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

June 8, 2007

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. Isabella Abbott, University of Hawaii (UH), Department of Botany, for Access to State Waters to Conduct Algal Baseline Characterization Research 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. Isabella Abbott, UH, pursuant to § 13-60.5, *Hawai'i Administrative Rules*, and § 187A-6, *Hawai'i Revised Statutes,* and all other applicable laws and regulations. The research permit, described below, will allow activity to occur in the NWHI State Marine Refuge (0-3 miles) waters surrounding Nihoa Island, Gardner Pinnacles, Laysan Island, Lisianski Island, Pearl and Hermes Atoll, and Kure Atoll. The activities will occur from July 7, 2007 through July 31, 2007, as outlined below and in the attached permit application.

INTENDED ACTIVITIES

The purpose of the applicant's research is to collect, study, and identify marine algae in preparation for a baseline study for the NWHI, with an emphasis on crustose coralline (red) algae. Algal specimens will be collected and assigned preliminary IDs in the field. Follow up work will be conducted at the Department of Botany, University of Hawaii at Manoa.

PROCEDURES

Algal specimens (approximately five specimens per site) will be collected by hand with knife or chisel; drifting algae will also be collected.

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific entities: Division of Aquatic Resources staff, Papahānaumokuākea Marine National Monument, NOAA Pacific Islands Regional Office (NOAA-PIRO), and United States Fish and Wildlife Service; and cultural reviewers: the Office of Hawaiian Affairs (OHA), and the Kaho'olawe Island Reserve Commission (KIRC). Three members of the Native Hawaiian community were also consulted.

Comments received from the scientific community on the Research Permit are summarized as follows:

One reviewer requested that if any Hawaiian monk seals are present in the area, all activity should cease until the seal departs the area.

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

OHA reiterated its request that each research vessel have at least one cultural practitioner on board. Additionally, all future Papahānaumokuākea Marine National Monument permit applications should address impacts to cultural resources.

RESPONSE:

The applicant will be required to cease research operations if monk seals are present in the immediate vicinity.

IMPACT ANALYSIS

Although some disturbances to Monument resources may be necessary to achieve the objectives of this project, the collection of five algal specimens per site will have minimal impact on Monument resources.

FINAL STAFF RECOMMENDATIONS:

DAR staff is of the opinion that Applicant has properly demonstrated valid justifications for her application and should be allowed to enter the NWHI State Marine Refuge 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 Research Permit General Conditions:

1. Require Applicant to inform and consult with DAR regarding Applicant's cruise plan before leaving for the NWHI.

2. Research operations should cease if monk seals are present in the immediate vicinity.

3. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocol attached to this permit.

4. Tender and dive vessels operating within the Monument are encouraged to operate at slow speed and with a bow lookout in shallow water coral reef areas in order to minimize prop or bow damage to three dimensional coral reef habitat or

endangered monk seals or sea turtles. 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 NOAA R/V Hi'ialakai and outside the confines of the lagoons or near-shore waters.

6. This permit is not to be used for nor does it authorize the sale of collected organisms. Under this permit, the authorized research activity, including work involving a bioassay or bioprospecting, must be for non-commercial purposes, i.e., not involving the use or sale of any organisms, byproducts, or material collected within the Monument for obtaining patents or intellectual property rights for profit.

7. The permittee may not convey, transfer, or distribute, in any fashion (including, but not limited to, selling, trading, giving, or loaning) any organism collected under this permit without the express written permission of the Co-Trustees.

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

RECOMMENDATION:

"That the Board authorize and approve, with stated conditions, a Research Permit to Dr. Isabella Abbott."

Respectfully submitted,

DAN POLHEMUS
Administrator

APPROVED FOR SUBMITTAL

ALLAN A. SMITH
Interim Chairperson

Department of Land and Natural Resources
Northwestern Hawaiian Islands Permit Application Review

Permit Type: Management ☐ Recreation ☐ Research ☒
Education ☐ Cultural ☐ Special Ocean Use ☐

Working Title: Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Research Permit to Dr. Isabella Abbott, University of Hawaii (UH), Department of Botany, for Access to State Waters to Conduct Algal Baseline Characterization Research Activities.

Project Applicant: Dr. Isabella Abbott, UH

Project Location(s) *(Both State Waters and Monument)*: Nihoa Island, Gardner Pinnacles, Laysan Island, Lisianski Island, Pearl and Hermes Atoll, and Kure Atoll.

Project Dates and Duration: July 7, 2007 through September 31, 2007

Project Précis & Background *(Summary of project and why this is proposed)*:

To collect, study, and identify marine algae in preparation for a baseline study for the NWHI, with an emphasis on crustose coralline (red) algae. Algal specimens will be collected and assigned preliminary IDs in the field. Follow up work will be conducted at the Department of Botany, University of Hawaii at Manoa.

Are there other relevant permits that have/will be issued with regard to this project? Yes ☒
State of Hawaii Scientific Collecting Permit

What is the relevance to management and/or the improved understanding of NWHI & MHI?

Dr. Abbott's study will provide valuable information on NWHI algal baseline conditions, and species presence/absence. This information is required for proper management of the Monument.

Could work be conducted outside the NWHI?: Yes ☐ **No** ☒

Has Applicant been granted a permit from the State in the past? No ☒
If so, please summarize past permits:

Have there been any a) violations: Yes ☐ **No** ☒ **b) late/ incomplete reports: Yes** ☐ **No** ☒
Any other relevant concerns from previous permits?

Recommendations:
DAR Staff: Approve this permit application ☒ Reject this permit application ☐
NH CWG: Approve this permit application ☐ Reject this permit application ☐

Northwestern Hawaiian Islands Marine National Monument

Permit Application

NOTE: ***This Permit Application (and associated Instructions) are for activities to be conducted in the Northwestern Hawaiian Islands Marine National Monument, including Hawaiian Islands National Wildlife Refuge, the Midway Atoll National Wildlife Refuge, Battle of Midway National Memorial, Northwestern Hawaiian Islands State Marine Refuge, Kure Atoll Hawaii State Seabird Sanctuary, and the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve. The Co-Trustees are required to determine that issuing the requested permit is compatible with the findings of Presidential Proclamation 8031. Within this Application, please 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, historical and cultural resources of the NWHI Marine National Monument (Monument).***

Summary Information

Applicant name:
Dr. Isabella Abbott

Permit categories:
☒ Research – Please fill out Sections A-D (as applicable) and Appendix A
☒ Conservation and Management - Please fill out Sections A-D (as applicable) and Appendix A
☐ Education - Please fill out Sections A-D (as applicable) and Appendix B
☐ Native Hawaiian Practices - Please fill out Sections A-D (as applicable) and Appendix C
☐ Recreation (Midway ONLY) - Please fill out Sections A-D (as applicable) and Appendix D
☐ Special Ocean Use - Please fill out Sections A-D (as applicable) and Appendix E

Briefly describe permit activity:

☐ This application is for a RENEWAL of an existing permitted project.
☒ This application is for a NEW project.

When will the activity take place?
From: 06/07 To: 10/07

NOTE: INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED
Please Send Permit Applications to:
NWHI Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
nwhipermit@noaa.gov
PHONE: (808) 397-2660 FAX: (808) 397-2662

NOTE: SUBMITTAL VIA ELECTRONIC MAIL IS PREFERRED BUT NOT REQUIRED. FOR ADDITIONAL SUBMITTAL INSTRUCTIONS, PLEASE SEE PG 7.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Abbott, Isabella A Riosmena-Rodrigues, Rafael

Title: Dr.

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

Dept. of Botany, 3190 Maile Way, Honolulu, HI 96822 (Abbott)
Universidad Autonoma Baja California, del Sur P.O. Box 19-B, La Paz, B.C.S. 23080, Mexico (Riosmena-Rodrigues)

Phone: 808-956-8073 01-612-1280880 ext 4812

Fax: 808-956-3923 01-612-1280880

Email: iabbott@hawaii.edu riosmena@uabcs.mx

For students, major professor's name, telephone and email address: Dr. Isabella Abbott
808-956-8073 iabbott@hawaii.edu

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

B.P. Bishop Muesum, University of Hawaii, Universidad Autonoma Baja California, del Sur Mexico

4. Additional persons to be covered by permit:

Note: not all will be going to NWHI, but will be qualified to go if needed
Cheryl Squair UH Manoa Ph.D. Student
Thomas Sauvage UH Manoa M.S. Student
Dan O'Doherty UH Manoa, M.S. Student
Akira Kurihara UH Manoa, Postdoctoral Ph.D.
Jennifer Koss NOAA NMF, marine biologist
Katherine Cullison UH Manoa, research assistant

Section B: Project Information

5a. Project location(s):

☒ Nihoa Island	☐ Land-based	☒ Ocean-based
☒ Necker Island (Mokumanamana)	☐ Land-based	☒ Ocean-based
☒ French Frigate Shoals	☐ Land-based	☒ Ocean-based
☒ Gardner Pinnacles	☐ Land-based	☒ Ocean-based
☒ Maro Reef		
☒ Laysan Island	☐ Land-based	☒ Ocean-based
☒ Lisianski Island, Neva Shoal	☐ Land-based	☒ Ocean-based
☒ Pearl and Hermes Atoll	☐ Land-based	☒ Ocean-based
☒ Midway Atoll	☐ Land-based	☒ Ocean-based
☒ Kure Atoll	☐ Land-based	☒ Ocean-based
☐ Other		

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

Location Description:
Intertidal and subtidal benthos at reefs visited by HI'IALAKAI cruise HI-07-04

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:*

To collect, study, and identify marine algae in preparation for a baseline study for NWHI, with an emphasis on crustose coralline (red) algae. Algal specimens will be collected and assigned preliminary IDs in the field. Follow up work will be conducted at the Department of Botany, University of Hawaii at Manoa.

7. As explained further in the instructions, please provide any 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, historical and cultural resources of the Monument:

Crustose coralline algae (CCA) are one of the major groups of reef building organisms. This is especially true of coral reefs at high latitudes, where coral growth rates are diminished due to cooler temperatures and reduced hours of daylight. Although the coral fauna of the NWHI are fairly well known, the diversity and ecology of CCA are poorly understood. A basic characterization, taxonomic evaluation, and species checklist is a starting point for understanding their biology. Without this baseline information, long-term monitoring of the distribution and abundance of CCA is not possible. CCA are known to be impacted by seawater acidification, and it is critical for scientists and managers to understand their contributions to reef structure and function in order to monitor any potential impacts of climate change and altered seawater chemistry.

8. Procedures:

Hand collected with knife or chisel; drifting algae

Section C: Logistics

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

State scietific collecting permit for intertidal and shallow subtidal algae for teaching and demonstration

9a. For each of the permits listed, please identify any permit violations or any permit that was suspended, amended, modified or revoked for cause. Please explain the circumstances surrounding the violation or permit suspension, amendment, modification or revocation.

None

10. Funding sources (Please attach copies of your budget, specific to proposed activities under this permit and include funding sources. Please see instructions for more information):

1) Hawaii Coral Reef Initiative: $53,632 (budget for common crustose algae of the Main Hawaiian Islands) Riosmena (PI) and Abbott (co-PI)

2) Packard Foundation (approval expected) $200,000 budget for baseline checklist for Marine Algae of the Northwestern Hawaiian Islands National Monument, including common crustose coralline algae (Abbott, PI)

Note: no cost for collecting for teaching and demonstration activities- permission is required to collect seaweeds for these purposes.

11. Time frame:

Activity start: June 2007
Activity completion: December 2007

Dates actively inside the Monument:
From: July 7, 2007
To: July 31, 2007

Please describe any limiting factors in declaring specific dates of the proposed activity at the time of application:
Dates are determined by NOAA ship schedules

Personnel schedule in the Monument:
Project personnel will be aboard HI'IALAKAI for the entire duration of the field work

12. Please 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:

13. Please check the appropriate box to indicate how personnel will enter the Monument:

☐ Vessel
☐ Aircraft

Provide Vessel and Aircraft information:

14. What certifications/inspections do you have scheduled for your vessel? Please fill in scheduled date (attach documentation):

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

15. 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 :

How will you comply with the 'No Discharge' regulations stipulated in Presidential Proclamation 8031? Describe in detail. If applicable, please attach schematics of the vessel's discharge and treatment systems:

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

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

VMS Email:
Inmarsat ID#:

16. Tender information:

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

Section D: Additional Information for Land Based Operations

17. Proposed movement of personnel, gear, materials, and, if applicable, samples:
No land based operations

18. Room and board requirements on island:

19. Work space needs:

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.

Signature Date

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

NWHI Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
FAX: (808) 397-2662

DID YOU INCLUDE THESE?

- ☒ Applicant CV/Resume/Biography
- ☒ Electronic and Hard Copy of Application with Signature
- ☐ 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
- ☐ Statement of information you wish to be kept confidential

Appendix A: Research OR Conservation and Management Application

NOTE: If land or marine archeological activities are involved, please contact the Monument Permit Coordinator at the address on the general application form before proceeding, as a customized application will be needed. For more information, please contact the Monument office on the first page of this application.

1a. 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:
Species of red, green, or brown frondose and crustone algae; blue-green algae

Scientific name:
various

& size of specimens:
range from a few mm to 15-20 cm in height (no more than 5 specimens per species per site)

Collection location:
Collections will be piggy-backed on HIMB projects occurring on the same cruise, and will occur at sites determined by HIMB PIs. Fore-reef, spurs and grooves, reef crest, and sandy lagoon will be sampled for crustose corallines. In addition, back-reef habitats will be sampled for frondose algae.

☒ Whole Organism ☒ Partial Organism

1b. What will be done with the specimens after the project has ended?
Deposited in 2 sets, one in Bishop Museum (Honolulu), other in UABC (Mexico)

1c. Will the organisms be kept alive after collection? ☒ **Yes** ☒ **No**
Few specimens may be kept to grow out for period > 1 month.

• Specific site/location:
Laboratories at Botany Department, UH Manoa

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

• Is there an outfall? ☐ Yes ☒ No

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

• Will organisms be released?
No

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

Specimens will be transported aboard HI'IALAKAI, either frozen, pressed in herbariums, or preserved in formaldehyde. Any live specimens will be secured in closed-system seawater containers. In case water changes are necessary, old seawater will be disposed of through the ship's MSD.

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

The collected seaweeds will be identified in Honolulu and Mexico (principally) and the primary set will be sent to the Bishop Museum for permanent deposit, the second set will be deposited in UABC at La Paz

4a. Gear and materials:

Hand tools

4b. Please list all Hazardous Materials you propose to take to and use within the Monument:

Formaldehyde 37%

5. Fixed installations and instrumentation:

none

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

An illustrated guide book for scientists and managers with pictures will be published as soon as specimens are identified (probably early 2008). The baseline study and analysis will take approximately two years to complete. Results will be published in peer-reviewd journals.

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7. List all publications directly related to the proposed project:

DID YOU INCLUDE THESE?

☒ Material Safety Data Sheets for Hazardous Materials

Appendix B: Education Application

1. Are you collaborating with others in any way to reduce duplicative activities in the Monument or elsewhere?

2. Gear and materials:

3. Fixed installations and instrumentation:

4. Is your proposed activity based on a State Department of Education Standards Based Curriculum? If so, please describe:

5. What materials, products or deliverables will be developed as a result of your proposed activity? Provide a time line for write-up and publication of information or production of educational materials:

6. List all publications/references directly related to the proposed project:

7a. 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:

Scientific name:

& size of specimens:

Collection location:

☐ Whole Organism ☐ Partial Organism

7b. What will be done with the specimens after the project has ended?

7c. Will the organisms be kept alive after collection? ☐ **Yes** ☐ **No**

• Specific site/location:

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

• Is there an outfall? ☐ Yes ☐ No

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

• Will organisms be released?

8. If applicable, how will the collected samples be transported out of the Monument?

Appendix C: Native Hawaiian Practices Application

1. Please state how the purpose and intent of the activity are appropriate and deemed necessary by traditional standards in the Native Hawaiian culture (pono), and demonstrate an understanding of, and background in, the traditional practice, and its associated values and protocols:

2. Please state how the activity benefits the resources of the Northwestern Hawaiian Islands and the Native Hawaiian community:

3. Please state how the activity supports or advances the perpetuation of traditional knowledge and ancestral connections of Native Hawaiians to the Northwestern Hawaiian Islands:

4. Will you be collecting any Monument resource? ☐ Yes ☐ No
If so, please provide the following information:

4a. 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 and/or Scientific name:

& size of specimens:

Collection location:

☐ Whole Organism ☐ Partial Organism

4b. What will be done with the specimens after the Native Hawaiian cultural practice is complete?

4c. Will organisms be kept alive after collection? ☐ Yes ☐ No

• Specific site/location:

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

• Is there an outfall? ☐ Yes ☐ No

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

• Will organisms be released?

NOTE: Any Monument resource harvested from the Monument for the purpose of Native Hawaiian practices will be consumed in the Monument.

5. Are you collaborating with others in any way to reduce duplicative activities in the Monument or elsewhere?

6. Gear and materials:

7. Will you erect any Native Hawaiian cultural structures or leave any offerings in the Monument? ☐ Yes ☐ No

If so, please describe:

8. Will you produce any publications, educational materials or other deliverables?
☐ Yes ☐ No

Provide a time line for write-up and publication of information or production of materials:

Appendix E: Special Ocean Use Application

NOTE: If this is a first time Special Ocean Use activity, it will be subject to a pilot project.

1. Please provide proof of general liability insurance, or indicate that you will be posting an equivalent bond against claims arising out of activities conducted under the permit:

2. Are you collaborating with others in any way to reduce duplicative activities in the Monument or elsewhere?

3. Gear and materials:

4. Fixed installations and instrumentation:

5. List all publications directly related to the proposed project:

For projects occurring with the Midway Atoll Special Management Area answer the following questions:

6. Please explain how your activity has been found compatible with the purposes for which the Midway Atoll National Wildlife Refuge was designated?

7. Please explain how your activity meets the requirement of furthering conservation and management of the Monument:

For projects occurring outside of the Midway Atoll Special Management Area answer the following questions:

8. Please explain how the proposed activity will directly benefit the conservation and management of the Monument:

9. Please explain how the purpose of the proposed activity is for research and education related to resources or qualities of the Monument:

NOTE: SPECIAL OCEAN USE PERMITS OUTSIDE THE MIDWAY ATOLL SPECIAL MANAGEMENT AREA DO NOT ALLOW THE USE OF A COMMERCIAL PASSENGER

VESSEL. A commercial passenger vessel is defined by the monument regulations as a vessel that carries individuals who have paid for such carriage.