



Figure S1. The geographical distribution of 14 populations of *Ilex chinensis*.

Table S1. Accession data for the populations of *Ilex chinensis*.

Location	Population code	Sample size	Longitude (E)	Latitude (N)	Altitude (m)
Southeast					
Wuzhong, Suzhou, Jiangsu	WZ	30	120.423736	31.2627675	234
Liyang, Changzhou, Jiangsu	LY	30	119.391389	31.409722	82
Jurong, Zhenjiang, Jiangsu	JR	30	119.325000	31.726111	73
Lin'an, Hangzhou, Zhejiang	LiA	27	119.177694	29.294583	146
Wuyishan, Nanping, Fujian	WYS	24	118.005104	27.711914	214
Central					
Jinzhai, Lu'an, Anhui	JZ	30	115.877055	31.245361	414
Jianshi, Enshi, Hubei	JS	30	110.028825	30.662899	791
Yuelu, Changsha, Hunan	YL	27	112.932705	28.188348	190
Pingjiang, Yueyang, Hunan	PiJ	21	113.793436	28.968811	463
Suichuan, Ji'an, Jiangxi	SC	30	114.004337	26.218344	877
Southwest					
Wushan, Congqing	WS	30	109.892250	31.280305	659
Pujiang, Chengdu, Sichuan	PuJ	30	103.440972	30.223472	564
Xinping, Yuxi, Yunnan	XP	30	101.502327	24.040277	2370
Longan, Qianxinan, Guizhou	LoA	32	105.443165	25.362817	1214

Table S2. Primer sequences and fragment size information for 11 microsatellite loci.

Locus code	Forward Primer (5'→3')	Reverse Primer (5'→3')	Expected product Size
Ilex-SSR-01	CTGGTGGATGAACAAGAAGAAAC	GCCTATGTGACTTGTCAGCTCTT	151
Ilex-SSR-28	GTGGATAGTGGTCACGAAAATGT	AGACCTCAATCACCATGTCTCTC	116
Ilex-SSR-29	ACGGGAGGGTTAATTACTGTTTC	TCTCTCTTCAAAACCAGACATCC	156
Ilex-SSR-32	ATGCCTTGGTCAGTTTCAATTA	ATTGTCTTACCGCATCTATCGAA	159
Ilex-SSR-34	CATAGACTGAGATCTGTCGCCTT	ACAAGCAATTGGAACAACAATT	150
Ilex-SSR-41	TAGCTACGACTCCTGCTGTAACC	AGGCCATATAGAAAAGAATTGCC	138
Ilex-SSR-68	CACGAACATACACACAGATGTCA	ATCTCTGATTCATCATGCTACCC	128
Ilex-SSR-69	TCTTCGAACCAAATTGATAAAGC	AAAATAAAGCTGAGACCTTTGCAG	156
Ilex-SSR-74	AATCACAGGCATCTATACGGTTG	GCCGGTACACTTTCCTTTATCAC	152
Ilex-SSR-75	CAAGGATGTTCCAAGTTTCTCAG	GCTGATGGAAAAGTACACTCCAC	150
Ilex-SSR-79	CTTGTAACCGGTAGAAAAGGAGG	TTGTGGCCTTTAGATTGCTCTAC	145

Table S3. The proportion of 4 genetic branches in 14 populations.

Population Code	q I (%) Green	q II (%) Blue	qIII(%) Yellow	qIV(%) Red
Southeast				
WZ	0.013	0.924	0.038	0.025
LY	0.007	0.892	0.099	0.002
JR	0.011	0.755	0.035	0.200
LiA	0.054	0.864	0.077	0.006
WYS	0.016	0.327	0.654	0.003
Central				
JZ	0.040	0.263	0.683	0.014
JS	0.019	0.059	0.919	0.003
YL	0.020	0.020	0.955	0.005
PiJ	0.127	0.031	0.784	0.058
SC	0.027	0.170	0.665	0.138
Southwest				
WS	0.093	0.036	0.869	0.003
PuJ	0.008	0.043	0.946	0.003
XP	0.004	0.165	0.004	0.828
LoA	0.984	0.006	0.008	0.002