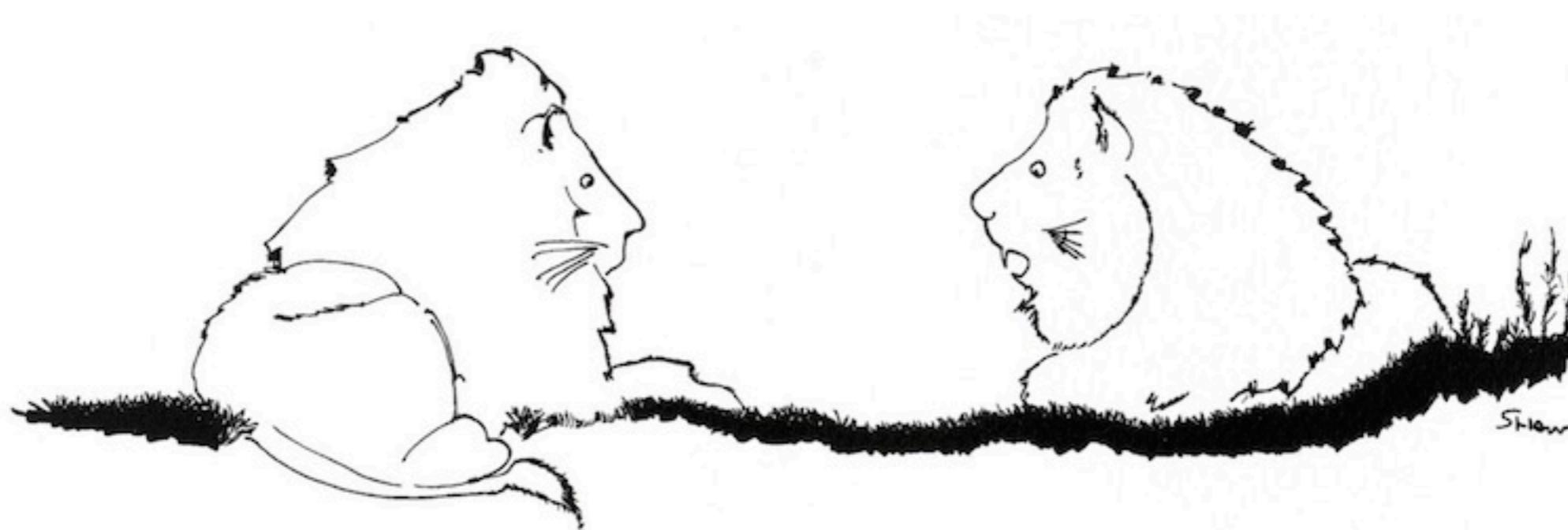
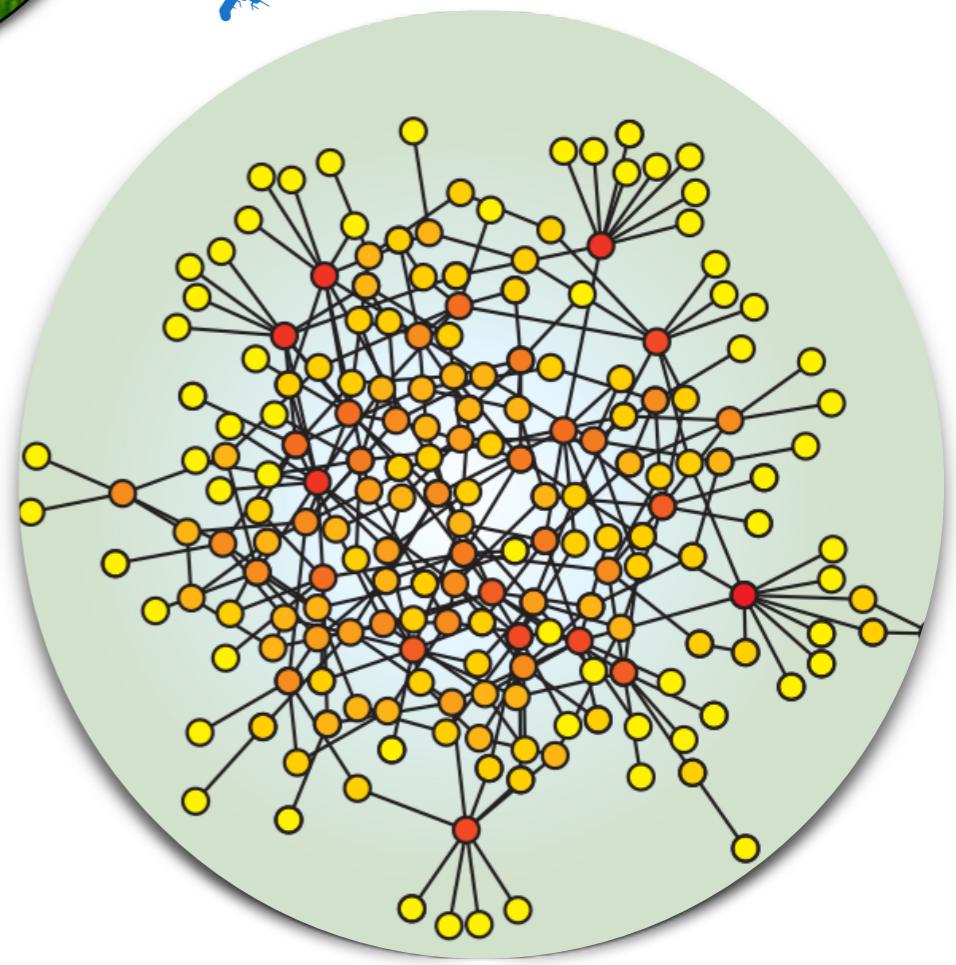


Fundamentals of Ecology



"I'm trying to eat more vegetarians."

Who am I and why am I here?



Course details

**UNIVERSITY OF CALIFORNIA, MERCED
BIO/ESS 148: Fundamentals of Ecology – Syllabus
Spring 2017**

Lecture time: Mondays and Wednesdays, 10:30-11:45 am

Lecture location: SSB 120

Discussion section times and locations:

Section BIO-148-02D:	Wednesdays, 5:30-6:20 pm, Classroom Bldg., Rm. 279	Full
Section BIO-148-03D:	Wednesdays, 6:30-7:20 pm, Classroom Bldg., Rm. 276	Full
Section BIO-148-04D:	Mondays, 4:30-5:20 pm, Classroom Bldg., Rm. 127	1 spot

Instructor: Justin D. Yeakel (jyeakel@ucmerced.edu)
Science and Engineering Bldg., Rm. 288
Office hours: Mondays and Wednesdays: 2:00 – 3:00 pm, or by appointment

Teaching Asst: Taran Rallings (trallings@ucmerced.edu)
PLACE
Office hours: TBD
Office hours: Mondays: 2:00-4:00 pm in SE1 258, or by appointment

Course Website: <http://jdyeakel.github.io/teaching/ecology>

Get your syllabus here

IV. Course Requirements & Grading Procedures:

a. *Class Attendance and Participation Policy:*

I expect students to attend most lectures; however, I will not take attendance. Over the 25+ years I have been teaching university-level courses, I have found that a student's performance in a course is closely coupled to their attendance.

Attendance and participation in the discussion section is required and will be a component of the student's course grade (see Discussion syllabus for details).

b. *Required and Supplemental Readings:*

Required Textbook: Cain, M.L., W.D. Bowman, and S.D. Hacker. 2014. Ecology, 3rd Edition. Sinauer Associates, Inc., Publishers. Sunderland, MA. 565+ p.

Readings will also be assigned for the Discussion section and instead of the book for some lectures. These are ***required*** and will be provided on the course website.

Note: other editions (1st or 2nd) of this textbook may be used but are not recommended.

Companion Website: <http://sites.sinauer.com/ecology3e/index.html>

This companion site is designed to help students using the Cain et al. *Ecology*, 3rd Edition textbook to master important concepts in ecology. It provides resources for reviewing each chapter, learning key terminology, working with data from actual experiments, and using simulations to explore model systems. The site also includes self-study quizzes to gauge your comprehension of each chapter.

Assignments and grading

Late assignments (e.g., homework, field report) will not be accepted.

Homework: Periodically during the semester, 3 homework assignments will be assigned consisting of exercises provided by the Teaching Assistant/Instructor.

Field Report: A short field report will be written independently by each student describing major ecological patterns observed and concepts discussed during the field trip to the Vernal Pools.

Quizzes: Six unannounced quizzes will be given periodically during the lecture period. Only the five best scores will be used in the calculation of your final grade.

Exams: There will be two “midterm” exams during the semester and a comprehensive final. *There will be no make-up exams or early exams.* If you are sick during an exam, please bring a note from your doctor verifying your illness. Your grade for the missed exam will be based on your average score from the other exams. You cannot miss more than one exam for an excused illness and taking the final is mandatory in order to pass the course.

Grading:

Your final grade will be based on the following: discussion section participation: 10%, homework: 15% (three assignments each of 5%), field report: 10%, quizzes: 10% (6 quizzes with best 5 of 6 counted), midterms: 30% (two, 15% each), and comprehensive final exam: 25%. If you receive more than 90%, you definitely will receive an A in the course. If you receive less than 55% of the total points, you definitely will receive an F.

Local field report: Vernal Pools
(Required) Saturday March 18, 9am-12pm

Discussion sections with Taran Rallings

Dig into the ecological literature



- What types of questions do ecologists ask?
- How do ecologists figure things out?
 - Empirical: Laboratory, Field
 - Theoretical investigations
- How is a scientific paper written?
- How are data displayed and communicated?

MATERIALS: <http://jdyeakel.github.io/teaching/ecology/>

No computers/tablets/phones to be used in class

EDUCATION

Attention, Students: Put Your Laptops Away

April 17, 2016 · 6:00 AM ET

Heard on [Weekend Edition Sunday](#)

NPR STAFF

JAMES DOUBEK



Laptops are common in lecture halls worldwide. Students hear a lecture at the Johann Wolfgang Goethe-University on Oct. 13, 2014, in Frankfurt am Main, Germany.

Thomas Lohnes/Getty Images

"When people type their notes, they have this tendency to try to take verbatim notes and write down as much of the lecture as they can," Mueller tells NPR's Rachel Martin. "The students who were taking longhand notes in our studies were forced to be more selective — because you can't write as fast as you can type. And that extra processing of the material that they were doing benefited them."

Tentative Weekly Schedule: Please note that the Instructor reserves the right to change the schedule. You will be advised in advance of any changes. ☺

Wk.	Weekly Topic & Learning Goals	Key Learning Outcomes	Readings	Assessments
1	18 Jan: The Web of Life and Course Logistics	Describe the general types of questions ecologists ask & the approaches used to address them	Cain et al. Ch. 1	
	Discussion: None			
2	23 Jan: Ecological Scales I	Cells to communities	Levin SA. <i>The problem of pattern and scale in ecology</i> . Ecology 73, 1943-1967 (link)	
	25 Jan: Ecological Scales II	Spatial and temporal scales		
	Discussion: Scale		Levin SA. <i>The problem of pattern and scale in ecology</i> (link)	Class participation
3	30 Jan: The Biosphere	Distinguish among the major Earth's biomes	Cain et al. Ch. 3	
	01 Feb: Energy in the Web of Life	Explain how different organisms acquire energy	Cain et al. Ch. 5	
	Discussion: Energy flow in webs		Chamberlain et al. <i>Pleistocene to recent dietary shifts in California condors</i> (link)	Class participation





Different communities

(A)



(B)



(D)

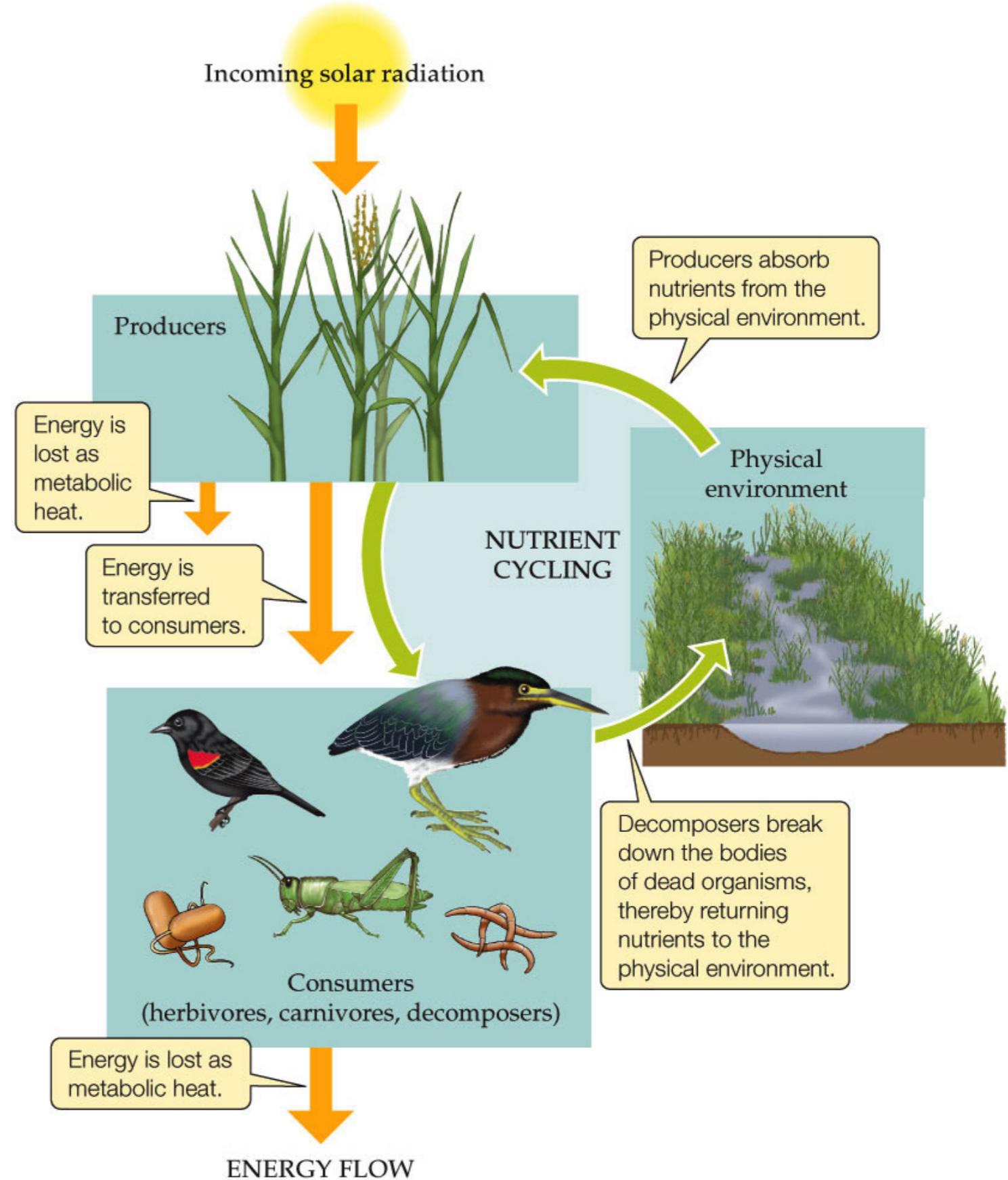


(C)



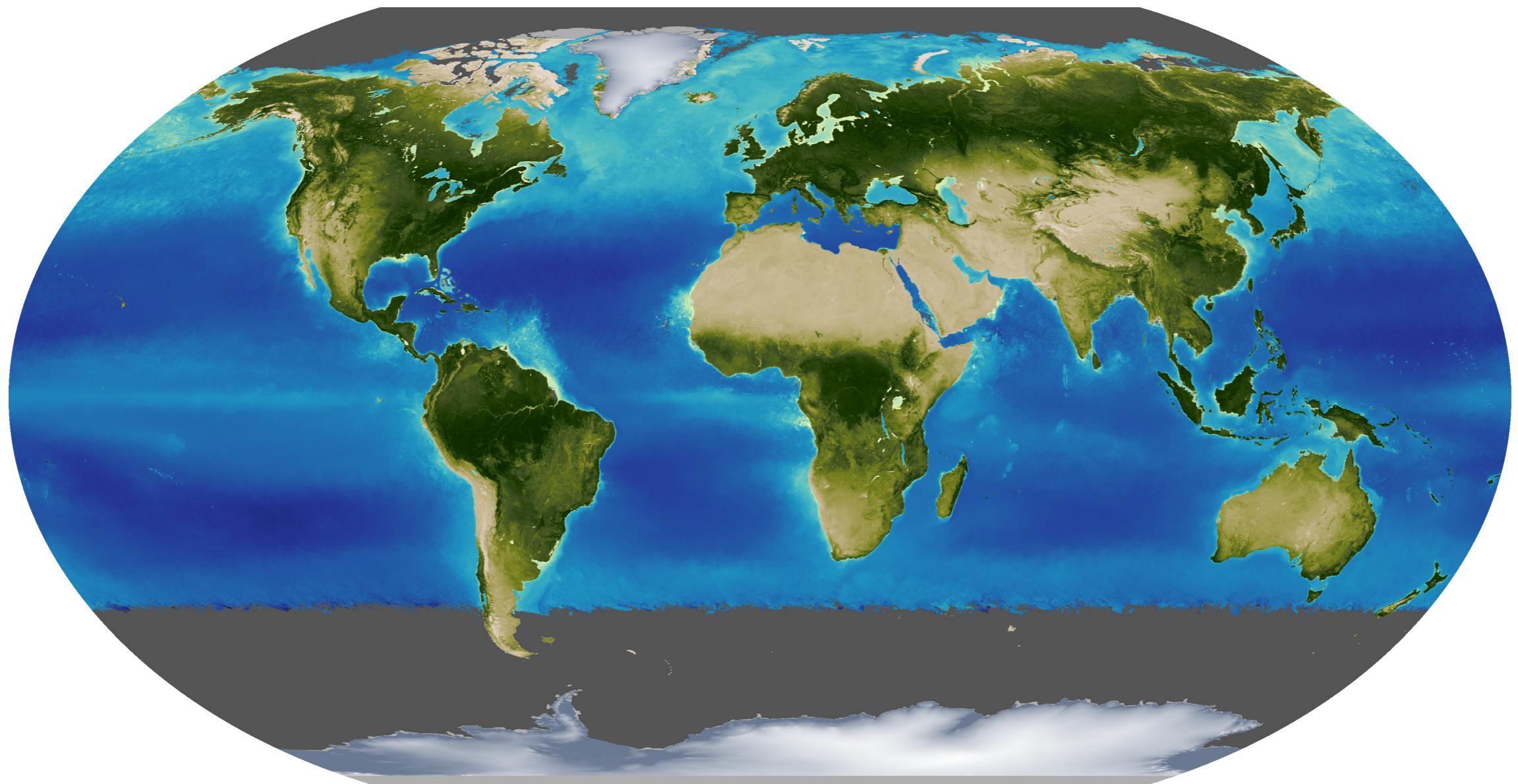
ECOLOGY, Figure 1.9

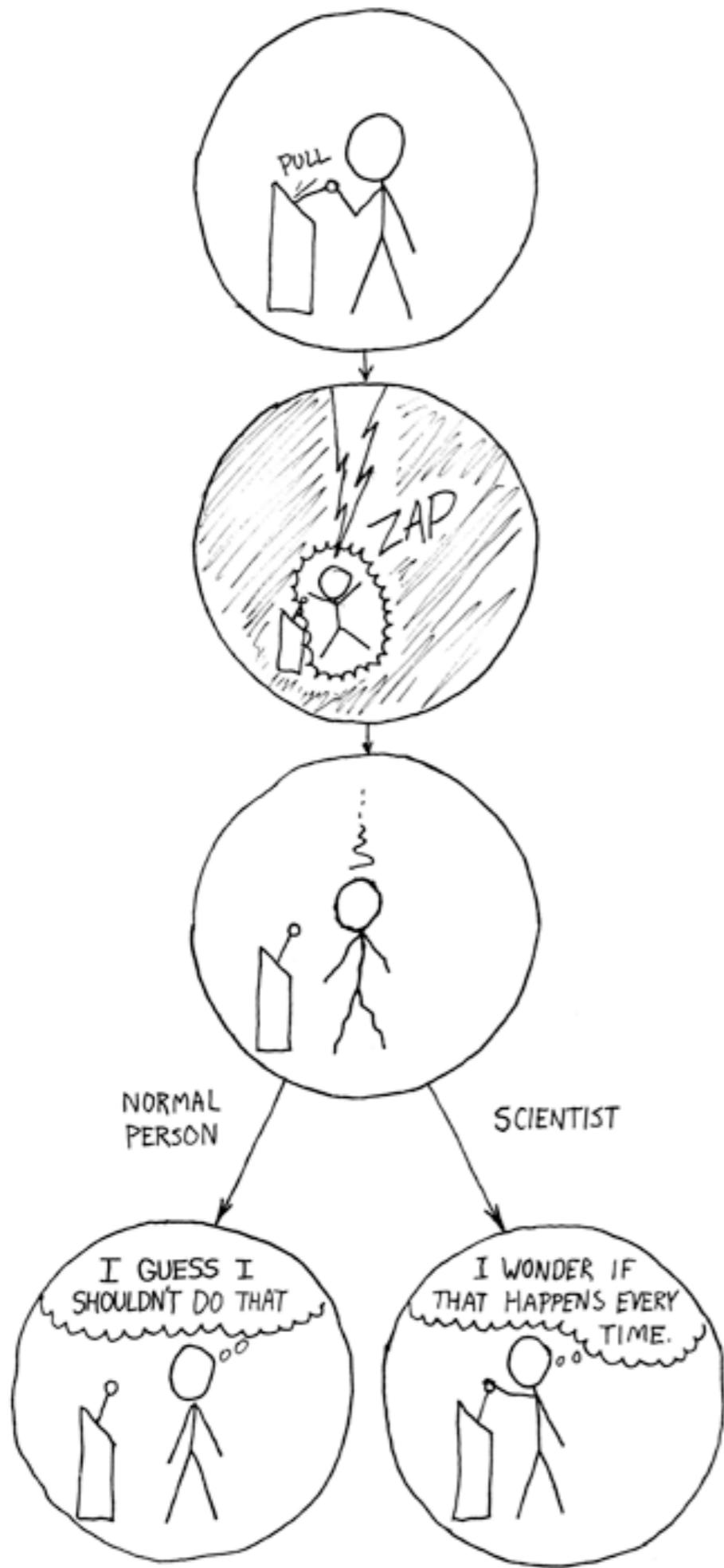
NPP: (net primary productivity)



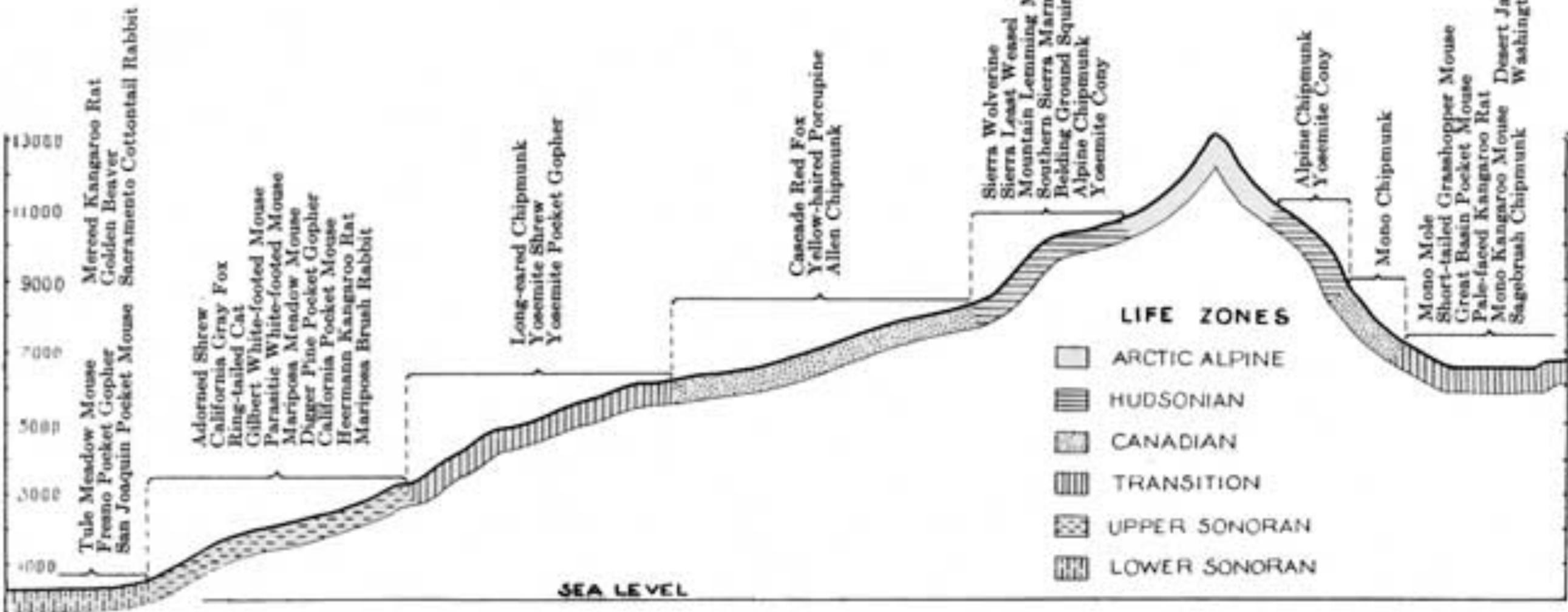
ECOLOGY 2e, Figure 1.11
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Biosphere





How do we science?



(A)



(B)



(C)





