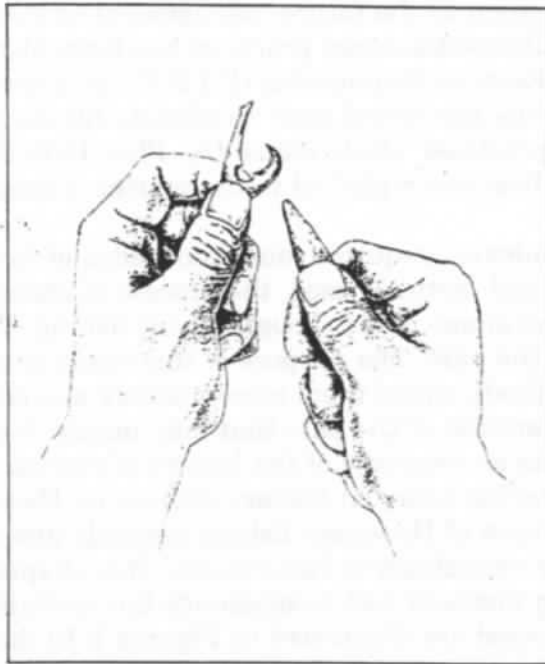


Ola i ke kai a Kanaloa: To Live in the Sea of Kanaloa

**An Archaeological/Historical Perspective on the Marine
Management of Kaho'olawe**

EXECUTIVE SUMMARY



INTERNAL DRAFT

by
Hallett H. Hammatt Ph.D.
&
David W. Shideler M.A.

Illustrations
by
Rodney Chiogioji

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Dames and Moore

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EXECUTIVE SUMMARY

OLA I KE KAI A KANALOA: TO LIVE IN THE SEA OF KANALOA:

An Archaeological/Historical Perspective on the Marine Management of Kaho'olawe

This study (Draft, 213 pps) presents an archaeological/historical perspective on the use of marine resources in the near shore waters of Kaho'olawe and formulates recommendations for consideration in the future management of these marine resources. As the revitalization of Hawaiian subsistence practices has been identified in the vision statement of the Kaho'olawe Reserve Commission (K.I.R.C.) as a specific end, the question then becomes how best to pursue the stated goal "to educate future generations in traditional Hawaiian fishing practices" (*Kaho'olawe Use Plan* 1995:40). This study focuses on how this might be best accomplished in the marine management of Kaho'olawe.

Such an educational endeavor requires some knowledge of the available sources of information, the technologies and methods used, the process of change over time, and the vocabulary with which the Hawaiians of old thought about fishing. We must look to our sources about information on the past. The purpose of this study is to review these sources, technologies, and methods, make them more publicly available, and draw recommendations for a consideration of the past that may inform the future. Hence, Section II of this work presents an overview of the history of marine use at Kaho'olawe. Section III presents a bibliographic essay on literary sources on Hawaiian fishing. Section IV presents an extensive overview of Hawaiian fishing methods and practices with a discussion of how they may be revitalized at Kaho'olawe. This chapter emphasizes the diversity of pre-contact fishing methods and recommends the revitalization of this diversity. Some methods discussed are illustrated in Figures 1-10 (in reduced size for this summary). Section V presents a review of traditional religious practices and a discussion of Hawaiian values associated with fishing. Section VI reviews the history of change in fishing technology in Hawai'i. Section VII and Appendix A present a review of the sacred places of Kaho'olawe associated with fishing. Section IX presents an extensive glossary of fishing terms.

Section VIII, a summary of specific recommendations, is largely excerpted in this Executive Summary.

More than one hundred years ago, several Hawaiian authors were fully aware that Hawaiian fishing methods were vanishing. This loss of fishing skills has accelerated in the twentieth century. Fishing methods which many of us once commonly observed or participated in - such as snaring 'a'ama crabs, gathering *limu* (seaweed), *lau* net fishing, or net making - are rarely observed today. Sadly such pre-contact fishing methods are unknown to many of Hawai'i's youth. Furthermore, even such historic fishing methods as using a "look-box" to catch octopus, using a "Hawaiian sling" spear, or a throw net are rapidly becoming techniques only practiced by "old timers."

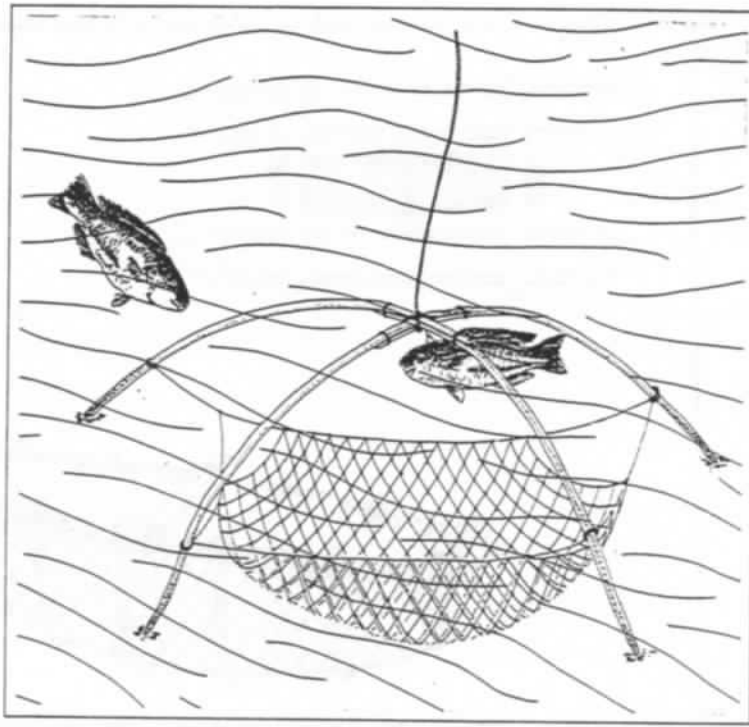


Figure 1 *'Upena uhu* or Dip Net

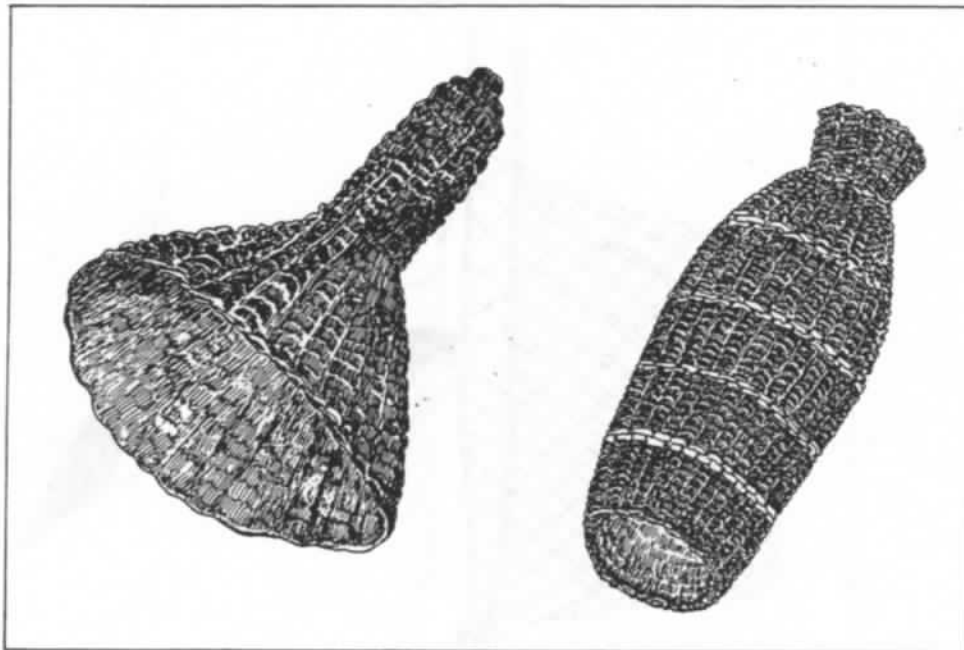


Figure 2. *Hina'i*: Showing a Basket of the *Hina'i 'ōpae* Type and Trap of the *Hina'i hīnālea* Type.

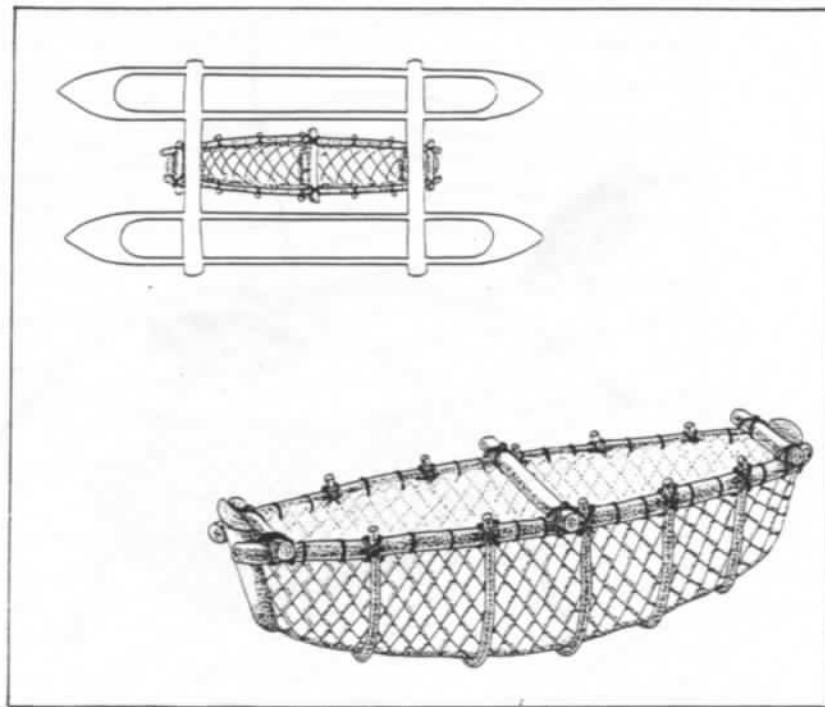


Figure 3 *Malau* or Bait Carrier. A Hypothetical Reconstruction of a Pre-contact *Malau* (Following Kamakau, 1976 and Kahaulelio, 1902).

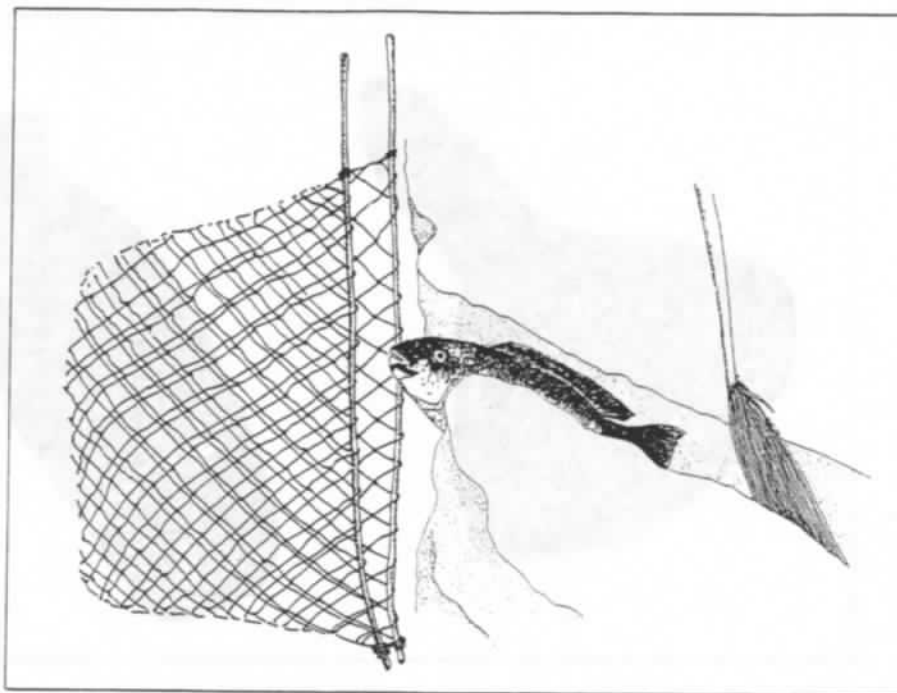
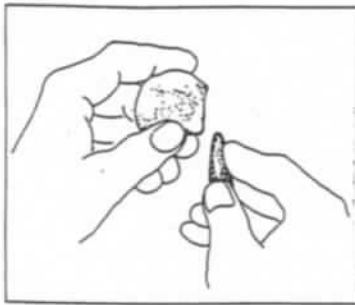
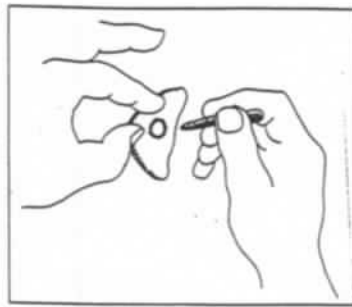


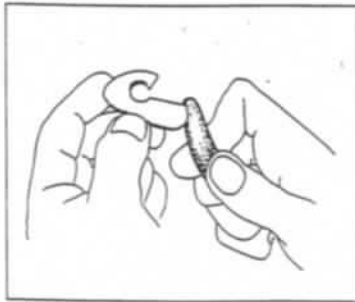
Figure 4 *Upena uluulu* (or Two-handed Scoop Net) Typically Used by Divers



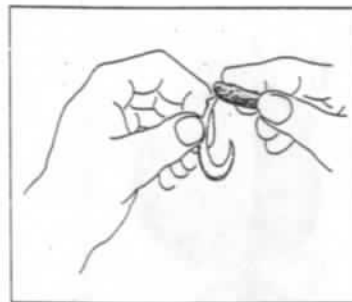
Having selected a shell, the craftsman searches for the strongest portion to create the hook and begins removing the unwanted parts with a coral file.



With a shell drill, the craftsman has cut a hole through the shell, beginning to define the inner curve of the hook.



The rough shape of the hook is apparent after the craftsman cuts through to the drilled hole and continues filing toward the final shape he has intimated.



The hook is near completion and the craftsman refines the shapes of the point and the knob that will secure the hook to a line.

Figure 5 Steps in Traditional Fishhook Manufacture

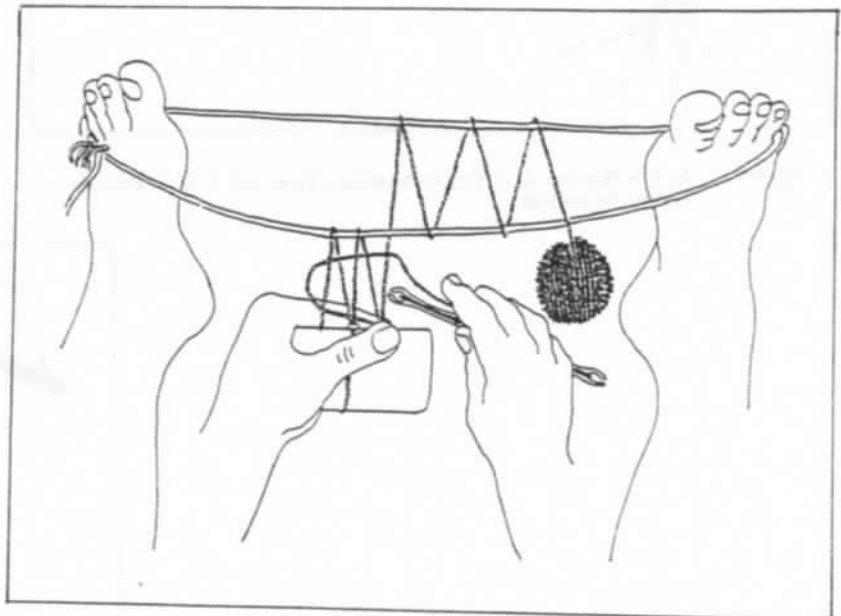


Figure 6 General View of Commencement of Net-Manufacturing Technique

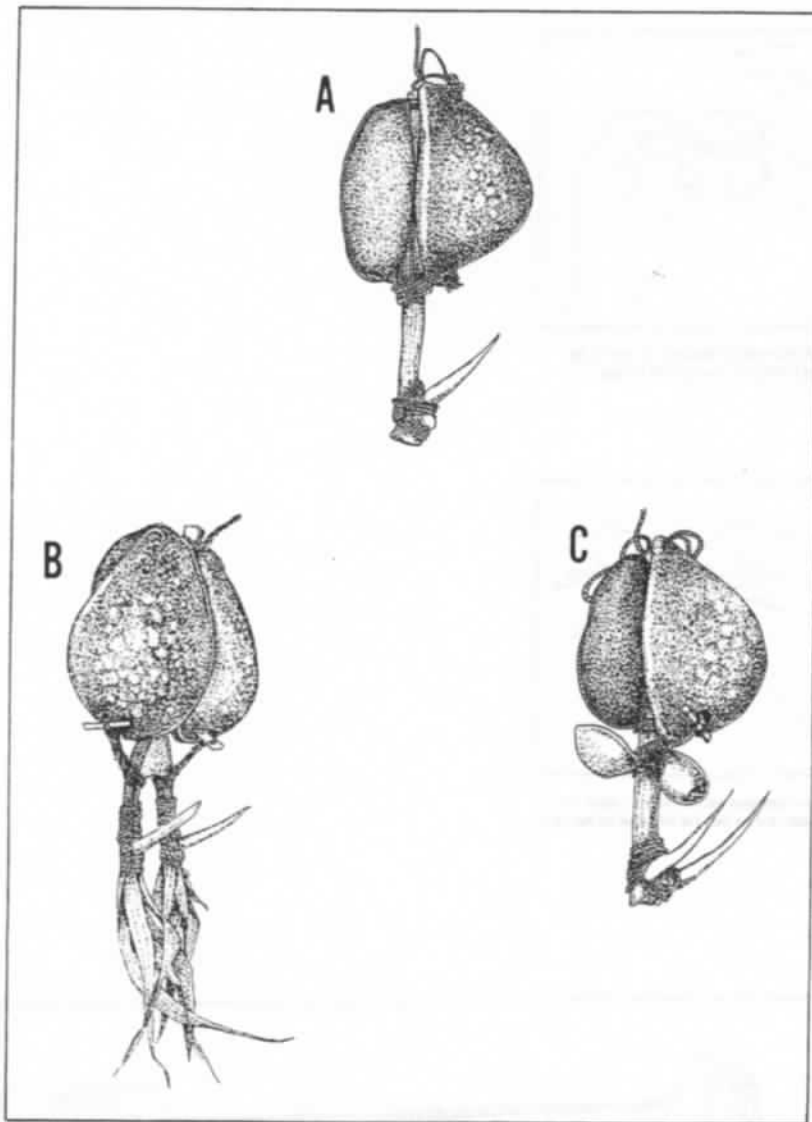


Figure 7 *Lā he'e* Showing: A. A Typical Pre-contact Form and B. & C. Probable Historic Innovations

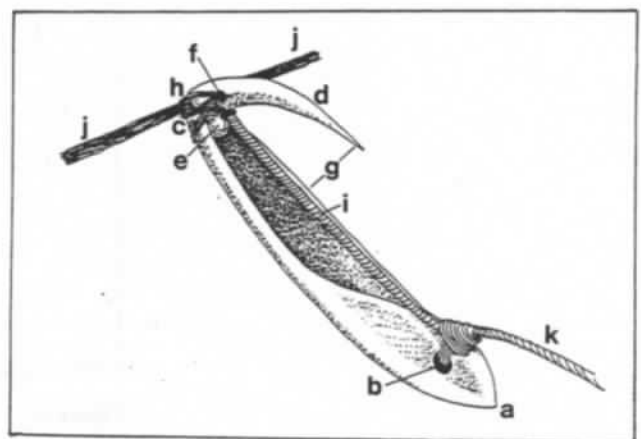


Figure 8 *Pū Uhi* or Trolling Lure: a. *Ihu* or *po'o* (nose of the shank), b. *Puka Ihu* (hole in nose of shank), c. *Muli* (stern of shank), d. *Lāld* (bone point of lure), e. *Kapuahi* (base of the *lāld*), f. *Humu* (hole(s) drilled in the *lāld*), g. *Hāmama* (gape), h. *Auwaē* (chin overhanging shank), i. *Pou* (lashing), j. *Hulu* (bristles), k. *Ka'ā* (snood)

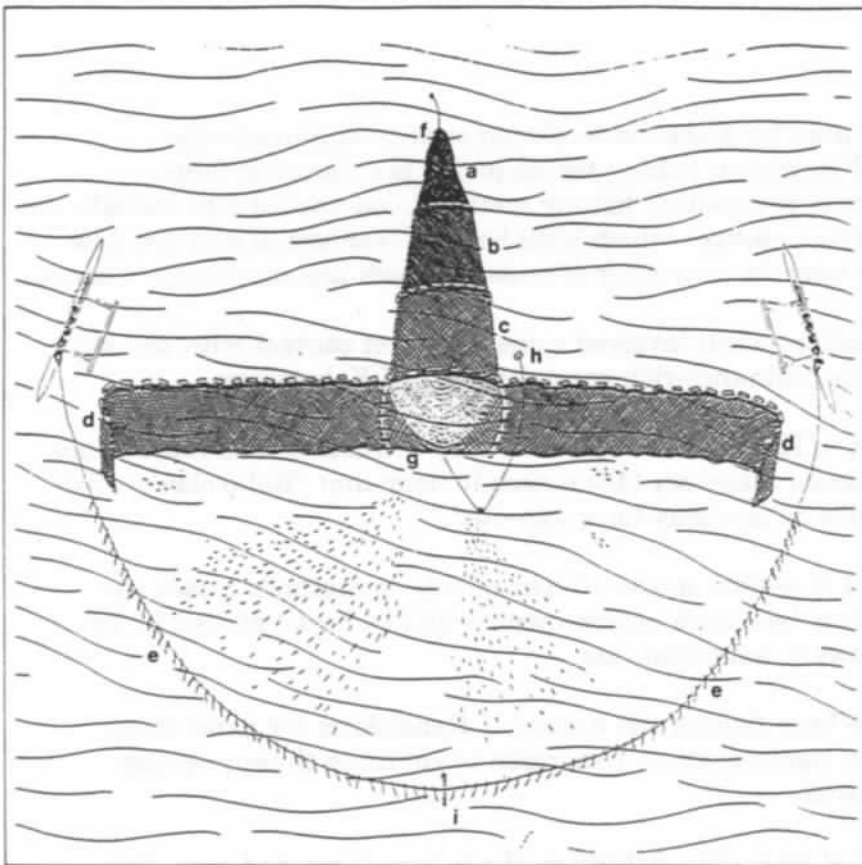


Figure 9 *Lau nui or Lau lima* Fishing: a. The *Pupu* (the farthest back net), b. *Puhiki* (middle net), c. *Puhinui* (outer net), d. *Pākū* (wing nets), e. *Lau* (lines with dependent *ki* leaves), f. *Mole* (farthest portion of bag net), g. *Waha* (opening of bag net), h. *Mouo* (buoy), i. *Ōhaō* (where *lau* are fastened)

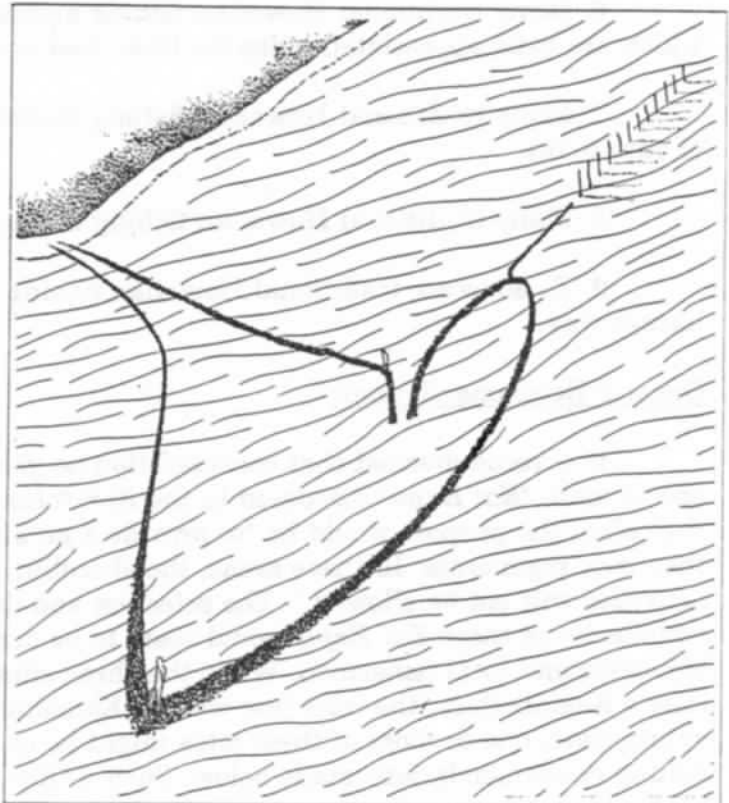


Figure 10 *Pā I'a* or Weir

A marine management plan for Kaho'olawe should seek to encourage the retention and dissemination of Hawaiian fishing techniques. This should include particularly the encouragement of pre-contact fishing methods, but should also include the encouragement of certain historic practices which have become traditional and are now passing away. This will not be easy for a number of reasons which are summarized below:

1. Hawaiian fishing practices often involved some degree of contact with the sea floor which is problematic in the ordinance-rich coastal waters of Kaho'olawe.
2. The marine resources of Kaho'olawe are not so very attractive. The *Kaho'olawe Island Nearshore Marine Resources Inventory* (18) makes it clear that "Kaho'olawe's fish population was not as impressive as one may have expected."
3. The restriction (*kapu*) of certain modern types of fishing methods raises the issue of enforcement. It is unclear how such enforcement would be best handled in terms of issues of personnel, costs, powers, sanctions, etc.
4. Many fishermen have been fishing the waters of Kaho'olawe for generations using modern technologies. The rights of these fishermen to continue these practices should be taken into consideration.
5. A number of traditional Hawaiian fishing methods (small-meshed nets, fish poison, human bone fishhooks) and target species (turtles, small fish) are in conflict with present federal and state laws.
6. Many traditional Hawaiian fishing methods focus on small, herbivorous species which are little appreciated today for their food value.
7. Many traditional Hawaiian fishing methods use native plant species uncommon or rare today.
8. Many traditional Hawaiian fishing methods are very labor intensive.
9. To advocate traditional Hawaiian fishing practices may be to urge people into harm's way.

General Recommendations:

It is recommended that consideration be given to the establishment in perpetuity of one or more "*Kai Kapu*" discussed in the *Kaho'olawe Use Plan* (1995:23). As stated in that plan, the purpose would be "to provide a *pu'uhonua kai* for marine animals so that they may regenerate. In these areas, the shoreline would remain unimproved and fishing activities will not be allowed." The selection and designation of the locations and boundaries of these *Kai Kapu* would seem to be done best in consultation with marine biologists and local fishermen. While the three sites designated for *Kai Kapu* in the Plan (Lae o Kealaikahiki, the inlet just west of Kamōhio Bay, and at Kanapou Bay) seem appropriate, one or more of these sites might be considered in relation to the restrictive fishing recommendations made below. Such a "*Kai Kapu*" designation might not be

incompatible with recreational and/or educational use.

It is recommended that consideration be given to placing a *kapu* or reserving certain areas of coastline for traditional pre-contact fishing methods. Fish catching methods in designated areas would not be allowed to include any use of metal, or other modern man-made substances (nylon, monofilament, plastic, fiberglass) with the exception of safety equipment (*tabi* and other footwear, wet suits, life vests, etc.). Such restrictions (*kapu*) should initially be for designated time periods (rather than in perpetuity from the start) to allow for some assessment. A period of two years might allow sufficient time for some preliminary assessments. It seems unlikely that the limitation of fishing activities on a seasonal basis (Cf. Kaho'olawe Use Plan 1995:23) would allow for data sufficient for decision making. Making some exceptions, such as allowing the use of hand-made cotton lines and nets, imported wood, and of masks, fins and snorkels might serve to significantly encourage the practice of traditional Hawaiian fishing methods.

It is recommended that consideration be given to placing a *kapu* or reserving certain areas of coastline for traditional post-contact fishing methods. Such restrictions might be made for an initial two-year period to allow for some assessment of workability. The purpose of this designation would be to encourage the retention of native Hawaiian arts that developed with the appropriation of the technology and methods of other peoples. Methods to be allowed in such designated areas would be those that developed in Hawai'i between 1778 and circa 1914. This would allow for the use of metal hooks, lures, and spears, and such historic innovations as the throw net and Hawaiian sling spear. Fishing methods arising after circa 1914 would be prohibited.

It is recommended that consideration be given to reserving certain areas of coastline in which the use of all modern (legal) fishing methods might be allowed. As we approach the twenty-first century, it should be recognized that certain "modern" fishing practices, fishing with rod and reel for example, are areas in which native Hawaiians and other people of Hawai'i have acquired a good deal of skill and have passed on this learning for generations. It may be appropriate to encourage even such modern practices for they have become traditional for many people.

It is recommended that cultural monitors be encouraged to familiarize themselves with indigenous Hawaiian fishing methods, practices, and terminology and perhaps be given some incentive to foster the development of such methods and skills. While it seems desirable to free the cultural monitors from any "enforcement" duties they might have a certain role in monitoring compliance in areas with restricted fishing.

The guiding principles of the *Kaho'olawe Use Plan* calls (1995:8) for "learning from...the ocean." It is recommended that fishing customs and practices and associated Hawaiian values be considered as a major focus of such learning. An important component of this learning would be group activities organized at the *Kahua kahuale* (Educational and Cultural Centers/Work Camps) and *Kahua ho'omoana* (Overnight Campsites). These activities would be overseen by cultural monitors and/or visiting experts who would volunteer to share their knowledge with Hawaii's youth. Such activities might include net manufacture and mending, fishhook and line manufacture, discussions of fishing lore, anti-erosion activities, and other learn-by-doing endeavors.

The *Kaho'olawe Island Nearshore Marine Resources Inventory* (DLNR, 1993:13) notes that commercial dive charter boats used Kanapou Bay which is cited (1993:9) as an area of "excellent underwater clarity" having "extensive" coral coverage. Under Chapter 6K of the Hawai'i Revised Statutes, commercial use of Kaho'olawe waters is strictly prohibited (*Hawai'i Fishing News*, October 1995:11). Possibly an exemption and a mutually beneficial relationship with one or more such commercial companies could be arrived at in the future that would augment or facilitate the vision of the Kaho'olawe Reserve Commission.

The survey of Hawaiian fishing technology and methods notes that turtles were taken in a variety of ways. The brief study on historic fishing has also brought to light that the Kingdom of Hawai'i actively encouraged an indigenous Hawaiian whale fishery and, indeed, granted permission to establish a whaling station on Kaho'olawe in 1858. It seems a virtual certainty that many Hawaiians were involved in Coastal Bay Whaling off Maui in the mid-nineteenth century. Furthermore, it seems clear that the Kingdom of Hawai'i actively encouraged sealing. Hawaiian sealing included the commercial slaughter of *Monachus* Hawaiian Monk Seals. It is recommended that the K.I.R.C. follow the federal mandates against the taking of turtles, whales, and seals even though there may be historic justification for such fisheries.

Recommendations for Infrastructure

Little in the way of infrastructure would be needed for the implementation of a program for the revival of Hawaiian fishing culture but a few points merit mention.

The development of "a shoreline and *mauka-makai* trail system" is called for in the *Kaho'olawe Use Plan* (1995:21) and would undoubtedly facilitate the revival of Hawaiian fishing culture on Kaho'olawe by facilitating access to the coastline.

While the *Kaho'olawe Use Plan* (1995:21) calls for the establishment of permanent moorings at Hakioawa, Kūheia, Honokanaia and at Ahupū "to afford safe access," the establishment of more permanent moorings should be reconsidered. The establishment of a number of permanent moorings (particularly in the vicinity of *Kahua ho'omoana*) could aid substantially in facilitating the safe practice of Hawaiian fishing techniques (as well as minimizing damage to coral from anchoring). In the absence of moorings, benthic fishing activities become more problematic because of the issue of unexploded ordinance. Moorings could provide relatively safe points at which off-shore canoe fishing could be undertaken.

One of the guiding principles of Kaho'olawe management plans is that "the land and the sea are interconnected and inseparable" (*Kaho'olawe Use Plan* 1995:40). One way of emphasizing this might be through the construction of *hālau wa'a* (canoe houses) and *pā wa'a* (canoe enclosures) at the *kahua kauhale* and *kahua ho'omoana* as called for in the *Kaho'olawe Use Plan* (1995:21,22). It is recommended that the selection of sites for such structures and the selection of sites from which to acquire stones for foundation construction be made in consultation with cultural monitors and an archaeologist to avoid any disturbance of archaeological sites. Because of the legal complexities surrounding even the most modest constructions in a coastal zone and recent unfortunate

misunderstandings related to similar enterprises, it is recommended that such constructions be planned in advance in coordination with the Department of Land and Natural Resources. Such constructions would be a logical focus for educational and cultural activities associated with fishing.

Consideration might be given to the construction of one or more modest weirs (*pā i'a*) or fish ponds (*loko pu'uone* or *loko kuapā*). Such structures would have the advantage of focusing fishing activities in a discrete relatively safe area which might be cleared of ordinance. They would provide an area where all could participate in fishing and would stand as testimonies to the Hawaiian values of *laulima* (cooperation) and *pa'ahana* (industry). While such structures might have to be periodically repaired, many willing hands can accomplish much in a short time. Construction would be by volunteers and might include limited excavation (in the case of a *loko pu'u one*) or construction of local stone (in the case of a *loko kuapā*). This should be undertaken in consultation with archaeologists, culture specialists and marine engineers to avoid degradation of shorelines and archaeological sites. The big problem would be in obtaining the permits required by various governmental agencies. One might think such a permitting process could be greatly streamlined with widespread support but this permitting process is clearly a major impediment.

The *ko'a* of Kaho'olawe are an area of particular concern. It is appropriate that these foci of religion associated with traditional Hawaiian fishing be incorporated in any revival of Hawaiian fishing culture. On the other hand, contemporary expressions of spirituality at some Hawaiian religious sites in the recent past have resulted in the alteration of these structures to the point where there may be conflict with existing Historic Preservation laws. Two ideas are thus suggested. Traditional *ko'a* that are to be re-used extensively should be thoroughly documented by archaeologists. Another option, which has already been implemented would be the construction of new *ko'a* structures at appropriate locations which would then serve as the proper focus for contemporary ritual activity. Such constructions should be done in coordination with cultural experts, archaeologists, and the Department of Land and Natural Resources to conform with existing Historic Preservation laws.