

Carnivore Ecology

Wildlife 332



Carnivores vs Carnivorans

Carnivores eat meat whereas carnivorans are members of the mammalian Order Carnivora, most of which eat meat

This course will focus on the 16 families that make up the mammalian Order Carnivora. We will focus on those families found in Wisconsin but also touch on other interesting families like marine carnivores and hyenas. We will discuss the evolution, functional morphology, life history, ecology, and

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TNR 346 Zoom or live
Office Hours by
appointment
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2

Monday lecture
11:00-11:50 TNR 352
Tuesday lab 2:00-3:50
TNR 352

3

WINTER TRACKING

We will try out a
tracking activity to get
us outside for a lab.



Form follows function

The teeth of this otter look different than weasels.



Bones and structures

The prominent sagittal crest on a wolverine



Dental Formula

We can infer dietary breadth from the dental formula and tooth shape.

conservation biology of each family, focusing on those species found in the state. Since we can't cover all 260 Carnivora species in depth, teams of students will give presentations on a species of their choosing within their assigned family.

Tentative Syllabus

Date Topic

1/24 Introduction 1/25 Lab: Discussion on course objectives, teams

1/31 Phylogeny of Carnivores 2/1 Lab: Winter tracking

2/7 Small Cats 2/8 Lab: Lynx vs Bobcat, Student Presentation 1

2/14 Large Cats 2/15 Lab: Estimating bite force, Student Presentation 2

2/21 Hyenas 2/22 Hyena skulls, Student Presentation 3

2/28 Foxes and small dogs 3/1 Lab: Grey and red fox, Student Presentation 4



Confirmed cougar captured on a Waupaca County trail camera.

3/7 Wolves and big dogs 3/8 Lab: Wolf skulls, Student Presentation 5

3/14 Bears 3/15 Lab: Bear skulls, Student Presentation 6

3/21 Spring Break

3/28 Marine Carnivores 3/29 Lab: Marine carnivore skulls

4/4 Skunks 4/5 Lab: Skunks, Student Presentation 7

4/11 Raccoons 4/12 Lab: Procyonids, Student Presentation 8

MARCH MAMMAL MADNESS

Spring is the season of college basketball's March Madness and my colleagues in the American Society of Mammalogists developed March Mammal Madness as an educational way to teach about mammals and even some other weird critters. Don't have the bracket yet, but we'll see if there are any carnivores. We an fill out the brackets and follow along for fun. Fun. No grades. Fun. Maybe, just maybe we will learn in the process.

cut global emissions

and possibly using waste heat. Advanced concrete mixes, however, could be particularly difficult to achieve their target strength to resist their expansion. Concrete investment and procurement policies are still needed to support the concrete industry, however, as the first steps. "We embedded carbon concrete" says and prepared the concrete, testing in Marin County, Calif. Buildings on Houston, Tex, and a concrete plant in Portland, Ore.

March Mammal Madness, an entertaining 'tournament' about wildlife instead of sports teams

Basketball fans look forward to March Madness each year, but for animal lovers, there's another option. March Mammal Madness is a "tournament" that pits mammals against one another with the goal of a group of scientists with a mission: to save the world.

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4/18 Badgers 4/19 Lab: Badgers, Student Presentation 9

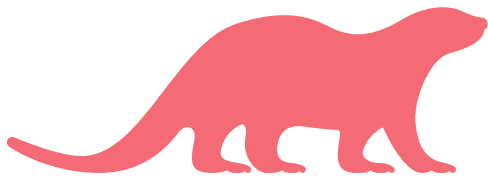
4/25 Fishers, Wolverines, and Martens 4/26 Lab: Student Presentation 10

5/2 Weasels, 5/3 Lab: Weasel material, Student Presentation 11

5/9 Otters 5/10 Lab: Otter material, Student Presentation 12

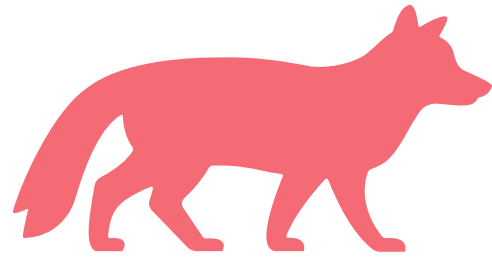
How will you be assessed?

Why do we grade? What is it you want to get out of this course? Do students read the syllabus? What is love and why are we here? We will discuss three of these during the semester, the other two you will have to figure out on your own. The traditional way of assessing student learning is through quizzes, exams, homework, term papers, etc. How will you be assessed when you find a job as a natural resources professional?



What is the class format?

We will learn about Carnivorans through reading and discussing a number of case studies and primary literature studies during the lecture period. During lab we will look at cranial material to understand how carnivory

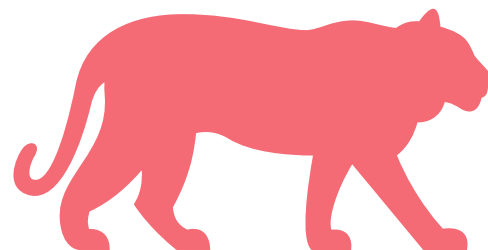


varies within the order. We will also use this time for teams of students to present on a species or carnivore that represents the group of focus for the week. Those presentations should be about 15 minutes in length followed by a discussion period.

While I have a general plan for the course, I am interested in the students coming up with some learning outcomes for the class as well.

Finally, this is the first time I am teaching this course live and you can help mold it for the future. I designed it for in-person instruction knowing that this would also work well in an online format. It's up to all of us to make this a good course and a good semester.

We are still in the middle of a global pandemic and need to continue to look out for each other. We did pretty well with the mask mandate in fall but now we have a new disruptive variant to worry about. The mask mandate is still in place, please wear well fitting masks that cover both your mouth and nose and preferably that does not move when you talk. This is a small sacrifice to learn together. Virtual learning taught me this about my students. While my



students told me that they learned more with in person instruction, what I observed was

that students learned more when they learned together. We learn better together. It is who we are a species. Embrace your pride, your pack.