9.20
Class #16: Foraging

Study questions:

1. Does the level of foraging or hunting activity depend on the amount of hunger? Could it be independent of hunger? Contrast the picture painted by Scott with what we learned earlier from Konrad Lorenz, Paul Leyhausen and John Flynn.

2. What is conditioned taste aversion (discovered in rats by John Garcia)? Is it really "a form of classical conditioning" (p 122)?

3. How (and why) would you expect neophobia in feeding behavior to change with (a) hunger level, and (b) age?

4. How can ospreys benefit from the hunting (fishing) success of neighbors although they don't share the booty?

5. Give two strong reasons why foraging in a group of herbivores may be better for an animal (like a bird) than foraging alone.

6. Does the same reasoning apply to carnivores in their hunting behavior? Explain.

    a. Examples of species that hunt in groups?
    b. Describe "bubble cloud feeding" by humpback whales.

7. What is meant by the term "optimal foraging"? What should a foraging animal optimize (in quantitative terms)? Describe two predictions about foraging behavior. (p 129-138)

    a. Studies of the marine iguana of the Galapagos Islands feed on seaweed. Investigators have found that some animals feed subtidally whereas others feed only intertidally—feeding when the water levels are low and seaweed is exposed. Why is this? (p 129-130)
    b. Why do crabs choose to feed on intermediate-size mussels instead of the more meaty large ones? (p 131f)
    c. Why do foraging redshanks (birds) visit less productive patches in addition to their focus on the most productive areas for finding large worms on the ocean bottom? (p 134, 136-137)
    d. When does an animal, like the redshanks, decide to move from one food patch to another? Explain in terms of the "marginal value theorem" developed and modified by Charnov (1976) to explain such foraging decisions.

8. What is meant by “the ideal free distribution” in a description of foraging by groups of animals?

9. Conflict is frequently faced by a foraging animal. Describe an observed relationship between foraging or hunting behavior of a species and the presence of a predator of that species.

9.20 Animal Behavior

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