– COMMENT –

Understanding the Hawaiian Past: A personal reflection

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A half-century ago, I began what would become a lifetime journey to explore and seek to understand the ancient cultures and civilizations of Hawai'i and the island Pacific. Born and raised on O'ahu, I was from an early age fascinated with Hawaiian history, partly inspired by frequent visits to Honolulu's Bishop Museum. At age 13, as a precocious Punahou School student, I had the good fortune to become a member of a summer intern program run by the Museum's malacologist, Yoshio Kondo. It was Kondo who suggested that I go to Hālawa Valley, Moloka'i, in the summer of 1964, where I dug my first test pit into what would later become known as the Hālawa Dune Site (Fig. 1).

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Bishop Museum's senior archaeologist, Kenneth P. Emory, was unaware that I had carried out my own excavation in Hālawa. When, after carefully analyzing all of the shell and bone midden from the test pit in Kondo's malacology lab and writing up my results, I presented Emory with a copy of my report, he was taken aback. A meeting was held in Museum director Roland Force's office to discuss the situation. Although admitting that I had produced a thorough report on my little dig, Emory was adamant that they couldn't have high-school students running around the islands putting down their own excavations. I would have to be properly supervised and trained! Hence in the summer of 1965 I joined the Museum's expedition to Hawai'i Island, under the direction of archaeologist Lloyd J. Soehren. At Kahakahakea our team excavated the tiny H66 rockshelter, with its incredibly dense concentration of fishhooks and other artifacts

Figure 1. My 1964 test pit in the coastal midden at Hālawa Valley, Moloka'i.

(see Editors' Introduction, Fig. 1).

Over the following five decades I have had the privilege of exploring, mapping, excavating, and studying archaeological sites and landscapes on every one of Hawai'i's main islands except Ni'ihau, as well as on other islands and archipelagoes spread across the vast Pacific. After receiving my doctorate from Yale in 1975, I was employed as a research archaeologist on the Bishop Museum staff for ten years. But even after leaving the Bishop – first for the University of Washington, and then the University of California at Berkeley – I continued to make Hawai'i and Polynesia the center of my research. Among the major projects which I had the pleasure to organize and direct in Hawai'i, I would count those in Hālawa, Moloka'i (Kirch and Kelly 1975), Kalahuipua'a, Hawai'i (Kirch 1979), Kawela, Moloka'i (Weisler and Kirch 1985), Waimea-Kawaihae, Hawai'i (Clark and Kirch, eds., 1983), Anahulu, O'ahu (Kirch and Sahlins 1992), Kahikinui, Maui (Kirch 2014), and the Hawai'i Biocomplexity Project with fieldwork on both Maui and Hawai'i Islands (Kirch, ed., 2011) as having made the most significant contributions.

Over the course of this long career, I have witnessed many changes in Hawaiian archaeology – in methods, practices, institutional structures, and interpretive frameworks. Indeed, today's archaeologists working in the islands would scarcely recognize the kind of archaeology that Kenneth Emory introduced me to in 1965. Cultural resource management did not yet exist and the handful of professional archaeologists were all academics who worked for the Bishop Museum or the University of Hawai'i. (The one exception was National Park Service archaeologist Ed Ladd.) The dominant intellectual paradigm was that of culture history, in which the main goal of archaeological research was to develop chronological sequences based on stratified or seriated assemblages of artifacts – in the case of Hawai'i, these were primarily fishhooks and stone adzes.

The first big change that I witnessed came when Roger Green introduced the settlement pattern approach in the late 1960s. Green, along with ethnobotanist Douglas Yen, brought fresh intellectual energy to the Bishop Museum and University of Hawai'i. They were important mentors in my 1969–70 research in Hālawa, Moloka'i, and were also largely responsible for the contemporaneous Lapakahi, Hawai'i, and Makaha, O'ahu projects. All three of these projects built upon Green's settlement pattern approach as well as Yen's innovative ecological perspective. Of course, we were also influenced in the late 1960s and early 70s by the paradigm shift that came to be called the 'New Archaeology,' inspired by Lewis and Sally Binford, Kent Flannery, David Clarke, and others. When P. Bion Griffin and H. David Tuggle took up faculty positions at the University of Hawai'i, they helped to promote the shift from culture history to processual archaeology.

Other major changes in the practice of Hawaiian archaeology started slowly in the late 1960s, then built in momentum through the 1970s and 80s, in response to the rapid pace of 'development' and the transition from a plantation to a tourist-based economy. This started first with what was initially called 'contract archaeology,' gradually becoming what today is known as cultural resources management, CRM for short. As Federal, State, and local laws and ordinances increasingly required developers to deal with the impacts of their highway, resort, or housing projects on archaeological sites, the field of archaeology shifted from being an 'ivory-tower,' academic endeavor to one in which dozens of independent, for-profit archaeological consultants competed for consultancies.

This sea-change from slow-paced academic research to today's highly competitive CRM world of the 'free market' has brought with it other major changes to archaeology in Hawai'i, some positive, some negative. I wrote about some of these changes and my worries about the direction in which Hawaiian archaeology was headed in a keynote address to the Society for Hawaiian Archaeology in 1997 (Kirch 1999), a speech that evoked some strong reactions. Fortunately, my worst fears – that Native Hawaiians were increasingly alienated from archaeology, seeing it as a tool of capitalism – did not come to pass, largely due to increased participation of Native Hawaiians in archaeological work. By becoming involved directly in archaeological work in Hawai'i, many young Native Hawaiians are shifting not only the way that fieldwork is conducted (more respectfully, integrating Hawaiian cultural protocols, for one thing), but reformulating the very questions that we are asking about the past.

There can be no doubt that the shift in emphasis from academia to CRM has resulted in an order of magnitude more archaeological work being carried out in the islands. The corresponding increase in archaeological information about Hawai'i's past is to be welcomed. Unfortunately, however, the majority of CRM-generated archaeological work in Hawai'i never gets published or synthesized in a manner accessible to the public at large. This makes the published research of the handful of scholars who conduct archaeological studies in the islands all the more important. The contributors to this volume are among those who are at the cutting edge of archaeological research in Hawai'i, helping to set the agenda for the next generation of students.

The papers that were presented in the 2013 Society for American Archaeology symposium 'Understanding the Hawaiian Past,' present a snapshot of contemporary Hawaiian archaeology by some of its most prominent and promising practitioners. Some, such as Rob Hommon, have been working in the field almost as long as me. Others, including Melinda Allen, Jenny Kahn, Mark McCoy, James Flexner, Peter Mills, and Kathy Kawelu have been my students or trained with me. Still others including Peter Vitousek, Oliver Chadwick, Thegn Ladefoged, and Jim Bayman are valued collaborators and colleagues. I take this opportunity to extend a warm *mahalo nui loa* to all of

them for contributing such thoughtful and stimulating papers to this volume. Collectively, they highlight some of the huge advances that have been made in the field in recent years, and demonstrate how far we have come from the days of Kenneth Emory. In the remaining paragraphs, I offer a few comments about their papers from my perspective of 50 years of studying Hawaiian archaeology.

Dating the first Polynesian settlement of Hawai'i and determining the immediate origins of that first double-hulled voyaging canoe is probably the most enduring problem in Hawaiian archaeology. It was a driving motivation for Kenneth Emory and Yosihiko Sinoto when I first met them in the mid-1960s. Sinoto had recently excavated at the Hane Dune Site on Ua Huka Island in the Marquesas, where the fishhooks, adzes, and other artifacts he had recovered convinced him that the Marquesas had been a key 'dispersal center' within Eastern Polynesia (Sinoto 1970). This idea of Marquesan centrality in Eastern Polynesian colonization supplanted the older view of Hiroa (1938) and others that the Society Islands had been the 'hub' of Eastern Polynesia, based on ethnographic research and oral traditions.

Melinda Allen reviews the last two decades of research in the Marquesas and other archipelagoes of Eastern Polynesia, assessing their implications for the hypothesis that the Marquesas was the immediate origin point for the Polynesian colonization of Hawai'i. The continued debate has, of course, been driven by the revolution in AMS radiocarbon dating (and re-dating) of early Eastern Polynesian sites, as well as by varied efforts to enforce 'chronometric hygiene' on the extant radiocarbon date corpus. Allen cautiously and carefully assesses the mounting evidence that the Marquesas were, in fact, themselves settled early enough to have provided the platform for an expedition into the northern Pacific by AD 1000–1200, the time frame now widely accepted for initial Hawaiian settlement. While pointing out the need for more research, Allen still finds the hypothesis tenable. My dream is that someone may yet find an adz of Eiao basalt in an as-yet-undiscovered Hawaiian cultural deposit!

The dynamic interactions between Polynesians and their island ecosystems has been one of my major interests ever since I worked with Doug Yen in the upper Makaha Valley in the spring of 1970 (Kirch 2013:147–50). In that project we trenched through ancient irrigation terraces and applied the first geoarchaeological analysis and interpretation of Hawaiian agricultural soils (Yen *et al.* 1972). At the same time, Stell Newman and Paul Rosendahl of the University of Hawai'i were carrying out the first detailed mapping of the Kohala Field System on Hawai'i Island (Rosendahl 1972). Years later, Peter Vitousek and I initiated the Hawai'i Biocomplexity Project (HBP), a multi-disciplinary investigation of soils, biogeochemical gradients, and landscape-level surveys of Hawaiian dryland agricultural practices (Kirch, ed. 2011). As Vitousek *et al.* recount in their paper (this volume), the HBP has not only led to a whole new level of understanding of how the pre-contact Hawaiians 'farmed the rock,' but has spun off exciting new research on other Polynesian islands, including Rapa Nui. We now know that the Kohala Field System was intensified over four centuries to thoroughly exploit the 'sweet spot' combination of nutrient-rich soils and rainfall conducive to sweet potato and dryland taro gardens. As Vitousek *et al.* suggest, such multi-disciplinary teamwork has much untapped potential – both for expanding our knowledge of Hawaiian farming into the wetland valleys, and on other islands of Polynesia. In fact, in collaboration with Oliver Chadwick I have recently mapped the distribution of soils and agricultural sites on the islands of Maupiti, Mo'orea, and Mangareva in French Polynesia.

Along with the shift from culture history to the New Archaeology in the late 60s and 70s came a renewed interest in the evolution of socio-political formations. Many scholars became interested in the 'chiefdom' stage of socio-political organization, looking to ethnohistoric accounts from Polynesia as models for such societies. While Elman Service (1967) and others regarded Polynesia as a 'type region' for the chiefdom, it was always evident that Hawai'i occupied a unique place within the spectrum of Polynesian societies, due to its elaborated hierarchy, virtual class endogamy, intensification of the means of production and use of corvée labor, and so forth (Sahlins 1958). Most archaeologists working in Hawai'i in the 1970s, however, such as Tim Earle (1978) or Ross Cordy (1981), held the position that Hawai'i represented the most complex example of a chiefdom society. At the time, I held essentially the same view. Not so Robert Hommon, whose 1976 doctoral dissertation advanced the argument that Hawaiian polities had become 'primitive states' by the time of European contact (Hommon 1976). Unfortunately, remaining unpublished and hence not widely read, Hommon's work did not have the impact it might have. Nonetheless, I gradually came around myself to the same view, that in late prehistory Hawaiian chiefdoms were transformed into 'archaic states' (Kirch 2010a). Hommon (2013) has now finally published his own theory of how that fundamental socio-political transformation occurred.

In his article in this volume, Hommon explores in detail the research potential of the Kealakekua region of Hawai'i Island for our understanding of the late Hawaiian state. Kealakekua Bay is, of course, where Captain James Cook met his fateful death in 1779, attempting to take King Kalani'ōpu'u captive in the royal village of Ka'awaloa. Kealakekua and its adjacent region was one of the royal centers regularly frequented by the island's kings and retainers, their constant demands for sustenance and other tribute partly supported by the highly productive Kona Field System situated in the uplands. Hommon not only points to the great potential in combining ethnohistoric and archaeological lines of evidence at Kealakekua, but offers us the 'Hard Times Hypothesis' (HTH). Based upon ethnographic observations of Sir Raymond Firth on the

Polynesian Outlier of Tikopia (where I also had the privilege of doing fieldwork in 1977–78), the HTH posits that chiefs who originally had only a nominal kind of authority over the populace might have used the opportunities provided by 'hard times' (drought, food scarcity, etc.) to effect more direct control over production and the extraction of tribute. Testing Hommon's HTH is a challenge that I hope archaeologists in Hawai'i will take on.

In the transition from chiefdom to archaic state which took place over the course of two to three centuries prior to the arrival of Captain Cook, Hawaiian religion and ritual practices also were radically transformed from their older, ancestral Polynesian modes into new, specialized cults with formal priesthoods. On the islands of Hawai'i and Maui, in particular, the worship of Kū and Lono became highly elaborated, Kū associated with the rise of warfare and territorial conquest, Lono with the formal collection of tribute during the Makahiki season (Kirch 2010a). Archaeologically, these changes in ritual practice are reflected in the monumental stone architecture that is collectively referred to as *heiau*, or places of sacrifice and prayer. Hawaiian archaeology began with the study of *heiau* variation (with the fieldwork of John F. G. Stokes, and later of Kenneth Emory, Wendell C. Bennett, J. Gilbert McAllister, and Winslow Walker), and *heiau* continue to be an important focus of contemporary archaeologists.

Mark McCoy's contribution highlights a number of ways in which innovative approaches are offering new insights regarding Hawaiian *heiau*. These include my own efforts to apply high-precision U/Th dating of coral offerings on Maui temples, refining the chronology of *heiau* development, as well as questioning the old assumption that *heiau* were oriented simply to topography. As I was able to demonstrate for Kahikinui, Maui, and McCoy illustrates with another example from Kalaupapa, Moloka'i, many *heiau* were laid out so that their architecture conforms to important astronomical phenomena, such as the acronical rising of Pleiades. McCoy goes on to provide another fascinating result from his own recent work at Pu'ukoholā Heiau on Hawai'i, where the application of XRF analysis to a stone pavement lends support to Hawaiian oral traditions stating that the temple's stones were imported from other parts of the island, in particular Pololū Valley. As McCoy asserts, the respectful study of these ritual sites continues to hold great potential for informing us about key aspects of Hawaiian history and culture.

Jennifer Kahn's contribution turns to the less monumental and more prosaic residential clusters inhabited by the Hawaiian people, following the approach of 'household archaeology.' Kenneth Emory would have regarded the excavation of house sites as a waste of time – he thought we knew everything about these structures from the ethnohistoric record. Just how wrong he was is highlighted by Kahn's examples from Hawai'i, Moloka'i, and Kaua'i islands, as well as from the 'Opunohu Valley on Mo'orea in the Society Islands where we have done joint fieldwork. Kahn stresses the importance of 'house society' theory (or *sociétés-à-maison* in Claude Levi-Strauss's original terminology) for understanding and interpreting transformations in Polynesian residential patterns. Indeed, the house society construct has been productively applied by ethnographers of Austronesian societies. Roger Green and I showed in our *Hawaiki* book (Kirch and Green 2001) how the 'house' in Ancestral Polynesia consisted not merely of a set of physical structures, but an associated social group holding an estate and other kinds of property, both material and intangible.

Variation in Hawaiian residential sites can reveal a great deal about the subtle complexities of social organization, gender relations, economic activity, and other facets of ancient Hawaiian life. One example from my own fieldwork in Kahikinui, Maui, is the discovery of how the practice of *'ai kapu* or separation of male and female eating was maintained through the use of dual food-grilling hearths within single *hale noa* structures, something not formerly known from the classic ethnographic accounts of David Malo or Samuel Kamakau (Kirch 2014). As Kahn demonstrates in her example from Miloli'i Valley on Kaua'i, changes in architecture and domestic living patterns that accompanied the post-contact conversion to Christianity and increased contact with the West may also be reflected through household archaeology.

Another unquestioned truism that I learned in the 1960s when studying with Emory and others was that there was relatively little movement of goods between communities and islands in the Hawaiian archipelago. The accepted view was that the basic territorial unit of Hawaiian social organization, the *ahupua'a*, was economically self-sufficient, containing within its boundaries all of the resources necessary to support its population. Of course, even Emory recognized that good quality adz basalt did not occur everywhere, so there must have been some movement of adze stone or finished adzes from the quarries to the communities where the tools were needed. William Kikuchi, a member of the Bishop Museum staff in the 1960s, was perhaps the first archaeologist to try to tackle the problem of tracing adzes and adze fragments or flakes to their sources of origin. Kikuchi consulted University of Hawai'i petrographer Gordon Macdonald about variation in Hawaiian basalts, cutting and examining petrographic thin-sections of representative adzes in the Bishop Museum collections. But the methods of optical petrography in the 1960s were not adequate to deal with the subtle variations in geochemistry of Hawaiian rocks. Frustrated, Kikuchi abandoned the project.

As Peter Mills and Steven Lundlbad report in their chapter, the development of new methods, especially nondestructive EDXRF, has revolutionized our ability to track Hawaiian adzes and adze fragments to their quarries (or at least to their volcanic sources), leading to greatly enhanced understanding of the movement of these important artifacts between communities. Following the acquisition of

an EDXRF instrument at the University of Hawai'i, Hilo, in 2004, Mills and Lundlbad have conducted non-destructive analyses of more than 21,000 artifacts and geological samples. Included in this set is my own series of adzes and adze flakes excavated from a suite of household and ritual sites in Kahikinui, Maui (Kirch *et al.*, 2012), which demonstrated not only the importation of significant numbers of adzes from other regions of Maui and from other islands, but also that imported artifacts occur more frequently in ritual contexts. In their chapter, Mills and Lundblad synthesize data from across the archipelago to show how artifacts from the Mauna Kea quarry on Hawai'i Island and from the Keahua I quarry on Kaua'i display classic patterns of 'down-the-line' exchange. Such empirical results have major implications for understanding Hawaiian economic, social, and political transformations.

While historians of Hawai'i have written voluminously about the post-contact period, they often summarily dismiss the much longer pre-contact period. Conversely, archaeologists have tended to emphasize the pre-contact period, evincing only limited interest in what transpired after AD 1778–79. In our Anahulu Valley project, Marshall Sahlins and I endeavored to merge the documentary approach of historical ethnography with archaeology in a study of the sweeping changes in Hawaiian economy and society from first contact up through the mid-nineteenth century (Kirch and Sahlins 1992). In his contribution, James Bayman builds upon our efforts by looking in detail at two types of material object essential to Hawaiian life both before and after contact: the fishhook and the adze. While iron was highly prized and rapidly acquired (evidently the Hawaiians already knew of iron prior to Cook's visit, presumably from iron embedded in the flotsam-and-jetsam of Asian and Spanish shipwrecks), this does not mean that iron immediately replaced the traditional materials of shell, bone, and stone. Bayman queries the databases of excavations in post-contact sites for evidence of the continued manufacture and use of fishhooks and adzes from traditional materials, finding that rates of adoption of the new foreign materials varied in time and space. Bayman's article demonstrates how much archaeology and the study of material culture in the post-contact period has to contribute to the study of 'emergent colonialism.'

James Flexner, who carried out an archaeological investigation of the infamous Kalawao leprosy settlement on Kalaupapa Peninsula, Moloka'i, for his doctoral dissertation at Berkeley under my supervision, provides a second example of the role of historical archaeology in Hawai'i and the Pacific. Drawing upon case studies in Hawai'i and Vanuatu, Flexner applies the approach of 'controlled comparison' which I have for many years advocated (e.g., Kirch 2010b). Specifically, Flexner poses the fascinating question of whether Western colonialism in the Pacific took on different forms when it encountered highly structured, hierarchical 'state' societies such as Hawai'i or stateless, 'anarchic' societies such as those found in Vanuatu. (Marshall Sahlins [in Kirch and Sahlins 1992: 215–16] had in fact suggested that the 'political economy of grandeur' inherent in indigenous Hawaiian chiefship 'gave capitalism powers and effects unparalleled in other Pacific societies.') While Flexner's comparative project is still in its early stage of development, he demonstrates its promise to uncover practices of 'counterpower' in the ways that people in both Hawai'i and Vanuatu reacted to and often resisted the dominant, intrusive colonial and capitalist agents. Such theoretically sophisticated approaches, integrating the material evidence of archaeology with documentary sources, will continue to push the boundaries of historical archaeology.

Probably because I was born and raised in the islands, I have always been sensitive to the ways in which archaeology and archaeologists interface with local communities, especially Native Hawaiians. In my long-term research in Kahikinui, Maui, I endeavored to integrative our archaeological studies with the goals of Ka 'Ohana o Kahikinui, a Native Hawaiian grass-roots organization that was seeking to regain access to Hawaiian lands (Kirch 2014). My 1997 keynote address to the Society for Hawaiian Archaeology pointed to what I saw as a growing disconnect between archaeological practice and the cultural and political interests of Native Hawaiian stakeholders (Kirch 1999). Later, under my supervision, Kathy Kawelu conducted a nuanced ethnographic study of the often tense relationship between archaeologists and Native Hawaiians for her doctoral project at Berkeley (Kawelu 2007). As Kawelu deftly showed, the dramatic rise in CRM archaeology in the islands led to an increased perception by many Native Hawaiians that archaeologists lacked cultural sensitivity, typically putting the interests of the developers (to whom they were financially beholden) before those of local communities.

In their article, Kathy Kawelu and Donald Pakele review the 'roots of engagement' between archaeologists and local communities, and discuss one project, albeit modest in its objectives and accomplishments, that exemplifies what they call 'community-based archaeology.' Community-based archaeology does not just involve 'consultation' between the archaeologist and stakeholders, it starts with a true collaboration in which the community members are fully empowered as equal partners in the work. The cultural site discussed in their paper is one of the few ancient religious sites in the Hilo region and would likely have been destroyed through a proposed expansion of the Hilo Harbor facilities, had local grassroots organizers not engaged with archaeologists, using heightened public awareness and the historic preservation process to force a revision of the development plans. Not only was the site itself preserved, but the Keaukaha and Hilo communities gained a stronger sense of their own cultural and historic values in the process.

It is inspiring to witness just how far Hawaiian archaeology has come in the half-century since I dug my

first test pit into the sands of Hālawa Valley, and was then put under the tutelage of Kenneth Emory and his Bishop Museum colleagues. Some of the same questions that motivated our research then have endured – the origins of the Hawaiians and the timing of their arrival in the islands chief among them. But many new research questions and topics have emerged over the years, such as the ways in which Hawaiian soils influenced the development of agriculture and settlement patterns, how daily practices were spatially structured within households, how emerging elites used monumental architecture to legitimate their rule and consolidate their power, and how after contact Native Hawaiians adjusted to or in some cases resisted the inroads of colonialism and capitalism, to name just a few. The theoretical constructs and the methods and techniques that we apply have likewise expanded, allowing us to capture and analyze a vastly increased array of data than we could have dreamed of fifty years ago. Perhaps most importantly – and even though the road has been a bumpy one at times – archaeologists today are increasingly engaged with local communities and stakeholders, working collaboratively to preserve and protect the fragile and precious past of Hawai'i.

In closing this personal reflection on the stimulating papers presented in this volume, I would like to express my *mahalo nui loa* to the organizers and editors, and to the contributors, for their hard work in bringing this symposium and its publication to fruition. *Malama pono*.

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