

# Biology of Mammals

Geoffrey Hammerson ([gammerson@wesleyan.edu](mailto:gammerson@wesleyan.edu))

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*“Step outside into a forest, field, or residential area, or stroll along a stream or wetland. Search the ground, examine nearby plants, look up into the trees. Careful observation will soon reveal evidence of the often secretive lives of wild mammals. You might find a track in the mud, hole in the ground, or scratched tree trunk, or perhaps a gnawed acorn, a stash of seeds, or chewed plant. All of these hint at intricate relationships and hidden agendas in the natural world. Each year, from concealed nests, emerge new generations of skillful fanged hunters and vast numbers of nibblers and gnawers. This assemblage of predators and prey is impressively diverse in size and habits, but all started life with precisely the same maternal nourishment. In this course, we immerse ourselves in the furred lifestyle and find out what it means to be a wild mammal.”*

**Please note: this course does not cover marine mammals, which are the subject of a separate GLS course (Spring 2017).**

## Schedule:

- Wednesdays, online: September 28, October 5, October 12  
6:30 - 8:30 pm
- Long weekend in field/on campus: October 15, 16, 17  
9:00 am - 5:00 pm
- One Wednesday, on campus: October 19  
6:00-9:00 pm

## Texts:

- Whitaker, J. O., Jr., and W. J. Hamilton, Jr. 1998. *Mammals of the eastern United States*. Third edition. Cornell University Press, Ithaca. Hardcover. ISBN-10: 0801434750, ISBN-13: 978-0801434754
- Rezendes, P. 1999. *Tracking and the art of seeing: how to read animal tracks and sign*. Second edition. Collins Reference. ISBN-10: 0062735241, ISBN-13: 978-0062735249.
- Elbroch, M. 2006. *Animal skulls: a guide to North American species* [Paperback]. Stackpole Books. ISBN-10: 0811733092, ISBN-13: 978-0811733090
- Godin, A. J. 1977. *Wild mammals of New England*. Johns Hopkins University Press, Baltimore [not the “field guide edition”]. Very useful book, highly recommended; out of print but available online through used book dealers (Amazon).

**Readings:** Before the first class, please read pages 1-20 in Whitaker and Hamilton, the Introduction chapter in Rezendes, and pages 1-106 in Elbroch’s *Animal Skulls*. During or shortly after October 15-17, please read in the texts the sections that cover the mammals we observed or otherwise detected in the field or studied in the classroom.

**Field gear:** For our field sessions, October 15-17, please wear appropriate clothing and footwear (for possibly cold/wet conditions, mud). Also, bring binoculars; a small notebook and pen/pencil (or smartphone for note taking); tape measure; snacks; water; and camera (optional). We will do a field trip each day in the morning or afternoon, depending on weather conditions.

**Classroom sessions:** October 15-17: approximately 2-3 hours each day are devoted to classroom sessions that include discussions of selected aspects of mammal ecology, behavior, activity cycles, reproduction, and conservation, focusing on the groups of mammals that occur in northeastern North America. Additionally, we learn to identify species based on external features, skull/tooth characteristics, and tracks and other signs.

**Online sessions:** *September 28:* overview of course and requirements; introduction to mammals of the Northeast. *October 5 and 12:* discussions of mammal biology; student presentations.

**Requirements:**

- Take-home short answer exam (20% of grade). Based on classroom lecture/discussion material and readings. Due October 26.
- Short (10-minute) presentation of original field observations of mammal behavior or sign (10% of grade). You will present this during one of our online or in-person meetings on October 5, 12, 15, 16, 17, or 19 (to be arranged). *Procedure:* go out and observe a mammal in the field and record its activities/behavior, or search for and document mammal sign (e.g., tracks, droppings, evidence of feeding). Mammal sign must be documented through photographs or drawings. Your observations must generate enough information to enable a 10-minute presentation to the class. Observing wild mammals can be challenging, as most species are nocturnal. Species most amenable to direct observation in daytime include squirrels, chipmunks, woodchucks, rabbits, and deer.
- Field Trip Reports (3) (each worth 10% of final grade). See guidelines to be posted on Moodle. Due December 4.
- Written report of individual project (30% of grade). Project is flexible; could be a field study, a written review (8-10 pages) of recent research on some aspect of mammal biology/conservation, or a written review (8-10 pages) of recent studies of a particular mammal species. Review papers must be based primarily on recently published journal articles. *The topic must be pre-approved by the instructor* (send an email with your proposed project topic to ghammerson@wesleyan.edu). Due: December 9.
- Mammal identification exam (10% of grade). Based on photos of mammals, tracks/signs, skulls. To be posted on Moodle. Due: December 9.