

## 9.20 Animal Behavior

### Topics list

1. Introduction: Organization, readings, requirements. Approaches to the study of animals and their behavior.
2. Key concepts in studies of animal behavior, emphasizing ethology. Readings from Scott (2005), supplemented by selections from other books, especially from classics in the field. Selected videos.
3. Key concepts in sociobiology. Readings from Alcock (2001), supplemented by selections from other books and some video presentations.

### Topics for special emphasis:

- Key concepts in learning.
- Habitat selection. Nest site selection; territoriality; dispersal; migration.
- Feeding. Foraging or stalking; prey capture; storage/hoarding; consummation.
- Antipredator behavior. Detection; tricking the predator; defenses -- individual, social; other adaptations.
- Sexuality. Dimorphisms in body and behavior; social organization, dominance structures; evolution of sexual signals, emancipation from original uses.
- Mating and reproduction. Pair bonding varieties and advantages; brood tending and its evolution; similarities of emancipated actions across widely different species.
- Cooperation among conspecifics.
- Tool use.

### Topics for less emphasis:

- Maintenance functions (other than feeding and predator avoidance): Elimination; temperature regulation; grooming, cleaning of body and nest, and evolution/ emancipation of these actions for social uses; reactions to illness and injury; sleeping and activity cycles; nesting *re* other functions, adaptations.
- Behavioral pharmacology and toxicology. Behavioral pathologies in laboratory and in the wild.

### Animals of special interest; possible student projects

- Flies and other insects.
- Rodents and lagomorphs. Social vs. solitary; specialized vs. generalized/non-specialized.
- Cats and other large predators; ferrets.
- Vegetarian foragers: ungulates; most cetaceans.
- Primates: monkeys.
- Primates: apes.
- Human ethology.
- Cognitive ethology / Comparative cognition.
- Wild animals in captivity. Animals in cages *re* natural adaptations, cf. humans in crowded conditions. Animal rights.

- Religious views of animals, and the consequences.
- Conservation efforts that succeed or go awry.