Course Syllabus
BIO 6021 - Readings in Biology: *Conservation Ecology*
Fall 2021

Catalog Course Description: Readings in Biology BIO 6021 (1 unit)
'Readings in Biology' focuses on the reading and discussion of research articles and other sources of material on a particular topic in biology. This course focuses on selected topics in conservation ecology: conservation ethics, conservation genetics, species resurrection ("DeExtinction"), conservation endocrinology, physiological ecology, and conservation behavior. This course may be repeated for up to four units, but the repeated offering must cover different content. Credit/No Credit
[To pass the course, students must earn at least a B minus, or greater than 87%.]

Instructor:	Dr. Mike Mooring Rohr Science Room 128 Telephone: (619) 849-2719 E-mail: mmooring@pointloma.edu	*Office hours:* Make a an appointment *Zoom or in person*
Meets:	Alternate Tuesdays from 5:00 – 6:30 PM	**Online: Mooring website**
Classroom:	Latter Hall 11 Conference Room (downstairs)	

Student Learning Outcomes:
Given a journal article to read, you will be able to:
- State the overall relevance of the paper to the field of conservation ecology.
- Identify the specific problem or question addressed by the paper.
- Discuss the important claims (conclusions) made by the authors.
- Identify the key supporting evidence for the authors' claims.
- Explain how/if the evidence supports the claims made by the authors.
- Understand the key methods used and describe them in general terms.

In addition, in the course of this class you will gain an understanding of the specific topics covered by the readings. You should be able to explain how ethics, genetics, reproductive technology, endocrinology, physiology, and behavior may contribute to the conservation of biodiversity and ecosystem health.

Required and Recommended Study Resources
We will read six journal articles over the semester; all are available on the Canvas site. Additional resources to support the reading will be on Canvas as well.

PLNU SPIRITUAL CARE

Mission Valley and Balboa Campuses:

PLNU strives to be a place where you grow as a whole person. To this end, we provide resources for our Graduate students to encounter God and grow in their Christian faith. We have an onsite chaplain, Rev. Gordon Wong, at the Mission Valley (MV) campus to service Graduate students at the Mission Valley and Balboa Campuses. Rev. Gordon Wong is available during class break times across the week. If you have questions for, desire to meet or share a prayer request with Rev. Wong, you can contact him directly at mvchaplain@pointloma.edu or gordonwong@pointloma.edu. Rev. Wong's cell number is 808-429-1129 if you need a more immediate response.

In addition, on the MV campus there is a prayer chapel on the third floor, which is open for use as a space set apart for quiet reflection and prayer.

Course Credit Hour Information

This class meets the PLNU credit hour policy for a 1-unit class delivered over 15 weeks (~38 hrs). For each reading, you should expect to spend 2 hours reading the article and 1 hour answering the guided questions. We will meet 8 times for 1.5 hours each, for a total face-to-face time of 12 hours. Our in-person meeting time will involve a discussion of each paper; each of you will alternate in leading one of the discussions. Thus, each one of you will spend about one hour preparing discussion questions during the semester. Some additional assignments will be done online through Canvas.

Assessment and Grading Criteria

Letter	Percent	Letter	Percent
A	90	C	70
A-	88	C-	68
B+	86	D+	66
B	80	D	60
B-	78	D-	58
C+	76	F	<58

Assignment	Points
Journal Article Guided Questions: six @ 10 pts	60
Participation in discussions: six @ 5 pts	30
Discussion leader preparation	30
Activities and quizzes	30
Attendance participation points	30
TOTAL	**180 pts**

<u>This is the 'journal article analysis' portion of the MS Biology exam</u>

Hopefully, this course will help prepare you for this section!

1. State the overall relevance of the paper to the field - How does this paper relate to larger issues in the field of study (marine biology, cell biology, etc.)?

2. State the specific problem/question addressed in the paper.

3. Identify two important claims made by the authors. A claim is a main argument and is generally made by the authors near the end of the paper. Some papers have several smaller conclusions that lead to main claims. This may or may not match the hypothesis that guided the research. A major claim is not speculation that the authors may mention; and the claims that you use for this exam must be supported in the assigned research paper, not in a paper cited by the authors. For each claim, do the following:

    a. For Claim #1, identify all the key supporting evidence (graphs, images, numerical values, etc.). This should be a minimum of 2 pieces of evidence, and may include substantially more. If a table or graph has a large amount of data, refer to specific areas, columns, or sections showing the relevant values, images, etc.

    b. Provide justification for Claim #1 by explaining how this evidence (answer #3a above) supports the authors' claim.

    c. In your own words, describe what each key method accomplishes and explain how it was useful in providing data to directly support Claim #1. Avoid any scientific jargon that might be used in the paper. Some papers report many different methods; include only those directly related to Claim #1.

PLNU INSTITUTIONAL POLICIES

PLNU Mission: To Teach ~ To Shape ~ To Send
Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

PLNU COPYRIGHT POLICY
Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY
Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See the Academic Honesty Policy in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY
PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

PLNU ATTENDANCE AND PARTICIPATION POLICY
Regular and punctual attendance at all synchronous class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions (virtual or face-to-face), the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. In some courses, a portion of the credit hour content will be delivered asynchronously and attendance will be determined by submitting the assignments by the posted due dates. See Academic Policies in the Graduate and Professional Studies Catalog. If absences exceed these limits but are due to university-excused health issues, an exception will be granted.

Class Meetings Readings in Conservation Ecology 2021

Date	Topic	Citation	Due
Sept 7	Introduction	Introduction to course and philosophy Getting to know each other Review of how to read a journal article Group activity	
Sept 21	Conservation Ethics	Krajick K (2006). The lost world of the Kihansi Toad. *Science* 311: 1230-1232. McCauley DJ (2006). Selling out on nature. *Nature* 443: 27-28. Maguire LA, Justus J (2008). Why intrinsic value is a poor basis for conservation decisions. *BioScience* 58: 910-911.	
Oct 5	Conservation Genetics	Lorenzana G. et al. (2020). Large-scale assessment of genetic diversity and population connectivity of Amazonian jaguars (*Panthera onca*) provides a baseline for their conservation and monitoring in fragmented landscapes. *Biological Conservation* 242:108417.	
Oct 19	De-Extinction	McCauley DJ et al. (2017). A mammoth undertaking: harnessing insight from functional ecology to shape de-extinction priority setting. *Functional Ecology* 31: 1003–1011.	
Nov 2	Conservation Endocrinology	Bhattacharjee S. et al. (2015). Glucocorticoid stress responses of reintroduced tigers in relation to anthropogenic disturbance in Sariska Tiger Reserve in India. *PLOS ONE* 10: 1-13.	
Nov 16	Physiological Ecology	Pagano et al. (2018). High-energy, high-fat lifestyle challenges an Arctic apex predator, the polar bear. *Science* 359: 568–572.	
Nov 30	Conservation Behavior	Cremona T, Spencer P, Shine R, Webb JK (2017). Avoiding the last supper. *Conservation Genetics* 18: 1475-1480. Indigo N, Smith J, Webb JK, Phillips B (2018). Not such silly sausages… *Austral Ecology* 43: 592–601.	