

**Fall 2011 Biodiversity (with a little Texas flair)**  
**Important Species in Texas – photos courtesy of Texas Parks & Wildlife**



Barton Springs Salamander  
(*Eurycea sosorum*)



Black-capped Vireo  
(*Vireo atricapilla*)



Monarch Butterfly  
(*Danaus plexippus*)



Tobusch Fishhook Cactus  
(*Sclerocactus brevipalmatus*)

Dr. Romi Burks, Associate Professor of Biology

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Course management system: Moodle at [lms.southwestern.edu](http://lms.southwestern.edu)

Sections:

112-02 10:00 1<sup>st</sup> half FJSH 221; 8/22-10/7\* (Students have M/Tu Lab)

112-04 11:00 1<sup>st</sup> half FJSH 148; 8/22-10/7\* (Students have M/Tu Lab)

112-01 10:00 2<sup>nd</sup> half in FJSH 148; 10/12-12/2\* (Students have W/Th/F Lab)

112-03 11:00 2<sup>nd</sup> half FJSH 148; 10/12-12/2\* (Students have W/Th/F Lab)

**SYLLABUS PHILOSOPHY:** This document should act like an owner's manual for a car. At least read through it once and then keep it in a safe and accessible. More or less, everything that you need to know about the course you should be able to find in this document.

**Course Description:**



Biodiversity represents one of our mini-courses (the others are Classical and Population Genetics, Cell Biology, and Genes and Molecules) that will introduce you to the study of biology. We use Brooker's *Biology* for all courses. This module concentrates on the diversity of organisms and the adaptations that they employ to withstand various stresses in their environment. I expect that you are taking this course because you are genuinely interested in the study of life, i.e., biology. This course is coupled with a laboratory component taught by Ms. Southwick.

While an introductory course, this is a *rigorous experience* that will demand your dedication, attention and involvement in learning. In particular, there is a large amount of material to cover and you will be asked to think critically about the importance of biodiversity and individual species.

**Student Learning Outcomes:**

1. Students will be able to articulate clearly the relationship between the terms adaptation, fitness, natural selection and evolution.
2. Students will be able to explain the inherent difficulty involved in defining the term “species.”
3. Students will be able to engage intelligently in debates about conservation practices (i.e. do we save a “species” or focus on habitat?).
4. Students will be able to give examples of species across multiple taxonomic groups.
5. Students will increase their confidence in oral communication skills.

**This course focuses on these three different questions:**

1. What is biological diversity and why should we value it?

We will talk about what distinguishes different species from each other and what mechanisms promote speciation. We will examine what early insights Charles Darwin had by reading excerpts from *The Origin of Species*. Biodiversity is not a topic without controversy. Substantial variation exists regarding the number of species that we know about (~1.8 million) and even more debate exists regarding the potential number of species out there. We will begin our study of biodiversity by examining the microscopic organisms that often escape notice and continue through the world of invertebrates.
2. How is species diversity represented and how does that become evident in function?

We would like to think that we know how many animals exist (because we can usually observe them in contrast to micro-organisms). However, new species are being discovered all the time. Because animals are mobile and capable of decision making, we often see ourselves in these creatures (called anthropomorphizing). We will use this unit to introduce the diversity of animals and discuss what adaptations allow them to survive amidst multiple stresses, be it predators, low food resources, temperature fluctuations, salinity, etc... Of course, animals do not exist in isolation. Plants constitute the base of the food chain. Without their ability to convert sunlight into sugars that we can use for energy, life as we know it would cease to exist. We will start with the simple plants (mosses, ferns) and move into the more complex gymnosperms and angiosperms. Always be asking what new innovations we see in each group of plants (& animals too).
3. What are some profiles of interesting organisms and are there steps being taken to preserve biodiversity?

Amazingly, over half of all described species are insects. However, we often focus our attention on larger, more visible or appealing organisms. In addition, certain organisms thrive in particular locales or perhaps only live in one place (i.e. endemic). Other species struggle to persist (i.e. threatened or endangered). We will focus on a particular suite of these organisms through species and habitat presentations focused on Texas flora (plants) and fauna (animals, etc...). With every student doing a species presentation (SEPARATE INSTRUCTION GUIDE), we will profile some interesting organisms and also review the relevant phylogeny and terminology associated with different organisms. After profiling a species, each student will then do a presentation on the regional habitat or conservation area associated with that species. Part of learning biology is learning a new language and that includes scientific names of species. After these species presentations, we will scale up and look at the different reasons for and approaches to preserving biodiversity and threats to biodiversity such as exotic species.

**NOTE A: Brooker's Biology, 2<sup>nd</sup> edition, ISBN 978-0-07-353221-9 required for Lecture**

Brooker et al. (2008) is the textbook that the Biology Department all agreed to use in ALL of the 1<sup>st</sup> year sequence. So, think of it as a book that you are buying for 4 classes instead of just 1. Also, keep in mind that the more you read the book, the cheaper it gets (value/hr). The lab manual is also required for Ms. Southwick's courses. If you are interested in an electronic version, let me know and I can put you in touch with our McGraw-Hill representative Robin Havens ([robin\\_havens@mcgraw-hill.com](mailto:robin_havens@mcgraw-hill.com)).

**NOTE B: Use of Moodle**

Southwestern uses an interactive course management system called Moodle. You will use Moodle to take quizzes, get feedback on assignments, keep track of your grades, download additional readings and the PowerPoint slides used in class and review species presentations. You should automatically be loaded into the system and can access Moodle via the SU Portal or directly at [lms.southwestern.edu](http://lms.southwestern.edu). Your username and password is your regular SU-electronic ID (same as your email). With any new technological application, sometimes things can go awry. Melanie Hoag ([hoagm@southwestern.edu](mailto:hoagm@southwestern.edu), x1644) can be of assistance with any Moodle difficulties.

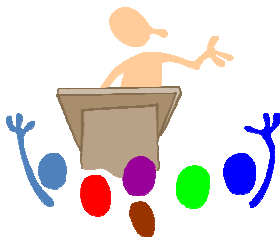
**NOTE C: Facebook Policy**

Most students seem to have a Facebook account. If you don't have one and don't want one, that is perfectly fine. All official class information goes through Moodle or myself to your SU email. However, if you do have a Facebook Page and want to network with your fellow peers, you would then want to add the Southwestern Network to have a class site.

- 1<sup>st</sup> point: I will not set up a required site for the course. If someone wants to take the initiative to make a group, I am in favor of group studying and brainstorming.
- 2<sup>nd</sup> point: I avoid setting up my own groups because if I send any student an invite, I think that they have to be "my friend."
- 3<sup>rd</sup> point /Friend policy: I'm happy to be "A Friend" with SU students with the knowledge that I am a faculty member at Southwestern first and take that seriously. If I see something that worries me, I will follow up. I believe in better safe than sorry. At the same time, I'm certainly not in the habit of checking up on students but cannot help but read updates when posted.
- 4<sup>th</sup> point: My Profile page is all-inclusive for my friends, family and some students. I do not post anything there that I am not willing to publicly share (this is good advice). So, if you would like to request to be my friend, I will certainly accept but I do not want to compel people.

**NOTE D: Participation in Education Research (CCLI of CBC-ANMH):**

I have been invited to participate in a National Science Foundation-funded project by the Center for Biodiversity and Conservation (CBC) at the American Museum of Natural History (AMNH) entitled "Developing and Assessing Process Skills in Conservation Biology and Other Integrative Fields." Process skills include a wide range of activities such as critical thinking, networking and teamwork, executing data analysis or interacting with diverse groups using written or oral communication. To really develop one skill, our focal area in this project will be oral communication.



**Rationale:** Commonly referred to as the #1 fear in America, few people enjoy public speaking. However, it is a skill that cannot be overlooked or overemphasized in education and the professional world. Practice helps but I think practice with considerable constructive feedback helps even more.

**Background:** The scientific community responsible for conservation and sustainable management of the earth will increasingly require skilled professionals. These professionals must be trained to address complex real-world issues, competing demands on ecosystems, and the role of innovative science and technology in meeting these challenges. However, concern exists across science fields, especially conservation biology, that undergraduate students in the United States lack development of important process skills needed by professionals. Prominent conservation practitioners often note a disconnect between most current academic preparation and the knowledge and skills actually needed in the professional world. To date, however, few projects have attempted to systematically evaluate the development of process skills in their students, or have assessed effects of different teaching methods on the development of these skills.

**Short-term Goal:** To give students the tools necessary to improve their oral communication skills while gaining insight into how focusing on process skills influences grasp of content.

**Long-term Goal:** To train professionals with the skills needed to battle 21<sup>st</sup> century issues in conservation biology

**Participation:** Biodiversity as a course requires that you give two individual presentations regardless of the connection with the CCLI project. Furthermore, your performance will be evaluated with rubric materials developed from this project whether or not you choose to participate in the assessment. **Absolutely no penalty of any kind exists for not participating in the assessment exercises.**

On the other hand, by participating, you have a unique opportunity to contribute data to a research study on learning and can gain an increased awareness of how your success in a particular skill may relate to better gains in course content and understanding. All of the data gathered from this study will be sent anonymously to staff at the CBC-AMHN. They will use it to compare with similar activities taking place in 12-14 other colleges and universities across the country. This project has been reviewed and approved by the Institutional Review Boards at both AMNH and Southwestern.



The project includes two exercises:  
 Exercise #1 focuses on species-level importance.  
 Exercise #2 focuses on broader-scale issues regarding habitats or conservation areas.

Picture of *Procambarus clarkii* (red swamp crayfish) in a wetland

The project includes the following 10 steps:

1. Provision of rubric for presentations (LAST PAGE OF SYLLABUS)
2. Self-assessment of process skill before presentation (SSA<sub>1</sub>)
3. Evaluation of content assessment prior to skill (Pre-CA – Ex 1 & Pre-CA – Ex 2)
4. Exercise/Presentation #1 – Species
5. Assessment<sub>1</sub> with Rubric
6. Evaluation of content assessment after Exercise 1(Post-CA-Ex 1)
7. Exercise/Presentation #2 – Habitat
8. Assessment<sub>2</sub> with Rubric
9. Evaluation of content assessment after Exercise 2 (Post-CA-Ex2)
10. Self-assessment of process skill after presentation (SSA<sub>2</sub>)

Assessments may be given on paper or through Moodle depending on project development. If you have any questions about the project, please feel free to contact the Project Coordinator, Ana Porzecanski ([alporze@amnh.org](mailto:alporze@amnh.org)).

**NOTE E: Burks availability & the relationship between teaching and research**

As you will hear about, when not with my classes, I study an invasive applesnail from South America. Unfortunately, I cannot get the seasons of the northern and southern hemispheres to align sometime. So, sometimes, I spend the last part of the fall semester in South America. Fortunately, we live in a great age of technology and can utilize this to stay connected whether I am in my office or half-way around the world. I expect that you will find me very responsive to your needs, either in person or electronically. Even when these types of schedule conflicts arise, I do not see a large divide between my teaching and research. I always seek to create the best experience for the Biodiversity classes in any absence and find ways to minimize the lack of my physical presence. I do not have set plans yet but I'll keep you posted (this will likely affect the 2<sup>nd</sup> half more than 1<sup>st</sup> but I like to keep them consistent). In addition, I hope that you will ask your faculty about their research or scholarship. Their academic pursuits represent an integral part of what they bring to Southwestern. In some cases, the connection between their teaching and research may be seamless. In other classes, some faculty may research within a specialty area that their classes only occasionally highlight. Either way, the act of being a scholar in the greater academic community gives faculty members exposure to new ideas, tangible accomplishments and often ideas for new ways of teaching and communication.

**Student "Bill of Rights" (Expectations for Biodiversity)**

- Each student can expect access to PowerPoint presentations prior to class via Moodle.
- Each student can expect class to begin on time.
- Each student can expect that I will arrange appropriate office hours as needed.
- Each student can expect to spend at least 2 hours (if not 3) reading or studying out of class for every 50 minutes in class. You will keep a log of your work – see below.
- Each student can expect to improve their writing & presentation skills.
- Each student can expect a classroom environment conducive to learning (speak up if not!).
- Each student can expect frequent communication by e-mail.
- Each student can expect to stay abreast of the material by doing on-line quizzes.
- Each student can expect that flexibility if excused absences (illness, sports, etc.) occur.
- Each student can expect that I will be direct and honest with them regarding their course progress and can know that every comment keeps the student's best interest in mind.

**Professor and Course Expectations of Students:**

- Every student will be on time to class. This means seated and ready to take notes.
- I expect that students will have read, completed the on-line quiz if available and considered the assigned reading before we cover this material in class.
- I also expect that you will go back and re-read carefully the assigned chapters and review your class notes within 1-2 days of being given.
- Biodiversity expects that you will be responsible for your own mastery of the material. This means that you need to take the initiatives to ask questions.

- I expect students to attend the optional review sessions if they have questions. If a student waits until the night before quizzes and exams to study, he/she will have an unpleasant experience and will not perform as well as possible.
- I expect students will provide adequate warning for classes missed due to legitimate academic circumstances. Reviewing missed material remains the student's responsibility.
- Students should attend the class for which they are enrolled, unless other arrangements are made with me. Student MUST attend the lab section for which they are enrolled.
- I expect the classroom environment to have a relaxed atmosphere where students can feel free to express opinions or ask questions.
- Students must respect other people's opinions even if they differ from theirs.
- Students will take some time to reflect on what they are learning.

Also note: Southwestern University and I are committed to assisting students with disabilities. There is nothing unusual or wrong with requesting help if needed. Reasonable accommodations may be made once a student has registered his/her disability and has the appropriate documentation on file with the Academic Success staff (office on 1<sup>st</sup> floor Prothro Building or at x1286). Accommodation notification should have a two week lead time or be communicated as soon as reasonably possible.

#### **Attendance:**

Each day an attendance log will be sent around to keep track. You are on your honor to initial your name and only your name. It is your responsibility to sign the log and also record if you are late to class (being late twice counts as an unexcused absence). Biodiversity is only 7 weeks long and every minute of every day counts. I expect you to attend class. If you accumulate more than 3 unexcused absences (i.e. non-University or illness related), the procedures for Involuntary Withdrawal will be put into effect with the Center for Academic Success. This means that the CAS Office will contact you to schedule an appointment to discuss your situation and come to some understanding of how you might continue successfully in the course. If you do not respond in their timeframe, then an "F" will be entered for your course grade. If you have reason for a legitimate absence, please notify me as far in advance as possible. You will be held responsible for the material covered in class.

#### **Grading Scale:**

582-600 = A+	555-581 = A	537-554 = A-
525-536 = B+	495-524 = B	477-494 = B-
465-476 = C+	435-464 = C	417-434 = C-
405-416 = D+	375-404 = D	357-374 = D-
Less than 357 = F		

Grades are not curved. The maximum possible points for the course add up to 600. I use a standard grading scale (see above). If you fall on the "cusp" between 2 grades, I reserve the right to consider "giving you the benefit of the doubt" IF AND ONLY IF:

- You have no more than 1 unexcused absence; AND
- Your grades show reoccurring quality or you consistently improve over the course of the semester; AND
- Your class presence and engagement is significantly notable.

**Enrichment Opportunities:**

- **Seminars:** The Department of Biology hosts a weekly seminar series on Thursdays at noon. You may earn up to an additional 3 points (½ %) for attending a seminar. To take advantage of this opportunity, send me an email ([burksr@southwestern.edu](mailto:burksr@southwestern.edu)) that informs me what you thought of the presentation and also convinces me that you took away some content. I encourage you to attend every seminar, although only 2 enrichment opportunities will count for points. If you have a legitimate time conflict, come talk to me and we will make alternate arrangements.
- **Popular Press Biodiversity Nuggets:** I hope that you will find that the material you learn in class relates to the daily world. If you come across an interesting article about something related to biodiversity, you can forward it to me with a brief description of the connection to class. I will then forward your contribution to your peers. You may earn up to 3 pts per biodiversity nugget.

**Please note: the maximum enrichment of your grade allowed is 12 pts (2% of your grade).**

**Drop Dates:** 1<sup>st</sup> Half (8/22 – 10/7) and 2<sup>nd</sup> Half (10/12 – 12/2)

Because this course fits within ½ of a semester, the timing for drops without record and drops with a W are different than for full semester courses. For 1<sup>st</sup> half, Sept. 9<sup>th</sup> = last day to drop without record and Sept. 24<sup>th</sup> = last day to drop with W. For 2<sup>nd</sup> half, Oct. 28<sup>th</sup> = last day to drop without record and Nov. 16<sup>th</sup> = last day to drop with W.

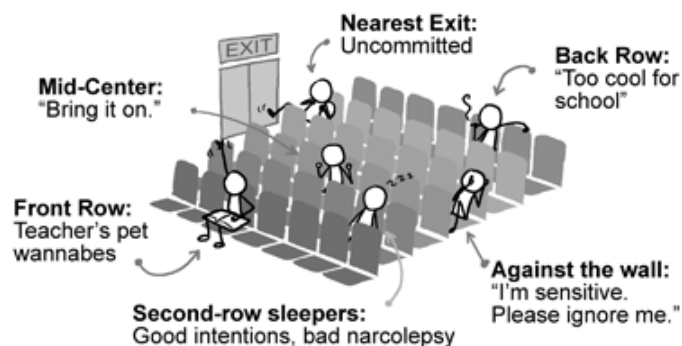
**Academic Dishonesty:** All course work is to be done independently. We are all very fortunate to have the Honor System here at Southwestern. In general, professors establish ground rules for acceptable collaboration or rules for exams, and students follow those rules. You must write out and sign the *honor pledge* on all individual work to be graded. The wording is as follows:

**"I have acted with honesty & integrity in producing this work & am unaware of anyone who has not."**

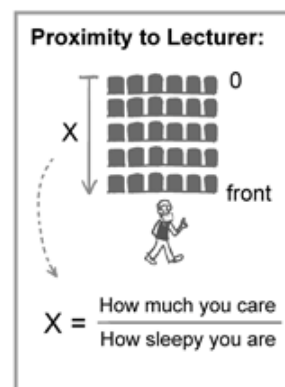
Your signature is also required. Please take responsibility for taking care of this; I will not chase you down if you forgot the pledge. On electronic submissions, you must have it on your submission. For quizzes, you must answer the T/F question for your work to count. By matriculating at this university, each of you has agreed to uphold this wonderful tradition. If you are unclear on the concept of plagiarism, come talk to me. When in doubt, paraphrase and cite using Name and Year methods (Burks 2005). Any perceived impropriety will be discussed with the student and then the appropriate action pursued through the Student Judiciary system.

**WHERE YOU SIT IN CLASS/SEMINAR**

And what it says about you:



WWW.PHDCOMICS.COM



Your evaluation will be based on 6 components: 1) Reading Quizzes; 2) Individual Species Presentation 3) Individual Habitat Presentation; 4) Exams; 5) Biodiversity Lab; and 6) Your Log.

A. Take at home on-line (i.e. using Moodle) reading quizzes 12 quizzes but only 11 count = 110 points or 18.33% of total	10 points
B. Species Presentation - 5 minute oral PowerPoint 35 points from rubric; 10 points for summary; 7.5% of total	45 points
C. Habitat Presentation - 5 minute oral PowerPoint 35 points from rubric; 10 points for summary; 7.5% of total	45 points
D. Exams – 3 exams; mix of MC, short answer & essay 80 points each; 40% of total	240 points
E. Biodiversity lab (Southwick) 25% of total	150 points
F. Studying Log 1.67% of total	10 points

**A. Done on-line, at home Reading Quizzes (10 pts x 11) 110 points**

Careful reading helps students grasp important vocabulary and concepts before they receive more attention in lecture. Highlighting text generally does not work for most students. I strongly advise taking short notes while reading to help cement the terms and ideas in place. Biodiversity covers a substantial amount of material in a short period of time. Even at the “survey” level, much of this material appears new to students because it was not emphasized in high school curricula.

To assure that students keep up with the reading, about 20% of your grade will reward your efforts outside of class. Prior to coming to class, students will complete a Reading Quiz (10 points) using the on-line application Moodle. The guidelines are as follows:

To access Moodle, go to [lms.southwestern.edu](http://lms.southwestern.edu)

1. Login with UserID (full email) and password
  2. Choose Course from top left and you should see “Biodiversity Fall 2011”
  3. Click on that course
  4. Find the Quiz associated with the day of lecture:
- Quizzes will be “turned on” starting at 4 p.m. on the class day preceding the topic. This allows for approximately a 40-hour window in which to take the quiz.
  - Quizzes will be “turned off” at 10 a.m. the day that they are due.
  - Make-up quizzes are not possible. If you forget to take it, then you must use your enrichment points to substitute. The lowest one of the 12 quizzes will be dropped from your grade.
  - The quizzes will not be actually timed. However, each attempt should take you ~ 10 minutes.
  - No materials are to be used while taking any quiz.
  - *Assessment*: Moodle will automatically grade the quiz and record your score in the Gradebook function.

- To encourage learning versus memorizing, students may elect to take each quiz 2 times:
  - Moodle will record the average of the 2 scores:
  - There will be 12 quiz opportunities.
  - You may review your answers to each of the questions to discover what you answered correctly versus incorrectly. Correct answers will not appear on the quiz but you are allowed to look them up between submissions.
- If you choose to take the quiz twice, a period of 6 hours must elapse. You are on your honor to adhere to this condition. I recommend the night before class and the morning of class.
- Spelling counts on Moodle. If you spell something incorrectly, you can retake the Quiz. I cannot anticipate all of the spelling errors that could result.
- Make sure you have answered all the questions before you submit.
- We will allow time to review any questions on the quiz at the beginning of class.
- Again, although we hope that this goes smoothly, there may be some start-up problems. Any problems with the on-line Moodle system should be reported to Dr. Burks immediately via email ([burksr@southwestern.edu](mailto:burksr@southwestern.edu)).
- You must answer the final True/False question for credit.

**This True/False question will appear at the end of each quiz (no actual credit awarded):**

"On my honor, I have completed this on-line quiz without aid of any materials, individuals or prior knowledge. In addition, I have not witnessed academic dishonesty by any of my peers. If this is my 2nd submission, it is also on my honor that I have executed this quiz within the time considerations listed in the Biodiversity syllabus. I acknowledge that my quiz will not count if I do not complete this question. If I answer False to this question, I know that I should immediately come and discuss the matter with Dr. Burks."

**B. & C. 5 minute Species or Habitat Presentation**

**45 points**

During the actual mini-course time slot, we will reserve 3 days for species presentations. This exercise is designed to enhance your knowledge about individual species, to provide a break in the lecture format, and to give you an opportunity to practice presentation skills. Students will sign up to profile a species (from a pre-approved list) near the beginning of the semester – first come, first serve. You will receive a presentation day by random. You can switch with willing others but there must be an even number of participants per day. Each student will prepare a PowerPoint presentation (up to 5 minutes) highlighting his/her species:

- More extensive materials will be posted for this assignment on Moodle. The basics include:
  - The PP should conform to guidelines given in class with a maximum of 8 slides and no longer than 4½ minutes to include some time for questions).
  - Students should turn in a 2-3 paragraphy summary of their species (with citations) and a handout with slides minimized.
  - At least two primary literature referenced must be included.
  - Presentations are due at 8 a.m. the morning of your presentation in the assignment WINDOW of MOODL so I can load them on the computer prior to class.
  - Evaluation will be based on the CCLI developed rubric.

**D. Exams**

**3 x 80 = 240 points**

You will be given 3 exams during the mini-course. The first will be given at night (6 p.m. – 8 p.m.). If this time conflicts with your schedule (note that official games count but athletic practices do not qualify as a conflict), please let me know and other arrangements can be made. The other 2 will likely be available in a Take Home or On-line Format. I will be available for questions during exam time but you are **ON YOUR HONOR** to adhere to these guidelines:

1. **No materials or assistance** are allowed while you take the exam.
2. You must take the exam in one sitting (bathroom breaks not included).
3. A maximum of 2 hours is allowed for each exam, although each exam should be able to be completed in 1-1½ hours.

Each exam is worth 80 points and will contain 26 multiple choice, vocabulary or matching (26 points), 3 interpretation questions (choose 2; 12 points), 8 short answers (choose 6) about lecture material (30 points) and 2 essays (choose 1; 12 points). Exams will be graded as quickly as possible and reviewed in class. The same exam will be given as a make-up, only in extreme circumstances. At Review "Brain Drain" sessions, you will have the opportunity to write exam questions. **Students are strongly encouraged to submit their own questions prior to the exam.** *Select questions will appear on the exam, although edits are possible.* The Third and Final Exam will be similar in format to previous exams with some cumulative material.

### **Oral Re-evaluation Option:**

If a student believes that he/she did much more poorly on an exam than expected (this does not mean a B or B+), then the student can talk to me about the possibility of an oral re-evaluation in which I will pose 2-3 questions for the student to answer. If the request is granted and the re-evaluation successful, then the exam score may be raised a letter grade or to the minimal passing grade. This option is only available once.

### **E. Biodiversity Lab**

**3 x 80 = 240 points**

**All labs must be completed in order to complete this course.** Due to space restrictions, you **MUST** attend lab on your scheduled day. Ms. Linda Southwick serves as your lab instructor and will provide you with the lab information and schedule. She will also provide me with your lab grades (out of 150 points). You will receive a single grade for both efforts. Lab grades tend to correlate with time and effort spent in lab. Do not be tempted to rush & catch-up later. You must complete both the lecture course and the lab course with a C- or better to enroll in upper level biology courses.

### **F. Activity Log**

**10 points**

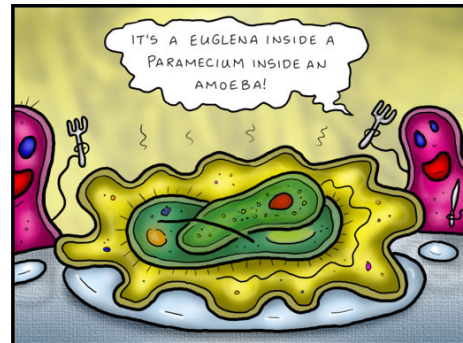
You may earn up to **10 points** by keeping a log of the time that you spend working on Biodiversity class. You can load them into Moodle. You should keep an electronic log (Word Document that can be pasted into email) that includes the date, start and end times, total time and activity. Routine activities include reading, quiz taking, studying and working on projects. Try and submit logs every 2 weeks.

### **Other Policies**

**Optional Review Sessions:** I will hold these throughout the semester at various times to accommodate different schedules. At these review sessions, we will 1) answer any questions you may have about material; 2) brainstorm about creating good exam questions. New material will not be covered. Pay attention for announced sessions.

**Late Work:** Late begins 1-hour after the end of class and is generally unacceptable (except quizzes). 20% penalty will be assessed per day.

### **DOCTOR FUN**



The Tiniest Turducken

29 Nov 2004

Copyright © 2004 David Farley, d-farley@biblio.org  
<http://biblio.org/Dave/drfun.html>  
 This cartoon is made available on the Internet for personal viewing only. Opinions expressed herein are solely those of the author.

**Email:**

I am an “e-ddict” and love to send and receive email. I will send email regarding important class messages & links that I think are appropriate. If I get too annoying, make a filter. But, get in the habit of checking. All official announcement will work through Moodle.

**Food/Beverage in Class:**

I do not mind if you “snack” during class with the limit that your food or beverage must not make noticeable noise or attract attention (i.e. avoid potato chips, slurping straws, applying cream cheese to bagels, etc...).

**Cell Phones:**

Unless you want me to answer it when it rings, please turn your cell phone off (this does not mean vibrate). Exception: If you have a family or personal emergency that requires it on, then fine. If it rings, please leave the room as quickly and quietly as possible.

**Laptops/PDAs/IPads, etc...:**

If you wish to use electronic devices to take notes and follow the slides, then no problem. If discovered searching or emailing during class, students will be asked to leave.

**In between 10 & 11 am MWF:**

As the two sections of Biodiversity meet in different rooms, I will not have time to solve problems or discuss issues between classes because I will need time to log on and off of the computers. Please send me an email or make an appointment.

Good grades they  
with your work in

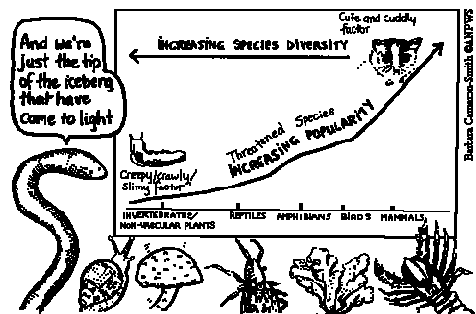
After reading the syllabus, please do the following:

**Mark important dates on calendars**

Exams & Drop Dates  
Presentation days

**Make sure you can login to Moodle****Fill out the syllabus check on Moodle that...**

1. You have read the syllabus and understand the class expectations.
2. The expectations for my success in Biodiversity are abundantly clear.
3. I know that I can make an appointment with Dr. Burks if times conflict.
4. I asked all the questions I had about the syllabus.
5. I will *first* consult the syllabus when I have a question about an assignment. If the answer is not to be found, then I will ask Dr. Burks.
6. I understand the option of “oral re-evaluation” regarding exams.



## Oral Communication Rubric

## Modified from the AAC&amp;U VALUE Rubric by The Network of Conservation Educators &amp; Practitioners (NCEP)

Oral communication involves a prepared, purposeful presentation designed to increase knowledge, to foster understanding or to promote change in the listeners' attitudes, values, beliefs, or behaviors. Levels of achievement (1-4) range from **Beginning** to **Exemplary**.

	1	2	3	4
<b>Organization</b> (cohesiveness, flow, transitions)	Presentation organization not evident and presentation hard to follow.	Presentation reasonably organized, but not easy to follow. Several ideas seemed out of place or irrelevant.	Presentation clearly organized, easy to follow. One or two ideas seemed out of place or irrelevant to the question.	Logical, clear, easy to follow presentation with a specific introduction and conclusion, sequenced material within the body and clear transitions. Presentation entailed cohesive information.
<b>Delivery Techniques and Language</b> (posture, tone, volume, gesture, eye contact, and vocal expressiveness)	Delivery techniques decreased understanding of the presentation. Speaker appeared uncomfortable. Language inappropriate for the audience. Volume generally too quiet or speaker could not be heard.	Delivery techniques made presentation understandable, but speaker appeared uncertain. On some occasions, speaker used inappropriate language. Volume sometimes too quiet.	Delivery techniques made the presentation interesting and speaker appeared comfortable. Appropriate language and volume used.	Delivery techniques made the presentation compelling and speaker appeared polished and confident. Appropriate language and volume used for the audience. Carefully chosen words help connect with audience.
<b>Content and Supporting Evidence</b> (explanations, examples, illustrations, figures, analogies, quotations, etc.)	Presentation did not include adequate evidence supporting the presenter's arguments or included irrelevant evidence. Student did not cite most evidence properly.	Presentation included relevant supporting evidence, but evidence only partially supported arguments. Proper citation format did not accompany supporting evidence.	Presentation included sufficient and relevant supporting evidence each argument. Most supporting evidence included proper citation, but limited variety of sources used.	Included a variety of types of relevant supporting evidence that were properly cited for most or all arguments.
<b>Student Comprehension</b> (understanding of subject, explanation of evidence)	Student displayed minimal understanding of his/her subject, did not explain supporting evidence sufficiently and failed to leave audience with synthetic take-home message. Does not answer ?s.	Student displayed adequate understanding of his/her subject, attempted to explain supporting evidence and provided audience with take-home message, although message lacked synthesis. Missteps on answering ?s.	Student displayed comprehensive understanding of his/her subject, did a clear job of explaining supporting evidence and connected audience to clear take-home message. Answers questions well	Student displayed excellent and synthetic understanding of his/her subject, intentionally explained supporting evidence and ended with a compelling, precisely phrased and memorable take-home message. Adds info to question.
<b>Visual Aids and Text</b> (properly formatted images and diagrams, visually pleasing and error-free presentation slides)	Presentation included errors or confusing images or diagrams which lacked relevance to topic. Overall, such inclusion detracted from presentation clarity. Excessive, cluttered, hard to read or irrelevant text appeared on most slides.	Presentation included somewhat confusing images or diagrams that may have had errors or lacked clear relevance. Excessive, cluttered, hard to read or irrelevant text appeared on more than 2 slides. Overall errors detracted from presentation clarity.	Presentation included largely clear images and diagrams with 1-2 exceptions. Slides appeared attractive and uncluttered.	Presentation included clear, visually pleasing images and diagrams used to enhance understanding of the topic or convey information more effectively. Slides had the appropriate amount of text and precise and relevant information.
<b>Timing</b> (effective use, pace, appropriate emphasis on the subjects)	Time not used effectively. Presentation lasted substantially too long or ended noticeably too short. Students talked too fast or too slow through talk.	Presentation went slightly over the allotted time. Time distribution among sections inappropriate in relation to section importance. Students talked too fast or too slow during most sections.	Student used time well and did not exceed the allotted amount. However, time distribution for sections could improve. Students talked too fast or too slow part of the time but spoke at a generally appropriate pace.	Student used time well by allocating appropriate and sufficient time to each part of the presentation. Student demonstrated an appropriate, moderate pace effectively in all sections.

**Modified from the AAC&U VALUE Rubric by The Network of Conservation Educators & Practitioners (NCEP)**

The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

*The type of oral communication most likely to be included in a collection of student work is an oral presentation and therefore is the focus for the application of this rubric.*

**Definition**

Quality oral communication embodies a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors.

**Framing Language**

Oral communication takes many forms. This rubric is specifically designed to evaluate oral presentations of a single speaker at a time and is best applied to live or video-recorded presentations. For panel presentations or group presentations, it is recommended that each speaker be evaluated separately. This rubric best applies to presentations of sufficient length such that a central message is conveyed, supported by one or more forms of supporting materials and includes a purposeful organization. An oral answer to a single question not designed to be structured into a presentation does not readily apply to this rubric.

**Glossary**

*The definitions that follow were developed to clarify terms and concepts used in this rubric only.*

- **Organization:** The grouping and sequencing of ideas and supporting material in a presentation reflecting cohesiveness. An organizational pattern that supports the effectiveness of a presentation typically includes an introduction, one or more identifiable sections in the body of the speech, and a conclusion. An organizational pattern that enhances the effectiveness of the presentation reflects a purposeful choice among possible alternatives, such as a chronological pattern, a problem-solution pattern, an analysis-of-parts pattern, etc., that makes the content of the presentation easier to follow and more likely to accomplish its purpose.
- **Delivery Techniques:** Posture, tone, volume, gesture, eye contact, and vocal expressiveness. Delivery techniques enhance the effectiveness of the presentation when the speaker stands and moves with authority, looks more often at the audience than at his/her speaking materials/notes, engages individuals and not just the direction of the audience when looking at the audience, does not speak towards the screen for long periods of time, uses the voice expressively (generally this means not reading notes), and uses appropriate language and volume for the audience. Use few vocal fillers ("um," "uh," "like," "you know," etc.).
- **Language:** Vocabulary, terminology, and sentence structure. Language that supports the effectiveness of a presentation is appropriate to the topic and audience, grammatical, clear, spells out acronyms the first time they are used, and free from bias. Language that enhances the effectiveness of a presentation is also vivid, imaginative, and expressive.
- **Content & Supporting Evidence:** Explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities, and other kinds of information or analysis that supports the principal ideas of the presentation. Supporting material is generally credible when it is relevant and derived from reliable and appropriate sources (properly cited.) Supporting material is highly credible when it is also vivid and varied across the types listed above (e.g., a mix of examples, statistics, and references to authorities). Supporting material may also serve the purpose of establishing the speakers credibility.
- **Student Comprehension:** A synthetic understanding of the subject, with intentional explanation supporting evidence, ending with a compelling, precisely phrased and memorable take home message. A clear take home message (or the main point/thesis/"bottom line of a presentation) is easy to identify; a compelling take home message is also vivid and memorable.
- **Visual Aids and Text:** Properly formatted images and diagrams, visually pleasing and error-free presentation slides used to enhance understanding of the topic or convey information more effectively.
- **Timing:** Allocation of time to each part of the presentation, adequate pace, and emphasis on the subjects.

Class#	Wk	Day	Topic	PP Slides	RQ Due	Reading Due	Notes – Add Drop Dates
1	1	Mon 8/22	Introduction to Biodiversity & Conservation	None			
2	1	Wed 8/24	Biophilia and Conservation	Biophilia	#1 Conservation	B: Chapter 60 ALL Elwood & Foster 2004 Wilson's <i>Biophilia</i> Ch1	
3	1	Fri 8/26	Evolution and Natural Selection	Evolution	#2 Darwin	B: Chapter 23 ALL Darwin Excerpts Wallace Excerpts	
4	2	Mon 8/29	Adaptation, Speciation and Biological Hotspots	Speciation	#3 Adaptation	B: Chapter 25 ALL	Possibility of Darwin Video
5	2	Wed 8/31	Bacteria and Archaea	Bacteria	#4 Bacteria	B: 22.3: pgs 459-466 B: Sections 26.1.; 26.2 & 26.5 B: Chapter 27 ALL	
6	2	Fri 9/2	Protists I	Protists	#5 Protist	B: Chapter 28 ALL	<i>Protist summary given</i>
	<b>3</b>	<b>Mon 9/5</b>	<b>No class – LABOR DAY</b>				
7	3	Wed 9/7	Plant-like Protists & Fungus	Fungus	#6 Fungus	B: Chapter 31 ALL	
		<b>THURS 9/8</b>	<b>Biodiversity Exam 1 – 7-9 pm</b>				Exam does not include W lect
8	3	Fri 9/9	Species Presentations 1				
9	4	Mon 9/12	Species Presentations 2				
10	4	Wed 9/14	Species Presentations 3				
11	4	Fri 9/16	Plant Function & Mosses	Plant	#7 Plant	B: 8.1: pgs 157-159 B: 8.4: & 8.5: pgs 168-175 B: Chapter 29 ALL	
12	5	Mon 9/19	Gymnosperms & Angiosperms		#8 Tree	B: Chapter 30 ALL Excerpt <i>The Orchid Thief</i>	
13	5	Wed 9/21	Special Teaching Activity				
		<b>THURS 9/22</b>	<b>Biodiversity Exam 2</b>				
14	5	Fri 9/23	Animals 1: Protostomes	Animals1	#9 Animals A	B: Chapter 32 ALL	
	<b>6</b>	<b>LAB</b>	<b>Habitat Presentations - Last hour of labs</b>				
15	6	Mon 9/26	Animals 2: Protostomes: Lophotrochozoa	Animals2	#10 Animals B	B: 33.1 – 33.3 pgs 666-381 Reading: <i>A Can of Worms</i>	
16	6	Wed 9/28	Animals 2 continued...				
17	6	Fri 9/30	Animals 3: Protostomes: Ecdysozoans	Animals3	#11 Animals C	B: 33.4 pgs 681-690	Pollination?
	<b>7</b>	<b>LAB</b>	<b>Habitat Presentations - Last hour of labs</b>				
18	7	Mon 10/3	Animals 3 continued...			Reading: Anthill <i>Excerpt</i>	
19	7	Wed 10/5	Animals 4: Deuterostomes	Animals4	12 Animals D	B: 33.5 691-697	
20	7	Fri 10/7	Review and Course Evaluations				All enrichment due
	<b>8</b>	<b>Mon 10/10</b>	<b>End of Round 1 – Fall Break</b>				
	8	Wed 10/12	Biodiversity Take Home Final Due				