

STATE of HAWAII RAC UPDATE
March 24, 2021
DLNR/DOFAW Kure Atoll Wildlife Sanctuary
Reporting Period Dec 2020 to March 2021

DOFAW KURE CAMP DEPLOYMENTS

The State conducted a successful COVID free deployment to Kure in October 2020. The contracted (USFWS and SOH) vessel M/V Imua and all passengers conducted a two-week quarantine before departure. Presently, the Kure summer team is in self-isolation for a 2-week quarantine period. They all tested negative for COVID 19 before going into strict self-isolation. They will be tested again for COVID before they board the ship M/V Imua on March 30.

The Kure summer and winter teams will be participating 25 day cleanup expedition focusing on removing derelict fishing nets and plastics from the shorelines of six islands and atolls within Papahānaumokuākea Marine National Monument. This collaborative project, in partnership with NOAA, the State of Hawaii, the US Fish and Wildlife Service, and the National Fish and Wildlife Foundation will work to remove marine debris from approximately 200 acres of shoreline habitat and will result in the removal an estimated 35 metric tons (75,000 lbs) of derelict fishing nets and plastics removed from Kamole (Laysan Island), Kapou (Lisianski Island), Manawai (Pearl and Hermes Atoll), Kuaihelani (Midway Atoll), and Hōlanikū (Kure Atoll).

When the ship arrives at Kure, the team will spend two days removing approximately 30k pounds of marine entanglements (mostly derelict fishing gear) collected over the past 2.5 years. Then the Kure summer teams supplies will be offloaded and the winter team and their gear will be loaded on the ship. The winter team will participate in the last leg of the trip, that will include Pearl and Hermes Atoll, where the recently described invasive alga *Chondria tumulosa* was discovered. The Best Management Practices will be followed to prevent the spread of Chondria to other Hawaiian Islands. The collection of marine debris from P&H will be bagged, treated, isolated and immediately transported to H-Power for incineration upon arrival in Honolulu.

For more information on this marine debris cruise check out Papahanaumokuakea Marine Debris Project:

<https://www.pmdphawaii.org/projects-1>

Please join us for a talk story webinar about this marine debris removal mission:

25 MARCH 2021 | 3 P.M.- 4 P.M.HST
WATCH ON YOUTUBE LIVE:
HTTPS://YOUTU.BE/4LSJW1U4PR4

ALBATROSS NEST COUNT CONDUCTED IN DEC 2020

The Kure winter field camp personnel conducted a partial-island albatross nest count in December 2020. The team counted albatross nests in 40 sub-routes around the island representing portions of all existing seabird routes. The estimated totals for active albatross nests are as follows: 36,500 LAAL nests and 3,700 BFAL nests.

VERBESINA ERADICATION

A precipitous decline in Verbesina plants is being documented on Kure this year and last. We believe we are at the end of the 6-year seed bank. We expect to find less than 7K Verbesina this year. The eradication program was started in 2010 but the entire island was not treated until 2014.

- 2016 VERENC Total = 200,040
- 2017 VERENC Total = 87,159
- 2018 VERENC Total = 47,928
- 2019 VERENC Total = 40,236
- 2020 VERENC Total = 15,328

MOSQUITO ERADICATION

No mosquitos have been document for two years. All water sources are treated twice monthly.

LAYSAN DUCK TRANSLOCATION 2021

Management of the small isolated endangered and reintroduced populations, such as the Laysan duck population on Kure, should include basic steps to ensure a minimum number of founding breeders and/or a long-term strategy for periodic assisted immigration to reduce the loss of genetic diversity over time. Current LADU population on Kure is estimated at 57 adults. A total of 28 founders were introduced in 2014 and all 28 were still alive a year later, but several botulism events negatively impacted the population. Botulism mitigation procedures have prevented outbreaks during the last two years. This year DOFAW received a 200k grant from USFWS State Wildlife Grant Program to continue the program and translocate 10-25 more individuals from Midway to Kure in October 2021. The project will coincide with the Kure summer and winter team exchange. The USFWS scheduled Midway resupply vessel will be used to transport the ducks, translocation team and Kure crews.

Recently published paper on Laysan Duck survival:

Reynolds, M.H., Hatfield, J.S., Courtot, K.N. & Cynthia Vanderlip, C. 2020. Survival of Laysan Teal *Anas laysanensis* differs between island populations: role of chronic avian botulism. *Wildfowl* 70: 192–210.

KURE WINTER TEAM REPORT CONTAINER SPILL FALLOUT

After reviewing the Kure list of found items, Midway atoll confirmed that they found matching items (WILSON volleyballs, “Gak” or “Slime”, Crocs, medical supplies, drinking straws, mason jars, food items, etc.) on the shores of both Eastern and Sand Island. The three types of backpacks have been found. Shoulder straps are potential entanglement hazards for monk seals. New floating items are especially attractive to young monk seals. On Midway in 1998, Cynthia Vanderlip documented an empty duffel bag the blew off a boat. The following day the duffel bag had to be cut off a young seal entangled in it.

Container spill fall out items



Photo by Emily Onderbeke
Midway Atoll March 2021
Items found on Midway that were also found on Kure.



Photo by Sarah Youngren,
Midway Atoll March 21, 2021
Croc shoes in lower right corner
are from the container spill.
Other items are commonly found
in Albatross boluses.

Many of the items from the container spill can be mistaken for food and be ingested by seabirds. Impacts of ingested plastic have been recently studied and quantified: Lauren Roman ([CSIRO Oceans and Atmosphere](#), Hobart, Tasmania, Australia) and colleagues have published open access in the journal [Environmental Research Letters](#) on the threats imposed on procellariiform seabirds by the ingestion of marine debris.

The paper’s abstract follows:

“Marine debris is a growing threat to hundreds of marine animal species. To understand the consequences of marine debris to wildlife populations, studies must go beyond reporting the incidence of wildlife and debris interactions and aim to quantify the harm resulting from these interactions. Tubenosed seabirds are globally threatened, with a near universal risk of debris ingestion and an unquantified risk of mortality due to eating plastics. In this paper, we explore the mortality risk narrative due to the acute effects of debris ingestion, and quantify behavioural and ecological factors including age, diet and

foraging method. We examined ingested debris loads, types and mortality of 972 adult and immature seabirds across 17 albatross, shearwater and prion species in a global seabird biodiversity hotspot. Though age and foraging method interact to influence the incidence and number of items ingested, age and diet were the most important factors influencing mortality. Mortality is influenced by debris load and type of debris ingested and there is selectivity for items that visually resemble a seabird's prey. Immature birds that forage on cephalopods are more likely to ingest and die from eating debris than are adults. Conversely, the risk of death to seabirds that forage on crustaceans is linked to the number of plastic items ingested and is higher in adults. Debris ingestion is an under-recognised cause of tubenose mortality and is likely negatively affecting rare and threatened species.”

https://www.acap.aq/latest-news/3990-cause-for-concern-debris-ingestion-is-an-under-recognised-cause-of-tubenose-mortality?fbclid=IwAR0k8e7krC6lrSQnALWwG-ug9gQZ_kOv3mZu3hREI4haWJ-k5MBn3NLGHxM

2020 - 2021 CONTAINER SPILL OUTFALL

CONTAINER SPILL ITEMS DISCOVERED FROM FEB 18TH – MARCH 20TH, 2021		
Item	#	Description
“CROCS”	15	Brand new Crocs (15 total) 13 lefts and 2 right/ various sizes and colors (dark blue, teal, yellow)/display hangars on some items/photos taken including manufacturer codes located on the inside of the strap.
“WILSON” VOLLEYBALLS	9	Brand new deflated WILSON volleyballs (9) various colors (pink, multi-colored, yellow, white)/photos taken of bar codes and manufactures codes.
DISNEY’S FROZEN 9oz SIPPY CUPS	10	in packaging Manufacturer’s (TOMY) packaging with barcodes and production batch codes (J2820MS00)
GAK” or “SLIME”?	31	Clear unlabeled containers that look like something pizza sauce would come in if you ordered a pie on the East Coast. Multiple colors: Black, Brown, Yellow, Red, Blue, Dark Blue, Dark Green, Green, Flo green, Orange...
SMARTY KAT ORGANIC CATNIP	2	.5oz packages
MASON JARS	2	Brand new lid latch style mason jars with an extra replacement seal inside, small gooseneck barnacles
OTTOMAN	1	Small ottoman furniture piece. Gooseneck barnacles present, torn material, exposed wood, stuffing, and nails.
BACKPACKS	3	1) Synthetic material/ black and white/plastic store tag holders/paper filler inside/some plastic damage protectors present. Thin looped straps pose an immediate entanglement risk to Hawaiian Monk Seals. 2) Synthetic see-through children’s backpack with small 2mm-3mm pieces of themed plastic like: clouds, suns, various fruit, etc. Backpack is “CLAIRE’S” brand. 2) Mini backpack. Clear with print designs: diamond rings, plastic soda

		bottles, hamburgers, juice boxes, plastic cups, WIFI signals, etc.
DRINKING STRAWS	24	Multi-colored
OXYGEN MASKS	4	Covers mouth
FOOD ITEMS	8	Bags of shrimp, frog parts, BARE brand toasted coconut chips, and other unidentified food. These items were not collected but photographed.
"KRISTEN ESS" SHAMPOO and CONDITIONER	12	New bottles without caps like ones a company would order and then fill with their product.
"VWR" BRAND MEDICAL VIALS	8	12 CM long/Brand new/clear/green twist cap/graduated 15ml
"GIANNI BINI" shoe	1	Brand new with stickers; leopard print slip on
SMALL GLASS CONTAINERS	6	Approx. 8 oz. glass jars with plastic top. Bottom labeled W (inside a circle) and the number 2.
AIRLIFE" OXYGEN SYSTEM PIECE	3	Found both in packaging and out of packaging
Small Toy boat "SS Ryan"	1	Looks like a brand new toy.
"Squeezimal"	1	stuffed toy "Made Exclusively for CLAIRE'S Found just outside of an albatross nest bowl. The object appeared to have been regurgitated by an albatross.

CONTAINER SPILL NEAR KURE

Late on Nov 30th an eastbound "super" container vessel ran into bad weather and over 1,800 shipping containers washed overboard about 380 miles west of Kure.

From Civil Beat , Dec 4, 2020 article

<https://www.civilbeat.org/2020/12/hundreds-of-containers-some-with-dangerous-goods-fall-from-ship-near-hawaii/>

"According to the global shipping company Ocean Network Express, the vessel had been moving goods from Tiantian, China, to Long Beach, California, when it encountered gale-force winds and large swells approximately 1,840 miles northwest of Hawaii on Monday

The company confirmed Friday that 1,816 containers were lost and said 64 of them were believed to contain "dangerous goods." It didn't specify what was inside.

The ONE Apus is now en route to Kobe, Japan, and was expected to arrive on Dec. 8. "Once the ONE Apus is in port and deemed safe, a full investigation will be conducted into this incident in conjunction with the Flag State and the relevant maritime authorities," the company's media release stated.

Neither ONE Shipping nor the ship's registered owner Chidori Ship Holding LLC responded to requests for further details."



Connor Helm @connorhelm · Dec 2

Oooh boy! Crew member shared a picture of the ONE Apus following reports of an estimated 1900 container lost or damaged. This could be the worst liner shipping disaster outside of total loss of vessel!



78 630 1.7K



Connor Helm @connorhelm · Dec 4

@openwaterspod will be releasing a special edition podcast on Monday 12/7. If you're interested in learning more about the ONE Apus or the maritime industry please follow our page for updates!

4 4 40



Connor Helm @connorhelm · Dec 4

12/4 Update
Estimated lost or damaged containers now at 1816 with 64 being classified as Dangerous goods

3 9 41

9:48 AM Sat Dec 5

cockpit.vesseltracker.com

Wedge site BOH oceanic wifi webpage Facebook News Netflix Gmail Pandora Shopping Google Scholar Google Maps Wikipedia Netflix craigslist-HI

Hawaii News | Honolulu Star-Advertiser Hundreds Of Containers — Some With 'Dangerous Goods' — vesseltracker.com Cockpit

Wood Mockenzie Vessel Extended search Live History My Vessels Ports skropidowski

ONE APUS

Track: Course over ground: 185.7°

Lat: 28.4480
 Lng: 174.3693

Draught: 14.9
 Speed: 15.9 km
 Source: SAIS
 AisMsgId: 1

Time: 2020-11-30 20:50 -1000
 Show vessel tracks for a time range around this point:
 24 hours [-12h ... +12h] 7 days [-3.5d ... +3.5d]

Vessels movement history

1. Select a time range by using the date and time fields or by selecting one of the preset ranges.

Start: 2020-11-28 00:00 End: 2020-12-05 23:59

Last Day Last 7 days Last 30 days

2. Select vessels to have their tracks displayed on the map by using either the search box in the top bar or the search in polygon tool below.

Tracked Vessels List

Vessel, IMO	Dist	Graph
ONE APUS, IMO: 9806079	3115.29 nm	

Search for vessels in polygon

Draw on map:

Map data © OpenStreetMap

HISTORY (28.42089, 174.55078) N 28° 25.21' E 174° 33.03'

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March 20, 2021 - Wired: Where are those shoes you ordered? Check the Ocean floor
More containers have fallen off ships in the past four months than are typically lost in a year. Blame heavy traffic and rolling waves.

<https://na01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.wired.com%2Fstory%2Fwhere-shoes-ordered-check-ocean-floor%2F&data=04%7C01%7C%7C49bf358cf9b141b3084608d8ecd66fd1%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637519753023997794%7CUnknown%7CTWFpbGZsb3d8eyJWljoIMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C1000&data=dtzAgH7o88ROThValY2v2z2MOY7uZutHGGrkv11cN0fw%3D&reserved=0>

WIRED

Where Are Those Shoes You Ordered? Check the Ocean Floor



The ONE *Apus* lost more than 1,800 containers during high winds and large swells in November, in what's expected to prove one of the costliest losses ever. PHOTOGRAPH: BUDDHIKA WEERASINGHE/BLOOMBERG/GETTY IMAGES

KURE ATOLL CONSERVANCY KAC

We are recruiting for winter volunteers. The announcement is posted on the home page of the KAC website: <http://www.kureatollconservancy.org>

100 % Donations to KAC go to supporting volunteers and purchasing supplies for the field camps.

Donate Button

https://www.paypal.com/donate/?hosted_button_id=U89WATC8TBFX8

See camp updates on KAC Facebook page