



## POSITION DESCRIPTION

### Summer 2022

NPS UNIT: War in the Pacific National Historical Park		Position #: 120
<p><b>Position Title:</b> Natural Resource Management Assistant</p> <p><b>Position Type:</b> Mosaics PLC</p> <p><b>Primary natural resource discipline:</b> Biological Sciences</p> <p><b>Position Keywords:</b> coral reef, coral, marine biology, restoration, data analysis</p> <p><b>Location:</b> Hagatna, Guam</p>		
COVID-19 NOTICE		
<p>As the COVID-19 pandemic continues to change and evolve, project timelines and structure remain flexible and it may be necessary to postpone start dates, begin work remotely, or reformulate the project's description. Should any development in the COVID-19 outbreak impair a project's timeline or results, the SIP Team will work with the park and project mentors to assess the situation and determine the best course of action at that time.</p>		
POSITION DESCRIPTION AND WORK PRODUCTS		
<p><b>Project Description:</b> Coral reefs are in decline worldwide due to climate change. More than half of War in the Pacific NHP's lands are underwater, and much of this submerged land is home to coral reef communities. The park's coral reefs have been badly damaged and continue to be threatened by warming ocean waters, ENSO-related low tides, acidification, pollution, and overfishing. Widespread coral bleaching events in 2013, 2014, 2016, and 2017 caused massive mortality, particularly among shallow reef flat coral communities.</p> <p>Reef restoration efforts within the park began in May 2019, when over 400 staghorn coral fragments were outplanted from a coral nursery to the shallow waters of the park's Asan Beach unit. These outplanted corals require regular monitoring, and during the bleaching season they may require additional care (such as installing shade clothes or removing algae). On Guam, bleaching season generally begins in late summer and lasts until winter, but bleaching can be caused at any time during the year by disease outbreaks, corallivores (such as the crown-of-thorns sea star), and low tide exposure. Tracking coral bleaching and water conditions throughout the year is imperative to understanding the overall health of Guam's reefs and the causes of coral bleaching. The park seeks an SIP Mosaics intern to assist with monitoring coral bleaching, particularly among outplanted corals, during the summer of 2022.</p> <p>The SIP intern's primary duty will be to perform monthly in-water coral bleaching surveys in order to track bleaching throughout the bleaching season. The intern will be trained to perform Coral Watch surveys, which use a color-matching card to identify the darkest and lightest colors of an individual coral colony. Since 2015, park staff, interns, and volunteers have used Coral Watch methods to evaluate coral bleaching along permanent transects at three sites. Using the Coral Watch methods will allow the intern to compare 2021 bleaching data at these sites to data from previous years. The intern will also use Coral Watch methods to assess bleaching among outplanted corals at Asan Beach unit.</p> <p>The intern will also assist with monitoring water quality conditions (i.e. temperature, light intensity, dissolved oxygen) on shallow reef flats using underwater data loggers. The intern will assist park staff with collecting data, adding data to the water quality database, and analyzing water quality data to generate trends and comparisons with bleaching data. The intern may also assist with various other natural resources activities, including monitoring Tridacna clam populations, quantifying coral recruitment, tracking the prevalence and progression of coral diseases, assessing growth of outplanted coral colonies, freshwater sampling, invasive species management, outreach events, etc.</p> <p><b>Work Products:</b> At the conclusion of the internship, the SIP intern will have conducted Coral Watch bleaching surveys on five permanent transects at three sites within the park for three consecutive months. The intern will have uploaded this data to the online Coral Watch database and generated reports on coral bleaching trends within the park.</p>		
NATURAL & PHYSICAL WORK ENVIRONMENT		
<p>War in the Pacific National Historical Park is located in Guam. The park encompasses both natural and cultural resources, with a focus on WWII history. Park headquarters are located in downtown Hagatna (the capitol of Guam), conveniently</p>		



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near restaurants, banks, grocery stores, and shopping malls. Guam has a tropical climate. Daytime temperature generally range from 80-88° F, with high humidity and a wet season from July to November. Guam is surrounded by coral reefs, and ocean water temperatures typically range from 82-86° F.

The intern will be based in the park headquarters with other natural resources staff. Fieldwork will be conducted on shallow reef flats, between 5-50 m from shore in water up to 3 m deep. All in-water fieldwork is conducted by snorkel. Strong swimming skills are required as currents can sometimes be strong; however, park staff do not enter the water in foul weather (e.g. lightning storms) or during marine weather warnings (e.g. high surf advisories). Rip currents have been known to form in the waters around Guam. Venomous animals, including cone snails, stonefish, and jellyfish, are occasionally encountered, but pose little threat unless bothered or handled. Sun exposure can result in serious sunburn, so protective clothing (including gloves and UV-protective long-sleeve shirts) will be provided, as well as reef-safe zinc sunblock. The intern will also have the opportunity to assist with terrestrial fieldwork, including monitoring plants in the rainforest and conducting hikes in badlands.

#### QUALIFICATIONS

Candidates should have completed at least two years in a course of study at an accredited college or university leading to a bachelor's degree in biological science, natural resource management, or a related discipline. Data entry experience or experience with Microsoft Excel is preferred.

Strong swimming skills are required, and snorkeling experience is highly desired. Interns must pass a swim test before they will be allowed to participate in fieldwork.

The applicant must be a U.S. citizen or U.S. permanent legal resident ("green-card-holder") between the ages of 18 and 30 years old, inclusive, or veterans up to age 35. Prior to starting this position, a government security background clearance will be required.

#### VEHICLE AND DRIVER LICENSE REQUIREMENTS

Applicant must have a valid driver's license to drive a government vehicle.

A personal vehicle is REQUIRED for this position.

#### HOUSING

**Park housing is NOT available. The intern will be responsible for finding housing in the nearby area.** Park housing is not available, but furnished apartments are available for \$700 to \$1000/month. The ideal candidate will be a local student who is already in stable housing.

#### INTERNSHIP DATES

**Start Date:** 05/30/2022

**End Date:** 10/17/2022

Number of Weeks: 20

Flexible Start Date: Yes

Nineteen weeks of the internship will be in the park. A mandatory Professional Development Workshop will be held in Washington, D.C. from August 1 - 4, 2022.

#### LIVING ALLOWANCE



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20 weeks (\$600/week = \$12,000)

#### Partners

This position is offered through the National Park Service's Scientists in Parks (SIP) Program in partnership with various organizations.



**PLEASE DIRECT ANY QUESTIONS TO ENVIRONMENT FOR THE AMERICAS**

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