

Scientists see big 'scientific event' as Pacific whales turn up far from home

February 17 2012, By Tim Johnson

When scientists fired a cigar-sized satellite tag into the blubber of a western gray whale off Russia's Sakhalin Island in September, they expected to track her along Asia's Pacific shoreline down to the South China Sea.

To their surprise, the young female turned up off of Mexico's Baja Peninsula.

The sudden travel bug that infected Varvara, the 9-year-old female now meandering in waters near Baja's Magdalena Bay, has deepened a mystery that has scientists the world over pondering what is happening to a tiny population of critically endangered western gray whales. Only 130 of the whales remain, feeding off of Sakhalin Island, not far from two offshore oil platforms.

In recent years, however, gray whales have been spotted far from their known migratory routes. One turned up in the Mediterranean off Israel, and a pair was seen in the Arctic's Laptev Sea.

Varvara's movements are sending a frisson through whaling circles.

"It's a scientific event - a big one," said Randall Reeves, a [marine mammal](#) expert who is a member of the global Western Gray Whale Advisory Panel, which met in Geneva earlier this week.

Varvara's movements have "demolished conventional wisdom," he said.

"It's always been believed that gray whales are coastal migrating mammals."

To get to Mexico, Reeves said, Varvara had to cross the Okhotsk Sea off the Siberian coast, navigate up Russia's [Kamchatka Peninsula](#), strike out across the huge and deep Bering Sea far from any coast, and into Alaskan waters. Once there, the whale would have migrated to Baja along the North American shoreline.

"For all scientists interested in animal migration, we are following this pretty closely," Reeves said.

Gray whales once swam in both the North Pacific and North Atlantic oceans. Under intense whaling pressure - whale oil was then what petroleum is to the world today - they had disappeared from the North Atlantic by the early 1700s. Two centuries later, the Pacific population also grew endangered.

Good environmental practices helped rescue California gray whales, also called eastern Pacific gray whales, and they've returned to a healthy population of 18,000 to 20,000. They spend summers suctioning for small crustaceans in a shallow area of the Bering Sea and winters breeding near Baja.

But the western gray whale - which varies genetically from the California whale - remains besieged, migrating each year from Sakhalin Island south along coasts to unknown Asian breeding grounds.

A joint team of U.S. and Russian scientists began researching the Sakhalin population in 1995 and started to tag them in 2010 to learn their migration routes.

"Because their numbers are so low - 130 individuals is the estimate - it

would be really important to find out where they are breeding to offer protection," said Bruce Mate, director of Oregon State University's Marine Mammal Institute and a member of the bi-national team.

The pressures on the western gray whales are great. Five have died in Japanese fishing nets in recent years. A 45-foot gray whale was found dead off China's Fujian province Nov. 5. The tiny population may have only 26 breeding age females. Varvara, born in 2003, is maturing into one of them.

"If we lose just one or two females every year, the population could become extinct. So just a small loss could have devastating effect," said Heather Sohl, a whale expert with WWF, the conservation group once known as the World Wildlife Fund.

The shallow feeding grounds off Sakhalin Island are threatened by gas and oil exploration. A third offshore platform is planned and will entail seismic testing.

"It's a very dangerous place to be a whale," said Stephen R. Palumbi, a marine ecologist at Stanford University. "If a whale population is stuck there, it's like being stuck in a very bad inner-city neighborhood."

That's why the discovery of Varvara off the coast of Baja has given whale experts new hope. Instead of facing doom in a poor habitat, the whales may be seeking ways to survive.

It's just the latest such indication.

In what Palumbi called a "totally wacky" sighting, experts spotted a gray whale off Israel's Herzliya Marina on May 8, 2010. They followed the whale for an hour and 10 minutes, documenting its condition. Twenty-two days later, the same whale was seen off Barcelona, Spain.

Photographs of the whale's tail flukes showed identical pigmentation patterns in both cases, confirming it was the same mammal.

"We all got the email that this gray whale was spotted near Israel. The reaction was: 'You've got to be kidding!' What a bizarre place for it to be," Palumbi said.

Israeli scientists studied whether the whale was an errant California gray whale, a vagrant from the [Sakhalin Island](#) group or a miracle survivor of the once-extant north Atlantic population, none of which had been seen for 300 years.

The most likely explanation, they found, was that it was a California gray whale that had traveled for 100 days along the Eurasian coast in Arctic waters that have been increasingly ice-free in summer months because of global warming.

Then came further sightings, including one along that same Eurasian route in the Laptev Sea north of Russia. Mariners also believe they spotted a [gray whale](#) in the far north Atlantic.

"It would've gone through probably the Northwest Passage over the top of North America," Mate said. "So as there is less and less ice, there'll be more and more opportunities for that kind of exchange between ocean basins."

Whales undertake the longest migrations in the mammal kingdom, during which they barely eat, surviving on stored blubber for up to five months.

"You can't average four miles an hour with a body size like that and spend any time feeding," Mate said.

Mate and his colleagues at the Hatfield Marine Science Center in Oregon are pioneers in satellite tracking of whales, moving beyond early experiments with glue and suction-cup devices to satellite-monitored radio tags fired from air guns.

The tags that scientists now inject into the backs of western gray whales send pulses for an average 123 days before they fail, Mate said.

The first evidence that western gray whales were migrating from Sakhalin to North America came in 2010, when scientists tagged a 13-year-old male they dubbed Flex. He was off the coast of Oregon when his tag's transmitter failed.

Varvara's journey of more than 7,000 miles this year suggests that Flex's migration was not an anomaly, and that western gray whales have far better navigation skills than previously understood.

By late January, Varvara had moved past this 27-mile long saltwater lagoon, which hosts the world's highest density of breeding whales. By early February, Mexican biologists determined that 1,620 whales had concentrated here.

While the lagoon is now a sanctuary for gray whales, it was once a place of slaughter. It is sometimes known in English as Scammon's Lagoon, named after whaling ship captain Charles Scammon, who harvested whales here in the 19th century.

The translation of the lagoon's Spanish name - Hare's Eye - gives a better indication of what a bloody and violent business whaling once was.

"It's called Hare's Eye Lagoon because a lot of whales were killed here," explained a tour boat captain, Leopoldo Lopez, noting that the water filled with blood. "That's how it got its name, you know, because when

you see a hare's eye at night, it is red."

On a recent morning, the lagoon's still surface mirrored a leaden sky, and scores of gray whales with calves could be seen rising to the surface to breathe. The resonant bellow, varying in timbre, offered a maritime symphony. Whales approached a boat, swimming underneath, then popping their heads above water. Somewhere off the Baja coast, Varvara appeared to be mingling.

Whether Varvara traveled to Baja with a potential mate is not known.

"At (age) 9, we wouldn't expect her to have a calf this year, and I'm not even sure she'll be mating this year," Mate said.

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