NMFS Stranding Program Contacts

**Alaska Stranding Network Meeting UPDATE**

Anchorage  
Friday, February 1, 2019  
Alaska Marine Science Symposium

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Greetings from the Coordinator
by Barbara Mahoney, NMFS

Although this is my first time as (Acting) Alaska Region Stranding Coordinator, I have worked with most of you on marine mammal strandings for many years (but who is counting!) and look forward to collaborating with everyone this coming year.

Wow, thank you Stranding Team for your continued efforts during another busy year, with about 270 marine mammals reported stranded statewide (as of 4 October). The Network was able to: collect tissues from many animals and perform necropsies in a number of cases (e.g., bearded seals, belugas, gray whales, harbor seals, humpbacks, ringed seals, spotted seals, Stejneger’s beaked whales, Steller sea lions); successfully return a lost adult Steller sea lion to the sea (page 8); and successfully disentangle Steller sea lions (page 12), Northern fur seals (page 14), and a humpback whale (page 3).

Alaska’s small stranding network is responsible for marine mammal strandings in the largest state in the nation. Our network’s accomplishments are a product of the collaborative talent, ingenuity, and resourcefulness of our network members.

Moving forward into the upcoming year, I plan to continue the efforts of the stranding response program in keeping with the direction established through the exceptional leadership of Mandy and Aleria. I look forward to the privilege of working with this wonderful team and I wish for a happy and healthy 2019.

Other Upcoming changes to NMFS Stranding Program Staff:

Effective the first week of November, Aleria will be taking an extended leave of absence for a once-in-a-lifetime family experience. In her absence, Sadie will be the Acting Large Whale Disentanglement Coordinator. Aleria is scheduled to return in August 2019. We will miss her but wish her fun learning opportunities and look forward to hearing about her adventures.

What Are…?

: This is a symbol to help easily recognize the end of a story or section.

Photo opp… : These are miscellaneous and interesting stranding photos received this year, but which do not necessarily accompany a specific story or topic in this newsletter.
A huge round of applause to the Dutch Harbor team and supporting participants in the successful disentanglement of a humpback whale caught in cod pot gear.

The first notification came in late in the morning of October 15. While collecting baseline marine data at the entrance to Unalaska Bay, Chris Hoffman of the Army Corps of Engineer observed a humpback whale dragging two buoys off of Needle Rock. Over the next couple of days, Chris and Andy Dietrick, a past participant in stranding events, were authorized to evaluate the animal and the entanglement. The number on the buoy provided information about the fishing boat and the fishery as well as an indirect estimate of entangling gear, which included a 6x6x3', 500 pound pot rigged for fishing Pacific cod (same pots they use for crab with a different tunnel for fish) with ~ 200' of 3/4 inch floating line, 200' of 3/4"sinking line and two buoys. Once it was apparent that a self-release was not likely, John Moran, a Level 4 responder from Juneau, was on his way to Dutch Harbor, with Ed Lyman (Acting National Large Whale Entanglement Response Coordinator), Aleria Jensen (AK Regional Large Whale Entanglement Coordinator), and Barb Mahoney (Acting Regional Stranding Coordinator) standing by.

_by Tim Coffey_

Left: The control line is added to the trailing gear. Photo courtesy of Tim Coffey.

Left and above: John makes a cut of the head wrap. Notice the white of the fluke curved under the whale. Photo courtesy of Andy Dietrick.

By the time the team in Dutch Harbor was gathered and ready to go on October 19th, the whale was anchored with wraps around the fluke and head, and able to surface only through pectoral fin sculling. Characterizing the entanglement was difficult, but greatly enhanced through the use of underwater GoPro footage and aerial drone footage (thanks to Andy Dietrick’s skills and certification). Vessels included the harbor master boat, the Tide Breaker, and an inflatable through UAF.
A successful rescue - continued

A control line was added and the drone was used to predict when the whale would surface. A head wrap was cut first followed by a successful cut of the line connecting the flukes to the head. At this point, the flukes were no longer pulled tight to the head and the whale began to drag the gear shallower water. A cutting grapple was used to cut the line to the pot and then set on the tail wraps. Between the cutting grapple, a fixed knife and a flying knife (one attached freely to line rather than fixed to a pole), the remainder of the gear was cut and the whale freed.

*Left:* With Dan Magone at the helm, John throws a cutting grapple. Photo courtesy of Andy Dietrick

The success of the endeavor was due to many factors, including a highly skilled team, cooperative weather and water, and the efficacious use of a GoPro and aerial drone to characterize the entanglement and whale behavior.

*Left:* The disentanglement team. Photo courtesy of Andy Dietrick.

*Right:* A stack of cod pots in Dutch. Photo courtesy of John Moran.

Curiously, this entanglement was the third confirmed report involving the pot cod fishery near Dutch Harbor, including two in 2017. According to Melissa Good, this increase may be due to a significant increase in the number of humpback whales in the area over the summer late into fall, as well as the establishment of a new state-waters pot cod fishery in 2014. In October the Board of Fish increased the inshore cod fleet’s allocation. According to Melissa, this increase means a change in gear type with a reduction in long-liner and trawl effort and an increase in pot effort. With more whales in the vicinity and more pots in the water just outside of Unalaska Bay, potentially for a longer period of time, it might be time to work on measures that will reduce the likelihood of future entanglements.
On August 3, 2018, NMFS was informed by the USFWS that a dead beaked whale had stranded on the NavFac beach near the town of Adak on Adak Island in the western Aleutian Islands (Figure 1). Examination of the photos determined it was an adult female Stejneger’s beaked whale (*Mesoplodon stejnegeri*). NMFS assigned this animal the unique tracking number AKR 2018165.

On August 10, 2018, NMFS received a report that seven additional beaked whales had been observed floating among the rocks on Palisades Point on Adak, on August 8 (Figure 2). USFWS confirmed the observation on August 9. The group of seven beaked whales stranded approximately 1.2 miles to the northeast of animal...
Adak Stejneger’s Beaked Whale - continued

On the evening of August 11, 2018, the stranding response team visited the carcasses on NavFac Beach and Palisades Point to assess and photograph. The team began collecting measurements and high priority samples on August 12, 2018. Three volunteers assisted with data collection/recording, photo documentation of the animals and the response effort, and flensing of the skulls. Necropsies continued August 13 and 14. The team returned to Anchorage with many of the samples on August 15. The heads of all eight animals and other tissue samples were stored on Adak in a chest freezer that was delivered to Homer via USFWS R/V Tiglax.

NMFS continues to work with other agencies to determine the potential cause of this stranding. Characteristics of the stranding are consistent with mass strandings of beaked whales in other parts of the world that have been linked to military sonar exercises. Beaked whales forage in very deep water and are sensitive to acoustic disturbance that can drive them to surface too quickly. The Alaska Volcano Observatory maintains and monitors dozens of seismographs along the Aleutian Islands, and they detected manmade seismic activities (air guns) from June 29-July 3, and July 15-20 for hours at a time NW of Adak. No authorized seismic has been identified for this region by State or Federal agencies that we have contacted. Although the timing of the seismic activities may not align with these beaked whale strandings, it does raise the possibility of unauthorized exploration activities that could involve sonar use (which would not be detected by land-based seismographs).

Above and right: Marc Webber, Sadie Wright, Sonia Kumar, and Zoe Ann Stinchcomb flense and document the uterus in beaked whale 2018165. Photos taken by Larry Hodge.
Stranded animals that pass through the Alaska SeaLife Center are screened for a variety of pathogens in order to rule out disease in the process of their rehabilitation, however many people are unaware that we also do disease surveillance of all patients at the end of each season (funding permitted). Serum samples collected during health examinations are screened for titers to common and emerging diseases including protozoal pathogens (toxoplasma, sarcocystis and neospora), leptospira, morbillivirus and brucella. This gives us valuable information about what may be lurking around in our Alaska marine mammal populations and also what we might expect in years upcoming. In 2018, we received some surprising results that prompted us to complete this surveillance a bit earlier in the year than usual. Specifically, 100% of animals screened in 2018 showed some level of titer to one or more of the six serovars of Leptospira for which we screened. Leptospira is a spirochete zoonotic pathogen known to cycle every 3-4 years along the Pacific Coast of California. It was formerly thought to be absent in the North Pacific, however reports of cases in Washington, British Columbia and Alaska have been increasing in recent years. Individuals develop positive antibody titers for various reasons including acute disease, prior exposure, maternally derived antibodies or cross reaction to antibodies to other disease. In 2018, 3/9 animals screened had titers typically suggestive of active infection (≥1600) in many species, however all three were asymptomatic, 2/2 tested negative for bacterial shedding by PCR, and none showed changes in clinical blood parameters that are typical for acute onset of leptospirosis-induced disease. This prompted me to look deeper into what we can learn from the results of our leptospirosis surveillance over the last 20 years and I’ll be presenting my findings at the Alaska Marine Science Symposium in January.

Photo opp… The giant squid that wasn’t.

Left: On July 17, reports started arriving of a giant squid that was floating north of Juneau. The carcass was described as “fairly fresh, must be 30 feet with tentacles, eye is dinner plate size”.

When biologists arrived to check out the report, they found the decomposing carcass of a humpback whale, necropsied June 2 on a beach > 30 miles south. Photo courtesy JJ Vollenweider.
The stranding was unusual right from the start. The first report was called in at 3 am, on Friday, August 31 describing a large Steller sea lion foaming at the mouth, breathing hard, but with no other physical injuries. Later that morning, OLE captured Facebook stills showing a large male sea lion caught in the beam of a flashlight sitting on the grass of the Southeast Alaska Regional Health Consortium campus (right), and video footage from the cab of a truck as it followed a galloping SSL down a dark road (thus explaining the symptoms described in the initial report).

NOAA Office of Law Enforcement (OLE) officers found the sea lion in the thick brush (left) with the closest water across a busy road. Through the remainder of the day and over the Labor Day weekend, attempts to haze the animal back to the water continued to evolve. The initial plan was to simply allow the animal time to leave the area on its own, but by Friday evening and into Saturday morning, the sea lion had moved to the doorway of a nearby derelict building instead.

On Saturday morning, members of the Sitka Stranding Network, NOAA OLE, and the Sitka Fire Department hazed the animal with a fire hose, moving it out of the doorway and between a rolling corridor of cars toward the water (below). The animal moved ahead of the cars and veered back into the thick brush where it remained throughout Sunday and into Monday morning.

On Monday morning a team from Juneau arrived in Sitka, met with Sitka responders, and made a plan to sedate the animal, use heavy equipment to transfer him to a flatbed truck, and relocate him to a nearby boat ramp.
Sitka Steller sea lion - continued

Relocation to the ramp was successful (left). While sedated, samples were collected, and a satellite tag was attached to the flipper to monitor the animal. Drug reversals were administered and the animal moved into the water (below) and quickly swam away.

The sea lion was first satellite tracked to a haulout on the outer coast south of Sitka. As of Oct. 11, he had moved ~1100 km to Marmot Island near Kodiak (left) with no indication of restranding.

While the event was a synergy of complications and challenges involving animal behavior, human behavior, and the physical environment, a successful resolution was only possible through tremendous collaboration and cooperation among members of the ADFG/NOAA Steller Sea Lion Disentanglement Team, NMFS Office of Law Enforcement, the Sitka Marine Mammal Stranding Network members, SEARHC, the Sitka Fire and Police Departments, Mt. Edgecum School, and other community volunteers.

Above right: Participants on Monday, Sept. 3, after the sea lion swam away. Back row, left to right: Mike Miller, Bob Marvelle, Ted Hasty, Al Duncan, Tim Coffey, Lauren Wild, Kate Savage, Jan Straley. Front row, left to right: Cheryl Barnes, Madison Kosma, Ellen Chenoweth, Kim Raum-Suryan.
Misguided, ill, or “reverse evolution”?  

It was unclear why the animal moved to the location where it was first observed. It likely crossed a very busy road serving the airport, the hospital, and the USCG station, early Friday morning when traffic was at a minimum. Once across the road, it mainly sought cover in dense brush throughout the day, sticking its head out occasionally, and then moving back into the brush. It was noted that the sea lion behaved like it did not want to cross the road, possibly because there was no clear and quiet path to the water.

There was also concern that the stranding was due to a disease process or ill health. The primary differential was domoic acid toxicity which, in California sea lions, has been associated with a chronic neurological manifestation that includes stranding in atypical locations (Goldstein et al. 2007). Although no other neurologic symptoms of algal toxicity were apparent, the team was prepared to necropsy the animal and seek diagnostic imaging for pathological changes associated with domoic acid toxicity had it died.

Other behaviors attributed to ill health may have been inherent to the species, age, and sex of the animal. At various times, the SSL was described as lethargic, with possible medical issues because it appeared to be “an animal with zero energy”, refusing to move. However, these characteristics may have been indicative of normal behavior rather than ill health. According to Justin Jenniges, ADF&G Steller Sea Lion Program, “Moving these big guys can be incredibly rewarding, mostly because of how difficult it is. They are stubborn!”.

Mike Williams of NOAA’s Northern Fur Seal Program also described how northern fur seal adult males will simply “not budge” and cited research that a “resolute, unyielding bearing” was found to be an essential behavior of adult male fur seal fighting success rather then the ability to inflict injury (Gentry 1998). Steller sea lions being a closely related species, this sea lion may have simply been displaying a resolute, unyielding bearing (above) consistent with its species, age and sex.

Or perhaps, as Justin suggested, it was a case of “reverse evolution” and the animal was simply intent on tracing its ursine roots!

**Social media – harassment vs. investment**

The SSL was first observed on Friday morning. The information spread quickly through social media and its presence was soon community knowledge. On Friday evening, as the animal postured in the doorway of an abandoned building, OLE described a procession of “hundreds or cars, dogs and people” taking selfies, making noise, and getting close, even as the Sitka PD, SEARHC security and NMFS OLE officers worked on crowd control. The attention prompted attempts to address the harassment, also via social media (right).

While the harassment abated, the interest and investment remained. As the Juneau team flew to Sitka on Monday morning, the flight attendant asked, “Is it stupid?” then, “Is it a walrus?”. Despite her misinformation, she was genuinely interested in the welfare of the animal. As the day progressed, it became very apparent that the community at large shared her interest and enthusiasm, were invested in the outcome, and rejoiced when the animal was successfully returned to the water.

As for fostering investment without harassment, perhaps Kim Raum-Suryan found the best solution. When asked whether it was ok to spread the word throughout the community that the animal had been successfully resighted along the outer coast, she replied, “Of course, but just please don’t tell them exactly where he is”.

**From Facebook, Sept. 4, 2018:**

All I’m saying is I can’t explain it but I felt personally invested in the well-being of that sea lion.
Like haven’t you ever been 1500 pounds and shy
and all your feelings were lost
and you were high functioning but like also not making v good choices
but you know, doing pretty well all unnatural things considered
tryna go home but also not go home
tryna be a better version of yourself but also not do anything at all whatsoever
having no end game but stubborn af
I will not be moved! -internal mantra
*flops around* -external mantra
Anyway I heart that sea lion so bad.
And I also heart the many folks in Sitka who spent days helping him return to the water.
We all lose our way sometimes.
We all need community.

Christy NaMee Eriksen
The Alaska Department of Fish and Game and the National Marine Fisheries Service continue to collaborate on disentangling Steller sea lions and seeking ways to track the survival of animals once they have been disentangled. To date we have darted and immobilized 13 subadult and adult male Steller sea lions, have disentangled 10 of these individuals and relocated one. In June-July 2018 we spent two weeks on a research cruise in Southeast Alaska. The purpose of this cruise is to collect data for ongoing vital rates and movement studies, but as time allows we also attempt to disentangle sea lions.

In 2018 we hoped to try a new method of attaching a satellite tag to a sea lion. Previous tag attachments have used epoxy to glue the tag onto the fur on the head or shoulders of the animal. The drawback to this method is that the tag falls off during the annual late summer/fall molt. Satellite tags have been attached to the flippers of phocids but this had not previously been tried on otariids, to our knowledge. The benefit of a flipper attachment is retention of the tag through the molting period.

On the first day of the trip we dissected a Steller sea lion flipper (collected from an animal that was necropsied in April 2018) in order to locate major and minor blood vessels and nerves to ensure that tag placement would not cause damage to these tissues (Figure 1).

In late June, we successfully darted a subadult male sea lion and removed an embedded packing band from the neck (Figure 2).
To track survival of this animal post-disentanglement, we then used epoxy to attach a satellite transmitter to the fur on the head of the sea lion and we had our first opportunity to attach a small location-only SPOT tag to the flipper (Figure 3). We also applied hair dye to the sides of the animal to help with visual identification. We were able to track this animal for 67 days but expect that with changes to the tag programming, this type of tag may be able to transmit for many months, perhaps >1 year.

Fig. 3. Disentangled Steller sea lion with satellite tag glued to head, SPOT tag attached to right foreflipper, and hair dye mark 772 for visual identification. Photo courtesy ADFG.

We darted and immobilized a second sub-adult male in July that appeared to have material around the neck. As it turned out, the entangling material was gone and the wound was healing (Figures 4 and 5). We took advantage of this opportunity to attach another SPOT tag to the foreflipper of this animal. This SPOT tag has been transmitting since July 4. We are optimistic that these tags will be retained on the flipper and function for many months, allowing for longer-term tracking than previously possible, especially for animals captured in summer within ~1-2 months of the annual molt.

Fig. 4 & 5. Steller sea lion with healing wound and scar from a neck entanglement. Photo courtesy ADFG.
Northern fur seals (NFS) are the poster marine mammals for neck entanglements. Entanglements are not an uncommon finding in the species, but successful disentanglements are size, location and season dependent, and require stealth, speed, strength, agility and maybe even a little luck. During the spring and summer, smaller non-breeding animals outside the rookery can be disentangled. In the fall, after the territorial males depart, females, pups and smaller males can be safely captured, restrained, and disentangled.

Members of the St. Paul Stranding Network and NOAA Fisheries Northern Fur Seal Program have been disentangling NFS for many years. On Sept. 19, Mike Williams, NOAA Fisheries NFS Program manager, and his team disentangled 5 animals on St. George Island, a personal record that will likely stand for a long time to come. A recap of the day’s effort is included below.

Below and right. #1: Mike Williams and Kit Cunningham stalk the entangled animal, upper left, to remove the gray netting.

Left and below. #2: Mike Williams, Dennis Lekanof, and Kit Cunningham prepare to remove an embedded packing band from an animal following capture.
Left and right. #3: Kit Cunningham and Buffy Meyer lay low after capturing an animal entangled with gray netting.

Left and right. #4: Buffy Meyer, Mike Williams, Kit Cunningham and Dennis Lekanof adjust the entangled animal to allow for the removal of blue netting. Multiple strands of the net were cutting deeply into neck.

Right. #5: This animal with blue netting embedded deeply in its neck was observed the day before, but in a location not suitable for a disentanglement. Fortunately, the team was able to disentangle the animal the following day.

Three of the five had significant soft tissue involvement. All of the five young animals were released on site and, now entanglement-free, bound to be more successful in their pelagic months ahead. All photos courtesy of K. Savage. Disentanglements completed under permit #18706-03.

Photo opp...

An adult female Northern fur seal with a tight necklace of yellow line and barnacles is observed on the Zapadni rookery on St. George Island. Disentanglement was not possible with this animal.

Photo courtesy R. Levandowski
Piloting small unmanned aircraft systems for harbor seal monitoring in the Pribilof Islands: a collaboration between tribal and federal governments

In January 2018, The Aleut Community of St. Paul Island Tribal Government (ACSPI) began a collaboration with NOAA Alaska Fisheries Science Center (AFSC) and Duke Marine Robotics and Remote Sensing (MARRS) Laboratory to investigate implementing sUAS surveys for the historically under-studied Pribilofs stock of isuġin or harbor seals (*Phoca vitulina*). Isuġin have been an important subsistence resource for ‘stinky oil’ or seal oil and an unknown level of harvest has been sustained since the islands were permanently settled in the late 1700s. The Pribilof Stock includes all harbor seals occurring on the five islands that comprise the Pribilof Islands archipelago. Surveys have been sparse over time, with surveys occurring in the 1970s and mid 2000s only. In an effort to explore monitoring methods that could increase the consistency and frequency of Pribilof Islands surveys, the NOAA AFSC Polar Ecosystems Program reached out to the ACSPI to inquire about a potential collaboration.

Left: Aaron Lestenkof (ECO), Alex Seymour (MARRS Lab), Josh London (NOAA AFSC), Erin Richmond (NOAA AFSC), Rhett Newton (MARRS Lab), and Erin Moreland (NOAA AFSC) hold up two senseFly eBee+ fixed wing aircraft that provided thermal imagery of fur seals, sea lions and harbor seals on Otter Island in August 2018.

Fortuitously, the ACSPI recently invested in small unmanned aircraft systems (sUAS) training and technology for tribal members and employees to promote science and management activities in the Pribilofs. Dr. Lauren Divine, Mr. Aaron Lestenkof and Ms. Veronica Padula of the ACSPI Ecosystem Conservation Office (ECO) received their Federal Aeronautical Administration sUAS Remote Pilot Certificates in September 2017. ECO has completed several research projects with northern fur seals and reindeer using drones, and continues to seek opportunities to expand research and management applications for sUAS locally. The inquiry from NOAA AFSC was timely as it provided ECO an unprecedented opportunity to lead a collaboration with agency on developing and field testing scientifically rigorous field survey protocols for marine mammals that have been historically ignored.
The collaboration also included Mr. Everette Newton and Dr. Alex Seymour, from the Duke MARRS Laboratory, experts in fixed wing and copter UAS operations. During August-September 2018, the team travelled to St. Paul Island, refined flight planning and field protocols of both land- and boat-based sUAS operations, and conducted repeated harbor seal surveys at St. Paul and Otter Islands. During this time, ECO pilots received incredibly valuable education and training from both NOAA AFSC. Areas of interest on these islands were chosen based on historical waypoints and traditional knowledge from hunters and residents of St. Paul and St. George. We used. Once protocols were refined, Dr. Divine and Ms. Padula travelled to St. George to field test the new protocols without the full team at several potential haulout locations on the island.

Above right: The Phantom 4 after lift-off on St. George, ready to conduct surveys of harbor seals. Bottom left: Aerial imagery of harbor seals taken from the same flight at Garden Cove, St. George, Alaska taken September 9th, 2018.

The team experimented with advanced flight planning software enabled customized transect capabilities and experimenting with photographic settings to maximize data quality and output. We combined local and traditional knowledge with advanced technologies to inform and develop monitoring protocols that resulted in high quality, reproducible products and a standardized but responsive program. This project provides a solid foundation for implementation of a long-term, community-led monitoring effort that can serve as a model for the use of sUAS platforms and collaborations between local constituents and management agencies.
Juvenile walrus observed resting on St. Paul Island in June 2018

In early June 2018, a group of Seabird Youth Network campers and instructors got to see a very rare visitor – a juvenile walrus! Although occasionally walrus are found dead, stranded and walrus bones wash in after storms, a live walrus hasn’t been seen at St. Paul Island in 13 years. The sighting was the first time many of the students had seen a live walrus. The walrus remained hauled out close to the town of St. Paul for a couple days, then was not seen again.

Above: Juvenile walrus observed resting on St. Paul Island in June 2018. Photo courtesy of Ram Papish.

Left: Campers view the young walrus from a safe distance with binoculars on St. Paul. Photo courtesy of Seabird Youth Network, http://seabirdyouth.org/walrus-day/.

Photo opp...killer whale lesion

Passengers on a whale watching boat near Juneau observed this killer whale with a large lesion on its side.

The speculated cause was primarily considered a viral infection followed by bacteria and fungus, possibly secondary to a prop strike.

Photo courtesy Brian W. O'Connor.
We just wanted to say “Hello” and update you with some news from Dr. Burek and Alaska Veterinary Pathology Services. First off, we are asking for carcasses for our upcoming trainings in November! More details on that below. This past June, we put on a necropsy workshop for our new stranding agreement holders on Kodiak (Su’naq Tribe of Kodiak) with folks from OLE, ADF&G and UAF-MAP program in attendance. We had a morning of lectures on Level A collections, very basic Level B and C collection, and safety practices. In the afternoon we had a wet lab with a necropsy demo, followed by smaller group necropsies on two sea otters and one harbor seal. On the second day, we reviewed the necropsy report on the grey whale case that I had come down for earlier in the year, talked about what to do with the samples after collection, and went over any lingering questions that the participants had. I think there was fun had by all and we had a great turn out of approximately 10 Kodiak residents. We have similar trainings scheduled for Sitka right after Whale Fest on Nov 6th and 7th and another in Juneau on November 16th and 17th. We are still looking for carcasses for these trainings, so if you have carcasses in the freezer and want to donate, please contact Sonia. There may also still be spots left if you want to join us. We are requesting Prescott funding to go there again next year for further training on the Level B and C data and sample collections and would like to know if there are other interested parties.
I’ve also published some marine mammal papers, have had two book chapters published, and presented a few cases (along with some other stranding network members). See below in bold. If anyone would like copies of these publications, please let me know. If you have cases that you think you’d like to work on together for publication, please let me know. I know Chris Gabriele and Louise Taylor-Thomas with GBNP have a couple of cases we’d like to publish together.

Best Regards,
Kathy Burek (907) 242-2566 and Sonia Kumar (303) 570-9898

Since 2013, the Alaska SeaLife Center (ASLC) Wildlife Response program, in cooperation with volunteers and stranding agreement holders across the state, has responded to more than 586 marine mammals representing a vast amount of the Alaskan coast line. These responses represent more than 57% of the ASLC’s historical responses since its inception in 1997. When live stranding marine mammals are admitted to the Rehabilitation Program at the ASLC in Seward, Alaska each animal receives a thorough physical exam and biological specimens (blood, urine, feces, mucosal swabs, +/- skin biopsies or hair samples) for routine diagnostics and disease screening are collected. All animals are screened for fecal pathogens and for exposure to a variety of diseases known to affect marine mammals and/or humans. In cases of live stranded animals with positive testing, serial sampling post treatment confirmed resolution of disease. While disease exposure rates in stranded marine mammals are different than the overall population, any positive findings indicate that the disease is active within the wild populations and may be present within a geographical region. These tests not only aid in the diagnosis of rehabilitating animals and thus aid their individual treatment, but they provide a method for disease surveillance for scarcely monitored populations.

Thanks to generous funding from the SeaWorld Busch Garden Conservation fund, the ASLC was able to run a batch of archived samples. Results and geographical distribution of findings will be summarized and presented as a poster at the Alaska Marine Science Symposium in Anchorage in January, it will be available to share with all interested regions as a convenient pdf file—perfect for sharing or printing and posting in your local area.

**Update:** The ASLC received Prescott funding to allow for veterinarians or healthcare providers in Northern Alaska, Western Alaska, or Kodiak to come to Seward, Alaska for an intensive hands-on training geared toward live marine mammal stranding response. Help spread the word! If you know of interested veterinarians or healthcare providers, please ask them to email Kathy Woodie at [kathyw@alaskasealife.org](mailto:kathyw@alaskasealife.org).
Our Oiled Wildlife Response Team continues to work collaboratively with the UC Davis Wildlife Health Center (WHC) and AZA to deliver HAZWOPER workshops. Since the development of the course (August 2017) we have delivered 10 HAZWOPER 24 hr workshops at AZA conferences and various AZA facilities. There is currently a pool of over 240 HAZWOPER 24 hr certified animal care, facilities and, safety personnel.

We recently finished developing HAZWOPER 24 hr Train-the-Trainer curriculum and administered a Train-the-Trainer workshop at the Seattle Aquarium September 19-22nd, 2018. We trained and certified 8 HAZWOPER 24 hr instructors within the AZA community to help sustain the program past the life of the grant. We also administered a HAZWOPER 24 hr workshop alongside the Train-the-Trainer workshop September 21-22nd.

Four ASLC staff members participated in the 2018 Exxon Mobile Mutual Aid Drill at Pt. Thomson. As part of the drill they set up our mobile treatment and response enclosure as well as practiced responding to 'live' seals.

Photo opp... Australian shark bites

We have all tried to associate what we believe to be scavenger or predator bites with a specific scavenger or predator. Thanks to Fred Sharpe for passing along these amazing photos by Stephen Underwood of a juvenile humpback whale carcass that washed ashore in Australia, with wounds associated with sharks in the area. Click here to see the news article with more images.
To Drone or not to Drone?
You may have noticed that a common theme in many of this issue’s articles is drone footage. Let’s face it, drones are cool and they provide some AMAZING imagery. They can be invaluable tools for assessing the situation for live strandings and Entanglement, and great for training purposes.

But, there are rules that need to be followed to avoid unauthorized harassment to marine mammals. Within the MMHSRP, there are currently two primary scenarios that include authorized use of drones. The first involves certified operators that are permitted to use drones for research purposes. The second involves certified operators that have received authorization from the Regional Stranding Coordinator to use drones during a response. While Mandy Migura’s CI letter authorized her to give verbal authorization to use drones in stranding and entanglement response, we are currently working on updating CI letters for other NMFS stranding program staff. So, for now, unless you have or are working with someone who has a NMFS-issued research permit specifically authorizing the use of drones around marine mammals, you will need to keep your drones at least 1000 feet above marine mammals to avoid harassment. Please note, you must be in compliance with all other laws and regulations pertaining to drones, e.g. FAA; special land use permits.

To make this issue even more confusing, the easiest way the FAA has for authorizing people to operate small drones is through their Section 107 permitting process. But, user beware – under that authority, the FAA doesn’t allow drones to be operated over 400 feet, far below the required altitude by NMFS for those without a marine mammal permit.

For more information, below are some links about using drones (a.k.a. UAS) around marine mammals:


Once again THANK YOU for all your hard work during the 2018 stranding season. Many calls came in to NMFS from all over the state, demonstrating a true team effort to respond to stranded animals in Alaska. Thank you for your help! A reminder to please submit any level As, photos, and necropsy reports within 30 days to: Kate.Savage@noaa.gov
Your reports allow us to track marine mammal health in Alaska and beyond.