

# Papahānaumokuākea Marine National Monument

## Historical Ecology

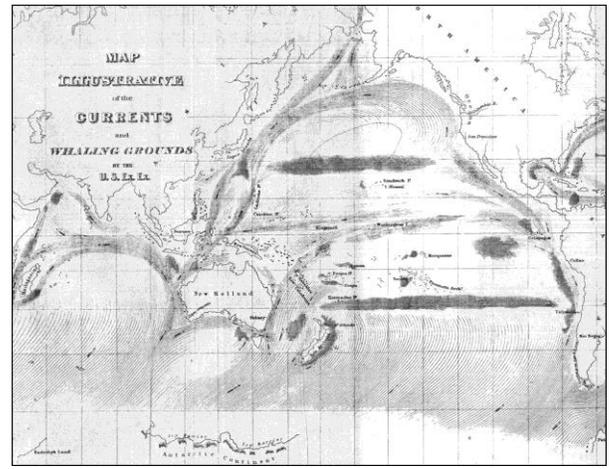
### Management Issue

Historical ecology involves the connection between people and the environment in which they live. Rather than examining one point in time, historical ecology may involve the human relationship to the environment over time in order to develop a broad understanding of this association. Humans have had an impact upon the marine environment in a variety of ways including extraction, harvesting, marine debris, invasive species and vessel groundings. The purpose of historical ecology in the context of management is to develop a better understanding of the baseline from which resources can be managed.

### Description

Through an interdisciplinary study of archival resources, oral histories and environmental data, an historical ecology survey would lay the groundwork for better understanding of the human relationship to the marine ecosystems of the Monument. Historical ecology may help to connect larger ecological changes with variations in specific species. With a goal to better manage resources within the Monument and a more thorough knowledge-based survey of the environment, historical ecology will engage ecologists, social scientists, historians and cultural practitioners in an attempt to truly understand the human dimension of the Monument.

Interpretation of historical ecology will include translation of Hawaiian language newspapers, archival resources in Hawai'i, Washington DC (and potentially others), and the collection of oral histories from fishermen, elders (kupuna), scientists, military personnel and visitors to the Northwestern Hawaiian Islands (NWHI). Integration of scientific and historic research will aim to broaden the Monument's interpretation and understanding of historical ecology as it relates to the environment and Native Hawaiian history.



Whaling map of the Pacific, from the US Exploring Expedition 1838-1842. "Sandwich" Islands south of main population. Map source: Bishop Museum archives

### Questions and Information Needs

- 1) How can we understand the human history of the Monument?
- 2) What archival resources are available to interpret the historical ecology of this site?
- 3) How will a better understanding of the historical ecology of the Monument lend to a better understanding of the ecosystem of the NWHI?
- 4) How can this project integrate disciplines such as maritime heritage, Native Hawaiian history, ecology, geology, etc.?
- 5) How are humans a part of the Monument's ecosystems?
- 6) How does the historical ecology of the Monument tie in to the historical archaeology of the main Hawaiian Islands and the broader historical ecology of the entire archipelago?
- 7) How can historical ecology help to understand endangered species such as sea turtles and monk seals?

### Scientific Approach and Actions

- The historical ecology efforts in the Monument are designed to increase our understanding of the Monument's ecosystems and foster effective and innovative management for the Monument.
- Historical ecology efforts in the Monument will help to develop a baseline for current ecosystem-based management efforts.
- The historical ecology efforts in the Monument will assist in understanding the human interaction with the

*Updated: September 2014*

*For More Information -- <http://www.sanctuaries.noaa.gov/science/assessment>*

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## Historical Ecology

Monument over hundreds of years of exploration, exploitation and protection.

### Potential Key Partners and Information Sources

University of New Hampshire, Scripps, NOAA/NMFS/Pacific Island Fisheries Science Center, Coral Reef Ecosystem Division, US Fish and Wildlife Service, University of Hawai'i, University of Hawai'i Sea Grant, State of Hawai'i, Native Hawaiian Cultural Practitioners, National Park Service, Nūpepa 'ōlelo Hawai'i, Hawaiian Language Newspaper Project, Climate Data Modernization Program

### Management Support Products

- Development of reports and articles
- Present findings and discoveries at public meetings, workshops, symposia and conferences
- Develop education and outreach products
- Facilitation of the translation of Hawaiian language newspapers

### Planned Use of Products and Actions

- Development of a historic baseline for the Monument
- Development of outreach strategies to inform other managers and scientists about findings
- Develop a database of archival research and oral history relevant to the Monument
- Integrate Monument historical ecology with larger efforts to develop a historic baseline for the entire archipelago.
- Development of focus groups aimed at understanding valuable constituent and outreach targets.

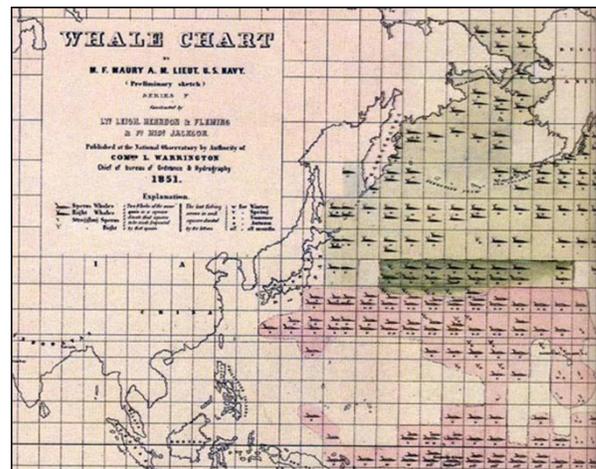


Table of Whale populations in the Pacific, 1851.  
Map source: Library of Congress

### Program References

#### PMNM Management Plan

- Marine Conservation Science Action Plan 3.1.1
- Native Hawaiian Culture and History 3.1.2
- Maritime Heritage Action Plan 3.3.4
- Historic Resources Action Plan 3.1.3
- Native Hawaiian Community Involvement 3.5.3
- Threatened and Endangered Species Action Plan 3.1.2
- Ocean Ecosystems Literacy Action Plan 3.5.4

#### Other Documents

- Links to Monument Goals 1 - 7

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