

CHAPTER 17 Answers to Problems

Problem 17.1. We would expect microsatellite loci to become diagnostic more quickly because of their greater mutation rate.

Problem 17.2. mtDNA is maternally transmitted and therefore it will not provide information about genetic contribution from the male parent.

Problem 17.4. One primary problem is that hybridization will result in the loss of multiple locus genotypes. Consider, for example, 10 loci in a hybrid swarm with approximately equal contribution of two species (A and B). Approximately 25% of all individuals will be homozygous for the allele from species A. However, less than one in a million individuals will be homozygous at all 10 loci for alleles from species A:

$$(0.25)^{10} = 0.00000095$$