

# Mystery illness plagues sea ice mammals

Mary Lochner | Posted: Thursday, July 12, 2012 6:24 pm

Martin “Bambi” Ayojiak went on a January seal hunt with his uncle and cousin, motoring along the ice’s edge in northwestern Bristol Bay. Yojiak shot a ringed seal, grabbed it with a hook and pulled it up on the ice. The father of six has a large extended family to feed, he said, and normally he would have processed the entire animal for food and other uses with the help of his uncle, cousin and family.

But this time was different. Ayojiak’s been seal hunting 40 years, he said, but he never saw anything like this. The large animal’s back and left side was black where the hide was bald. Its face appeared healthy, but the hair was coming out on the rest of the body.

Hoping the front part was good, Ayojiak opened the animal up. It appeared healthy, with a lot of fat. But his uncle said it was still a sick animal, and that it was best not to touch it any more, or eat it for meat. Instead, they should let it sink back into the ocean.

It was one of the first reports in 2012 of a mysterious illness that’s been affecting northern sea mammals with symptoms including hair loss and skin lesions. But it was far from the last. After National Oceanic and Atmospheric Administration scientists declared that an “Unusual Mortality Event” was affecting seals in Alaska in Dec. 2011, citing 75 reports of sick seals starting in July 2011, it took a wait-and-see approach to new cases while testing old cases for everything from radiation to viruses. The agency released a report that radiation was not considered a key factor, and that, as of Feb. 2012, there were no new cases but that perhaps spring seal hunts would show whether the disease continued to affect seals.

Ayojiak reported the sick seal case he and his relatives found last January to the village’s environmental coordinator. Calls to a half-dozen Western Alaska villages showed tribal governments are well familiar with the unusual illness. All had fliers from NOAA about the disease, and all had specific personnel, the village’s environmental coordinator, tasked with taking and referring reports of sick seals.

Make that sick seals or walruses. NOAA has confirmed that “a similar disease process” is affecting both seals and walruses. It has yet to confirm that polar bears experiencing hair loss and skin lesions are experiencing the same, or a related, disease.

According to NOAA’s June 25, 2012 release on its investigation into the Unusual Mortality Event, Native subsistence hunters found and reported 40 affected seals, most of them ringed seals, in 2012. Two walruses with skin lesions have been reported this year by hunters, one from Savoonga and one from Chefornak. Samples from both showed that one of the walruses had lesions consistent with the illness, while the other had lesions due to trauma. According to NOAA, it could be difficult to distinguish walruses that have the disease from healthy walruses, which often have skin abrasions from fighting other walruses.

The U.S. Geological Survey, accompanied by veterinarians, found that in 2012, 23 out of 82 polar bears

showed hair loss and skin nodules—raised, hard spherical points in the skin— “similar to those observed in ice seals,” according to the NOAA report. But, “it is unclear if the condition is the same as that exhibited by ice seals and walruses under the UME.”

Polar bears aren't new to incidences of hair loss and skin abnormalities, the report says. Similar symptoms, including hair loss, affected 20 percent of polar bears in a study in 1998-1999, and anecdotal reports of polar bears with hair loss were made from 1999 through 2011.

Most of the 2012 cases of illness-affected seals are likely survivors, NOAA says, with a few of them possibly classifiable as new cases.

Necropsies of diseased sea mammals have found bloody fluid accumulation in the lungs, inflammation of the liver, enlargement of the heart, and enlarged lymph nodes. These symptoms could indicate infection or blood poisoning that occurred as a result of the skin lesions, according to the report. The skin is important for keeping out pathogens. Or, they could indicate a wider immune system dysfunction that is part of the disease itself, the report says.

Animals affected by the illness have been found in Russia and Canada as well, and NOAA is working with Russian, Canadian and European researchers in the circumpolar region on the UME investigation.

NOAA's inter-agency team of researchers is investigating a variety of possible causes, including radiation, pathogens, and even stressors from climate change. But it has no clear answers for what might be causing the mystery illness.

“Currently there is no evidence that people can be affected by this disease through handling and or consumption of traditionally prepared foods from seals and walruses,” the NOAA report says.

“However, it is strongly recommended that Alaska Native coastal communities continue to rely on their customary and traditional practices as well as seek advice by community elders to aid in the decision process as to whether a harvested ice seal or walrus is fit for human consumption.”

Which pretty much boils down to: don't eat the affected sea mammals.

“The elders told us not to touch those things when they're like that, just let them sink is what they told us,” Ayojiak said. “If they're sick or look different, just let them sink back and don't touch them again.”