



Supplement 2. Estimates of slopes and intercepts for logistic regressions on data for sixteen microsatellite markers, along with 95% confidence intervals for the parameter estimates. Loci for which the parameter estimate falls outside of the 95% confidence interval are in bold font.

Homozygote slope		95% confidence interval	
Locus	Estimate	upper	lower
1 P2852	-4.391	-3.485	-6.418
2 W15	-4.168	-2.914	-13.888
3 O312	-10.550	-5.695	-12.174
4 O344	-9.953	-9.286	-18.948
5 O206	-9.106	-6.200	-34.654
6 O127	-4.818	-4.361	-78.893
7 <b>O202</b>	<b>-4.406</b>	<b>-5.013</b>	<b>-11.325</b>
8 O30_2	-4.328	-3.065	-6.200
9 <b>O220</b>	<b>-51.530</b>	<b>-12.413</b>	<b>-31.441</b>
10 <b>O28</b>	<b>-3.070</b>	<b>-3.104</b>	<b>-15.159</b>
11 <b>O137</b>	<b>-5.751</b>	<b>-7.378</b>	<b>-14.746</b>
12 <b>O60</b>	<b>-5.569</b>	<b>-7.052</b>	<b>-14.331</b>
13 O149	-8.591	-7.456	-14.905
14 O167	-17.635	-11.939	-39.690
15 O214	-13.617	-8.528	-22.176
16 W5	-11.109	-8.926	-19.833

Homozygote intercept		95% confidence interval	
Locus	Estimate	upper	lower
1 P2852	1.356	3.302	0.917
2 <b>W15</b>	<b>3.106</b>	<b>14.437</b>	<b>3.643</b>
3 O312	7.905	9.530	3.470
4 <b>O344</b>	<b>3.042</b>	<b>11.213</b>	<b>3.998</b>
5 O206	0.888	3.380	0.676
6 O127	-0.272	1.006	-1.001
7 <b>O202</b>	<b>3.213</b>	<b>9.752</b>	<b>3.636</b>
8 O30_2	2.058	4.263	1.413
9 O220	8.724	19.008	5.885
10 O28	4.150	15.867	3.950
11 <b>O137</b>	<b>1.476</b>	<b>10.014</b>	<b>3.698</b>
12 <b>O60</b>	<b>3.070</b>	<b>10.733</b>	<b>4.178</b>
13 O149	5.275	11.259	4.250
14 O167	8.592	21.695	6.078
15 O214	3.730	9.961	2.770
16 <b>W5</b>	<b>4.341</b>	<b>13.425</b>	<b>4.744</b>

Heterozygote slope		95% confidence interval	
Locus	Estimate	upper	lower
1 P2852	-2.177	-1.424	-3.974
2 W15	-1.151	0.293	-11.024
3 O312	-6.871	-1.383	-7.734
4 <b>O344</b>	<b>-3.814</b>	<b>-4.031</b>	<b>-11.911</b>
5 O206	-5.201	-4.040	-7.320
6 <b>O127</b>	<b>-1.202</b>	<b>-2.586</b>	<b>-4.604</b>
7 O202	-0.815	-0.726	-7.392
8 O30_2	-2.421	-0.978	-4.062
9 O220	-9.343	-6.270	-16.781
10 O28	1.153	1.218	-11.380
11 O137	-2.919	-2.651	-8.734
12 O60	-2.002	-1.125	-8.108
13 O149	-3.775	-1.284	-9.008
14 O167	-7.404	-5.027	-15.508
15 O214	-7.103	-5.064	-12.490
16 W5	-3.981	-2.395	-10.627

Heterozygote intercept		95% confidence interval	
Locus	Estimate	upper	lower
1 P2852	0.734	3.067	0.728
2 W15	1.021	11.868	0.810
3 O312	5.971	7.182	0.993
4 <b>O344</b>	<b>0.917</b>	<b>9.256</b>	<b>1.765</b>
5 O206	1.136	3.570	0.776
6 <b>O127</b>	<b>-1.877</b>	<b>1.632</b>	<b>0.067</b>
7 O202	1.325	7.277	0.775
8 O30_2	1.611	3.877	0.886
9 O220	5.465	13.471	2.988
10 <b>O28</b>	<b>-0.132</b>	<b>12.394</b>	<b>0.013</b>
11 <b>O137</b>	<b>-0.484</b>	<b>7.264</b>	<b>1.460</b>
12 O60	1.066	7.299	0.448
13 O149	2.425	7.975	0.420
14 O167	5.217	12.641	2.204
15 O214	2.976	8.765	1.849
16 W5	1.551	8.849	1.013

Supplement 3. Distribution of standardized two-locus disequilibria ( $D'$ ) for 171 comparisons among 19 multi-allelic microsatellite loci in four different genotypic classes of hybrids of *Populus alba* and *P. tremula* from a Central European hybrid zone. Hybrid genotypic classes are ranked according to increasing molecular hybrid index from early generation hybrids (HI group 1) to highly introgressed advanced generation backcrosses to *P. alba* (HI group 4). A: rare alleles ( $f < 8\%$ ) included. B: rare alleles excluded. For overall allele numbers and numbers of rare alleles at each locus in the hybrid zone see Table 1.

