



**U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE**

**Pacific Islands Fisheries Science Center
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Project Report

VESSEL

NOAA Ship *Oscar Elton Sette* SE-22-03

PROJECT PERIOD

The NOAA Ship *Oscar Elton Sette* was engaged as support for a Pacific Islands Fisheries Science Center (PIFSC), National Marine Fisheries Service (NMFS), NOAA, project from 28 May 2022 to 25 Sept 2022, with 28 days at sea in the main Hawaiian Islands (MHI) and Papahānaumokuākea Marine National Monument (PMNM).

AREA OF OPERATION

The operating area includes the main Hawaiian Islands (MHI) and Papahānaumokuākea Marine National Monument (PMNM) from the island of Hawai'i to Kure Atoll with Hawaiian monk seal and marine turtle surveys and/or camp deployment at Nihoa Island, French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, Midway Atoll, and Kure Atoll.

TYPE OF OPERATION

1. Deployment of Hawaiian monk seal camps and marine turtle camps at French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, and Kure Atoll.
2. Conduct monk seal and marine turtle surveys at Ni'ihau, Nihoa, Mokumanamana, Midway Atoll, and Kure Atoll. Surveys may also be conducted at French Frigate Shoals, Laysan Island, Lisianski Island, and/or Pearl and Hermes Reef if time allows.
3. Pick up seals in need of rehabilitation for transport from any site where seals are found to Ke Kai Ola (KKO) monk seal hospital in Kona, Hawaii.
4. Retrieve and replace one High-Frequency Acoustic Recording Package (HARP) for the Cetacean Research Program (CRP) near Pearl and Hermes Reef.
5. Opportunistic CTD casts.

ITINERARY

- 28 April Pearl Harbor
- Departed NOAA Pier at Ford Island, Pearl Harbor at 1300 following ship delay. Conducted ship familiarization and began transit to Nihoa.
Embarked (19): Ronco, Staman, McCue, Cedillo, Mino, Schneiderman, Kerschner, Vasquez, Stilley, Reininger, Stoll, Glinsky, McLean, Lloyd-Lim, Ely, Glover, Yost, Selvig, Rosen.
- 29 April Nihoa
- Launched SE-2 at 1500 to deploy 5 personnel to conduct abbreviated monk seal surveys on Nihoa's main beach and west ledge. Recovered shore party at 1700, secured operations, departed for Mokumanamana.
Survey Teams (5): Ronco, Cedillo, Mino, Schneiderman, Ely
- 30 April Transited
- Mokumanamana was not surveyed due to ship delays caused by a fouled propeller. Issue was resolved the same day, but the island was bypassed to maintain the scheduled arrival at FFS on 1 May.
- 1 May French Frigate Shoals
- Launched SE-2, SE-4, and *Iwa* at 0800 to Tern Island to deploy seal and turtle teams plus shore team to assist with field camp offload and set-up. Recovered shore party at 1700, secured from operations.
Disembarked (8): Staman, Schneiderman, Kerschner, Vasquez, Stilley, Reininger, Stoll, Glinsky
- 2 May Launched SE-2 and SE-4, starting at 0800 to deploy shore team to continue camp offload and set-up. Recovered *Iwa* following inflation issue to troubleshoot onboard. Recovered shore party at 1720, secured from operations.
Embarked (1): Staman
- 3 May Launched SE-4 and *Montauk* at 0800 to deploy shore team to continue camp offload and set-up. Recovered shore party at 1100, secured from operations, departed for Pearl Harbor.
Disembarked (2): Staman, Yost
- 4–5 May Transited
- 6 May Pearl Harbor

Secured at NOAA Pier at Ford Island, Pearl Harbor, at 0900. On-loaded remaining field camp equipment for the second leg of the cruise. Overnight at the pier following departure delay. Conducted ship familiarization.

Disembarked (2): McLean, Lloyd-Lim

Embarked (10): Lino, Hein, Mercer, Bane, Idle, Taylor, Matheny, Boloson, Rickards, Kozama

- 7 May Departed NOAA Pier at Ford Island, Pearl Harbor at 0800 and began transit to French Frigate Shoals.
- 8 May Transited
- 9 May FFS Launched SE-2, SE-4, and *Iwa* at 0800 to deploy shore team to assist with remaining field camp offload, camp set-up, and survey training for new staff. Recovered shore party at 1515, secured operations, departed for Laysan Island.
Embarked (2): Staman, Yost
- 10 May Transited
- 11 May Laysan

Launched SE-2 and SE-4 starting at 0800 to deploy seal and turtle teams plus shore team to assist with field camp offload and set-up. Recovered shore party at 1615, secured operations, departed for Lisianski Island.
Disembarked (3): Ely, Glover, Hein
- 12 May Lisianski

Launched SE-2 and SE-4 starting at 0800 to deploy seal and USFWS teams plus shore team to assist with field camp offload and set-up. Recovered shore party at 1800, secured operations, departed for Kure Atoll.
Disembarked (4): Mercer, Bane, Taylor, Idle
- 13 May Transited
- 14 May Kure

Launched SE-2 and SE-4 starting at 0800 to deploy seal and DLNR teams plus shore team to assist with field camp offload and set-up. Onloaded embarking DLNR team's gear and equipment. Surveyed Sand Island. Recovered shore party at 1800, secured operations, departed for Midway Atoll.
Disembarked (4): Matheny, Boloson, Rickards, Rosen
Embarked (5): Smith, Brosius, Hopkins, Steinbesser, Moss

- 15 May Midway
- Launched SE-4 and *Kukini* starting at 0800 to deploy teams to conduct seal and marine turtle surveys of Sand Island and Eastern/Spit Island complex. SE-4 returned to ship after deploying Sand Island shore party. *Kukini* recovered Eastern shore party at 1500, Sand Island shore party at 1800 and secured operations. Sanitized small boats and equipment used at Midway per PMNM BMP requirements.
- Shore Party–Sand (5): Ronco, McCue, Mino, Yost, Kozama, Selvig, ENS Moore
- Shore Team–Eastern (5): Staman, Lino, Cedillo, Smith, ENS Brasher
- 16 May Pearl and Hermes Reef
- Launched SE-4 and *Elele* starting at 0800 to deploy seal plus shore team to assist with field camp offload and set-up. Recovered shore parties at 1600, secured operations. Sanitized small boats and equipment used at PHR per PMNM BMP requirements.
- Disembarked (5): Mino, Yost, Kozama, Selvig, Staman
- 17 May Launched SE-4 and *Kukini* starting at 0800 to deploy seal plus shore team to assist with field camp offload and set-up. Recovered shore parties at 1730, secured operations, and departed for Lisianski. Sanitized small boats and equipment used at PHR per PMNM BMP requirements.
- Embarked (1): Staman
- 18 May Lisianski
- Launched SE-2 at 0800 to deploy shore team to assist with remaining field camp offload, camp set-up, and survey training for new staff. Recovered shore parties at 1600, secured operations, and departed for Laysan
- Embarked (1): Mercer
- 19 May Laysan
- Launched SE-2 at 0800 to deploy shore team to assist with remaining field camp offload, camp setup, and survey training for new staff. Embarked 2 seals in poor body condition for rehabilitative care at KKO. Recovered shore parties at 1600, secured operations.
- Embarked (3): Ely, Glover, Hein
- 20 May Launched SE-2 at 0800 to deploy shore team to assist with remaining field camp offload, camp rebuild, and survey training for new staff. Recovered shore parties

at 1600, secured operations, and departed for Kona.

Disembarked (3): Ely, Glover, Hein

21–23 May Transited

24 May Kona

Launched SE-2 at 1330 to Honokohau Small Boat Harbor to disembark two KKO seal patients. Recovered SE-2 at 1400, secured operations, and departed for Pearl Harbor.

25 May Pearl Harbor

Secured at NOAA Pier at Ford Island, Pearl Harbor at 0900.

Disembarked (11): Ronco, Staman, McCue, Lino, Cedillo, Mercer, Smith, Brosius, Hopkins, Steinbesser, Moss.

End of project.

MISSIONS AND RESULTS

Results for the main objectives for SE-22-06 are as follows:

1. Deployment of Hawaiian monk seal camps and marine turtle camps at French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, and Kure Atoll.

Field teams were deployed with camps established successfully at French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, and Kure Atoll.

Unprecedented weather caused delays in offloading at nearly all sites resulting in extended work days for both the science party and the ship, as well as an evolving itinerary. While the cruise was successful in its primary objective, the following objectives were limited by logistical challenges and time constraints.

2. Conduct monk seal and marine turtle surveys at Ni'ihau, Nihoa, Mokumanamana, Midway Atoll, and Kure Atoll. Surveys may also be conducted at French Frigate Shoals, Laysan Island, Lisianski Island, and/or Pearl and Hermes Reef if time allows.

No surveys were conducted at Ni'ihau or Mokumanamana on this cruise.

Hawaiian monk seal and marine turtle population assessment surveys with full island (Census, C) or full atoll coverage (Atoll Count, A) were conducted at Nihoa, and Midway Atoll.

Seal and turtle surveys with partial island/atoll coverage (Incidentals, I) were conducted at FFS, Laysan, Lisianski, Kure Atoll, and Pearl and Hermes Reef to provide survey, tagging, and handling training to new staff and to search for seal rehabilitation candidates.

Table 1. Summary of preliminary Hawaiian monk seal survey data collected during SE-22-03. Midway numbers are approximate and will be confirmed once data is analyzed.

Site	Survey Date	Survey type	Seal Count	Seals Temple Tagged	Notes
Nihoa	29 April	C	37	0	Two allflex tags applied to seals. No nursing mom/pup pairs observed.
FFS/Shark	9 May	A	11	0	One nursing mom/pup pair observed. The other islands in the atoll were surveyed 9-10 May by the on-island team to complete the atoll count.
Kure/Sand	14 May	A	8	1	Green Island was surveyed 15 May by the on-island team to complete the atoll count.
Midway	15 May	A	32	3	Three weaned pups tagged and three nursing mom/pup pairs observed.
PHR/North	17 May	I	na	0	Survey for rehabilitation candidates only, none detected.
Lisianski	18 May	I	na	2	Two weaned pups tagged. One weaned pup with injuries assessed by veterinary team.
Laysan	19 May	I	na	2	Two weaned pups tagged, one mom/pup pair reunited. Two pups in poor body condition collected for rehabilitation.
Laysan	20 May	I	na	4	Two weaned pups and one juvenile tagged, one juvenile retagged.

Table 2. Summary of preliminary green sea turtle survey data collected during SE-22-03.

Site	Survey Date	Notes
Nihoa	29 April	No turtles observed by HMSRP field staff.
FFS/Shark	9 May	Turtle data collected by MTBAP field staff, to be submitted for analysis at the completion of the field season.
Kure/Sand	14 May	No turtles observed by HMSRP field staff.
Midway	15 May	~14 turtles observed, and ~5 turtles tagged and/or given a dremel number during a training session with MTBAP and Midway USFWS staff. Data to be submitted for analysis at the completion of the field season.
PHR/North	17 May	Several turtles observed by MTBAP staff on Southeast Island on May 16, but not surveyed due to camp offload. ~40 turtles observed by MTBAP staff from small boat on North Island during seal survey for rehabilitation candidates.

Site	Survey Date	Notes
Lisianski	18 May	~12 turtles observed and ~4 tagged and/or given a dremel number during a training session with MTBAP and Lisianski USFWS staff. Data to be submitted for analysis at the completion of the field season.
Laysan	19 May	No turtles recorded during HMSRP survey.
Laysan	20 May	3 turtles tagged and given a dremel number during a training session with MTBAP and Laysan USFWS staff. Many crawls (false and potential pits) recorded in the sectors just south of camp. An additional safe-handling training was conducted with field staff on one of the dremeled turtles. Data to be submitted for analysis at the completion of the field season.

3. Pick up seals in need of rehabilitation for transport from any site where seals are found to Ke Kai Ola (KKO) monk seal hospital in Kona, Hawaii.

Two Hawaiian monk seal pups in poor body condition were identified at Laysan Island during the cruise. During surveys on 19 May, both animals were assessed and determined to be in need of rehabilitation. The two seals were rescued from Laysan for transport on the ship. While onboard, the veterinary team provided supportive care and trained members of the science party monitored the animals around the clock. The ship arrived at Kailua-Kona on Hawaii Island on 24 May, and the seals were delivered to the Ke Kai Ola veterinary team for rehabilitative care at The Marine Mammal Center’s hospital. Both seals will be released back in the Monument following their recovery.

4. Retrieve and replace one High-Frequency Acoustic Recording Package (HARP) for the Cetacean Research Program (CRP) near Pearl and Hermes Reef.

This objective was not accomplished due to time constraints, but HARP retrieval at PHR will be a priority for SE-22-06, as will the deployment of the replacement HARP if not already completed at the time of that cruise.

5. Opportunistic CTD casts.

This objective was not accomplished due to time constraints.

SCIENTIFIC PERSONNEL

Participating Institutions

- NOAA National Marine fisheries (NMFS), Pacific Island Fisheries Science Center (PIFSC)
 - Hawaiian Monk Seal Research Program (HMSRP), Protected Species Division (PSD)
 - Marine Turtle Biology & Assessment Program (MTBAP), PSD
 - Protected Species Support and Services Program (PSSP), PSD

- Survey and Operations Services (SOS), Science Operations Division (SOD)
- Cooperative Institute for Marine and Atmospheric Research (CIMAR)
- State of Hawaii Department of Land and Natural Resources (DLNR)
- US Fish and Wildlife Service (USFWS)

In the following table, colors are used to indicate the sites at which field staff disembarked for the 2022 field season, and will be recovered on SE-22-06. Yellow indicates FFS, orange indicates Laysan, green indicates Lisianski, blue indicates PHR, and purple indicates Kure. Pink indicates the DLNR team that was recovered from Kure during this cruise.

Name (Last, First)	Title	Leg	Date Aboard	Date Disembark
Ronco, Hope	Chief Scientist, PIFSC, NMFS	all	4/28/2022	5/25/2022
Staman, Marylou*	Operations Lead, CIMAR	all	4/28/2022	5/25/2022
McCue, Laura	Marine Biologist, PIFSC, NMFS	all	4/27/2022	5/25/2022
Cedillo, Claudia	Veterinary Technician, PIFSC, NMFS	all	4/27/2022	5/25/2022
Schneiderman, Jonathan	Biological Technician, PIFSC, NMFS	1	4/27/2022	5/1/2022
Kerschner, Leah	Biological Technician, PIFSC, NMFS	1	4/27/2022	5/1/2022
Vasquez, Shannon	Research Technician, CIMAR	1	4/27/2022	5/1/2022
Stilley, James	Research Assistant, CIMAR	1	4/27/2022	5/1/2022
Reininger, Alexandra	Research Assistant, CIMAR	1	4/28/2022	5/1/2022
Stoll, Jamie	Research Assistant, CIMAR	1	4/27/2022	5/1/2022
Glinsky, Alexander	Research Technician, CIMAR	1	4/27/2022	5/1/2022
McLean, Rob	Research Assistant, CIMAR	1	4/28/2022	5/6/2022
Lloyd-Lim, Calla	Research Assistant, CIMAR	1	4/28/2022	5/6/2022
Ely, Megan	Research Assistant, CIMAR	all	4/27/2022	5/11/2022
Glover, Sarah	Research Assistant, CIMAR	all	4/27/2022	5/11/2022
Mino, Paige	Research Technician, CIMAR	all	4/27/2022	5/16/2022
Yost, James*	Research Technician, CIMAR	all	4/27/2022	5/16/2022
Selvig, Meagan	Research Assistant, CIMAR	all	4/27/2022	5/16/2022
Rosen, Jonathan	Research Assistant, CIMAR	all	4/27/2022	5/14/2022
Christy Kozama	Biological Research Associate, CIMAR	2	5/6/2022	5/16/2022
Mercer, Tracy*	Research Associate, CIMAR	2	5/6/2022	5/25/2022
Lino, Michelle Barbieri	Veterinary Medical Officer	2	5/6/2022	5/25/2022
Hein, Rachel	Research Assistant, CIMAR	2	5/6/2022	5/11/2022

Name (Last, First)	Title	Leg	Date Aboard	Date Disembark
Bane, Michele	Research Technician, CIMAR	2	5/6/2022	5/12/2022
Chelsey Taylor	Research Assistant, CIMAR	2	5/6/2022	5/12/2022
Jessica Idle	Biological Technician, USFWS	2	5/6/2022	5/12/2022
Matheny, Sanna	Research Technician, CIMAR	2	5/6/2022	5/14/2022
Bolosan, Tiana	Crew Lead, RCUH, DLNR	2	5/6/2022	5/14/2022
Rickards, Mele	Volunteer, RCUH, DLNR	2	5/6/2022	5/14/2022
Smith, Michelle	Crew Lead, RCUH, DLNR	2	5/14/2022 (Kure)	5/25/2022
Brosius, Gideon	Volunteer, RCUH, DLNR	2	5/14/2022 (Kure)	5/25/2022
Hopkins, Hayden	Volunteer, RCUH, DLNR	2	5/14/2022 (Kure)	5/25/2022
Steinbesser, Myka	Volunteer, RCUH, DLNR	2	5/14/2022 (Kure)	5/25/2022
Moss, Dwight	Volunteer, RCUH, DLNR	2	5/14/2022 (Kure)	5/25/2022

*Staman, Yost, Mercer, Ely, Glover, and Hein additionally disembarked or embarked for short lengths of time as detailed in the itinerary section.

PROJECT MEDIA

Media associated with SE-22-03 can be found at the following location: [Turtle and Seal Biologists Deploy to Papahānaumokuākea for the 2022 Field Season](#) (Feature Story)

Submitted by: _____
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