

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

September 28, 2012

Board of Land
and Natural Resources
Honolulu, Hawaii

Request for Approval of Special Activity Permit No. 2012-86 for Emilia Sogin,
University of Hawaii at Manoa, Hawaii Institute of Marine Biology
to Take Stony Corals Samples and Place Temperature Loggers for a Study on
Climate Change Impacts on Corals around the Islands of Oahu and Molokai

The applicant proposes to study the metabolite production of stony corals on Oahu and Molokai. The purpose of the study is to analyze the differences between islands and temperature gradients. The study will examine two common species of stony corals in order to explain why some corals are more influenced by environmental stress than others. The location of temperature loggers will be approved through a site approval plan issued by the Office of Conservation and Coastal Lands.

Applicant requests a Special Activity Permit to "take" samples of stony coral as set forth in the attached application.

RECOMMENDATION:

Based on the application and the Departments record in this matter, and the exemption determination (attached), the Board DECLARES, FINDS, and DECIDES:

- 1) That the actions covered by this permit will have little or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment;
- 2) The Chair is authorized to approve the declaration of exemption on behalf of the Board, for purposes of HRS Chapter 343, and HAR Chapter 11-200, HAR; and
- 3) The Chair is authorized to approve, with stated conditions, the proposed Special Activity Permit.

Respectfully submitted,



WILLIAM M. TAM
Acting Administrator

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson

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

September 28, 2012

Board of Land
and Natural Resources
Honolulu, Hawaii

Request for Approval of Special Activity Permit No. 2012-86 for Emilia Sogin,
University of Hawaii at Manoa, Hawaii Institute of Marine Biology
to Take Stony Corals Samples and Place Temperature Loggers for a Study on
Climate Change Impacts on Corals around the Islands of Oahu and Molokai

The applicant proposes to study the metabolite production of stony corals on Oahu and Molokai. The purpose of the study is to analyze the differences between islands and temperature gradients. The study will examine two common species of stony corals in order to explain why some corals are more influenced by environmental stress than others. The location of temperature loggers will be approved through a site approval plan issued by the Office of Conservation and Coastal Lands.

Applicant requests a Special Activity Permit to "take" samples of stony coral as set forth in the attached application.

RECOMMENDATION:

Based on the application and the Departments record in this matter, and the exemption determination (attached), the Board DECLARES, FINDS, and DECIDES:

- 1) That the actions covered by this permit will have little or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment;
- 2) The Chair is authorized to approve the declaration of exemption on behalf of the Board, for purposes of HRS Chapter 343, and HAR Chapter 11-200, HAR; and
- 3) The Chair is authorized to approve, with stated conditions, the proposed Special Activity Permit.

Respectfully submitted,



WILLIAM M. TAM
Acting Administrator

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET, ROOM 330
HONOLULU, HAWAII 96813

September 28, 2012

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

PAUL J. CONRY
INTERIM FIRST DEPUTY

WILLIAM M. TAM
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: William J. Aila, Jr., Chairperson

FROM: Robert Nishimoto, Environmental Program Manager
Division of Aquatic Resources

SUBJECT: Declaration of Exemption from the Preparation of an Environmental Assessment under the Authority of Chapter 343, HRS, and Chapter 11-200, HAR, for a Special Activity Permit to Emilia Sogin, University of Hawaii at Manoa, Hawaii Institute of Marine Biology.

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: Special Activity Permit to Emilia Sogin, University of Hawaii at Manoa, Hawaii Institute of Marine Biology, for the take of coral samples and use of state lands off Oahu and Molokai.

Permit Number: SAP 2012-086

Project Description: The permit, as described below, would authorize the taking of up to 1,680 nubbins and biopsies from two common species of stony corals, from September 28, 2012 through September 27, 2013. The take of marine stony corals is prohibited under section 13-95-70, Hawaii Administrative Rules (HAR), unless authorized by a permit issued under section 187A-6, Hawaii Revised Statutes (HRS).

Stony corals have a symbiotic relationship with their endosymbiotic dinoflagellate algae in the genus *Symbiodinium*. A change in sea surface temperature (SST) can cause the corals to expel their algae. The study proposes to sample metabolite production and associated *Symbiodinium* assemblages in Hawaiian reef building corals, comparing between the islands of Molokai and Oahu, and over thermal stress anomalies (TSA) and average summer SST gradients. The number of samples requested is the maximum number of samples to be collected and may be reduced if on-going work concludes that a smaller sample size is suitable for the analyses.

In order to collect replicate nubbins for metabolite production and *Symbiodinium* analyses, divers using SCUBA or snorkel will use a hammer and chisel to obtain coral tissues. Modeling clay will be used to plug sampling scars. Data loggers will be fixed to rebar that will have been hammered into dead substrate at each site.

Results from this sampling effort will provide baseline data documenting metabolite production in Hawaii's reef building corals and may help to explain why some corals are more influenced by environmental stress than others. Results will allow us to be able to assess the health states of reefs in the main Hawaiian Islands.

Consulted Parties: Russell Sparks, DAR Maui; Hawaii Department of Health - Hansen's Disease Branch; DLNR – Office of Conservation and Coastal Lands; DHHL – Land Management Division

Exemption Determination: After reviewing § 11-200-8, HAR, including the criteria used to determine significance under § 11-200-12, HAR, 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. Since this permit involves an activity that is precedent to a later planned activity, i.e., the repeated methodologies throughout the permit period, the categorical exemption determination here will treat all planned activities as a single action under § 11-200-7, HAR.

2. The Exemption Class for Scientific Research with no Serious or Major Environmental Disturbance Appears to Apply. § 11-200-8(a)(5), HAR, exempts the class of actions that 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.” This exemption class has been interpreted to include the study of nearshore marine fish species, such as those being proposed.

The proposed activities here appear to fall squarely under the exemption classes identified under §§ 11-200-8(a)(1), 11-200-8(a)(5), HAR, and as described under the 1976 exemption list class items. As discussed below, no significant disturbance to any environmental resource is anticipated. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

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.” § 11-200-8(b), HAR. 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. § 11-200-12, HAR.

Significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected. All activities will be conducted in a manner that does not diminish marine resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The majority of fishes will be caught and released. Those few fish kept for otolith extraction will not threaten the survival of the species.

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 have a Minimal or No Significant Effect on the Environment.

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 research activities covered by this permit will be carried out with strict safeguards for the natural, historic, and cultural resources, 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.

William J. Aila, Jr. Chairperson,
Board of Land and Natural Resources

Date

Department of Land & Natural Resources
DIVISION OF AQUATIC RESOURCES
1151 Punchbowl Street, Room 330
Honolulu, Hawaii 96813

Date Issued: September 28, 2012

Valid not longer than September 27, 2013

SPECIAL ACTIVITY PERMIT

The Department of Land and Natural Resources hereby grants permission for certain activities involving aquatic organisms belonging to the people of Hawaii, under Section 187A-6, Hawaii Revised Statutes, and other applicable laws.

The Permittee is

Name: Emilia Sogin Address: University of Hawaii at Manoa
Hawaii Institute of Marine Biology
P.O. Box 1346
Kaneohe, HI 96744

This permit is issued, subject to the general and special conditions, for the take of samples from corals off Oahu and Molokai for a study on the symbiotic relationship between the dinoflagellate algae and its coral host.

Common Name	Scientific Name	Number Specimen at each site	Location See Special Conditions II.B.
Rice coral	<i>Montipora capitata</i>	420 nubbins 2 cm ² 420 biopsies < 1cm	Oahu and Molokai
Cauliflower coral	<i>Pocillopra meandrina</i>	420 nubbins 2 cm ² 420 biopsies < 1cm	Oahu and Molokai

I. GENERAL CONDITIONS:

- A. This permit does not make the Department of Land and Natural Resources or the State of Hawaii liable in any way for any claim of personal injury or property damage to the permittee or assistants which may occur during any activity conducted under this permit; moreover, the permittee and all assistants agree to hold the State harmless against any and all claims of personal injury, death or property damage resulting from activities of the permittee or any assistant.
- B. This permit conveys a privilege to engage in only those activities under the jurisdiction of the Department of Land and Natural Resources. The permittee is responsible for complying with all applicable County, State, and Federal requirements. The permit does not convey any privilege of access over or through private property.

- C. The permittee and each assistant are individually responsible and accountable for their actions while conducting activities authorized under this permit; additionally, the permittee is responsible and accountable for the actions of the permittee's assistants.
- D. This permit is not transferable or assignable. Any person whose name does not appear on this permit and is conducting any activity described herein is subject to prosecution for violation of State laws.
- E. The permittee may request changes to the permit. Any such request to make changes to the permit must be made in writing and received by the Department at least thirty days prior to the change. The addition of new assistants will require each individual to sign the Attachment on page 6 stating that they have read, understood, and agree to abide by all general and special permit conditions. No change may be implemented without written approval from the Department.
- F. The permittee may request to:
 - 1. Add assistants to the permit;
 - 2. Add another permittee or replace an existing permittee in the manner stated above; and
 - 3. Change the activities authorized under this permit.
- G. The permittee or their assistant(s) must have with them a copy of this permit while conducting activities authorized by this permit.
- H. This permit authorizes collection of organisms protected by Federal law only with prior appropriate Federal authority, which must be described on Page 1 of this permit (if applicable).
- I. This permit does not authorize the sale of any collected organism.
- J. This permit expires on the date indicated on Page 1. Within one month of the expiration date, the permittee must return this permit to the address listed on the upper left corner of page 1 with complete information on all activities authorized under this permit, on the attached Activity Report form.
- K. The permittee and assistants agree to provide access to data obtained under authority of this permit upon request of the Division of Aquatic Resources, and to provide to the Division a copy of each report, published for distribution, prepared with data obtained under this permit. The permittee agrees to provide the Division of Aquatic Resources access to organisms obtained and held under this permit for on-site inspection.
- L. The permittee agrees to notify the island office of the Division of Conservation and Resources Enforcement at least 24 hours prior to any authorized activity being conducted in the field. Please provide the permittee name, the permit number, the date, time, and location of the planned activity, and contact information.

- M. A violation of any terms or condition of this permit or any violation of State law not covered by this permit may result in revocation of the permit and other penalties as provided by law. In addition, the Department may consider any such violation as grounds for denying any future application for this or any other permit issued by the Department.

II. SPECIAL CONDITIONS

- A. This permit authorizes the take of the coral samples, up to the number and sizes, listed on page 1. The samples may be taken from each location listed in Appendix 1, attached at the end of this permit. A hand hammer and chisel may be used to obtain coral samples and clay will be used to plug the sampling scars. Data loggers will be fixed to a rebar that has been hammered into the dead substrate or sand at each site.
- B. These sites authorized in Appendix 1 that are within the jurisdiction of Kalaupapa are subject to separate approval from the Kalaupapa National Historic Park and the Department of Hawaiian Home Lands, Land Management Division. A separate Site Plan Approval is also required for use of state submerged lands to place the data loggers.
- C. The primary permittee and designated assistants are required to obtain permission before entering upon lands or waters not under the jurisdiction of the Department.
- D. This permit does not by implication authorize the primary permittee or any designated assistant to engage in any other activity that is in violation of any other State, Federal or County law, regulation or ordinance.

WILLIAM J. AILA, JR., Chairperson
Department of Land and Natural Resources

cc: (x) DOCARE
(x) DAR - MAUI

SIGNATURES AND AGREEMENT

By my signature below, I acknowledge receipt and understanding of the general and special conditions of this Special Activity Permit. Further, I agree to abide by all of these conditions when conducting activities authorized by this permit.

PRINCIPAL PERMITTEES: _____
Emilia Sogin

DESIGNATED ASSISTANTS:

Signature: _____

Print Name: Denise Yost

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

Signature: _____

Print Name: _____

SIGNATURES AND AGREEMENT

By my signature below, I acknowledge receipt and understanding of the general and special conditions of this Special Activity Permit. Further, I agree to abide by all of these conditions when conducting activities authorized by this permit.

PRINCIPAL PERMITTEES: _____
Emilia Sogin

DESIGNATED ASSISTANTS:

Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____

ACTIVITY REPORT

Results of all activities performed under authority of this permit must be reported on this form (or copies) within one month after the permit expires (see first page). Use as many sheets as you need. Submit the report to the Division of Aquatic Resources at 1151 Punchbowl Street, Room 330, Honolulu, HI 96813.

Date	Location	Common or Scientific Name	Quantity Collected*	Disposition of Specimens
------	----------	------------------------------	------------------------	-----------------------------

Permittee Signature

Emilia Sogin
Printed name

_____ Signature

_____ Date

*If salvaged (collected because the specimen was dead or injured already), please detail circumstances: condition (dead, or describe extent of injury), how or from whom the specimen was obtained.

ATTACHMENT FOR DESIGNATED ASSISTANTS ONLY

Primary Permittee: Emilia Sogin

I, being the primary permittee, hereby acknowledge the addition of the following designated assistants.

Emilia Sogin

Date

ADDITIONAL DESIGNATED ASSISTANTS

We, the undersigned, have read, understand, and agree to all conditions stipulated in the above Special Activity Permit.

Signature _____

Print Name: _____

Signature _____

Print Name: _____

Signature _____

Print Name: _____

Signature _____

Print Name: _____

Signature _____

Print Name: _____

Signature _____

Print Name: _____

Signature _____

Print Name: _____

Signature _____

Print Name: _____

Signature _____

Print Name: _____

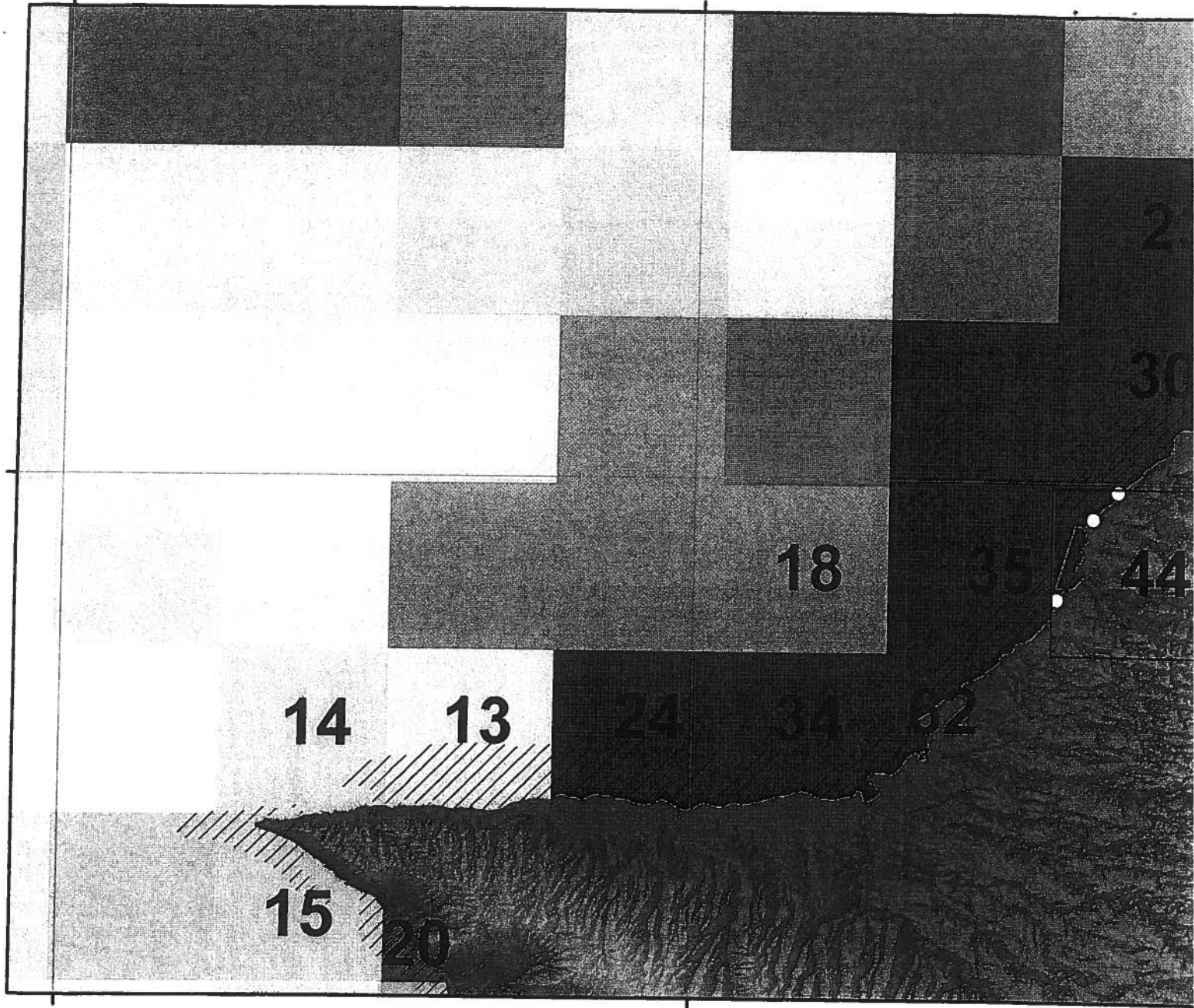
Signature _____

Print Name: _____

SAP 2012-86 Appendix 1. Authorized Collection Sites

Site Number	Lat	Long	TSANum	Island
1	-157.022	21.18465	69	Molokai
2	-157.054	21.18689	69	Molokai
3	-157.039	21.18976	69	Molokai
4	-157.1	21.19645	47	Molokai
5	-157.063	21.18757	47	Molokai
6	-157.083	21.19194	47	Molokai
7	-156.969	21.06754	41	Oahu
8	-156.932	21.05882	41	Oahu
9	-156.95	21.06178	41	Oahu
10	-158.054	21.6643	44	Molokai
11	-158.061	21.65709	44	Molokai
12	-158.07	21.63572	44	Molokai
13	-156.919	21.0521	53	Molokai
14	-156.91	21.05528	53	Molokai
15	-156.922	21.05529	53	Molokai
16	-157.12	21.09725	55	Molokai
17	-157.133	21.09418	55	Molokai
18	-157.13	21.09479	55	Molokai
19	-158.017	21.30359	51	Oahu
20	-157.984	21.31234	51	Oahu
21	-158.005	21.3056	51	Oahu

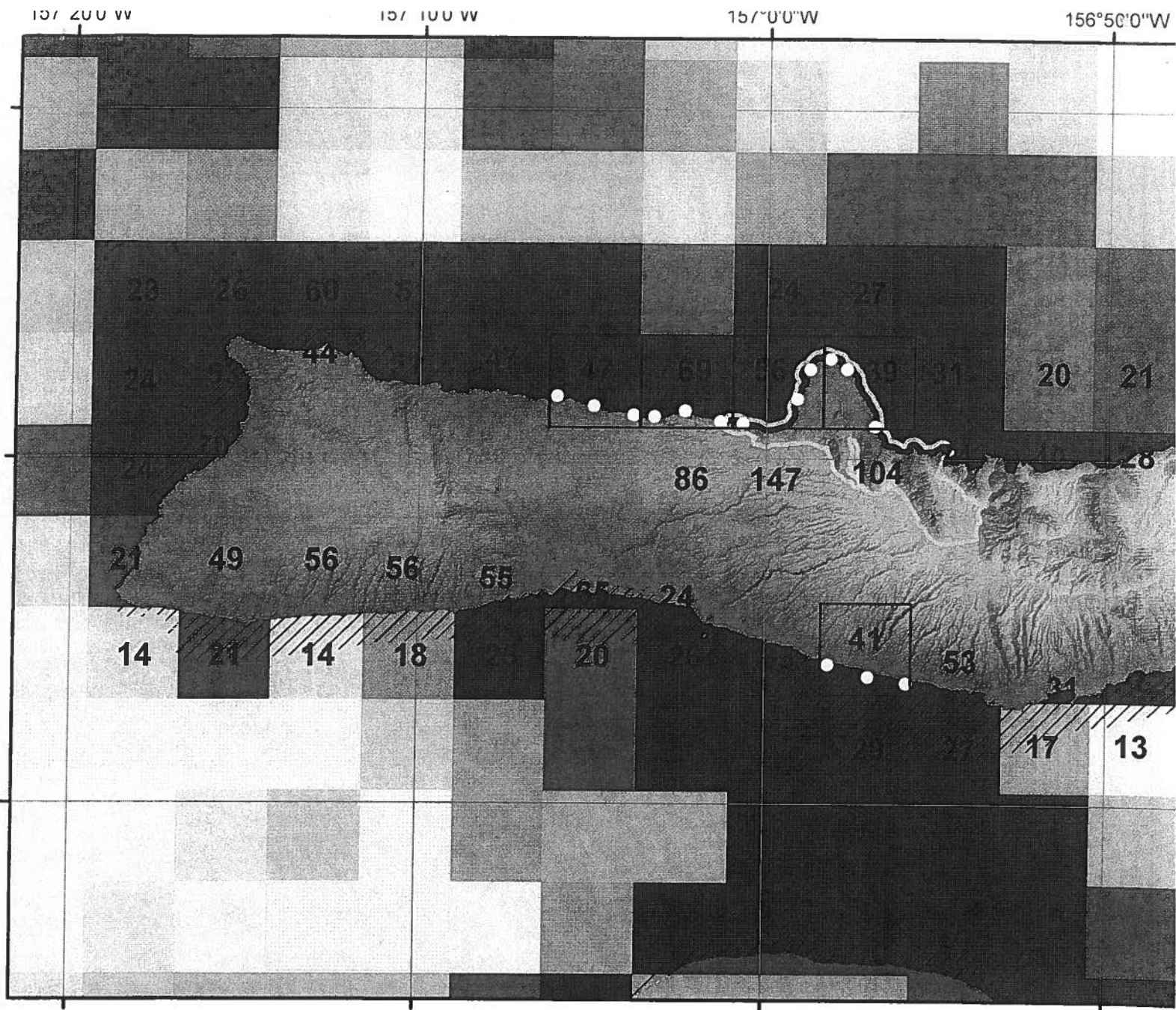
100 100 W



0 1.5 3 6 9 12 Kilometers

Sum TSA Frequency 1982-2009





0 2.75 5.5 11 16.5 22 Kilometers

Sum TSA Frequency 1982-2009

