0.693	1.000	0.500	0.526	0.375	106-118
	CH05g11	2	2.000	0.693	1.000	0.500	0.526	0.375	175-222
	CH05g07	1	1.000	0.000	0.000	0.000	0.000	0.000	156
	Mean	<i>1.160</i>	<i>1.118</i>	<i>0.095</i>	<i>0.112</i>	<i>0.066</i>	<i>0.069</i>	<i>0.052</i>	<i>n/a</i>

Table S3. Characterization of a minimal set of 25 SSR markers based on groups of *Chaenomeles* samples identified through Structure analysis

Group	Locus	Na	Ne	I	Ho	He	uHe	PIC	Allele range, bp
<i>C. japonica</i> (group 2)	CH01a09	4	1.885	0.791	0.375	0.470	0.480	0.393	183-205
	CH01d03	2	1.041	0.098	0.040	0.039	0.040	0.038	130-140
	CH03d01	5	2.066	1.005	0.480	0.516	0.527	0.473	96-108
	CH05e03	5	3.019	1.274	0.920	0.669	0.682	0.617	135-152
	CH-Vf1	8	3.840	1.625	0.792	0.740	0.755	0.704	131-157
	CH01d09	6	2.057	1.051	0.625	0.514	0.525	0.476	128-164
	CH03d10	6	2.809	1.261	0.720	0.644	0.657	0.593	161-184
	CH01f03b	5	2.432	1.099	0.760	0.589	0.601	0.536	170-214
	CH04f06	3	1.900	0.807	0.600	0.474	0.483	0.414	170-180
	CH01F02	5	1.826	0.865	0.583	0.452	0.462	0.407	177-202
	CH01h02	3	1.986	0.792	0.000	0.497	0.507	0.408	220-230
	CH01g05	8	3.956	1.564	0.920	0.747	0.762	0.705	148-168
	CH02c02b	3	1.981	0.752	0.480	0.495	0.505	0.391	114-122
	CH02g01	3	2.923	1.085	0.913	0.658	0.672	0.584	183-205
	CH02a03	3	2.637	1.021	0.560	0.621	0.633	0.541	113-128
	CH03b10	5	2.108	1.055	0.480	0.526	0.536	0.491	87-106
	CH03b06	6	4.032	1.512	0.920	0.752	0.767	0.711	94-110
	CH03g06	5	2.142	0.930	0.217	0.533	0.545	0.448	132-140
	CH04g07	5	1.583	0.792	0.143	0.368	0.377	0.351	152-170
	CH05h05	4	2.432	1.098	0.739	0.589	0.602	0.541	145-161
	CH05c06	5	2.997	1.244	0.826	0.666	0.681	0.608	91-113
	CH05d03	2	1.682	0.595	0.391	0.405	0.414	0.323	160-162
	CH05a02_a	3	2.946	1.090	0.500	0.661	0.675	0.587	108-111
	CH05g11	2	2.000	0.693	1.000	0.500	0.510	0.375	175-229
	CH05g07	6	3.977	1.507	0.913	0.749	0.765	0.707	156-170
	Mean	4.48	2.490	1.024	0.596	0.555	0.567	0.497	n/a
<i>C. japonica</i> (group 3)	CH01a09	7	3.905	1.620	0.667	0.744	0.756	0.715	183-223
	CH01d03	1	1.000	0.000	0.000	0.000	0.000	0.000	130
	CH03d01	7	2.715	1.288	0.645	0.632	0.642	0.582	96-108
	CH05e03	9	4.072	1.669	0.645	0.754	0.767	0.721	135-164
	CH-Vf1	8	4.829	1.768	0.806	0.793	0.806	0.765	131-157
	CH01d09	10	2.683	1.470	0.700	0.627	0.638	0.605	119-167
	CH03d10	6	3.914	1.520	0.645	0.745	0.757	0.707	170-192
	CH01f03b	5	3.274	1.352	0.839	0.695	0.706	0.648	194-218
	CH04f06	7	2.546	1.158	0.774	0.607	0.617	0.534	168-196
	CH01F02	10	5.279	1.874	0.733	0.811	0.824	0.786	161-202
	CH01h02	5	3.255	1.338	0.333	0.693	0.705	0.643	220-234
	CH01g05	9	5.058	1.874	0.903	0.802	0.815	0.780	142-168
	CH02c02b	4	2.758	1.146	0.677	0.637	0.648	0.577	114-144
	CH02g01	6	2.118	1.127	0.467	0.528	0.537	0.503	183-205
	CH02a03	4	1.881	0.851	0.581	0.468	0.476	0.419	113-136
	CH03b10	4	1.727	0.815	0.452	0.421	0.428	0.389	87-106
	CH03b06	7	3.214	1.434	0.742	0.689	0.700	0.650	88-136
	CH03g06	8	4.852	1.767	0.433	0.794	0.807	0.767	123-140
	CH04g07	8	3.534	1.553	0.448	0.717	0.730	0.685	152-172

CH05h05	4	2.882	1.195	0.893	0.653	0.665	0.599	145-157
CH05c06	6	3.879	1.499	0.733	0.742	0.755	0.702	95-113
CH05d03	2	1.965	0.684	0.533	0.491	0.499	0.371	160-162
CH05a02_a	3	2.971	1.094	0.677	0.663	0.674	0.589	108-111
CH05g11	2	2.000	0.693	1.000	0.500	0.508	0.375	175-229
CH05g07	6	5.273	1.721	0.862	0.810	0.825	0.783	156-174
Mean	<i>5.92</i>	<i>3.263</i>	<i>1.300</i>	<i>0.648</i>	<i>0.641</i>	<i>0.651</i>	<i>0.596</i>	<i>n/a</i>

Table S4. Characterization of a minimal set of six SSR markers based on groups of *Chaenomeles* samples identified through Structure analysis

Group	Locus	Na	Ne	I	Ho	He	uHe	PIC	Allele range, bp
<i>Chaenomeles</i> spp.	CH01a09	5.0	4.000	1.474	0.875	0.750	0.800	0.708	187-207
	CH03d01	4.0	2.723	1.143	1.000	0.633	0.675	0.570	96-108
	CH05e03	9.0	6.737	2.047	0.875	0.852	0.908	0.835	135-174
	CH01d09	5.0	3.879	1.461	0.750	0.742	0.792	0.701	125-149
	CH03b10	2.0	1.882	0.662	0.750	0.469	0.500	0.359	84-93
	CH04g07	3.0	2.246	0.882	0.125	0.555	0.592	0.456	154-160
	Mean	4.7	3.578	1.278	0.729	0.667	0.711	0.605	n/a
<i>C. japonica</i> (Group 1)	CH01a09	4.0	1.885	0.791	0.375	0.470	0.480	0.393	183-205
	CH03d01	5.0	2.066	1.005	0.480	0.516	0.527	0.473	96-108
	CH05e03	5.0	3.019	1.274	0.920	0.669	0.682	0.617	135-152
	CH01d09	6.0	2.057	1.051	0.625	0.514	0.525	0.476	128-164
	CH03b10	5.0	2.108	1.055	0.480	0.526	0.536	0.491	87-106
	CH04g07	5.0	1.583	0.792	0.143	0.368	0.377	0.351	152-170
	Mean	5.0	2.120	0.995	0.504	0.510	0.521	0.467	n/a
<i>C. japonica</i> (Group 2)	CH01a09	7.0	3.905	1.620	0.667	0.744	0.756	0.715	183-223
	CH03d01	7.0	2.715	1.288	0.645	0.632	0.642	0.582	96-108
	CH05e03	9.0	4.072	1.669	0.645	0.754	0.767	0.721	135-164
	CH01d09	10.0	2.683	1.470	0.700	0.627	0.638	0.610	119-167
	CH03b10	4.0	1.727	0.815	0.452	0.421	0.428	0.389	87-106
	CH04g07	8.0	3.534	1.553	0.448	0.717	0.730	0.697	152-172
	Mean	7.5	3.106	1.402	0.593	0.649	0.660	0.619	n/a
<i>C. cathayensis</i>	CH01a09	1.0	1.000	0.000	0.000	0.000	0.000	0.000	213
	CH03d01	1.0	1.000	0.000	0.000	0.000	0.000	0.000	106
	CH05e03	1.0	1.000	0.000	0.000	0.000	0.000	0.000	158
	CH01d09	1.0	1.000	0.000	0.000	0.000	0.000	0.000	162
	CH03b10	2.0	1.471	0.500	0.400	0.320	0.337	0.269	84-93
	CH04g07	1.0	1.000	0.000	0.000	0.000	0.000	0.000	163
	Mean	1.2	1.078	0.083	0.067	0.053	0.056	0.045	n/a

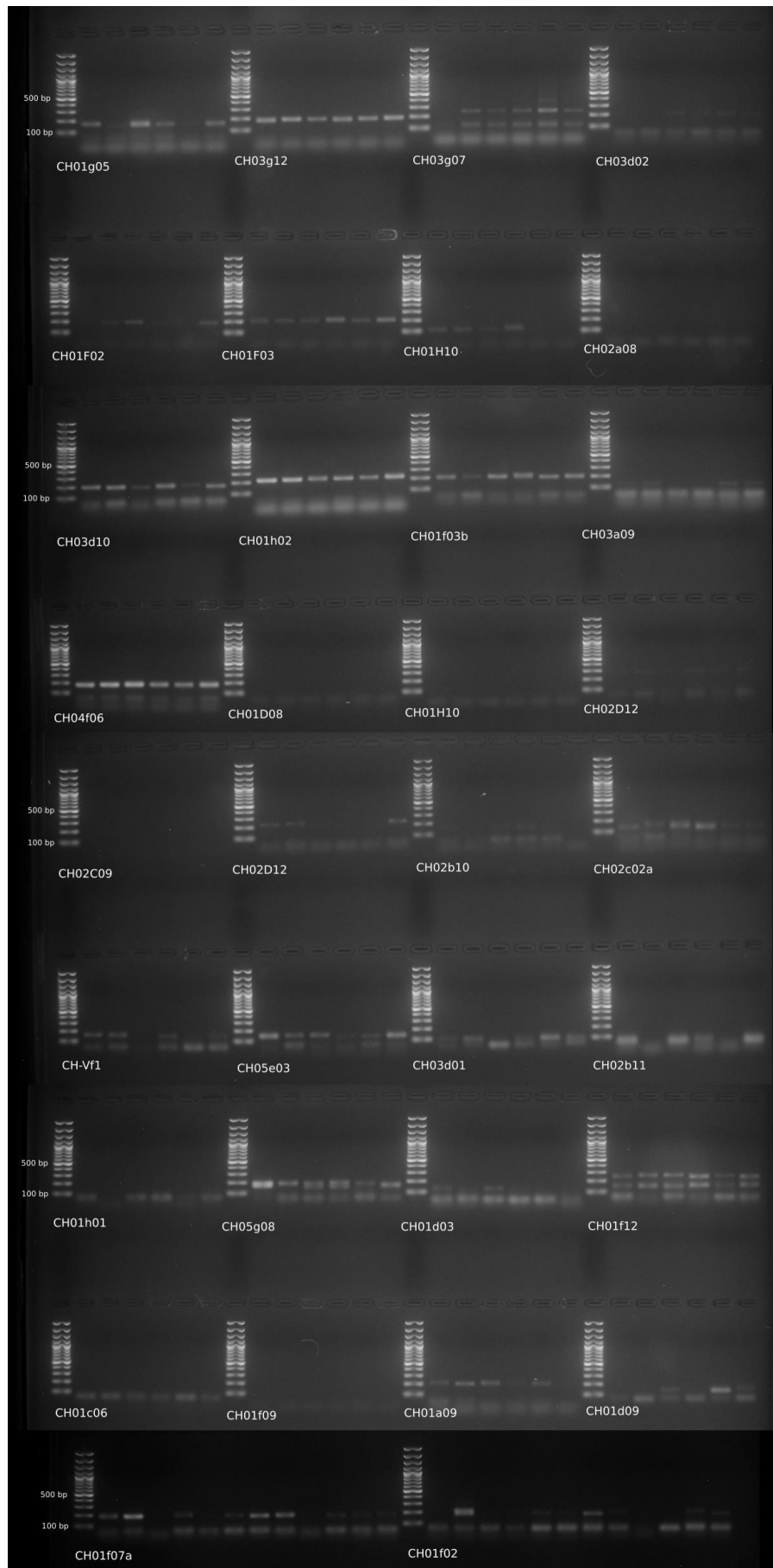


Figure S1. PCR amplification to test *Malus* marker transfer to randomly selected *C. japonica* cultivars from the Institute of Horticulture genetic resources collection.

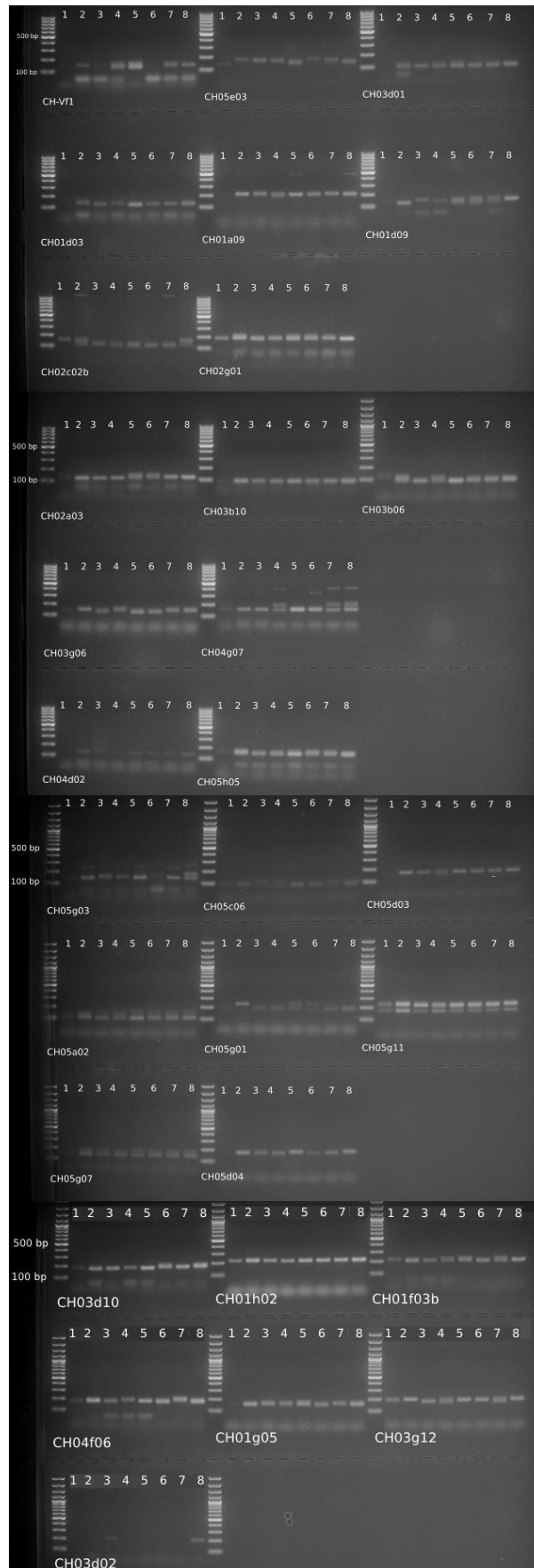


Figure S2. PCR Amplification of *Chaenomeles* material from the National Botanic Garden of Latvia, using SSR markers from *Malus*. 1 – *C. speciosa* 'Brilliant', 2 – *C. speciosa* 'Scarlet', 3 – *C. × californica*, 4 – *C. × superba*, 5 – *C. × superba* 'Pink Trail', 6 – *C. × superba* 'Vermillion', 7 – *C. × superba* 'Crimson and Gold', 8 – *C. × superba* 'Stanford Red'.

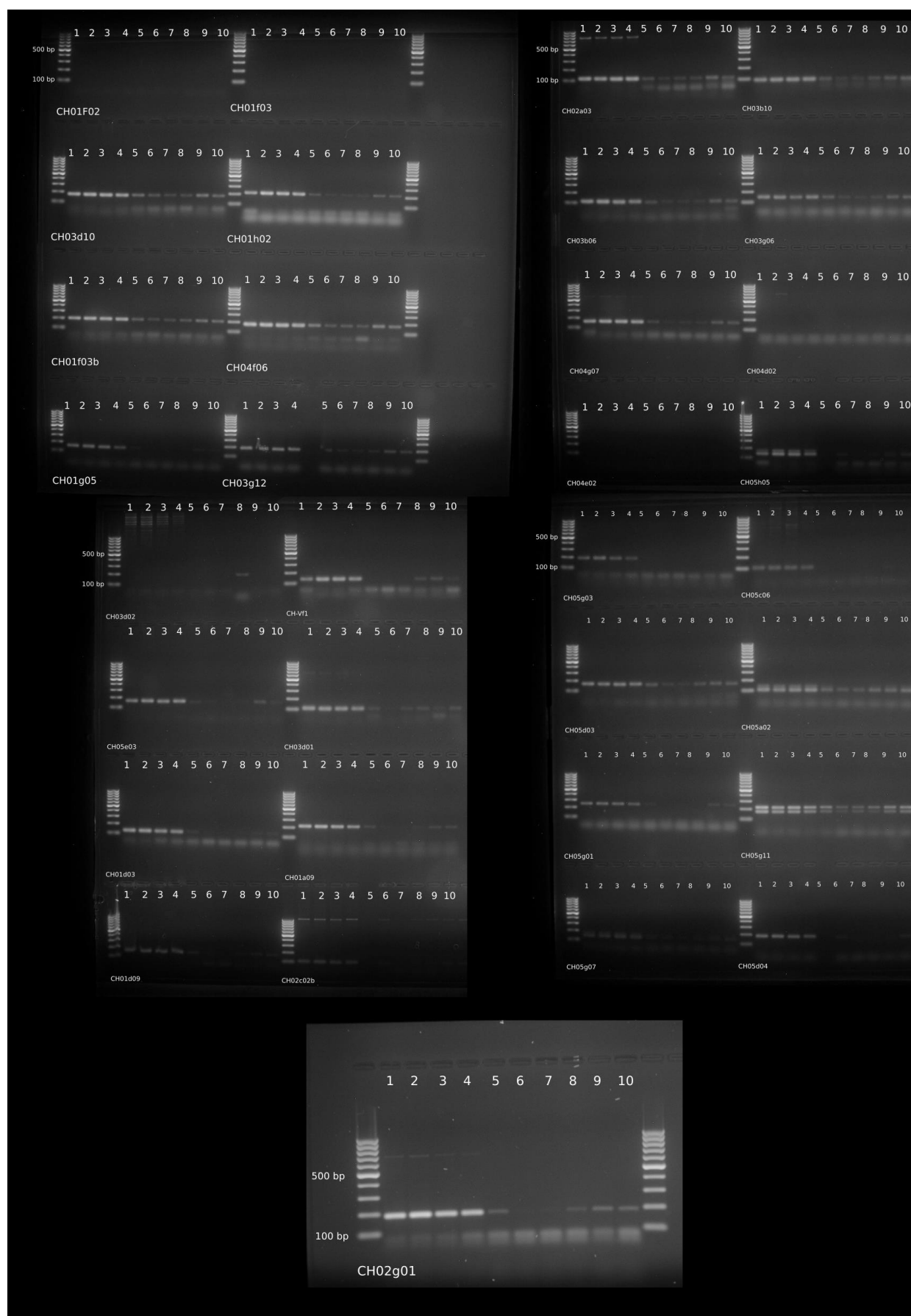


Figure S3. PCR amplification of *C. cathayensis* material received as a seed sample from the University Botanical Garden of Strasbourg, France, using SSR markers from *Malus*. 1 – 10: *C. cathayensis* genotypes #1 through #10.