

Lecture 30, 05 Dec 2006

Conservation Biology
ECOL 406R/506R
University of Arizona
Fall 2006

Kevin Bonine
Kathy Gerst



fall 2006 conservation biology course
presents.....
**a creativity project
exhibit**

*come see student projects integrating
artistic creativity with conservation
education, including:*

- original artwork
- creative writing
- children's books
- music
- multimedia
- games

thursday, november 30

forbes lobby
noon-2 pm



Housekeeping, 05 December 2006

-Thank Tony Dee (flat-tail horned lizard)

Today: Final day of class & Evaluations

Thurs 14 Dec: **Final** Exam 1100-1300h in this room

(182 Lab Preceptors? <http://blc.arizona.edu/courses/182Lab/Preceptors297a/course.htm>)



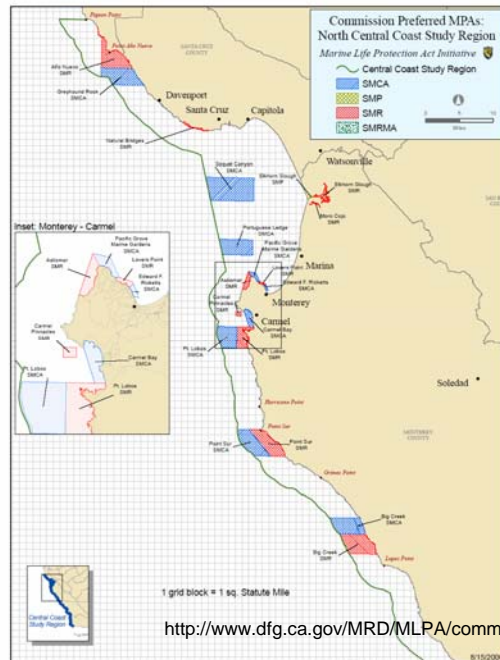
Thank you all for a great semester. It was a pleasure working and learning with you.

-Kevin and Kathy



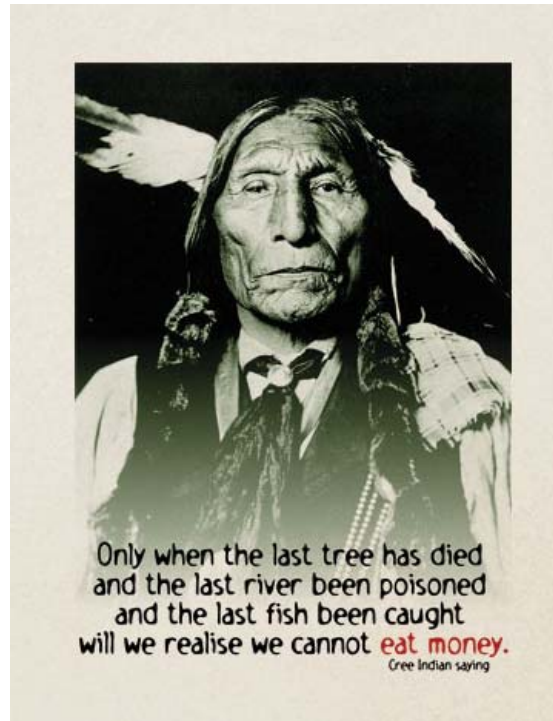
3

MPAs



4

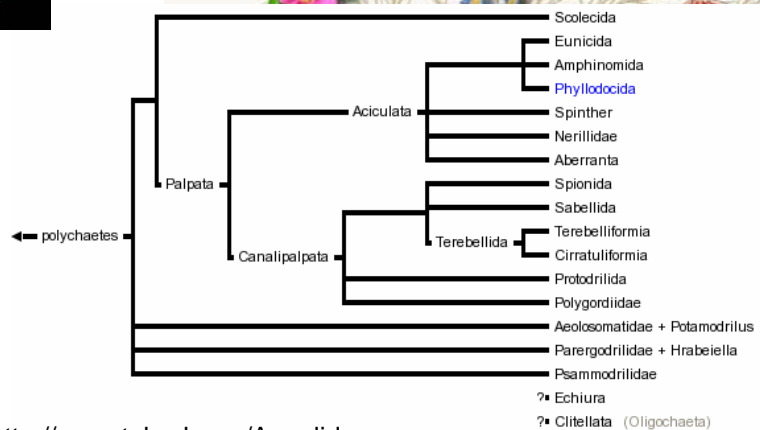
SMCA = state marine conservation area SMP = state marine park
SMR = state marine reserve SMRMA = state marine recreational management area



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Annelida



<http://www.tolweb.org/Annelida>

Table 2.1 Ecosystem Services and Functions

Ecosystem service*	Examples
Gas regulation	Carbon dioxide/oxygen balance, ozone for protection against ultraviolet light
Climate regulation	Greenhouse gas regulation, dimethyl sulphide production affecting cloud formation
Disturbance regulation	Storm protection, flood control, drought recovery, and other aspects controlled by vegetation structure
Water regulation	Provisioning of water for agricultural (such as irrigation) or industrial (such as milling) processes or transportation
Water supply	Provisioning of water by watersheds, reservoirs, and aquifers
Erosion control and sediment retention	Prevention of loss of soil by wind, runoff, or other removal processes; storage of silt in lakes and wetlands
Soil formation	Weathering of rock and the accumulation of organic material
Nutrient cycling	Nitrogen fixation, nitrogen, phosphorus, and other elemental or nutrient cycles
Waste treatment	Waste treatment, pollution control, detoxification
Pollination	Provisioning of pollinators for the reproduction of plant populations
Biological control	Keystone predator control of prey species; reduction of herbivory by top predators
Refugia	Nurseries, habitat for migratory species, regional habitats for locally harvested species, or overwintering grounds
Food production	Production of fish, game, crops, nuts, and fruits by hunting, gathering, subsistence farming, or fishing
Raw materials	The production of lumber, fuel, or fodder
Genetic resources	Medicine, products for materials science, genes for resistance to plant pathogens and crop pests, ornamental species (pets and horticultural varieties of plants)
Recreation	Ecotourism, sport fishing, and other outdoor recreational activities
Cultural	Aesthetic, artistic, educational, spiritual, and/or scientific values of ecosystems

*Ecosystem "goods" included in ecosystem services.

Sources: Adapted with permission from Robert Costanza et al., "The value of the world's ecosystem services and natural capital," *Nature*, May 1997.

Brennan and Withgott 2005

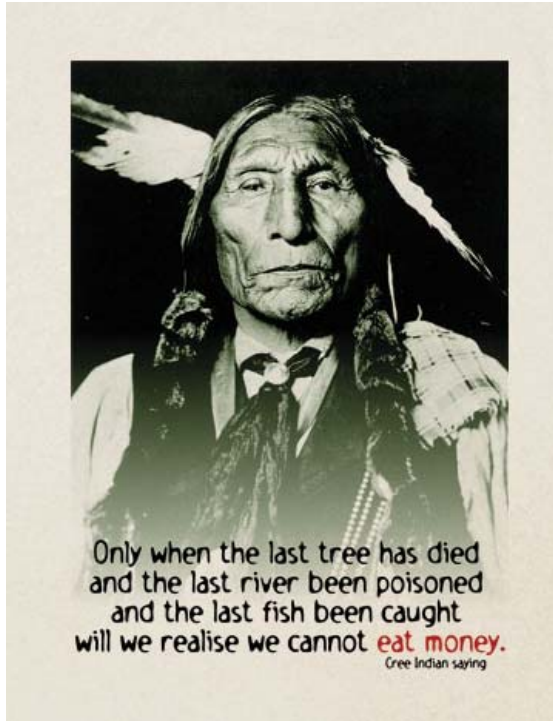
Sustainability...

<http://www.sustainlane.us/home.jsp>

<http://www.sustainlane.us/overview.jsp>

http://www.esa.org/science_resources/issues.php

<http://www.esa.org/seeds/activities/CampusEcologyChapters.php>



**How do we change
people's values?**

Do we need to?

9

Oral Presentations:

How to convey information effectively.

How to persuade people.

10

What arenas and topics are relevant to conservation biology?

Take conversation biology and turn it in to action.



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(competent before radical)

**Science before
fingerpainting.**

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