

Biology 370 – Animal Behavior  
Spring 2008 – Dr. Carey – Exam 4

1. Define: (3 pts each)
  - A. haplodiploidy
  - B. handicap principle
  - C. sexual bimaturism
  - D. life history strategy
  
2. As we move up in elevation in a mountain range, environmental conditions become much more variable and unpredictable. Given that, what would you predict about the following in comparing a species that inhabits low elevations versus one that inhabits high elevations in the range. Be sure to support your predictions with ultimate factors. (8 pts each)
  - A. investments in parental care
  - B. fecundity
  
3. Alternative reproductive tactics are generally not very successful in enhancing the fitness of individuals showing them. Why then do individuals show these selectively inferior traits in many species? (9 pts)
  
4. We have a species in which males and females are roughly equal in size and pairing among them is random. Why might we expect such a species to have balanced sex ratio? However, we find that the species exhibits a female bias to the sex ratio. Present 2 ultimate hypotheses for this unbalanced sex ratio. (24 pts)
  
5. Give 2 different ultimate explanations for the finding that externally fertilized fish show high male investment in parental care, while internally fertilized species show female parental care. (15 pts)
  
6. Females in many species often choose as mates the males that have the brightest colors and/or the most elaborate vocalizations. How could such choices be based on choosing the male with highest genetic quality as a mate? Give 2 possibilities. (16 pts)
  
7. Distinguish between shareable and non-shareable parental investment. (8 pts)