

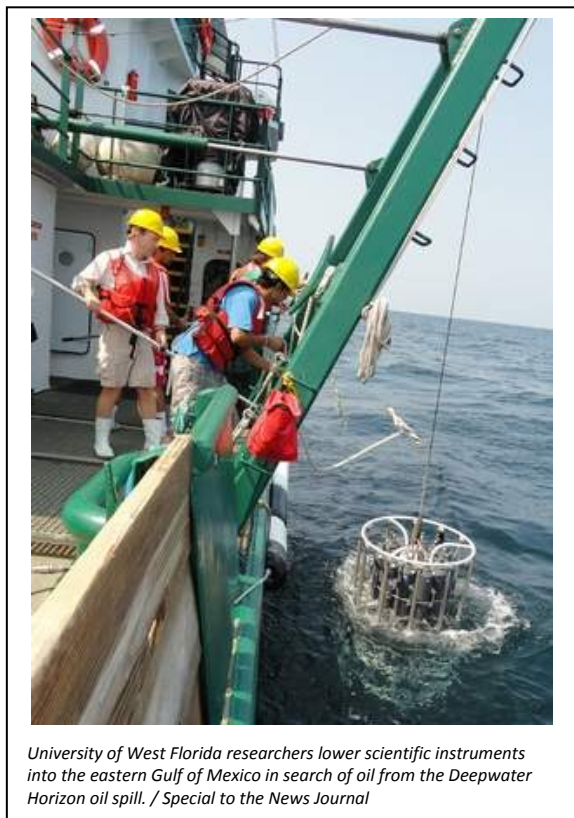
UWF: Most oil from BP spill gone from Gulf along Panhandle

Most crude disappeared, studies show

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Written by Kimberly Blair



University of West Florida researchers lower scientific instruments into the eastern Gulf of Mexico in search of oil from the Deepwater Horizon oil spill. / Special to the News Journal

Two years after tar balls from the Deepwater Horizon oil well explosion began washing up on Pensacola Beach and Perdido Key, there's good news: Most of the oil is gone from Florida waters.

The fear that vast, gooey tar mats of BP oil are lurking on the floor of the Gulf of Mexico just waiting to be unleashed by a hurricane isn't valid, according to research by University of West Florida scientists.

The scientists have spent a year on an offshore study to determine how much of the 270 million gallons of spilled BP oil remains in the Gulf between Perdido Key and Panama City. The offshore study will continue for another year. An onshore study will wrap up this month.

"That oil washing on shore will not happen," said Richard Snyder, director of the university's Center for Environmental Diagnostics & Bioremediation. "There's no oil out there to wash up."

The scientists' conclusion brings a sigh of relief to local residents who were first confronted with tar balls on June 4, 2010, then awoke to large masses of tar on June 23.

Hearing of the research results, Pensacola Beach resident Jim Cox reacted with a resounding "Wow!"

He has been persistently concerned that volumes of crude are floating offshore.

"That was my big worry all last summer," he said. "I worried the oil would get kicked back on the beach, and the news would get out and ruin our tourism again. Not having that lurking over our shoulder is wonderful."

Snyder and other scientists believe the oil likely broke down naturally, with the help of dispersants, or dissipated.

Snyder cautioned, however, that the absence of large reservoirs of oil off Florida's shores does not mean there are no tar mats or patties still buried closer to shore in sand bars.

As BP has pointed out, these submerged tar mats could be the source of tar balls washing on shore for years to come.

Two other pieces of good news also come from the studies:

- Levels of polynuclear aromatic hydrocarbons, a chemical in crude oil commonly called PAHs, have nearly disappeared in the water column, sediment, and microorganisms in the roughly 5,000-square-mile Florida Panhandle Bight shelf, encompassing the eastern Gulf and extending about 50 miles south.
- PAHs found in coquina clams along beaches between Panama City and Perdido Key finally dissipated in March after being at high levels throughout last year.

Studying the impact

The findings are the result of work of eight UWF scientists and 24 students who have been working with a consortium of science and academic institutions from all along the Gulf Coast, Georgia and even Norway, on the two studies that actually go well beyond understanding the impact of the oil spill on the Gulf.

The studies — called DEEP-C and C-IMAGE — are basically examining every element in the eastern Gulf, from the geography to current flows, in an effort to answer the question: What are short-term and long-term environmental consequences of petroleum hydrocarbon release on marine life and the marine ecosystem?

Much like meteorologists rely on a vast amount of data to predict the paths of hurricanes, UWF and other scientists will use the data to build models to better predict where oil from future blowouts is likely to flow.

What does the oil research mean to the average Pensacola area residents?

"The economy of the Florida Panhandle is intimately associated with the health of the Gulf of Mexico," said Wade Jeffrey, an oceanographer and the lead UWF scientist on the C-IMAGE project.

"But we really don't understand how the Gulf works and how to keep it healthy and keep the fisheries in good shape. That all feeds into the big picture of taking care of the Gulf so we can take advantage of its resources."

'Dodged a bullet'

BP gave an initial \$10 million to the Florida Institute of Oceanography and \$450 million to the Gulf Research Initiative for research related to the aftermath of the oil spill.

The Bioremediation Center has received \$2.1 million of that money for work through 2014. The center received \$20,000 from Escambia County and the Santa Rosa Island Authority for beach monitoring.

The Gulf of Mexico is the least understood and least studied body of water in the country, Jeffrey said.

“And that’s really impacted our ability to understand the impacts of the oil spill,” he said.

But he said the studies suggest that Florida “dodged a bullet.”

He said the oil’s effects on microbes that are the foundation for the Gulf’s food chain — bacteria and phytoplankton — were short-term rather than long-term.

“It looks like the Gulf has a high level of resiliency,” he said. “The environment can take some type of a smack-down, but the question is: How much is too much?”

However, Jeffrey is quick to point out that UWF’s findings about the Gulf off Florida may not be the same as the findings of other scientists studying the Gulf off Alabama, Mississippi and Louisiana.

“We were not impacted to the extent that Alabama, Mississippi and Louisiana were,” he said. “That’s because we were farther away. The closer you were, the more you were impacted.

“Apparently, there are places where there is still black gunk from the oil spill on the shoreline. It washed in sea grass and marshes, and it’s hard to get out.”

Canary in the sand

Snyder said research on the coquina clam, which concludes this month, has reaped many benefits.

“Coquina are excellent indicators of oil for sandy beaches,” he said. “We did not have biological indicators for sandy beaches before. And they showed the oil cycled through the system and is no longer there.”

Coquinas proved to be great subjects to study because they are filter feeders, processing a lot of water and sand, Snyder said. They burrow in the wave wash zone along the shorelines, which, locally, were most impacted by the spill.

“They don’t have enzymes to break down the PAHs found in oil,” said Snyder, UWF’s lead scientist on the DEEP-C project. “They’ll accumulate in the coquina.”

The research focused on six beaches between Perdido Key State Park and St. Andrews State Park in Panama City. But a bulk of the samples that were taken to the Bioremediation Center’s lab for analysis came from the university’s beach property, east of Portofino Island Resort, where BP allowed submerged tar patties and mats to stay and degrade naturally.

“We were getting elevated numbers of PAHs, the chemical from oil and tar pies buried on the beach in the coquinas,” Snyder said. “That’s all gone down. The latest sampling we’ve done is approaching zero. The chemicals have cycled throughout the system and have been degraded by bacteria.”

He said the level of the chemicals never posed a danger to the public.

'A tremendous education'

Besides collecting valuable data, UWF students got “a tremendous education on how to respond to an oil spill,” Snyder said

“The students trained in hydrocarbon chemistry and analytical chemistry and basic oceanography,” he said.

Alexandra Vestail, 22, of Jacksonville, who graduated from UWF this spring with a bachelor’s degree in biology, spent a year of her studies working mostly on the coquina project, and joined the team of scientists on one of about 10 offshore cruises.

She said few students get the opportunity to work on developing a new scientific method from scratch and seeing results that prove the method works.

“It was a great experience,” she said. “Most students want to be part of something bigger. I would not have been able to get that experience at a bigger college. It has given me the skills I need to go to graduate school and start a career.”

And she took away one valuable lesson about the oil that seeps regularly from boats and drilling rigs.

“The Gulf has a way of dealing with it,” she said. “We do mess up a lot, and nature has a way fixing things we cannot.”

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