

State of Hawai'i
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawai'i 96813

July 28, 2017

Board of Land and Natural Resources
Honolulu, Hawai'i

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Research Permit to Dr. Bruce Mundy, NOAA, Pacific Islands Fishery Science Center, for Access to State Waters to Conduct Research Activities to Characterize Hawaiian Jack Species

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 Applicant Dr. Carl Meyer, Hawai'i Institute of Marine Biology, University of Hawai'i, pursuant to § 187A-6, Hawai'i Revised Statutes (HRS), Chapter 13-60.5, Hawai'i Administrative Rules (HAR), and all other applicable laws and regulations.

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

- Nihoa Island
- Mokumanamana Island
- French Frigate Shoals
- Gardner Pinnacles
- Maro Reef
- Laysan Island
- Lisianski Island
- Pearl and Hermes Atoll
- Midway Atoll
- Kure Atoll

The activities covered under this permit would occur between August 1, 2017 thru July 31, 2018.

INTENDED ACTIVITIES

The applicant proposes to conduct activities to verify the species identification of the lehe, thicklipped jack, pig ulua, or butaguchi ulua (*Pseudocaranx* species) that resides in the Hawaiian Archipelago. This study would determine if the species in Hawaiian waters is different from *Pseudocaranx dentex*, or if it is a Polynesian species that would take the available name *Pseudocaranx cheilio*. Up to four individuals would collect up to seven butaguchi ulua via spear during the annual Reef Assessment Monitoring Program cruise aboard NOAA Ship

HI'IALAKAI (separately permitted under permit no. PMNM-2017-002) from September 6-30, 2017. Collection activities would occur in shallow waters (< 100 m. depth) at all islands/atolls throughout PMNM and Maro Reef.

To safeguard Monument resources the applicant would abide by the following PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within the PMNM: Best Management Practices for Boat Operations and Diving Activities (BMP #004); General Storage and Transport Protocols for Collected Samples (BMP #006); Marine Wildlife Viewing Guidelines (BMP #010); and Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011).

The applicant's proposed activities directly support the Monument Management Plan (MMP) by characterizing Monument resources as prioritized in the Monument Management Plan activity MCS-1.1 – Continue to characterize types and distributions of shallow-water marine habitats to inform protection and management efforts, and MCS-1.5 – Measure connectivity and diversity of key species to enhance management decisions.

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
- ☒ Drilling into, dredging, or otherwise altering the submerged lands other than by anchoring a vessel; or constructing, placing, or abandoning any structure, material, or other matter on submerged lands
- ☒ Discharging or depositing any material or matter into the Monument
- ☒ Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
- ☒ Attracting any living Monument resources
- ☒ 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 and cultural entities: Hawai'i Division of Aquatic Resources, Hawai'i Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site since May 24, 2017, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Comments received from the scientific community are summarized as follows:

QUESTIONS:

1. Will persons be free-diving or scuba diving to spear the butaguchi ulua?

The collectors will be snorkeling at Midway Atoll and using SCUBA at Kure Atoll if too few specimens are collected at Midway.

COMMENTS / RECOMMENDATIONS:

1. Collection amount of less than 10 fish is not a concern. These fish are not considered threatened or endangered.

Agree and noted.

2. The field PI Jason Leonard is qualified to carry out this task. He will already be on board as part of the NOAA RAMP team.

Agree and noted.

3. This study doesn't really seem necessary in PMNM. They should be able to get samples in the MHI. However, it will not hurt the populations in the NWHI.

Given the low abundance of this species in the MHI and high abundance in the NWHI, conducting this activity in PMNM would increase the probability of collecting up to 7 whole specimens needed to confirm the identity of the species, and is not expected to have any adverse impacts to this species. Attempts have been made to obtain specimens in the MHI without any success. We continue to try to obtain specimens in the MHI, but we request this permit to increase the chances of obtaining the specimens needed to solve this problem. If specimens can be obtained in the MHI before the RAMP cruise, we will only request the number of specimens from the Monument needed to have a total of 7. If 7 specimens are obtained from the MHI prior to the RAMP cruise, we will not collect any specimens from the Monument and we will not use this permit. However, lack of success in the MHI thus far does not make us optimistic about obtaining the required specimens here.

4. The proposed activity will be on the RAMP cruise, not biogeography.

Noted and thank you for the clarification.

5. Fish assemblages in the NWHI are known for a high level of endemism. Confirming the identity of *Pseudocaranx* in the Hawaiian waters (same as widely distributed *P. dentex*, Polynesian species or unique to Hawaii) is helpful.

Noted and thank you.

6. Confirming the presence of *Pseudocaranx* species unique to Hawaii or Polynesia benefit the management of the NWHI, especially given their higher abundance in the NWHI compared to the MHI.

Agree and noted.

7. Given the low abundance of the species in the MHI, the small number of specimen collection in the NWHI is justifiable.

Agree and noted.

8. Confirming the identity of the species benefits resource managers and potentially increase the intrinsic value of the monument.

Agree and noted.

9. Taxonomic studies generally take a long time to publish, so the proposed 2-3 year time frame seems very reasonable.

Agree and noted.

10. The species has also been recorded from mesophotic reefs of the three northern atolls of the NWHI. Thus, confirming the identity also helps characterization of mesophotic reefs of the NWHI.

Agree and noted.

11. The proposed activity will be carried out by very experienced divers who are Monument staff. The use of spears ensures that there will be no bycatch of non-targeted species.

Agree and noted.

12. Collection of up to 7 whole specimens is unlikely to have any deleterious or irreparable impacts on the Monument's resources given this species' abundance in the NWHI.

Agree and noted.

Comments received from the Native Hawaiian community are summarized as follows:

Cultural reviews support the acceptance of this application. No concerns were raised.

Comments received from the public are summarized as follows:

No comments were received from the public on this application.

Additional reviews and permit history:

Are there other relevant/necessary permits or environmental reviews that have or will be issued with regard to this project? (e.g., MMPA, ESA, EA) Yes ☒ No ☐

If so, please list or explain:

- The proposed activities are in compliance with the National Environmental Policy Act.
- The proposed activities are in compliance with the National Historic Preservation Act.
- An informal review of all aforementioned activities following section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA; 16 U.S.C. 1855(b)) is currently underway. The outcome of this review may require the applicant to adhere to other NMFS-prescribed conditions. Such conditions would be reflected in the PMNM permit, prior to issuance.
- A request is currently underway to the National Marine Fisheries Service (NMFS) to cover all proposed activities under PMNM's programmatic ESA Section 7 informal consultation. The outcome of this consultation may require the applicant to adhere to other NMFS-prescribed conditions. Such conditions would be reflected in the PMNM permit, prior to issuance.
- The Department has made an exemption determination for this permit in accordance chapter 343, HRS, and Chapter 11-200, HAR. See Attachment ("DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPA HĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT RESEARCH PERMIT TO DR. BRUCE MUNDY, NOAA, PACIFIC ISLANDS FISHERIES SCIENCE CENTER, FOR ACCESS TO

STATE WATERS FOR RESEARCH ACTIVITIES INTENDED TO CHARACTERIZE CERTAIN
HAWAIIAN JACK SPECIES UNDER PERMIT PMNM-2017-022.”

Has Applicant been granted a permit from the State in the past? Yes ☐ No ☒

If so, please summarize past permits:

Have there been any a) violations: Yes ☐ No ☒

b) Late/incomplete post-activity reports: Yes ☐ No ☒

Are there any other relevant concerns from previous permits? Yes ☐ No ☒

STAFF OPINION

PMNM staff is of the opinion that the Applicant has properly demonstrated valid justification for their application and should be allowed to enter the NWHI State waters and conduct the activities therein as specified in the application with certain special instructions and conditions, which are in addition to the Papahānaumokuākea Marine National Monument Research Permit General Conditions. All suggested special conditions have been vetted through the legal counsel of the Co-Trustee agencies (see Recommendation section).

MONUMENT MANAGEMENT BOARD OPINION

The MMB is of the opinion that the Applicant has met the findings of Presidential Proclamation 8031 and this activity may be conducted subject to completion of all compliance requirements. The MMB concurs with the special conditions recommended by PMNM staff.

RECOMMENDATION:

That the Board authorize and approve a Research Permit to Dr. Carl Meyer, Hawai‘i Institute of Marine Biology, University of Hawai‘i, with the following special conditions:

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 NWHI Marine Refuge.

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6. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional and customary practices by Native Hawaiians.

Respectfully submitted,



Maria Carnevale
State Co-Manager
Papahānaumokuākea Marine National Monument



APPROVED FOR SUBMITTAL



SUZANNE CASE
Chairperson

Papahānaumokuākea Marine National Monument
RESEARCH Permit Application

NOTE: This Permit Application (and associated Instructions) are to propose activities to be conducted in the Papahānaumokuākea Marine National Monument. The Co-Trustees are required to determine that issuing the requested permit is compatible with the findings of Presidential Proclamation 8031. Within this Application, provide all information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Papahānaumokuākea Marine National Monument (Monument).

ADDITIONAL IMPORTANT INFORMATION:

- Any or all of the information within this application may be posted to the Monument website informing the public on projects proposed to occur in the Monument.
- In addition to the permit application, the Applicant must either download the Monument Compliance Information Sheet from the Monument website OR request a hard copy from the Monument Permit Coordinator (contact information below). The Monument Compliance Information Sheet must be submitted to the Monument Permit Coordinator after initial application consultation.
- Issuance of a Monument permit is dependent upon the completion and review of the application and Compliance Information Sheet.

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED

Send Permit Applications to:
NOAA/Inouye Regional Center
NOS/ONMS/PMNM/Attn: Permit Coordinator
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
nwhipermit@noaa.gov
PHONE: (808) 725-5800 FAX: (808) 455-3093

SUBMITTAL VIA ELECTRONIC MAIL IS PREFERRED BUT NOT REQUIRED. FOR ADDITIONAL SUBMITTAL INSTRUCTIONS, SEE THE LAST PAGE.

Papahānaumokuākea Marine National Monument Permit Application Cover Sheet

This Permit Application Cover Sheet is intended to provide summary information and status to the public on permit applications for activities proposed to be conducted in the Papahānaumokuākea Marine National Monument. While a permit application has been received, it has not been fully reviewed nor approved by the Monument Management Board to date. The Monument permit process also ensures that all environmental reviews are conducted prior to the issuance of a Monument permit.

Summary Information

Applicant Name: Bruce Mundy

Affiliation: NOAA, National Marine Fisheries Service, Pacific Islands Fisheries Science Center

Permit Category: Research

Proposed Activity Dates: September 6 – 30, 2017

Proposed Method of Entry (Vessel/Plane): NOAA Ship Hi'ialakai

Proposed Locations: All shallow marine areas at all island/atoll areas within the Northwestern Hawaiian Islands

Estimated number of individuals (including Applicant) to be covered under this permit: 5

Estimated number of days in the Monument: 25

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

The proposed activity would verify the species identification of the lehe, thicklipped jack, pig ulua, or butaguchi ulua (*Pseudocaranx* species) that resides in the Hawaiian archipelago. It would determine if the species in Hawaiian waters is different from *Pseudocaranx dentex*, originally described from Brazil, which was long thought to be the *Pseudocaranx* species in Hawaiian waters, or if it is a Polynesian species that would take the available name *Pseudocaranx cheilio*.

b.) To accomplish this activity we would

We would collect 6-7 whole butaguchi via spear, freeze them whole and conduct molecular analysis (cytochrome c oxidase I; COI genetic barcode analysis) and morphological analysis using standard ichthyological techniques to confirm identity. The work will be done in collaboration with Dr. William Smith-Vaniz, a world authority on the taxonomy of ulua (Carangidae) (e.g. Smith-Vaniz. 1999, and Smith-Vaniz and Jelks. 2006). The COI barcode analysis has been used in previous taxonomic studies of fish

specimens from the Papahānaumokuākea Marine National Monument (e.g., Pyle et al., 2016).

c.) This activity would help the Monument by ...

This activity would help the Monument by further characterizing Monument resources as prioritized in the Monument Management Plan activity MCS-1.1 – *Continue to characterize types and distributions of shallow-water marine habitats to inform protection and management efforts*, and MCS-1.5 – *Measure connectivity and diversity of key species to enhance management decisions*.

Other information or background:

Until 2007, the species of lehe or butaguchi ulua in Hawaiian waters was identified as *Pseudocaranx dentex* (Bloch & Schneider), with a type locality of Brazil (e.g., Randall, 1996. Shore fishes of Hawai'i, 1st edition; Hoover, 2003. Hawaii's fishes. A guide for snorkelers divers and aquarists, 9th printing [revised]). The genus *Pseudocaranx* is now known to consist of a complex species still under study by William F. Smith-Vaniz; who advised the use of the name *P. cheilio* (Snyder) for the Hawaiian population; type locality, O'ahu, in the most recent reference for the identification of Hawai'i's fishes (Randall, 2007. Reef and shore fishes of the Hawaiian Islands). Randall (2007) also commented that the Easter Island population of lehe or thicklipped jack was most similar to the population in Hawai'i and might also take the name *P. cheilio*. However, Randall and Cea (2011. Shore fishes of Easter Island) noted that "Easter Island specimens are currently identified as the Hawaiian *P. cheilio*, despite lower gill raker counts (W. F. Smith-Vaniz, pers. comm.). Genetic study may be needed to resolve confusing meristic data in these populations." Thus, the species identifications of *Pseudocaranx* from the Hawaiian Islands and Easter Island remain unresolved and are in need of more research to solve the taxonomic problems in the genus.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Mundy, Bruce C.

Title:

Fisheries Research Biologist
Fisheries Research and Monitoring Division
Pacific Islands Fisheries Science Center
National Marine Fisheries Service
National Oceanic and Atmospheric Administration

1a. Intended field Principal Investigator (See instructions for more information):

Jason Leonard

2. Mailing address (street/P.O. box, city, state, country, zip):

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

For students, major professor's name, telephone and email address:

3. Affiliation (institution/agency/organization directly related to the proposed project):

NOAA, National Marine Fisheries Service
Pacific Islands Fisheries Science Center

4. Additional persons to be covered by permit. List all personnel roles and names (if known at time of application) here (e.g. John Doe, Research Diver; Jane Doe, Field Technician):

Jason Leonard, Research Diver
Mark Royer, Research Diver
Daniel Coffey, Research Diver
Stephen Matadobra, Research Diver

Section B: Project Information

5a. Project location(s):

| | | | |
|------------------------------------------------------------------|-------------------------------------|---------------------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> Nihoa Island | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Necker Island (Mokumanamana) | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> French Frigate Shoals | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Gardner Pinnacles | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Maro Reef | | | |
| <input checked="" type="checkbox"/> Laysan Island | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Lisianski Island, Neva Shoal | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Pearl and Hermes Atoll | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Midway Atoll | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Kure Atoll | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input type="checkbox"/> Other | | | |

NOTE: Shallow water is defined by water less than 100 meters in depth.

☐ Remaining ashore on any island or atoll (with the exception of Sand Island, at Midway Atoll and field camp staff on other islands/atolls) between sunset and sunrise.

NOTE: There is a fee schedule for people visiting Midway Atoll National Wildlife Refuge via vessel and aircraft.

Location Description:

The cruise is scheduled to visit the following island/atoll areas: French Frigate Shoals, Laysan, Lisianski, Pearl and Hermes, Midway and Kure, however all location boxes are checked in the event that the cruise instructions change, or locations change due to unforeseen events like weather.

5b. Check all applicable regulated activities proposed to be conducted in the Monument:

- ☒ Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource
- ☐ Drilling into, dredging, or otherwise altering the submerged lands other than by anchoring a vessel; or constructing, placing, or abandoning any structure, material, or other matter on the submerged lands
- ☐ Anchoring a vessel
- ☐ Deserting a vessel aground, at anchor, or adrift
- ☐ Discharging or depositing any material or matter into the Monument
- ☐ Touching coral, living or dead
- ☒ Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
- ☐ Attracting any living Monument resource
- ☐ Sustenance fishing (Federal waters only, outside of Special Preservation Areas, Ecological Reserves and Special Management Areas)

- ☐ Subsistence fishing (State waters only)
☒ Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

6. Purpose/Need/Scope *State purpose of proposed activities:*

The purpose of this activity is to confirm identity of a species of ulua (possibly *Pseudocaranx cheilio*) residing in the Hawaiian archipelago. The genus *Pseudocaranx* is now known to consist of a complex of species still under study by William F. Smith-Vaniz; who advises use of the name *P. cheilio* (Snyder) for the Hawaiian population (Randall, 2007), but there is an unresolved taxonomic problem with the identification of the *Pseudocaranx* in the Hawaiian Islands. *P. dentex* and *P. cheilio* are also known as the lehe, thicklipped jack, pig ulua, or butaguchi ulua. In order to confirm the identity of this fish, 6-7 whole butaguchi would be speared, frozen whole on the ship and taken to the lab where Cytochrome c oxidase I; COI genetic barcode analysis and morphological analysis using standard ichthyological techniques would be conducted to confirm identity of this fish.

*Considering the purpose of the proposed activities, do you intend to film / photograph federally protected species? Yes ☐ No ☒

If so, please list the species you specifically intend to target.

For a list of terrestrial species protected under the Endangered Species Act visit:

<http://www.fws.gov/endangered/>

For a list of marine species protected under the Endangered Species Act visit:

<http://www.nmfs.noaa.gov/pr/species/esa/>

For information about species protected under the Marine Mammal Protection Act visit:

<http://www.nmfs.noaa.gov/pr/laws/mmpa/>

7. Answer the Findings below by providing information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Monument:

The Findings are as follows:

a. How can the activity be conducted with adequate safeguards for the cultural, natural and historic resources and ecological integrity of the Monument?

This activity would be conducted with adequate safeguards for the cultural, natural and historic resources and ecological integrity of the Monument as it would target a very small sample of butaguchi (6-7 whole specimens) via spear, so there would be no chance of bycatch. The sample size is considered small for the amount of this species of fish located within the NWHI where it is more abundant in comparison to the main Hawaiian Islands (MHI). This activity would not occur around any historical sites (e.g., shipwrecks) or other historic sites within the NWHI. Additionally, the experienced research divers conducting this activity would collect this small sample of fish carefully

and respectfully and without doing harm to other resources within Papahānaumokuākea, and share research results with everyone including managers, the NWHI Coral Reef Ecosystem Reserve Advisory Council, and the Native Hawaiian Cultural Working Group to name a few.

b. How will the activity be conducted in a manner compatible with the management direction of this proclamation, considering the extent to which the conduct of the activity may diminish or enhance Monument cultural, natural and historic resources, qualities, and ecological integrity, any indirect, secondary, or cumulative effects of the activity, and the duration of such effects?

This activity would be conducted in a manner compatible with the management direction of Proclamation 8031, as the activity would further characterize the resources within Papahānaumokuākea. Characterization of shallow water marine resources like butaguchi is included in the PMNM Management plan as the following:

- MCS-1.1 – *Continue to characterize types and distributions of shallow-water marine habitats to inform protection and management efforts; and*
- MCS-1.5 – *Measure connectivity and diversity of key species to enhance management decisions.*

This type of research is also prioritized in the PMNM Natural Resources Science Plan in the following activities:

- Use a combination of remote sensing, acoustic, optical, and diver data collection techniques to characterize and map shallow water (<30 meters) benthic habitats to establish baselines;
- Use a combination of optical and diver data collection techniques to collect ecosystem monitoring data, including new marine species and records for the NWHI; and
- Conduct studies of population demography and genetic structure on selected dominant or keystone plants, vertebrates, or invertebrates.

c. Is there a practicable alternative to conducting the activity within the Monument? If not, explain why your activities must be conducted in the Monument.

There is no practicable alternative to conducting the activity within the Monument. We put a request out to a number of MHI fishermen almost a year ago for the collection of butaguchi from the MHI and we have not been successful. It is well-known amongst the fisheries and ecosystem research community that butaguchi are more common within the NWHI, therefore we are requesting a small sample from the Monument.

d. How does the end value of the activity outweigh its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity?

The end value of this activity outweighs its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity because (1) this sample size is small, (2) the methods of obtaining these fish (spear) are targeted, therefore no

bycatch will result, and (3) this activity will further characterize natural and cultural resources (butaguchi) within the Monument providing managers with more information to make informed decisions regarding PMNM management.

e. Explain how the duration of the activity is no longer than necessary to achieve its stated purpose.

The activity will be conducted as a “piggyback” activity on the September biogeography cruise and requires limited collection of 6-7 whole butaguchi to be frozen. Once these fish are caught, the activity will cease.

f. Provide information demonstrating that you are qualified to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.

The aforementioned field personnel have conducted hundreds of research dives within PMNM and have extensive experience spearfishing throughout the Pacific. Additionally, the Principle Investigator, Bruce Mundy is a Research Fishery Biologist at the NOAA NMFS Pacific Islands Fisheries Science, Honolulu, who specializes in the biogeography and biodiversity of central Pacific fishes.

His publications on those topics include inventories of fishes of the Hawaiian Archipelago (Mundy, B. C. 2005. A checklist of the fishes of the Hawaiian Archipelago. B. P. Bishop Museum Bull. Zool. No. 6, 704 p.) and the Pacific Remote Islands Marine National Monuments (Mundy, B. C., R. Wass, E. DeMartini, B. Greene, B. Zgliczynski, R. E. Schroeder, & C. Musberger. 2010. Inshore fishes of Howland Island, Baker Island, Jarvis Island, Palmyra Atoll, and Kingman Reef. Atoll Res. Bull. No. 485: 1-131). He has participated in numerous PIFSC collecting cruises in his 32 years of work at NMFS, and has provided specimens collected by PIFSC to taxonomists who described new fish species from that material (e.g., Smith-Vaniz, W. F., & G. D. Johnson. 2016. Hidden diversity in deep-water bandfishes: review of *Owstonia* with descriptions of twenty-one new species (Teleostei: Cepolidae: Owstoniinae). Zootaxa 4187: 1-103).

Dr. William Smith-Vaniz is a world-recognized authority on the taxonomy of jacks, family Carangidae, with numerous publications that include the descriptions of many new species (e.g., W. F. Smith-Vaniz & H. L. Jelks. 2006. Australian trevallies of the genus *Pseudocaranx* (Teleostei: Carangidae), with description of a new species from Western Australia Mem. Mus. Victoria, vol. 63, no. 1: 97-106). He was a biologist at the U.S. Geological Survey Southeast Ecological Science Center and is currently an active research associate at the Florida Museum of Natural History at the University of Florida, Gainesville.

g. Provide information demonstrating that you have adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.

This activity would be funded in whole by the NMFS Pacific Islands Fisheries Science Center. The federal government is self-insured.

h. Explain how your methods and procedures are appropriate to achieve the proposed activity's goals in relation to their impacts to Monument cultural, natural and historic resources, qualities, and ecological integrity.

Our methods and procedures are appropriate to achieve the proposed activity's goals in relation to their impacts to PMNM cultural, natural and historic resources, qualities, and ecological integrity as molecular identification is the best low-impact way to confirm identity of butaguchi residing within the Monument and the Hawaiian archipelago. This technique will use a small sample of fish which will be caught via spear, frozen whole and shipped to a laboratory for molecular workup (CO1 genetic barcode analysis).

i. Has your vessel been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of Presidential Proclamation 8031?

NOAA Ship Hi'ialakai has a type-approved VMS.

j. Demonstrate that there are no other factors that would make the issuance of a permit for the activity inappropriate.

There are no other factors that would make the issuance of a permit for the activity inappropriate.

8. Procedures/Methods:

Butaguchi would be speared via pole-spear or spear gun, frozen whole and stored on NOAA Ship Hi'ialakai for transport back to Honolulu. Once in Honolulu, the fish would be shipped to the fish collection Florida State Museum of Natural History where Dr. Smith-Vaniz will do a morphological analysis of them to determine their taxonomic status. Dr. Smith-Vaniz will also administer the genetic analysis that will be done by his colleagues.

The shipping address is: Ichthyology Collection, Florida State Museum of Natural History, Dickinson Hall, Gainesville, FL 32611-7800. C/o Mr. Robert H. Robins, collection manager, attn. Dr. William Smith-Vaniz (smithvaniz@gmail.com).

Once the specimens arrive in Florida, the CO1 technique would be used to identify the butaguchi and confirm that they are either *P. cheilio* or *P. dentex*. DNA barcodes (cytochrome c oxidase I; COI) would be sequenced following the protocol described in Copus et al. (2015).

NOTE: If land or marine archeological activities are involved, contact the Monument Permit Coordinator at the address on the general application form before proceeding.

9a. Collection of specimens - collecting activities (would apply to any activity): organisms or objects (List of species, if applicable, attach additional sheets if necessary):

Common name:

Thicklipped jack, butaguchi ulua or pig ulua

Scientific name:

Pseudocaranx dentex or *P. cheilio*

& size of specimens:

7 specimens maximum, various sizes

Collection location:

Shallow water areas (<100 meters) surrounding the NWHI.

☒ Whole Organism ☐ Partial Organism

9b. What will be done with the specimens after the project has ended?

After analysis, the specimens will be permanently accessioned into the ichthyology collection of the Florida State Museum, the U.S. National Museum of Natural History, or the specimens will be split between both collections, at Dr. Smith-Vaniz' preference.

9c. Will the organisms be kept alive after collection? ☐ Yes ☒ No

All organisms would be frozen whole.

• General site/location for collections:

Shallow water areas (<100 meters) surrounding the NWHI.

• Is it an open or closed system? ☐ Open ☐ Closed

N/A

• Is there an outfall? ☐ Yes ☐ No

N/A

• Will these organisms be housed with other organisms? If so, what are the other organisms?

N/A

• Will organisms be released?

N/A

10. If applicable, how will the collected samples or specimens be transported out of the Monument?

The samples would be transported out of the Monument via NOAA Ship Hi'ialakai.

11. Describe collaborative activities to share samples, reduce duplicative sampling, or duplicative research:

This research would be conducted in partnership with Papahānaumokuākea Marine National Monument (Office of National Marine Sanctuaries) and the Florida State Museum and the U.S. Museum of Natural History.

12a. List all specialized gear and materials to be used in this activity:

Pole spears, spear guns and dive equipment.

12b. List all Hazardous Materials you propose to take to and use within the Monument:
N/A

13. Describe any fixed installations and instrumentation proposed to be set in the Monument:
N/A

14. Provide a time line for sample analysis, data analysis, write-up and publication of information:

It will take 2-3 years to complete the analysis and finish the manuscript.

15. List all Applicants' publications directly related to the proposed project:

Copus, J. M., C. A. Ka'apu-Lyons, and R. L. Pyle. "*Luzonichthys seaver*, a new species of Anthiinae (Perciformes, Serranidae) from Pohnpei, Micronesia." *Biodiversity data journal* 3 (2015).

Mundy, B. C. 2005. A checklist of the fishes of the Hawaiian Archipelago. B. P. Bishop Museum Bull. Zool. No. 6, 704 p.

Mundy, B. C., R. Wass, E. DeMartini, B. Greene, B. Zgliczynski, R. E. Schroeder, & C. Musberger. 2010. Inshore fishes of Howland Island, Baker Island, Jarvis Island, Palmyra Atoll, and Kingman Reef. Atoll Res. Bull. No. 485: 1-131

Papahānaumokuākea Marine National Monument Management Plan, December 2008, Honolulu, Hawai'i.

Papahānaumokuākea Marine National Monument Natural Resources Science Plan
2011-2015, Honolulu, Hawai'i.

Pyle, R. L., B. D. Greene, and R. K. Kosaki. "*Tosanoides obama*, a new basslet (Perciformes, Percoidae, Serranidae) from deep coral reefs in the Northwestern Hawaiian Islands. ZooKeys 641: 165–181." (2016).

Randall, J. E. *Reef and shore fishes of the Hawaiian Islands*. Sea Grant College Program, University of Hawai'i, 2007.

Smith-Vaniz, W. F. 1999. Carangidae jacks and scads (also travallies, queenfishes, runners, amberjacks, pilotfishes, pámpanos, etc.): 2659-2756 in K. E. Carpenter & V. H. Niem (eds.). FAO species identification guide for fishery purposes. The living resources of the western Central Pacific. Volume 4. Bony fishes part 2 (Mugilidae to Carangidae). Rome, FAO: 2069-2790.

Smith-Vaniz, W. F., & H. L. Jelks. 2006. Australian trevallies of the genus *Pseudocaranx* (Teleostei: Carangidae), with description of a new species from Western Australia Mem. Mus. Victoria, vol. 63, no. 1: 97-106.

With knowledge of the penalties for false or incomplete statements, as provided by 18 U.S.C. 1001, and for perjury, as provided by 18 U.S.C. 1621, I hereby certify to the best of my abilities under penalty of perjury of that the information I have provided on this application form is true and correct. I agree that the Co-Trustees may post this application in its entirety on the Internet. I understand that the Co-Trustees will consider deleting all information that I have identified as "confidential" prior to posting the application.

Bruce C Mundy

17 May 2017

Signature

Date

**SEND ONE SIGNED APPLICATION VIA MAIL TO THE MONUMENT OFFICE
BELOW:**

NOAA/Inouye Regional Center
NOS/ONMS/PMNM/Attn: Permit Coordinator
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
FAX: (808) 455-3093

DID YOU INCLUDE THESE?

- ☒ Applicant CV/Resume/Biography
- ☐ Intended field Principal Investigator CV/Resume/Biography
- ☐ Electronic and Hard Copy of Application with Signature
- ☐ Statement of information you wish to be kept confidential
- ☐ Material Safety Data Sheets for Hazardous Materials

Papahānaumokuākea Marine National Monument Compliance Information Sheet

1. Updated list of personnel to be covered by permit. List all personnel names and their roles here (e.g. John Doe, Diver; Jane Doe, Field Technician, Jerry Doe, Medical Assistant):

Jason Leonard, Research Diver
Mark Royer, Research Diver
Daniel Coffey, Research Diver
Stephen Matadobra, Research Diver

2. Specific Site Location(s): (Attach copies of specific collection locations):

Shallow water areas (less than 100 meters depth) at all island/atoll locations including Nihoa, Mokumanamana, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island, Lisianski Island/Neva Shoal, Pearl and Hermes Atoll, Midway Atoll, and Kure Atoll.

3. Other permits (list and attach documentation of all other related Federal or State permits):

N/A

3a. For each of the permits listed, identify any permit violations or any permit that was suspended, amended, modified or revoked for cause. Explain the circumstances surrounding the violation or permit suspension, amendment, modification or revocation.

N/A

4. Funding sources (Attach copies of your budget, specific to proposed activities under this permit and include funding sources. See instructions for more information):

The Pacific Islands Fisheries Science Center is partnering with the National Ocean Service to collect these samples as part of the annual NWHI RAMP cruise using equipment and salary time already allocated for RAMP. Because this project is piggybacking on the RAMP cruise, costs to collect an additional 6-7 fish via spear would be negligible.

5. Time frame:

Activity start: 6 September 2017

Activity completion: It will likely take 2-3 years to complete the analysis and finish the manuscript for this project.

Dates actively inside the Monument:

From: 6 September 2017
To: 30 September 2017

Describe any limiting factors in declaring specific dates of the proposed activity at the time of application: N/A

Personnel schedule in the Monument: Please see cruise instructions for this information.

6. Indicate (with attached documentation) what insurance policies, bonding coverage, and/or financial resources are in place to pay for or reimburse the Monument trustees for the necessary search and rescue, evacuation, and/or removal of any or all persons covered by the permit from the Monument: The federal government is self-insured.

7. Check the appropriate box to indicate how personnel will enter the Monument:

- ☒ Vessel
☐ Aircraft

Provide Vessel and Aircraft information: NOAA Ship Hi'ialakai

8. The certifications/inspections (below) must be completed prior to departure for vessels (and associated tenders) entering the Monument. Fill in scheduled date (attach documentation): Please see NOAA Ship Hi'ialakai's CIS form for inspection information.

- ☐ Rodent free, Date:
☐ Tender vessel, Date:
☐ Ballast water, Date:
☐ Gear/equipment, Date:
☐ Hull inspection, Date:

9. Vessel information (NOTE: if you are traveling aboard a National Oceanic and Atmospheric Administration vessel, skip this question):

Vessel name:
Vessel owner:
Captain's name:
IMO#:
Vessel ID#:

Flag:
Vessel type:
Call sign:
Embarkation port:
Last port vessel will have been at prior to this embarkation:
Length:
Gross tonnage:
Total ballast water capacity volume (m3):
Total number of ballast water tanks on ship:
Total fuel capacity:
Total number of fuel tanks on ship:
Marine Sanitation Device:
Type:

Explain in detail how you will comply with the regulations regarding discharge in the Monument. Describe in detail. If applicable, attach schematics of the vessel's discharge and treatment systems:

Other fuel/hazardous materials to be carried on board and amounts:

Provide proof of a National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement-approved Vessel Monitoring System (VMS). Provide the name and contact information of the contractor responsible for installing the VMS system. Also describe VMS unit name and type:

VMS Email:
Inmarsat ID#:

* Individuals MUST ENSURE that a type-approved VMS unit is installed and that its automatic position reports are being properly received by the NOAA OLE system prior to the issuance of a permit. To make sure your VMS is properly configured for the NOAA OLE system, please contact NOAA OLE at (808) 725-6110 or (808) 725-6100.

* PERMITS WILL NOT BE ISSUED TO INDIVIDUALS ENTERING THE MONUMENT VIA VESSEL UNTIL NOAA OLE HAS CONTACTED THE MONUMENT PERMIT COORDINATOR WITH A 'POSITIVE CHECK' READING.

10. Tender information:

On what workboats (tenders) will personnel, gear and materials be transported within the Monument? List the number of tenders/skiffs aboard and specific types of motors:

Please see RAMP CIS form.

Additional Information for Land Based Operations

11. Proposed movement of personnel, gear, materials, and, if applicable, samples:
N/A

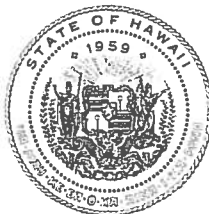
12. Room and board requirements on island: N/A

13. Work space needs: N/A

DID YOU INCLUDE THESE?

- ☐ Map(s) or GPS point(s) of Project Location(s), if applicable
- ☐ Funding Proposal(s)
- ☐ Funding and Award Documentation, if already received
- ☐ Documentation of Insurance, if already received
- ☐ Documentation of Inspections
- ☐ Documentation of all required Federal and State Permits or applications for permits

DAVID Y. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 28, 2017

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY PEARSON
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

TO: Division of Aquatic Resources File

THROUGH: Suzanne D. Case, Chairperson

FROM: Maria Carnevale
Papahānaumokuākea Marine National Monument

DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER
THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAHĀNAUMOKUĀKEA
MARINE NATIONAL MONUMENT RESEARCH PERMIT TO DR. BRUCE MUNDY, NOAA PACIFIC ISLANDS
FISHERIES SCIENCE CENTER, FOR ACCESS TO STATE WATERS
TO CHARACTERIZE HAWAIIAN JACK SPECIES UNDER PERMIT PMNM-2017-022

The following permitted activities are found to be exempted from preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200, HAR:

Project Title:

Papahānaumokuākea Marine National Monument Research Permit to Dr. Bruce Mundy, NOAA Pacific Islands Fisheries Science Center, for Access to State Waters to Characterize Hawaiian Jack Species

Permit Number: PMNM-2017-022

Project Description:

The applicant proposes to conduct activities to verify the species identification of the lehe, thicklipped jack, pig ulua, or butaguchi ulua (*Pseudocaranx* species) that resides in the Hawaiian Archipelago. This study would determine if the species in Hawaiian waters is different from *Pseudocaranx dentex*, or if it is a Polynesian species that would take the available name *Pseudocaranx cheilio*. Up to four individuals would collect up to seven butaguchi ulua via spear during the annual Reef Assessment Monitoring Program cruise aboard NOAA Ship HI'IALAKAI (separately permitted under permit no. PMNM-2017-002) from September 6-30, 2017. Collection activities would occur in shallow waters (< 100 m. depth) at all islands/atolls throughout PMNM and Maro Reef.

To safeguard Monument resources the applicant would abide by the following PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within the PMNM: Best Management Practices for Boat Operations and Diving Activities (BMP #004); General Storage and Transport Protocols for Collected Samples (BMP #006); Marine Wildlife Viewing Guidelines (BMP #010); and Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011).

The applicant's proposed activities directly support the Monument Management Plan (MMP) by characterizing Monument resources as prioritized in the Monument Management Plan activity MCS-1.1 – Continue to characterize types and distributions of shallow-water marine habitats to inform protection and management efforts, and MCS-1.5 – Measure connectivity and diversity of key species to enhance management decisions.

Consulted Parties:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawai'i Division of Aquatic Resources, Hawai'i Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site since May 24, 2017, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Exemption Determination:

After reviewing HAR § 11-200-8, including the criteria used to determine significance under HAR § 11-200-12, DLNR has concluded that the activities under this permit would have minimal or no significant effect on the environment and that issuance of the permit is categorically exempt from the requirement to prepare an environmental assessment based on the following analysis:

1. All activities associated with this permit; have been evaluated as a single action. As a preliminary matter, multiple or phased actions, such as when a group of actions are part of a larger undertaking, or when an individual project is precedent to or represents a commitment to a larger project, must be grouped together and evaluated as a single action. HAR § 11-200-7. This permit may involve an activity that is precedent to a later planned activity, i.e. the future collection of additional specimens to characterize the species; the categorical exemption determination here will treat all planned activities as a single action.

2. The Exemption Class for Scientific Research with no Serious or Major Environmental Disturbance Appears to Apply. Chapter 343, HRS, and § 11-200-8, HAR, provide for a list of classes of actions exempt from environmental assessment requirements. HAR §11-200-8.A.5. exempts the class of actions which involve "basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource." The proposed species characterization study activities here appear to fall squarely under the exemption class #5, exempt item #3 as described under the

Division of Forestry and Wildlife exemption list published on June 12, 2008. This exemption class has been interpreted to include “Research or experimental wildlife (and plant management) actions”, such as those being proposed. As discussed below, no significant disturbance to any environmental resource is anticipated in the removal of this minor amount of individual fish. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

To safeguard Monument resources the Applicant would abide by the following PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within the PMNM: Best Management Practices for Boat Operations and Diving Activities (BMP #004); General Storage and Transport Protocols for Collected Samples (BMP #006); Marine Wildlife Viewing Guidelines (BMP #010); and Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011).

3. Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not be Significant. Even where a categorical exemption appears to include a proposed action, the action cannot be declared exempt if “the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.” HAR § 11-200-8.B. To gauge whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. HAR § 11-200-12. Examples of actions which commonly have a significant effect on the environment are listed under HAR § 11-200-12.

Past permitted projects including similar collections and techniques have shown no adverse impacts. With that mind, significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potential sensitive environment of the project area will not be significantly affected. All activities will be conducted in a manner compatible with the management direction of the Monument Proclamation in that the activities do not diminish Monument resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The joint permit review process did not reveal any anticipated indirect or cumulative impacts that would occur as a result of these activities.

The Principal Investigator has years of experience within PMNM and no inadvertent impacts to the environment are anticipated. Therefore, since no significant cumulative impacts or significant impacts with respect to any particularly sensitive aspect of the project area are anticipated, the categorical exemptions identified above should remain applicable.

4. Overall Impacts will Probably be Minimal and Insignificant Any foreseeable impacts from the proposed activity will probably be minimal, and further mitigated by general and specific conditions attached to the permit. Specifically, all conservation and management activities covered by this permit will be carried out with strict safeguards for the natural, historic, and cultural resources of the Monument as required by Presidential Proclamation 8031, other applicable law and agency policies and standard operating procedures.

Conclusion. Upon consideration of the permit to be approved by the Board of Land and Natural Resources, the potential effects of the above listed project as provided by Chapter 343, HRS and Chapter 11-200 HAR, have been determined to be of probable minimal or no significant effect on the environment and exempt from the preparation of an environmental assessment.

Suzanne Case
Board of Land and Natural Resources

Date