

Garrett College
 Natural Resources and Wildlife Technology Program
 and
 Adventure Sports Program

Natural History Syllabus
BIO 110



Fisher (Martes pennanti)

Course Description

BIO 110 is a course in the basic principles of natural history, including ecosystem structure and function, plant and animal identification, geology, and soils. Field trips to local ecosystems exemplify these principles.

Course Assessment Techniques

Course Learning Goal	Outcome Measures and/or Classroom Assessment Techniques	When Assessment Occurs
1. The student will demonstrate competency in identification and natural history of herbaceous flora common in Appalachian ecosystems.	Field Exams (average score used for assessment)	1 st quarter of semester
2. The student will demonstrate competency in identification and natural history of woody flora common in Appalachian ecosystems.	Field Exams (average score used for assessment)	2 nd quarter of semester
3. The student will demonstrate competency in identification and natural history of bird and mammal species common in Appalachian ecosystems.	Exams	3 rd and 4 th quarter of semester
4. The student will demonstrate competency in gathering, organizing and presenting natural history information in both written and oral form.	Natural History Guide and Oral Presentation	4 th quarter of semester

Instructor

Peter Skylstad, Professor of Biology

Advanced Technology Center for Sustainable Land Use - NRWT Office (Room 1010-CAOS)

Office Phone and Voice Mail: 301.387.3332

Office Hours: Tu/Th 10:30-11:30, Friday by appointment, when possible

E-mail: peter.skylstad@garrettcollege.edu

Faculty Webpage: <http://www.garrettcollege.edu/faculty-web-pages/peter-skylstad>

NRWT Program Webpage: <http://www.garrettcollege.edu/educationalopportunities/creditoptions/academic-departments/nrwt>

Texts and Other Hardware

Eastern Forests - Kricher (* Begin reading this book immediately!)

Wildflowers - Peterson and McKenny (* Begin reading this book immediately!)

Trees and Shrubs - Petrides

Birds - Peterson (Fifth Edition)

Guide to Animal Tracking and Behavior - Stokes (Not available in bookstore - try Amazon.com for under \$5)

Mammals - Burt and Grossenheider (optional, but recommended - Not available in bookstore - try Amazon.com for under \$10)

Rite in the Rain Field Notebook (required)

Binoculars (optional, but recommended)

Hand Lens (required, available at the Campus Bookstore)

Assessment

70% - tests and field quizzes (TBA)

Field Notebook - (5% reduction of grade if poorly maintained)

10% - Natural History Guide Oral Presentation (December 2nd & 4th)

20% - Natural History Guide - **due no later than Wednesday, 12-4-2013 (11:45 A.M.)**

WARNING! Students must **complete all** assignments in order to pass the class. Plagiarism will result in a "0" for any assignment, automatic failure of the course, and expulsion (see plagiarism section below).

Assessment Scale

93 - 100% = A

90 - 92% = A-

87 - 89% = B+

83 - 86% = B

80 - 82% = B-

77 - 79% = C+

73 - 76% = C

70 - 72% = C-

67 - 69% = D+

63 - 66% = D

60 - 62% = D-

< 60% = F

Parking at CAOS

The small parking lot in front of the CAOS building is reserved for faculty and full-time staff only. Students must park in dorm parking areas or in parking area to the west of CAOS.

Academic Dishonesty Policy

All students at Garrett College are expected to adhere to a code of academic honesty and integrity. Violations of the code of academic honesty include all forms of cheating, plagiarism (see plagiarism section below), and misuse of college documents or instruments. Students found to be in violation of the code of academic honesty will receive an F in the course in which dishonesty occurred and will be withdrawn from all other courses. The student will be academically suspended from Garrett College for a minimum of one semester. Additional penalties may be incurred as each violation is investigated and reviewed on an individual basis.

Schedule

The schedule will be tentative, depending upon the weather and class needs. In general, most class time will be spent in the field, regardless of weather conditions. The class will visit a variety of locations to familiarize students with the different species and ecosystems found in the region.

Attendance

Because 70% of your grade is based upon field tests and field quizzes, attendance is required. If you miss more than 3 classes, you will receive a **FA** and will not earn credit for the class. You are responsible for knowing all species and concepts covered during each class and from readings. The best way to learn a species covered in class is to attend class! This information is very difficult to pick up outside of class, so it is in your best interest to come to all classes. If class is missed, it is your responsibility to obtain the information, either from the instructor or from fellow students. Daily field quizzes/tests cannot be taken at any time other than the scheduled time. Absence during classroom exams will not be excused for reasons other than "documented" extreme illness or "documented" death in the family. If classes are delayed until 10:00 AM due to weather, BIO 110 will meet at 10:00. **** Reminder Warning: If you miss more than 3 classes, you will receive a **FA** and will not earn credit for the class**

Classroom etiquette

The goal of any classroom activity is to provide the greatest educational benefit to all students. It goes without saying that you should expect and practice, in your words and actions, respect and consideration for fellow students and the instructor. In other words, your behavior should not interfere with the rights of others or with the educational process. **The instructor has the right to dismiss a student from class for behavior deemed disruptive to the teaching and learning process.** Such behavior includes, but is not limited to, tardiness, leaving in the middle of class without permission, inappropriate conversation during class, and use of inappropriate language. You are expected to give the instructor your undivided attention, interest, and respect. In BIO 110, information will be provided constantly, both while stopped and en route in the van. You need to pay attention and avoid unnecessary conversation to prevent yourself and/or others from missing important information. All cell phones and other electronic devices must be turned off at all times during class.

Tobacco use

In accordance with GC's tobacco use policy, students may not use tobacco (smoked or smokeless) in or on college property, including college vehicles, or during any outdoor class. You are reminded that you agreed to this policy as part of signing the GC "Policies and Procedures" form during your initial registration. Please understand that the instructor must enforce this policy and that you must refrain from the use of any tobacco product during class. Do not smoke in front of CAOS entrances!

Care of College vehicles

An advantage of attending GC is the greater opportunity (compared to all other colleges) to travel and spend time in the field. For much of the semester, we will travel in 15 passenger vans owned by GC or rented from a local vehicle rental company. To ensure the continued opportunity to spend time in the field, it is imperative that you take very good care of these vehicles. You are asked to keep the vehicles very clean (e.g., pick up all trash at the end of class, refrain from spilling any drinks or food, clean muddy boots before entering the vehicle, keep feet off of seats and the dashboard), to take care of the seats (e.g., refrain from pulling on and climbing over seats, keep sharp objects from cutting the upholstery), and to take care of the exterior (e.g., refrain from denting or scratching the van). Abuse of the vans will result in loss of our travel privileges. You are also asked to keep the classroom neat and clean, clean up any crumbs or spills, and refrain from abusing furnishings.

Clothing

You must be prepared each week to work outside in prevailing weather conditions, including rain, snow, and cold temperatures. For health and comfort sake, proper attire is strongly suggested, including, when appropriate, boots, raingear, umbrella, warm clothing, and gloves. Remember, the weather can change dramatically, so come prepared!

Field Notebook

The majority of class time in this course will be spent in the field, emphasizing two goals: learning to recognize plants and animals commonly found in our region, and learning to use field guides to identify unknown species. To facilitate success in achieving these goals, you will record the following types of entries in a field notebook:

- 1) Class notes - You will record observations about species examined during each class. You should list the date, species discussed, and note the characteristics of each species that will help you identify that species in the future.
- 2) Notes from outside class time - You will experience limited success achieving the goals above if you only work on identification skills during class time. To ensure recollection of species previously covered in class and proficiency in field guide use, you will go out on your own at least 10 times during the semester, recording the date, any species you find, and any other natural history observations you make.

Notes must be recorded in a Rite-in-the-Rain waterproof notebook. Entries from the two categories listed above should be recorded in separate portions of the notebook. Each entry should be numbered. Notes **must be recorded while you are in the field**, rather than from memory at some later time. To receive credit for the field notebook, **the original notes must be checked by the instructor**, even if you choose to transcribe your notes into some other format at a later date.

Natural History Guide Instructions and Format

The natural history guide you will develop this semester is an integral part of Adventure Sports. It will allow you to become very well informed about the area you choose to research. The area you choose can be located anywhere on the planet, although I recommend that you do some preliminary research to determine if enough information is available about your particular site. There are some places on Planet Earth that are not well documented and would not be ideal when developing your first natural history guide. The natural history guide will enhance the development of important skills that are essential for any successful Adventure Sports professional. In addition, a well designed guide can serve as a part of your portfolio and can enhance your chances of employment in this highly competitive field. The natural history guide consists of seven sections and multiple subdivisions within each section.

1. Introduction (5%)
2. Geography/Geology (20%)
3. Flora/Fauna/Ecological Communities (40%)
4. Area Activities (10%)
5. Logistics (10%)
6. Conclusion (5%)
7. Maps (10%)

Natural History Guide Grading Rubric: The importance of each section is denoted by its percentage. The greatest investment of effort should be based on section percentage, e.g., Section 3 - Flora/Fauna/Ecological Communities.

Use the criteria below as a checklist when developing your guide.

Introduction (5%)

You never get a second chance to make a first impression. The opening paragraph of your paper will provide your readers with their initial impressions of your argument, your writing style, and the overall quality of your work. A vague, disorganized, error-filled, off-the-wall, or boring introduction will probably create a negative impression.

On the other hand, a concise, engaging, and well-written introduction will start your readers off thinking highly of you, your analytical skills, your writing, and your paper. This impression is especially important when the audience you are trying to reach (your instructor) will be grading your work. Your introduction is an important road map for the rest of your paper. Your introduction conveys a lot of information to your readers. You can let them know what your topic is, why it is important, and how you plan to proceed with your discussion. It should contain a thesis that will assert your main theme. It will also, ideally, give the reader a sense of the kinds of information you will use and the general organization of the paragraphs and pages that follow.

Geography/Geology (20%)

landforms (*map required*)

climate/weather

aquatic systems (*map required*)

geological history/geomorphology

rock types (*map required*)

- minerals

- fossils

- soils

Flora/Fauna/Ecological Communities (40%)

unique/characteristic species (ex. rare, threatened, endangered species)

unique/characteristic ecological communities/habitats (*map required*)

- ecological relationships

- ecological calendar/yearly cycles

- past/present human impact

Area Activities (10%)

points of interest (*map required*)

suggested trips or hikes (*map required*)

recreational opportunities

other activities/events

Logistics (10%)

transportation/access (*map required*)

clothing and other necessities

regulations (things you can and can't do)

land ownership/land use regulations (*map required*)

health considerations

lodging/camping (*map required*)

fees/permits

guide services/vendors

area contacts - for more information

Conclusion (5%)

Return to the theme or themes in the introduction. This strategy brings the reader full circle. For example, if you begin by describing a scenario, you can end with the same scenario as proof that your essay is helpful in creating a new understanding. You may also refer to the introductory paragraph by using key words or parallel concepts and

images that you also used in the introduction. Synthesize, don't summarize: Include a brief summary of the paper's main points, but don't simply repeat things that were in your paper. Instead, show your reader how the points you made and the support and examples you used fit together.

Maps (10%)

You must have a minimum of 10 maps (less than 10 will lower your grade significantly) and you must reference them in the text of your document. The maps must have utility!

Citations (5 point reduction if minimum requirements are not met)

You must have a minimum of 15 references of which 10 can be based on relevant field guides. Sources can be based on interviews, books, periodicals, field guides and the web (you may have no more than five web-based citations). You must cite within the body of the paper (when appropriate) and list references on a citation page (see below). If this is not done, I will assume that you are guilty of plagiarizing someone else's work and you will receive an automatic "0". All maps must be referenced within the context of the paper. No direct quotes longer than two sentences permitted and no more than three direct quotes in total. Absolutely no "cut and paste" from the Internet. This will result in automatic failure of the course (see plagiarism section) and dismissal from the college.

Additional Document Assessment Criteria

Style

Attractiveness

Grammar

Spelling

Neatness

Organization

Accuracy

* It is a very good idea to seek help from the "writing lab" in GC's English department before you submit your final draft!

* Use the library resources early in the semester!

* Remember, do not plagiarize as it will result in automatic failure! Caution --- we have software that can data mine the Internet and find relationships between research papers (or natural history guides) and websites! Always give credit where credit is due (see plagiarism section below).

Natural History Guide Oral Presentation

Each student will develop a 15 minute presentation based on their on their Natural History Guide (see above). Presentations should include the following sections: 1) Introduction, 2) Geography and Geology, 3) Flora, Fauna, and Ecological Communities, 4) Area Activities, 5) Logistics, 6) Conclusion, and 7) Maps. Maps should be used to support each section. The introduction should lay the foundation for the subject to be presented. The conclusion should tie everything together. Each student should adhere strictly to the 15 minute time limit and expect a one minute question/answer session to follow the presentation (total of 16 minutes). Visual aids (slides, transparencies, handouts, PowerPoint, etc.) are required.

Oral Presentation Content Grading Rubric: The importance of each section is denoted by its percentage. The greatest investment of effort should be based on section percentage, e.g., Section 3 - Flora/Fauna/Ecological Communities.

1. Introduction (5%)
2. Geography/Geology (20%)
3. Flora/Fauna/Ecological Communities (40%)
4. Area Activities (10%)
5. Logistics (10%)
6. Conclusion (5%)
7. Maps (10%)

Example of Public Speaking Critique for BIO 110 Oral Presentation

Presenter's Name: Jane Brobdingnagianowski

Date: 12/2/08

Title: The High One – Denali National Park

Style	Voice	Visual Aids	Subject Knowledge	Time Mgmt.
/15	/15	/15	/40	/15
<input type="checkbox"/> body language <input type="checkbox"/> facial expression <input type="checkbox"/> animation <input type="checkbox"/> eye contact <input type="checkbox"/> relaxed factor	<input type="checkbox"/> tone <input type="checkbox"/> volume <input type="checkbox"/> inflection <input type="checkbox"/> enunciation <input type="checkbox"/> pace	<input type="checkbox"/> easy to read <input type="checkbox"/> professional <input type="checkbox"/> images quality <input type="checkbox"/> technical prowess <input type="checkbox"/> organization	<input type="checkbox"/> background info <input type="checkbox"/> expert factor <input type="checkbox"/> sure of oneself <input type="checkbox"/> organization <input type="checkbox"/> depth <input type="checkbox"/> question/answer	START: _____ FINISH: _____ TOTAL: _____

Score for Oral Presentation: /100 % = _____

PLAGIARISM INFORMATION

“To borrow another writer’s **language or ideas** without proper acknowledgment is a form of dishonesty known as plagiarism” (Hacker 353).

Writers are obliged to acknowledge all material that is **quoted, paraphrased, or summarized from any work. This includes information downloaded from the Internet.** If a writer fails to cite a source, **whether deliberately or accidentally,** he/she is guilty of plagiarism. Research papers are a collaboration between the student and his/her sources. To be fair and ethical, students must acknowledge the origin of these sources, whether from print or electronic media. **Failure to do so is a serious academic offense (plagiarism)** (Hodges & Whitten 413).

Plagiarism is a form of academic dishonesty. Students who plagiarize, whether in written work or in computer assignments, are subject to the following disciplinary actions as stated in the Code of Student Conduct published in Garrett’s catalog:

“All forms of academic dishonesty are causes for dismissal from the institution. The penalty is course failure and College expulsion. The individual may request readmittance to the institution. However, readmittance is not automatic, nor is it guaranteed” (41).

Plagiarism may take three different forms:

- 1) failing to cite quotes and borrowed ideas,
- 2) failing to enclose borrowed language in quotation marks,
- 3) failing to put summaries and paraphrases in your own words
(Hacker 354).

Students often believe that as long as they do not quote directly from their source, they have not plagiarized. On the contrary, unless the paraphrase or summary is truly the student’s work, distinct from the author’s language, the summary is

plagiarized.

To avoid plagiarizing an author's language, students should resist the temptation to look at the source while summarizing or paraphrasing. For instance, they should close the book, write from memory, then open the book to check for accuracy (Hacker 356).

EXAMPLES

The following paraphrases are plagiarized - even though the source is cited - because the language is too close to that of the original source.

Original Version

If the existence of a signing ape was unsettling for linguists, it was also startling news for animal behaviorists.

-Davis, Eloquent Animals, p. 26

Unacceptable Borrowing of Phrases

The existence of a signing ape unsettled linguists and startled animal behaviorists.
(Davis 26).

Unacceptable Borrowing of Structure

If the presence of a sign-language-using chimp was disturbing for scientists studying language, it was also surprising to scientists studying animal behavior (Davis 26).

Acceptable Paraphrases

When they learned of an ape's ability to use sign language, both linguists and animal behaviorists were taken by surprise (Davis 26).

According to Flora Davis, linguists and animal behaviorists were unprepared for the news that a chimp could communicate with its trainers through sign language (26).

(Hacker 356)

When in doubt, a student should consult his/her English text, research manual, or the writing lab.

WORKS CITED

Hacker, Diana. Rules for Writers. Boston: Bedford, 1996.

Hodges, John C. and Mary E. Whitten. Harbrace College Handbook. New York: Harcourt, 1989.

WARNING! DO NOT "CUT AND PASTE" FROM THE INTERNET. YOU WILL BE BUSTED AND EXPELLED! NO DOUBT!

In Wildness is the Preservation of Humankind.

Henry David Thoreau

If I have seen further than others, it is because I stand on the shoulders of giants.

Sir Isaac Newton

Tentative Fall, 2013 BIO 110 Schedule

9/4	Orientation - What is Natural History?, What can students expect?
9/9	SwampWalker - Natural History Walk in a Relict Boreal Bog
9/11	Wildflower Identification and Natural History (Field)
9/16	Wildflower Identification and Natural History (Field)
9/18	Wildflower Identification and Natural History (Field)
9/23	Wildflower Identification and Natural History (Field)
9/25	Wildflower Identification and Natural History (Field)
9/30	Wildflower Identification and Natural History (Field)
10/2	<i>Wildflower Identification Field and Lab Exam</i> * <u>Last Day to choose topic for Guide</u>
10/7	Tree Identification and Natural History (Field)
10/9	Tree Identification and Natural History (Field)
10/14	Tree Identification and Natural History (Field)
10/16	Tree Identification and Natural History (Field)
10/21	Tree Identification and Natural History (Field)
10/23	Tree Identification and Natural History (Field)
10/28	Tree Identification and Natural History (Field)
10/30	<i>Tree Identification Field and Lab Exam</i>
11/4	Birds - Identification and Natural History (Lab)
11/6	Birds - Identification and Natural History (Lab)
11/11	Birds - Identification and Natural History (Lab)
11/13	Birds - Identification and Natural History (Lab)
11/18	Birds - Identification and Natural History (Lab)
11/20	Birds - Identification and Natural History (Field)
11/25	<i>Birds - Identification Field and Lab Exam (Begin Mammal/Tracks ID)</i>
11/27	HOLIDAY
12/2	Mammals/Tracks - Identification and Natural History (Lab) * Oral Presentations begin...
12/4	Mammals/Tracks - Identification and Natural History (Lab) * Oral Presentations continued...
12-9/12-12	<i>FINAL EXAM</i> - Cumulative (Date/Time TBA)

**** Important:** Natural History Guide - due no later than Wednesday, 12-4-13 (11:45 A.M.)

More Words of Wisdom.....

Genius is 1% inspiration and 99% perspiration. (T. A. Edison)

It is the teacher's role to provoke students to teach themselves. (Lawrence Skylstad)

The harder I work, the luckier I get! (Lawrence Skylstad)

Ignorance is voluntary bad luck! (Lawrence Skylstad)

You have a right to your own opinion, but not your own facts! (Mark Twain)