



NOAA FISHERIES SERVICE

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NOAA

Monk Seals

Seal Count, October 18th, 2008

The 4th Hawaiian monk seal count was a success with 48 seals counted and over 300 volunteers participating statewide.

	28 April, 2007	20 October, 2007	19 April, 2008	18 October, 2008
Kauai	13	6	13	14
Oahu	6	5	14	9
Molokai	19	7	8	15
Maui/Lanai	1	3	0	5
Kahoolawe	2	1	2	0
Big Island	0	1	1	5
Total	41	23	38	48

The numbers we get are just a snap shot in time and with just 4 counts it is hard to draw any assumptions about population size, but I think we can say it is good news that we counted 48 seals.

Several large milestones occurred for this seal count:

- A seal “weaner” on Oahu that had gone missing from observers for several weeks was discovered at Kaena Point, much to the joy of dedicated volunteers.
- One seal that was counted was in rehabilitation in a shoreline pen on the Marine Corps Base on Oahu. Kind of cheating since he is in a pen but, hey we’ll count him!
- Big Island had a large increase in the number of seals counted and the largest area cover of all the main Hawaiian Islands.

Freedom at last for KP2, the first successfully released hand-reared Hawaiian monk seal

KP2 Case Overview

A male Hawaiian monk seal temporarily identified as “KP2”, was first observed on May 1, 2008 on a Kauai beach after apparently being abandoned by a young female seal. This particular young female seal had abandoned her pup the previous year soon after pupping, and that pup died. On May 2, attempts were made to reunite the pup with his mother. The attempts were unsuccessful, so the decision was made to collect the pup with the goal of captive rearing it. The United States Coast Guard airlifted the seal aboard a C-130 to the National Marine Fisheries Service (NMFS), Kewalo Research Facility, Honolulu, Hawaii under National Oceanic Atmospheric Administration/National Marine



Hawaiian Monk Seals



Fisheries Service (NOAA/NMFS) Marine Mammal Health and Stranding Response permit # 932-1489-09. This was a joint effort between the NOAA/NMFS Pacific Islands Fisheries Science Center (PIFSC) and Regional Office (PIRO).

The pup, approximately 24 hours old at capture, weighed 15.7 kg and appeared dehydrated upon admittance into rehabilitation. Broad-spectrum antibiotics were given orally for 10 days to minimize risk of infection via the umbilicus (a common cause of mortality for hand-reared neonatal harbor seals). Subcutaneous and oral fluids were administered for rehydration.

The Marine Mammal Center (TMMC) of the Marin Headlands of Sausalito, California was contacted immediately to take on the immense task of hand rearing this neonate. Since 1975, over 12,000 animals, such as elephant seals, sea lions, sea otters, harbor seals, fur seals, dolphins, harbor porpoises and the like, have been rescued and treated at the hospital facilities of TMMC. TMMC recognizes human interdependence with marine mammals and their importance as sentinels of the

ocean environment, the health of which is essential for all life. TMMC recently partnered with NMFS because of their desire to provide expertise in Hawaiian monk seal recovery through science based projects. As a result, under the direction of pinniped veterinarian Dr. Frances Gulland, TMMC provided veterinary consultation and sent shifts of experienced volunteers and staff to Honolulu to direct the daily feeding, care and husbandry for the 227 days that KP2 spent in rehabilitation. Oahu based volunteer monk seal responders also assisted in the latter part of KP2's care with nighttime observations.

KP2 gained about 52kgs over his 7.5 months under human care. "Initially, the biggest challenge was finding the right nutrition for the seal when it was being fed formula. Later, the challenge was to get KP2 to learn to eat on his own," stated Dr. Gregg Levine, NMFS contract veterinarian in charge of the medical oversight of KP2. Levine and teams of TMMC and NMFS volunteers used previously established techniques for elephant and harbor seals to help KP2 transition to eat live moi, a local bait fish that Hawaiian monk seals are known to consume.

On September 8, 2008, KP2 was moved from the Kewalo Basin Research Facility to a shoreline pen at Marine Corps Base Hawaii in Kaneohe Bay. Seawater in his shoreline pen ranged from 1 to 3.5 feet in depth depending on tides. KP2 acclimated quickly to his new environment. Over the next two months he was observed tracking, catching and consuming live fish and crabs that entered his pen in addition to his daily ration of dead herring. KP2 was observed pushing rocks into one corner of the beach pen that was usually under water. During the day, he would spend a lot of time

hunting and foraging near this "artificial reef" for small fish and sea cucumbers that came there for refuge in the rock pile. A local Marine Corps enforcement officer would routinely collect live tako (Hawaiian for octopus) weighing 1.0 to 4.0 kg for KP2. In addition to the hours of "pre-release" exposure to a prey item often consumed by Hawaiian monk seals, the tako provided environmental enrichment and supplemental nutrition.

Release Determination

Due to the critical condition of the Hawaiian monk seal population, NMFS wanted to ensure that this seal posed no threat to the wild population and adhered to the criteria all marine mammal releases must comply with in the NOAA/NMFS Marine Mammal Health and Stranding



Response Marine Mammal Release Guidelines. With the help of the United States Coast Guard, KP2 was transported on December 16, 2008 aboard a HH65 helicopter to a remote area on the island of Molokai. The release site was selected primarily because it is used regularly by other seals and would provide the opportunity for KP2 to socialize. An additional consideration was that there



are few people in the area, which would reduce the likelihood of KP2 interacting with humans after his habituation and subsequent conditioning to human care givers. Prior to release KP2 was instrumented with a small satellite linked time-depth recorder and a VHF tag. Both tags were affixed to his pelage with epoxy.

Post-Release Monitoring

At the time of this writing KP2 is doing well. One concern was whether or not he would be able to adapt and develop normal dive behavior upon release. “So far KP2 has been behaving like other young seals we have studied,” said Dr. Charles Littnan, PIFSC Monk Seal Research Program Leader. “He has slowly been venturing further from the release site and diving deeper as he gains experience.” He has been in the wild for 6 weeks and has been observed feeding and interacting with another young male monk seal. Recently he has traveled over 65 km from his release site and successfully found his way back. All signs currently point to a successful reintroduction to the wild. However, if he shows signs of failing to thrive, plans are in place to recapture KP2 and put him permanently into a facility for captive research and public display. Should the seal continue to do well, he will be captured in 3 month intervals over the next year for medical examinations; both to ensure he is healthy and to gather baseline information for future cases.

Hawaiian Monk Seal Recovery and Adaptive Management

The capacity to rescue pre-weaned pups, care for them in captivity and release them back to the wild population is a high priority and will contribute to the recovery of the Hawaiian monk seal. The Recovery



Plan for the Hawaiian Monk Seal, the Hawaiian Monk Seal Recovery Team, TMMC and NOAA/NMFS share the view that every seal should be considered vital to the population and to the recovery potential of this species. During this experience we have learned about caring for pre-weaned pups, which will contribute to the adaptive management approach integral to future monk seal recovery efforts.

Over the past four years management actions and research in the MHI have provided valuable insights on how to deal with pups born on popular beaches, our ability to relocate seals within the main Hawaiian Islands and evaluate the threats of exotic diseases etc. Future rescues will likely involve cases where interactions with people or domestic animals have



caused the abandonment of a pup. In the future NOAA/NMFS and its partners will continue to focus on critical recovery actions, with the ultimate goal of salvaging reproductive potential and recovering the Hawaiian monk seal.

Acknowledgements

NMFS Pacific Islands Region would like to thank the following for their contributions of expertise, resources, and associated expenses that resulted in the success of this project:

The Marine Mammal Center staff and volunteers for medical advice, daily feeding and husbandry of KP2

The Hawaiian Monk Seal Response Team Oahu Volunteers

Agency support for transports and seal holding: United States Coast Guard, Air Station Barbers Point and the United States Marine Corps Base Hawaii

R015's 2008 Pupping Event

In September 2008, R015 gave birth to her second pup (tag ID RW34 / RW35) in Waimanu Valley, a very remote area located north of Waipio Valley on the Northeast coast of the Island of Hawaii. For this event, Hilo Marine Mammal Response Network volunteers hiked in every few weekends to monitor the new pup. Because the hike is so intense the level of monitoring was greatly reduced compared to the 2007 Waimanu Valley pupping event when volunteers were flown in via helicopter on a weekly basis.

Once you descend into the valley, a river must be crossed to reach the beach and camp sites. Unlike in 2007 when the mother-pup pair were deterred from entering the river, the 2008 pair were successful in entering the river where they remained until the pup weaned. The use of the river by the mother-pup pair is cause for concern for two reasons. First, it is believed the health of the pup may potentially be at risk as the water quality is unknown for this particular river, though there have been reported cases of humans



contracting Leptospirosis. The second cause for concern is human safety. There were times when volunteers observed the seals, both mother and pup, lunging out of the water and vocalizing at people attempting to cross the river. Though there were no reports of seal – human interaction, the seals would spend most of their time near the river mouth, the crossing point for valley visitors.

Regardless of the limited volunteer coverage and the utilization of the river by the seals, when the pup weaned sometime between 10/27/08 and 11/01/08 it appeared to be healthy. When the pup was tagged on November 17, its girth was measured at 119 cm and its length as 137 cm. In addition, upon tagging, the sex of the pup was confirmed as female.





Monk Seal managers and scientists travel to Lehua Island Reserve, off Niihau

In September 2008, a team of monk seal managers and scientists spent two and a half days on Lehua Island Reserve, off Niihau. In the short time on the island, 8 different adult male seals were observed. The seals use the ledges on the island as resting areas and routinely “cruise” the shoreline challenging one another. All



seals were photographed and scars/bleach marks were recorded for identification and cross-referencing with our library of known seals. Three individuals were bleach marked to identify them more easily, as they had few notable scars. One seal with tags and two others were recognized as having been sighted before on Kauai, Oahu or both islands. The observations that were made will give insights into the marine ecosystem for the island and help us to understand this sector of the seal population within the main Hawaiian Islands.



Mahalapuu Pupping Event

Kauai monk seal volunteers prepared for the delivery of four pups through the spring and summer of 2008. Three of the seals were discovered during the April seal count and one was found to have abandoned her pup.

It came as a surprise when K12 was found to be pregnant with a fifth pup due in November. K12 has pupped five years in a row! The female pup, tagged W48, was born at Mahalapuu. Volunteers helped monitor the area and once weaned, the pup was watched daily as she ventured further down the beach and into deeper waters.



What Can You Do to Help?



Go to the website of The Marine Mammal Center, a NOAA Monk Seal Recovery Partner:

<http://www.marinemammalcenter.org>

or go to:

<http://www.marinemammalcenter.org/learning/comm/monksealrecovery.asp>

Oahu Volunteer's website:

<http://www.monkseal.org>

or go to:

<http://www.monksealmania.blogspot.com>





Cetaceans

Kauai Orca Stranding Event

On 10/21/08 a call was received regarding the stranding of a Killer whale, or Orca, on the south shore of Kauai. Wendy McIlroy confirmed the presence of a live sub adult *Orcinus orca* and after the area was secured, DOCARE Officer Brad Akana, stayed overnight to record any major changes in movement or disposition of the whale and also for crowd control. A team consisting of David Schofield, the HPU Stranding Team, and contract veterinarian Dr. Gregg Levine later arrived on Kauai. By the time the sun came up the next morning hundreds of people began to gather on the scene.



After a briefing with David Schofield, Kauai Fire and Police Dept. officials, Coast Guard, lifeguards, HPU team, NOAA staff, DLNR staff, volunteers, and community members provided outreach to the many people present on the beach.

The team of NMFS staff and Lifeguards put tow rope on the whale's flukes and pulled the whale away from rocks to a sandy area on the beach out of the surf to give safe access to treat it. The whale was given a sedative and humanely euthanized. Dr. Kristi West (HPU PI) collected post euthanasia blood samples before the whale was loaded onto a flatbed truck and





moved to the necropsy site. The necropsy commenced using a combination of the HPU and Killer Whale Sampling Protocol provided by Pacific Northwest whale researchers, and after the necropsy was completed the whale was buried. Sabra Kauka provided the whale and the team with a final Hawaiian blessing.

Orca in Hawaii

(Robin W. Baird, Research Biologist, Cascadia Research Collective, Olympia, WA)

There is very little known about killer whales in Hawaiian waters, primarily because they have been encountered so infrequently. In small-boat surveys around all the main Hawaiian Islands since 2000, covering 48,074 km of survey trackline in 444 days on the water, with 1,109 sightings of 18 different species of toothed whales and dolphins (not counting humpback whales) killer whales were only encountered on a single occasion (a group of four seen off the big island in 2003). There is no estimate of the number of individuals that might use the waters around the main Hawaiian Islands, but there is an estimate for the entire Hawaiian Exclusive Economic Zone, an area that covers out to 200 nautical miles (380 km) from all the main Hawaiian Islands and

the Northwestern Hawaiian Islands. That estimate, based on a large-vessel survey undertaken by NOAA Fisheries in 2003, is of 349 individuals, but there is a lot of uncertainty associated with the estimate, so the true population could be much smaller (or much larger).

A review of all records of killer whales in Hawaiian waters from 1994 through 2004 was published in 2006. There were 21 records during that period, with records spread throughout the year. Group sizes have ranged from lone individuals to groups of about 10. There were records of killer whales feeding on octopus and squid, and attacking both humpback whales and spotted dolphins, suggesting the killer whales in Hawaiian waters have a diverse diet, unlike those that inhabit coastal areas from California north. Most sightings were far from shore, and they are unlikely to feed on monk seals on any regular basis given their apparent use primarily of deep waters in Hawai'i. Anyone interested can download a copy of the 2006 paper from www.cascadiaresearch.org/robin/hawaii.htm.

Pigmentation pattern differences and genetic samples collected from two individuals indicated that killer whales that utilize Hawaiian waters are not part of the populations that utilize near-shore areas along the west coast of North America. If anyone has photographs of killer whales from Hawaiian waters showing the dorsal fin and saddle patch pigmentation (the light patch at the base of the dorsal fin), we would be very interested in comparing those photos to the small catalog available from the Hawaiian Islands.

Responder Profile



Special thanks to Patrick Ching for his donation of art to the monk seal volunteer manual and for supporting the local monk seal responders



Seals sited during the seal count at Kaena Pt Oahu



Training in American Samoa



A dead spinner dolphin had to be packed in frozen corn for shipment on a local cargo plane