

9.20

Classes #17: Anti-predator behavior

Wednesday Oct 19, 2005

Readings:

Scott ch 7, "Avoiding predation", pp 143-165.

Schneider, G.E., "Four hours in the life of a Syrian hamster", *unpublished manuscript*.

Study questions: Scott ch 7

1. Distinguish between primary and secondary defense strategies of prey animals. Give an example of each.
2. What is "counter shading" and why would cephalopods need a counter-shading reflex? Describe this behavior.
3. Many predators develop search images by perceptual learning. Octopus and squid species can counter this ability. How?
4. Some ground-nesting birds make nests that are on relatively open ground, making them fairly conspicuous. What advantage does this have? What can they do to protect their nest from an approaching fox or polecat? Give examples.
5. How can a chick caught in the jaws of a predator sometimes avoid death? Describe two FAPs of such a chick (include both the stimuli and the responses).
6. What are two major benefits of group foraging by birds? In analyzing group foraging, what costs must be weighed against these benefits?
7. Describe mobbing behavior by birds, including its functions.
8. Besides running away, what strategies do some species employ when detected by a predator and attacked – other than the method in Q#5? (Some strategies are not described by G. Scott in ch 7.)
9. Describe both altruistic and selfish purposes of alarm calls. Could both kinds of motives have evolved by natural selection?
10. Why is it important for redshanks, a wading bird that feeds on large worms, to have evolved two distinct alarm calls?
11. Describe "stotting" behavior by Thompson's gazelles. This strange behavior has led scientists to suggest various hypotheses to explain it. Which is supported by quantitative observations?