reached Hawai'i (Irwin 164-166).

Archaeological evidence also connects early settlers of Hawai'i with Hiva – adzes, fishhooks, and pendants found at an early settlement site at Ka Lae on the Big Island of Hawai'i are similar to those found in Hiva. Of course, the archaeology of the Pacific is still in its infancy. As comparative work progresses in the Pacific, similarities are emerging among artifacts of all the Polynesian islands, suggesting that perhaps widespread contact and trading were more frequent than previously thought.

It is probably too simplistic to attribute the settlement of any island group to a single migration from another single island group. The voyages of the Polynesian Voyaging Society's *Hokule'a* and computer-simulated voyages have shown that Polynesians could have saided in traditional canoes all the north-south and east-west routes among their islands. Kenneth Emory has noted that some words in the Hawaiian language (such as the names of some days in the lunar month) are shared uniquely with the Tahitian language (Kirch 66), suggesting settlers to Hawai'i came from Tahiti as well as the Marquesas. More archaeological evidence is needed from Hawai'i, Hiva and other islands of Polynesia before any definitive statements can be made about the relationship among the island groups during the period of the early settlement of Hawai'i.

## Two-Way Voyaging after Settlement

According to Hawaiian oral traditions collected in the 19th century, voyaging continued between Hawai'i and the South Pacific after the original settlement of Hawai'i. The motives given for voyaging are various:

- 1. Maintaining Family Connections: The earliest traveller mentioned in oral tradition is the goddess Papa, or Walinu'u; according to tradition she returned to Kahiki because her parents were from there; in Kahiki she became a young woman again; after herrejuvenation, she returned to Hawai'i (Kamakau 92). Mo'ikeha is said to have sent his son Kila to Tahiti to bring his grandson La'amaikahiki to Hawai'i (Fornander, Vol. IV, 112-128). Kaha'i-a-Hema is said to have gone to Kahiki to find his father Hema, who had sailed to Kahiki to get the apo'ula, or sacred red girdle, as a birth gift for Kaha'i. Hema originally came to Hawai'i from Kahiki (Kamakau 94).
- 2. Marriage: Hawai'iloa voyaged from Hawai'i to Tahiti to search for husbands or wives for his children. He brought back his brother Ki's first born son Tu-nui-ai-a-te-Atua as a husband for his daughter O'ahu (Fornander, VI, 279). Keanini (whose mother was from Hawai'i) sailed from Kahiki to Hawai'i to marry Ha'inakolo; he and Ha'inakolo returned to Kahiki. After they had a child called Leimakani, Ha'inakolo and Leimakani returned to Hawai'i (Kamakau 103-4). Lu'ukia went from Hawai'i to Kahiki where she married 'Olopana; Kaupe'a, the daughter of 'Olopana, went from Kahiki to Hawai'i to marry Kauma'ili'ula (Lu'ukia's brother); Kaupe'a returned to Kahiki to be with her parents and to give birth to a child, who later returned to Hawai'i, becoming an ancestor of chiefs (Kamakau 102).
- 3. Family Quarrels and Unhappy Love Affairs: Pele, the volcano goddess, quarrelled with her sister Namakaokaha'i, a sea goddess, and left her homeland (the mystical land of Kuaihelani) to come to Hawai'i (Emerson ix-xvi). Pa'ao feuded with his brother Lonopele. After each killed the other's son, Pa'ao migrated to Hawai'i (Kamakau 3-5; 97-100). According to one tradition, 'Olopana grew jealous of his brother Mo'ikeha, so Mo'ikeha left for Hawai'i (Kalakaua 115-135). Another version of the Mo'ikeha tradition says he left Tahiti for Hawai'i after being rejected by his brother's wife Lu'ukia (Fornander, Vol. IV, 112-114).
- 4. Burial in Homeland: La'amaikahiki took Mo'ikeha's bones back to Tahiti for burial (Fornander, Vol. IV, 152-154).
- 5. Acquiring Mana from the Homeland: Pa'ao, who brought the war god Kuka'ilimoku to Hawai'i, returned to Tahiti to bring back a chief of pure blood (Kamakau 3-5; 97-100).
- 6. Escaping Flood and Famine: Pupu-hulu-ana left Kaua'i during a famine and searched for islands to the east (Kamakau 103). 'Olopana left Waipi'o for Kahiki after a flood brought on a famine (Kalakaua 115-135).
- 7. Maka'ika'i Sightseeing and Adventure: Kaulu "traveled throughout Kahiki, saw all the kingdoms of the world"

(Kamakau 92). Paumaukua "was a chief who traveled around Kahiki and brought back with him several foreigners" (Kamakau 95). Mo'ikeha's grandson Kaha'i-a-Ho'okamali'i went sightseeing to Tahiti and brought back with him a breadfruit tree from 'Upolu (Taha'a in the Society Islands) and planted it at Pu'uloa, 'Ewa district, O'ahu (Kamakau 110).

Similar motivations and motifs appear in the voyaging traditions of other Pacific islands. Another motivation for voyaging, not represented in this list, was to obtain materials or plants not available on one's home island. The tradition of Aka describes a voyage from Hiva (Marquesas) to Rarotonga to obtain highly prized red feathers; the story of Pepe-iu describes a voyage made to bring the breadfruit plant from Hiva to Rarotonga.

## The End of Voyaging

By the time Europeans arrived in Hawai'i in the 18th century, voyaging between Hawai'i and the rest of Polynesia had ceased for more than 400 years, perhaps the last voyager being Pa'ao or Mo'ikeha in the 14th century. The reason for the cessation of voyaging is not known. However, after the 14th century, the archaeological evidence reveals a dramatic expansion of population and food production in Hawai'i (Kirch 303-306). Perhaps the resources and energies of the Hawaiian people went into developing their 'aina; and ties with families and gods on the islands to the south weakened.

## Voyaging and Human Survival

As Ben Finney suggests in "One Species, or a Million?" (From Sea to Space), the history of humanity is a history of migrations. Human beings originated in Africa perhaps 200,000 years ago, spread through Europe and Asia, walked across a once-existant land bridge (or paddled along the coastline) to the Americas, then traversed short sea distances to the once-unified land mass of New Guinea-Australia. The human movement into Polynesia was the final phase of the human settlement of the globe, into the most isolated, most difficult to reach habitable land. The particular genius and contribution of the Polynesians was the development of seafaring and navigation skills and canoe technology that enabled them to voyage back and forth across the long sea distances among islands of the Pacific. The motivation for the exploration was probably universal: the search for new lands for settlement and new resources for survival.

Human beings have been one of the most successful species on earth, adapting technology and culture for survival in new environments. Human population has flourished in many different places and times. The Polynesians, with their expertise in fishing and farming, were able to develop healthy, stable communities on islands with limited resources. Resource management and conservation were essential on such islands, since overexploitation could result in damage to or permanent loss of resources. Malama 'aina, caring for the land, was a key value for survival. At their best, Polynesian societies found a balance between human needs and limited resources. Extended families, or 'ohana, worked the land and sea; those near the coast supplied the products of the sea to those living inland, who in turn supplied land products. The division of labor and sharing is embodied in the tradition of two brothers and their wives – Ku'ula-uka, a farmer of the uplands, and his wife Hina-ulu-'ohia, a goddesss of the forest; and Ku'ula-kai, a fisherman, and his wife Hina-puku-i'a, who gathered products of the reef and seashore. As part of an 'ohana, everyone worked together and received a share of the produce. Stinginess and hoarding was criticized, as was laziness, sponging, and gluttony. Hospitality to malihini (persons from outside of the community) was also a strong tradition.

Yet establishing such a stable community on one island did not eliminate the need for exploration and migration. There was always the possibility of finding and settling a better island with more resources and space. And no human society is stable and secure forever. Natural disasters occur – tsunamis, rising sea levels or sinking islands, typhoons and burricanes, floods, and droughts could bring on famine. Even if no natural disaster occurred, population generally increases in favorable environments, and the maximum carrying capacity of islands were eventually reached. Successful food production, unless combined with birth control, results in overcrowding. One solution to overcrowding was migration to marginal areas of the inhabited island, or to a new island. The tradition of Ru tells how this Ra'iatean migrated to the uninhabited Aitutaki with a group of settlers because of overpopulation