

# Bio 45 -- Animal Behavior -- Reading List 1 -- 2002

This list is for the first third of the course. "Skim" means look for major points; don't get lost in the details. Readings other than Alcock can be found by going to the e-journal page of the library website and looking for the journal name. [www.brown.edu/Facilities/University\\_Library/eresources/ejournals/alpha.html](http://www.brown.edu/Facilities/University_Library/eresources/ejournals/alpha.html). That will take you to a website where you can download a pdf copy of the paper.

## Week 1

**\*\*\* start observing behavior and writing in your journals \*\*\***

- 1 - Wed., 4 Sept. - Introduction
- 2 - Fri., 6 Sept. - Ways of Thinking about Behavior
  1. Alcock, J [course textbook] - Ch. 1

## Week 2

- 3 - Mon., 9 Sept. - Where does Behavior Come From? - Levels of Explanation
  1. Alcock - Ch. 2

**\*\*\* Discussion #1 - Introduction to journals - observing behavior \*\*\***

- 4 - Wed., 11 Sept. - Integrating Proximate and Ultimate
  1. Alcock - Ch. 4, pp. 99 - 103.
  2. Alcock - Ch. 5, pp. 115- 119
- 5 - Fri., 13 Sept. - Weak and Strong Science Done Directly and Indirectly
  1. Alcock - Ch 5, pp. 132-142 pay close attention to how animals deal with the complex amount of information they receive
  2. Birgesson, A., et. al.. 2001. Colour vision in fallow deer: a behavioural study. *Animal Behaviour* 61(Feb.): 357-365. e-journal article – note how “simple” important experiments can be!

## Week 3

**\*\* Journal Exercise #1 - Due in class Friday - see Handout for details \*\***

- 6 - Mon., 16 Sept. - Genes and Behavior -- What to we mean? How do we know?
  1. Alcock - Ch. 3

**\*\*\* Discussion #2 - Film: Oystercatcher Foraging Behavior \*\*\***

- 7 - Wed., 18 Sept. - Back to Darwin -- Studying Behaviors as Adaptations
  1. Alcock - Ch. 4, pp. 76-84 & 90-99
- 8 - Fri., 20 Sept. - Behavior and Adaptationist Thinking
  1. Alcock - Ch. 6 -- skim - focus on timing and hormonal regulation of behavior

**Note: Some of the readings in the first part of the course are not directly covered in lecture. Though not always covered in lecture, you need to build up an understanding how behavior is designed and regulated (i.e., stimulus filtering, hormonal regulation, development, and timing of behavior = Chs. 4-6 of Alcock).**

#### Week 4

**9 - Mon., 23 Sept. - Adaptationist Thinking -- Testing our ideas**

1. Alcock - Ch. 7, pp. 183-192
2. Pope, D.S. 2000. Testing function of fiddler crab claw waving by manipulating social context. *Behav. Ecol. Sociobiol.* 47:432-437. e-journal

**\*\*\* Discussion #3 - Testing Adaptation Hypotheses: \*\*\***

**10 - Wed., 25 Sept. - Integrating "How" and "Why" -- Cost/benefit Thinking**

1. Alcock - Ch. 7, pp. 192-213.

**11 - Fri., 27 Sept. - Designing Organisms - Thinking While Learning**

1. Alcock - Ch. 5, pp. 142-149
2. Alcock - Ch. 9, pp. 259-266

#### Week 5

**Lectures for Part II - complete reading list to follow**

**1 - Mon., 30 Sept - Designing Optimal Organisms -- Optimal Foraging Theory - 1**

1. Alcock - Ch. 8, pp. 231-238
2. Cristol, D. 2001. American crows cache less preferred walnuts. *Anim. Behav.* 62(Aug): 331-336 - e-journal - a study that you could easily do around here!

**\*\*\* No Discussion Sections This Week \*\*\***

**- Mon., 2 Oct. -- FIRST HOUR EXAM -- in class -**

- Covers material for lectures 1 - 11
- Covers Alcock and assigned readings above plus any others assigned for discussion sections

**2 - Fri., 4 Oct. - Optimal Foraging Theory - 2**

1. Alcock - Ch. 8, pp. 238-246
2. Robinette, R. & J. Ha. 2001. Social and ecological factors influencing vigilance by northwestern crows, *Corvus caurinus*. *Anim. Behav.* 62(Sept): 447-452 e-journal - relates to journal exercise.