All students will be required to work on a field project related to fish and/or wildlife. Wildlife biologists and technicians are frequently called upon to conduct surveys or otherwise study wildlife with little supervision or no plans for how the project should be carried out. This project will help students learn how to independently identify a research question of interest, develop methods for collecting data related to the question at hand, and collect and synthesize data in hopes of answering the question of interest. It is NOT designed to be merely a library report, but should involve collecting your own field data, analyzing other local data already available, or some combination of these. You should expect to spend a minimum of 10 hours of hands-on, field-based work not including the library research or writing components of this project. At the end of the semester, a word-processed final report will describe what you were interested in studying and why it was important, what you did and found, how your findings relate to other information related to your question of interest, and any problems you encountered with the project. Projects will also be reported to your lab section in the form of an oral PowerPoint presentation.

Goals:
1. To independently plan and carry out a field project.
2. To develop objectives and to evaluate your success at achieving those objectives.
3. To learn about a specific area related to wildlife.
4. To develop an appreciation for the problems involved with conducting fieldwork.
5. To give you an opportunity to meet professionals in the field.
6. To develop your skills in PowerPoint and oral presentations.
7. To develop your skills in technical writing.

Typical headings:
- Title
- Abstract
- Introduction
- Study Area
- Methods
- Results
- Discussion
- Acknowledgment
- Literature Cited

See the author guidelines for the Journal of Wildlife Management available on Moodle to determine what materials goes into each of these sections.

Your paper should include what you did in the field, the methods that you used, and references comparing your work to information cited in technical literature. Use the author guidelines for the Journal of Wildlife Management available on Moodle as a model for style, headings, and literature citation format. Part of your grade will be determined based on how closely you follow these formatting guidelines since this is a technical writing assignment.

A total of at least eight (8) literature citations including at least six (6) from technical, peer-reviewed scientific literature such as journals must be used. Examples of technical
journals are the Journal of Wildlife Management, Wildlife Society Bulletin, Journal of Mammalogy, Ecology, Auk, Condor, Wilson Bulletin, Transactions of the North American Wildlife and Natural Resource Conference, etc… Popular magazines such as "Outdoor Life" or Internet sites are NOT technical literature. **Use of Internet sites should be minimized. These sites will not count toward your required technical sources.** Wikipedia is not an acceptable source. This report will be graded for grammar, technical accuracy, completeness, and evidence of original creativity and thought. Use of spell-check is expected. Papers with numerous spelling errors generally receive low grades and you may be required to correct and resubmit them. I strongly recommend that you take drafts of any written assignments related to this project to the Writing Center for them to review. Also, **read a draft of your paper aloud to a friend or family member, and have them read and edit it on their own, prior to submitting your final draft.** Incomplete sentences or sentences that do not make sense are common mistakes in student papers that MUST be avoided if you want to earn a higher score on this assignment.

### Paper guidelines (Also see author guidelines for Journal of Wildlife Management):

1. The paper must be word-processed and double-spaced. Use a letter-quality or laser printer. Handwritten papers will not be accepted.
2. An Abstract and Literature Cited section must be included. Other sections such as Introduction, Study Area, Methods, Results, Discussion, and Acknowledgments should also be included.
3. Your paper must include literature citations within text and these must correspond directly to your Literature Cited section (i.e., all in text citations must be listed in Literature Cited and all citations in Literature Cited must appear somewhere in the text).
4. **Never include word for word quotes from other literature.** Put everything in your own words and give credit to original authors by citing them in the text at the end of the paper in your Literature Cited section. Careful thought is required to adequately rephrase others ideas, findings, writing, etc... **You must carefully think about your writing to avoid plagiarism.**
5. To receive full credit your assignment must be turned in at the start of the lecture period when it is due. After that time you can earn at most 50% of the total point value and any papers turned in 24 hours after the assigned time will receive no credit. Computer problems are not acceptable excuses for late assignments.
6. The first time you mention the common name of any plant or animal give the genus and species of the organism within parentheses immediately after it. After that you usually use the common name only. Ex.: Coyotes (*Canis latrans*) were found in all forest types, but coyotes were less common than red foxes (*Vulpes vulpes*). Scientific names should be underlined or italicized.

**PAPERS NOT FOLLOWING THE GUIDELINES SPECIFIED ABOVE WILL NOT BE ACCEPTED AND MUST BE RESUBMITTED.**

**Cooperators:**

A copy of your final report should be given to any people who assisted you in completing the project or private landowners that allowed you access to their property for project purposes. You should also send them a letter thanking them for their assistance. They should also be acknowledged in your paper.
**Oral presentation:**
At the end of the semester, during your last lab period, you will deliver an oral presentation to your peers highlighting your project. Your presentation must use PowerPoint. **You are not allowed to use a prepared script that you read from.** You may use an outline or notes including brief phrases. **Practice your presentation several times before delivering it to the class.** Oral presentations should be 7 - 8 minutes. Your PowerPoint presentation must include photos from your field site, of objects you used in the study, and/or of steps in the process you carried out. Use bulleted phrases and avoid using full sentences in your PowerPoint.

In the past a number of students have not been prepared to present their final oral reports on the assigned dates. This wasted class time when accommodations had to be made so they could present their projects at other times. So that no one will waste their classmates' instruction time, all oral presentations will be given within the scheduled lab period without exception. If some of your materials are not ready at that time, you will have to do without them. A significant penalty will be deducted for anyone who does not have his or her PowerPoint ready for the class presentation.

**Final written reports:** Your final submission will include only a hard copy of your final paper. I do not want to see drafts of your paper handed in with the final product.

**Plagiarism/damage to library resources:**
At the minimum if your assignments include plagiarism you will be given a 0 on that project. Your name will also be added to a plagiarism list maintained by the Department of Fisheries, Wildlife, and Environmental Science. In severe cases you may be removed from the course. Defacing any library materials or other violations of academic policies may also result in a grade of 0 for the entire project, possible removal from the class with a final grade of F, and referral to the Campus Judicial Board. These actions may also lead to a letter about the indiscretion being sent to the Vice President of Academic Affairs to be placed in your permanent campus files.

**Deadlines:**
1. **Initial topic selection:** 29 or 30 January 2018 during lab – 5 points
2. **Literature Cited draft:** 19 February 2018 at start of lecture – 10 points
3. **Introduction draft:** 26 February 2018 at start of lecture – 15 points
4. **Study area draft:** 5 March 2018 – 5 points
5. **Methods draft:** 26 March 2018 – 15 points
6. **Final written report:** 23 April 2018 at start of lecture – 100 points
7. **Oral presentation:** 7 or 8 May 2018 during lab – 50 points
Topics:
The list that follows is designed to provide ideas for potential field projects. You may choose any other project that interests you, however all topics must be approved by the instructor. Many projects will require personal transportation.

Cave House Museum of Geology and Mining property
1. Use infrared/motion sensing cameras to document wildlife in different areas of the property
2. Do a bird census of the site to show changes from winter-spring
3. Document mammal tracks, scats, and other signs in different vegetation types
4. Do scent station surveys for mammals in different areas
5. Conduct deer browse use surveys in winter and/or deer pellet surveys in the spring in different vegetation types

Note: For all Cave House property studies students must notify Paul Bascomb, the quarry manager (Cell: 518 528-5791) before initiating the project. You must sign in and out of the site at the weigh station for each visit to the site unless you make other arrangements with Paul. Discuss your project with me before you contact Paul.

Other projects
6. Compare the effectiveness of motion-sensing cameras and track plate boxes for documenting mammal use at the same site
7. Use snow tracking or other techniques to document bobcat habitat use in different forest types at Mine Kill State Park
8. Set up, map, and monitor sets of amphibian cover boards in different areas
9. Do wildlife surveys with night vision equipment in different vegetation types
10. Document fisher distribution in areas where DEC selects using motion-sensing cameras and/or hair snares
11. Do hemlock wooly adelgid surveys at Mine Kill State Park and other areas for comparison
12. Gather winter turkey flock data for the DEC and compare turkey numbers in different areas. (in R-4 Karl Parker coordinates this)
13. Compare effectiveness of control measures for house sparrows in the campus barns or elsewhere
14. Compare duck trap success between different sites with our Ducks Unlimited chapter
15. Compare effectiveness of control measures for starlings and/or pigeons near the campus barns or elsewhere
16. Compare bald eagle and/or other raptors winter and spring habitat use within different areas of Schoharie County
17. Compare wildlife habitat use in different areas at the Landis Arboretum (contact Anne Donnelly or Prof. Brabetz)
18. Compare woodcock abundance along different routes in Schoharie County or elsewhere
19. Use infrared tripped cameras to document carnivores and other species in different vegetation types
20. Survey different wildlife professionals about where they think future employment opportunities exist and employment challenges facing recent graduates
21. Use snow tracking (backtracking) to determine habitat use of different areas by wildlife
22. Use hair snares to document mammal use of different areas
23. Census coyotes in different areas using recorded howls
24. Census owls on Eminence State Forest or elsewhere using recorded calls
25. Compare winter/spring grouse use on Eminence State Forest using flushing surveys or snow tracking
26. Conduct bird surveys in different vegetation types or areas (e.g., Hamm property on Eminence State Forest, New York Power Authority site in North Blenheim, etc…)
27. Document habitat use by species other than deer in different vegetation types at the New York Power Authority site at North Blenheim
28. Conduct deer habitat use surveys in different areas at the New York Power Authority site at North Blenheim (including pellet surveys)
29. Conduct amphibian/reptile inventories in different areas or vegetation types (this would most easily be done over spring break on Long Island or New Jersey, etc… where spring comes earlier)
30. Document bird use in different areas at Looking Glass Pond on Eminence State Forest
31. Document mammal use in different areas at Looking Glass Pond on Eminence State Forest
32. Quantify browse use on all common woody plants by deer on a tract of land
33. Document bald eagle behavior in southern New York in major wintering areas
34. Survey our Fisheries and Wildlife graduates who are employed in the field about how they would recommend that we change our curriculum
35. Conduct wildlife habitat use surveys on different properties or vegetation types
36. Document trends in wild turkey flock numbers, distribution, and mortality through the winter. Work with a specific flock or area
37. Conduct a mark and recapture project on small mammals to develop a population estimate
38. Document deer winter habitat use in different forest types
39. Observe the behavioral dominance or seed preferences of individual birds or species at feeders
40. Compare use of several bird feeder types (tube, platform, and ground) to determine preference of species using the feeders
41. Compare the use of different food types by songbirds at feeders (with feeders all the same)
42. Identify coyote food habits by examining stomachs of dead animals or scat (taxidermists, fur dealers, and the highway dept. could supply carcasses)
43. Conduct a forest inventory of a site and develop a timber management plan to benefit wildlife
44. Conduct a road-kill survey in different landscapes and draw comparisons (There is a smart phone Citizen Science app for this)
45. Conduct a winter/spring bird census on SUNY lands by habitat type and time period
46. Survey small and medium size mammal use by habitat type on SUNY lands
47. Map habitats or inventory birds or mammals on private lands
48. Conduct vegetation or animal inventories on the Iroquois Indian Museum property and compare to another location
49. Quantify volumes and densities of trees on SUNY or private forestlands by individual stands/habitats/topographic classes
50. Inventory wildlife use on the campus farm property and compare to another location
51. Conduct track or pellet count transects to quantify habitat use by deer, grouse, turkey, rabbits etc… in different areas
52. Compare health (e.g., weights) of mice trapped indoors vs. outdoors during winter
53. Compare effectiveness of Sherman box traps and snap traps for catching mice