

Bradley L. Garrett
International Centre for Archaeology Underwater
www.archaeologyunderwater.com
87-336 Ka' ohe Road
Captain Cook, Hawai'i 96704
808-292-6339
brad@archaeologyunderwater.com

Underwater Cultural Heritage and Environmental Awareness: WWII Wrecks of Truk Lagoon

Introduction to Location

Truk (a.k.a. Chuuk) was an Imperial Japanese Navy base during World War II. Considered second only to Pearl Harbor in strength, the U.S. saw this base as a major threat and in February 1944 began Operation Hailstone, a 2-day intense aerial bombing campaign that continued in various forms until the war's end. More than 50 naval and merchant ships were sunk in Truk Lagoon, and up to 100 aircraft, with many intact, having been protected by the surrounding barrier reef. The submerged military remains also attract colorful and diverse marine life and SCUBA divers from around the world. Unfortunately, the area is also under constant pressure from environmental and human threats. A premier dive location, fragile ecosystem and essential component to the Chuukese economy, this lagoon is in dire need of research and future planning.

Summary of Project - Visualization of the World War II Landscape

In July 2006, this project began under the supervision of Mr. Bill Jeffery at Truk Lagoon (Chuuk) in the Federated States of Micronesia. Funded in part by the Earthwatch Foundation, the project is a multi-year, multi-disciplinary study of the now submerged World War II battleground at Truk.¹

The project aims to record the current status of wrecks in the lagoon and to engage the public by allowing volunteers to help with recordation. One of the projects main goals is also to get this information out to as many interested parties as possible through media dissemination, lectures and publications. Project AWARE participation would be a good opportunity for exposure for the Project AWARE program through all of these venues.

Project Goals and Methods

The project involves the collaboration of three primary investigators, with unique yet intertwined research goals, seeking to tie together marine biology, archaeology and corrosion studies. Public dissemination is one of the most important aspects of the Earthwatch project, and Mr. Jeffery, as the project leader, is eager to fill this need. The role of Bradley L. Garrett on the project will be as a team leader and GIS/media coordinator. Bradley's role on the project is essential to tying together the work of this ongoing research.²

¹ Information for this project can be found at the project's website:
<http://www.earthwatch.org/site/pp2.asp?c=dsJSK6PFJnH&b=1170739>

² Bradley L. Garrett's qualifications and Curriculum Vitae can be viewed on the International Centre for Archaeology website under the Bios section: <http://www.archaeologyunderwater.com/ICAU%20Bios.htm>

After an introduction to archaeological and biological recording techniques and diving practices, volunteers will divide into groups and take to the water with waterproof slates, measuring tapes, and waterproof digital voltmeters. Using these simple instruments, volunteers will observe and record information on the lagoon's archaeology and on the corrosion and current decay rates of the wrecks. Participants will learn to recognize coral reef animals such as fishes and hard corals to conduct an assessment of marine life. Volunteers will also have two non-diving days during which volunteers will help enter data and take oral histories from local people. Logistic aspects of the project have been arranged by Mr. Jeffery and The Earthwatch Foundation. At the same time, Mr. Garrett will be using a Seabird underwater data collector rented from the Hawai'i office of the United States National Oceanic and Atmospheric Administration (NOAA) which will collect data on currents, oxygen levels, chemical compositions and marine life. After the volunteer period of the project has ended, Mr. Garrett will compile the data from the Seabird and volunteers into a GIS database.

Statement of Specific Environmental Benefit

Many of these World War II wrecks underwater in Truk Lagoon contain gas, oil and munitions, which could damage the fragile ecosystem of the bay if released. This is a very real possibility of structural collapse. Data collected by NOAA Hawaii's Seabird data collector will give researchers vital information on the state of deterioration on these wrecks which may lead to stabilization efforts that will prevent the collapse of their structure, thus preserving the environment and tourism viability (essential to the FSM economy) for the resources.

Dangers from ship and plane wreck collapse and the potential for oil and fuel to be released threaten the delicate marine eco system of Truk Lagoon. Work undertaken as part of this project will be in collaboration with Chuuk Department of Marine Resources and the United States Environmental Protection Agency (EPA). GIS data collected for this project may assist in environmental monitoring of the adjacent marine environment to predict where the oil and fuel may be carried by the sea. Constructed GIS models will therefore serve as tools to assist in mitigation of possible detrimental environmental effects before they take place.

In cases where emergency procedures must be undertaken immediately, the project is seeking a budget for on-site stabilization materials. These will be used to stabilize wrecks which are in eminent and immediate danger of explosion which could lead to archaeological and/or environmental damage.

Significance of the Project

GIS modelling will be the best way to tie together data from different project components, and will provide a visual framework which may reveal correlations between these seemingly disparate studies. Data collected from underwater nodes and during reconnaissance dives will document currents, oxygen levels, chemical compositions and marine life. Data gathered is, by itself, inert; a comprehensive GIS model is needed to interlace, organize and systematize this data in a way which will paint a new picture of the lagoon. This picture will be spatial and temporal, emphasising the importance of this place to living people. Once this takes place, patterns will begin to emerge which will begin to unveil the past and present mysteries of this submerged battleground.

Truk lagoon (Chuuk) is an area in need of collaboration and open discussion. International stakeholders in this underwater space include the Japanese, United States of America, and Federated States of Micronesia (FSM) governments. Additionally, Truk Lagoon has become a haven for SCUBA sport divers and the vital source of income for local indigenous people. Data collected from the project will serve more humanistic efforts than simply allowing for more complex or inclusive interpretation. Visual GIS models, pamphlets at the local

Historic Preservation Office and DVDs will be presented local communities to help understand the rapidly changing world which they depend on for economic subsistence; a world which is in danger of (literal) collapse.

There is a good possibility for theoretical discussion and analysis of work undertaken in the form of presentations at public conferences, symposia and meetings and publication in academic journals, magazines and on the World Wide Web. Project AWARE would receive credit and recognition for any funding provided in all of these contexts.

Project Timeframe

This project began in 2006 and is scheduled to run to the end of 2008. The project is scheduled to run in two 1-month sessions. The first will be from July 1st to July 30th, and the second from November 13th to December 13th. Funding from PADI Project AWARE for the 2007 calendar year will be used over the course of both field sessions.

Mr. Garrett is currently scheduled to undertake work as an archaeological field director for the project from 2007 to 2008. This work will involve organizing teams to map submerged World War II material remains in the Lagoon. Data collected from this fieldwork will be paired with data from team studying the biology and corrosion rates of World War II remains in the lagoon.

Project Budget

The Earthwatch foundation has made a total annual financial commitment to the project of \$35,496.00. Unfortunately, this project funding is already tied up in the organization of volunteers and equipment already on site. Last season, it was found that additional staff was needed as well as more funding to produce information pamphlets and other media about the project which is accessible to the public and will encourage additional research. Finally, new equipment is being sought this year from NOAA which will speed up the data collection process greatly and allow for data to be collected from greater depths. This proposal seeks to add these new components to the project with the induction of Mr. Garrett to the team.

Funding sought in this proposal is for the entire calendar year (two 30-day field seasons). Total amount requested for 2007 is \$1000.00. An itemized description of the application of this funding is below:

WWII Wrecks of Truk Lagoon Project, 2007

Funding for	Length of time	Amount	Subtotal
Seabird data collector rental (NOAA)	60 Days	\$80.00/day	\$4800.00
Wreck Stabilization Material	NA	\$1000.00	\$1000.00
Project Videography and DVD Production	60 Days	\$25.00/day	\$1500.00
Production of pamphlets and posters	NA	\$1000.00	\$1000.00
Boat rental from local dive shop	20 Days (Volunteer Periods)	\$85.00/day	\$1700.00
Total			\$10,000.00