

BIO 252 Introduction to Field Ornithology FALL 2008

Dates: 5-7 September
3-5 October

Location: Hawk Mountain Sanctuary, Acopian Center for Conservation Learning

Times: Fridays 7-9 PM
Saturdays and Sundays 8AM – 4PM

Course Instructor

Dr. Chris Farmer
Hawk Mountain Sanctuary

Address and phone number

Acopian Center for Conservation Learning, 410 Summer Valley Road,
Orwigsburg, PA 17961; phone, 570-943-3411, x102; email,
farmer@hawkmtn.org.

Location

The course meets at the Acopian Center for Conservation Learning, on Route 895 in Orwigsburg

Course Description

A field-oriented survey of identification, adaptations, habitat associations, research techniques, and behavior of birds at Hawk Mountain and surrounding areas. This course meets 2 weekends in the fall.

Course Objectives: students will

- learn how to identify birds in the field,
- learn about the different habitats where birds can be found,
- learn about avian adaptations, especially flight, foraging, nesting, mating systems, and bird song
- learn about techniques used to study birds in the field
- understand the conservation threats that affect birds, especially in eastern forests.

Friday Night, 5 September

There will be an indoor class session AND a short field trip. Bring hiking boots, raingear (if needed), and a flashlight or headlamp.

Topic Schedule

| Date | Topic |
|----------------------------------|---|
| Friday, 5 September 7-9 PM | Introduction to the course; topography of birds; owl survey field trip; <i>Acopian Center and field</i> |
| Saturday, 6 September 8AM-4PM | Field Methods: AM - mist netting and banding as study techniques; topography and adaptations; <i>Acopian Center</i> PM - Where to find birds; how to use binoculars and the fundamentals of birding; <i>field and Acopian Center</i> |
| Sunday, 7 September 8AM-4PM | Field Methods: AM-Point Counts and Spot-mapping; <i>field</i> PM- Avian conservation issues, color-banding and behavioral studies; <i>field</i> |
| Friday, 3 October | Migration Studies |
| Saturday, 4 October 8AM-4PM | Field methods: AM and PM - Raptor Capture techniques, nest box studies, telemetry studies; <i>field</i> |
| Sunday 5 October 8AM-4PM | Field Methods: AM- Migration Counts; <i>field</i> PM- Conservation Issues/Library Time; <i>Acopian Center</i> |

Class Attendance: Regular attendance is **mandatory**. Because of the intensive nature of this course, a single missed class will result in a failing grade.

In the Field:

- Bring binoculars and a field guide (if you have them).
- Be sure to include rain gear - we go out rain or shine. The weather can be either warm or cool this time of year so be sure to check the weather forecast.
- Wear hiking boots, some of the terrain will be very rocky, and we will be walking 1-2 miles each day.
- Bring a lunch and something to drink - there is no place to buy food and drink near the Acopian Center
- Call my office by 8AM if you will not be here either Saturday or Sunday.

Field Guides:

A good field guide is an essential tool of birding. You can get through this course without one, but you will need one to continue birding on your own. Two excellent guides are *The Sibley Field Guide to Birds of Eastern North America* and *The Peterson Field Guide to Eastern Birds*. A useful resource for beginners is *Sibley's Birding Basics*. An excellent introduction to common bird songs and calls is the CD guide, *Birding by Ear*.

Assignments and grading: (% of final grade for each assignment in parentheses).

1) Class Participation (50% of grade) – This is an interactive, field-based course with minimal lecturing. Therefore, class participation will be important. This course will be successful only if students participate. Moreover, because it is a field course, proper conduct is especially required. This includes making it to the field/class on time and ready to begin work. And perhaps most important, we will be in the field under possibly less than comfortable conditions so good cheer and flexibility is required of all.

2) Research paper (50% of grade) – You will be required to write a position statement, topic: installation of industrial-scale wind turbines on ridges in the Appalachian region. We will discuss this topic along with several other conservation issues in our region during the course. The goal of this position paper is to convince me (succinctly) of the wisdom of your opinion regarding this controversial topic. In order to do this you should first look through the information on the CD handed out the first day of class and decide what your position is. You should then develop an argument for your position that is based on scientific findings - as a general guide, scientists place more weight on peer-reviewed, journal articles than on technical reports, conference talks, consultant reports, and industry “fact” sheets (the other contents of the CD). As a starting point, look over the contents of the “position papers” folder to see how position papers are written (“writing a position statement”) and what sorts of support people generally use (look over the examples). Your position paper must differ from the guidance in this folder in one major way, it must include references in a “literature cited” section at the end of the paper.

A minimum of five references is required. Only one source can be from the internet. This relates to internet-published sources. Sources that are published in the traditional manner (i.e., on paper) that are available online are not considered Internet based. Please cite your references in the style used by *The Auk* (e.g. Farmer et al. 2007). If a reference appears in the text of the paper, it should be fully described in the literature cited section with enough information so that a naïve reader could locate the source. Feel free to use references on the

CD or to find additional references - scientific papers on this topic have been published in Auk, Condor, Ibis, Journal of Wildlife Management, Wildlife Society Bulletin, Wilson Bulletin, and various other conservation/ecological journals.

Examples of Literature Citations:

Journal Article:

Farmer, C. J., D.J.T. Hussell, and D. Mizrahi. 2007. Detecting population trends in migratory birds of prey. Auk 124: 1047-1062.

Book:

Zar, J.H. 1996. Biostatistical analysis, 3rd ed. Prentice-Hall Inc., Upper Saddle River, New Jersey, USA.

Chapter or Article in Book:

Michod, R.E. 1993. Inbreeding and the evolution of social behavior. *In* The natural history of inbreeding and outbreeding (N.W. Thornhill, ed.), pp 74-96. University of Chicago Press, Chicago, Illinois, USA.

Thesis or dissertation:

Wolf, N. 2001. Foraging ecology and stopover site selection of migrating Western Sandpipers (*Calidris mauri*). Thesis, Simon Fraser University, Burnaby, British Columbia, Canada.

Webpage:

National Audubon Society. 2002. The Christmas Bird Count Historical Results. [Online.] Available at www.audubon.org/bird/cbc. (last accessed October, 2007).

In developing your position statement, think carefully about the sources of information you use - do they have an agenda or are they merely presenting objective information? If they have an agenda, do they support it with data or hearsay? Do they have a financial stake in fostering or preventing wind energy development? For example, biological consultants are often hired by industry and its opponents to perform research; a consultant's job is to protect the interests of their client, not necessarily to uncover the truth. Conversely, academic researchers in ecology are often funded by grants that do not depend on what conclusions they reach. Other questions you should ask yourself include: do the data support the conclusions the author presents? Was the analysis appropriate for the data? What are the costs and benefits of pursuing the course of action recommended by the author? (note: costs and benefits can be economic, ecological, social, political, etc.) Was the research peer-reviewed by independent scientists or was it published without review? (here, scientific journal articles are peer-reviewed, other reports sometimes are and sometimes aren't)

On the CD, you will find a collection of resources relevant to the paper topic. They are organized in folders to make it easier for you to identify scientific papers, position statements, industry fact sheets, government reports (technical reports), and other sources of information, such as conference talks, consultant reports, and tidbits culled from the internet.

Papers should be no more than 8-10 pages in length (not including the cover page) double-spaced, 1 inch margins, 12 pt. Times font, and must be typed/word processed. Hand written papers will not be accepted.

Papers are due on Monday, 27 October 2008 by 5 PM. I prefer that papers are sent via email (*farmer@hawkmtn.org*) as a MS Word attachment. I will send you an acknowledgment e-mail upon receipt; if you don't get a confirming e-mail, assume I did not receive your e-mail and call or try again until I confirm. Hard copies also will be accepted if they are received at the Acopian Center by 5:00, 27 October.