



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE/NOAA FISHERIES
Pacific Islands Fisheries Science Center
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PROJECT REPORT¹

VESSEL: NOAA Ship *Oscar Elton Sette*, Cruise SE-14-06

CRUISE 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 August 30 through September 19, 2014, for a total of 21 sea days in the Papahānaumokuākea Marine National Monument (PMNM) and main Hawaiian Islands (MHI).

AREA OF OPERATION: The operating area included transit northwest along the main Hawaiian Islands and PMNM from Ford Island, Pearl Harbor, to Kure and southeast to Kona, Island of Hawaii, with Protected Species Division (PSD) operations including opportunistic Hawaiian monk seal surveys, field camp recovery, transport of Hawaiian monk seals, at Hawaii Island, Ni'ihau Island, Nihoa Island, Necker Island, French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, Midway Atoll, and Kure Atoll.

TYPE OF OPERATIONS:

1. Field camp demobilization and gear recovery
2. Monk seal population surveys
3. Weaned monk seal pup translocations between the Northwestern Hawaiian Island (NWHI) sites
4. Transport of seals between Ke Kai Ola monk seal rehabilitation facility and NWHI
5. Deployment and recovery of High-frequency Acoustic Recording Packages (HARPs) for the Cetacean Research Program (CRP).

¹ PIFSC Cruise Report CR-17-002
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6. Conduct CTD casts at 10 permanent conductivity/temperature/depth (CTD) stations in NWHI.

ITINERARY:

- 30 August **Pearl Harbor:** Embarked 16: Lopez, Littnan, Kaufman, Taylor, McAtee, Brookshire, Ronco, Dalton, Heindl, Matsuoka, Eitelberg, Fox, Fields, Bolosun, Irvine, Luthy. Departed Ford Island, Pearl Harbor at 1400 en route to Kona.
- 31 August **Kona:** 0800 Arrived Honokohau Harbor. Deployed SE-4 and seal party to Honokohau Harbor to collect seals coming from Ke Kai Ola rehabilitation facility. Seals were transferred to ship using SE-4 over 4 trips to the ship. Embarked 1: Barbieri. Departed 1100 en route for Kauai HARP site.
- 1 September **Kauai HARP:** 1030 Arrived Kauai HARP site. Attempted recovery of HARP but was not able to get a signal from the instrument. Departed 1100 en route for French Frigate Shoals.
- 2 September **Transit**
- 3 September **French Frigate Shoals:** Arrived at French Frigate Shoals 0800. Deployed seal team to release one seal and begin assessment and translocation of seals. 1100 Embarked 1: Spring. 1030–1530, loaded seven (7) weaned pups for translocation to Laysan Island. 1600 Recovered shore party. Departed French Frigate Shoals 1700 en route to Laysan Island.
- 4 September **Transit**
- 5 September **Laysan Island:** Arrived at Laysan Island 0800. Deployed SE-04 with shore party. Shore party set up shore pen and conducted seal captures. 1030 Began conducting release of translocated seals. Disembarked 10 monk seals. Disembarked 5 scientists: Taylor, Brookshire, Ronco, Dalton, Heindl. Shore party captured 4 seals (3 weaned pups, 1 juvenile) for sampling and satellite tagging. 1500 Recovered shore party. Departed 1700 en route to Lisianski Island.
- 6 September **Lisianski Island:** Arrived at Lisianski Island 0800. Deployed SE-4 with shore party. Loaded all field camp gear and shore party conducted seal census and turtle survey. Departed 1500 en route to Pearl and Hermes Reef.
- 7 September **Pearl and Hermes Reef:** Arrived at Pearl and Hermes Reef 0800. Loaded all field camp gear and supplies including one 5-meter inflatable boat, 5.5-meter rigid hull inflatable boat and up to 4 drums of gasoline. 1700 Departed en route to Kure Atoll.
- 8 September **Kure Atoll:** Arrived at Kure Atoll 0800. Offloaded and loaded DLNR and NMFS supplies. Disembarked 5: Fox, Fields, Bolosun, Irvine and Luthy, Embarked 6: Worcester, Saunter, Portner, Tucker-Williams, Cook, and Cody. Captured 3

- weaned pups: 2 for translocation to Lisianski and 1 for rehabilitation in Kona.
1700 Departed en route to Midway Atoll.
- 9 September **Midway Atoll:** Arrived 0800 and tied up to cargo pier. Disembarked 3: Spring, Portner, and Tucker-Williams. Embarked 2: Farrer and Meise. Captured 2 weaned pups for translocation. Captured 2 additional weaned pups for sampling and satellite tagging. Departed Midway 1800 en route to Pearl and Hermes Reef.
- 10 September **Pearl and Hermes Reef:** Arrived at Pearl and Hermes Reef 0800. Deployed SE-4 to conduct seal surveys and tagging. 1400 Recovered SE-4 and transited to HARP site. 1600 Recovered PHR HARP and deployed new harp. Departed 1800 en route to Lisianski Island.
- 11 September **Lisianski Island:** Arrived at Lisianski Island 0800. Deployed seal team on SE-2 to conduct survey. Deployed SE-4 with 4 translocated seals for release on Lisianski Island. 1000 Recovered SE-4. Shore team captured 2 weaned pups for sampling and satellite tagging. 1400 Recovered SE-2 with shore team and departed en route to Laysan Island.
- 12 September **Laysan Island:** Arrived at Laysan Island 0800. Demobilized camp. Loaded all equipment and supplies using SE-4 and SE-2. Embarked 1 pre-weaned monk seal pup for transport to Kona. Embarked 3 scientists: Taylor, Brookshire, Ronco. 1200 Departed en route to French Frigate Shoals.
- 13 September **Transit**
- 14 September **French Frigate Shoals:** Arrived at French Frigate Shoals 0800. Demobilized camp. Loaded all supplies including two 17-ft Boston Whalers. Loaded all other equipment and supplies using SE-4 and SE-2. Embarked 4: Farry, Roberts, Hess, Yeager. 1400 Departed FFS en route to Necker Island.
- 15 September **Transit**
- 16 September **Ni'ihau Island:** Arrived 0800 to Ni'ihau Island. Launched SE-2 to conduct monk seal survey. Recovered SE-2 and transited to Lehua rock for seal survey. 1000 launched SE-2 with seal team to conduct survey of Lehua Rock. 1130 recovered SE-2. 1700 recovered Ni'ihau survey team.
- 17 September **Transit**
- 18 September **Kona:** 0800 Arrived Honokohau Harbor. Deployed SE-4 with 2 seals and seal team to meet Ke Kai Ola staff on shore. Disembarked Barbieri. 1000 Transited to Jaggar Seamount HARP site. 1500 recovered HARP and transited to Pearl Harbor.
- 19 September **Pearl Harbor.** Disembarked 19: Lopez, Littnan, Kaufman, Eitelberg, Farry, Roberts, Hess, Yeager, Taylor, Brookshire, Ronco, McAtee, Meise, Cook, Cody, Worcester, Saunter, Farrer, Matsuoka.

MISSIONS AND

RESULTS: The main objectives for SE 14-6 were:

1. Monk seal camp demobilization and supply transport:
Monk seal field camps were demobilized at French Frigate Shoals and Kure Atoll. A temporary camp was established at Laysan Island. Supplies from previously evacuated camps at Lisianski Island and Pearl and Hermes Reef were recovered. Supplies and personnel were transported by SE 14-6 for the American Bird Conservancy from Laysan Island and for the DLNR to/from Kure Atoll.

2. Opportunistic monk seal surveys and satellite tagging:
Hawaiian monk seal population surveys were conducted at Lisianski Island, Pearl and Hermes Reef, and Ni'ihau Island. Eight seals (3 weaned pups at Laysan, 1 juvenile at Laysan, 2 weaned pups at Midway, 2 weaned pups at Lisianski) were sampled, satellite tagged, and left on site for assessment of health and behavior.

3. NWHI Translocations:
A total of 11 female weaned monk seals were moved from sites with a low probability of survival in the NWHI to other sites with a higher probability of survival in the NWHI. Seven weaned pups were moved from French Frigate Shoals to Laysan Island. Two weaned pups were moved from Kure Atoll to Lisianski Island. Two weaned pups were moved from Midway Atoll to Lisianski Island.

Table 1: NWHI translocations

<u>Seal ID</u>	<u>Source Site</u>	<u>Date Captured</u>	<u>Destination Site</u>	<u>Date Released</u>
Y12F	French Frigate Shoals	9/3/2014	Laysan Island	9/5/2014
Y16F	French Frigate Shoals	9/3/2014	Laysan Island	9/5/2014
Y20F	French Frigate Shoals	9/3/2014	Laysan Island	9/5/2014
Y26F	French Frigate Shoals	9/3/2014	Laysan Island	9/5/2014
Y50F	French Frigate Shoals	9/3/2014	Laysan Island	9/5/2014
Y72F	French Frigate Shoals	9/3/2014	Laysan Island	9/5/2014
Y74F	French Frigate Shoals	9/3/2014	Laysan Island	9/5/2014
KF18	Kure Atoll	9/8/2014	Lisianski Island	9/11/2014

Table 1 cont'd:

<u>Seal ID</u>	<u>Source Site</u>	<u>Date Captured</u>	<u>Destination Site</u>	<u>Date Released</u>
KF20	Kure Atoll	9/8/2014	Lisianski Island	9/11/2014
PF00	Midway Atoll	9/9/2014	Lisianski Island	9/11/2014
PF02	Midway Atoll	9/9/2014	Lisianski Island	9/11/2014

4. Ke Kai Ola transport:

Four seals (2 weaned pups and 2 juveniles) were transported from a rehabilitation facility in Kona on the Island of Hawaii to French Frigate Shoals and Laysan Island. Two seals were collected from Kure Atoll and Midway Atoll and transported to Ke Kai Ola at the end of the project.

Table 2: Seals transported between Ke Kai Ola rehabilitation facility and NWHI.

<u>Seal ID</u>	<u>Size</u>	<u>Sex</u>	<u>Source Site</u>	<u>Destination Site</u>
Y5PP	juvenile—unknown age, presumptive yearling	F	Ke Kai Ola—Kona	French Frigate Shoals
PN10	juvenile—yearling	F	Ke Kai Ola—Kona	Laysan Island
BF00	weaned pup	F	Ke Kai Ola—Kona	Laysan Island
BF02	weaned pup	M	Ke Kai Ola—Kona	Laysan Island
KF04	weaned pup	F	Kure Atoll	Ke Kai Ola—Kona
TF90	weaned pup	F	Laysan Island	Ke Kai Ola—Kona

5. HARP:

The project supported the PSD Cetacean Research Program by recovering and deploying HARPs at Pearl and Hermes Reef. A HARP recovery was attempted off of the Island of Kauai but no response was received from the instrument. A third HARP was recovered from Jaggar Seamount to the west of the Island of Hawaii.

6. CTDs:

Shipboard CTD casts were conducted successfully at 10 historical sites during transits between islands. CTDs were conducted to a depth of 500 m at 10 permanent CTD cast stations at Nihoa, Necker, French

Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island, Lisianski Island, Pearl and Hermes Reef, Midway Atoll, and Kure Atoll to examine oceanographic conditions and water quality.

**SCIENTIFIC
PERSONNEL:**

1. Barbieri, Michelle, Veterinarian, Pacific Islands Fisheries Science Center (PIFSC), National Marine Fisheries Service (NMFS)
2. Bolosan, Tiana, DLNR volunteer, Department of Land and Natural Resources (DLNR), State of Hawaii (SOH)
3. Brookshire, Gennifer, JIMAR volunteer, Joint Institute for Marine and Atmospheric Research (JIMAR), University of Hawaii (UH)
4. Cody, Nicole, Hoku, JIMAR volunteer, JIMAR, UH
5. Cook, Benjamin, Biological Research Technician, JIMAR, UH
6. Dalton, Megan, Millerbird Biologist, American Bird Conservance (ABC)
7. Eitelberg, Robin, Collaborator, Skysail Films
8. Farrer, Jessica, Biological Research Technician, JIMAR, UH
9. Farry, Shawn, Biological Research Technician, JIMAR, UH
10. Fields, Ben, DLNR volunteer, DLNR, SOH
11. Fox, Adam, biological technician, DLNR, SOH
12. Heindl, Barbara, Millerbird Biologist, ABC
13. Hess, Megan, JIMAR volunteer, JIMAR, UH
14. Irvine, Aliah, DLNR volunteer, SOH
15. Kaufman, Angela, veterinary technician, JIMAR, UH
16. Littnan, Charles, Lead Scientist, PIFSC, NMFS
17. Lopez, Jessica, Field Research Supervisor and Chief Scientist, JIMAR, UH
18. Luthy, Tamara, DLNR volunteer, DLNR, SOH
19. Matsuoka, Koa, JIMAR Volunteer, JIMAR, UH
20. McAtee, Carrie, Biological Research Technician, JIMAR, UH
21. Meise, Kristine, JIMAR Volunteer, JIMAR, UH
22. Portner, Liat, DLNR volunteer, DLNR, SOH
23. Roberts, Darren, Biological Research Technician, JIMAR, UH
24. Ronco, Hope, JIMAR volunteer, JIMAR, UH
25. Saunter, Matthew, DLNR biological technician, DLNR, State of Hawaii (SOH)
26. Spring, Joseph, Turtle Technician, JIMAR, UH
27. Taylor, Whitney, Biological Research Technician, JIMAR, UH
28. Tucker-Williams, DLNR volunteer, DLNR, SOH
29. Worcester, Naomi, DLNR biological technician, DLNR, SOH
30. Yeager, Kirstie, Biological Research Technician, JIMAR, UH

Submitted by: 

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Approved by: 

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