

## Comments and Study questions for Dugatkin Chapter 11. Antipredator Behavior

Ethology and Behavioral Ecology  
Spring 2007

1. Note that gopher snakes are not poisonous; clearly the antibody section has to do with Pacific or speckled rattlers.
2. Be familiar with the antipredator techniques associated with fish schools. Many of these also apply to herds and flocks.
3. Notice that the optimal choice for food type, based on profitability can change when predators are present (see the squirrel/hawk example on p 385-6).
4. Also note the impressive example of phenotypic plasticity in response to predators with the hatching time examples.
5. Do vervets "intend" to warn others when they produce alarm calls? Explain the experimental evidence in regard to this question and whether or not it convinces you – and if not, give an alternative explanation.
6. What are potential reasons for the evolution of tail flagging (ever read *The Yearling*)? Why do our familiar white tailed deer flag? Explain.
7. What are **boldness** (we have considered under personality earlier), **predator inspection**, and **mobbing**? What is the relationship between group size of prey and each of these behaviors?
8. The example of antipredator behavior in different populations of minnows is very interesting, especially in regards to the relative roles of learning and genetic variation. Make an argument about genes and predisposition to specific learning (a phenomenon that we have considered many times earlier in the course).
9. Note that brain size comes up again except this time a bit more convincingly. Is there a cost to brain size increases? Explain.
10. When I originally read the experiments by Alfieri and others on social learning and predator avoidance, I was astounded. Please know the examples and what was shown. Also think about this within the context of evolution (when is it better to learn as to have innate behavior – does this relax learning requirements somewhat) and within the entire nature/nurture discussion that is often at the center of ethology. The same questions apply to learning mobbing behavior (last section of the chapter).

We will encounter Prof. Milinski in Ch. 13.

Also answer questions 2, 4 and 5 at the end of the chapter.