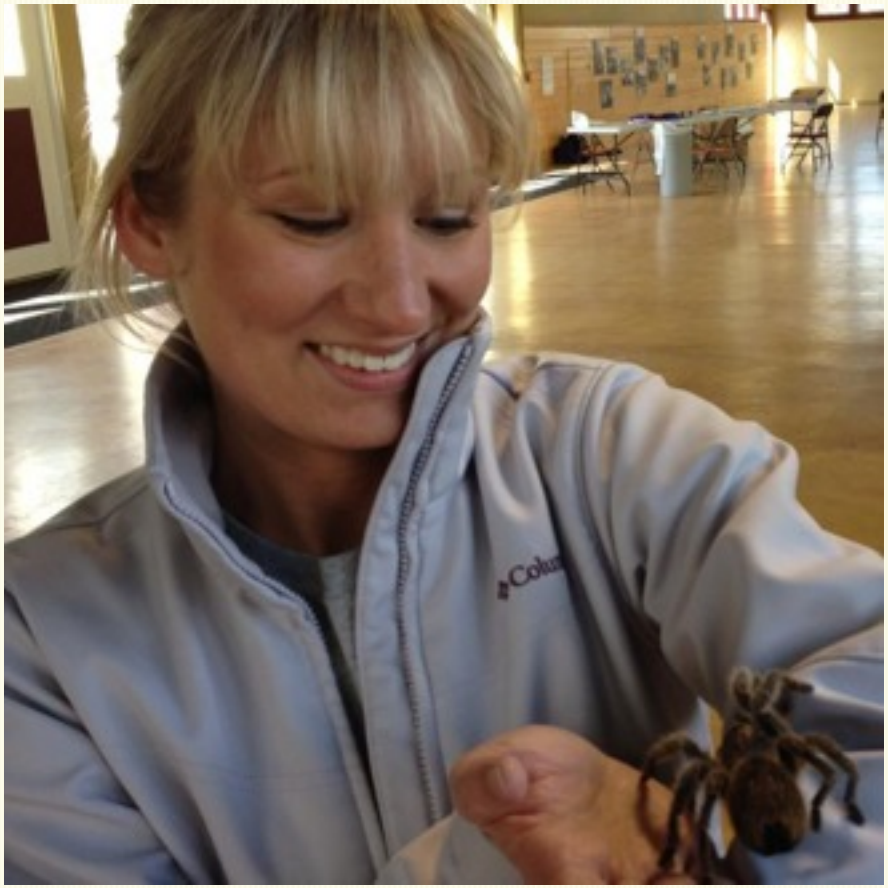
Jesse Brunner

Disease ecologist: transmission, persistence, and virulence of wildlife disease

- Ranaviruses in amphibians
- Tick-borne disease in small mammal communities

Prettifier of data: inordinate love of data presented well

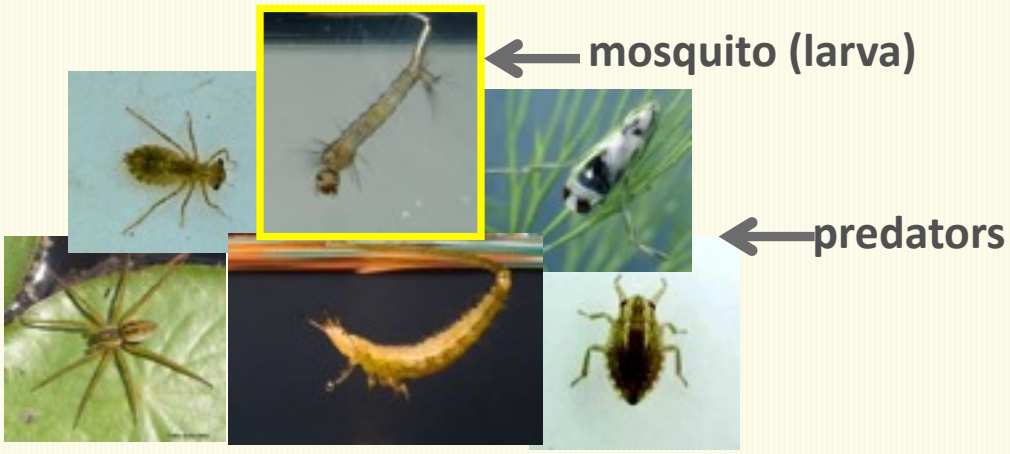
Amanda Meadows



Community ecologist (with an interest in disease ecology)

I study how predation risk experienced by insect vectors can influence pathogen transmission

- System: West Nile Virus/*Culex pipens* (mosquito vector)/lots of predators



Fernando Villanea (PhD Candidate)

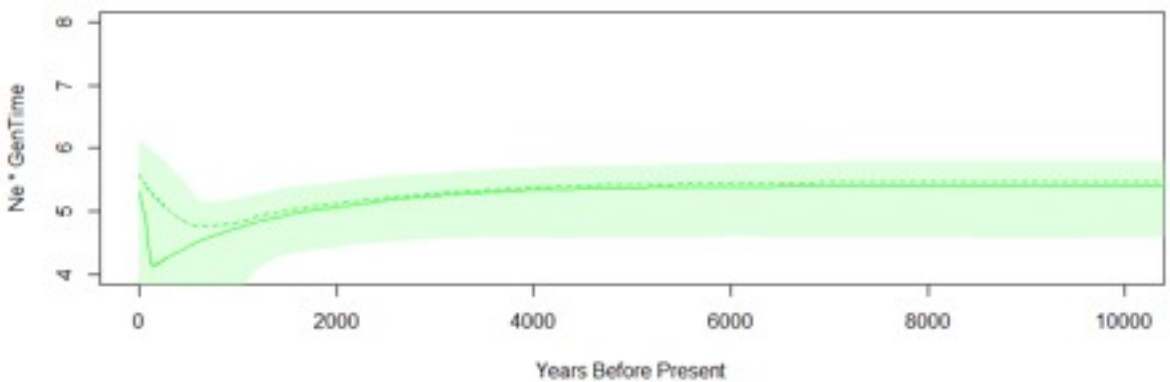
(pronounced: [fɛr : næn : do] [vi- jɑ: neh : ɑ])

Fernando's interest include:

-Population genetics
-Neutral Coalescent Theory
-Demographic history

If it has DNA, we can study it!:

Fernando has studied a variety of organisms including humans, New World monkeys, northern fur seals, rodents, island snails, Chinook salmon, and fossil plants.



Neat, huh? This Bayesian Skyline Plot represents the population growth and decline of Chinook Salmon on the Columbia river.

Ricky Berl

Ph.D. Candidate in Zoology

Social behavior, evolution, and culture

Comparative social behavior in gray wolves

Evolution of sociality in the Canidae

Genome-culture coevolution in hunter-gatherers

General Ecology Syllabus

Biology 372, 4 credits, WSU Pullman campus, Fall 2014
Course Prerequisite: Biology 106; Chemistry 102 or 105

Instructor	**Dr. Jesse Brunner**
Office hours	Tu/W 10:30-12:00, or by appointment
Location	283 Eastlick Hall
Email	Jesse.brunner@wsu.edu
Phone	(509) 335-3702
Lectures	Tu/Th 9:10-10:25 in Todd Hall 430
Labs	Eastlick G94

TA	**Amanda Meadows**	**Ricky Berl**		**Fernando Villanea**	
	Sect 1	Sect 2	Sect 3	Sect 4	Sect 5
	Tu 2:50-5:40	W 12:10-3:00	W 3:10-6:00	Tu 12:00-2:50	Th 12:00-2:50
Email	amanda.meadows@wsu.edu	richard.berl@wsu.edu		fervillanea@wsu.edu	
Office hours	M 11:00-1:00, or by appt	M 12:00-2:00, W10:00-12:00, or by appt		T/Th 10:00-12:00, or by appt	
Location	FSHN 258B	271B Eastlick		271B Eastlick	

Text book SimUText Ecology, by SimBio. Instructions for how to purchase this e-textbook are on the Piazza.com site… (and I emailed you the instructions as well!)

Webpage & Email We will use Piazza for class discussion and course management. You will find **course documents** (e.g., the schedule, lecture notes, keys to the quizzes and exams) as well as any **announcements**. ***Rather than emailing questions to the teaching staff, you need to post your questions on Piazza.***

Our class page is at: https://piazza.com/wsu/fall2014/biol372/home

Check this site often for answers, updates, and announcements. If you have any problems or feedback for the developers, email team@piazza.com. PLEASE register with a username that *begins your last name.*

1) Make sure you go to the right section
If you *need* to trade, go to the section you *want* and try to find someone to trade with… it's up to you!

2) Make sure you get the textbook asap! (Use SimBio's tech support… they're very good.)

3) Make sure you sign onto the Piazza page
You should have received an email… if not, let me know.
Check in often.
Use it for your own purposes

My first goal in this class is for you to **develop an ecological intuition** based on rules of thumb, approximations, and a deep understanding of the processes and interactions that lead to ecological patterns. Second, I want you to **understand the types of questions that ecologists ask**, how they relate to one another, and how we go about answering them. My last goal is for you to **learn to think about how data support or refute hypotheses**. This means being able to carefully formulate your expectations and interpret information from scientific studies, particularly graphs, tables, and mathematical models. By the end of this course these things should be second nature to you.

Grading, Exams and Quizzes

The distribution of grades is as follows (there is no curve):

A 92-100%	B^+ 88-89	C^+ 78-79	D^+ 68-69
A^- 90-91	B 82-87	C 72-77	D 60-67
	B^- 80-81	C^- 70-71	F ..... < 60

Your final grade will be composed of your lecture grade (60%) and your lab grade (40%); you must pass the lab in order to pass the class.

	% Lecture Grade	% Final Grade
Exam 1	10	6
Exam 2	15	9
Exam 3	20	12
Exam 4 (final)	20	12
SimUText Questions	25	15
In-class Quizzes	10	6
Lab	---	40

Exams: You will have three 50-minute exams in class and a comprehensive **final exam scheduled from 10:10AM to 1:00PM on December 15th**. I am not allowed to offer the

The big question in ecology:

What determines the distribution and abundance of organisms?

limits
promotes
controls

Experiments from the lab to the field

-randomized trials
-common garden
-interventions

Observational studies

-space for time
-comparative
-phylogenetic

Natural "experiments"

-Mount St Helens
-[CO_2]

Models

-statistical
-theoretical
-boxes and arrows

"Seek simplicity, but distrust it."
-Alfred North Whitehead

Two general approaches:

1) Build up knowledge from lower-level processes
2) Study the larger whole and look for associations