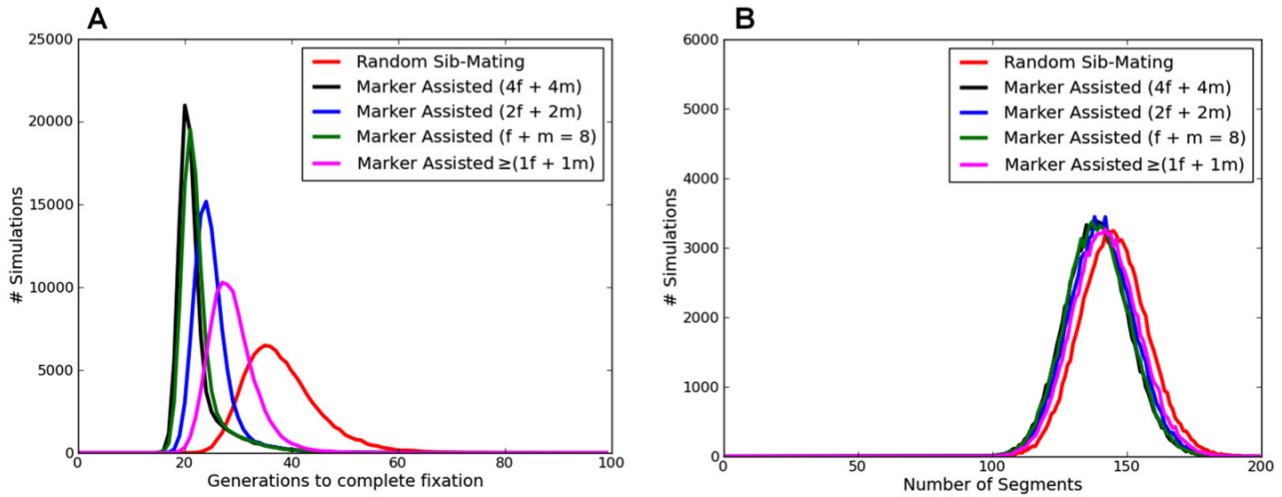


## ALTERNATE LITTER-SIZE ASSUMPTIONS



**Figure S2** Compares the number of generations it takes to achieve complete fixation for 5 breeding schemes that make different assumptions about the available pool of breeders. The standard random sib-mating is provided for comparison. MAI Sib-Pairs assuming a pool of 8 breeders with 4 of each sex and takes an average of  $22.10 \pm 4.41$  generations to reach complete fixation. The MAI Sib-Pairs assuming a pool of 4 (2 each sex) takes an average of  $25.05 \pm 3.89$  generations to reach complete fixation. The MAI Sib-Pairs Unbalanced Sex-Ratio assumes 8 offspring with varying sex-ratios at each generation. These sex-ratios range from 1 female and 7 males to 7 females and 1 male. This breeding scheme requires an average of  $22.63 \pm 4.25$  generations to reach complete fixation. Finally, the Greedy Sib-Pairs (Marker Assisted  $\geq (1f + 1m)$ ) breeding scheme creates small litters of 1-3 offspring and sets up the best breeder pair as soon as at least 1 female and 1 male offspring exist. The Greedy Sib-Pairs breeding selection depicts the natural inclination to set up breeders as soon as possible; however, our simulations indicate that it does not reduce the number of generations required to reach complete fixation as much as waiting until 8 offspring are available for comparison. In fact, it requires an average of  $28.97 \pm 4.46$  generations to reach complete fixation. The overall impact of each breeding scheme on the genetic diversity is negligible.