



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Pacific Islands Fisheries Science Center
1845 Wasp Blvd. Bldg. 176 • Honolulu, Hawaii 96818
(808) 725-5300

PROJECT REPORT

VESSEL: *Hi 'ialakai*, Project HA 16-03

PROJECT PERIOD:

The NOAA Ship *Hi 'ialakai* was engaged as a support vessel for a Pacific Islands Fisheries Science Center (PIFSC), National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), project from April 17 through May 13, 2016 for a total of 27 sea days at the Northwest Hawaiian Islands (NWHI) in the Papahānaumokuākea Marine National Monument (PMNM) and Main Hawaiian Islands (MHI).

AREA OF OPERATION:

The operating area included transit northwest along the MHI and NWHI from Ford Island, Pearl Harbor, to Kure Atoll with Hawaiian monk seal research program (HMSRP) operations including opportunistic Hawaiian monk seal surveys, field camp deployment, and collection of Hawaiian monk seals for rehabilitation and transport at Nihoa Island, Necker Island, French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, Midway Atoll, and Kure Atoll.

TYPE OF OPERATIONS:

The ship established monk seal field camps by transporting HMSRP personnel, equipment, and supplies to French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Reef, and Kure Atoll. A monk seal staff member was deployed short-term on Midway Atoll to conduct monk seal surveys. Day monk seal surveys at Ni‘ihau Island, Nihoa Island, and Midway Atoll were conducted to census the monk seal population.

Seven juvenile Hawaiian monk seals were translocated from Oahu to sites in the NWHI to be returned to the wild after a period of rehabilitation at a facility in Kona. While on board the ship, the seals were held in cages on the aft deck. While seals were on deck, limited access was allowed to maintain quarantine and seals were monitored by scientists 24 hours a day. Small boats were used to move seals from the ship to the islands in large dog kennels.

Land based marine debris operations were conducted at Kure Atoll, Midway Atoll, Pearl and Hermes Reef, Lisianski Island, and French Frigate Shoals. Nets, lines, and plastics were collected from the shorelines and moved to large bagsters that were then loaded in small boats and transported to the ship to be removed from the environment.

ITINERARY:

17 April **Pearl Harbor:** Embarked 21 scientists: Barbieri, Barcina, Becker, Bohlander, Brack, Chauvin, Dolan, Duffy, Johanos, Hilliard, Hughes, Kaufman, Lyons, Nichols, Nimz, Ronco, Smith, Sullivan, Surgent, White, Youngstrom, and 7 seals. Departed Ford Island, Pearl Harbor en route to Ni‘ihau Island.

18 April **Ni‘ihau Island:** Early morning arrival at Ni‘ihau Island. Weather was deemed unsafe for launching of small boats. After assessing options and weather forecast, the ship departed the area and traveled Northwest to assess conditions at sites further up the chain.

19 April **Mokumanamana Island:** 1200 arrival at Mokumanamana Island. Weather was deemed unsafe for launching of small boats and landing on island was unsafe due to high surf and waves. Departed area en route to French Frigate Shoals.

20 April **French Frigate Shoals:** Morning arrival at FFS. Disembarked Sullivan, Barcina, Nichols, Hilliard, Hughes, and Lyons, and deployed additional day personnel to assist in camp set up. Offloaded equipment and supplies using small boats Kaku, Zodiac, and HI2 including 1 17-ft Boston Whaler, 1 6-m RHIB, 9 55-gal drums of gasoline, 8 bins frozen bait, 24 propane tanks, and 180 5-gal water jugs. Transported three rehabilitated seals to island for release. Offload continued until 1730. Secured operations for the day.

21 April **French Frigate Shoals:** Continued offload of equipment from previous day. Afternoon, recovered shore personnel and departed FFS en route to Laysan Island

22 April **Transit**

23 April **Laysan Island:** Morning arrival at Laysan Island. Disembarked Ronco, Smith, Chauvin, and Johanos and deployed additional personnel to assist with camp set up. Offloaded equipment and supplies using small boats Kaku, Zodiac, and HI2 including 4 pallet tubs, buckets, and 100 5-gal water jugs. Transported and

released of one rehabilitated seal. Recovered shore personnel. Afternoon, departed Laysan Island en route to Lisianski Island.

24 April **Lisianski Island:** Morning arrival at Lisianski Island. Disembarked Nimz, Dolan, and Becker, and deployed additional personnel to assist with camp set up. Offloaded equipment and supplies using small boats Kaku, Zodiac, and HI2 including 4 pallet tubs, buckets, and 80 5-gal water jugs. Transported and released of two rehabilitated seals. Afternoon, recovered shore personnel and departed Lisianski en route to Pearl and Hermes Reef.

25 April **Pearl and Hermes Reef:** Morning arrival at PHR. Disembarked Youngstrom, Brack, White, and Surgent and deployed additional personnel to assist with camp set up. Offloaded equipment and supplies using small boats Kaku, Zodiac, and HI2 including one 5-meter inflatable boat, one 5.5-meter RHIB, 5 pallet tubs, buckets, 120 5-gal water jugs, and 7 55-gallon drums of gasoline. Afternoon recovered shore personnel and departed in route to Midway Atoll.

26 April **Midway Atoll:** Morning arrival at Midway cargo pier. Deployed shore team to conduct survey on Sand Island. Loaded marine debris and equipment. Loaded 950 gallons of gasoline. Overnighted at cargo pier.

27 April **Midway Atoll:** Conducted seal survey at Eastern Island. Embarked Morioka, Suka, Slater, Westbrook, Kelly, Garriques, Dillon, Acoba, Tabata, and Portner. Disembarked Kaufman. Afternoon departed for Kure Atoll.

28 April **Kure Atoll:** Morning arrival at Kure Atoll. Transported one rehabilitated seal using small boat Kaku. Deployed marine debris team on HI2 to collect debris on shore. Weather became unsafe for operations so all personnel were recalled and returned to the ship.

29 April **Kure Atoll:** Continued offload of Kure gear for NMFS and DLNR using Kaku. Marine debris team deployed on HI2 to collect debris on shore. Afternoon recovered shore personnel and departed en route to Midway Atoll.

30 April **Midway Atoll:** Morning arrival. Deployed Kaku to conduct monk seal survey on Eastern Island and HI2 to transport marine debris personnel to collect debris on Sand Island. Embarked Kaufman. Afternoon departure en route to Pearl and Hermes Reef.

1 May **Pearl and Hermes Reef:** Arrive Pearl and Hermes Reef. Deployed seal team on Kaku to Seal Kittery Island to conduct seal surveys and data collection training. Deployed marine debris team on small boats MD2 and MD3 to Seal Kittery Island to collect shore debris. MD2 and MD3 returned with 1 bagster each of debris. Afternoon recovered shore personnel.

2 May **Pearl and Hermes Reef:** Continued work at PHR. Deployed seal team on Kaku to North Island to conduct seal surveys and data collection training. Offloaded 1 55-gallon drum of gasoline. Deployed marine debris team to North Island on MD2 and MD3 to collect shore debris. Loaded ½ bagster of land debris. Afternoon recovered shore personnel.

3 May **Pearl and Hermes Reef:** Continued work at PHR. Deployed seal team on Kaku to conduct data collection training on Southeast Island. Offloaded 3 55-gallon drums of gasoline. Deployed marine debris team on MD2 and MD3 to Southeast Island to collect shore debris. Loaded 2 bagsters of land debris. Afternoon departed en route to Lisianski Island.

4 May **Lisianski Island:** Morning arrival at Lisianski Island. Deployed seal team in Kaku to search for entangled seal previously reported by Lisianski team. Deployed marine debris team in MD2 and MD3 to collect land debris. Loaded 3 bagsters of land debris. Embarked Becker. Afternoon recover shore personnel and depart en route to Laysan Island.

5 May **Laysan Island:** Morning arrival at Laysan Island. Deployed Kaku to recover personnel and offload equipment. Embarked Johanos. Weather conditions were unsuitable for other operations and forecasted to deteriorate so ship departed area once essential operations were completed en route to French Frigate Shoals.

6 May **Transit**

7 May **French Frigate Shoals:** Morning arrival at French Frigate Shoals. Deployed monk seal team to assist field camp personnel and marine debris team to conduct debris collection and surveys. Afternoon recovered shore personnel.

8 May **French Frigate Shoals:** Offloaded 10 drums of gasoline to Tern Island using Kaku. Afternoon departed en route to Mokumanamana Island.

9 May	Mokumanamana Island: Morning arrival at Mokumanamana Island. Weather was deemed unsafe for launching of small boats and landing on island was unsafe due to high surf and waves. Departed area en route to Nihoa Island.
10 May	Nihoa Island: Morning arrival at Nihoa Island. Weather in the morning was marginal for boating operations. After a reassessment around 1000 boats were prepared and successfully launched at 1200. Disembarked shore party using Zodiac to conduct seal surveys and repair time lapse camera on shore. Afternoon recover shore party.
11 May	Nihoa Island: In morning launched Zodiac to deploy shore party to conduct seal surveys and continue repair of time lapse camera on shore. Afternoon Zodiac recovered shore party and ship departed en route to Ni‘ihau Island.
12 May	Ni‘ihau Island: Morning arrival at Ni‘ihau Island. Launched Zodiac with shore party to conduct seal survey on shore. Recovered Zodiac and transited to Lehua rock for seal survey. Launched Avon with seal team to conduct survey of Lehua Rock. Recovered Zodiac and transited back to main Ni‘ihau launch site. Afternoon, launched Zodiac to recover shore party. Departed Ni‘ihau en route to Pearl Harbor.
13 May	Pearl Harbor: Arrive Ford Island, Pearl Harbor. End of Project.

MISSIONS AND RESULTS:

The main objectives for HA 16-03 were:

1. Deployed monk seal camps:
The ship successfully transported personnel, equipment, and supplies to field camps at French Frigate Shoals, Laysan Island, Lisianski Island, and Pearl and Hermes Reef. All personnel were disembarked and offloads were conducted safely within the time allotted. Due to a previous injury, the Kure monk seal staff member (Duffy) was not able to be disembarked. She returned to Honolulu with the ship. Kure camp supplies were offloaded in case a camp can be established later in the summer.
2. Conducted beach surveys for Hawaiian monk seals:
The fifth ever survey of Ni‘ihau Island (including Lehua rock) for Hawaiian monk seals was conducted on 12 May. One atoll count and additional seal surveys were completed

at Midway Atoll on 26, 27, and 30 April. Seal surveys were conducted at Nihoa Island on 10 and 11 May. Surveys were not able to be conducted at Mokumanamana (Necker) Island due to poor weather conditions. Survey results and data from these efforts are still being compiled.

3. Transported Hawaiian monk seals from Oahu to NWHI sites:

Seven seals were transported from Oahu to sites in the NWHI after time at a rehabilitation facility in Kona on the Island of Hawaii. The seals were held on the aft deck of the *Hi'ialakai* in cages with shade and water misters to maintain comfortable conditions. They were fed herring daily per veterinary guidance. Field teams searched their sites for appropriate candidates to transport from the NWHI to Kona for rehabilitation but none were identified in the time the ship was in the area.

Table 1: Seals transported between Ke Kai Ola (KKO) rehabilitation facility and NWHI

<u>Seal ID</u>	<u>Name</u>	<u>Size</u>	<u>Sex</u>	<u>Date Embarked</u>	<u>Destination Site</u>	<u>Date Disembarked</u>
AG18	Ama‘ama	J1	F	4/17/2016	FFS	4/20/2016
AG36	Mahina	J1	F	4/17/2016	FFS	4/20/2016
Y70F	Mo‘o	J2	F	4/17/2016	FFS	4/20/2016
NG99	Kilo	J1	F	4/17/2016	Laysan	4/23/2016
LG06	Puka	J1	F	4/17/2016	Lisianski	4/24/2016
LG36	Neva	J1	F	4/17/2016	Lisianski	4/25/2016
KG56	Ena‘ena	J1	F	4/17/2016	Kure	4/28/2016

4. Marine Debris surveys and removal

Marine debris shoreline surveys and removal operations were conducted at Midway Atoll, Kure Atoll, Pearl and Hermes Reef, Lisianski Island, and French Frigate Shoals, resulting in a removal of 10,965 kg. (24,123 lbs.) of derelict fishing gear and plastics from the environment. The ship successfully loaded and transported 9,280 kg. (20,416 lbs.) of marine debris back to Honolulu to be recycled through various partnerships.

SCIENTIFIC PERSONNEL:

Acoba, Tomoko, Joint Institute for Marine and Atmospheric Research (JIMAR) Marine Debris Specialist, JIMAR, UH
Barbieri, Michelle, Veterinarian, Pacific Islands Fisheries Science Center (PIFSC), National Marine Fisheries Service (NMFS)
Barcina, Keelan, JIMAR biological Research Technician, JIMAR, UH
Becker, Brenda, Biologist, PIFSC, NMFS
Bohlander, Jessica, Field Research Supervisor and Chief Scientist, JIMAR, UH
Brack, Jon, JIMAR biological research assistant, JIMAR, UH
Chauvin, Matthew, JIMAR volunteer, JIMAR, UH
Dillon, Amanda, JIMAR Marine debris specialist, JIMAR, UH
Dolan, Brittany, JIMAR Biological research assistant, JIMAR, UH
Duffy, Maureen, JIMAR biological Research Technician, JIMAR, UH
Garriques, Joao, JIMAR Marine debris specialist, JIMAR, UH
Hilliard, Genevieve, JIMAR volunteer, JIMAR, UH
Hughes, Olivia, JIMAR Marine turtle technician, JIMAR, UH
Johanos, Thea, Biologist, PIFSC, NMFS
Kaufman, Angela, JIMAR veterinary technician, JIMAR, UH
Kelly, Kristen, JIMAR Marine debris specialist, JIMAR, UH
Lyons, Kerry, JIMAR Marine turtle technician, JIMAR, UH
Morioka, James, JIMAR Marine debris operations lead, JIMAR, UH
Nichols, Ross, JIMAR Biological research assistant, JIMAR, UH
Nimz, Ilana, Biological Research Technician, JIMAR, UH
Portner, Liat, JIMAR Marine debris specialist, JIMAR, UH
Ronco, Hope, JIMAR biological research technician, JIMAR, UH
Slater, David, JIMAR Marine debris specialist, JIMAR, UH
Smith, Michelle, JIMAR volunteer, JIMAR, UH
Sullivan, Mark, Emergency Response Associate, JIMAR, UH
Suka, Rhonda, JIMAR Marine debris specialist, JIMAR, UH
Tabata, Ryan, JIMAR Marine debris specialist, JIMAR, UH
Westbrook, Charley, JIMAR Marine debris specialist, JIMAR, UH
White, Laura, JIMAR biological research assistant, JIMAR, UH
Youngstrom, Sadie, JIMAR biological research technician, JIMAR, UH

Submitted by: _____


Jessica Lopez Bohlander
Chief Scientist

Approved by: _____

Michael Seki
Science Director
Pacific Islands Fisheries Science Center