

Scientists have found a 35km-long plume which threatens Gulf waters

By [Global Research](#)

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Scientists say the oil plume is 35km long and located deep below the ocean's surface

Scientists have found a 35km-long plume of oil deep in the waters of the Gulf of Mexico, despite US government claims that most of the oil from a ruptured well had dispersed.

The report released on Thursday in the journal *Science* is the first conclusive evidence of an underwater oil plume, a phenomenon which could explain the location of much of the oil that had been presumed to have disappeared.

Oil floating about 1,200 metres below the surface, where temperatures are 4.5 degrees Celsius, breaks down at a slower pace than oil on the surface, posing an unseen threat to marine life, scientists said.

"Many people speculated that the sub-surface oil droplets were being easily downgraded," Dr Richard Camilli, the study's chief author, told journalists.

"Well, we didn't find that. We found that it was still there," Camilli, a member of the research team from the Woods Hole Oceanographic Institute, said.

Contradictory claims

On August 4, the US National Oceanic and Atmospheric Administration (NOAA) said the "vast majority" of oil had evaporated, been removed by clean-up teams or was dispersing naturally.

The remaining 26 per cent, an estimated 1.3 million barrels of oil, was classified as "residual".

"Any self-respecting microbe will want to eat oil ... but microbes are a lot like teenagers; they work on their own time"

Government data suggested that it was located "either on or just below the surface as residue and weathered tar balls, has washed ashore or been collected from the shore, or is buried in sand and sediments".

The plume discovery appears to call those claims into question, although the scientists were careful not to overstate the conclusions of an expedition which lasted from June 19 to June 28.

The plume would have been undetectable without the scientists' high-tech equipment, including a special underwater mass spectrometer used to detect the chemical signature of the oil, which was carried deep below the surface by submersible devices.

"At this point, we know the plume exists, and we will know more about its potential biological activity in the future," Dr Chris Reddy, another of the article's authors, said.

The oil leak in the Gulf of Mexico was caused by an explosion on the Deepwater Horizon rig on April 20, which caused it to collapse and fracture the well head. Eleven people were killed in the incident.

About 4.9 million barrels of oil are thought to have spewed from the well in the Gulf of Mexico before it was capped last month.

Micro-organisms

Prior to the release of this study, scientists assumed micro-organisms in the water had eaten much of the oil, taking it out of the ocean.

But the size and depth of the plume means the role of microbes is less clear.

The spill has affected animals birds and marine life [Gallo/Getty] "Any self-respecting microbe will want to eat oil ... but microbes are a lot like teenagers; they work on their own time, their own scale ... it is difficult often to make predictions about microbe degradation," Reddy said.

"It may vary substantially in the Gulf in any one time."

When asked directly if the study's conclusions contradict US government data, one of the authors said: "I can tell you that we found the plume and I can't tell you how much oil is in it because we don't have the values yet".

Steve Murawski, the chief fisheries scientist for the NOAA, the organisation which provided the dispersal data to the US government, attended the release of the new study and agreed that the plume could hurt marine life.

"This is a highly sensitive ecosystem," Murawski said. "The animals down at 3,000 to 3,400 feet [below the surface] grow slowly."

The oil, which includes toxic components such as benzene, could cause genetic problems for marine life even at low concentrations, Murawski said.

Towards the end of the news conference, a reporter with the Times Picayune in New Orleans, Louisiana, the epicentre of the spill, asked what affect the plume would have on fisherman who depend on marine life in the Gulf.

"How this equates to the fishery at this time, I can't say anything about that," one of the study's authors said.

Oil is no longer flowing from the well and Barack Obama, the US president has said the well is capped, but the replacement cap will not be completed until the middle of September.

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