Alcock Ch. 10 -- "Evolution of Reproductive Behavior" Study Questions
Ethology and Behavioral Ecology

General: This is a long but very interesting chapter. You will note, as you read it, that we have already discussed many of the theoretical concepts of the chapter and also some of the examples.

1. Terms: parental investment, operational sex ratio, sex role reversal, nuptial gift, sperm competition, satellite, mate guarding.

2. What is a conditional mating strategy? Know the horseshoe crab example. What is often true about the relative fitness of individuals employing different conditional mating strategies? By contrast, how do distinct mating strategies work (broadly speaking and with respect to relative fitness)? Know the sponge isopod example. Which one of these alternative strategy types (conditional vs. distinct) could be investigated using the notion of ESS? Explain.

3. Table 10.2 is very useful, as are the examples in the text that it relates to.

4. How might cryptic female choice and sperm competition inter-relate – how are the different from each other and how might one potentially affect the evolution of the other? (Note that these are also independent concepts).

5. Table 10.3 is also a very useful summary. We have covered some of the ideas contained on it earlier in the course (good genes and runaway (Fisherian) selection). Review these in the text but concentrate on learning the other two mechanisms, "healthy mates", and "chase-away selection." Note that telling which mechanism is primarily responsible for the evolution of mate choice can be a difficult process but that clever experiments can often support one hypothesis over alternatives. The peacock example is instructive in this regard.

6. Sexual conflict is an important area of research. Note that the "logic" selecting for certain behaviors in one sex can easily be detrimental to the other. Know the fruit fly and bedbug examples