## The New York Times Reprints

This copy is for your personal, noncommercial use only. You can order presentation-ready copies for distribution to your colleagues, clients or customers here or use the "Reprints" tool that appears next to any article. Visit www.nytreprints.com for samples and additional information. Order a reprint of this article now.



June 17, 2010

## Spill May Have Taken Its Largest Victim Yet

## By LESLIE KAUFMAN

Over the last weeks, the carcasses of oily pelicans, turtles and other animals have washed to shore in the Gulf of Mexico. Now the first dead whale has been found — a juvenile sperm whale floating 77 miles from the leaking oil well.

On Tuesday, a National Oceanic and Atmospheric Administration ship spotted the 25-foot animal due south of the Deepwater Horizon site. The water the whale was floating in was not oiled.

Blair Mase, the Southeast marine mammal stranding coordinator for the oceanic agency, said that scientists were "very concerned" that oil was the cause of the whale's death, but that the whale's body was so decomposed and scavenged by sharks that it would be impossible to say for certain.

Instead, scientists will try to determine whether the whale had been swimming through oil by using a method known as hindcasting, which looks at how bloated an animal's body is to calculate how long it has been dead, then retraces patterns in water currents to tell where the body might have drifted from. The whale's condition suggests it has been dead for at least several days, Ms. Mase said.

Scientists are also taking skin samples from the whale, which will be tested for petroleum. The results of those tests, as well as tests on its skin and blubber to determine its gender, may take weeks to process, the oceanic agency said. Government workers are also trying to rule out other possible causes of death, like a ship strike or net entanglement.

"It is a relatively rare occurrence," said Ms. Mase, who added that there have been only five or six whale deaths in the gulf in five years, "so we are studying this very carefully."

NOAA sent a research ship to the area around the Deepwater Horizon a few days ago

specifically to learn whether the oil spill was changing whales' behavior and if so, in what ways.

There are an estimated 1,700 sperm whales that live in gulf waters and they are known to congregate particularly at the mouth of the Mississippi River, a rich feeding ground. Unlike other whales, which travel long distances, these live full-time in the gulf and do not usually mingle with sperm whale pods in the neighboring Caribbean and Sargasso Sea. Ms. Mase said that the dead whale was almost certainly a gulf whale.

The fate of the whales, which have frequently been spotted swimming in the oil by planes overhead, has been of intense concern to wildlife biologists. Because whales are large and very mobile, they are relatively less vulnerable to oil spills than other sea life. However, the whales are classified as endangered and the crude oil is toxic to them. Moreover, they prefer to dive and fish right off the continental shelf, where the Deepwater Horizon wellhead is located, and their sensitivity to the large plumes of oil droplets and the enormous amount of dispersants being used to combat this disaster is unknown.

Hal Whitehead, a biologist who studies at Dalhousie University in Halifax, Nova Scotia, said sperm whales are highly social animals that live in matriarchal groups like elephants. They communicate through noises that sound like clicks, which researchers refer to as a dialect. They have also shown behaviors that resemble mourning. In one case, Dr. Whitehead said, when a young sperm whale died, its mother carried its carcass around in her mouth.

Sperm whales live anywhere from 60 to 100 years, scientists estimate. But they reproduce on average only every five years, which is why even a few whale deaths can be significant, Dr. Whitehead said.