

Figure S1. The maximum-likelihood (ML) phylogenetic tree of the 22 populations of *Quercus gilva*. The abbreviations of population codes are the same as in Table 2.

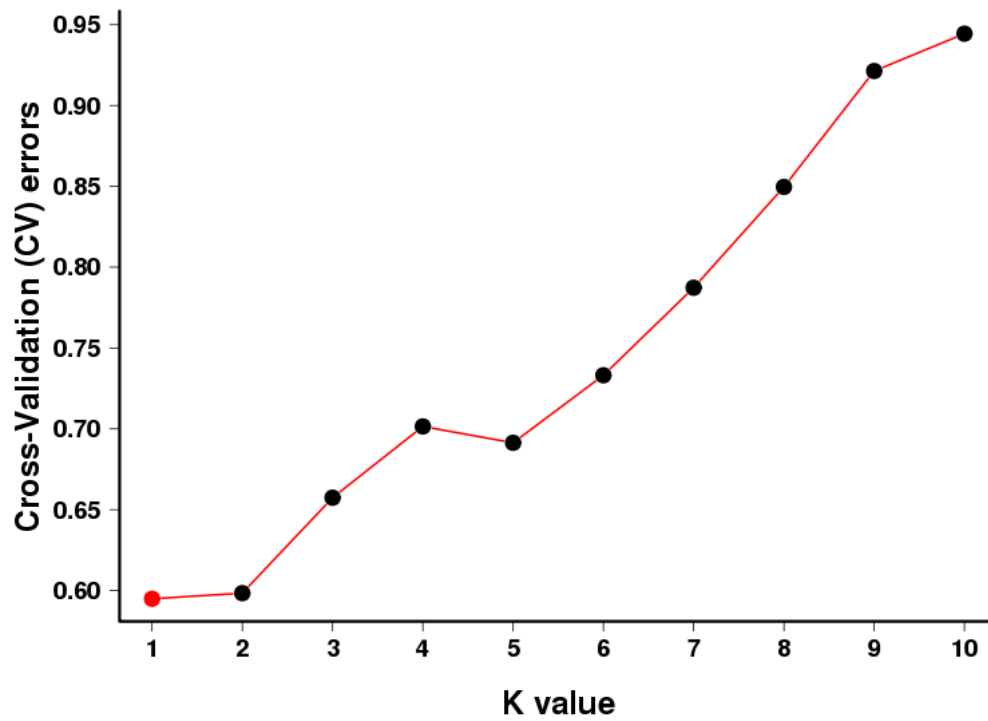


Figure S2. ADMIXTURE bar plots for the proportion of genetic membership to each ancestry assuming ($K = 1$ to 10) ancestral populations.

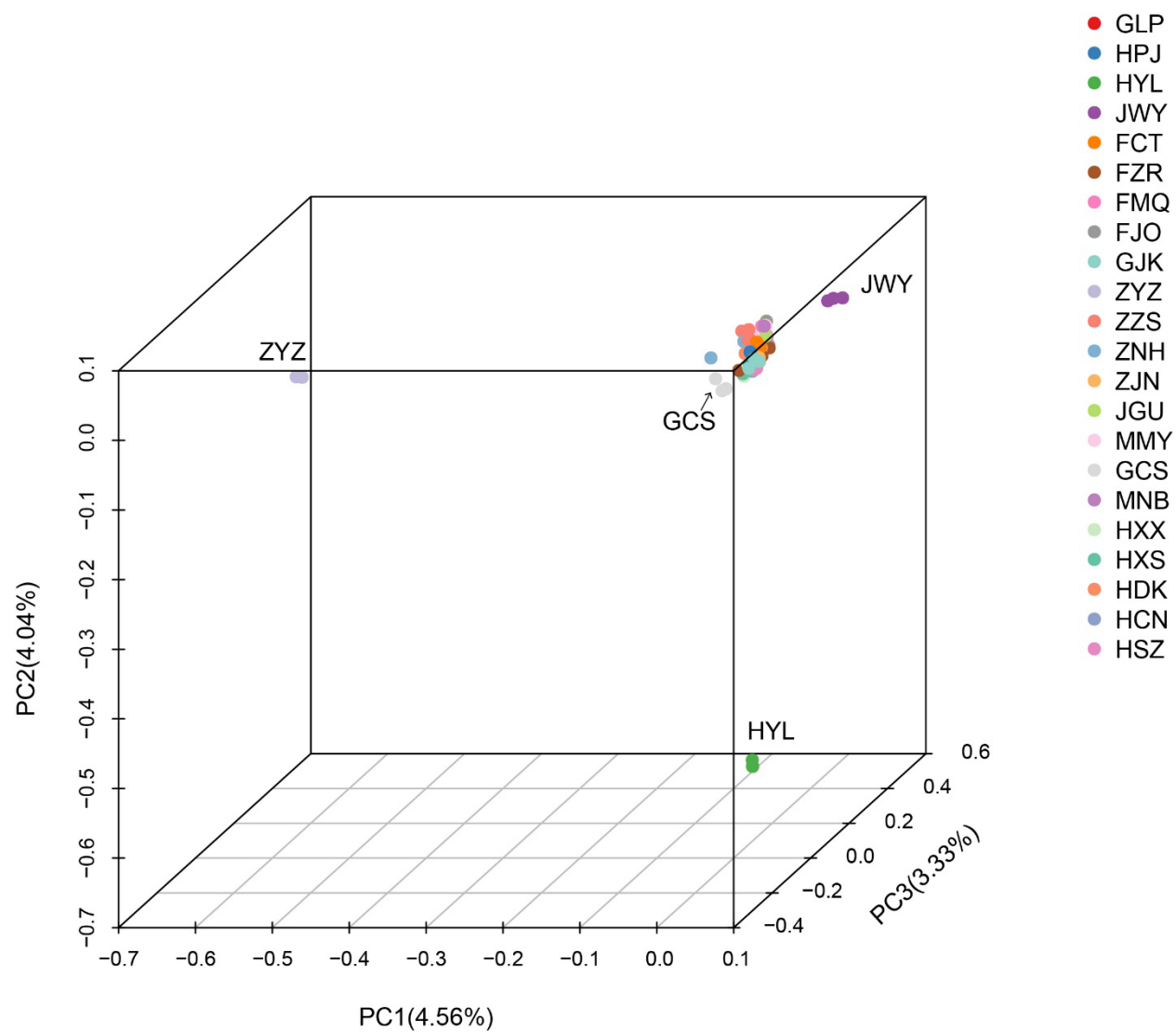


Figure S3. PCA (principal component analysis) of 65 individuals of *Q. gilva*. The cycles with different colours represent the different populations. The details of abbreviation codes for populations showed in Table 2.

Table S1. Information of each individual and population used in our study, and the quality of sequencing. The abbreviations of population codes are the same as in Table 2.

Individual ID	Population ID	Latitude	Longitude	Altitude	Clean reads	Q20 (%)	Q30 (%)	GC (%)	Mapped (%)	Average daph	Location
SYG00323	GLP	26.3919	109.1481	450	31794016	94.16	86.48	35.69	93.98	9	Gong-Zhai and Shao-Zhai, Liping, Qiandongnan, Guizhou, China
SYG00325	GLP	26.3919	109.1481	450	31322951	94.23	86.64	36.42	94.37	9	Gong-Zhai and Shao-Zhai, Liping, Qiandongnan, Guizhou, China
SYG00327	GLP	26.3919	109.1481	450	31322951	94.53	87.16	35.61	96.37	10	Gong-Zhai and Shao-Zhai, Liping, Qiandongnan, Guizhou, China
SYG00346	GJK	27.5452	108.6745	570	63886847	96.45	90.93	39.03	85.48	17	Xin-Tain village, Jiangkou, Tongren, Guizhou, China
SYG00352	GJK	27.5452	108.6745	570	31598335	96.62	91.27	37.75	86.16	8	Xin-Tain village, Jiangkou, Tongren, Guizhou, China
SYG00354	GJK	27.5452	108.6745	570	32601265	94.62	87.35	35.82	95.96	10	Xin-Tain village, Jiangkou, Tongren, Guizhou, China
DM22917	GCS	26.0374	106.2831	1321	32177249	94.83	87.73	38.64	84.9	8	Tuan-Po village, Changshun, Qiannan, Guizhou, China
DM22918	GCS	26.0374	106.2831	1321	32647090	94.6	87.31	38.37	89.02	9	Tuan-Po village, Changshun, Qiannan, Guizhou, China
DM22920	GCS	26.0374	106.2831	1321	32180663	96.61	91.24	36.87	96.81	10	Tuan-Po village, Changshun, Qiannan, Guizhou, China
SYG07526	HXX	27.7207	112.5519	128	33647908	96.5	90.99	35.61	96.68	10	Dongtai mountain, Xiangxiang, Hunan, China
SYG07530	HXX	27.7207	112.5519	128	64168110	96.26	90.42	35.02	98.71	20	Dongtai mountain, Xiangxiang, Hunan, China
SYG07534	HXX	27.7207	112.5519	128	33644688	96.44	90.86	35.64	95.81	10	Dongtai mountain, Xiangxiang, Hunan, China
SYG07538	HXS	27.5301	111.4098	317	33126091	96.07	90.05	35.82	97.27	10	Cai-Jia-Xi, Xinshao, Shaoyang, Hunan, China
SYG07541	HXS	27.5301	111.4098	317	33518757	96.79	91.6	36.36	95.56	10	Cai-Jia-Xi, Xinshao, Shaoyang, Hunan, China
SYG07544	HXS	27.5301	111.4098	317	33397628	96.5	90.96	36.37	92.97	10	Cai-Jia-Xi, Xinshao, Shaoyang, Hunan, China
SYG07550	HDK	27.1413	110.4706	514	34349641	96.52	91.07	39.55	79.23	8	Zhu-Shan-Wan, Dongkou, Shaoyang, Hunan, China

SYG07558	HDK	27.1413	110.4706	514	32580366	96.76	91.57	37.51	90.72	9	Zhu-Shan-Wan, Dongkou, Shaoyang, Hunan, China
SYG07560	HDK	27.1413	110.4706	514	34165833	96.25	90.46	37.08	90.39	10	Zhu-Shan-Wan, Dongkou, Shaoyang, Hunan, China
SYG07567	HCN	26.3806	112.5138	138	32762907	96.46	90.9	37.21	92.47	9	Chen-Xi Kindgarden, Changning, Hengyang, Hunan, China
SYG07572	HCN	26.3806	112.5138	138	32519145	96.57	91.17	36.31	98.67	10	Chen-Xi Kindgarden, Changning, Hengyang, Hunan, China
SYG07575	HCN	26.3806	112.5138	138	34098824	96.65	91.27	36.55	96	10	Chen-Xi Kindgarden, Changning, Hengyang, Hunan, China
SYG07742	HSZ	29.2443	109.9999	567	33191279	96.07	89.96	37.24	89.35	9	Wang-Jia-Po, Chen-Jia village, Sangzhi, Zhangjiajie, Hunan, China
SYG07748	HSZ	29.2443	109.9999	567	32365924	95.04	88.12	42.95	69.91	7	Wang-Jia-Po, Chen-Jia village, Sangzhi, Zhangjiajie, Hunan, China
SYG07750	HSZ	29.2443	109.9999	567	32365924	94.58	87.24	37.12	91.77	9	Wang-Jia-Po, Chen-Jia village, Sangzhi, Zhangjiajie, Hunan, China
SYG07714	HPJ	28.585	113.8866	269	31504497	94.5	87.1	39.44	86.17	8	Xin-Wu-Li, Lu-Shan-Lin-Chang, Pingjiang, Yueyang, Hunan, China
SYG07719	HPJ	28.585	113.8866	269	32302055	94.4	86.93	36.53	91.1	9	Xin-Wu-Li, Lu-Shan-Lin-Chang, Pingjiang, Yueyang, Hunan, China
SYG07723	HPJ	28.585	113.8866	269	32414654	94.71	87.5	35.6	93.51	9	Xin-Wu-Li, Lu-Shan-Lin-Chang, Pingjiang, Yueyang, Hunan, China
SYG00320-7	HYL	26.0833	113.7404	830	31980515	94.59	87.25	38.78	90.65	9	Qiao-Jiao-Tou, Yanling, Zhuzhou, Hunan, China
SYG00320-10	HYL	26.0833	113.7404	830	32230588	94.19	86.57	35.23	97.03	10	Qiao-Jiao-Tou, Yanling, Zhuzhou, Hunan, China
SYG00320-12	HYL	26.0833	113.7404	830	31574192	94.82	87.71	35.67	95.48	9	Qiao-Jiao-Tou, Yanling, Zhuzhou, Hunan, China
SYG07587-04	JWY	29.1934	117.902	122	32025173	96.47	90.9	35.45	97.65	10	Liu-Fang, Yi-Du village, Wuyuan, Jiangxi, China
SYG07587-08	JWY	29.1934	117.902	122	31974123	94.78	87.62	35.33	97.2	10	Liu-Fang, Yi-Du village, Wuyuan, Jiangxi, China
SYG07587-12	JWY	29.1934	117.902	122	62737443	94.68	87.45	36.98	94.28	19	Liu-Fang, Yi-Du village, Wuyuan, Jiangxi, China
SYG07498	FCT	25.9848	116.4154	800	62255559	94.53	87.15	36.76	93.84	18	She-Bei, Changting, Longyan, Fujian, China
SYG07502	FCT	25.9848	116.4154	800	32637830	94.78	87.63	38.73	73.31	7	She-Bei, Changting, Longyan, Fujian, China

SYG07504	FCT	25.9848	116.4154	800	33627304	96.37	90.69	37.6	88.56	9	She-Bei, Changting, Longyan, Fujian, China
SYG07418	FZR	27.2653	119.8494	785	32325602	96.3	90.53	35.3	95.1	9	Shi-Gu-Lan village, Zherong, Ningde, Fujian, China
SYG07422	FZR	27.2653	119.8494	785	30932885	96.49	90.92	36.32	95.27	9	Shi-Gu-Lan village, Zherong, Ningde, Fujian, China
SYG07426	FZR	27.2653	119.8494	785	32607056	96.85	91.77	36.03	90.86	8	Shi-Gu-Lan village, Zherong, Ningde, Fujian, China
DM21497	FMQ	26.242	118.7464	639	66731674	96.51	90.96	35.66	97.7	21	Bai-Yun village, Minqing, Fuzhou, Fujian, China
DM21500	FMQ	26.242	118.7464	639	32355707	96.52	91.03	35.66	97.85	10	Bai-Yun village, Minqing, Fuzhou, Fujian, China
DM21501	FMQ	26.242	118.7464	639	32603000	96.6	91.19	35.83	95.79	10	Bai-Yun village, Minqing, Fuzhou, Fujian, China
DM21576	FJO	27.3141	118.5333	863	32102078	96.63	91.28	35.58	98.19	10	Qing-Tian-Yan village, Jian'ou, Nanping, Fujian,China
DM21577	FJO	27.3141	118.5333	863	33375615	96.86	91.79	36.29	95.97	10	Qing-Tian-Yan village, Jian'ou, Nanping, Fujian,China
DM21578	FJO	27.3141	118.5333	863	32279570	96.65	91.3	35.72	97.43	10	Qing-Tian-Yan village, Jian'ou, Nanping, Fujian,China
ZX14335-01	ZYZ	29.7645	121.2933	81	37342616	96.44	90.22	36.99	86.56	10	Zhong-Po-Shan forest park, Yinzhou, Ningbo, Zhejiang, China
ZX14335-02	ZYZ	29.7645	121.2933	81	29678065	96.64	91.46	36.72	88.98	8	Zhong-Po-Shan forest park, Yinzhou, Ningbo, Zhejiang, China
ZX14335-03	ZYZ	29.7645	121.2933	81	31943266	96.61	91.19	36.32	90.9	9	Zhong-Po-Shan forest park, Yinzhou, Ningbo, Zhejiang, China
ZX14347-01	ZZS	30.0156	122.3961	201	32814625	96.46	90.88	37.06	93.44	9	Pu-Tuo mountain, Pu-Tuo island, Zhoushan, Zhejiang,China
ZX14347-02	ZZS	30.0156	122.3961	201	32877069	96.54	91.04	37.02	88.69	9	Pu-Tuo mountain, Pu-Tuo island, Zhoushan, Zhejiang,China
ZX14347-04	ZZS	30.0156	122.3961	201	31979261	96.65	91.27	39.87	78.11	8	Pu-Tuo mountain, Pu-Tuo island, Zhoushan, Zhejiang,China
ZX14367-01	ZNH	29.2032	121.3988	187	65572606	96.75	91.5	37.72	83.05	17	Huang-Qi-Shan village, Yi-Shi town, Ninghai, Ningbo, Zhejiang, China
ZX14367-03	ZNH	29.2032	121.3988	187	36439171	94.89	87.8	38.75	81.77	9	Huang-Qi-Shan village, Yi-Shi town, Ninghai, Ningbo, Zhejiang, China
ZX14367-05	ZNH	29.2032	121.3988	187	35836909	95.24	88.42	40.11	80.84	9	Huang-Qi-Shan village, Yi-Shi town, Ninghai, Ningbo, Zhejiang, China

ZX14382-02	ZJN	28.0197	119.8168	445	31999234	96.75	91.22	41.69	62.48	6	Xia-He village, Jingning, Lishui, Zhejiang, China
ZX14382-04	ZJN	28.0197	119.8168	445	30945354	95.04	88.21	41.58	72.68	8	Xia-He village, Jingning, Lishui, Zhejiang, China
K-GU-17	JGU	33.3023	126.2768	133	33082058	95.9	89.65	35.52	98.82	10	Gueok-ri, Daejeong-eup, Jeju, South Korea
K-GU-22	JGU	33.3023	126.2768	133	32968710	96.53	91.05	35.01	92.28	9	Gueok-ri, Daejeong-eup, Jeju, South Korea
K-GU-27	JGU	33.3023	126.2768	133	32554737	96.54	91.05	35.38	98.61	10	Gueok-ri, Daejeong-eup, Jeju, South Korea
j-MY-05	MMY	31.8488	131.225		67906031	93.82	85.92	35.96	96.98	21	Miyakonojo-shi, Miyazaki Prefecture, Japan
j-MY-10	MMY	31.8488	131.225		32287290	94.06	86.41	37.07	91.3	9	Miyakonojo-shi, Miyazaki Prefecture, Japan
j-MY-15	MMY	31.8488	131.225		32939666	94.51	87.15	36.73	98.13	10	Miyakonojo-shi, Miyazaki Prefecture, Japan
j-NB-05	MNB	32.6544	131.6873		31594700	94.25	86.7	36.78	96.72	9	Nobeoka-shi, Miyazaki Prefecture, Japan
j-NB-10	MNB	32.6544	131.6873		34232023	94.9	87.84	37.1	96.79	10	Nobeoka-shi, Miyazaki Prefecture, Japan
j-NB-15	MNB	32.6544	131.6873		36415671	95.08	88.2	37.49	92.64	10	Nobeoka-shi, Miyazaki Prefecture, Japan

Table S2. All the information of population status of *Q. gilva*.

Country	Location	Latitude	Longitude	Altitude	Number of individuals	Habitat	Source of information
China	Chenjia, Beilun, Ningbo, Zhejiang	121.8815	29.79042	176	<10	Temple	our field survey
China	Gongtong Village, Beilun, Ningbo, Zhejiang	121.8328	29.81101	151	<10	Fengshui Forest	our field survey
China	Guanyindian Village, Beilun, Ningbo, Zhejiang	121.8371	29.79846	381	<10	Fengshui Forest	our field survey
China	Taiheli Village, Guoju town, Beilun, Ningbo, Zhejiang	122.0771	29.871	167	<10	Fengshui Forest	our field survey
China	Shanjiaao Village, Huangboao Town, Xiangshan, Ningbo, Zhejiang	121.8471	29.5406	117	<10	Fengshui Forest	our field survey
China	Jinzhukeng Village, Huangboao Town, Xiangshan, Ningbo, Zhejiang	121.7281	29.42306	99	<10	Fengshui Forest	our field survey
China	Zhushan Village, Xiangshan, Ningbo, Zhejiang	121.9302	29.55438	77	1	Fengshui Forest	our field survey
China	Maoyang Village, Xiangshan, Ningbo, Zhejiang	121.8433	29.3855	72	<10	Fengshui Forest	our field survey
China	Tiantongsi to Taibaishan, Beilun, Ningbo, Zhejiang	121.8002	29.80907	450	15	Fengshui Forest	our field survey

China	Putuo Island, Putuo, Zhoushan, Zhejiang	122.3961	30.01555	340	10	Fengshui Forest	our field survey
China	Xiaheshan Village, Bohai, Jingning, Lishui, Zhejiang	119.8168	28.01966	445	3	Fengshui Forest	our field survey
China	Yanping, Xiading Village, Jiulongshan, Suichang, Zhejiang	118.9806	28.3675	561	2	In nature reserve	our field survey
China	Xianglong Village, Pingnan, Ningde, Fujian	119.1595	26.93752	692	100-500	Fengshui Forest	our field survey
China	Gulan Village, Zherong, Ningde, Fujian	119.8495	27.26547	708	25	Fengshui Forest	our field survey
China	Shebei and Zhutang, Changting, Longyan, Fujian	116.4156	25.98479	793	25	Fengshui Forest	our field survey
China	Qingtianyan Village, Jian'ou, Nanping, Fujian	118.5333	27.3141	863	>500	Fengshui Forest	our field survey
China	Baiyun Village, Minqing, Fuzhou, Hunan	118.7464	26.24198	639	15	Fengshui Forest	our field survey
China	Liufang, Yidu Village, Wuyuan, Jiangxi	117.902	29.19336	110	15	Fengshui Forest	our field survey
China	Xuanjiashan, Haixing Village, Pengze, Jiujiang, Jiangxi	116.8681	29.9369	114	1	Fengshui Forest	our field survey
China	Qiaojiaotou, Yanling, Zhuzhou, Hunan	113.7629	26.1294	681	5	Fengshui Forest	our field survey
China	Xinwuli, Lushanlinchang, Pingjiang, Yueyang, Hunan	113.8866	28.58504	262	30-100	In nature reserve	our field survey
China	Xiangjiayu, Sangzhi, Zhangjiajie, Hunan	110.239	29.35275	625	30-100	In nature reserve	our field survey
China	Wangjiapo, Chenjia Village, Sangzhi, Zhangjiajie, Hunan	109.9999	29.24432	483	30-100	Fengshui Forest	our field survey
China	Dongtaishan, Xiangxiang, Hunan	112.5519	27.72068	125	30-100	In forest	our field survey
China	Caijiayi, Xinshao, Shaoyang, Hunan	111.4098	27.53008	259	30-100	In forest	our field survey
China	Chenxi Kindergarten, G364, Changning, Hengyang, Hunan	112.5138	26.38065	94	30-100	In forest	our field survey
China	Shaba S230, Sangzhi, Zhangjiajie, Hunan	110.0186	29.27584	466	8	In forest	our field survey
China	Zhangjiadalaozhai, Jingzhou, Huaihua, Hunan	109.484	26.71377	400	5	In forest	our field survey
China	Mengchong, Tongdao, Huaihua, Hunan	109.8114	26.36642	391	100-500	Fengshui Forest	our field survey
China	Dashiban Village, Huitong, Huaihua, Hunan	109.7425	26.88467	331	12	Fengshui Forest	our field survey
China	Miaozhai, Chaliu Village, Suining, Shaoyang, Hunan	110.2874	26.59422	402	14	Fengshui Forest	our field survey
China	Maoping, Xinshao, Shaoyang, Hunan	111.3512	27.44108	296	12	Fengshui Forest	our field survey

China	Xinshao to Zishui X033, Shaoyang, Hunan	111.3566	27.44705	247	7	Fengshui Forest	our field survey
China	Hengshanxi Village, Xinhua, Loudi, Hunan	111.1355	27.76895	303	50	Fengshui Forest	our field survey
China	Laofenghuangsi, Z010, Lianyuan, Loudi, Hunan	111.7572	27.52556	631	50	Fengshui Forest	our field survey
China	Jindong forest park, Qiyang, Yongzhou, Hunan	112.0867	26.17391	363	6	In forest	our field survey
China	Gudun, Gaotun, Liping, Qiandongnan, Guizhou	109.1481	26.39187	446	45	Fengshui Forest	our field survey
China	Hongjun bridge, Shaozhai, Liping, Qiandongnan, Guizhou	109.1487	26.3367	425	63	Fengshui Forest	our field survey
China	Tuanpo Village, Changshun, Qiandongnan, Guizhou	106.2829	26.03735	1321	8	Fengshui Forest	our field survey
China	Xintian Village, Jiangkou, Tongren, Guizhou	108.6742	27.5451	570	70	Fengshui Forest	our field survey
China	Taiwan	120.7382	23.58059	1044	No information	No information	BGCI
China	Taiwan	120.75	24.43333	331	No information	No information	BGCI
China	Taiwan	120.7667	22.4	1081	No information	No information	BGCI
China	Taiwan	120.8167	22.98333	2319	No information	No information	BGCI
China	Taiwan	120.861	24.42715	272	No information	No information	BGCI
China	Taiwan	120.8667	23.91667	519	No information	No information	BGCI
China	Taiwan	120.9045	24.36108	1090	No information	No information	BGCI
China	Taiwan	120.9302	24.58866	203	No information	No information	BGCI
China	Taiwan	120.9401	24.50361	775	No information	No information	BGCI
China	Taiwan	120.9825	24.52389	981	No information	No information	BGCI
China	Taiwan	121.0343	24.08916	784	No information	No information	BGCI
China	Egongjishan, Taiwan	121.0819	24.6022	1430	12	No information	Sugiura et al., 2015
China	Taiwan	121.125	24.2389	1276	No information	No information	BGCI
China	Tianhu, Taiwan	121.1781	24.6592	930	2	No information	Sugiura et al., 2015
China	Mamei, Taiwan	121.2794	24.6725	1379	10	No information	Sugiura et al., 2015
China	Taiwan	121.3193	24.74138	933	No information	No information	BGCI
China	Taiwan	121.3667	24.78333	465	No information	No information	BGCI
China	Taiwan	121.4361	24.81667	960	No information	No information	BGCI
China	Manyueyuan, Taiwan	121.4447	24.8303	381	10	No information	Sugiura et al., 2015
China	Taiwan	121.5156	24.60694	569	No information	No information	BGCI
China	Taiwan	121.5233	24.85456	886	No information	No information	BGCI
China	Taiwan	121.5258	25.17278	902	No information	No information	BGCI

China	Taiwan	121.5428	24.86306	385	No information	No information	BGCI
China	Taiwan	121.55	24.86667	132	No information	No information	BGCI
China	Taiwan	121.5892	25.09389	104	No information	No information	BGCI
China	Taiwan	121.7941	24.88072	512	No information	No information	BGCI
China	Taiwan	121.8507	24.94044	352	No information	No information	BGCI
China	Fushan, Taiwan	121.5936	24.7567	641	12	No information	Sugiura et al., 2015
Japan	Omura	130.0017	32.9392	293	8	In the forest	Sugiura et al., 2015
Japan	Yabe, Fukuoka, Japan	130.8342	32.12167	396	No information	In the forest	BGCI
Japan	Kobayashi	130.9581	31.9661	261	3	In the forest	Sugiura et al., 2015
Japan	Kobayashi, Miyazaki, Japan	131.1319	32.07667	434	No information	In the forest	BGCI
Japan	Mine	131.1450	34.1117	72	3	In the forest	Sugiura et al., 2015
Japan	Tano	131.2964	31.8606	184	12	In the forest	Sugiura et al., 2015
Japan	Ishizuchi	131.3167	32.5031	387	6	In the forest	Sugiura et al., 2015
Japan	Miyazaki, Japan	131.4219	31.79139	168	No information	In the forest	BGCI
Japan	Shimanto City, Kochi, Japan	132.9167	33.23333	295	No information	In the forest	BGCI
Japan	Tosashimizu, Kochi, Japan	132.9188	32.9125	101	No information	In the forest	BGCI
Japan	Shimanto, Kochi, Japan	132.9438	33.27083	322	No information	In the forest	BGCI
Japan	Tosashimizu, Kochi, Japan	132.95	32.83333	37	No information	In the forest	BGCI
Japan	Ochi, Kochi, Japan	133.2333	33.53333	252	No information	In the forest	BGCI
Japan	Matuyama	133.2869	34.4139	52	8	In the forest	Sugiura et al., 2015
Japan	Susaki, Kochi, Japan	133.4563	33.42083	68	No information	In the forest	BGCI
Japan	Kochi, Japan	133.5667	33.63333	393	No information	In the forest	BGCI
Japan	Konan, Kochi, Japan	133.8188	33.62083	447	No information	In the forest	BGCI
Japan	Aki, Kochi, Japan	133.9333	33.6	398	No information	In the forest	BGCI
Japan	Umaji, Kochi, Japan	134.0333	33.56667	513	No information	In the forest	BGCI
Japan	Tsurugi, Tokushima, Japan	134.0955	34.01306	252	No information	In the forest	BGCI
Japan	Muroto, Kochi, Japan	134.1688	33.32917	152	No information	In the forest	BGCI
Japan	Yoshinogawa, Tokushima, Japan	134.2307	33.98882	439	No information	In the forest	BGCI
Japan	Kamiyama, Tokushima, Japan	134.2394	33.94155	508	No information	In the forest	BGCI
Japan	Kaiyo, Tokushima, Japan	134.2433	33.5716	146	No information	In the forest	BGCI
Japan	Naka, Tokushima, Japan	134.292	33.80007	410	No information	In the forest	BGCI
Japan	Kamiyama, Tokushima, Japan	134.3445	34.0109	353	No information	In the forest	BGCI
Japan	Kamitomda	135.4400	33.7264	58	9	In the forest	Sugiura et al., 2015
Japan	Hirai	135.6725	33.6689	303	12	In the forest	Sugiura et al., 2015
Japan	Kyotanabe, Wakayama, Japan	135.7554	33.83379	210	No information	In the forest	BGCI
Japan	Tsurugara	136.9461	35.5914	145	5	In the forest	Sugiura et al., 2015
Japan	Toyohashi	137.4789	34.8208	98	2	In the forest	Sugiura et al., 2015
Japan	Jugei	138.8364	34.6992	189	1	In the forest	Sugiura et al., 2015

Japan	Higashiizu, Shizuoka, Japan	139.0462	34.86372	509	No information	In the forest	BGCI
Japan	Kiyokawa, Kanagawa, Japan	139.2781	35.47409	196	No information	In the forest	BGCI
Japan	Kiyosumi, Chiba, Japan	140.1467	35.1558	239	4	In the forest	Sugiura et al., 2015
South Korea	Jeoji-ri, Jeju Island	126.2804	33.3113	148	22	In the forest	Kim et al., 2018
South Korea	Cheongsu-ri, Jeju Island	126.277	33.3025	123	6	In the forest	Kim et al., 2018
South Korea	Gueok-ri, Jeju Island	126.2842	33.2971	133	45	In the forest	Kim et al., 2018
South Korea	Harye-ri, Jeju Island	126.5979	33.3209	326	3	In the forest	Kim et al., 2018
South Korea	Hwasun-ri, Jeju Island	126.3308	33.2648	122	4	In the forest	Kim et al., 2018

Table S3. Linkage disequilibrium decay measured by r^2 in each population and their position when LD decayed to half of their maximum value. The abbreviations of population codes are the same as in Table 2.

Population ID	r^2 half	r^2 half Decay Value (kb)
HYL	0.4512162	0.269003404
ZYZ	0.4513042	0.274609628
HSZ	0.3750513	85.98902409
GCS	0.3694775	116.421576
GLP	0.3438865	121.1566961
ZZS	0.3661504	136.386704
HXS	0.352714	143.4687669
HDK	0.3248934	168.7951558
HPJ	0.370401	169.4867879
HCN	0.3302864	199.962927
JGU	0.3294638	209.8502125
MNB	0.3371089	223.5478937
HXX	0.3190013	224.1582538
FJO	0.3630367	239.3708329
FCT	0.3492753	337.1761654
ZNH	0.3348428	385.492631
FMQ	0.3672237	388.0594056
MMY	0.3325408	454.941946
GJK	0.3680512	685.2315352
JWY	0.3866513	NA
FZR	0.3734457	NA
ZJN	0.4631374	NA
<i>Quercus gilva</i>	0.1573392	1.861261788