

**Figure S1 Population divergence and LD decay of *P. tomentosa* association population.** (A) Neighbor-joining phylogenetic tree based on the SNPs. Purple, Southern region (S) individuals; Green, Northeastern regions (NE) individuals; Orange, Northwestern regions (NE) individuals;. The reliability of each branch was evaluated by bootstrapping with 1000 replicates. (B) LD decay of the three geographic populations. The x axis stands for physical distances (Kb), whereas theyaxis stands for r2 values. (C) Population structure of three geographic populations when K= 3.