Advanced Ecology Discussion Questions D Jenkins

Saccheri et al. (1998)

1. Inbreeding depression leading to extinction in natural populations was disputed? Really? Any other cases you have heard about?
2. How does a local population overcome inbreeding depression?
3. 1600 suitable meadows, 320-524 of which are occupied in a given year during 4 years, 200 extinctions and 114 colonizations in an average year. And what have you been doing lately?
4. Can someone explain What In The Sam Hill they were doing with these global and sample models (Fig. 2, Table 1)?
5. p. 493. “Larval group size shortly after winter diapause was positively associated with maternal heterozygosity ... as was larval weight ... suggesting that overall larval viability is enhanced in more heterozygous families.” Or is it vice versa – does greater overwinter larval survival and size increase heterozygosity after a winter?
6. p. 492, last ¶. “Selection against deleterious recessives exposed by localized inbreeding may be relatively inefficient owing to drift within and gene flow among neighbouring small local populations that carry different deleterious alleles.”So is metapopulation dispersal a blessing or a curse for fragmented populations?

Nathan (2006)

7. Does LDD relate at all to population biology? Metapopulation biology?
8. Fig. 2A, end of thick black line. How In The Daggum Sam Hill does one study something that has ~ 10^{-10} chance of occurring and may take ~ 1 year to observe a single event?
9. Fig. 2B. Why does probability of seed survival go up at moderate distance but down at greater distance?
10. If we consider the potential importance of LDD for conservation biology amidst climate change, what should we be doing about ensuring it continues?
11. Do organisms evolve to increase LDD, or is this mostly a matter of accidental tourism?
12. Would you want to carve out your scientific niche as The expert on LDD?