BP Oil Spill Culprit for Heavy Toll on Coral

CAIN BURDEAU,Associated Press

NEW ORLEANS (AP) — After months of laboratory work, scientists say they can definitively finger oil from BP's blown-out well as the culprit for the slow death of a once brightly colored deep-sea coral community in the Gulf of Mexico that is now brown and dull.

In a study published Monday, scientists say meticulous chemical analysis of samples taken in late 2010 proves that oil from BP PLC's out-of-control Macondo well devastated corals living about 7 miles southwest of the well. The coral community is located over an area roughly the size of half a football field nearly a mile below the Gulf's surface.

The damaged corals were discovered in October 2010 by academic and government scientists, but it's taken until now for them to declare a definite link to the oil spill.

Most of the Gulf's bottom is muddy, but coral colonies that pop up every once in a while are vital oases for marine life in the chilly ocean depths. The injured and dying coral today has bare skeleton, loose tissue and is covered in heavy mucous and brown fluffy material, the paper said.

"It was like a graveyard of corals," said Erik Cordes, a biologist at Temple University who went down to the site in the Alvin research submarine.

So far, this has been the only deep-sea coral site found to be seriously damaged by the spill.

On April 20, 2010, the well blew out about 50 miles off the Louisiana coast, leading to the death of 11 workers aboard the Deepwater Horizon drilling rig and the nation's largest offshore spill. More than 200 million gallons of oil were released.

"They figured (the coral damage) was the result of the spill, now we can say definitely it was connected to the spill," said Helen White, a chemical oceanographer with Haverford College and the lead researcher.

She said pinpointing the BP well as the source of the contamination required sampling sediment on the sea floor and figuring out what was oil from natural seeps in the Gulf and what was from the Macondo well. Finally, the researchers matched the oil found on the corals with oil that came out of the BP well.

Also, the researchers concluded that the damage was caused by the spill because an underwater plume of oil was tracked passing by the site in June 2010. The paper also noted that a decade of deep-sea coral research in the Gulf had not found coral dying in this manner. The coral was documented for the first time when researchers went looking for oil damage in 2010.

The findings were published in the Proceedings of the National Academy of Sciences.

The scientists said that they have gone back to the dying corals by submarine since 2010, but that they are not ready to talk about what they've seen at the site.

However, Charles Fisher, a biologist with Penn State University who's led the coral expeditions, said recovery of the damaged site would be slow.

"Things happen very slowly in the deep sea; the temperatures are low, currents are low, those animals live hundreds of years and they die slowly," he said. "It will take a while to know the final outcome of this exposure."

BP did not immediately comment on the study.

The researchers said the troubled spot consists of 54 coral colonies. The researchers were able to fully photograph and assess 43 of those colonies, and of those, 86 percent were damaged. They said 10 coral colonies showed signs of severe stress on 90 percent of the coral.

White, the lead researcher, said that this coral site was the only one found southwest of the Macondo well so far, but that others may exist. The researchers also wrote in the paper that it was too early to rule out serious damage at other coral sites that may have seemed healthy during previous examinations after the April 2010 spill.

Jerald Ault, a fish and coral reef specialist at the University of Miami who was not part of the study, said the findings were cause for concern because deep-sea corals are important habitat. He said there are many links between animals that live at the surface, such as tarpon and menhaden, and life at the bottom of the Gulf. Ecosystem problems can play out over many years, he said.

"It's kind of a tangled web of impact," he said.

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