

## PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT

Agency Report to the Monument Management Board

1 October 2016 – 22 April 2017

**Agency:** DLNR/DOFAW

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**Date:** 4 May 2017

### Agency Accomplishments & Recent Activities

Winter 2016-2017 Kure Crew on camp switch day March 27



#### **Wildlife Management:**

60 hours were spent conducting shorebird surveys and monitoring Boobies.

- Brown and Masked Booby nesting began at the beginning on 2017 with the first Masked Booby nest documented on January 4, 2017.
- As of April 22, 56 nests have been documented: 22 MABO & 34 BRBO
- Weekly shorebird surveys were conducted in congruence with the Hawaiian Monk Seal surveys.

#### **Laysan Duck translocation population management**

490 hours were spent monitoring Laysan ducks and maintaining wetland habitat.

- Habitat maintenance at the seeps and guzzlers continues. This includes weeding, sediment removal, providing shade, cleaning and replenishing water sources as necessary.
- Supplemental feeding was conducted in January by recommendation of Michelle Reynolds USGS to boost early breeding in Laysan ducks due to 0% survivorship of ducklings last year.
- A small botulism outbreak (waiting on necropsy for confirmation) occurred from February 28 – March 10. A total of 7 ducks died during the event. The present population is estimated at 30-32 adult individuals of which 16 are founders. One fresh carcass was frozen and transported to Dr. Thierry Work at the USGS Honolulu Lab; results pending.
- No new sick ducks or mortalities have been reported.

- Field crews continued to do daily seep checks 1 month after the crew switch and have reduced checks to 3x/week. Founder re-sights and population estimates are documented.



A female ASY (after second year) foraging for maggots out of this decomposing albatross egg.

### **Mosquito (*Culex quinquefasciatus*) Eradication**

Mosquito monitoring and eradication efforts were performed in congruence with Laysan duck monitoring.

- First observation of mosquitos on Kure was in mid July 2016 and are thought to have been introduced from Midway by the wind.
- A Midway canary arrived at the same time further indicating a strong wind that likely transported them. The canary was last observed in Camp October 7, 2016.
- Mosquitos were confirmed on August 22, 2016 after capturing and sending photos to Honolulu.
- September 1, 2016 supplies were delivered from Midway via the Kahana and all water sources on Kure were treated with the larvicide *Bacillus thuringiensis* ssp. *Israelensis* (Bti) mosquito dunk. All standing water sources around Camp were kept empty and holes were drilled in marine debris capable of collecting water.
- Fresh Dunk was sent to Kure with the arrival of the Winter team and routine applications to all water sources were conducted. Mosquitos were controlled in all water sources except the 2 seeps on Green Island by the end of the winter season.
- The Summer 2017 team brought out a new larvicide VectoLex (*Bacillus sphaericus*) and applied it to all water sources during the first week of April. Since then, no mosquitos nor mosquito larvae have been detected.
- Eradication is expected to be successful because of the limited water sources and year around presence of DLNR staff.

### **Ant Eradication and Post Monitoring**

250 hours were spent monitoring Green Island for Big-Headed ants.

- Full island monitoring was last conducted by 5 people October 17-21, 2016.
- BHA were detected at 16 monitoring stations on the SW side of Green Island.
- At least 5 Amdro baited stations were deployed at each point and Amdro was sprinkled in the areas at a 2-pound per acre rate.
- Next full-island monitoring is to take place this summer.

### **Black Rat (*Rattus rattus*) Eradication**

Rat monitoring was performed in congruence with BHA monitoring.

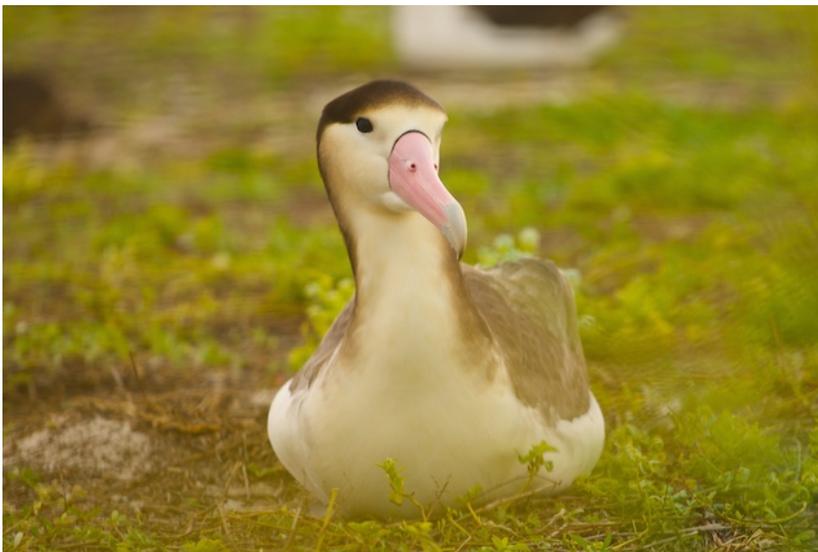
- One rat was detected on Green Island on August 20, 2016 and was captured on August 31, 2016.
- A full-island rat survey was conducted in junction with the BHA survey October 17-21, 2016 that comprised a 30-meter grid with gnaw sticks covered in peanut butter placed at each point (900 points across the entire 200 acres of Green island).
- No rat or signs of rats were found.
- Baited Good Nature traps continue to be monitored weekly along the 4000' runway.

### **Albatross**

227 hours - Albatross Nest Count completed by 5 people Dec 16-21, 2016.

- Laysan – 35,360 pairs
- Black-footed – 3,381 pairs
- Short-tailed – 1 pair

Short-tailed Albatross newcomer



First Kure sighting of this intermediate plumage phased Short-tailed albatross (Band number 13C 2213). Sighting was about ½ mile from the female-female Short-tailed albatross nest on the SW side of the island.

### **Invasive Plant Removal**

- An average of 500 hours a month were spent on *Verbesina* and other invasive plant removal.
- Total number of *Verbesina* plants removed in February – March 16, 2017 was 16,640 plants with only 2 plants that dropped seeds from 4 viable seed heads.
- Higher numbers of individual plants are expected to continue through the summer which is the peak of its growing season.



Team members heading back into the field after lunch. The vegetation in this photo is completely native comprising nohu, alena, kawelu, and naupaka which together create excellent breeding habitat for surface and ground nesting seabirds. At this stage *Verbesina* becomes increasingly difficult to find and requires a keen eye for detection amongst the natives.

#### **Habitat Management of relocated PCB contaminated soils**

139 hours was spent on revegetation of the SMD and Reburial Pit.

- PCB contaminated soils from the scrap metal dump (SMD) on the SW end of Green Island was excavated and reburied 2,500' inland by the USCG and their contractor Element Environmental LLC. The project took place August 19 – September 3, 2016.
- The Summer 2016 team performed the initial out-plantings of Kawelu and other soil stabilizing natives at the Reburial pit. They also out-planted Naupaka that the Winter 2015 team propagated at the SMD to revegetate and promote dune build up.
- The Winter 2016 team propagated 7,500 native plants that were used to continue revegetation of the SMD and Reburial pit.
- The excavator that fell into the lagoon off the capsized LCM on September 2, 2016 was checked twice during the winter season. On both accounts, photos were taken to document the site. No significant changes in positioning were found, nor were there any fluids found to be leaking from the excavator at any time.



Winter 2016 team member  
outplanting Naupaka at the SMD.



Popolo (*Solanum nelsonii*), is an endangered  
native Hawaiian species. Here Popolo keiki  
are growing strong in Kure's nursery.

### **Hawaiian Monk Seals (HMS)**

142 hours were spent monitoring Hawaiian Monk Seals.

- Weekly surveys were conducted on Green Island by DLNR staff to record survival factors, pregnant females, pupping, and the physical condition of young animals.
- Weekly reports were sent to NMFS.
- Kure's first pup of 2017 was sighted on March 17<sup>th</sup>! The second pup followed shortly after and was sighted on the 19<sup>th</sup>.
- As of April 22, there are 8 mom/pup pairs and 1 weaner.
- Subadult female KN02 who was first sighted on December 18, 2016 with a Cookiecutter shark bite that removed her eye was sighted on March 4, 2017 almost completely healed and in good body condition.

### **Marine Debris**

127 hours were spent collecting and hauling marine debris back to camp.

- The winter 2016 camp removed ~2,000 lbs of debris off Green Island's shoreline.
- Marine debris and entanglement hazards were collected weekly during the HMS survey and stored at collection points around the island for future pick up.

- April 13, 2017 Papahānaumokuākea partners held a marine debris media event highlighting the removal of 100,000 lbs of debris stored on Midway that's been collected from Midway and Kure atolls over the last 6 years. Transportation of the debris to Honolulu was provided by the M/V Kahana. Funding for the project was provided by the State of Hawaii DLNR DOFAW Marine Debris Mitigation Capital Improvement Project.



Field camp leaders Naomi Worcester and Matthew Saunter hauling marine debris out of the ocean using the davit on Kure's pier.

### Weather

- January continued to be a stormy month with gusts up to 64mph on the 30<sup>th</sup> and a total of 10.16" of rain for the month. This was the highest gust and most rainfall of the season.