



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-22-06

PROJECT PERIOD:

The NOAA Ship *Oscar Sette* was engaged as support for a Pacific Islands Fisheries Science Center (PIFSC), National Marine Fisheries Service (NMFS), NOAA, project from 06 August 2022 to 02 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 Hawaii to Kure Atoll with Hawaiian monk seal and marine turtle surveys and/or camp deployment at Ni'ihau, Mokumanamana, Nihoa, Lalo (French Frigate Shoals), Kamole (Laysan Island), Kapou (Lisianski Island), Manawai (Pearl and Hermes Reef), Midway Atoll (Kuaihelani), and Hōlanikū (Kure Atoll).

TYPE OF OPERATION:

1. Recover 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. Release and 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 two High-Frequency Acoustic Recording Package (HARP) for the Cetacean Research Program (CRP) near Pearl and Hermes Reef and off Kona, Hawaii island.
5. Retrieve and replace two acoustic mooring systems for the Hawaiian Islands Humpback Whale National Marine Sanctuary near French Frigate Shoals and Middle Bank.
6. Opportunistic CTD casts.

ITINERARY:

6 August - Pearl Harbor: Departed NOAA Pier at Ford Island, Pearl Harbor ontime at 1300. Conducted ship familiarization and began transit to Kona. Embarked one Hawaiian monk seal pup in need of rehabilitative care for transport to Kona.

Embark (8): Ronco, Cedillo, Staman, McCue, Kozama, Selvig, Rios, Siddiqi

7 August - Kona: Recovered Kona HARP at approximately 0900, deployed replacement HARP immediately afterwards. Launched SE-2 at 1030 to Honokohau Harbor to disembark one seal patient in need of care at KKO. Embarked one seal patient for release in PMNM and additional science team members. Recovered SE-2 at 1130, secured operations, and departed for Nihoa.

Embark (2): Whoriskey, Flores

8 August - Transit

9 August - Transit: Scheduled survey at Nihoa was not conducted on this date. Vessel access to the area was prohibited due to military activities.

10 August - Mokumanamana: Launched SE-2 at 0800 to deploy 6 personnel to conduct monk seal surveys at the primary landing and at the boulder ledge. Recovered shore party at 1400, secured operations, departed for Kamole.

Survey Teams (6): Ronco, McCue, Staman, Cedillo, Kozama, Selvig

11 August - Transit

12 August - Kamole (Laysan Island): Launched SE-2 and SE-4 starting at 0800 to recover USFWS team and field camp supplies plus shore team to assist with field camp onload and breakdown. Recovered shore party at 1615, secured operations, departed for Kapou.

Disembark (1): Kozama

Embark (2): Poulson, Stone

13 August - Kapou (Lisianski Island): Launched SE-2 and SE-4 starting at 0800 to recover seal and USFWS team and field camp supplies plus shore team to assist with field camp onload and breakdown. Recovered shore party at 1615, secured operations, departed for Manawai.

Embark (3): Bane, Taylor, Idle

14 August - Manawai (Pearl and Hermes Reef, offshore only): Recovered and deployed replacement HARP at Manawai. Secured operations, departed for Hōlanikū.

15 August - Hōlanikū (Kure Atoll): Launched SE-2 and SE-4 starting at 0800 to recover seal and DLNR teams plus shore team to assist with field camp onload and breakdown. Offloaded outgoing DLNR team's gear and equipment. Recovered shore party at 1615, secured operations,

departed for Midway Atoll.

Disembark: Rios, Flores, Siddiqi

Embark(4): Matheny, Boloson, Rickards, Rosen

16 August - Midway Atoll (Kuaihelani):

Launched Kaku starting at 0800 to recover seal team and field camp supplies plus shore teams to survey Sand, Eastern, Spit. Recovered Elele and Kukini. Recovered one juvenile Hawaiian monk seal in need of rehabilitative care. Recovered shore party at 1615, secured operations, departed for Manawai.

Disembark (2): Poulson, Stone

Embark (2): Mino, Yost

17 August - Manawai: Launched Kaku starting at 0800 to recover field camp supplies plus shore team to assist with field camp onload and breakdown. Recovered shore party at 1615, and secured operations.

18 August - Manawai: Launched Kaku starting at 0800 to recover field camp supplies plus shore team to assist with field camp onload and breakdown. Launched Elele to survey North Island. Recovered one Hawaiian monk seal pup in need of rehabilitative care. Recovered shore party at 1615, secured operations, departed for Kamole.

19 August - Transit

20 August - Kamole: Launched SE-2 and SE-4 starting at 0800 to recover seal and USFWS teams and field camp supplies plus shore team to assist with field camp onload and breakdown. Recovered shore party at 1615, secured operations, departed for Lalo.

Embark (5): Ely, Glover, Hein, Kozama, Vallery

21 August - Transit

22 August - Lalo (French Frigate Shoals): Launched SE-4 starting at 0800 to send vet team and shore party ashore. Recovered two Hawaiian monk seal pups in need of rehabilitative care. Recovered shore party at 1000, secured operations, departed for Nihoa.

23 August - Nihoa: Launched SE-2 at 1000 to deploy 7 personnel to conduct monk seal surveys on Nihoa's main beach and west ledge. Recovered shore party at 1400, secured operations, departed for Kona.

Survey Teams (8): Ronco, Cedillo, Mino, Kozama, Yost, Ely, Matheny, Glover.

24 August - Transit

25 August - Kona: Launched SE-4 at 0800 to Honokohau Small Boat Harbor to disembark four seal patients. Recovered SE-4 at 0915, secured operations, and departed for Pearl Harbor.

Disembark (1): Whoriskey

26 August - Pearl Harbor: Arrived offshore at PH buoy at 0630, secured at NOAA Pier at Ford Island, Pearl Harbor at 0700. All Leg 1 gear, equipment, and program/NOS boats offloaded.

Disembark (17): Ronco, Cedillo, Ely, Glover, Hein, Mino, Kozama, Yost, Selvig, Matheny, Rosen, Bolosan, Rickards, Bane, Taylor, Idle, Vallery

Embark (5): Bohlander, Barclay, Geary, Clemans, Sommer

27 August - Pearl Harbor: Departed NOAA Pier at Ford Island, Pearl Harbor on time at 0800. Conducted ship familiarization and began transit to Lalo.

Embark (5): Becker, Kelly

28 August - Transit

29 August - Lalo (French Frigate Shoals): Launched SE-2 and SE-4 starting at 0800 to recover field camp supplies plus shore team to assist with field camp onload and breakdown. Recovered Montauk at 0900 and SE-2 at 1600. Recovered shore party and SE-4 at 1730, and secured operations.

Disembark (2): Barclay, Geary

30 August - Lalo: Launched SE-2 and SE-4 starting at 0800 to recover field camp supplies plus shore team to assist with field camp onload and breakdown. Recovered Iwa at (1000) and shore party in SE-4 at 1430, secured operations, departed for Ni'ihau.

Embark (9): Barclay, Geary, Schneiderman, Kerschner, Vasquez, Stilley, Reininger, Stoll, Glinsky

31 August - Transit

1 September - Ni'ihau: Launched SE-2 at 0730 to deploy 6 personnel to conduct monk seal surveys at Ni'ihau and re-launched SE-2 to deploy 3 personnel to conduct a survey around Lehua at 0900. Recovered survey team at Lehua at 1015, and shore party at Ni'ihau at 0430, secured operations, departed for Pearl Harbor.

Survey Teams (9): Bohlander, Becker, Schneiderman, Stilley, Kerscher, Vasquez, McCue, Reininger, Kelly

2 September - Pearl Harbor: Arrived offshore at PH buoy at 1000, secured at NOAA Pier at Ford Island, Pearl Harbor at 1130. All Leg 2 gear, equipment, and program boats offloaded.

Disembark (16): Staman, McCue, Bohlander, Becker, Barclay, Geary, Clemans, Sommer, Kelly, Schneiderman, Kerschner, Stilley, Vasquez, Reininger, Glinsky, Stoll

MISSIONS AND RESULTS:

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

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

Field camps were recovered successfully at all sites.

- 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.**

Hawaiian monk seal population assessment surveys with partial (Incidental, I) or full island (Census, C) coverage or full atoll coverage (Atoll Count, A) were conducted at Mokumanamana (MMM), Midway Atoll, Manawai (Pearl and Hermes Reef) and Nihoa.

Table 1: Summary of preliminary Hawaiian monk seal survey data collected during SE-22-06. Seal counts are approximate and will be confirmed once data is analyzed.

Site	Survey Date	Survey type	Seal Count	Seals Temple Tagged	Notes
MMM	10 Aug	C	27	0	Two mom/pup pairs observed, plus one suspected mom with dead P1.
Midway Atoll	16 Aug	A	24	2	Two previously unmarked juveniles tagged, one on Sand and one on Eastern. No mom/pup pairs or new weaned pup observed
Manawai (PHR) - North Islands	18 Aug	I	n/a	5	5 weaned pups were tagged, and one new mom/pup pair was observed.
Nihoa	23 Aug	C	24	1	No mom/pup pairs or weaned pups observed. One previously unmarked subadult tagged.

No marine turtle population assessment surveys were conducted during SE-22-06 on islands where HMSRP or MTBAP camps were present this summer. Surveys were conducted on Mokumanamana, Midway Atoll, and Nihoa Island (table 2).

Table 2: Summary of preliminary green sea turtle survey data collected during SE-22-06.

Site	Survey Date	Notes
MMM	10 Aug	2 turtles (1 male, 1 female) observed basking by HMSRP field staff during full island census. Neither were checked for tags.
Midway	16 Aug	1 turtle observed basking during a census on Eastern Island. No turtles were observed on Sand Island during the HMSRP incidental survey.
Nihoa	23 Aug	No turtles observed by HMSRP field staff during full island census.

3. Release and 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

One Hawaiian monk seal pup in poor condition was transferred from Oahu on 06 August to Kailua-Kona on Hawaii Island on 07 August. The seal was delivered to the Ke Kai Ola veterinary team for rehabilitative care at The Marine Mammal Center’s hospital.

One healthy Hawaiian monk seal pup was transferred from Ke Kai Ola to the Sette on 07 August and transported to Kamole on 12 August. The seal was released on 15 August following 3 days of acclimatization in a shore pen.

During the cruise, animals in poor body condition in need of rehabilitative care were identified and embarked at Midway on 16 August (1), Manawai on 18 August (1), and Lalo on 22 August (2). These seals were delivered to the Ke Kai Ola veterinary team on 25 August for rehabilitative care at The Marine Mammal Center’s hospital.

While all seals were onboard, the veterinary team provided supportive care and trained members of the science party monitored the animals around the clock. All animals will be released following their recovery.

4. Retrieve and replace two High-Frequency Acoustic Recording Package (HARP) for the Cetacean Research Program (CRP) near Pearl and Hermes Reef and off Kona, Hawaii island.

The HARP offshore of Kona, Hawaii Island was recovered and replaced successfully on 07 August. The HARP near Manawai (Pearl and Hermes Reef) was recovered and replaced successfully on 14 August.

Location	New Deployment Date/Time	New Latitude	New Longitude	New Depth
Kona	07 August 2022, 0942 HST	19°34.996'N	156°00.935'W	655.5m
Manawai (PHR)	14 August 2022, 1012 HST	27°43.766'N	175°33.249'W	1074m

5. Retrieve and replace two acoustic mooring systems for the Hawaiian Islands Humpback Whale National Marine Sanctuary near French Frigate Shoals and Middle Bank.

The acoustic moorings were recovered and replaced at Middle Bank on 9 August and at Lalo (French Frigate Shoals) on 22 August.

Location	New Deployment Date/Time	New Latitude	New Longitude	New Depth
Middle Bank	09 August 2022, 0854 HST	22°39.736'N	161°02.522'W	59.98m
Lalo (FFS)	22 August 2022, 1028 HST	23°45.475'N	166°20.087'W	29.7m

6. Opportunistic CTD casts.

The following CTD casts were conducted during SE-22-06.

Site	Location	Date/Time Completed
Nihoa CTD	22° 32.000'N 162° 00.000'W	31 August 2022, 1705 HST
Necker CTD	23° 11.099'N 164° 42.562'W	31 August 2022, 0116 HST
FFS CTD	23° 34.000'N 166° 18.000'W	29 August 2022, 1949 HST
Gardner Pinnacles CTD	24° 08.000'N 167° 40.000'W	21 August 2022, 1612 HST
Maro Reef CTD	25° 00.000'N 170° 00.000'W	11 August 2022, 1901 HST
Laysan CTD	25° 34.000'N 171° 32.000'W	20 August 2022, 1512 HST
Lisianski CTD	25° 50.000'N 173° 40.000'W	19 August 2022, 1328 HST
PHR CTD	27° 40.000'N 175° 49.700'W	14 August 2022, 1347 HST*
Midway CTD	28° 06.001'N 177° 21.300'W	16 August 2022, 1944 HST*
Kure CTD	28° 12.000'N 178° 20.001'W	15 August 2022, 0309 HST*

*Conducted while ship was on 'Samoa Standard Time' for Midway Atoll (-1 hour from HST)

SCIENTIFIC PERSONNEL:

Participating Institutions

- NOAA Fisheries
 - Pacific Island Fisheries Science Center (PIFSC)
 - Protected Species Division (PSD)
 - Hawaiian Monk Seal Research Program (HMSRP)
 - Marine Turtle Biology & Assessment Program (MTBAP)
 - Protected Species Support and Services Program (PSSP)
 - Pacific Island Regional Office (PIRO)
 - Protected Resources Division (PRD)
 - Research Corporation of the University of Hawaii (RCUH)
 - Cooperative Institute for Marine and Atmospheric Research (CIMAR)
 - State of Hawaii Department of Land and Natural Resources (DLNR)
 - U.S. Fish and Wildlife Service (USFWS)
 - Ke Kai Ola (KKO), The Marine Mammal Center (TMMC)

In the following table, colors are used to indicate the sites at which personnel are embarking or disembarking. No color indicates Honolulu, gray indicates Kona, yellow indicates FFS, orange indicates Laysan, green indicates Lisianski, blue indicates PHR, pink indicates Midway, purple indicates Kure.

Name (Last, First)	Title	Leg	Date Aboard	Date Disembark	Affiliation
Ronco, Hope	Marine Biologist (Chief Scientist, Leg 1)	1	8/6/2022	8/26/2022	NOAA
Staman, Marylou	Marine Science Coordinator (Chief Scientist, Leg 2)	all	8/6/2022	9/2/2022	CIMAR
McCue, Laura	Marine Biologist (Operations Lead)	all	8/6/2022	9/2/2022	NOAA
Cedillo, Claudia	Veterinary Technician	1	8/6/2022	8/26/2022	NOAA
Selvig, Meagan	CIMAR Research Assistant	1	8/6/2022	8/26/2022	CIMAR
Kozama, Christy*	CIMAR Research Associate	1	8/6/2022	8/26/2022	CIMAR
Siddiqi, Afsheen	DLNR Camp Leader	1	8/6/2022	8/15/2022	DLNR
Rios, Hāwane	DLNR Volunteer	1	8/6/2022	8/15/2022	DLNR
Flores, Kapulei	DLNR Volunteer	1	8/7/2022	8/15/2022	DLNR
Whoriskey, Sophie	Veterinarian	1	8/7/2022	8/26/2022	KKO

Stone, Michael	USFWS Biologist	1	8/12/2022	8/16/2022	USFWS
Poulsen, Peter	USFWS Biologist	1	8/12/2022	8/16/2022	USFWS
Bane, Michele	CIMAR Research Technician	1	8/13/2022	8/26/2022	CIMAR
Taylor, Chelsey	CIMAR Research Assistant	1	8/13/2022	8/26/2022	CIMAR
Idle, Jessica	USFWS Biological Technician	1	8/13/2022	8/26/2022	USFWS
Matheny, Sanna	CIMAR Research Technician	1	8/15/2022	8/26/2022	CIMAR
Rosen, Jonathan	CIMAR Research Assistant	1	8/15/2022	8/26/2022	CIMAR
Bolosan, Tiana	DLNR RCUH Camp Leader	1	8/15/2022	8/26/2022	DLNR
Rickards, Mele	DLNR Volunteer	1	8/15/2022	8/26/2022	DLNR
Mino, Paige	CIMAR Research Technician	1	8/16/2022	8/26/2022	CIMAR
Yost, James	CIMAR Research Assistant	1	8/16/2022	8/26/2022	CIMAR
Ely, Megan	CIMAR Research Technician	1	8/20/2022	8/26/2022	CIMAR
Glover, Sarah	CIMAR Research Assistant	1	8/20/2022	8/26/2022	CIMAR
Hein, Rachel	CIMAR Research Assistant	1	8/20/2022	8/26/2022	CIMAR
Vallery, Anna	USFWS Biologist	1	8/20/2022	8/26/2022	USFWS
Bohlander, Jessica	Supervisory Marine Biologist	2	8/26/2022	9/2/2022	NOAA
Becker, Brenda	Biological Technician	2	8/27/2022	9/2/2022	NOAA
Sommer, Allison	CIMAR Research Technician	2	8/26/2022	9/2/2022	CIMAR
Clemans, Brittany	CIMAR Research Technician	2	8/26/2022	9/2/2022	CIMAR
Barclay, Stephen*	USFWS Biologist	2	8/26/2022	9/2/2022	USFWS
Geary, Nate*	USFWS Engineer	2	8/26/2022	9/2/2022	USFWS
Kelly, Irene	Natural Resource Specialist	2	8/27/2022	9/2/2022	NOAA
Schneiderman, Jonathan	CIMAR Research Technician	2	8/30/2022	9/2/2022	CIMAR
Kerschner, Leah	CIMAR Research Assistant	2	8/30/2022	9/2/2022	CIMAR
Vasquez, Shannon	CIMAR Research Assistant	2	8/30/2022	9/2/2022	CIMAR
Stilley, James	CIMAR Research Assistant	2	8/30/2022	9/2/2022	CIMAR
Reininger, Alexandra	CIMAR Research Technician	2	8/30/2022	9/2/2022	CIMAR
Stoll, Jamie	CIMAR Research Assistant	2	8/30/2022	9/2/2022	CIMAR
Glinsky, Andrew	CIMAR Research Assistant	2	8/30/2022	9/2/2022	CIMAR

*Kozama, Barclay, and Geary additionally disembarked or embarked for short lengths of time as detailed in the itinerary section.

PROJECT MEDIA:

Media associated with SE-22-06 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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