

## 9.20

### Classes #2-3: Introduction, continued Friday, Sept 9; Monday, Sept 12.

#### *Readings:*

- Niko Tinbergen (1958), *Curious Naturalists*, ch 11, Cliff dwellers, pp 187-204.
- Graham Scott (2005), *Essential Animal Behavior*, ch 1, An introduction, pp 1-18.

#### *Questions on readings: Tinbergen.*

- 1) Describe the equipment used by Oxford student Ms Cullen, working under Tinbergen's supervision, to study Kittiwakes on the Farne Islands of the UK. There were three key items.
- 2) What is the reason why Kittiwakes have evolved to be much less disturbed by human observers than other gulls?
- 3) At the same time, Kittiwakes spend more time fighting and threatening each other than do other gulls on their breeding grounds. Why?
- 4) Describe the behavior of a male-female pair of Kittiwakes that indicates that they are forming a pair successfully.
- 5) Describe a clear difference between the behavior of recently hatched Kittiwake chicks and chicks of other gulls (Herring gulls, or Black-headed gulls), and why this should be expected. How was this difference shown to be innate?

#### *Questions on readings: Scott.*

- 1) Why has it been useful for humans to know about behavior of animals – at least some animals? Give examples.
- 2) Why are both observation and experimentation important in studies of animal behavior?
- 3) Will computer simulations of behavior replace the study of living animals? What is the value of simulations?
- 4) Niko Tinbergen, the British ethologist, in a 1963 paper, described four different “why?” questions about animal behavior. Give an example of each of these four.
- 5) How could a particular behavior pattern found in nature be (or become) maladaptive? Is this common?

- 6) Why do black-headed gulls remove egg shells from the nest? How was this discovered by Niko Tinbergen? (Which kind of “why” question am I asking here?)
- 7) Imprinting is a particular kind of learning, first described in birds. What is it, how is it unique, and what are its advantages for animals of some species? (Students: Investigate this beyond the textbook’s information.)