

Anthropology 6186/4930  
Sec 2A75/  
Spring 2020  
sdef@ufl.edu

Dr. Susan D. deFrance  
1350-B Turlington Hall  
Office hours T and Thurs 2:30-4:00 pm  
and by appt.

## The Archaeology of Maritime Adaptations

### Course Objectives and Goals:

This seminar examines human adaptations to maritime and coastal settings using evidence from archaeological, ethnohistoric and ethnographic contexts. Issues to be examined include:

- 1) DEFINITIONS OF MARITIME ADAPTATIONS
- 2) CHARACTERISTICS OF MARINE RESOURCES AND HABITATS
- 3) HISTORY OF INVESTIGATIONS
- 4) TECHNOLOGY AND ORGANIZATION OF MARITIME PREDATION
- 5) OWNERSHIP, TERRITORY, AND RESOURCE RIGHTS
- 6) POPULATION, SETTLEMENT AND SITE SIZE
- 7) HEALTH AND BIOLOGY OF MARITIME POPULATIONS
- 8) ECONOMIC AND POLITICAL ORGANIZATION
- 9) COMPLEXITY OF MARITIME SOCIETIES
- 10) ETHNOGRAPHY OF MARITIME PEOPLES
- 11) MODERN ISSUES RELATED TO CONSERVATION, CLIMATE CHANGE, AND SEA LEVEL RISE

Populations and cultures exhibiting maritime adaptations, among others, include: Jomon, Pacific Islands, Yagan, Andean Coast, Chumash, Northwest Coast, Eskimo/Aleut, Red Paint Archaic, Calusa, European Mesolithic, Coastal Maya

Readings are available on the course elearning/Canvas site.

### *Written Work and Class Presentations:*

- 1) Weekly Assignments: 1-2 page review (critique, evaluation – not summaries) of ALL weekly readings. These are due at the start of class; late papers are not accepted without prior permission.
- 2) Each session students will be assigned one reading to present in detail (max. 15 minutes). Oral presentations will rotate between students depending on the number of reading assignments per week. All students must be prepared to discuss all the weekly readings at class time.
- 3) Final Paper (due APRIL 25 AT 4 PM- NO late papers, No incompletes, emergencies excluded) – on an approved topic related to the Archaeology of Maritime Adaptations. Final Paper should follow *American Antiquity* format for bibliography with a minimum of 2 references per page.

### *Grading:*

**Class participation (20%)** attendance (10%) and discussion (10%)  
(excused absences for illness and academic business only)

**Class presentations (15%)**

**Weekly written critiques (15%)**

**Final paper (50%)** Graduates - ~20 pages double-space; Undergraduates - ~10 pages

## **The Archaeology of Maritime Adaptations**

**Jan. 6**                      **Introduction, class structure, class themes**

**Jan. 13 Marine and coastal environments and habitats**

### **Readings:**

Visit <http://www.sms.si.edu/IRLSpec/index.htm>

The Smithsonian Marine Station at Fort Pierce, Indian River Lagoon, Florida  
view habitat and lagoon information in detail and other components in general

download NOAA publication: (read or print [it is better in color])

[http://www.nmfs.noaa.gov/habitat/habitatconservation/publications/EnglishWetlands\\_051404.pdf](http://www.nmfs.noaa.gov/habitat/habitatconservation/publications/EnglishWetlands_051404.pdf)

Barber, R. T. and F. P. Chavez,  
1983 Biological Consequences of El Niño, *Science* 222:1203-1210.

Cowardin, Lewis M., Virginia Carter, Francis C. Golet, and Edward T. LaRoe  
n.d. Classification of Wetlands and Deepwater Habitats of the United States

Jackson, J. B. C.  
1997 Reefs since Columbus. *Coral Reefs* 16 (supplement):23-32.

Salwen, Bert  
1962 Sea Levels and Archaeology in the Long Island Sound Area. *Am. Antiquity* 28(1):46-55.

Sandweiss, Daniel H.  
2003 Terminal Pleistocene through Mid-Holocene Archaeological Sites as Paleoclimatic Archives for the Peruvian Coast, *Palaeogeography, Palaeoclimatology, Palaeoecology* 194:23-40.

Scudder, Sylvia  
2003 Sea Level Rise or Shallow-water Midden Deposition? Archaeopedology at the Seminole Rest Archaeological Site, Coastal East-Central Florida. *Journal of Archaeological Science* 30 (12):1551-1557.

**Jan. 20**                      **MLK Holiday**

**Jan. 27**                      **Early View of Maritime Adaptations: Ethnography and Archaeology**  
**Readings:**

Barnett, Homer  
1939 The Coast Salish of Canada. *American Anthropologist* 40:118-141.

Hewes, Gordon W  
1948 The Rubric of "Fishing and Fisheries." *American Anthropologist* 50(2): 238-246.

Cook, S. H.  
1946 A Reconsideration of Shellmounds with Respect to Population and Nutrition. *Am. Antiquity* 12:50-52.

Orssich, Adam and Elfriede Stadler Orssich

1956 Stratigraphic Excavations in the Sambaqui of Araujo II, Parana, Brazil. *American Antiquity* 21(4):357-369.

Roberts, H. H.

1932 The First Salmon Ceremony of the Karuk Indians. *Am. Anthropologist* 34:426-440.

Sauer, C. O.

1962 Seashore—Primitive Home of Man? *Proceedings of the American Philosophical Society* 106: 41–47.

Uhle, M.

1907 The Emeryville Shellmound. *American Archaeology and Ethnology (Berkeley)* 7:1–106.

ON RESERVE LIBRARY WEST

Nelson, N.C.

1909 Shellmounds of the San Francisco Bay Region. *U. California* 7(4).

ON RESERVE LIBRARY WEST - SKIM

### **Feb. 3**

### **The Maritime Paradigm**

#### **Readings:**

Arnold, J. E.

1995 Transportation Innovation and Social Complexity among Maritime Hunter-Gatherer Societies. *American Anthropologist* 97:733–747.

Cooney, Gabriel

2003 Introduction: Seeing Land from the Sea, Seascapes issue. *World Archaeology* 35(3):323-328.

Erlandson, Jon M.

2001 The Archaeology of Aquatic Adaptations: Paradigms for a New Millennium. *Journal of Archaeological Research* 9:287-350.

Jon M. Erlandson and Scott M. Fitzpatrick

2006 Oceans, Islands, and Coasts: Current Perspectives on the Role of the Sea in Human Prehistory. *Journal of Island & Coastal Archaeology* 1(1):5-32.

Marquardt, William H. 2010 Shell Mounds in the Southeast: Middens, Monuments, Temple Mounds, Rings, or Works? *American Antiquity* 75(3):551-570.

Moseley, Michael

1992 Maritime Foundations: Preceramic Subsistence and ... and Multilinear Evolution: Retrospect and Prospect. *Andean Past* 3:5-42.

**Feb. 10**

**Dietary Variation in Maritime Adaptations  
Fish, Shellfish, Crabs, Marine Mammals, Birds  
Readings:**

Akazawa, Takeru

1988 Variability in the Types of Fishing Adaptation of the Later Jomon Hunter-Gatherers. In *The Archaeology of Coastlines*, edited by Geoff Bailey and John Parkington, Cambridge University Press, Cambridge. Selected chapters

Colten, R. H., and Arnold, J. E.

1998 Prehistoric Marine Mammal Hunting on California's Northern Channel Islands. *American Antiquity* 63:679–701.

deFrance, S. D.

2005 Late Pleistocene Marine Birds from Southern Peru: Distinguishing Human Capture from El Niño Induced Windfall. *Journal of Archaeological Science* 32:1131-1146.

Kozuch, Laura.

1993 *Sharks and Shark Products in Prehistoric South Florida*. Institute of Paleoenvironmental Studies, University of Florida, Gainesville.  
EXAMINE SDEF COPY.

Parsons, Jeffery R.

2005 The Aquatic Component of Aztec Subsistence: Hunters, Fishers, and Collectors in an Urbanized Society. *Subsistence and Sustenance* 15(1) (UM reprint of book chapter).

Losey, Robert J., Sylvia Behrens Yamada and Leah Largaespada

2004 Late-Holocene Dungeness Crab (*Cancer magister*) Harvest at an Oregon Coast Estuary. *Journal of Archaeological Science* 31(11):1603-1612.

**Feb. 17**

**Ethnographic background of maritime populations  
Alaska and Arctic regions, NW and California  
Readings:**

Boxberger, Daniel

1989 *To Fish in Common: The Ethnohistory of Lummi Indian Salmon Fishing*. University of Nebraska Press, Lincoln. selected chapters

Erlandson, Jon M.

1998 The Making of Chumash Tradition. *Current Anthropology* 39(4):477-485.

relates to Chumash self-identity and issues other than their uniqueness as a maritime peoples.

Moss, M. L.

1993 Shellfish, Gender, and Status on the Northwest Coast: Reconciling Archaeological, Ethnographic, and Ethnohistorical Records of the Tlingit. *Am. Anthropologist* 95:631–652.

Moss, M. L.

2008 Outer Coast Maritime Adaptations in Southern Southeast Alaska: Tlingit or Haida? *Arctic Anthropology* 45(1):41-60.

Wenzel, George W.

1995 Ningiqtuq: Resource Sharing and Generalized Reciprocity in Clyde River. *Arctic Anthropology* 32(2):43-60.

**February 24                      Ethnographic background of maritime (and lacustrine) populations  
Australia and Pacific islands, Caribbean, S. America  
Readings:**

Jones O'Day, Sharyn

2004 Past and Present Perspectives on Secular Ritual: Food and the Fisherwomen of the Lau Islands, Fiji, pp. 153-161. Proceedings of the 9<sup>th</sup> ICAZ Conference, *Behavior Behind Bones: The Zooarchaeology Ritual, Religion, Status, and Identity*, edited by S. Jones O'Day, W. Van Neer, and A. Ervynck. Oxbow Books, UK.

Lieber, Michael D.

1992 *More Than a Living: Fishing and the Social Order on a Polynesian Atoll*. Westview Press, Boulder. Chapters 1, 2, 9, 10

Levieil, Dominique and Benjamin Orlove

1990 Local Control of Aquatic Resources: Community and Ecology in Lake Titicaca. *American Anthropologist* 92:362-382.

McNive, Ian J.

2003 Saltwater People: Spiritscapes, Maritime Rituals and the Archaeology of Australian Indigenous Seascapes. *World Archaeology* 35(3): 329-349.

Price, Richard

Caribbean Fishing and Fishermen: A Historical Sketch. *Am. Anthropol.* 68 (6):1363-1383.

Titcomb, M.

1972 *Native Use of Fish in Hawaii*, 2nd ed., U. of Hawaii Press, Honolulu. pp. 1-56.

**March 2                              Spring Break**

**March 9                              Earliest use of marine resources, Paleolithic and Old World  
European Mesolithic, New World Late Pleistocene  
Readings:**

Bailey, G. N. et al.

2019 The Archaeology of Pleistocene Coastal Environments and Human Dispersals in the Red Sea: Insights from the Farasan Islands. In N. M. A. Rasul and I. C. F. Stewart (eds.), *Geological Setting, Palaeoenvironment and Archaeology of the Red Sea*, pg 583-604. Springer, Berlin.

Braje, Todd, et al.

2019 Fladmark + 40: What Have We Learned about a Potential Pacific Coast Peopling of the Americas? *American Antiquity* online preview.

Dillehay, T., C. Ramírez, M. Pino, M. Collins, J. Rossen, J. Pino-Navarro.

2008. Monte Verde: Seaweed, Food, Medicine, and the Peopling of South America. *Science* 320:784-786.

Richards, M.P., R. Jacobi, J. Cook, P.B. Pettitt, C.B. Stringer

2005 Isotope Evidence for the Intensive use of Marine Foods by Late Upper Palaeolithic Humans. *Journal of Human Evolution* 49:390-394

Richards, M. P. and Schulting, R. J.

2006 Touch not the Fish: the Mesolithic- Neolithic Change of Diet and its Significance. *Antiquity* 80 (308): 444-456.

Stringer, C.B., J. C. Finlayson, R. N. E. Barton, Y. Fernandez-Jalvo, I. Caceres, R. C. Sabin, E. J.

Rhodes, A. P. Currant, J. Rodriguez-Vidal, F. Giles-Pacheco, J. A. Riquelme-Cantal

2008 Neanderthal Exploitation of Marine Mammals in Gibraltar *Proceedings of the National Academy of Sciences*, 105 (38), 14319-14324 DOI: [10.1073/pnas.0805474105](https://doi.org/10.1073/pnas.0805474105)

Will, Manuel, Andrew W. Kandel, and Nicholas J. Conard

2019 Midden or Molehill: The Role of Coastal Adaptations in Human Evolution and Dispersal. *Journal of World Prehistory* 32:33–72.

Erlandson, Jon R., Torben C. Rick, Todd J. Braje, Molly Casperson, Brendan Culleton,

Brian Fulfrost, Tracy Garcia, Daniel A. Guthrie, Nicholas Jew, Douglas J. Kennett,

Madonna L. Moss, Leslie Reeder, Craig Skinner, Jack Watts, Lauren Willis

2011 Paleoindian Seafaring, Maritime Technologies, and Coastal Foraging on California's Channel Islands. *Science* 331, 1181-1185.

## **March 16**

## **Bioarchaeology and Health of coastal foragers - Prehistory**

### **Readings:**

Bathurst, Rhonda R.

2005 Archaeological Evidence of Intestinal Parasites from Coastal Shell Middens. *Journal of Archaeological Science* 32(1):115-123.

Blom, Deborah, et al.

2005 Anemia and Childhood Mortality: Latitudinal Patterning Along the Coast of Pre-Columbian Peru. *AJPA* 127:152–169.

Schwarcz Henry P., Chisholm B.S., Burchell M.

2014 Isotopic Studies of the Diet of the People of the Coast of British Columbia. *AJPA* 155(3):460-468.

Smith-Guzmán, Nicole and Richard G. Cooke

2019 Cold-Water Diving in the Tropics? External Auditory Exostoses among the Pre-Columbian Inhabitants of Panama. *American Journal of Physical Anthropology* 168 (3):448-458

Villotte, Sébastien and Christopher J. Knusel

2016 External Auditory Exostoses and Prehistoric Aquatic Resource Procurement. *Journal of Archaeological Science: Reports* 6:633-636

## **March 23**

### **Archaeology and Technology**

#### **Methods of capture, technology, storage, transport**

#### **Readings:**

Arnold, Jeanne E.

2007 Credit Where Credit Is Due: The History of the Chumash Oceangoing Plank Canoe. *American Antiquity* 72(2):196-209.

Beheim, Bret and Adrian V. Bell

2011 Inheritance, Ecology and the Evolution of the Canoes of East Oceania. *Proceedings of Royal Society - Biological Sciences*, 278(1721):3089-3095.

Callaghan, Richard

2001 Analysis of Ceramic Age Seafaring and Interaction Potential in the Antilles. *Current Anthropology* 42(2):308-313.

Gamble, Lynn H.

2002 Archaeological Evidence for the Origin of the Plank Canoe in North America. *American Antiquity* 67(2):301-315.

Groesbeck AS, Rowell K, Lepofsky D, Salomon AK

2014 Ancient Clam Gardens Increased Shellfish Production: Adaptive Strategies from the Past Can Inform Food Security Today. *PLoS ONE* 9(3): e91235.

Hudson, Jean L.

2004 Additional Evidence for Gourd Floats on Fishing Nets. *American Antiquity* 69(3):586-587.

Marcus, Joyce, Jeffrey D. Sommer, and Christopher P. Glew

1999 Fish and Mammals in the Economy of an Ancient Peruvian Kingdom. *Proceedings of the National Academy of Sciences of the United States of America* 96(11):6564-6570.

Walker, Karen J.

2000 The Material Culture of Precolumbian Fishing: Artifacts and Fish Remains from Coastal Southwest Florida. *Southeastern Archaeology* 19(1):24-45.

**March 30**

**Archaeology of SE Asia, Pacific Islands, and Africa**

**Readings:**

Breen, Colin and Paul J. Lane

2003 Archaeological Approaches to East Africa's Changing Seascapes. *World Archaeology* 35(3):469-489.

Fitzpatrick, Scott M.

2008 Micronesian Interregional Interaction: Deciphering Multi-Group Contacts and Exchange Systems through Time. *Journal of Anthropological Archaeology* 27(1):131-147.

Fujita, Masaki, et al.

2016 Advanced maritime adaptation in the western Pacific Coastal Region Extends Back to 35,000–30,000 Years before Present. *PNAS* 113(40): 11184–11189.

Goff, J. R.; McFadgen, B. G.

2001 Catastrophic Seismic-Related Events and Their impact on Prehistoric Human Occupation, Coastal New Zealand. *Antiquity* 75(287):155-163.

Habu, Junko

2004 *Ancient Jomon of Japan*. Cambridge University Press, Cambridge, England.  
Selected chapters

Kirch, Patrick V.

1997 *The Lapita People: Ancestors of the Oceanic World*. Blackwell, Cambridge, Mass.  
Chapters 1, 6, and 7

**April 6**

**Archaeology of Ancient Americas: Andean South America**

**Readings:**

Beresford Jones et al.

2018 Refining the Maritime Foundations of Andean Civilization: How Plant Fiber Technology Drove Social Complexity During the Preceramic Period. *J Archaeol Method Theory* (2018) 25:393–425

Marquet, Pablo A., Calogero M. Santoro, Claudio Latorre, Vivien G. Standen, Sebastián R. Abades, Marcelo M. Rivadeneira, Bernardo Arriaza and Michael E. Hochberg

2012 Emergence of Social Complexity among Coastal Hunter-Gatherers in the Atacama Desert of Northern Chile. *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 109, No. 37:14754-14760

Moseley, M. E.

1975 *The Maritime Foundations of Andean Civilization*. Menlo Park, Cummings. skim

Prieto, Gabriel and Dan Sandweiss, eds.

2019 Introduction to Maritime Communities of the Ancient Andes. UF Press, Gainesville.



Sandweiss, Daniel H., Ruth Shady Solís, Michael E. Moseley, David K. Keefer, and Charles R. Ortloff

2009 Environmental change and economic development in coastal Peru between 5,800 and 3,600 years ago. *PNAS- Proceedings of the National Academy of Sciences of the USA*. 105(5):1359-1363.

Sandweiss, Daniel H, H. McInnis, R. L. Burger, A. Cano, B. Ojeda, R. Paredes, M. C. Sandweiss, M. D. Glascock,

1998 Quebrada Jaguar: Early South Am. Maritime Adaptations, *Science* 281:1830-1832.

Shady Solís, Ruth

2005 Caral Supe, Perú: la civilización de Caral-Supe : 5000 años de identidad cultural en el Perú. Instituto Nacional de Cultura, Lima skim

**April 13                      Archaeology of Ancient Americas:  
Caribbean, Central America, and North America  
Readings:**

Cannarozzi NR and Kowalewski M

2019 Seasonal oyster harvesting recorded in a Late Archaic period shell ring. *PLoS ONE* 14(11):e0224666.

McKillop, Heather

1995 Underwater Archaeology, Salt Production, and Coastal Maya Trade at Stingray Lagoon, Belize. *Latin American Antiquity* 6(3):214-228.

Rick, Torben C., Jon M. Erlandson, Rene L. Vellanoweth, and Todd J. Braje

2005 From Pleistocene Mariners to Complex Hunter-Gatherers: The Archaeology of the California Channel Islands. *Journal of World Prehistory* 19:169-228.

Ramos, Reniel

2010 What is the Caribbean: an Archaeological Perspective? *Journal of Caribbean Archaeology, Special Publication #3 2010*

Stark, Barbara L. and Barbara Voorhies

1978 Prehistoric Coastal Adaptations: The Economy and Ecology of Maritime Middle America. Academic Press, New York. SKIM

Thompson, Victor D. and John E. Worth

2011 Dwellers by the Sea: Native American Adaptations along the Southern Coasts of Eastern North America. *Journal of Archaeological Research* 19:51–101.

Reexamine article by Marquardt

**April 20**

**Conservation, Climate Change and the Future  
Brief class presentations**

Anderson, David et al.

2017 Sea-level Rise and Archaeological Site Destruction: An Example from the Southeastern United States using DINAA (Digital Index of North American Archaeology) PLoS ONE 12(11): e0188142. <https://doi.org/10.1371/journal.pone.0188142>

Aswani, Shankar

2019 Perspectives in Coastal Human Ecology (CHE) for Marine Conservation. *Biological Conservation* 236:223-235.

Doney, Scott C., et al.

2012 Climate Change Impacts on Marine Ecosystems. *Annual Review of Marine Science* 4(1):11-37.

Jackson JBC, et al.

2001 Historical Overfishing and the Recent Collapse of Coastal Ecosystems. *Science* 293:629–637

**April 27**

**Final Paper due – 4 PM – via email (pdf preferred)**