Welcome to the class!

EFB 390: Wildlife Ecology and Management

Dr. Elie Gurarie

August 29, 2023

A bit about me:

Dr. Elie(zer) Gurarie (rhymes with *Smelly Ferrari*)

Quantitative Wildlife Ecologist 206 Illick | Office hours: Thursday, 3:30-4:30 (might change)

BS/BA - Physics | Languages

MS - Environmental Geosciences

Ph.D. - Quantitative Ecology and Resource Management

Employment: National Marine Mammal Laboratory, NOAA | University of Helsinki | University of Maryland | University of Wisconsin |

Consultant: USGS | USFWS | Great Lakes Fisheries Commission | Environment Climate Change Canada | Florida Fish and Wildlife Conservation Commission | Gov't of Northwest Territories | Gov't of Yukon | Wekweezhi Renewable Resources Board | Natural Resources Institute Finland

Research word cloud

Some wildlife ...

That I know-know

Caribou | Wolves | Steller sea lions | Northern fur seal | Pacific salmon

That I pretty much know Sea otters | Sea lamprey | Brown bear | White-tailed deer | Fisher | Coyote

That I have visited Ladoga ringed seal | Panda bear | Roe deer | Manatee | Southern three-banded armadillo

That I've seen the data for

Polar bear | Antarctic ice seals | Dall sheep | Mexican fish-eating bats | Asiatic Cheetah | Persian Leopard | Kestrel | Bowhead whales | more ...

Co-Instructors

Chloe Beaupré

Sydney Opel

This class is foundational

Necessarily more **broad** than **deep**, but should provide the **critical** and **reasoning** skills and **research skills** needed to succeed - in other wildlife courses and beyond.

According to Allen Rutberg, only a fraction of wildlife management is about biology.

"The rest is sorting out why people believe what they do," he said.

THE CONTROL OF NATURE NOVEMBER 15, 2021 ISSUE
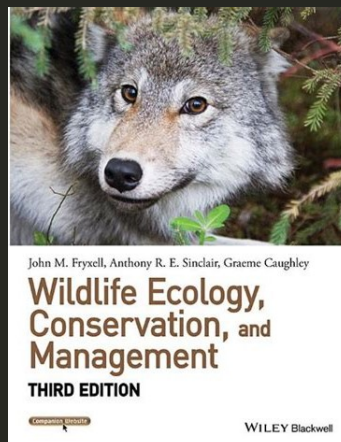
DEER WARS AND DEATH THREATS

- **Wildlife Ecology** is a super complex natural science.
- But the **science** is a relatively **small** part of **Wildlife Management** - which involves *society, culture, law, policy, governance, history* and all sorts of "human" stuff.

No required text

Any reading materials will be shared on Blackboard.

Fryxell | Sinclair | Caughley is a text I'll probably refer to / scan most frequently in (the first half) of class.

John M. Fryxell, Anthony R. E. Sinclair, Graeme Caughley

Wildlife Ecology, Conservation, and Management

THIRD EDITION

WILEY Blackwell

Arc of the class

1. Science

- **Fundamentals**
  - Deep history of human-wildlife interactions
- **Topics and Tools in Wildlife Ecology**
  - Abundance estimation and Sampling
  - Population Ecology + Interactions
  - Habitats
  - Behavior, space-use and movement
  - Physiology / Disease / other

2. Management

- **The North American Model of Wildlife Management**
  - What is the NAM? History, context, critiques
  - Role of harvest
  - Legal frameworks
- **Alternatives to the North American model.**
  - Indigenous perspectives*
  - Co-management*
  - European example*
  - South American example*
- **Special topics**
  - Role of zoos
  - Game bird management*
  - Fur-bearers*
  - Urban ecology*
  - Predators*
  - Adaptive management*

There will be lots of guest lecturers!

Especially in the latter half of the class.

These will expose you to broad and diverse set of experiences in the broad domain of wildlife ecology and management:

- role of Zoos
- Indigenous Nation co-management
- Role of hunting and harvest
- Waterfowl and birds
- Furbearers
- Wildlife law
- Dynamic management
- Marine mammals
- Disease
- adaptive management

Content Goals:

1. What do we need to know about wildlife

2. How do we collect and analyze data on wildlife?

3. What are philosophies and approaches to managing wildlife?

4. What is the historical context and how does the current state of **science / culture / economics /** and **politics** interact in the context of wildlife management and conservation.

Technical Goals

1. Learn to do research

You will be exposed to a lot of information, but **how do we know what we know**?

- Learning to do **research**, follow up on claims, read original sources. Separate *popular literature* from *"grey literature"* (very prominent in wildlife management) from *peer-reviewed literature*.
- You will build an **annotated bibliography** with a (near)-weekly mini-assignment to find, cite & briefly summarize a source for a **fact**, **assertion** or **argument** presented in lecture.
- key tool: zotero

2. Some quantitative / statistical tools

- E.g. - estimating abundance with confidence interval
- Because as wildlife ecologists you MUST get comfortable with Uncertainty / Randomness / Modeling

Assessment

1. **35%**: Weekly short assignments, a few longer mini-projects

2. **30%**: Both open book and open note - one on the last day of class.

3. **25%**: Final group project + presentation

4. **10%**: Participation (class / recitation / online discussion forums), including two.

Recitation sections

- Tues, 3:30-4:25 - Baker 310
- Tues, 5:00-5:55 - Baker 314
- Wed, 3:45-4:40 - Baker 314
- Thurs, 8:00-8:55 - Baker 314

I reserve the right ...

to change anything anytime for any reason.

(in practice - this policy only ever benefits students)