

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:

Papahānaumokuākea Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
nwhipermit@noaa.gov
PHONE: (808) 397-2660 FAX: (808) 397-2662

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: Monica S. C. Carneiro da Silva

Affiliation: Centro de Biologia Ambiental, Faculdade de Ciencias, Universidade de Lisboa, Portugal

Permit Category: Research

Proposed Activity Dates: 7/2009 - 9/2009 (this is the approximate duration of the nestling period of the species; this is the best time to collect blood samples at day time because only the nestlings are present at the nests (at this time the adults return to the colonies only at night). The nestlings are easily accessed on their nests and cope with the human handling better than the adults.

Proposed Method of Entry (Vessel/Plane): n/a

Proposed Locations: Bulwer's Petrels colonies: Tern Island (French Frigate Shoals), Nihoa Island, Laysan Island

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

For logistic reasons this application would rely on refuge managers and their teams or researchers already on the islands to collect the blood samples. Only one person (if experienced) or two (if less experienced) per island is required to carry out the work. This collaboration would have the advantage of minimising human presence (and disturbance) on the islands.

Estimated number of days in the Monument: Optimally, 20 samples would be collected from each location. For each island this could easily be carried out during one to two days, for a total of three to six days in the Monument.

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

The proposed activity would involve taking blood samples from a burrow-nesting Procellariiform seabirds, the Bulwer's Petrel. These blood samples would be used to extract DNA in order to compare with samples already obtained from colonies in the Atlantic to answer questions about whether the populations from the Pacific and Atlantic oceans are genetically different and are demographically isolated.

b.) To accomplish this activity we would

To accomplish this activity we would collect a small sample of blood (50 microlitres) from 20 individuals (nestlings if possible, to ensure colony of origin) of each species from each colony. To collect a sample, the brachial vein is punctured with a thin needle, and the drop of blood that forms upon puncture is collected with a capillary tube and eluted in an Eppendorf tube with lysis buffer (inert solution which will preserve the DNA sample at room temperature). A little pressure is then applied at the collection spot with a small amount of cotton until the blood stops flowing. The bird is then returned to its nest, on each island. The process of taking the sample takes less than 5 minutes.

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

This activity would help the Monument by providing the local authorities in charge of management and conservation with information to define policies that take into account the levels of genetic diversity and uniqueness of each colony, and levels of gene flow for this ground-nesting seabird. For example, if populations of a species differ genetically, then loss of a population will lead to a severe decline in the species' genetic diversity, potentially increasing the overall risk of extinction. Although populations of this species are considered stable by BirdLife Conservation, their general small population sizes renders them susceptible to extinction, and their current status is considered either rare or vulnerable. By revealing how genetic variation is partitioned among and within populations and how demographically autonomous they are, the molecular approaches we are proposing to employ will help characterize the genetic diversity that conservation biology seeks to preserve.

The current taxonomic status of Bulwer's Petrels is unclear. Populations of this species in the Atlantic and Pacific Oceans have been diverging for a long time and may have accumulated significant differences which would warrant them a different species status. Conservation efforts will need to take this information into account in order to decide whether they should be considered different management units.

Portugal and Hawaii currently hold some of the most important populations of this species and there should be a concerted effort for the conservation of its populations. Results will be presented in scientific meetings and eventually will be published in international, peer-reviewed, journals. We will also elaborate reports to local management authorities, such as the Parque Natural da Madeira, Portugal, and if appropriate, the Papahānaumokuākea Marine National Monument and Hawaiian Fish and Wildlife Services, USA.

Other information or background:

This proposed research is part of a broader project to study comparative phylogeography of two pairs of Procellariiform seabirds. The first pair includes the Bulwer's Petrel and Band-rumped Storm-Petrel (*Oceanodroma castro*). The other pair of species includes the White-faced Storm-Petrel (*Pelagodroma marina*) and Little Shearwater (*Puffinus assimilis*), which have populations in the NE Atlantic Ocean (Portugal), South Atlantic Ocean (Gough Island, UK) and New Zealand. We have established collaborations with researchers from South Africa, Australia and New Zealand and sampling of these four species is currently under way.

Populations of all four species from the NE Atlantic (Portugal and the Cape Verde Islands) have already been collected and we have initiated the development of the molecular markers required to carry out the analysis. Specifically, we have so far isolated twelve markers for Bulwer's Petrels .

A research grant has been awarded by the Fundacao para a Ciencia e a Tecnologia (the Portuguese equivalent to the National Science Foundation) which covers mainly the laboratory costs. For more information please see http://www.fct.mctes.pt/projectos/pub/2006/Painel_Result/default2.asp?idElemConcurso=927

Contacts are being pursued to renew the relevant state permits, such as a permit from the Hawaiian Division of Forestry and Wildlife.

We applied for a permit last year to carry out this research which was approved by the board of trustees (PMNM-2008-029). However, because this work relies on the availability of researchers or Fish and Wildlife personnel already working or visiting the islands, we were unable to carry out the work last season for lack of suitable personnel at the right time on the islands.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Silva, Monica C.

Title: Dr.

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

For each location the Principal Investigator will either be the Refuge Manager or Principal Investigator of the research team visiting each island. Contacts have already been made with the Refuge Managers and researchers who may be visiting the islands at suitable times.

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

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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

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

Centro de Biologia Ambiental, Faculdade de Ciencias, Universidade de Lisboa, Portugal

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):

n/a

Section B: Project Information

5a. Project location(s):

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

Ocean Based

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

Location Description:

Bulwer's Petrels excavate burrows in soft sand or soil and sometimes under boulders (as it happens with Bulwer's Petrels nesting in NE Atlantic colonies). They typically nest in open areas covered in short vegetation.

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:*

Mechanisms of population divergence and speciation in widely distributed and mobile species, such as seabirds, are poorly understood. Allopatric models of divergence require extrinsic barriers to dispersal which, for most seabirds, are limited to a small number of biogeographic events, such as land-bridges. Phylogeographic patterns in these species have mostly been explored in the context of the presence of intrinsic (demographic or behavioural) barriers. Procellariiform seabirds have been the focus of multiple ecological studies but are otherwise not well known at the molecular level. No study to date has looked at the impact of common biogeographical barriers to the geographic distribution of allelic lineages in co-distributed Procellariiforms.

We are thus proposing to undertake a comprehensive multi-locus phylogeographic analysis, using Procellariiform species as models. It will incorporate information from single nucleotide polymorphisms (SNP) at a substantial number of loci. Since SNPs occur at similar mutational scales, on a per site basis, the use of these genetic markers allows comparability of genetic variation across loci within and between species.

All in all, this research will be significant in its examination of multiple seabird divergences across major vicariant barriers and in its multi-locus integration of biogeography, coalescent theory and novel analytical methods for estimating demographic parameters such as divergence times, effective population sizes at different temporal scales, and rates of gene flow.

Specific goals:

- a.) Isolate and survey polymorphism at significant number of loci with different modes of inheritance, effective population sizes, and levels of selection in a Procellariiformes species: Bulwer's Petrel (*Bulweria bulwerii*);
- b.) Estimate population divergence times and relate them to the timing of major biogeographical changes that historically might have had an impact on the evolutionary path of this species, such as the emergence of the Panama Isthmus (approx. 3 million years ago);
- c.) Examine whether the divergence in the populations of this species across these biogeographical barriers have been accompanied by reductions in the effective population size as predicted in some theoretical models;
- d.) Estimate levels of contemporary gene flow between populations of this species, and determine whether there is evidence for demographic or behavioural factors that may be responsible for differences in current patterns of population genetic structure seen among species.

IMPORTANT: In order to address these goals, we need to obtain genetic material (DNA) from different colonies which we isolate from blood samples (in birds, the red blood cells are nucleated).

In Hawaii we rely on the presence of available researchers or Fish and Wildlife personnel to collect the blood samples. We applied last year for a permit to do this work, which was approved by the board of trustees of the Papahānaumokuākea Marine National Monument (PMNM-2008-

029). However we were unable to collect the samples due to the lack of available personnel with the necessary technical skills at the time the birds were at the colonies.

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?

The activity will be carried out by experience researchers. Still, information will be given to them on the best practices to conduct the sampling, ensuring that disturbance to the habitat and the birds being sampled will be minimised. For example, there are two potential sources of disturbance to the birds: disturbance to the soil which may lead to damage to the burrows and disturbance to the birds which may cause them to abandon the nest. Damage to the soil, can be avoided by carefully selecting burrows at the edge of the breeding areas. Areas with poor or no vegetative cover should be avoided. Disturbance to the birds can be minimised by avoiding the period where adults are incubating eggs. Samples should be taken from nestlings wherever possible - the birds are sedentary and can easily be handled during daylight hours when the adults are at sea foraging for food. The volume of blood taken for each sample does not in any way affect the survival of the nestling. Finally, it should be noted that adults or young birds can be removed for sampling without damaging the nest.

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?

The proposed activity will have minimal impact and have no long-term effects that may diminish the value of the Monument cultural and natural resources. The blood sampling procedure is simple and can be carried out in a few minutes. This will not involve excessive stress on the birds, especially if nestlings are sampled. This procedure is standard and to date no long term negative effects have been detected on avian species. The samples will be taken on a single visit so there is no effect of cumulative disturbance that would affect the birds on the colony. Birds would be removed from the burrows via main entrance to the burrow, which is usually shallow, and absolutely no damage should be expected.

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.

The most relevant breeding colonies of Bulwer's Petrels in the Pacific Ocean occur on the NW Hawaiian islands. The islands in the Monument are visited more regularly and would allow the samples to be collected in a much shorter period of time using researchers already visiting the island for other purposes. The amount of human disturbance is minimised and the objectives of the proposal can be realised more quickly with consequent benefits to the understanding of the ecological uniqueness of 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 proposed activity will strength the knowledge of the Monument's cultural and natural resources. Specifically, it will determine whether populations breeding on the Monument' islands are demographically isolated and may have evolved into a different species. This will reinforce the identity and value of this particular resource - the 'Ou - by providing a better understanding of its uniqueness. From a practical standpoint, this detailed information would be invaluable for identifying conservation priorities and planning management strategies.

Finally, at the end of the study all remaining blood samples will be returned to the state of Hawaii. We have initiated contacts with the Vertebrate Zoology Collections Manager of the Bishop Museum, in Honolulu, to arrange for possible future storage of these samples at the Museum. Museum storage allows other researchers to use these samples, obviating the need to re-sample these species in the future, and avoiding any further disturbance.

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

The dates indicated refer to the breeding period for the species, and thus the only time when individuals visit land (and are accessible to the collecting personnel). In practice, however, blood sampling should not take more than 3-5min/individual. From previous experience, two mornings or afternoons should provide enough time for the sampling to be done on each island.

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

Since sampling would be carried out by Refuge Managers/their assistants and researchers on the islands, mitigation of any potential impacts is certainly safeguarded. Each individual would be provided with a detailed description of the sampling process along with information on working in the colonies to minimise disturbance.

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.

The PI received a research grant from the Fundacao para a Ciencia e a Tecnologia (please check http://www.fct.mctes.pt/projectos/pub/2006/Painel_Result/default2.asp?idElemConcurso=927 for more information).

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.

The technique used to collect the sample is standard for obtaining blood from birds and has been shown to be minimally invasive and cause the least amount of disturbance. Birds may be removed from the burrow by reaching through the entrance so no additional disturbance to the area in the colony is required.

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

n/a

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

The collection of the samples would be carried out by Refuge Managers or researchers already authorized to visit the islands. These individuals would be acutely aware of the environment and responsibilities in working in the Monument.

8. Procedures/Methods:

The proposed activity includes collecting blood samples from Bulwer's Petrels from nestlings or adults. Red-blood cells in avian species are nucleated and are the most commonly used and less intrusive way of obtaining genomic DNA from this group of vertebrates. Because in a single drop of blood that are many red blood cells, only minute samples of blood carry enough DNA to conduct molecular work.

Blood sampling would be carried out in 15-20 individuals (nestlings if possible, to ensure colony of origin) of each species from each colony: brachial vein is punctured with a thin needle, and the drop of blood that forms upon puncture is collected with a capillary tube and eluted in an eppendorf tube with lysis buffer (inert solution which will preserve the DNA sample at room temperature). A little pressure is then applied at the collection spot with a small amount of cotton until the blood stops flowing. The bird is then returned to its nest.

We have provided last year the Refuge Managers with three independent "blood collection kits" which not only have all the materials necessary to collect and keep the blood samples, but also with a detailed set of instructions on how to proceed with the blood sampling without causing unnecessary distress to the birds.

For each location we would need the assistance of either the Refuge Manager and its team or Principal Investigator of the research team visiting each island. Contacts have already been made with the Refuge Managers and Fish and Wildlife researchers who may be visiting the islands at suitable times.

To all personnel who have been contacted to provide assistance with the blood sampling we have been offering co-authorship in all publications that will result from this sampling. Given the specific nature of the work described, sampling would likely be carried out by professional staff/researchers, in which case the offer of co-authorship would be a more appropriate form of compensation.

NOTE: If land or marine archeological activities are involved, 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, contact the Monument office on the first page of this application.

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:
Bulwer's Petrel/ 'Ou

Scientific name:
Bulweria bulwerii

& size of specimens:
20 individuals from each of three colonies sampled, to a maximum of 60 samples total; 50 to 100 microliters of blood is the required volume of blood from each bird.

Collection location:
Tern (French Frigate Shoals), Nihoa and Laysan Islands

Whole Organism Partial Organism

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

If there is blood sample volume left, the remaining samples will be kept in a Museum. To this end, we have initiated contacts with the Vertebrate Collection Manager at the Bishop Museum, Honolulu (Dr. Shelley James) so that samples would be returned to the state of Hawaii. Museum storage allows other researchers to use these samples, obviating the need to re-sample these species in the future.

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

The blood samples will be taken in the field, close to the burrow from which the bird was taken. The birds will be return immediately to their nests upon completion of the blood sampling.

• General site/location for collections:

Blood samples are being collected in the immediate vicinity of each colony.

• Is it an open or closed system? Open Closed

n/a - the bird are immediately returned to their burrow after the sample is taken.

• 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 - birds are sampled one at a time, and returned immediately to their burrow.

• Will organisms be released?

Birds will be returned to their burrow. Even if adults are sampled, they will not be released into the air. Nestlings are not capable of flying until they reach the end of the nestling period, and do not venture outside their nests.

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

The samples should be flown out of the Monument. The lysis buffer the samples are kept in prevents blood and DNA degradation at room temperature. The lysis buffer solution is inert and can be safely transported by airplane. I would naturally arrange with the collaborating personnel to pay for all transportation and mailing costs.

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

This is an original project and no duplication issues are involved. Since our project involves many samples from many colonies of four species, there will be collaborations with other researchers.

We are also planning collaborative work with Dr. Joel Bried, University of Acores, Portugal, with the aim of performing a world wide taxonomy of the Bulwer's Petrels (which involves a thorough sampling of the species across the world, including Japanese colonies and Indian Ocean colonies). There is no duplicative research involved since this study is taxonomic (and not phylogeographic) in nature, and we are planning to use different (slow-evolving) genetic markers, and sample all the populations of the Bulwer's Petrels. Our collaborative work would obviously reduce duplicative sampling from Hawaii.

More importantly, once this project is completed, remaining blood samples volumes will be sent to the Bishop Museum, Honolulu, providing access to other researchers and obviating the need to re-sample these populations.

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

1. needles
2. capillary tubes
3. Eppendorf tubes with Lysis buffer
4. cotton
5. bird bag
6. permanent marker pen

All the necessary materials have been made available to the collection personnel.

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:

This project has received funding for three years. Although we intend to start publishing results from this project still in 2009 (concerning other species), the plan for the project expects analyses to be completed by March 2010, assuming samples could be obtained this year. Initial reports are due for release Q2 of 2010 and final publications by the end of 2010.

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

Silva, M.C. & Edwards, S.V. In prep. Influence of micro-evolutionary processes in the genetic diversity of a philopatric seabird species: evidence from neutral loci and loci under selection. To be submitted to *Evolution*.

Silva, M.C. & Coelho, M.M. In prep. Characterization of anonymous nuclear loci for Procellariiformes seabird species. To be submitted to *Conservation Genetics*.

Silva, M.C. & Edwards, S.V. 2009. Structure and evolution of an MHC class II B gene in the Thin-billed Prion (Procellariiformes: *Pachyptila belcheri*). *Journal of Molecular Evolution* 68: 279-291.

Edwards, S.V., Silva, M.C., Burg, T., Friesen, V., Warheit, K.I. 2000. Molecular genetic markers in the analysis of seabird bycatch populations. In Melvin, E.I. & Parrish, J.K. (eds.), *Seabird bycatch: trends, roadblocks and solutions*. Proceedings of International Symposium of the PSG group, Semi-Ah-Moo, WA. University of Alaska Sea Grant, Fairbanks, AK.

Silva, M.C. & Grandeiro, J.P. 1999. Genetic variability and isolation of Cory's Shearwater (*Calonectris diomedea*) in the NE Atlantic as revealed by DNA fingerprinting. *Condor* 101: 174-179.

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.

Signature

Date

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

Papahānaumokuākea 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
- 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