

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: List of species sampled.

File Name: Supplementary Data 2

Description: Alignment length and polymorphic sites of the 2124 orthologous genes in 122 Fagaceae individulas and one outgroup.

File Name: Supplementary Data 3

Description: The 236 trios with significant gene flow detected by *D*-statistic tests. The *D*-statistic tests were performed on trios in the format ((H1, H2), H3), and positive *D* values indicate gene flow between H2 and H3. The significance of *D* values was tested by a two-sided standard block-jackknife procedure implemented in Dsuite with default parameters, and adjusted by Bonferroni correction for multiple comparisons.

File Name: Supplementary Data 4

Description: Six Lists of genes with the best information for datating. Each list of genes were identified a combiantion of "gene-shopping" method and reference topology.