Keller’s exam questions: Wednesday, September 17th.

Open book:

Essay 1: How might admixture between genetically divergent populations contribute, positively or negatively, to (i) fitness and (ii) local adaptation of the “hybrid” population over time? How would you design an experiment to measure these outcomes empirically? What information on the parental sources would you need to know to make the most accurate predictions for the fitness of their hybrids?

Essay 2: Discuss your expectations for the evolution of a locally adapted trait (ex., flowering time) in *Arabidopsis thaliana* after admixture between source populations. In your response, consider the effects of *A. thaliana’s* breeding system, and the evolutionary history of expansion and adaptation of *A. thaliana* in Europe as it affects different types of “distance” between your source populations (i.e., geographic, genetic, environmental). How would these expectations change for admixture between (introduced) North American populations?

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