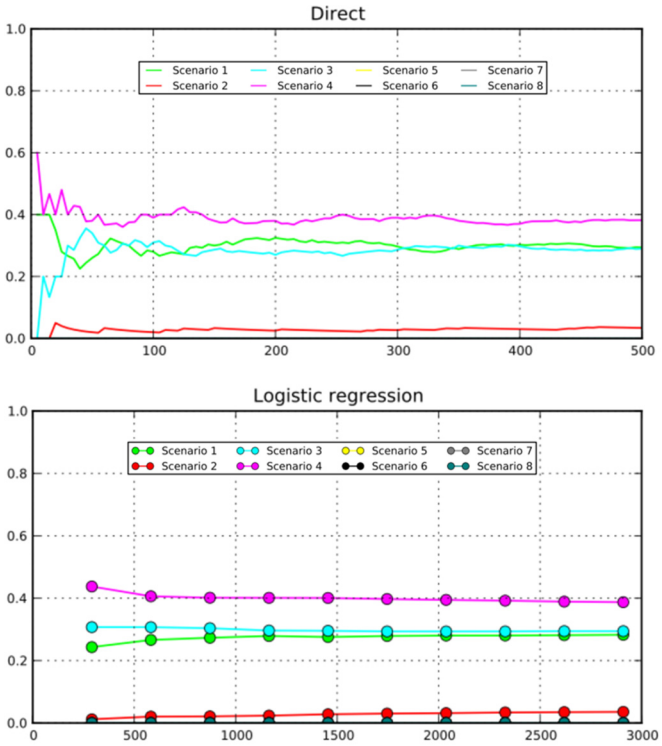

Figure S1. Posterior probabilities estimated by the direct approach and the logistic approach for eight alternative scenarios (Figure 3) in DIYABC. The simulation revealed that scenario 4 had the highest posterior probability relative to other scenarios.

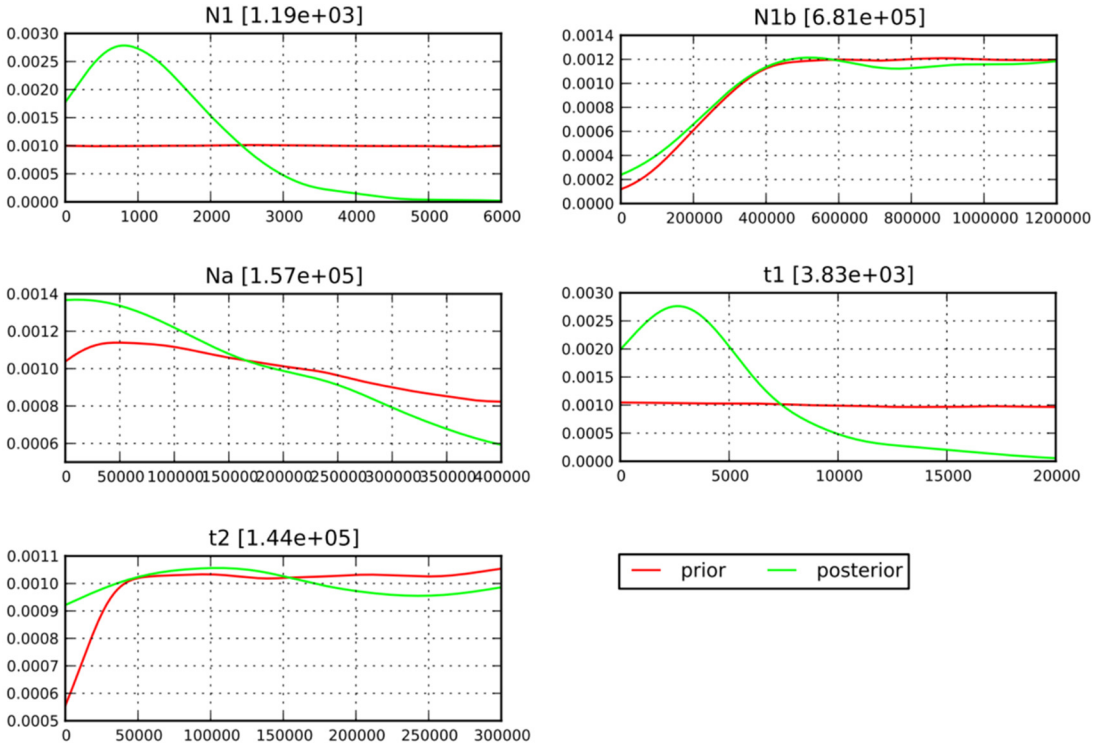

Figure S2. Prior and posterior distribution of demographic parameter under scenario 4 in Figure 3 estimated using DIYABC.

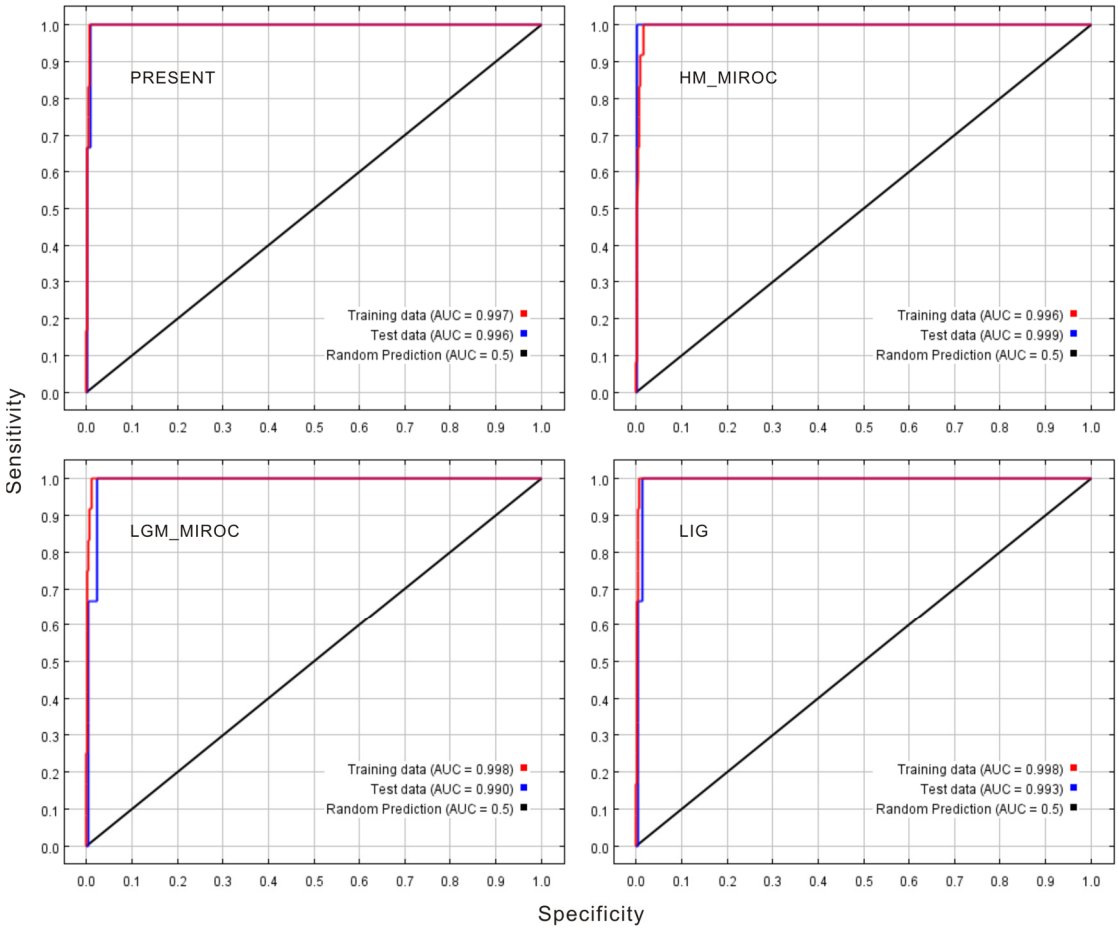

Figure S3. The ROC curve (AUC) for each predicted distribution, the present-day (PRESENT), the Mid-Holocene (MH_MIROC), the Last Glacial Maximum (LGM_MIROC), and the Last Interglacial (LIG) climatic periods.

Table S1. Description of the prior distribution of parameters from eight scenarios in Figure 3 used in Approximate Bayesian Computation.

Parameter	Distribution	Minimum	Maximum
N_1	Uniform	10	6000
N_{1a}	Uniform	10	400000
N_{1b}	Uniform	10	1200000
N_2	Uniform	10	800000
N_{2a}	Uniform	10	800000
N_{2b}	Uniform	10	400000
N_A	Uniform	10	400000
t_1	Uniform	10	20000
t_2	Uniform	10	300000
μ	Uniform	10^{-4}	10^{-3}

$N_A > N_1$,$N_A > N_{1a}$, $N_A < N_{1b}$, $N_A < N_2$, $N_A < N_{2a}$, $N_A > N_{2b}$, $N_{1a} > N_1$, $N_{1b} > N_1$, $N_{2a} < N_2$, $N_{2b} < N_2$, $t_2 > t_1$, and μ mutation rate.

Table S2. Polymorphism of eleven EST-SSR loci for each population within *T. grandis*, *T. nucifera* and *T. jackii*.

Population	N_A	H_O	H_E	I	PIC	N_A	H_O	H_E	I	PIC	N_A	H_O	H_E	I	PIC
	gr12					gr16					gr28				
1	3	0.778	0.699	1.089	0.371	2	0.222	0.209	0.349	0.164	3	0.444	0.392	0.684	0.164
2	3	0.889	0.621	0.958	0.258	2	0.800	0.505	0.673	0.359	2	0.800	0.505	0.673	0
3	2	0.938	0.514	0.691	0.447	2	0.824	0.499	0.678	0.359	2	0.824	0.499	0.678	0.258
4	3	0.714	0.532	0.870	0.303	2	0.143	0.138	0.257	0	2	0.071	0.071	0.154	0
5	3	0.364	0.437	0.709	0.568	2	0.182	0.173	0.305	0.280	2	0.091	0.091	0.185	0.204
6	1	0	0	0	0.388	1	0	0	0	0.334	2	0.500	0.400	0.562	0.211
7	3	0.385	0.342	0.619	0.258	1	0	0	0	0.371	1	0	0	0	0.305
8	1	0	0	0	0.586	1	0	0	0	0.178	1	0	0	0	0.340
9	2	0.375	0.325	0.483	0.450	2	0.750	0.500	0.662	0.124	1	0	0	0	0.067
10	3	0.600	0.591	0.933	0.488	2	0.067	0.287	0.451	0.141	2	0.133	0.239	0.393	0.212
11	3	0.667	0.583	0.934	0.535	2	0.167	0.159	0.287	0.334	3	0.250	0.236	0.456	0.450
12	3	0.583	0.598	0.968	0.486	3	0.182	0.178	0.368	0.239	2	0.167	0.159	0.287	0.204
13	3	0.833	0.629	1.011	0.360	2	0.611	0.437	0.616	0.152	3	0.667	0.541	0.870	0.083
14	2	0.467	0.508	0.684	0.510	2	0.200	0.186	0.325	0.163	2	0.200	0.186	0.325	0.141
15	3	0.625	0.575	0.865	0.501	2	0.500	0.500	0.662	0.365	2	0.125	0.325	0.483	0.365
16	3	0.867	0.662	1.061	0.374	2	0.286	0.349	0.520	0.367	2	0.267	0.239	0.393	0.367
17	3	0.333	0.494	0.752	0	2	0.500	0.437	0.616	0	2	0.278	0.246	0.403	0
18	2	0.375	0.325	0.483	0	2	0.625	0.525	0.685	0	2	0.500	0.400	0.562	0.305
	gr29					gr34					gr44				
1	3	0.333	0.307	0.557	0.239	2	0.111	0.111	0.215	0	1	0	0	0	0.239
2	3	0.900	0.563	0.845	0.511	2	0.900	0.521	0.688	0	2	0.800	0.505	0.673	0.359
3	3	0.941	0.613	0.972	0.354	2	0.824	0.499	0.678	0	3	0.813	0.522	0.786	0.215
4	4	0.786	0.696	1.232	0.198	1	0	0	0	0.226	3	0.429	0.370	0.656	0.152
5	3	0.455	0.537	0.860	0.554	2	0.273	0.247	0.398	0	2	0.273	0.368	0.536	0.117
6	4	0.875	0.692	1.163	0.447	1	0	0	0	0.053	1	0	0	0	0.340
7	3	0.231	0.219	0.431	0.258	2	0.308	0.271	0.429	0.110	2	0.182	0.173	0.305	0

8	2	0.167	0.167	0.287	0.269	1	0	0	0	0.099	1	0	0	0	0
9	3	0.875	0.633	0.974	0.616	1	0	0	0	0	2	0.500	0.500	0.662	0.325
10	3	0.667	0.540	0.860	0.550	2	0.067	0.067	0.146	0.141	2	0.067	0.067	0.146	0
11	3	0.583	0.649	1.033	0.367	2	0.167	0.159	0.287	0	1	0	0	0	0.404
12	4	0.667	0.583	1.059	0.444	2	0.250	0.228	0.377	0.062	3	0.333	0.304	0.566	0.062
13	3	0.500	0.417	0.728	0.444	1	0	0	0	0.208	3	0.667	0.489	0.787	0.290
14	2	0.333	0.287	0.451	0.518	1	0	0	0	0.195	2	0.333	0.287	0.451	0.272
15	2	0.143	0.495	0.652	0.436	1	0	0	0	0.372	2	0.286	0.264	0.410	0.365
16	4	0.467	0.637	1.100	0.509	1	0	0	0	0.367	2	0.133	0.129	0.245	0.406
17	5	0.625	0.502	0.961	0.141	2	0.056	0.056	0.127	0	3	0.333	0.381	0.684	0
18	2	0.375	0.325	0.483	0.582	2	0.125	0.125	0.234	0	1	0	0	0	0
	gr48					gr67					gr80				
1	4	1.000	0.726	1.228	0.566	4	0.667	0.608	1.014	0.443	2	0.111	0.111	0.215	0.610
2	3	1.000	0.574	0.856	0.511	2	1.000	0.526	0.693	0.195	1	0	0	0	0.258
3	3	1.000	0.633	1.018	0.636	2	0.813	0.498	0.676	0.456	2	0.118	0.114	0.224	0.195
4	2	1.000	0.519	0.693	0.583	3	0.546	0.450	0.760	0.482	2	0.071	0.071	0.154	0.408
5	3	1.000	0.671	1.060	0.510	3	0.857	0.604	0.898	0.240	2	0.273	0.368	0.536	0.198
6	2	0.250	0.233	0.377	0.571	1	0	0	0	0.482	3	0.250	0.425	0.703	0.053
7	3	0.917	0.685	1.084	0.456	4	0.583	0.540	0.997	0.427	3	0.769	0.520	0.791	0
8	2	1.000	0.546	0.693	0.624	1	0	0	0	0.500	1	0	0	0	0.099
9	3	1.000	0.633	0.974	0.375	2	0.250	0.233	0.377	0.385	2	0.375	0.325	0.483	0.067
10	3	1.000	0.618	0.983	0.539	3	0.714	0.622	1.000	0.547	4	0.467	0.402	0.766	0
11	4	1.000	0.645	1.083	0.638	4	0.750	0.634	1.106	0.195	1	0	0	0	0.412
12	3	1.000	0.567	0.846	0.517	3	0.500	0.540	0.815	0.529	2	0.333	0.391	0.562	0.361
13	4	1.000	0.713	1.270	0.567	2	0.250	0.226	0.377	0.465	3	0.722	0.538	0.797	0.290
14	4	0.933	0.653	1.120	0.436	3	0.769	0.542	0.859	0.420	4	0.733	0.690	1.211	0.305
15	4	1.000	0.742	1.251	0.441	3	0.500	0.592	0.882	0.375	2	0.250	0.233	0.377	0
16	4	1.000	0.616	1.027	0.540	3	0.286	0.265	0.509	0.366	3	0.231	0.219	0.431	0.105
17	3	1.000	0.665	1.067	0.375	3	0.353	0.570	0.924	0	2	0.056	0.056	0.127	0

18	3	1	0.592	0.882	0.195	4	0.429	0.495	0.895	0	1	0	0	0	0.354
	gr81					gr98									
1	2	1	0.529	0.693	0.541	3	0.833	0.621	0.960	0.655					
2	3	1	0.574	0.856	0.511	4	0.900	0.658	1.106	0.359					
3	3	1	0.544	0.805	0.544	3	0.813	0.575	0.884	0.398					
4	3	1	0.638	1.019	0.428	4	0.643	0.683	1.161	0.469					
5	3	1	0.602	0.930	0.504	4	0.909	0.775	1.365	0.677					
6	1	0	0	0	0.511	3	0.714	0.604	0.898	0.581					
7	3	1	0.557	0.829	0.375	3	0.385	0.557	0.901	0.520					
8	1	0	0	0	0.375	2	0.333	0.485	0.637	0.505					
9	3	1	0.633	0.974	0.541	2	0.750	0.500	0.662	0.590					
10	3	1	0.600	0.943	0.627	4	0.714	0.738	1.302	0.579					
11	4	1	0.714	1.251	0.375	4	0.833	0.656	1.165	0.314					
12	3	1	0.562	0.837	0.492	3	0.750	0.692	1.093	0.658					
13	2	1	0.514	0.693	0.484	4	0.389	0.344	0.678	0.691					
14	3	1	0.638	1.019	0.432	4	0.571	0.730	1.301	0.589					
15	3	1	0.658	1.024	0.441	3	0.500	0.492	0.778	0.551					
16	3	1	0.612	0.963	0.416	4	0.800	0.752	1.341	0.457					
17	3	1	0.613	0.974	0	3	0.722	0.675	1.082	0.346					
18	2	1	0.533	0.693	0	3	0.625	0.625	0.984	0.465					

N_A numbers of allele, H_O observed heterozygosity, H_E expected heterozygosity, *I* Shannon's information index, and *PIC* polymorphism information content.

Table S3. Pairwise genetic difference (F_{ST}) among populations within *T. grandis* based on EST-SSR loci (below diagonal) and chloroplast genes (above diagonal).

Population	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1		0.566 **	0.070	0.624 ***	0.643 ***	0.667 ***	0.566 ***	0.579 ***	0.634 ***	0.614 ***	0.667 ***	0.643 ***	0.518 ***	0.221 ***	0.714 ***	0.796 ***
2	0.146 ***		0.286	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	-0.037	0.637 ***	0.754 ***
3	0.127 ***	0.159 ***		0.379 *	0.409 *	0.447	0.286	0.308	0.395 *	0.363 *	0.447	0.409 *	0.238	0.025	0.628 **	0.748 ***
4	0.219 ***	0.288 ***	0.212 ***		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.122	0.007	0.703 ***	0.791 ***
5	0.164 ***	0.182 ***	0.052 ***	0.125 ***		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.141	0.019	0.722 ***	0.802 ***
6	0.159 ***	0.128 ***	0.064 ***	0.131 ***	0.041 ***		0.000	0.000	0.000	0.000	0.000	0.000	0.166	0.035	0.747 ***	0.817 ***
7	0.249 ***	0.204 ***	0.108 ***	0.222 ***	0.074 ***	0.000		0.000	0.000	0.000	0.000	0.000	0.060	-0.037	0.637 ***	0.754 ***
8	0.210 ***	0.206 ***	0.100 ***	0.099 ***	0.005 *	0.015	0.036 **		0.000	0.000	0.000	0.000	0.075	-0.026	0.653 ***	0.762 ***
9	0.155 ***	0.177 ***	0.046 ***	0.155 ***	0.040 ***	0.021 ***	0.077 ***	0.064 ***		0.000	0.000	0.000	0.131	0.013	0.713 ***	0.797 ***
10	0.161 ***	0.171 ***	0.091 ***	0.171 ***	0.040 ***	0.030 *	0.073 ***	0.026 *	0.034 **		0.000	0.000	0.111	0.000	0.692 ***	0.784 ***
11	0.236 ***	0.192 ***	0.185 ***	0.212 ***	0.111 ***	0.181 ***	0.208 ***	0.146 ***	0.212 ***	0.183 ***		0.000	0.166	0.035	0.747 **	0.817 ***
12	0.115 ***	0.143 ***	0.067 ***	0.106 ***	0.004 ***	-0.003	0.023 *	0.003 *	0.014 *	0.006	0.139 ***		0.141	0.019	0.722 ***	0.802 ***
13	0.135 ***	0.101 ***	0.062 *	0.093 ***	0.047 *	0.011 *	0.054 ***	0.027 **	0.019 *	0.029 *	0.145 ***	0.000		0.004	0.670 ***	0.771 ***
14	0.161 ***	0.151 ***	0.077 ***	0.088 ***	0.021 ***	0.012 *	0.046 ***	0.009 *	0.014 *	0.009	0.160 ***	-0.008	-0.011		0.570 ***	0.699 ***
15	0.187	0.196	0.184	0.268	0.161	0.181	0.243	0.188	0.207	0.194	0.251	0.172	0.187	0.162		-0.039

	***	***	***	***	***	***	***	***	***	***	***	***	***	***	
16	0.208 ***	0.220 ***	0.191 ***	0.251 ***	0.143 ***	0.183 ***	0.238 ***	0.179 ***	0.203 ***	0.191 ***	0.238 ***	0.171 ***	0.193 ***	0.154 ***	-0.032

*$P < 0.05$, **$P < 0.01$, and ***$P < 0.001$.