

## NECU 5311 Aspects of Northern Environments

Instructor: M. Dowsley; mdowsley@lakeheadu.ca

### Course Description:

This seminar focuses on the study of human-environmental interactions through time in the northern latitudes. Weekly readings, which serve as points of discussion, will be drawn from peer-reviewed literature from multiple disciplines (geography, ecology, archaeology, and anthropology). Although the geographic focus of this course is on Canada's near and far north, case studies may be drawn from other regions as well.

As a graduate student, you are now entering a community of scholars and are expected to contribute to scholarly discourse in your subject area. To develop and practise this suite of skills, the assignments for this course include readings and discussions using various academic styles of writing, but all focusing on main themes regarding northern environments. You will critically evaluate others' work, both from the peer-reviewed literature and from your class mates and other graduate students. As well, you will be expected to contribute to the class through participation in discussions, formal presentations and written evaluations of others.

### Evaluation:

<b>Assignment 1. Book Review</b>	15%
10% for your review	
5% for your editing of the review of one peer	
<b>Assignment 2. Scholarship Application Using Someone Else's Work</b>	15%
10% for your work	
5% for your written judgement and ranking of 2 others' work	
<b>Assignment 3. Full Grant Proposal on your work</b>	35%
Grant proposal following tri-council guidelines	
20% marked by prof using tri-council evaluation	
5% for class' evaluation of your work	
10% your written judgement of 2 others' work	
<b>Assignment 4. Seminar Presentation of Grant Proposal</b>	10%
5% your presentation of the topic (content, references, presentation, visuals)	
5% providing readings and discussion questions to class, leading discussion	
<b>Participation</b>	25%
Completing readings, participating in discussions, less formal presentations	

***Attendance of weekly seminars is mandatory. Failure to attend two or more seminars throughout the term (for reasons other than illness or personal crisis) will result in a failing grade for the participation component of the course.***

### **Technology:**

Please bring a laptop, tablet, or smart phone to do some writing and refer to homework documents

### **Readings:**

Weekly reading assignments are given below under the week in which they are *due*. Also, Adrian Tanner's *Ethnography on the Cree* will be discussed as an example of one style of academic reporting, a report on aspects of one Northern culture, and as an example of a cultural landscape. It will be available in the bookstore towards the end of September. The other books are widely available and should be in libraries, used book stores or on-line.

Diamond, J. 1997. *Guns, Germs and Steel*. (Read before week 4)

Diamond, J. *Collapse: How societies choose to fail or succeed*. New York: Viking. (Read before week 5 esp. the introduction and the chapter on Norse Greenland)

Tanner, Adrian. 1979. *Bringing Home Animals: Religious Ideology and Mode of Production of the Mistassini Cree Hunters*. New York: St. Martin's Press. (Read before week 6)

Suggested: Swales, John, M. and Christine B. Feak. *Academic Writing for Graduate Students: Essential Tasks and Skills*. Ann Arbor: The university of Michigan Press.

Week	Lecture topic	Discussion assignment/ Activity	Assignments Due
1 Sept 10	Intro, Ecological situation Intro to traditional societies	<ul style="list-style-type: none"> <li>• Book Reviews –assigned in class</li> <li>• Discuss assignment 1</li> </ul>	Rowley-Conly
2 Sept 17	Part 1: How we might study env-human relations Part 2: Paleoenvironments, first peoples in North America	<ul style="list-style-type: none"> <li>• Students explain main theories of human-landscape interactions</li> <li>• Abstract writing</li> <li>• Select main and supplemental books for Assignment 1</li> </ul>	Part 1: Select own reading, see below Part 2: see list
3 Sept 24	Mid-holocene historical overview Historical Ecology	<ul style="list-style-type: none"> <li>• Abstract writing</li> </ul>	Abstract writing 5-slide power point
4 Oct 1	Environmental Determinism Permanent Residency in the Arctic	<ul style="list-style-type: none"> <li>• SSHRC student scholarship information</li> <li>• Discuss Assignment 2</li> </ul>	<i>Guns Germs and Steel</i> Group Presentations
5 Oct 8	Environmental Determinism Thule and Norse	<ul style="list-style-type: none"> <li>• Assignment 3 information</li> <li>• Discuss how a thesis is proposed and constructed</li> </ul>	<i>Collapse</i> <b>Draft Book Review due</b> Supplemental book
6 Oct 15	Cultural Landscapes	<ul style="list-style-type: none"> <li>• Tanner Discussion</li> </ul>	<i>Bringing Home Animals</i> <b>Assignment 1: Final Book Review due</b> 7-slide power point
7 Oct 22	Human impacts on northern environments Arctic		<b>Assignment 2: SSHRC scholarship application for someone else's work</b>
8 Oct 29	TBA		
9 Nov 5	TBA		
10 Nov 12	TBA		
11 Nov 19	Seminars	<ul style="list-style-type: none"> <li>• Evaluate seminars, submit grant proposals</li> </ul>	<b>Assignments 3 and 4</b>
12 Nov 26	Seminars	<ul style="list-style-type: none"> <li>• Evaluate seminars, submit grant proposals</li> </ul>	<b>Assignments 3 and 4</b>

## **Week 1. Introduction to the Course**

- What Graduate school is all about
- perception and 'measurement' of the north
- the subarctic and arctic biomes

Rowley-Conly reading and questions

## **Week 2**

### **Part 1: Theories of human-environment interactions**

Select one of the following research programs, theories, or subdisciplines and using text books from the library and/or journal articles present a short (5-10 min.) synopsis of what it is (key postulates), some key thinkers in the field, example research conducted and critiques of the research program. Submit your bibliography (of at least 5 sources) for grading.

Research programs/subdisciplines/theories: Systems theory, cultural ecology, equilibrium theory of ecology, landscapes, environmental anthropology, ethnoecology, optimal foraging theory. Check with the instructor regarding your choice.

Hints: Wikipedia may be used as a starting point to help you select a topic of interest to you, but you can't cite it in your bibliography. Summaries of the research programs might be found in Annual Review of Anthropology.

### **Part 2: Early northern paleoenvironments and the first peopling of N. America**

- Deglaciation and the shifting north, early northern paleoenvironments
1. Ager, T.A. 2003. Later Quaternary vegetation and climate history of the central Bering land bridge from St. Michael Island, western Alaska. *Quaternary Research* 60:19-32.
  2. Beaudoin, A.B., Wright, M., and Ronaghan, B. 1996. Late Quaternary landscape history and archaeology in the 'Ice-Free Corridor': Some recent results from Alberta. *Quaternary International* 32: 113-126.
  3. Dyke, A. S. 2004. An Outline of North American Deglaciation with Emphasis on Central and Northern Canada. In *Quaternary Glaciation - Extent and Chronology, Part II*, edited by J. Ehlers and P. L. Gibbard, pp. 373-424. Developments in *Quaternary Science*, Volume 26. Elsevier, The Netherlands.  
Hint: Look carefully at the maps! But you can skim the rest if this isn't your field
  4. Julig, P.J., J.H. McAndrews, W.C. Mahaney. 1990. Geoarchaeology of the Cummins site on the beach of proglacial Lake Minong, Lake Superior Basin, Canada. *Geological Society of America*. Centennial Special Volume 4, Chapter 2. Pp 21-50
  5. Yu, Z. 2003. Late Quaternary dynamics of tundra and forest vegetation in the southern Niagara Escarpment, Canada. *New Phytologist* 157: 365-390.
  6. Zazula, G.D. et al. 2003. Ice Age steppe vegetation in eastern Beringia. *Nature* 423: 603.

Hint: If you are not familiar with Latin names of plants, team up with some peers who are so that you can understand the shift in plant communities when humans first began to move into North America and into Ontario.

### Week 3

**Class Activity 1 Abstract Writing:** Select one of the short conference papers made available by the instructor last class. Prepare an abstract of the article. Print 3 copies of your abstract and bring to class. Remember to work independently on this assignment.

#### Part 1: Holocene and Boreal Forest

Mid-Holocene climate and implications for subarctic hunter-gatherers

1. Liu, K-B. 1990. Holocene paleoecology of the Boreal Forest and Great Lakes-St. Lawrence Forest in Northern Ontario. *Ecological Monographs* 60: 179-212.
2. Wright, J.V. 1981 "Prehistory of the Canadian Shield". In *Handbook of North American Indians Subarctic*, Vol. 6, edited by J. Helm, general editor W. Sturtevant, pp. 86-96. Smithsonian Institution, Washington, D.C.

**Class Activity 2 Power Point Presentations:** Using these 2 papers and Scott Hamilton's slide show, create a 5 slide presentation on some aspect of the readings that you find interesting. Present it in class.

Supplemental references are out there, like:

1. Dawson, K. 1983 "Prehistory of the Interior Forest of Northern Ontario". In *Boreal Forest Adaptations: The Northern Algonkians*, edited by A.T. Steegmann, Jr., pp. 55-84. Plenum Press, New York.

#### Part 2: Historical Ecology

1. Balée, W. 2006. The research program of historical ecology. *Annual Review of Anthropology* 35: 75-98.
2. Balée, W. and Erickson, C. (2006). Time, Complexity, and Historical Ecology. In *Time and Complexity in Historical Ecology: Studies in the Neotropical Lowlands*, edited by William Balée and Clark Erickson, pp. 1-20. Columbia University Press, New York.
3. Crumley 1994. Historical Ecology Chapter

### Week 4. Permanent Residency in the Arctic.

#### Assignment 2 readings

Read York and Keffer's SSHRC apps

Each student will select either Anna Bunce or Dressler et al. for assignment 2. No need to work on it yet!!!

#### Environmental Determinism

- Environmental Determinism suggests that the environment shapes human adaptation and therefore culture; like Social Darwinism it is closely tied to politics
- This week and next we will look at the most extreme environment, the Arctic, and 3 cultures that occupied it in the last 1000 yrs, the Dorset, the Thule and the Norse in order to understand how environment and history affect a culture

1. Blaut, J.M. 1999. Environmentalism and Eurocentrism. *Geographical Review* 89(3): 391-408.

- Focus on his critique of Diamond's work. Having read Diamond, how would you defend him?

2. Freilich, Morris. 1967. Ecology and Culture: Environmental Determinism and the Ecological Approach in Anthropology. *Anthropological Quarterly* 40(1): 26-43.

3. Coombes, P. and K. Barber. 2005. Environmental determinism in Holocene research: Causality or coincidence? *Area* 37(3): 303-311.

### **Part 1 Arctic First Peoples**

Powers, W.R. and R. H. Jordan. 1990. Human biogeography and climate change in Siberia and Arctic North America in the fourth and fifth millennia BP. *Phil. Trans. R. Soc. London Series A*. 665-670.

- How did the environment constrain culture (or not)? What influences culture more, its environment or history?

#### **Group 1: Teach us about the Arctic Small Tool Tradition, emphasis on the Dorset culture (45 min)**

#### **Group 2: Teach us about the Thule culture (45 min)**

For each, the group should focus on the following: How did history and environment influence your culture? What technologies were invented to deal with the environment? What else did your culture do, besides survive? What happened to your culture?

Some references to get you *started* find these on your own. Read more, and submit your group bibliography. Your group will be marked together and the groups will be ranked against each other for the content and quality of your presentation.

#### **ASTt (Paleoeskimo)**

Friesen, T. Max. 2004. "Contemporaneity of Dorset and Thule Cultures in the North American Arctic" New Radiocarbon Dates from Victoria Island, Nunavut. *Current Anthropology* 45(5): 685-691.

Hayes, M.G., Coltrain, J.B. and O'Rourke, D.H. 2005. Molecular archaeology of the Dorset, Thule and Sadlermiut. Contributions to the study of the Dorset Paleo-Eskimos. Sutherland, P.D. ed. Mercury Series, Canadian Museum of Civilization. Pp 11-32. North E 78 C2C66 2005

Maxwell, M.S. 1984. Pre-Dorset and Dorset Prehistory of Canada. Handbook of North American Indians vol 5 –Arctic. Damas, D. (ed). Washington, D.C.: The Smithsonian Institution.

McGhee, R. 1996. Ancient People of the Arctic. Canadian Museum of Civilization. Vancouver, B.C.: UBC Press.

McGhee, R. 1978. Canadian Arctic Prehistory. National Museum of Man.

Mobjerg, T. 1999. New adaptive strategies in the Saqqaq culture of Greenland, c. 1600-1400 BC. *World Archaeology* 30(3):452-465. (see others in this volume –some may be of interest to Thule group as well)

Murray, M.S. 1999. Local heroes. The long-term effects of short-term prosperity – an example from the Canadian Arctic. *World Archaeology* 30(3): 466-483.

Park, R. (1993). The Dorset-Thule Succession in Arctic North America: Assessing Claims for Culture Contact. *American Antiquity*, 58(2), 203-234.

Shields, Edward D. and Gregory Jones. 1998 Dorset and Thule Divergence from East Central Asian Roots. *American Journal of Physical anthropology* 106: 207-218.

### **Thule (Neoeskimo)**

Schledermann, P., and K. McCullough. Western elements in the Early Thule culture of the eastern high arctic. *Arctic*, Vol. 33, No. 4, pp. 833-841.

Friesen, T. Max and Charles D. Arnold 2008 The Timing of the Thule Migration: New Dates from the Western Canadian Arctic. *American Antiquity* 73 (3):527-538.

Jacobs, J. and Sabo, G. (1978). Environments and Adaptations of the Thule Culture on the Davis Strait Coast of Baffin Island. *Arctic and Alpine Research*, 10(3), 595- 615.

Schledermann (1976). The effect of climatic/ecological changes on the style of Thule culture winter dwellings. *Arctic and Alpine Research*, 8(1), 37-47.

McCartney & Savelle (1993). Bowhead whale bones and Thule Eskimo subsistence-settlement patterns in the central Canadian Arctic. *Polar Record*, 29(168), 1-12.

Savelle & McCartney (1999). Thule Eskimo bowhead whale interception strategies. *World Archaeology*, 30(3), 437-451.

Savelle, James M. 1997. The Role of Architectural Utility in the Formation of Zooarchaeological Whale Bone Assemblages. *Journal of Archaeological Science* 24: 869-885.

Whitridge, Peter 2002. Social and Ritual Determinants of Whale Bone Transport at a Classic Thule Winter Site in the Canadian Arctic. *International Journal of Osteoarchaeology* 12: 65-75.

Morgan, E. D., L. Titus, R. J. Small and Corony Edwards. 1983. The composition of Fatty Materials from a Thule Eskimo Site on Herschel Island. *Arctic* 36(4): 356-360.

Damas, D. (ed). 1984. Handbook of North American Indians vol 5 –Arctic. Damas, D. (ed). Washington, D.C.: The Smithsonian Institution.

McGhee, R. 1996. Ancient People of the Arctic. Canadian Museum of Civilization. Vancouver, B.C.: UBC Press.

McGhee, R. 1978. Canadian Arctic Prehistory. National Museum of Man.

### **Week 5. The Thule and Greenland Norse: Divergent responses to climate change**

**Draft book review due** – bring 3 hard copies to class (or email if you are in Orillia!)

Deadline for reading your supplemental book for the book review. Today you will read your peer's review and give comments.

Read *Collapse*

#### **Readings**

1. Mann, M.E. 2002. Little Ice Age. In: Encyclopedia of Global Environmental Change. John Wiley & Sons.
2. Matthews, J.A. and Briffa, K.R. 2005. The 'Little Ice Age': Re-evaluation of an evolving concept. Geografisker Annaler, Series A, Physical Geography 87(1): 17-36.
3. McGovern, T.H. 1980. Cows, harp seals, and churchbells: Adaptation and extinction in Norse Greenland. Human Ecology 8: 245-275.
4. Dugmore, A.J. et al. 2007. Norse Greenland settlement: Reflections on climate change, trade, and the contrasting fates of human settlements in the North Atlantic Islands. Arctic Anthropology 44: 12-36.
5. Panagiotakopulu, E. et al. 2007. Fossil insect evidence for the end of the Western Settlement in Norse Greenland. Naturwissenschaften 94: 300-306.
6. D'Andrea et al. 2011. Abrupt climate change as an important factor for human migration in West Greenland. PNAS: May 31, 2011.

### **Weeks 6 Cultural Landscapes of the Boreal Forest**

Submit Assignment 1.

### **Part 1: Bringing Home Animals**

- Discussion on the book.
- Find a book review of this book, critique the review and book verbally for the class
- Find an article that cites Tanner's Bringing Home Animals, how is the book used and valued by later researchers?

### **Readings**

1. Berkes, F. and Davidson-Hunt, I. 2006. Biodiversity, traditional management systems, and cultural landscapes: examples from the boreal forest of Canada. *International Social Science Journal* 58: 35-47.
2. Davidson-Hunt, I. J. 2003a. Indigenous lands management, cultural landscapes and Anishnaabe people of Shoal Lake, Northwestern Ontario, Canada. *Environments* 31(1): 21-41.

Study Qu: What are 'Cultural Landscapes' and Davidson-Hunt's argument for looking at them as dynamic?

3. Davidson-Hunt, I.J. 2003b. Learning as you journey: Anishinaabe perception of social-ecological environments and adaptive learning. *Conservation Ecology*. 8(1): 5
4. Lewis, H.T. and Ferguson, T.A. 1988. Yards, corridors and mosaics: how to burn a boreal forest. *Human Ecology* 16: 57-77.
5. Pendea I.F., Chmura, G.L., Costopoulos A. 2011. Mid to late Holocene fire history of eastern James Bay: investigating the environmental impact of early humans. GeoHydro2011 Proceedings of the Joint Meeting of the Canadian Quaternary Association (CANQUA) and the Canadian Chapter of the International Association of Hydrogeologists (IAH-CNC).
6. Miller, AM, Davidson-Hunt, I. 2010. Fire, Agency and Scale in the Creation of Aboriginal Cultural Landscapes. *Human Ecology* 38: 401-414.

### **Part 2**

Find another paper on cultural landscapes (not in Boreal or Arctic ecozone). Prepare 7 slides outlining the theory presented in the paper (how does the paper's case study advance theory?) and explaining the case study and comparing to ours in the boreal forest.

### **Week 7. Human Impacts on Arctic Environments**

**Assignment 2 due.** Bring 3 copies to class. Orillia students email to prof ahead of time for printing.

**Part 1.** Receive grant applications from 2 other students in the class. Evaluate them and rank them. Be sure to write at the top of your submission: Your name, and the two students you evaluated. Submit to prof.



## Readings

1. Smith, K.P. 1995. Landnam: The settlement of Iceland in archaeological and historical perspective. World Archaeology 26: 319-347.
2. Dugmore, A. J., Church, M. J., Buckland, P. C., Edwards, K. J., Lawson, I., McGovern, T. H., Panagiotakopulu, E., Simpson, I. A., Skidmore, P., and Sveinbjarnardottir, G. 2005. The Norse landnam on the North Atlantic islands: an environmental impact assessment. Polar Record 41: 21-37.
3. Lawson, I. T., Church, M., J. , McGovern, T. H., Arge, S. V., Woollet, J., Edwards, K. J., Gathorne-Hardy, F. J., Dugmore, A. J., Cook, G., Mairs, K.-A., Thomson, A. M., and Sveinbjarnardóttir, G. 2005. Historical Ecology on Sandoy, Faroe Islands: Palaeoenvironmental and Archaeological Perspectives. Human Ecology 33: 651-684.
4. Douglas, M.V. et al. 2004. Prehistoric Inuit whalers affected Arctic freshwater ecosystems. PNAS 101: 1613-1617.
5. Hadley, K.R. et al. 2010. Ecological influences of Thule Inuit whalers on high Arctic pond ecosystems: A comparative paleolimnological study from Bathurst Island (Nunavut, Canada). Journal of Paleolimnology.
6. Woollett, J. 2008. Labrador Inuit subsistence in the context of environmental change: An initial landscape history perspective. American Anthropologist 109(1): 69-84.

## Part 2.

Select one of the papers above and find 2 other readings related to it. Present them in class informally (no slides needed).

**Week 8.** TBA

**Week 9.** TBA

**Week 10.** TBA

**Weeks 11 & 12.** Assignment 4 presentations

Bring 3 printed copies of your proposal.

Collect 2 from peers to evaluate in class or as homework. Rank them and submit to prof with your name and the name of the two students you marked at the top.