

BIOL 472.02 – Case Studies in Human Ecology Seminar, Spring 2019

Web: <http://herbarium.millersville.edu/hardy.php>

Location & Time: Roddy 258, F 1:00-1:50

Instructor Dr. Christopher Hardy

Office: Roddy 271

Tel: 871-4317

Office Hrs: T 1-2, W 10-12, F 2-4

Course Quote:

"When we try to pick out anything by itself, we find it hitched to everything else in the Universe."

John Muir, Naturalist, Chapter 6 in *My First Summer in the Sierra* (1911)

Objectives

1. Use the primary literature for fact discovery and synthetic understanding of the basis for ecological problems that affect and are, to varying extents, caused by humans.
2. Use the primary literature and peer discussions to elucidate the complex interactions among particular species that underlie these problems.
3. Acquire, through practice, the skills to lead your peers in academic discussions of such topics.

Schedule

<u>Lecture Topic</u>	<u>Facilitator & Reading</u>
Week of Jan 21: Introduction	
Week of Jan 28: ALS-PDC Disease in Guam.	Facilitator: Dr. Hardy Read: Cox & Sacks. 2002. <i>Neurology</i> 58: 956-959
Week of Feb 04: ALS-PDC Disease in Guam follow-up studies	Facilitator: TBA Read: TBA
Week of Feb 11: ALS-PDC Disease in Guam follow-up studies	Facilitator: TBA Read: TBA
Week of Feb 18: Lyme Disease	Facilitator: TBA Read: Pfeiffer. 2018. Introduction & Chapter 1, <i>Lyme</i> .
Week of Feb 25: Lyme Disease & Habitat Fragmentation	Facilitator: TBA Read: TBA
Week of Mar 04: Lyme Disease & Climate Change	Facilitator: TBA Read: TBA
Week of Mar 11: Spring Break	Spring Break
Week of Mar 18: Pest & Invasive Species Ecology & Impacts	Facilitator: TBA Read: Pimentel et al. 2005. <i>Ecological Economics</i> 52: 273-288.
Week of Mar 25: Chestnut Blight History & Impact	Facilitator: TBA Read: TBA
Week of Apr 01: Spotted Lantern Fly History & Impact	Facilitator: TBA Read: TBA
Week of Apr 08: Dutch Elm Disease History & Impact	Facilitator: TBA Read: TBA
Week of Apr 15: Dogwood Anthracnose, Hemlock Woolly Adelgid, or Emerald Ash Borer	Facilitator: TBA Read: TBA
Week of Apr 22: Algal Blooms & Their Impacts: Dead Zones	Facilitator: TBA Read: TBA
Week of Apr 29: Algal Blooms & Their Impacts: Toxic Algal Blooms	Facilitator: TBA Read: TBA
Week of May 06: Final Exam: Wed, May 8, 10:15-12:15	Final Exam

Grading A point system is employed. Final letter grades are determined based on the percentage of total possible points your earn as follows (A = 93-100%; A- = 90-92; B+ = 87-89; B = 83-86; B- = 80-82; C+ = 77-79; C = 73-76; C- = 70-72; D+ = 67-69; D = 63-66; D- = 60-62; F = below 60%).

Weekly Article Submissions (via email the day before class; 5pts ea)	60
Discussion Facilitator	20
Final Exam	50
<u>Attendance (up to 5 pts deducted for each day late or absent)</u>	<u>60</u>
Total points possible	190

*More information on the Article Submissions, Discussion Facilitation, and Final Exam are below.

Weekly Article Submissions By the close (11:59 pm) of each Thursday before a Friday class meeting, you must submit via email to Dr. Hardy (christopher.hardy[at]millersville.edu) the full bibliography of a peer-reviewed article or book chapter that you feel is relevant to the upcoming topic for the next week. Submissions receiving full credit are those that: 1) are not copied or plagiarized from another student’s submission, 2) suggest an article that is directly relevant to the next week’s topic, is from the primary scientific literature, is accessible as a PDF immediately from a University computer or, if it is not, its PDF is attached with your submission, and 3) conform to the formal email submission format modeled below. I will spend the Friday morning that follows reviewing your thoughtful submissions and will announce in class that day which one I have chosen for us to read and discuss for the following week. Follow the following submission format:

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Hi Dr. Hardy,
Please consider for next week’s discussion the following article: Cox PA and Sacks OW. 2002. Cycad neurotoxins, consumption of flying foxes, and ALS-PDC disease in Guam. *Neurology* 58: 956-959.

It seems relevant to the topic of ALS-PDC in Guam and I have confirmed that it is accessible as a PDF directly from an MU computer.

Thank you,
YourFirstName
”

Discussion Facilitation Each student is to come prepared to class having read the assigned reading for that day and being prepared to lead, moderate, or otherwise “facilitate” an interactive, class-driven, 40 minute discussion of the content, conclusions and methods presented by the article and broader topic. Dr. Hardy will randomly pick one or two students to act as facilitators each class period. If two facilitators are chosen, then they will alternate in their efforts as a “tag-team.” Your 20 pt “Discussion Facilitator” score will depend on how well you do as a facilitator. You do not have to hand in anything to professor. After your first class as facilitator, you will not be graded again as facilitator, although you may be picked again to facilitate as the weeks come. A good facilitator uses his or her notes made while reading the article to get the class moving in a discussion in the following sequence:

- 1) What is the problem addressed and where was the problem or study located? (usually given in the article Introduction),
- 2) Had there been previous research or speculation into the cause of the problem? What was this previous work? (usually given in the article Introduction and sometimes reviewed in the Discussion; also, we would know about previous work if we had read such articles in earlier weeks),
- 3) What new information or new angle does the current article bring to an understanding of the topic? (usually foreshadowed towards the end of the Introduction and then developed further in succeeding sections of the article),
- 4) What are the main findings and conclusions of the article and how do each data table and figure support those conclusions?
- 5) Are there any areas in the article that you or the class did not understand?
- 6) Are there any directions for future research that the authors have suggested or the class could suggest?

Final Exam A 35-to-50-question, 50-point, mostly if not all multiple-choice exam testing your retention of the conceptual and factual knowledge acquired on each of the weekly topics.

Special Needs Please let me know if you have any disabilities or special needs that might affect your performance in this course. I will do my best to accommodate you.

Attendance Attendance is required.

Honesty Each student is expected to adhere to the Millersville University's Academic Honesty Policy. Violation of it results in a zero for the assignment. The policy can be found in the Student Handbook and the Academic Honesty and Dishonesty brochure (<http://www.millersville.edu/catalogs/undergraduate/index.pdf>)

Title IX Millersville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment, comply with Title IX of the Education Amendments of 1972, 20 U.S.C. §1681, et seq., and act in accordance with guidance from the Office for Civil Rights, the University requires faculty members to report to the University's Title IX Coordinator incidents of sexual violence shared by students. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Faculty members are obligated to report to the person designated in the University Protection of Minors policy incidents of sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred.

Information regarding the reporting of sexual violence, and the resources that are available to victims of sexual violence, is available at <http://www.millersville.edu/sexualviolence/index.php>.