

Table 1 Suppl. Information of sampled populations of *C. parthenoxylon* in Vietnam.

Populations	Sample size	Collection locality	Altitude	Longitude
Tay Yen Tu	20	Tay Yen Tu National Forest, Son Dong, Bac Giang province	106°47'31"	21°24' 55"
Yen Tu	21	Yen Tu National Forest, Quang Ninh province	106°43'06"	21°08' 23"
Hang Kia	35	Hang Kia - Pa Co Nature Reserve, Hoa Binh province	104°55'44"	20°44'38"
Tam Dao	27	Tam Dao National Park, Vinh Phuc province	105°34'11"	21°24' 24"
Cuc Phuong	19	Cuc Phuong National Park, Ninh Binh	105°35'57"	20°21' 06"
Xuan Nha	22	Xuan Nha Nature Reserve, Son La	104°39'21"	20°40'10"
Xuan Lien	24	Xuan Lien Nature Reserve, Thanh Hoa	105°13'45"	19°50' 16"
Pu Hoat	24	Pu Hoat Nature Reserve, Nghe An	104°47'40"	19°45' 22"

Table 2 Suppl. Information of 10 SSR loci for PCR amplification this study. PF - forward primer, PR - reverse primer, T_m - PCR annealing temperature.

Locus	Primer sequence (5'-3')	Repeat motif	PCR product size [bp]	Observed allele size range [bp]	T _m [°C]	GenBank accession No.
xaxi1	PF: AAGAGCGAGGAGTAGGAGGC PR: GGGATAGGGAGACGAAGGAG	(AT)11	166	154 - 172	55	OR536819
xaxi2	PF: ACAATTGCTTGCCAGTAGC PR: CTGCTGCTGTAGTTTTCCCC	(GA)10	265	261 - 271	55	OR536834
xaxi3	PF: TTATGCGATTTGGTTGTGGA PR: CATGAAGAAAGACGCGCATA	(AT)10	242	222 - 246	55	OR536825
xaxi4	PF: CTTTGTGCTTTGTTTCAGCCA PR: TCTCTTTCCCAAATCTCCCA	(CTC)7	278	276 - 282	55	OR536866
xaxi5	PF: ACAAACCCTATGGCATGAGC PR: GTTGGAAGAAGCTGGTTTCG	(CAG)7	251	249 - 258	55	OR536858
xaxi6	PF: GTCGTCCGCCATATCAACTT PR: ATCTTTTGAGGGGGAGATG	(CT)10	236	231 - 261	55	OR536817
Xaxi7	PF: GGGCTCCTATGACATTTCCTC PR: TTCAGTTCATGCCAGCTTTG	(TC)10	204	200 - 206	55	OR536816
Xaxi8	PF: GGGTGGGAAAAATTTGAGGT PR: GTCGACGAGGAAGTTGAAGC	(TC)11	259	227 - 247	56	OR536845
xaxi 9	PF: TGTCTATGGGTGTGTTGGGA PR: AGCTCGTTGTGGCATTCTTCT	(AC)11	277	276 - 278	55	OR536821
xaxi10	PF: CAGTAGCATCCTCCTCGCTC PR: CCCTTCCATGTTCCAACAAC	(CTG)8	255	256 - 274	56	OR536860

Table 3 Suppl. Frequencies of null alleles for the *C. parthenoxylon* populations according Oosterhout using Micro-Checker; *sign of a null allele at the 0.05 level.

Xuan Lien	Frequency of null alleles	Yen Tu	Frequency of null alleles	Hang Kia	Frequency of null alleles
xaxi1	0.094	xaxi1	-0.058	xaxi1	-0.018
xaxi2	0.160*	xaxi2	-0.074	xaxi2	0.135*
xaxi3	0.053	xaxi3	0.095	xaxi3	0.132
xaxi4	0.127	xaxi4	-0.016	xaxi4	0.166*
xaxi5	0.117	xaxi5	-0.048	xaxi5	0.104
xaxi6	-0.107	xaxi6	-0.004	xaxi6	0.050
xaxi7	-0.089	xaxi7	0	xaxi7	0.054
xaxi8	0.183*	xaxi8	0.144	xaxi8	0.021
xaxi9	-0.089	xaxi9	0.087	xaxi9	-0.015
xaxi10	-0.274	xaxi10	-0.023	xaxi10	-0.259
Total	0.017	Total	0.010	Total	0.037
Pu Hoat	Frequency of null alleles	Tam Dao	Frequency of null alleles	Tay Yen Tu	Frequency of null alleles
xaxi1	0.159*	xaxi1	-0.038	xaxi1	-0.038
xaxi2	0.188*	xaxi2	-0.065	xaxi2	0.080
xaxi3	0.062	xaxi3	0.078	xaxi3	0.013
xaxi4	0.034	xaxi4	-0.019	xaxi4	-0.025
xaxi5	0.162	xaxi5	0.053	xaxi5	0.039
xaxi6	0.031	xaxi6	0.038	xaxi6	-0.067
xaxi7	-0.183	xaxi7	0	xaxi7	-0.025
xaxi8	0.064	xaxi8	0.134	xaxi8	0.118
xaxi9	-0.190	xaxi9	-0.061	xaxi9	-0.065
xaxi10	-0.268	xaxi10	-0.083	xaxi10	-0.006
Total	0.060	Total	0.004	Total	0.024
Xuan Nha	Frequency of null alleles	Cuc Phuong	Frequency of null alleles		
xaxi1	-0.066	xaxi1	-0.082		
xaxi2	0.119	xaxi2	0.022		
xaxi3	0.239*	xaxi3	0.165*		
xaxi4	0.029	xaxi4	0.040		
xaxi5	0.235*	xaxi5	-0.046		
xaxi6	-0.134	xaxi6	0.159		
xaxi7	0.009	xaxi7	-0.163		
xaxi8	-0.041	xaxi8	0.053		
xaxi9	0.138	xaxi9	0.021		
xaxi10	0.046	xaxi10	-0.139		
Total	0.057	Total	0.005		

Table 4 Suppl. Proportion of ancestry values for eight populations of *C. parthenoxylon*, based on 10 runs at K = 2 and K = 3 in *Structure* and compiled in *Structure harvester*.

Populations	K = 2		K = 3		
	Genetic group I	II	Genetic group I	II	III
Hang Kia	0.051	0.949	0.029	0.881	0.091
Yen Tu	0.965	0.035	0.955	0.026	0.019
Xuan Nha	0.046	0.954	0.019	0.903	0.079
Cuc Phuong	0.047	0.953	0.022	0.886	0.092
Xuan Lien	0.043	0.957	0.018	0.042	0.941
Tam Dao	0.964	0.036	0.943	0.043	0.013
Tay Yen Tu	0.926	0.074	0.910	0.026	0.064
Pu Hoat	0.029	0.971	0.013	0.024	0.963

Table 5 Suppl. Number of individuals for each population assigned to a cluster.

Population	Cluster 1	Cluster 2	Cluster 3
Hang Kia	0	33	2
Yen Tu	21	0	0
Xuan Nha	0	20	2
Cuc Phuong	0	16	3
Xuan Lien	0	1	23
Tam Dao	27	0	0
Tay Yen Tu	20	0	0
Pu Hoat	0	0	24

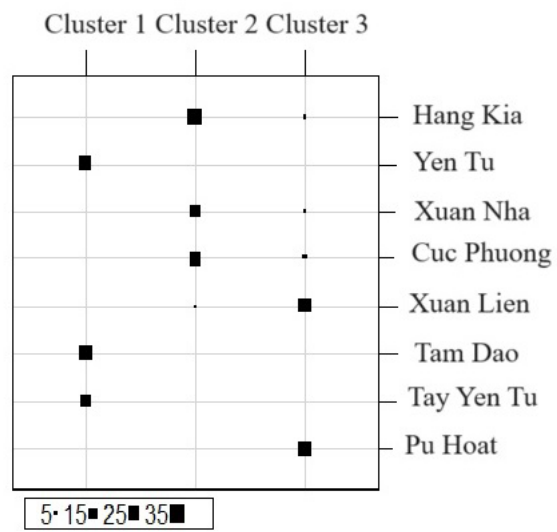


Fig. 1 Suppl. Number of individuals per population (rows) assigned to each cluster (columns) using DAPC without prior information.