

# FIELD BIOLOGY (BIOL 342) - FALL 2009

<b>LECTURE</b>	01	TTh	8:00-8:50	Holt 170 (Kirn)	<b>Instructor:</b> Shelly Kirn, M.S.
<b>LABS</b>	02	T	11:00-1:50	Holt 125 (Kirn)	Holt 254 ; 898-5757
	03	T	2:00 – 4:50	Holt 125 (Whittsell)	sakirn@csuchico.edu
	04	W	11:00 – 1:50	Holt 125 (Kirn)	office hours: W/Th 9-11, also
	05	W	2:00 – 4:50	Holt 125 (Bogiatto)	by appointment

**PREREQUISITE** – BIOL 101 (or equivalent)

## REQUIRED MATERIALS

National Geographic's Field Guide to the Birds of North America 5<sup>th</sup> Edition (not 4<sup>th</sup>, not 3<sup>rd</sup>)  
 National Audubon Society Field Guide to California  
 Field Notebook (I suggest: Elan, orange cover)

## HIGHLY RECOMMENDED MATERIALS

Evolution - Berra  
 Your BIOL 101 Text (or equivalent book)

## ASSIGNMENTS

## GRADING

‘pop’ lecture quizzes 2@20	40	A	90% & ↑	C+	78%
midterm	70	A-	89%	C	70%-77%
cumulative final	100	B+	88%	C-	69%
plant collection	70	B	80%-87%	D	60%-68%
field quizzes +/- 2@10	20	B-	79%	F	59% & ↓
field practical	25				
lab final	50				
<hr/> total points possible	375				

## ATTITUDE, PARTICIPATION, AND EFFORT

We reserve the right to subjectively (by no more than one half of a letter grade) lower final grades based on poor attitude and lack of participation. For example a B to a B- or a C- to a D. Behaviors that will negatively impact your grade include but are not limited to: idle chatting during presentations, reading the newspaper during class, working on other things during class, the use of cell phones or other electronics during class, habitual tardiness and absenteeism, failure to bring required materials when requested to do so, blatant and deliberate apathy, lack of compliance with health and safety mandates, the use of any tobacco products during class (including field trips), etc. Your lab instructor will discuss further expected behaviors in the field.

Note that unlike some of your other courses perhaps, you are **not** awarded points for simply showing up to class and taking up space! A few examples of expected behaviors include: thoughtful response to questions posed by instructor or other students, intelligent questions and comments, being an active participant during field excursions, etc. These are expected and do not earn bonus points. Attendance is mandatory and expected, as is constructive and inspired participation. When a group of students all make an effort, the result is a much better experience for everyone. Plus, when you make a genuine effort and are fully present in the moment of each activity, you are more likely to do well. Weird how that works! Foul and/or sour attitudes make a difficult learning environment, so let's keep it positive, learn some cool stuff, and enjoy the ride!

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**“A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise.” Aldo Leopold**

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### **POLICIES, EXPECTATIONS, AND OTHER IMPORTANT STUFF**

- There are **NO** make-ups for either quizzes or exams without a **verifiable** serious and compelling reason (as defined in the CSU, Chico catalog). If you miss a quiz, exam, or other graded assignment, you must submit documentation such as a doctor’s note, an obituary, a jury summons, whatever is needed within the week of the missed assignment. Please know and understand that verifiable documentation is mandatory and not subject to discussion or debate.
- **Two unexcused absences from the weekly lab meetings** (field trip or in-house) **will result in the loss of one full letter grade. Three or more (unexcused) missed lab meetings will result in a failing grade for the course regardless of scores earned.** Please present the documentation of the missed lab as soon as possible, preferably within the week of the absence. Worst-case scenario, it is vital that all documentation is given to me no later than finals week. Once the semester is over and grades have been submitted, I will **NOT** entertain any excuse for absences. Again, verifiable documentation is obligatory and not debatable.
- It is best to not make assumptions about what I will or will not do, or what you think I have to do. Don’t assume that I have to give you make up exams or quizzes. Don’t assume that I have to allow you to go on field trips wearing flip-flops. If serious and compelling issues interfere with your work in this class I need to be informed at the earliest possible time. If you act responsibly towards me, I will readily reciprocate. If you just assume that I will cater to your needs, forget it!
- **Please arrive to class on time (or early!), and do not leave before I am done.** Perpetual tardiness is both disruptive and rude to your classmates and to me. Do not get up in the middle of lecture and wander out of the room. This is also quite disruptive and rude. When you come to lecture, plan to stay for the entire session. Sitting for 50 minutes really should not be an issue for the vast majority of college students. Try planning ahead: use the restroom before class, bring water with you, have tissues in your book bag. Repeated interruptions will lead to disciplinary actions and will negatively impact your grade. If you have concerns with this, please talk to me in office hours.
- **Personal electronic devices** (including but not limited to cell phones, MP3s, iPods, etc.) **will be turned to silent (or OFF!), and put out of sight while in the lecture room, the lab, and the field.** This is a college classroom, not your living room or car, so act accordingly. Offenders will be asked to leave class. If disruptions become chronic further disciplinary steps will be pursued.
- Students are expected to bring the required bird guide and field notebook on every field trip. Failure to do so will negatively impact your grade.
- I cannot stress enough the importance of appropriate clothing and footwear during field trips! Hats, sunscreen, and water are absolutely vital during hot weather. Rain gear or a change of dry clothes/shoes is highly recommended during wet weather. **DO NOT** wear flip-flops on any field trip. Just because you “hike in these all the time” does not mean that they are suitable during this class. **If you wear what I consider to be inappropriate footwear (and I notice), then I will prohibit you from attending the trip** that will then count as an unexcused absence. No joke.

- I expect you to accept responsibility for learning and grades earned, and to demonstrate complete academic integrity. Penalties levied for scholastic dishonesty may range from a zero on an assignment to an F in the course, or possibly a suspension from the University. I consider all examples of academic dishonesty, cheating, and plagiarism very seriously.
- Please note that to drop a course after the end of the fourth week requires a “serious and compelling” reason. Again, note what defines serious and compelling (see Academic Policies on page 145 in the 2007-2009 University Catalog, also available online).

### OTHER TIPS FOR SUCCESS IN FIELD BIOLOGY

- Listen to everything that your instructor says. We mean it and you will be held responsible for it. This even means the information contained in the syllabus!
- Pay attention to what is repeated, that is usually a good indicator of something really important (i.e., the type of stuff that frequently shows up on quizzes and exams).
- I suggest that you study a **minimum** of 2-3 hours a week for every hour spent in class. For this class that’s 4-6 hours every week just for the lecture material. That is EACH week, not just the night before an exam. Successful students from previous semesters tell me that this is about right. College is a full time job!
- Manage your time efficiently. Do not be deceived by what appears to be large blocks of free time in your schedule. It simply does not exist (see comment above)!
- Take advantage of lab time, especially extra lab time. Lab is scheduled for 2 hours and 50 minutes each week, which honestly isn’t enough. You need to always come prepared to stay the entire period.
- Do not waste time listening to the false prophets. There are plenty of rumors about this course that are absolutely ridiculous and unsubstantiated by evidence. Attitude and fear can be self-fulfilling prophecies that are perpetuated by people who are unsuccessful in the class. Most people who make A’s and B’s in Field Biology admit that you will have to study **and study a lot**. However, they will also tell you the course can be fun, is not at all impossible, and perhaps an experience that will forever change the way you view the natural world. If you do exactly what your instructor asks you to do and are willing to put in the time and effort, you will be well equipped for success!

### COURSE GOALS AND OBJECTIVES

Our goal in Field Biology is to help you learn biological concepts, especially natural history, organismal biology, and ecology all within an evolutionary context. Through material presented in lectures, labs, and field trips students will become more knowledgeable about major groups of life and interactions among organisms with a major emphasis on plants and animals. The field experiences are designed to increase awareness, understanding, appreciation and conservation of the incredible habitats and related wildlife of the Northern Sacramento Valley.

This is your typical college-level biology course with a heavy field element. Expect to spend a lot of time listening to your instructor present information during the lecture, lab, and field components of this course. Students are expected to actively listen, to think, take notes, to engage, and to interact during class. After successfully passing this course, you will have a content-rich

background in field biology that will contribute to a foundation for your future as a thinking member of society, a voter, a parent, a teacher, and (hopefully!) a life-long advocate for the remarkable diversity of the natural world.

Learning Objectives - Students will know:

- 1) major plant communities in the Northern Sacramento Valley and several plant species indicative of each.
- 2) major groups of animals in North America with an emphasis on the identification and natural history of key local examples.
- 3) basic ecological principles and how energy flows within a system.
- 4) Biological Evolution by Natural Selection
- 5) what defines science and what is (and is not) scientific.

## Lecture Calendar

DATE	TOPIC
Aug 25	Course Introduction
27	more business, plant project discussion, The Limits of Science
Sept 1	Evolution: How did evolutionary thought evolve?
3	Evolution: Darwin & Wallace propose a mechanism of evolution
8	<b>NO CLASSES – <u>State mandated furlough day</u></b>
10	Evolution: Darwin & Wallace propose a mechanism of evolution
15	Evolution: How do we know that it happens? The evidence
17	Speciation: What is a species and how do new species form?
22	Allopatric Speciation and Reproductive Isolating Mechanisms
24	Ecological Concepts: How does energy flow through ecosystems?
29	Ecological Concepts wrap-up
Oct 1	Introduction to major invertebrate groups (part 1)
6	Introduction to major invertebrate groups (part 2)
8	Evolutionary trends among plants (major groups, overview, terms)
13	<b>MIDTERM</b>
15	<b>NO CLASSES – <u>State mandated furlough day</u></b>
20	Alternation of Generations – a key feature of plants
22	Bryophytes lack conducting structures (non-vascular plants)
27	Pterophyta: the seedless vascular plants include the ferns
29	Coniferophyta: The cone bearing plants
Nov 3	Anthophyta: Superstars of diversity and abundance
5	Pollination Ecology and Dispersal Mechanisms
10	Fishes: overview, osmoregulation, migration

- 12 Amphibia: the amphibians live a double life
- 17 Reptilia: the rise of reptiles
- 19 Mammalia: the tell-tale hair      **Remember! Plant Collections Due!!**

November 23-27      NO CLASSES! Thanksgiving Break!

- Dec 1 Mammal wrap-up
- 3 Aves: origins and relationships (merely glorified reptiles??)
- 8 Aves: flight, the central avian adaptation
- 10 Aves: mating systems (or "What's love got to do with it?")

<b>Dec 15</b>	<b>TUESDAY COMPREHENSIVE FINAL</b>	<b>10am-12 noon</b>
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## Lab & Field Calendar

**DATE:**                      **LAB TOPIC/ACTIVITY**

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- Aug 25/26 Introduction to Lab, Taxonomy & The Kingdoms of Life
- Sep 1/2 **Field Trip** – Riparian of the Sacramento River
- 8/9 ***NO LAB MEETING! furlough day (Sept 8) - ALL LABS CANCELLED***
- 15/16 Insect Lab/Display
- 22/23 **Field Trip** – Foothill Woodland/Riparian of Upper Bidwell Park
- 29/30 Fish Lab/Display
- Oct 6/7 **Field Trip** – Feather River Fish Hatchery and Chinook Salmon
- 13/14 Amphibians and Reptiles Lab/Display
- 20/21 Mammal Lab/Display
- 27/28 **Field Trip** – Chaparral and Montane Coniferous Forest (Hwy 32 transect)
- Nov 3/4 Bird Lab/skins and skulls
- 10/11 **Due to Veteran's Day conflicts, NO formal lab this week! Attendance optional**

Use this time wisely! Here are some suggested activities: work on your plant collections, come into the lab room to study display items, meet with me to discuss course concepts, go on a self-guided, impromptu field trip, etc.

17/18      **Field Trip** – Field Practical Exam (location T.B.A.)

Nov 23-27      NO CLASSES! Thanksgiving Break!

Dec 1/2      **Field Trip** – Sacramento River NWR – Rancho Llano Seco Unit

Dec 8/9      Lab Finals (during your last lab period)
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**"In the end, we will conserve only what we love, we will love only what we understand, and we will understand only what we are taught."**

***Baba Dioum, Senegalese conservationist***

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