



**NOAA
FISHERIES**

Pacific Islands
Fisheries
Science Center

2014 Marianas Archipelago

Ship-based Research

MAY 22, 2013

PRELIMINARY PLANS FOR 2014

Currently, the NOAA Ship Oscar Elton Sette (SE) and the NOAA Ship Hi'ialakai (HA) are scheduled to work in the Marianas Archipelago in 2014.

The Coral Reef Ecosystem Division (CRED) has requested time aboard the HA to conduct the standard MARAMP project.

The Center has requested time aboard the SE to conduct work in the Marianas that may include insular fisheries research (life history and fish surveys), cetacean surveys, fisheries oceanography, and Monuments research.

NOTE: Both ships also have projects scheduled in the Hawaiian Archipelago, including: work in the NWHI for the Office of National Marine Sanctuaries (ONMS); monitoring of the critically endangered Hawaiian Monk Seal; an insular reef fish survey; and a bottomfish gear comparison survey.

NOAA SHIP OSCAR ELTON SETTE



GENERAL SPECIFICATIONS

DESIGN

- Length (LOA): 68.3 m (224 ft.)
- Breadth (moulded): 13.1 m (43 ft.)
- Draft, Maximum: 4.6 m (15 ft.)
- Displacement: 2,301 tons
- Gross Tonnage: 1,935
- Net Tonnage: 580

SPEED & ENDURANCE

- Cruising Speed: 10.5 knots
- Range: 18,00 nmi
- Endurance: 40 days
- Endurance Constraint: Stability

FOOD SERVICE & SEATING CAPACITY

- Mess Room: 26

BERTHING CAPACITY

- Single Staterooms: 13
- Double Staterooms: 10
- Bunkhouse: 6 berths

MEDICAL FACILITY

- Medical Treatment Room with one bunk
- Emergency and first-aid equipment aboard, administered by designated USPHS Medical Officer

COMPLEMENT

- Commissioned Officers: 5
- USPHS Medical Officer: 1
- Crew: 13
- Scientists: 20 (Max)

SMALL BOATS

ACHILLES

Type: Inflatable

Length: 14 ft.

Hoisting weight: 371 lbs.

Propulsion: 40 hp Honda outboard motor

Capacity: 6 persons

SAFE BOAT

Type: Safe boat

Length: 15 ft.

Hoisting weight: 1,340 lbs.

Propulsion: 90 hp Honda outboard motor

Capacity: 7 persons

ELECTRONIC EQUIPMENT

ACOUSTICS

Simrad EK-50

Simrad EK-60

Acoustic Doppler Current Profiler (ADCP)

SCIENTIFIC EQUIPMENT

CTD System

Thermosalinograph (TSG)

WINCHES

NET SPOOL

Location: Fantail, main deck

Manufacturer: Marco

Model: WT202

CTD WINCH

Location: Winch deck

Manufacturer: Markey

Model: Desh 5

Type: Hydraulic drive

Wire: 8,000 m conducting wire

OCEANOGRAPHIC WINCH

Location: Port

Manufacturer: Markey

Model: Desh 3

Type: Hydraulic drive

Wire: 2,000 m conducting wire

GILSON WINCH

Location: Winch deck

Manufacturer: Pullmaster

Model: M25

Type: Hydraulic drive

Wire: 200 ft. wire

TRAWLING WINCH

Location: Winch deck

Quantity: 2

Manufacturer: Marco

Model: WT202

Type: Hydraulic drive

Wire: 5,000 m wire



CRANES

BOAT DECK CRANE

Location: Boat deck 0-2

Manufacturer: North American Crane and Equipment

Type: Articulating

SWL

Maximum: 20,000 lbs.

Minimum: 2,100 lbs.

FANTAIL CRANE

Location: Fantail, main deck

Manufacturer: North American Crane and Equipment

Type: Articulating

SWL

Maximum: 24,000 lbs.

Minimum: 6,600 lbs.

OVER-THE-SIDE-HANDLING A-FRAME

Location: Fantail, main deck

SWL

Maximum: 10,000 lbs.

J-FRAME:

Quantity: 2

Location: Starboard side aft,
main deck and
Port side aft

SWL

Maximum: 35,000 lbs.



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Research Expedition Compares Methods for Surveying Deepwater Bottomfish in the Maui Triangle Region

April 15, 2013



NOAA Ship *Oscar Elton Sette*.

Researchers from the NOAA Pacific Islands Fisheries Science Center (PIFSC) are leading an expedition to develop fishery-independent methods of assessing the abundance of deepwater bottomfish around the main Hawaiian Islands. The bottomfish population supports important commercial and recreational fisheries in Hawaii.

The research expedition is being carried out by a team of PIFSC scientists on the NOAA Ship *Oscar Elton Sette* in collaboration with colleagues from the Northwest Fisheries Science Center, University of Hawaii at Manoa (UHM), Joint Institute for Marine and Atmospheric Research at the University of Hawaii at Manoa, Pacific Islands Fisheries Group (PIFG), and the NOAA Teacher at Sea program. The *Sette* departed her home port at Ford Island, Pearl Harbor, on April 15, 2013, for the study area in waters of the Maui Triangle, an ocean region delineated by the islands of Maui, Molokai, Lanai, and Kahoolawe. Leading the 15-day mission is Dr. Donald R. Kobayashi from the PIFSC Ecosystems and Oceanography Division. Cooperating with the *Sette* will be the chartered research vessel *Huki Pono* and 3 chartered bottomfish fishing vessels of the PIFG: *Imua*, *Naomi K*, and *Hokuloa*. Working together, the vessels will collect information on the abundance of bottomfish in the study area using hook-and-line fishing, hydroacoustics, and underwater video.

The expedition has 2 objectives. First, the vessels will accomplish a near-simultaneous survey of deepwater bottomfish in the Maui Triangle region using 4 methods, or gears: a Simrad EK60 echosounder (operating from the *Sette*), an autonomous underwater vehicle (AUV) and remotely-operated vehicle (ROV) camera system including a BlueView imaging sonar unit (deployed from the *Sette*), baited underwater stereo video camera systems (or BotCam, deployed by a UHM team aboard the *Huki Pono*), and hook-and-line fishing from the fishing vessels. Second, the *Sette* will conduct acoustic target ground-truthing experiments using ROV cameras and BlueView in conjunction with Simrad EK60 active acoustics.

In the first portion of the research project, the 4 survey gears will be intensively deployed within 10 selected survey grid areas in the Maui Triangle region, each 500 m x 500 m. The 10 survey grids will be chosen from a larger set of candidate grids (see map) shortly before the project mobilizes to best take advantage of prevailing weather conditions, proximity to port, and patterns of fish abundance, and to mitigate impacts of the fishing operations on activities of local fishermen and management

Explore...

- Cetaceans
- Coral Reefs
- Ecosystems
- Fishery Economics
- Hawaiian Monk Seals
- Human Dimensions
- Oceanography
- Sea Turtles

Benthic Habitat Mapping

Near-real-time meteorological and oceanographic data

Remote sensing data products

TurtleWatch

Quarterly Research Bulletin

OceanWatch Central Pacific

Barbless Circle Hook News

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Cruise Reports (1990-Present)

Research Vessels

[Townsend Cromwell](#) | [Oscar Sette](#) | [Hi'ialakai](#) | [NOAA Chartered Vessels](#)

Summaries of the current and prior research cruises led by PIFSC researchers
can be found at:

<http://www.pifsc.noaa.gov/cruise/index.php>

All Center Cruise Reports (1990-Present)
for Townsend Cromwell | Oscar Sette | Hi'ialakai | NOAA Chartered Vessels
can be found at:

<http://www.pifsc.noaa.gov/library/cruise.php>

2013 NOAA SHIP OSCAR ELTON SETTE SCHEDULE

POC: Operations
MOC - Pacific Islands
1897 Ranger Loop Road, Bldg 184
Honolulu, HI 96734 (808) 455-6891

NOAA Ship Oscar Elton Sette

Updated 4/15/2013

DATE	PORT	PROJECT INFO	LO	LONG-TERM GOAL	DAS	CUM DAS
10/1/2012	Mon Underway	SE-12-08				
ARR: 10/3/2012	Wed Pearl Harbor, HI	Hawaii AUV	NMFS	Healthy Oceans	3	3
	Pearl Harbor, HI	Fleet Inspection period (10/1 - 10/4, one day underway)	OMAO	Mission Support	1	4
DEP: 11/13/2012	Tue Pearl Harbor, HI	Transit to West Coast shipyard	OMAO	Mission Support	10	14
ARR: 11/22/2012	Thu Alameda, CA					
3/4/2013	Alameda, CA	Sea Trials	OMAO	Mission Support	1	15
DEP: 3/5/2013	Tue Alameda, CA	Sea trials and transit from	OMAO	Mission Support	10	25
ARR: 3/14/2013	Thu Pearl Harbor, HI	West Coast shipyard				
DEP: 4/15/2013	Mon Pearl Harbor, HI	SE-13-02	NMFS	Healthy Oceans	15	40
ARR: 4/29/2013	Mon Pearl Harbor, HI	Insular Bottom Fish Survey (AUV)		AUV: 15 PFD		
5/1/2013	Wed Pearl Harbor, HI	Gear Trials	OMAO	Mission Support	1	41
DEP: 5/7/2013	Tue Pearl Harbor, HI	SE-13-03	NMFS	Healthy Oceans	30	71
ARR: 6/5/2013	Wed Pearl Harbor, HI	Cetaceans Population Assessment				
DEP: 6/12/2013	Wed Pearl Harbor, HI	SE-13-04	NMFS	Healthy Oceans	15	86
ARR: 6/26/2013	Wed Pearl Harbor, HI	Kona IEA				
7/2/2013	Tue Pearl Harbor, HI	Small Boat Ops / Fueling	OMAO	Mission Support	1	87
DEP: 7/3/2013	Wed Pearl Harbor, HI	SE-13-05	NMFS	Healthy Oceans	18	105
ARR: 7/20/2013	Sat Pearl Harbor, HI	Monk Seal Population Assessment				
DEP: 7/27/2013	Sat Pearl Harbor, HI	SE-13-06	NMFS	Healthy Oceans	15	120
ARR: 8/10/2013	Sat Pearl Harbor, HI	Insular Bottom Fish Survey (AUV)				
DEP: 8/17/2013	Sat Pearl Harbor, HI	SE-13-07	NMFS	Healthy Oceans	20	140
ARR: 9/5/2013	Thu Pearl Harbor, HI	Life History / Larval - Johnston				
DEP: 9/11/2013	Wed Pearl Harbor, HI	SE-13-08	NMFS	Healthy Oceans	20	160
ARR: 9/30/2013	Mon Pearl Harbor, HI	Monk Seal Population Assessment				
9/30/2013	Mon Pearl Harbor, HI	In Port Pearl Harbor				
<i>15 Program Funded Days</i>					DAYS AT SEA	160
					22-Apr-13 Signed Omnibus	172
					OPERATING DAYS	160
					22-Apr-13 Signed Omnibus	172

THINGS TO CONSIDER WHEN DRAFTING A SCHEDULE

TRANSIT TIMES

TAGOS average 9-10 knots

BERTHING

20 scientists

DURATION

30 Days-at-Sea max

OPERATING TEMPO

12-hr vs. 24-hr operations

Overtime and safe working standards can limit hours of operations; maximum number of hours personnel are allowed to work in a day is 12-hours.

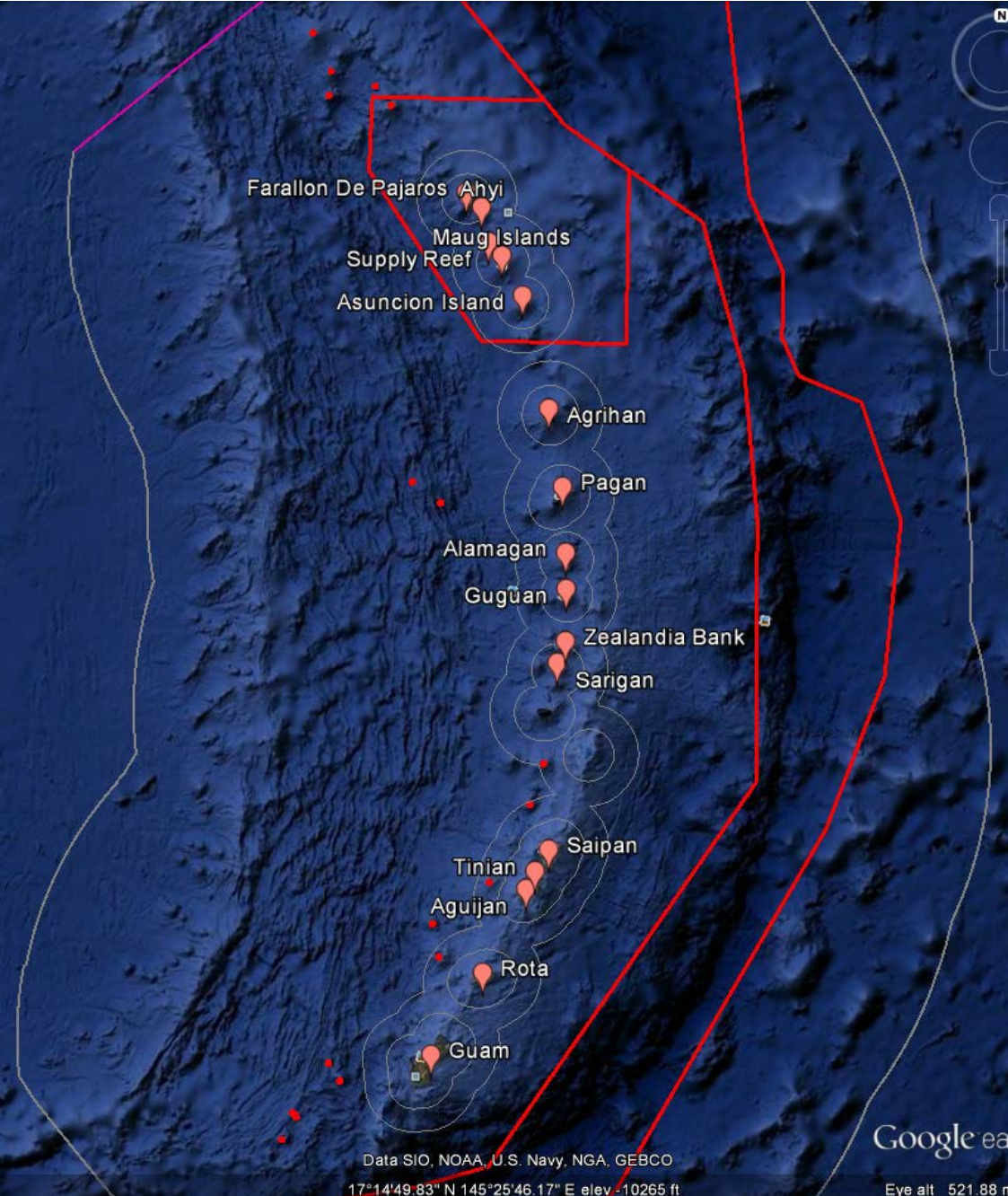
Type of operations can affect operating tempo.

Activities on deck require crew support and can impact how much of a given activity e.g. fishing (reel or trawl), diving, small boats, over the side gear (AUV, ROV, etc.) can be done.

Amount of time need to mobilize and demobilize for each project.

In ports are important for crew rest as well as swapping out of scientific parties – mob/de-mob must be built into the project plan to ensure a smooth transition between projects port of call.

Must be able to resupply the ship and allow for adequate crew rest



TRANSIT TIMES

Sette: average transit speed
9-to-10 knots

Honolulu to Guam: ~15 days

Guam to Rota: ~5.6 hours

Rota to Aguijan: ~5.6 hours

Aguijan to Tinian: ~ 1.1 hours

Tinian to Saipan: ~2.1 hours

From Rota to Farallon de Pajaros:
400 nm = ~44.4 hours





