

Sex and Mating Homework – Chapters 7 and 8 (2015)

Chapter 7

- 1) What is a “bower” (the structure, not the bird!) and why is it built?
- 2) There are often large differences in the mating behavior of males and females within a species (for example, read the Bower bird intro again). Robert Trivers suggests that this difference is due to differences in:
 - A) Gamete size
 - B) Parental investment
 - C) The effects of testosterone on the kidneys
 - D) The effects of estrogen on the kidneys
 - E) The size differences in males vs. females
- 3) The operational sex ratio is:
 - A) When you have an operation and change your sex
 - B) The number of males compared to females
 - C) The ratio of sexually receptive males to sexually receptive females
 - D) The number of males that reproduce compared to the number of females that reproduce
 - E) The differences between males and females.
- 4) What is meant by a “sex role reversal”?
 - A) When you have an operation and change your sex
 - B) When males in a species behavior like females and vice versa.
 - C) When a male changes from a male to a female (and vice versa).
 - D) When a females is larger than a male.
- 5) What is sexual selection and who came up with the idea? Why was this an issue for the “discoverer” (until he came up with a way to explain it...you might need the internet to answer that part!).
- 6) Explain what is going on in Figure 7.13 (Giraffes).

7) How do small male Marine Iguanas overcome sexual competition (see figure 7.17)?

- A) By ejaculating prior to copulating
- B) By running up to females faster than larger males
- C) By acting like females
- D) By acting more aggressive.
- E) By removing a competitors sperm

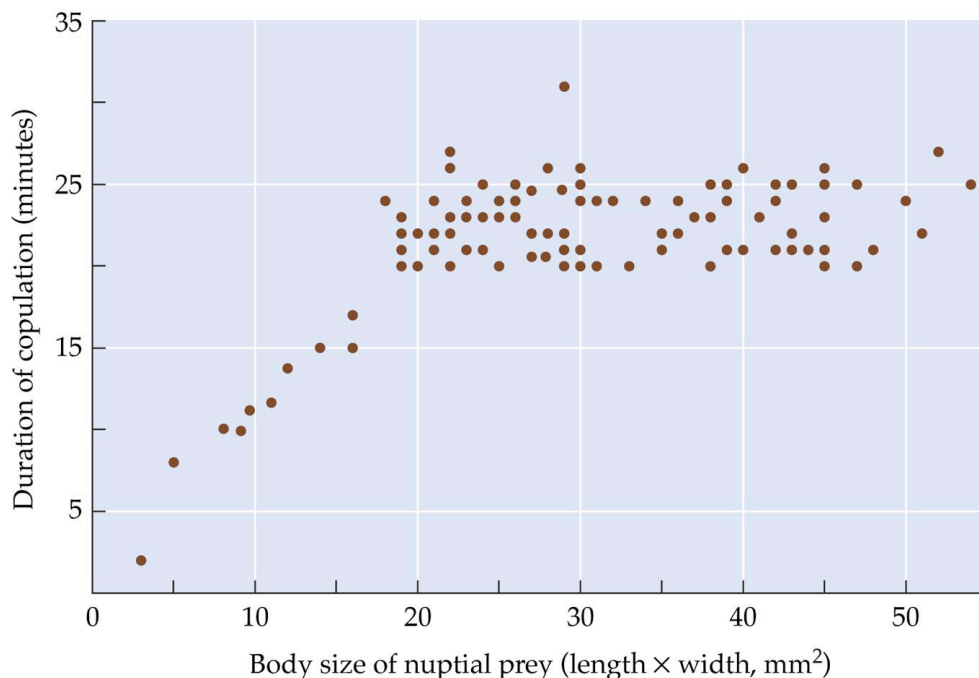
8) How do small male bluegill sunfish overcome sexual competition (see figure 7.24)?

- A) By ejaculating prior to copulating
- B) By running up to females faster than larger males
- C) By acting like females
- D) By acting more aggressive.
- E) By removing a competitors sperm

9) How do male black-winged damselflies overcome other male competitors (see figure 7.25)?

- A) By ejaculating prior to copulating
- B) By running up to females faster than larger males
- C) By acting like females
- D) By acting more aggressive.
- E) By removing a competitors sperm

10) What is a “nuptial gift” and what does the graph in the figure demonstrate?



Chapter 8

11) Using your textbook, give a basic definition for each of the following mating systems (both for the category and subcategory). Also, give an example of each.

Category	subcategory	Description	Example
Monogamy			
	Female-enforced		
	Mate-guarding		
Polyandry			
Polygynous			
	Female defense		
	Resource defense		
	Lek		
	Scramble Competition		

12) What is an extra-pair copulation?

13) What is the fertility insurance hypothesis?

Print this sheet off and bring it to class; we will watch this film as part of our activity!

Questions for the Movie - Evolution: Why Sex?

- 1) Jerry Johnson and his team study a lizard that has an unusual reproductive strategy. What is so different about these lizard's reproductive strategy?

- 2) Robert Vrijenhoek and his team study guppies in Mexico in which some reproduce sexually while others reproduce asexually. Which have more parasites? After a severe drought, guppies in the top level ponds had something unusual happen to them. What was it? What is the Red Queen and how does it apply to these guppies?

- 3) Why did Darwin have a problem with animals such as Peacocks? What explanation did he finally come up with?

- 4) What did Marion Petrie discover about a Peacocks tail in terms of what females like?

- 5) According to Stephen Emlen, what makes birds more monogamous than other animals? What is unusual about Jacana's? Why are the eggs or chicks often killed by an incoming female?

- 6) Why are chimps violent while bonobo's are peaceful? What environmental difference leads to this?

- 7) When women rate the smell of men, do they tend to choose males that have similar or dissimilar immune systems than they do?

- 8) When women choose men based on looks, what do they look for in a short term mate vs. a long term mate?