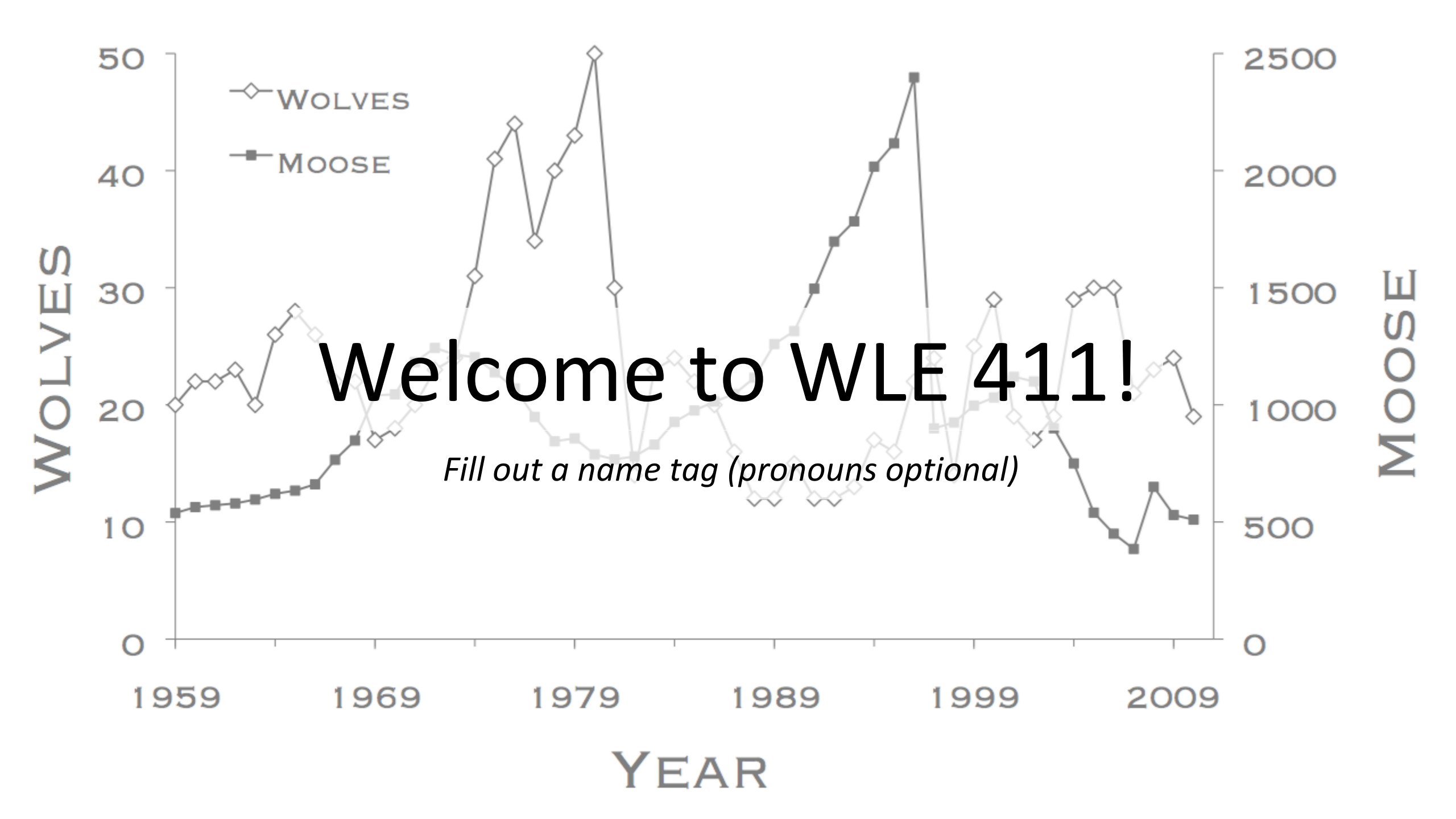
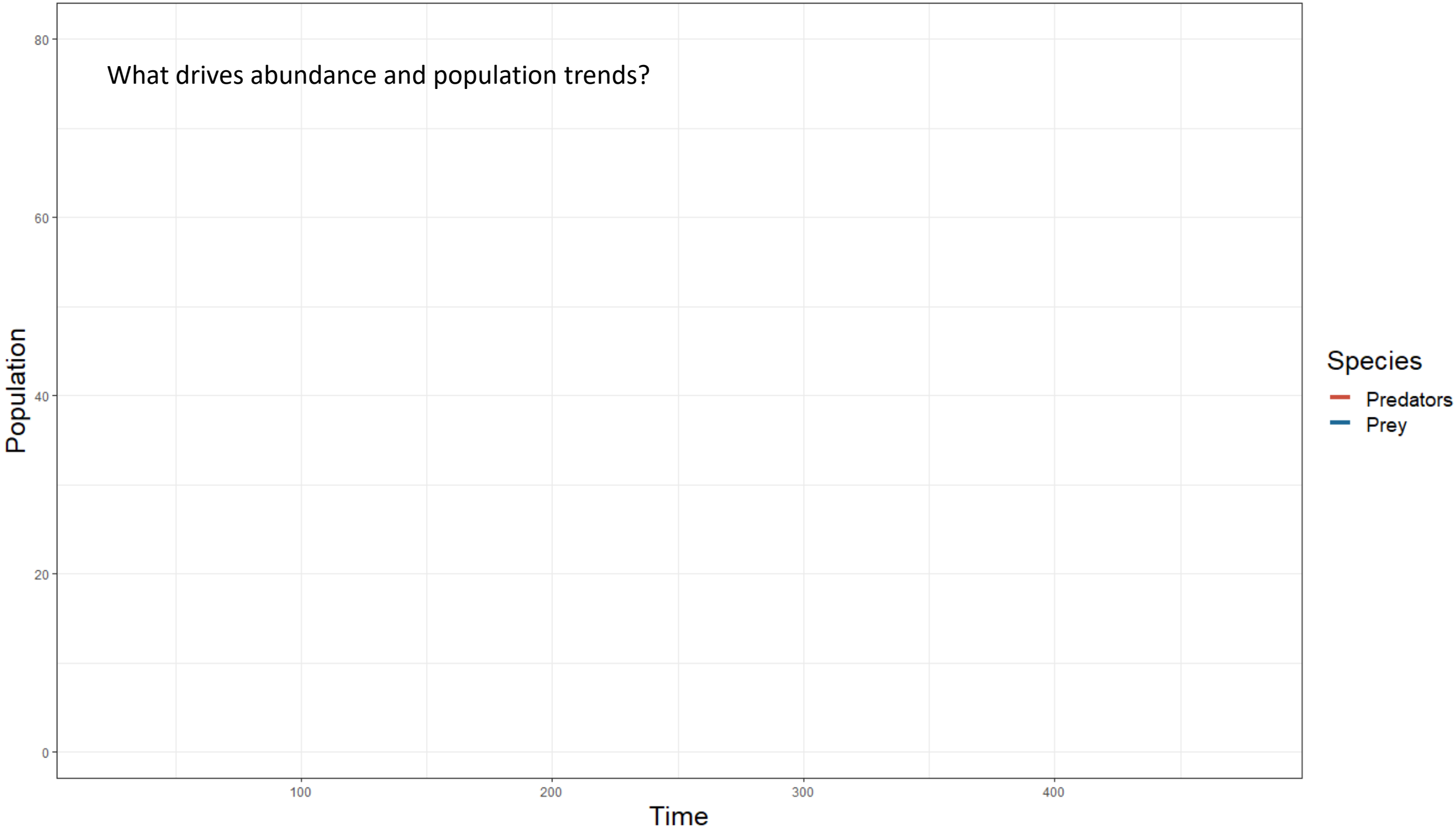


Welcome to WLE 411!

Fill out a name tag (pronouns optional)

What drives abundance and population trends?



Liam Berigan (he/him)

2013 – 2017

2017 – 2019

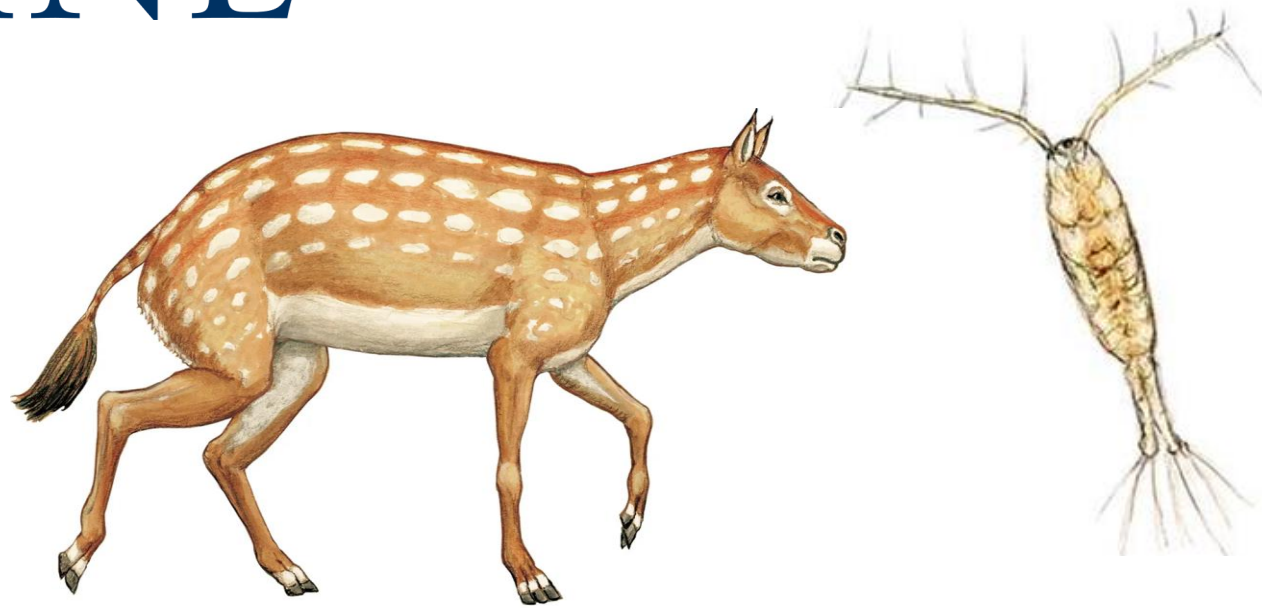
1865 THE UNIVERSITY OF MAINE

2020 – present

Marcos

J. Marcos Rodríguez

2016-2020



Learning objectives

1. Design wildlife field studies that are useful for population monitoring and analysis.
2. Apply quantitative methods to estimate animal abundance, survival, and population growth, and interpret the results of those analyses.
3. Have a greater familiarity with computer software commonly used for wildlife population analysis.
4. Critically assess others' work and provide constructive suggestions in these areas.

Lab structure

- 5 – 10 minute lecture at the beginning of lab
- Rest of the period- work through the lab manual
  - Support from peers and instructors

Attendance

- Honor system
- If absent:
  - Email Liam (preferably before)
  - Work through lab manual individually
  - Support through office hours

Office hours

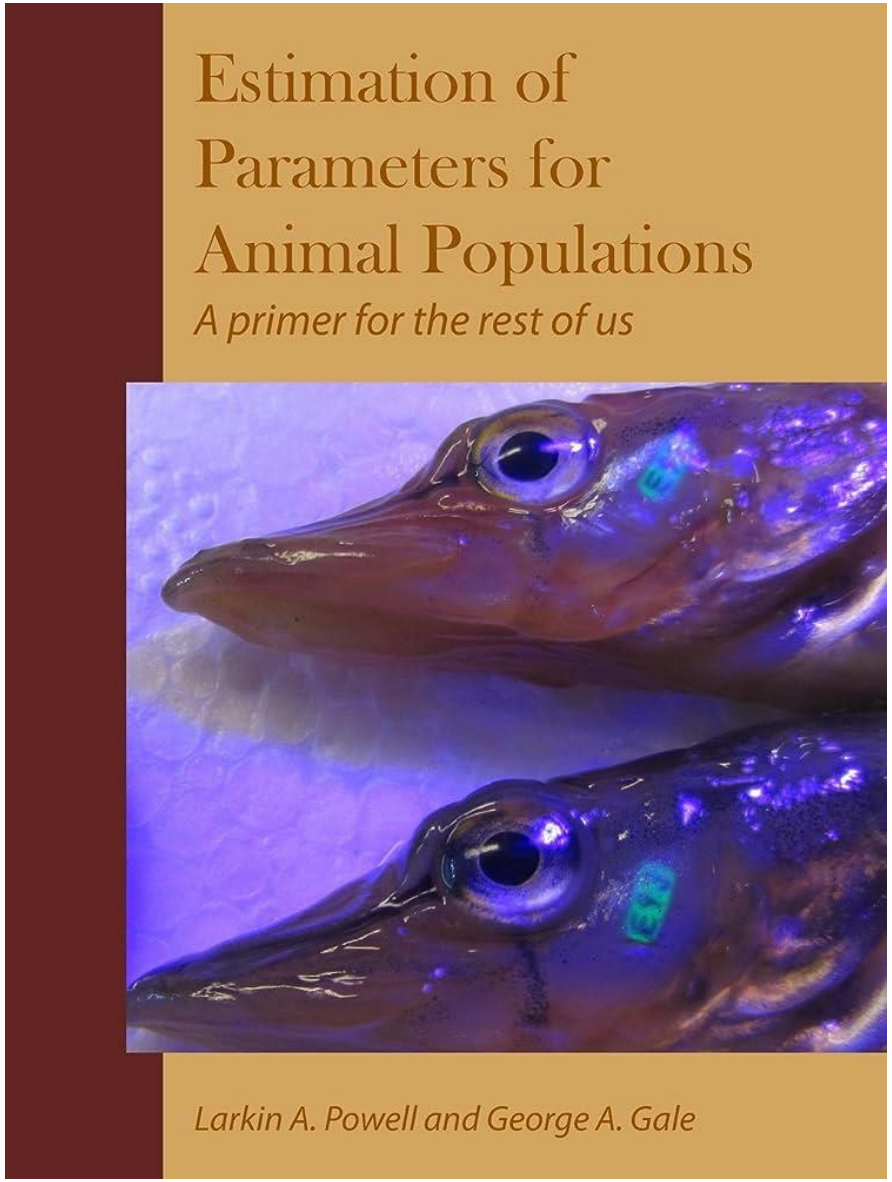
- Liam
  - Thursdays 1 to 2 pm, 232 Nutting
- Marcos
  - Wednesdays 9 to 10am, 220 Nutting
- Bring a laptop or USB drive if you're having code issues

Software

- Programs:
  - Microsoft Excel
  - R & RStudio
  - Program MARK
- Recommend using lab computers
  - Works on most personal PCs
  - MARK will not run on modern Macs

Reference text

- Estimation of Parameters for Animal Populations
  - Powell & Gale
  - Free online
- Weekly assignments in the syllabus
- The lab manual focuses on *how*, the reference text focuses on *why*



Brightspace

Grading

- 10 assignments, 15 points each
- Due at the beginning of the subsequent class
  - See Brightspace for dates
  - Late assignments receive penalties
- 2 revisions per semester (via email)
- Contact:
  - Liam for extensions
  - Marcos for grading questions, revisions

Accessibility

- Accommodations
  - liam.berigan@maine.edu
- Student Accessibility Services
  - um.sas@maine.edu
- Religious holidays
  - Email Liam if missing class
- Support services
  - umaine.edu/wellness

Academic honesty

Academic honesty is very important. It is dishonest to cheat on exams, to copy term papers, to submit papers written by another person, or generated by software or systems without the explicit approval of the instructor, to fake experimental results, or to copy or reword parts of books or articles into your own papers without appropriately citing the source. Students committing or aiding in any of these violations may be given failing grades for an assignment or for an entire course, at the discretion of the instructor. In addition to any academic action taken by an instructor, these violations are also subject to action under the University of Maine Student Conduct Code. The maximum possible sanction under the student conduct code is dismissal from the University. Please see the University of Maine System's Academic Integrity Policy listed in the Board Policy Manual as Policy 314: https://www.maine.edu/board-of-trustees/policy-manual/section-314/

Academic honesty

- Collaboration on assignments is encouraged
  - Asking questions, debugging code, etc.
- However, all submitted assignments should be unique
  - No copy-pasting your lab mate’s code

14 Course Schedule

Week	Dates	Topic	Reading
1	Aug 28 or Sep 1	Course Introduction and Computer Lab/Software Primer	None
2	Sep 4 or 8	No Lab (Labor Day)	None
3	Sep 11 or 15	Lab 1: Refresher on Lincoln-Peterson population estimation	Chapter 1, Article on Spreadsheet Basics
4	Sep 18 or 22	Lab 2: Exponential and logistic population growth	Chapter 2
5	Sep 25 or 29	Lab 2 (continued)	None
6	Oct 2 or 6	Lab 3: Time series analysis of population trends	Chapter 6
7	Oct 9 or 13	No Lab (Fall Break)	None
8	Oct 16 or 20	Lab 4: Probability, maximum likelihood, and model selection	Chapters 3, 4
9	Oct 23 or 27	Lab 5: Introduction to survival estimation in R	Chapter 6 and 7
10	Oct 30 or Nov 3	Lab 6: Known Fate 1	Chapter 10
11	Nov 6 or 10	No Lab (Veteran's Day)	None
12	Nov 13 or 17	Lab 7: Known Fate 2- Use of explanatory covariates	Chapter 9, review Chapter 6
13	Nov 20 or 24	No Lab (Thanksgiving Break)	None
14	Nov 27 or Dec 1	Lab 8: Stage-structured population models	Chapter 19
15	Dec 4 or 8	Lab 9: Distance sampling in Program R	None

[a] This schedule is subject to change at my discretion

[b] Chapters refer to the reference text (Powell & Gale)

Preface to WLE 411 Lab Manual

Erik Blomberg (edited by Matt Mensinger and Liam Berigan)

08/15/2023

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