**BIO 4734/5734 - Ornithology   
Spring 2008**

**Description**

This course is a study of the birds of Oklahoma, their taxonomy, physiology, anatomy, ecology, distribution, behavior, and natural history. There is a three-hour per week laboratory to accompany BIO 4734/5734. Field trips are required. Prerequisites for BIO 4734 are STAT 2103 and 15 hours of biology, including BIO 1404 (or permission of the instructor). Prerequisites for BIO 5734 include graduate standing and 15 hours of biology, including BIO 3534 or BIO 3454 (or permission of the   
instructor) and STAT 2103.

**Objectives**

1) The students will become familiar with all aspects of ornithology, including how to read and discuss ornithological literature (BIO 5734 students will be expected to lead discussions on ornithological literature).

2) The students will conduct a group ornithological research project. (BIO 5734 students will conduct an individual ornithological research project.)

3) The students will learn to identify (both visually and by song) 200 species of Oklahoma Birds (200 by sight, 80 by song).

**Instructor**

Dr. Chris Butler

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**Class website:** http://www.biology.uco.edu/PersonalPages/CButler/BIO4734

**Class meets**

Tuesdays 8:00-10:50 AM

Thursdays 8:00-10:50 AM

**Required Reading  
C:\Users\cbutler11\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\Y4M7LKC5\MCj04414050000[1].wmf**

* Gill, F. B. 2007. Ornithology, Third Edition. W.H. Freeman and Company, New York.
* Sibley, D.A. 2000. The Sibley Guide to Birds. Alfred A. Knopf, New York.
* Walton, R.K. R. W. Lawson, and R. T. Peterson. 2002. Birding by Ear: Eastern and Central North America. Audio CD. Houghton Mifflin, Boston.

**Assignments and Grading**

Attendance: 50 pts

Weekly Bird Quizzes: 220 pts (best 11 out of 12 scores)

Mid-Term Exam: 200 pts

Project: 250 pts

Final: 200 pts

Final Bird ID test: 200 pts

Assignments: 300 pts

Total: 1420 pts

**Extra Credit**

Avian round skins (or skeletons) may be prepared for extra credit in this course (for up to 50 pts of extra credit). A large bird may receive up to 15 pts of extra credit, a small bird may receive up to 10 pts, and a skeleton may receive up to 5 pts. All round skins must be completed by 29 April 2010.

There is also an extra credit trip to Black Mesa at the end of the semester, from 30 Apr – 2 May. Students who participate will receive 20 pts of extra credit.

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| **Course Calendar:** |
| **The course calendar may change during the course of the semester depending upon circumstances. Check the course website (http://www.biology.uco.edu/personalpages/CButler/BIO4734/syllabus.htm) for the most recent information.**  **Weekend Field Trips**   * 26-27 March - Field trip to eastern OK * 3 April - Day trip to Wichita Mts & Hackberry Flat * 9-11 April - Field trip to SE OK * 30 Apr – 2 May Trip to Black Mesa  |  |  | | --- | --- | | **12 January**  [Class Overview / Birds and people](http://www.biology.uco.edu/personalpages/CButler/BIO4734/lectures/Jan_12_2010_Intro_to_Ornithology.pdf) ([\*.pptx](http://www.biology.uco.edu/personalpages/CButler/BIO4734/lectures/19_Feb_2008_Vocalizations.pptx))  "Lords of the Air" video / Bird ID time  Abstract Discussion / Independent Research Projects  Before class, read Gill - CH 1 | **14 January**  Field Trip to Mitch Park  (meet at main entrance of Mitch Park in Edmond at 8:00 AM. [See OKC Audubon Society's website at http://www.okc-audubon.org/hotspot-mitch.shtml for more details](http://www.okc-audubon.org/hotspot-mitch.shtml)) | | **19 January**  Quiz 1  Diversity of Birds lecture (\*.pptx)  "To Fly or Not to Fly" video    Before class, read Gill - CH 1 | **21 January**  Guide to Bird Watching (\*.pptx)  Simple Ornithological Statistics lab | | **26 January**  Quiz 2  History of Birds lecture (\*.pptx)  "The Mastery of Flight" video  Systematics lecture (\*.pptx)  Before class, read Gill - CH 2-3 | **28 January**  Pigeon dissection lab | | **2 February**  Quiz 3  Feathers lecture \*.pptx)  Paper discussion (hand in answers at start of class)  Flight lecture (\*.ppt)  Before class, read Gill - CH 4-5  Discuss Matyjasik, P., J. Matyjasik, F. de Lope, and M. P. Møller. 2004. Vane emargination of outer tail feathers improves flight manoeuvrability in streamerless hirundines,Hirundinidae. Proceedings of the Royal Society of London, Series B***271***: 1831-1838. | **4 February**  Bird skinning lab  [Bird Skinning lab](http://www.biology.uco.edu/personalpages/CButler/BIO4734/assignments/Preparing_Ornithological_Specimens.doc)  [Bird Skinning Video Part #1](http://www.biology.uco.edu/personalpages/CButler/BIO4734/assignments/Bird_skinning_1.mpg) (10 minutes; ~108 MB)  [Bird Skinning Video Part #2](http://www.biology.uco.edu/personalpages/CButler/BIO4734/assignments/Bird_skinning_2.mpg) (13 minutes; ~130 MB)  Note: The Audubon meeting will be on Tuesday, Feb 12th. | | **9 February**  Quiz 4  Physiology lecture (\*.pptx)  Paper discussion (hand in answers at start of class)  Senses, Brains and Intelligence lecture (\*.pptx)  Before class, read Gill - CH 6-7  Discuss McGraw, K. J., G. E. Hill, and R.S. Parker. 2005. The physiological costs of being colourful: nutritional control of carotenoid utilization in the American goldfinch (Carduelis tristis). Animal Behaviour***69***: 653-660. | **11 February**  Field trip to Lake Hefner - meet at Prairie Dog Point at 7:30 AM. Trip will last till 10:20 AM.  [Directions to Prairie Dog Point](http://www.biology.uco.edu/personalpages/CButler/BIO4734/directions/Prairie_dog_point_directions.htm). ([Map of Lake Hefner](http://www.okc-audubon.org/hotspot-hefner-map.pdf))  Dress warmly! | | **16 February**  Quiz 5  Guest lecture by Dr. Jeff Kelly  "How Birds Eat" movie  Before class, read Gill - CH 8 | **18 February**  Vocalizations lecture (\*.pptx)  "The Insatiable Appetite" movie  Time to work on group projects | | **23 February**  Quiz 6  "Signals and Songs" movie  Paper discussion (hand in answers at the start of class)  Annual Cycle of Birds (\*.pptx)  Before class, read Gill - CH 9  Discuss Hobson, K. A. 2005. Stable isotopes and the determination of avian migratory connectivity and seasonal interactions. Auk***122***: 1037-1048. | **25 February**  Point Count / Distance Lab  MARK lab | | **2 March**  Quiz 7  Migration and Navigation lecture (\*.pptx)  "Meat-eaters" movie    Before class, read Gill - CH 10-11 | **4 March**  Mid-Term Exam (multiple choice key, short answer key) | | **9 March**  Quiz 8  Social Behavior lecture (\*.pptx)  "Finding partners" movie  Before class, read Gill - CH 12-13 | **11 March**  Guest lecture by Dr. Grzybowski  Mates and Breeding Systems lecture (\*.pptx) | | **16 March**  SPRING BREAK | **18 March**  SPRING BREAK | | **23 March**  Quiz 9  "The Demands of the Egg" video  Paper discussion (hand in answers at the start of class)  Before class, read Gill - CH 14  Discuss Pitcher, T. E., P. O. Dunn, and L. A. Whittingham. 2005. Sperm competition and the evolution of testes size in birds. Journal of Evolutionary Biology***18***: 557-567. | **25 March**  Field trip to the [zoo](http://www.okczoo.com/visi.htm) - meet at 08:50 in front of zoo. | | **30 March**  Quiz 10  Bird Sex lecture (\*.pptx)  "The Problems of Parenthood" video  Before class, read Gill - CH 15-16 | **1 April**  Field Trip to Rose Lakes & Lake Overholser ([Directions](http://www.biology.uco.edu/personalpages/CButler/BIO4734/directions/Rose_Lakes.htm))  Meet at 7:30 AM. | | **6 April**  Quiz 11  Guest lecture by Chris Roy  Parents and their offspring lecture (\*.pptx)  Before class, read Gill - CH 17-18 | **8 April**    "The Limits of Endurance" video  Lifetime reproductive success lecture (\*.pptx)  Before class, read Gill - CH 20 | | **13 April**  Quiz 12  Populations lecture (\*.pptx)  Paper discussion (hand in answers at start of class)  Species lecture (\*.pptx)  Read Cam, E. E. G. Cooch, and J-Y. Monnat. 2005. Earlier recruitment or earlier death? On the assumption of equal survival in recruitment studies. Ecological Monographs***75***: 419-434.  Before class, read Gill - CH 19-20 | **15 April**  Bird Banding at Prof Butler's house (directions)    ([Click here to see the 2008 photos and videos](http://www.biology.uco.edu/personalpages/CButler/BIO4734/bird_banding.htm)) | | **20 April**  Communities lecture (\*.pptx)  Paper discussion (hand in answers at start of class)  Conservation lecture (\*.pptx)    Read Bearhop, S., W. Fiedler, R. W. Furness, S. C. Vontier, S. Waldron, J. Newton, G. J. Bowen, P. Berthold, and, K. Farnsworth. 2005. Assortative mating as a mechanism for rapid evolution of a migratory divide. Science***310***: 502-504.  Before class, read Gill - CH 21 | **22 April**  Free time to work on group presentations | | **27 April**  Group Presentations | **29 April**  Final Bird ID test | |  | **6 May**  7:00-8:50 AM Final Test | |

**Additional Information**

**OKBIRDS listserve**

The Sutton Avian Research Center is sponsoring a discussion list (listserv) for those interested in Oklahoma birds! If you have an e-mail address and you are interested in Oklahoma birds and birding, then the OKbirds listserv is for you.

What is a listserv? It's basically a loose network of e-mail users interested in a particular subject, in this case Oklahoma birds and birding. Once you are subscribed (it's free) you will be able to send a bird-related question, observation, or message to a single address and it will quickly and automatically be delivered to all other subscribers to the list. Any replies to your message will also be delivered to all subscribers.

What is the purpose of OKbirds? The OKbirds listserv will provide a forum for questions, answers, and discussions about Oklahoma birds and birding. It will allow subscribers a quick and efficient way of reaching a large number of people who are interested in birds. Post your questions, interesting observations, directions to good birding sites or rare birds, etc. Or, if you are shy, just sit back and read the messages as they come in!

How do I subscribe? To subscribe, send a message from the e-mail account (or screen name) you wish to use for your subscription with "subscribe OKbirds your name" (your first and last name, or first initial and last name, not your email address) as the only thing in the message body to listserv@lists.ou.edu. Subscriptions will generally be processed within 48 hours. You will receive confirmation and further instructions once you are added. You may also unsubscribe at any time.

Example message to subscribe: subscribe OKbirds John Doe

What else do I need to know? Access to this listserv is owner-controlled, meaning that new subscribers must be added by the list owner. Only subscribers to the list will be able to post messages to it, not advertisers. The listserv is being administered at the University of Oklahoma and will be kept "hidden." These three steps are taken so advertisers or others not subscribing to the list will not be able to obtain information about you. The list owner can also unsubscribe problem addresses. Further instructions for posting messages, list etiquette, unsubscribing, etc. will be e-mailed to you once you are added as a subscriber.

**BIRDJOBS-L LISTSERVICE**

AN E-LIST SERVICE is available. Subscribers to this list will receive lists of new job announcements in their e-mail. These are the same announcements as will appear on-line.To join the Birdjobs-L e-list, send the following e-mail message to <lyris@cornell.edu>: join Birdjobs-L "your name". Where your name (include the quotation marks) is the name you want to be available to the list's administrators. Leave the subject line blank. Send this message from the e-mail address where you want to receive the e-list's messages. The message must be sent in plain text, that is, no formatting, font styles, or HTML code. Your name must appear in double quotes. You leave the e-list by sending message "leave BirdJobs-L" to <lyris@cornell.edu>.