

Research tag not adequately sterilized is linked to death of whale

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An endangered orca that died earlier this year likely developed a fatal infection after a scientist failed to adequately sterilize a research tag that was shot into its body, according to a report released Wednesday.

The [killer whale](#), L-95, was found dead in Canadian waters off Vancouver Island in March. It was a member of the endangered southern-resident killer-whale population that frequents Puget Sound. There are only 82 [whales](#) in the J, K and L pods today.

NOAA Fisheries was distressed that the work of one of its scientists with the Northwest Fisheries Science Center may have been at the root of the whale's death, said Richard Merrick, NOAA Fisheries chief scientist, in a telephone news conference Wednesday.

"We are deeply dismayed that one of these tags may have had something to do with the death of one of these whales," Merrick said. "It is our job to reduce risk and that is what we will do."

The death could lead to permanent suspension of the tagging program, if scientists can't get to the bottom of what happened and how to avoid it again. There are also ramifications beyond tagging of whales, potentially for other species, Merrick said.

"Whenever something like this happens, there are implications beyond this direct situation," he said.

The tag that may have killed the whale was shot at the animal unsuccessfully once and dropped into the sea. It was retrieved and shot again at the whale, sticking into the animal that time, Merrick said. But the tag had not been sterilized with bleach after falling into the water.

A review panel convened to investigate the whale's death found that it died of a severe fungal infection that may have been introduced by the tag. The tag had broken off and pieces remained in the whale's body near major blood vessels, which may have contributed to the animal's death, the panel found.

The whale also was thin and in poor condition.

The tags contain satellite-linked transmitters that allow scientists to track where the whales roam in winter when they leave Puget Sound. The agency is trying to learn if adequate habitat has been set aside for the whales to aid their recovery. Eight whales in the three pods have been tagged, including the whale that died.

The tagging program has been suspended pending further investigation, including an independent scientific review convened by the Northwest Fisheries Science Center.

The dead whale was found near Nootka Island along the west side of Vancouver Island on March 30. The last transmission from its tag was Feb. 23, 2016.

The infection was found at lesions that developed at the tagging site. Invasive fungal hyphae may also have spread more easily because the whale's immune system was suppressed, the scientists found.

The tag was disinfected with alcohol on the boat after it was fished out of the water for another try, but that was not sufficient, the scientists

determined. That meant the tag could have introduced fungi "deep into the tag site," the experts found.

The tag location, near the dorsal fin, also meant the infection was located near large blood vessels, allowing it to spread more easily.

The whale was a 20-year old male, tagged about five weeks before its death.

Brad Hanson, a wildlife biologist who is the lead on the tagging study, said the team worked for six years to develop a safe and reliable tagging method, used on more than 500 whales of various species without problems in the past.

Hanson said he took responsibility for a communication breakdown that led to the tag being cleaned only with alcohol, not bleach, as per protocol.

A Northwest native who has worked with orcas for 40 years, Hanson said he felt the death acutely.

"It's a devastating blow, professionally and personally," he said. "We just have to work through it and see what we can learn."

A fungal infection found in the whale's lungs could have come from a fungus on the skin, and not the tag wound, Hanson said. It also could be the work of a new pathogen just beginning to be seen in marine mammals frequenting these waters, he said.

Or the fungus could have invaded the wound from the skin after the tag broke off.

Some of the experts on the review panel said suspension of the tagging

program altogether should be considered if the orca population is deemed too fragile to sustain any more losses.

"It may be prudent not to resume invasive tagging and use noninvasive assessment tools ... as a less risky source of useful information," the review found.

The [review panel](#) was composed of five veterinarians, veterinary pathologists and biologists.

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