

# THE EVOLUTION OF ANCIENT HAWAIIAN SOCIETY, US

*Course ID: ARCH 300i*  
*July 15-August 18, 2018*

**FIELD SCHOOL DIRECTOR:**

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## INTRODUCTION

Settled by a common ancestral society about a thousand years ago, the diverse islands of East Polynesia provide a unique canvas for examining how small founding propagules transformed insular landscapes while developing social and economic strategies that resulted in some of the most complex stratified societies of the prehistoric world. The exemplar, of course, is the Hawaiian Islands which arguably crossed from complex chiefdom to a state-level society in the last few centuries before European contact in 1795. One crucial aspect for examining the transformation of late prehistoric Hawaiian society is understanding the organization or structure of settlement space within traditional land units or *ahupua'a*. Ideally, these pie-shaped wedges of land traversed an elevational gradient from the mountainous interior, to the coastal margins. In the early 1980s, an intensive settlement pattern survey of 7.7 km<sup>2</sup> of the south-central leeward side of Moloka'i island, encompassing three *ahupua'a*, was completed. A total of 499 structural features were mapped and more than 400 m<sup>2</sup> were excavated in residential complexes (representing archaeological households), agricultural field systems, rock shelters, temples, and a low sandy mound—the site of the earliest occupation (Weisler and Kirch 1985). Renewed excavations will target several high-status residential complexes that were only tested in the early 1980s and also other archaeological temples that have never been investigated. The new research objectives will focus on the following:

1. Conducting area excavations to understand intra-household variability that can be linked to status. For example, previous research has shown that tools fashioned from non-local stone, the presence of pig bone, and the nature of the household shrine are indicators of status.
2. Community-level religious structures are symbols of chiefly authority and power, whereas the position of household shrines reaffirms the structure of functional space separating sacred from secular activities. Additional excavations will be completed in religious structures to obtain material for determining the precise dates of use. Relatively few religious sites have been excavated in the Hawaiian Islands and there is scant documentation of the internal organization (activity areas) within these structures. Consequently, the excavations will provide some of the most detailed archaeological documentation of the internal organization and functions of religious structures.
3. Only 13 standard radiocarbon dates were obtained from previous excavations, despite the large size of the study area which included more than 20 separate and well-defined residential complexes. These samples processed in the early 1980s were of unidentified wood charcoal and therefore may have included "old wood" not appropriate for dating by today's standards. Therefore, it is essential to obtain a new suite of wood charcoal samples where appropriate short-lived wood charcoal can be AMS dated, thus yielding a new high-precision chronology for the settlement system.
4. All excavated sediments will be sieved with 3.2 mm (1/8") screens, all faunal material retained and identified to nearest taxon. All identifications can be done at the University of Queensland using extensive reference material (shellfish; fish, dog, rat, turtle; urchins; land snails), while bird bone will be sent to specialists. Students will learn the fundamentals of faunal identification and analysis. UQ also has facilities to geochemically analyze stone artifacts to determine non-local sources of stone.

The research objectives briefly outlined above are the short-term goals which will result in refereed journal articles. The long-term goal is to produce a monograph which incorporates the survey and excavation data from the 1980s research combined with the renewed excavations resulting from the field school.

## **COURSE OBJECTIVES**

The Kawela study area is a well-preserved, late prehistoric community encompassing a broad range of archaeological sites including residential complexes, rainfed and irrigated agricultural systems, religious sites, fish ponds, and petroglyph or rock arts sites. Students will learn how to recognize these basic site types. Students will learn basic compass and tape mapping skills and participate in plane-table and alidade mapping as well. Excavation skills will include: setting up excavation units, learning careful and controlled excavation techniques, plotting artifacts, drawing subsurface features (such as ovens and fireplaces), sieving cultural sediments, and recognizing and sorting cultural material. Students will get in-field lectures on sediments and soils, how to record stratigraphy, and how to recognize site formation and disturbance processes. During lab sessions (and depending on what is recovered), students will learn: how to differentiate the major classes of bone midden including fish, bird, medium mammal (dog and pig), rat, and turtle; how to identify marine shellfish, urchin, and crab to lowest taxon; and how to recognize artifact types and lithic debitage. It is anticipated that students will spend at least one day a week on lab processing the excavated finds. On at least a few days during the field school, we will spend time in the nearshore environment fronting the project area for collecting shellfish, urchins, crabs and fish for processing into reference specimens. Students will observe the different littoral shore microenvironments that were targeting prehistorically for capturing a range of sea food. During the field and lab work students will collect and identify artifacts and food remains that are essential for determining the intra-site variability of the residential complexes and religious structures. What kinds of activities were conducted within religious structures as evidenced by the food remains and artifacts? Is there a differential distribution of food remains across house sites that will allow us to determine the

status of the occupants? Students will see how research questions are addressed from the material that is collected.

#### **ACADEMIC CREDIT UNITS & TRANSCRIPTS**

**Credit Units:** Attending students will be awarded 8 semester credit units (equivalent to 12 quarter credit units) through our academic partner, Connecticut College. Connecticut College is a private, highly ranked liberal arts institution with a deep commitment to undergraduate education. Students will receive a letter grade for attending this field school (see grading assessment and matrix). This field school provides a minimum of 160 direct instructional hours. Students are encouraged to discuss the transferability of credit units with faculty and registrars at their home institutions prior to attending this field school.

**Transcripts:** An official copy of transcripts will be mailed to the permanent address listed by students on their online application. One additional transcript may be sent to the student's home institution at no additional cost. Additional transcripts may be ordered at any time through the National Student Clearinghouse: <http://bit.ly/2hvurkl>.

#### **PREREQUISITES**

Any enthusiastic student with a passion for learning is welcome to apply to this field school.

#### **DISCLAIMER – PLEASE READ CAREFULLY**

Hawaii has a semi-tropical climate and during the summer months the temperatures range from 85-90 degrees F and rainfall is barely an inch per month. Consequently, expect hot and dry weather. The archaeological sites are at about 250 foot elevation overlooking the south shore of Moloka'i and the broad coastal reef. Site vegetation consists mostly of grasses, low shrubs, and sparse trees. Most archaeological sites are walking distance from the accommodation. Onsite work will begin at 7:30 each morning, with mid-morning and mid-afternoon breaks, lunch at about noon. The level of difficulty for excavation is moderate and students should be in a reasonable level of fitness to tolerate the warm and dusty conditions.

If you have any medical concerns, please consult with your doctor. For all other concerns, please consult with the project director – as appropriate.

#### **LEARNING OUTCOMES**

By the end of the field school, students will master essential techniques and methods in field and lab work as well as having a broad understanding of Hawaiian archaeology and prehistory including the theoretical perspectives that underpin the discipline. In the field students will learn: how to recognize the diversity of Hawaiian archaeological sites; basic compass and tape site mapping; participate in plane-table and alidade mapping of architectural sites; setting up excavation units and learning careful and controlled methods of data collection; drawing features (such as fireplaces, ovens, artifact concentrations); shown examples of how to identify and record stratigraphy; how to sieve and sort cultural deposits from the excavations; and how to recognize site formation and disturbance processes. Depending on what is recovered from the site excavations, students will learn: how to recognize the major classes of midden such as bone, shellfish, urchins, crabs; how to identify marine shellfish, crabs, and urchins to lowest taxon; how to separate bone into fish, medium mammal (dog and pig), rat, turtle; how to identify the common families of fish; how to process reference specimens that students will collection in the nearshore environments; after identification of the midden constituents, students will learn how to quantify the faunal into minimum numbers of individuals (MNI) and number of identified

specimens (NISP) and the strengths and weaknesses of both methods. Students will also learn basic artifact recognition and the fundamental of stone flake analysis. In lab and field lectures will acquaint students with Hawaiian archaeology and prehistory, theories on the development of ancient Hawaiian society, and selected topics on geoarchaeology. There will also be a lecture on “Land snails in archaeology” by Dr Carl Christensen (Bishop Museum, Honolulu) demonstrating the unique information that land snails can provide for environmental reconstruction, dating, and human transport.

### **GRADING MATRIX**

Students will be evaluated with three assessments:

- **25%**- Students will be assessed on their participation in field and lab work. For example, what is the quality of their field work? Do students put in a good honest day’s work? Are forms completed correctly? Are they sufficiently detailed?
- **50%**- A daily field diary will be submitted at the end of the field school. The diaries should include reporting of the work done each day, interpretations of the excavations they were involved with, overall interpretations of the site, the significance of the recovered midden and artifacts, and the weather conditions. Knowledge gained from the assigned readings should be incorporated into the interpretations of the site, project research design, and any other aspects of the field and lab research.
- **25%**- A lab practical will provide the opportunity for the students to demonstrate their ability to identify the different classes of bone, major shellfish species, urchins, and crabs. Students will also be tested on basic artifact recognition.

### **TRAVEL & MEETING POINT**

Honolulu, Hawaii is easy to get to on any of the major airlines. Once in Honolulu, you will need to get on an inter-island flight to Moloka’i. Students must arrive on July 15 by 3pm. This is about a 25 minute flight. The trip from Honolulu (HNL) to Moloka’i (MCK) can be arranged through Makani Kai Air ([www.makanikaiair.com](http://www.makanikaiair.com)). The Ho’olehua, Molokai airport (MCK) is very small and students will be met at the baggage claim area.

If you missed your connection or your flight is delayed, please call, text or email project director immediately. A local emergency cell phone number will be provided to all enrolled students.

### **VISA REQUIREMENTS**

This is a domestic program. No visa requirement for US citizens. Citizens of other countries are asked to check the United States Embassy website page at their home country for specific visa requirement.

### **ACCOMMODATIONS**

The accommodation is a modern 3 bedroom, two bathroom house with an outside shower situated on a fenced 2 acre property overlooking the south shore of Moloka’i and across the channel south to Lana’i. It is a spectacular view. The accommodation is a modern home in a subdivision with little chance of contacting food borne illnesses. In the morning, breakfast foods will be made available for students to self-select. Staff and students will take turns preparing lunches for the group which will consist primarily of sandwiches and fruit. The evening meal will be prepared by staff (students are encouraged to help). Most dietary needs will be accommodated such as vegetarian, vegan, wheat free, etc.

## COURSE SCHEDULE

**Week 1 (beginning July 15, 2018):** Lectures “A brief history of Pacific archaeology,” “The complex Hawaiian Chieftdom: Overview of the archaeological theory and prehistory of the Hawaiian archipelago,” “Hawaiian settlement patterns, the Kawela study area and research design, and working with indigenous communities”, and “A quarried landscape in the Hawaiian Islands.” Tour project area and specific sites selected for excavation, visit other sites in area. Start site excavation (at least 3 days). One half day for collecting marine specimens on the reef (weather and tides permitting). One and half days for rest and exploring the island.

**Week 2 (beginning July 23, 2018):** Site excavations, on-site lectures on soils and sediments, site formation processes, and disturbance processes as good examples are encountered during excavations (5 days). Begin lab work (1 complete day) and begin instruction on archaeozoology (faunal identification, analysis, and quantification). Depending on what is recovered from the excavations, students will learn artifact recognition, how to identify the key attributes of stone flakes (debitage). Lecture on “Quantification of food remains from archaeological sites.” One free day for rest and exploring the island.

**Week 3 (beginning July 30, 2018):** Continue site excavations (4 days). One day lab instruction and processing finds. Weather and tides permitting, one day for collecting and processing reef specimens. Lecture by Dr Carl Christensen (Bishop Museum, Honolulu) on ‘Land snails in archaeology.’”

**Week 4 (beginning August 6, 2018):** Continue site excavations (4 days). One day lab instruction and processing finds. One day to visit other archaeological sites on the island. One day for resting.

**Week 5 (beginning August 13, 2018):** Continue excavations (3 or more days). One to three days lab instruction and processing finds and getting collections ready to take to the University of Queensland for further analysis. One free day.

## EQUIPMENT LIST

Aside from comfortable, loose-fitting work clothes, it is essential to bring sunscreen, water bottle, long-sleeve shirts (for sun protection), trowel, pencil and pen, clipboard, sturdy work boots, hat, sun glasses, reef shoes (for participating in reef walks and collecting reference specimens), small backpack. Optional equipment includes mask, fins, and snorkel.

## MANDATORY READINGS

Clarkson, C., Shipton, C. and Weisler, M. (2014) Differentiating the reduction sequence of Hawaiian quadrangular adzes: A case study from Moloka'i. *Journal of Archaeological Science* 49:361-371.

Harris, M., Weisler, M.I. and Faulkner, P. (2015) A refined protocol for calculating MNI in archaeological molluscan shell assemblages: A Marshall Islands case study. *Journal of Archaeological Science* 57:168-179.

Kirch, P. (1990) The evolution of social complexity in prehistoric Hawaii: An assessment of the archaeological evidence. *Journal of World Prehistory* 4(3): 311-345.

Kirch, P. (2011) When did the Polynesians settle Hawai'i? A review of 150 years of scholarly inquiry and a tentative answer. *Hawaiian Archaeology* 12:3-26.

Lambrides, A.B.J. and Weisler, M.I. (2016) Pacific Islands Ichthyoarchaeology: Implications for the development of prehistoric fishing studies and global sustainability. *Journal of Archaeological Research* 24(3):275-324. DOI 10.1007/s10814-016-9090-y

Weisler, Marshall I. (2011) A quarried landscape in the Hawaiian Islands. *World Archaeology* 43(2):293-312.

Weisler, M.I., K. Collerson, Y-X Feng, J-X Zhao and K-F Yu (2006) Thorium-230 coral chronology of a late prehistoric Hawaiian chiefdom. *Journal of Archaeological Science* 33(2):273-282.

Weisler, M.I. and P. Kirch (1985) The structure of settlement space in a Polynesian Chiefdom: Kawela, Moloka'i, Hawaiian Islands. *New Zealand Journal of Archaeology* 7:129-158.

Weisler, M.I. and Love, S. (2015) Geoarchaeology. In James D. Wright (editor-in-chief), *International Encyclopedia of the Social and Behavioral Sciences*, 2<sup>nd</sup> edition, vol. 10. Elsevier, Oxford, pp. 53-57.

Weisler, M.I. and R. Walter (2002) Late prehistoric fishing adaptations at Kawakiu Nui, west Moloka'i. *Hawaiian Archaeology* 8:42-61.

### **RECOMMENDED READINGS**

Athens, J.S., T.M. Rieth and T.S. Dye (2014) A paleoenvironmental and archaeological model-based age estimate for the colonization of Hawai'i. *American Antiquity* 79(1):144-155.

Clarkson, C., Shipton, C., and Weisler, M. (2015) Front, back and sides: Experimental replication and archaeological analysis of Hawaiian adzes and associated debitage. *Archaeology in Oceania* 50:71-84. DOI: 10.1002/arco.5056.

Harris, M. and M.I. Weisler. (In Press). Prehistoric human impacts to marine molluscs and intertidal ecosystems in the Pacific Islands. *Journal of Island and Coastal Archaeology*. (Published online January 20, 2017.)

Weisler, M.I., Q. Hua and J-x. Zhao (2009) Late Holocene <sup>14</sup>C marine reservoir corrections for Hawai'i derived from U-series dated archaeological coral. *Radiocarbon* 51(3):955-968