

Welcome to the class!

EFB 390: Wildlife Ecology and Management

Dr. Elie Gurarie

February 21, 2022



A bit about me: Dr. Elie(zer) Gurarie

(rhymes with *Smelly Ferrari*)

Quantitative Wildlife Ecologist 206 Illick | Office hours: **TBD**

BS/BA - Physics | Languages / Literature, CWRU

MS - Environmental Geosciences - Université d'Aix-Marseille III, France

Ph.D. - Quantitative Ecology and Resource Management, U. Washington, Seattle

Employment: National Marine Mammal Laboratory, NOAA | U. Helsinki | U. Washington | U. Maryland | U. 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



Co-instructors

Chloe Beaupré

- M.S. in Ecology and M. in Environmental Management) at Western Colorado University

Ph.D. student under Dr. Gurarie studying large ungulate (esp. caribou) movements, spatial and population ecology.

Riley Stedman

- B.S. Wildlife Science - ESF

Master's student under Dr. Schummer studying wintering habitat selection of Mallards and American Black Ducks in eastern Long Island.

(Office hours and locations TBD)

This class is foundational

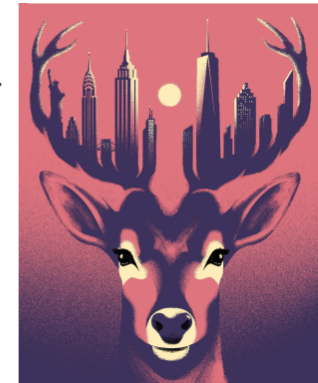
Necessarily more **broad** than **deep**, but should provide **critical** and **reasoning** skills and **research skills** needed to succeed - in other wildlife courses and beyond.

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.

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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 ... but lots of readings

Any reading materials will be shared on Blackboard.



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

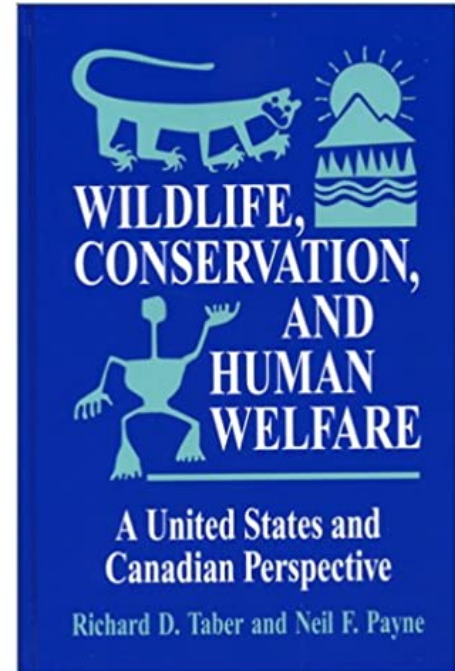
Wildlife Ecology, Conservation, and Management

THIRD EDITION

Companion Website

WILEY Blackwell

Good on science.



Interesting book on wildlife-human interactions.

Overarching arc of class

Fundamentals

- Deep history of human-wildlife interactions

Topics and Tools in Wildlife Ecology

- Estimation and populations
- Behavior, space-use and movement
- Habitats
- Interactions
- Disease

The North American Model of Wildlife Management

- History, context, critiques
- Role of harvest | Legal frameworks

Alternatives to the North American model.

- Indigenous approaches*
- European examples*
- South American examples*

Special topics

- Game bird management*
- Fur-bearers*
- Urban ecology*
- Predators*
- Marine mammals*
- Adaptive management*

Governance and law

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:

- Indigenous approaches
- Role of hunting and harvest
- Waterfowl and birds
- Furbearers
- Wildlife law
- Dynamic management
- Marine mammals
- Disease | Physiology
- more

Broad Goals:

1. Scientific Reasoning
2. Quantitative Reasoning
3. Critical thinking
4. Collaborative Work
5. Synthesis & communication of complex interactions

Not a Goal:

To learn ALL the things about ALL the animals!

Instead:

We learn **how to learn** what we **need to learn**.

(No memorization)

Technical Goal I: 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 tools:  ,  , 

Technical Goal II: Quantitative Methods

We will perform some (simple) experiments with **sampling** and **estimation**.

As wildlife ecologists you **MUST** get comfortable with **VARIABILITY** (in processes), **UNCERTAINTY** (in observations), and **RANDOMNESS** (for modeling)

Assessment (approximately)

1. **45%**: Weekly short assignments, to guarantee engagement with the material
2. **25%**: (Likely) - two quizzes - (all open book and open note).
3. **30%**: Final group project + presentation
4. **10%**: Participation (class / recitation / discussion forums).

Final Project

You will work in groups to investigate a "*Paradox of Wildlife Ecology and Management*", or take a side and argue in a "*Controversy of Wildlife Ecology and Management*". These research efforts will culminate in **written reports** and **group presentations**. Details to come (and be developed as course progresses).

Recitation sections

With **Chloe** and **Riley**.

Lots of readings and discussions.

Also developing and work-shopping the final projects.

Curiosity, Respect, Openness, Debate

Institutional Statement on Diversity

Diversity is a source of strength, creativity and innovation for ESF. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities and opinions enrich the college community. We commit ourselves to the pursuit of excellence in teaching, research, outreach and diversity as inextricably linked goals.

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I reserve the right ...

to change anything anytime for any reason.

(in practice - this policy only ever benefits students)

