Lecture 04, 30 Aug 2007
Ethics, Leopold
Conservation Biology
ECOL 406R/506R
University of Arizona
Fall 2007
Kevin Bonine
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Upcoming Readings
today: Textbook Ch. 3, Leopold readings, Callicott 1997 (from Meffe and Carroll)
[Q1 due 30 Aug if you choose to answer.]
Tues 04 Sept: Text Ch. 4; Costanza et al. 1997, Driessen 2004
Thurs 06 Sept: Walther et al. 2002, Peak Oil Link, (optional: National Geographic)

Especially relevant for 506 students:

Conservation Seminar
If you are interested in participating in the Conservation Seminar (RNR696a – but you don’t need to enroll) please attend Wednesday at 3:30 in BSE 218.

Chris McDonald
cmcdon@email.arizona.edu
(contact for readings)

Plastic Trees in Los Angeles?
knowledge -> advocacy?

Values, Ethics, Philosophy...

Rolston Essay (p. 35 in Callicott Chapter)
-species vs. species in the system (definition of species)
-value of evolutionary trajectory
-extinction and doors (temporal and spatial scales)
Role of scale... (context of disturbance and extinction)

Anthropogenic perturbations:
...fast rate and large spatial scale.

(Cited in Callicott 1997)

Values, Ethics, Philosophy...

Ethics:
constrain self-serving behavior in deference to some other good

Tragedy of the Commons
Role of religions?
interpretation...


The Tragedy of the Commons
Garrett Hardin

The tragedy of the commons develops in this way. Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy.

As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, “What is the utility to me of adding one more animal to my herd?” This utility has one negative and one positive component.

1) The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1.

2) The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsmen, the negative utility for any particular decision-making herdsman is only a fraction of -1.

Adding together the component partial utilities, the rational herdman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another . . . . But this is the conclusion reached by each and every rational herdman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.

Judeo-Christian Tradition
Intrinsic value by divine decree.
Noah saving “species”.

Islam
No separation of church and state.
Unity, Trusteeship, Accountability.

Hinduism
Core of all being is one reality, Brahman.
Prakṛti, matrix of the material creation

Buddhism
Limit use of resources.
Nirvana: self+surroundings

Jainism
Each living thing has a soul.

Taoism
The way of nature; don’t buck it.

Iroquois
consider the impact of their decisions on the seventh generation to come

Chipko (Hindu links)
The ultimate tree-huggers.
Himalayas of India
"Conservation may be a sign of personal virtue but it is not a sufficient basis for a sound, comprehensive energy policy."

-Vice President R. Cheney, April 2001

Five axioms of consensus among environmentalists:

1. Dynamism
2. Interrelatedness
3. Nested systems
4. Creative processes
5. Differential fragility

Norton 1991 (see Van Dyke p. 72)
Discussion:

1. How do conservationists respond to the question, “What good is it?”
2. How do we verify that humans, or anything, has intrinsic value?
3. “Enclosed/Private” Goods, or “Common” Goods - Which of these is a better approach for conservation? Why?
4. What is the conservation role of the world’s religions?

“Objectivity is only possible in matters too small to be important, or in matters too large to do anything about.” (p. 226)

-Aldo Leopold

Aldo Leopold:

Thinking Like a Mountain
Escudilla
The Land Ethic
The Outlook for Farm Wildlife
The Land-Health Concept and Conservation

“Aldo Leopold

“An ethic, ecologically, is a limitation on freedom of action in the struggle for existence.

An ethic, philosophically, is a differentiation of social from anti-social conduct.”” (p. 238)
Leopold Land Ethic
- Property vs. propriety
- Role of land [biology] in human history
  (Diamond, Guns Germs and Steel)
- Sacrifice
- Obligation of private landowner
- Livestock, Violence
- Economics?
  Farm as Factory or Place to Live?

Aldo Leopold Land Ethic
- What is “land-health?”
- processes
- evolutionary/ecological biology
- complexity & quality
- invasives

Aldo Leopold Land Ethic
- land pyramid

“a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise”

Leopold

Thinking like a mountain
"a mountain lives in mortal fear of its deer"

Escudilla
progress?
"It's only a mountain now."

The planet will survive, will we?

"In our attempt to make conservation easy we have made it trivial“ (p.246)

-Leopold
The Land-Health Concept and Conservation

Conservation is a series of ecological predictions made by beginners because ecologists have failed to offer any.

Leopold, p. 220

"Whether you will or not
You are a King, Tristram, for you are one
Of the time-tested few that leave the world,
When they are gone, not the same place it was.
Mark what you leave."

As quoted in Leopold, 1949
p. 261 (The Land Ethic)

Human Population?