

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://lib.azusa.edu/course/182_lab/Preceptors207preceptor.htm)



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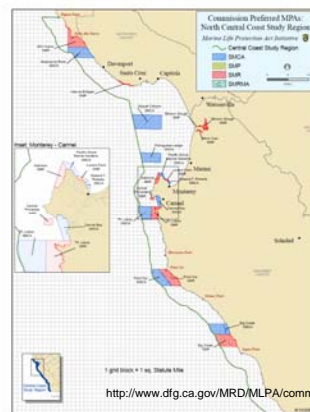
Thank you all for a great semester. It was a pleasure working and learning with you.

-Kevin and Kathy



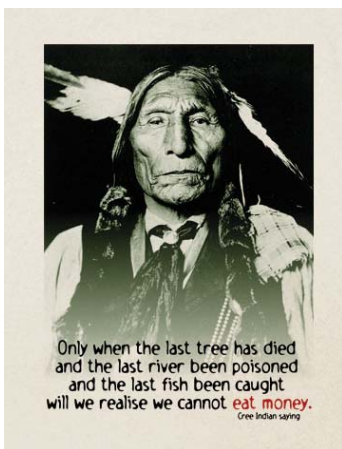
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MPAs



<http://www.dfg.ca.gov/MRD/MLPA/commissiondocs.html>

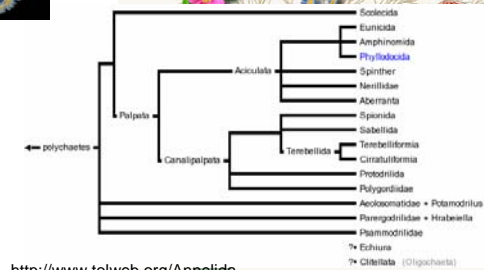
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Annelida



<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.
Source: 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...

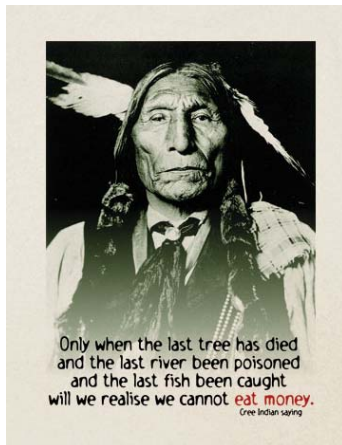
<http://www.sustainlane.us/home.jsp>

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

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

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

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How do we change people's values?

Do we need to?

Oral Presentations:

How to convey information effectively.
How to persuade people.

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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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