ANT 380K (Unique #31422)
Seminar: Interpreting Cultural Environments: Past and Present
Spring 2013

Course Time: Tuesday, 2 – 5 pm
Location: SAC 5.124

Instructor: Dr. Arlene Rosen, Office: SAC 4.132
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Office Hours: Tuesday and Wednesday 11:00 am – 12:00 pm, or by appointment.

Course Description: This seminar course is an introduction to some of the major guiding anthropological concepts concerning relationships between past human societies, culture and the ‘natural world’. The course will include lectures, readings and discussions on ecological concepts and processes, human ecodynamics, landscape sustainability, landscape heritage, human perceptions and symbolization of their environments, political ecology, human behavioral ecology, the ecology of colonialism, and human impacts on the environment. Throughout the course we will discuss how to generate problem-driven research based on the above concepts using the technical skills of environmental archaeology.

Format: Seminar. Two to four journal articles will be assigned weekly. Students are expected to do all the assigned readings. Each week (beginning in the second class meeting) one student will be responsible for giving a 15 min summary of the articles and getting discussions started by providing a few questions or comments to the group. I will provide general background information and additional comments if necessary.

Grading:

One Research Paper (4000 Words) (80%)
Paper topics will be open, subject to agreement between the student and the instructor. The students should have agreed a topic by week six of the class.

2) A 30-50 minute PowerPoint presentation covering one of the session topics. The student will submit a printout of the PowerPoint slides, plus a bibliography of this topic (20%).

3) For each session students will do all of the required reading for that session, but will be responsible for presenting one of the readings in detail.

Weekly Topics (subject to alteration with advanced notice):

1. Jan 15. Introduction to the Course, Historical Background, Ecological Principles and Environmental Archaeology
2. Jan 22. Culture and Biodiversity in the Past and Present
3. Jan 29. No Class Meeting: Prepare Bibliography and Powerpoint Presentations  
5. Feb 12. Historical Ecology  
8. Mar 5. Landscape Archaeology and Phenomenology  

Mar 12. Spring Break: No Class  

13. Apr 16. Human Adaptations and Niche Construction (social and ecological)  
15. Apr 30. Student Presentations of paper topics

Session Descriptions and Selected Readings

1. Introduction to the Course, Historical Background, Ecological Principles and Environmental Archaeology

Human societies are situated within and integrated into ecological and environmental systems. One of the goals of Environmental Archaeology is to understand the relationships and interactions between cultural systems and their settings within the litho- and bio-spheres. This goes beyond understanding the procurement of food supplies to sustain life. Nature and environment are an integral part of the way humans structure their societies, political systems and perceptions of the world around them. People are in part shaped by their environment, but also have a multitude of solutions for adapting to their environmental milieu. Humans also in turn alter the natural world in ways un-precedented by other species. In this session we will explore some of these complex interactions.

Suggested Readings


Additional Background References


2. Culture and Biodiversity in the Past and Present

According to the UN Convention on Biological Diversity, biodiversity is the variability among living organisms from all sources including, among other things, terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part. This includes diversity within species (genetic), among species, and of ecosystems. Most of us would agree that biodiversity is a very important characteristic of our planet that should be preserved and encouraged. In this session, we will consider the significance of biodiversity, its relationship to climate change, the effects of human activity, and how archaeology, together with biological, sedimentological and other sciences, can work together to understand biodiversity in the past, present and future.

Suggested Readings


3. Jan 29. No Class Meeting: Prepare Bibliography and PowerPoint Presentations

4. Human Adaptations to Environments: Behavioral Ecology, Optimal Foraging

Human behavioral ecology (HBE) takes as its starting point that humans, like all other species, have evolved a strong predisposition to maximize their individual reproductive fitness. HBE is part of a wider research program, evolutionary ecology, which can be defined as “the application of natural selection theory to the study of adaptation and biological design in an ecological setting” (Winterhalder & Smith 1992: 5). From this premise – often referred to as the ‘phenotypic gambit’ – stems its focus on the interaction between evolutionary forces and ecological variables in the development of specific adaptations. How can this be done in practice? The key to the effective application of behavioral ecological models is the assigning of costs and benefits to the behaviours under study, no matter whether these behaviors are social or economic. These costs/benefits can then be evaluated with explicit and often mathematically rendered optimization and game theoretical models. These models are directly derived from evolutionary theory and allow specific predictions or hypotheses to be put forward, which can be put to the test using behavioral information. HBE enjoys a wide field of application in anthropology, where specific issues such as wealth inheritance, birth spacing and migration can be investigated from this angle. In its archaeological manifestation, HBE most commonly focuses on issues of territoriality, subsistence and technological change, but patterning in resource transport, the origin and diffusion of agriculture, the material correlates of social status, early human social organization, the development of social hierarchies, and the evolution of human life history have also been addressed. In this session we will explore the basic premises of HBE as well as some of the models used. On the basis of a range of case studies, we will consider how effectively HBE allows an evaluation of the patterns seen in the archaeological record and how it interacts with other theoretical approaches.

Readings


Further readings & case studies


5. Historical Ecology

Historical Ecology examines the progressive impact of human societies on landscapes through time. These changes are due to multiple factors that contribute to the ever-changing landscape. Human societies are viewed as an integral part of the landscape's history. The progression of human influence on the landscape, vegetation and water resources through time, represent successive layers of change that build on past human influence which has been continuing over the entire course of human habitation on the planet.

Readings


6. Political Ecology

In this session we will investigate how human social, political and economic motivations have impacted their environments through time. How do social inequalities impact environments? How do agro-pastoral economic strategies change between managing elite elements of societies motivated by cash-crop production and external markets versus small-scale subsistence farmers? How do communities make decisions about their environments in the context of their political organization, economies, and social systems? How does this vary with different types of societies in different ecological settings through time?
Readings:


Are Nature and Culture separate entities? How is nature perceived by other societies both in the present and the past? In this session we explore the many different ways that societies perceive their natural surroundings, contrasting societies with different forms of socio-economic organizations and those living in diverse environments. Discussion topics include a how these perceptions might influence the success or failure of adaptations to particular environmental settings.

Readings:


8. Landscape Archaeology and Phenomenology
This session will address the many ways in which people perceive the landscape around them. Societies classify and organize their surroundings for subsistence, economic, social, political and religious purposes. This structuring of space beyond the settlement is dependent upon the meaning that populations impart upon the landscape. This meaning is a function of symbolic processes, their sense of place, memory, history, legends and the concepts of sacred and profane. In this session we will explore the ways in which archaeology and environmental studies can contribute to our understanding of these social processes.

Readings:

Mar 12. Spring Break: No Class

9. The ‘Anthropocene’ and Human Impact on the Environment

The extinction of large animals (‘megafauna’) characterises many parts of the world during the Quaternary and early Holocene periods. Climatic change, shifting ecological zones and the impact of human hunting (‘overkill’) are among the hypotheses proposed to account for these dramatic changes in faunas.

Is human impact on the atmosphere a new phenomenon, or has there already been human modification of global climate in the past (even if much more subtle than recent industrial impacts)? It can be suggested that the mid and late Holocene differs from past interglacial because greenhouse gasses increase instead of decreasing as expected. One candidate to blame is the intensification and spread of rice agriculture in Asia.

Readings:


**Additional Readings:**

**Fire and firing**


*Or*


*Or*  

**Megafaunal Extinctions**


**Methane and early rice agriculture: the beginnings of global warming?**

Ruddiman, W. F. and J. S. Thomson 2001. The case for human causes of increased atmospheric CH4 over the last 5000 years.  *Quaternary Science Reviews* 20: 1760-1777 [on-line at Sciencedirect.com; also IoA periodicals]
10. Ecology of Colonialism and Conquest

With conquest and colonialism, the controlling social entity brings with it ecological and economic concepts that it applies to new regions and new environments. In this session we will explore how this has impacted native ecologies and agro-pastoral strategies. We will look at the successes and failures of these intrusive environmental strategies and the motivations behind them.

Readings:


Resilience Theory provides a model for describing how social and ecological systems change and restructure through time. The premises are that most systems are not static but rather they are dynamic and change over time. While not entirely predictable, these changes often follow a pattern in which four phases of change are commonly observed:

• “During the growth phase when resources are plentiful, fast-growing entities that can take advantage of these resources tend to dominate the system.

• As the system matures, it enters a conservation phase where resources become ‘locked up’ in longer-lived entities, (e.g., nutrients in the soil are absorbed by trees)
and are no longer available for new colonizers. As a few species or organizations come to dominate in the conservation phase, the system tends to become less flexible which increases the likelihood of collapse.

• A release phase is often viewed as a disturbance to the system. Disturbances can destroy structure and other forms of capital, whether it is natural capital, such as accumulated biomass in a forest, or social capital such as policies or relationships, as suggested by the history of the telephone industry.

• The release phase is quickly followed by the reorganization phase during which new entities and innovations may enter the system but only a few will survive through to the start of the next growth phase.

• Often the new adaptive cycle will be very similar to the old; at other times, it will be very different. Forests may re-colonize with similar species and assemblages."


13. Apr 16. Human Adaptations and Niche Construction (social and ecological)

Niche construction is the process in which an organism alters its own (or other species') environment, often but not always in a manner that increases its chances of survival. This concept has been used in anthropology to examine how humans surround themselves with “survival-friendly” plants, animals and geomorphological settings creating a kind of feedback system. Social niche construction is a concept used to describe a kind of ‘ecology’ of human social structures and family organization.

Readings to be selected
14. Solving Anthropological Research Questions with Environmental Data

This session explores some of the ways in which environmental studies are used to answer anthropological questions about human behaviors, social systems, and lifeways in the past.

Readings (Required Readings to be confirmed)

General & bones

Sediments

Archaeobotany

15. Apr 30. Student Presentations of paper topics