

Comments and Study questions for Dugatkin. Chapter 1. Natural Selection

Ethology and Behavioral Ecology
Spring 2008

This is an overview for the entire course. I should get you used to how Dugatkin thinks about animal behavior – views that most behaviorists including your instructor generally share (but with various disagreements). Read this as an overview. Here are a few specific points. Note that for this chapter (except as noted below), I am interested in your getting some important general ideas about behavior. Anything in bold you should know as we will see these again; things that I have underlined only will be repeating topics this semester but you need not know them now.

1. According to Dugatkin, **what are the three foundations of studies of animal behavior?** Please be familiar enough with the following examples that you can recount them to others: **xenophobia** in mole rats, including its subtleties, the use of theoretical models in behavior (e.g., prisoner's dilemma is mentioned), the grasshopper meal choice experiments (concentrate on the inter-relationships between learning and selection, not the experimental design although we will see examples of this type of design later), the rats and the "information center" model.
2. **What is the crucial difference between individual and cultural learning?**
3. What are **conceptual approaches** to animal behavior and what, approximately, is **inclusive fitness** and why can it represent a conceptual approach?
4. What are **theoretical approaches** according to Dugatkin?
5. What are **empirical approaches**?
6. **Do you think that theoretical and conceptual approaches, as outlined by Dugatkin represent useful distinctions or should they be unified as "theoretical" as opposed to "empirical"?**

Read the interview with E.O. Wilson carefully as we will have much to say about him in the next few classes and then late in the course. Note especially what he says about the relationships between social and biological sciences and animal and human studies? **Why do you suppose that historically there has been such a distinction between these?**