

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

May 23, 2008

Board of Land
and Natural Resources
Honolulu, Hawaii

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Research Permit to Dr. Robert Toonen, University of Hawaii, Hawaii Institute of Marine Biology, for Access to State Waters to Conduct Reef Invertebrates Genetic Survey Activities.

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahānaumokuākea Marine National Monument research permit to Dr. Robert Toonen, assistant researcher, University of Hawaii, Hawaii Institute of Marine Biology, pursuant to § 187A-6, Hawaii Revised Statutes (HRS), chapter 13-60.5, Hawaii Administrative Rules (HAR), and all other applicable laws and regulations.

The research permit, as described below, would allow entry and research activities to occur in the Papahānaumokuākea Marine National Monument (Monument), including the NWHI State Marine Refuge and the waters (0-3 nautical miles) surrounding the following sites:

- Nihoa Island,
- Necker Island (Mokumanamana),
- French Frigate Shoals,
- Gardner Pinnacles,
- Maro Reef
- Laysan Island,
- Lisianski Island, Neva Shoal,
- Pearl and Hermes Atoll,
- Kure Atoll State Seabird Sanctuary

The activities covered under this permit would occur from June 1, 2008 through September 30, 2008.

The proposed activities are a renewal of work previously permitted and conducted in the Monument.

INTENDED ACTIVITIES

The purpose of these activities is to conduct a population genetic survey of common reef invertebrates. This survey is an on-going effort to determine patterns of connectivity or isolation

among each reef ecosystem throughout the Hawaiian Archipelago with a focus on locations within the Monument, as well as between the Monument and the main Hawaiian Islands.

To carry out this survey, the applicant is requesting to collect target invertebrates by hand and take tiny tissue biopsy samples prior to release of the live animals back to the environment. Tissue biopsy samples are typically obtained as small fragments for corals (1 cm²), or arm clips for sea stars, brittle stars and sea cucumbers. The targeted species are locally abundant and widespread in the area, easy to identify, and easy to collect. Despite the fact that only extremely abundant species are targeted, for which removal of 50 individuals has no detectable population effect, the applicant would use non-lethal tissue samples to further minimize impact whenever possible. Exceptions to non-lethal sampling would include only hermit crabs of the genus *Calcinus*, for which the whole animal is needed to confirm field identification. It is expected that new species would be discovered from these samples, and they would subsequently become part of the Bishop Museum permanent collection.

The applicant is requesting 50 specimens/species/location and notes that this number is cumulative for his past and future cruises, meaning once 50 samples of a species are gathered at one location, no additional specimens will be taken on subsequent cruises. There are several species and locations for which the maximum sample size is already complete. See F-2d for a table of species and current collection status.

Tissue samples would be preserved in >70% ethanol and transported back to HIMB for genetic analyses.

The applicant notes that researchers at HIMB have coordinated to share samples where appropriate.

This research would help determine whether the Monument is a series of relatively fragile (isolated) ecosystems, or whether individual reef habitats are connected in a larger and more robust ecosystem. It will also address the issue about whether the NWHI serves as a source of larvae to replenish depleted stocks in the main Hawaiian Islands.

The activities described above may require the following regulated activities to occur in State waters:

- Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource
- Touching coral, living or dead
- Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands

RESPONSE:

1. DAR and Monument staff have been working with HIMB researchers to address staff concerns and develop a Monument transport protocol. Currently, the protocol is subject to external peer review. The results of this review will be known by the May 23rd Land Board meeting. The method of storage and transport of coral being proposed by the applicant would be addressed in the Monument transport protocol.
2. The Applicant states that he has presented results at the Hanauma Bay lecture series, has done several interviews with Marvin Buenconsejo on KHNL news, and to the members of The Nature Conservancy. He plans to continue these types of public presentations
3. The Applicant states that although they have not made any effort to sex the animals in the field, they have not sampled any berried females as far as he knows. The 5th walking leg would be avoided, and given the choice, they would take a single dactyl from the 2nd or 3rd walking leg or a piece of antenna when necessary.
4. A cultural briefing was given to HIMB staff and researchers by the cultural reviewer who made this request. That briefing included a discussion on how best to incorporate and implement this practice into Monument activities that require the taking of samples.

STAFF OPINION:

DAR staff is of the opinion that Applicant has properly demonstrated valid justifications for his application and, conditional on development of a peer-reviewed Monument transport protocol, should be allowed to enter the NWHI State waters and to conduct the activities therein as specified in the application with the following special instructions and conditions, which are in addition to the Papahānaumokuākea Marine National Monument Conservation and Management Permit General Conditions. The following special conditions have been vetted through the legal counsel of the Co-Trustee agencies.

1. This permit is not to be used for nor does it authorize the sale of collected organisms. Under this permit, the authorized activities must be for noncommercial purposes not involving the use or sale of any organism, by-products, or materials collected within the Monument for obtaining patent or intellectual property rights.
2. The permittee may not convey, transfer, or distribute, in any fashion (including, but not limited to, selling, trading, giving, or loaning) any coral, live rock, or organism collected under this permit without the express written permission of the Co-Trustees.
3. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocols attached to this permit.
4. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.

5. Refueling of tenders and all small vessels must be done at the support ships and outside the confines of lagoons or near-shore waters in the State Marine Refuge
6. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional and customary practices by Native Hawaiians.

MONUMENT MANAGEMENT BOARD OPINION:

The MMB is of the opinion that the Applicant has met the findings of Presidential Proclamation 8031 and this activity, conditional on development of a peer-reviewed Monument transport protocol, may be conducted subject to completion of all compliance requirements. The MMB concurs with the special conditions recommended by DAR staff.

RECOMMENDATION:

“That the Board authorize and approve, with stated conditions, a Research Permit to Dr. Robert Toonen, University of Hawaii, Hawaii Institute of Marine Biology.”

Respectfully submitted,



DAN POLHEMUS
Administrator

APPROVED FOR SUBMITTAL



LAURA H. THIELEN
Chairperson