

PROJECT OVERVIEW

Ancient Hawaiians understood the lunar rhythms and seasonal patterns of important resource species and created moon calendars to inform the wise management of those resources. These moon calendars were used to predict seasonal, monthly, and daily ecological cycles of harvested species. This information was used to dictate proper harvest seasons and strategies and identify “kapu” or no-take periods on harvest during critical periods of development and reproduction.

Traditional knowledge tells us that seasonal cycles are unique to each island region. Fish spawning seasons still need to be determined for each bay or region to fully understand local resources.

Through collaborations between local communities, scientists, and management agencies, we are creating moon calendars with communities around the state to share local spawning seasons and pono (sustainable) harvest practices. Our project goals:

1. Raise awareness of traditional pono fishing practices to improve the health of fish stocks.
2. Identify spawning times for fishery resource species, focusing on *Kala*, *Kole*, *Manini*, *Akule*, and others.
3. Develop fishing moon calendars.

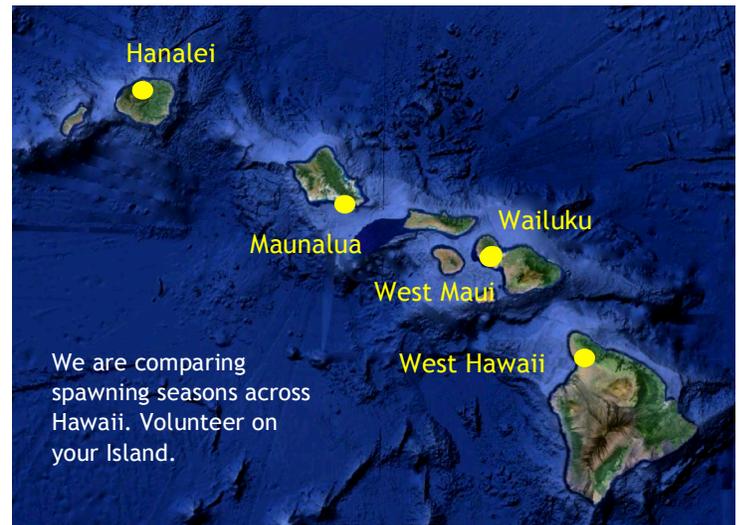
APPROACH

- *Local fishermen are trained to observe gonad (egg) development in fish and drop off gonad samples for scientific analysis.*
- *UH Scientists analyze the gonad samples to determine time of spawning and size of maturity (size that fish are capable of spawning). This information is used to inform the appropriate harvest size and harvest times.*
- **Partners:** Local communities, Conservational International’s Hawaii Fish Trust, UH Manoa, NOAA Papahānaū-mokuākea, NOAA Hawaii Islands Humpback Whale National Marine Sanctuary, Sea Grant, and Hawaii DAR.

MOST IMPORTANT RESULTS

- *Identifying pono (sustainable) harvest practices.*
- *Providing education opportunities and community training in fish spawning seasons and sustainable harvest practices.*
- *Linking community values with local management goals.*

SITE LOCATIONS



To volunteer contact:

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The South Kohala Coastal Partnership is a dynamic partnership committed to the implementation of the SKCAP guided by the shared vision. The vision of the South Kohala Coastal Partnership is to achieve: A restored, healthy, abundant and resilient South Kohala coastal system cared for and cherished by an island community guided by the values and traditions of South Kohala.

HAWAII
~coral reef~
STRATEGY

ACCOMPLISHMENTS

We have been working towards sustainable harvest in South Kohala by learning the natural cycles of our resources and knowing the proper times to harvest.

- *Outreach and training on sustainable fishing practices are held regularly in South Kohala. Please check the www.facebook.com/spawningseasons for upcoming events.*
- *We are working with fishermen in the area to identify spawning seasons and size that fish begin to spawn for several important reef fishes.*
- *We have found that the size that fish reach adulthood and are capable of spawning is different by island regions.*
- *Our research suggests that spawning seasons are variable and influenced by location.*



Manini (convict tang) eggs during spawning. Scientific assessment allows provides detailed picture of the eggs.

MANAGEMENT IMPLICATIONS

This project is increasing community-based resource management and conservation in the Hawaiian Islands by identifying local pono fishing practices and combining this traditional knowledge with scientific techniques.

Communities are using this information to develop local resource monitoring programs and increasing resource users' influence on the local management. South Kohala is just one location where spawning season research is occurring. We are comparing spawning seasons for reef fish from Kauai, Oahu, Maui, and Hawaii Island to understand the variability in spawning seasons and size that fish become spawning capable.

Through this research we will identify local strategies to increase future resource abundance. These will be specific to each location, but some important management measures are common to all locations:

- *Limit harvest during spawning seasons.*
- *Leave larger sized fish.*
- *Harvest only what you need.*

To ensure that our resources persist into the future we must monitor the natural cycles of our resources and share this knowledge among resource users.



Community training on fish spawning seasons and pono fishing practices.

More Information

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