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Fourth Anniversary of Gulf Oil Spill: Wildlife Is Still Suffering from Toxic Cover Up

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BP and the Government Decided to Temporarily Hide the Oil by Sinking It with Toxic Chemicals … The Gulf Ecosystem Is Now Paying the Price

As we noted at the time, and on the first (and here), second and third anniversaries of BP's Gulf oil spill, BP and the government made the spill much worse by dumping toxic dispersant in the water in an attempt to to sink – and so *temporarily* hide – the oil.

In addition, adding dispersant makes oil 52 times more toxic than it would normally be.

EPA whistleblowers tried to warn us...

Gulf toxicologist Susan Shaw told us last year:

> Covering up the [Gulf] oil spill with Corexit was a **deadly action** ... what happened in the Gulf was **a political act, an act of cowardice and greed**.

(60 Minutes did a fantastic exposé on the whole shenanigan.)

And the cover up went beyond adding toxic dispersant. BP and the government went so far as hiding dead animals and keeping scientists and reporters away from the spill so they couldn't document what was really happening.

As the National Wildlife Federation (NWF) notes in a new report, the wildlife is *still* suffering from this toxic cover up.

NWF reports:

> Some 900 bottlenose dolphins of all ages—the vast majority of them dead—have been reported stranded in the northern Gulf between April 2010 and March 2014. In 2013, bottlenose dolphins were found dead or stranded at more than three times average rates before the spill. In 2011, dead infant or stillborn dolphins were found at nearly seven times the historical average and these strandings have remained higher than normal in subsequent years. NOAA has been investigating this ongoing wave of bottlenose dolphin strandings across the northern Gulf of Mexico since February 2010, before the Deepwater Horizon rig exploded. This is the longest period of above-average strandings in the past two decades and it includes the greatest number of stranded dolphins ever found in the Gulf of Mexico. In December 2013, NOAA published results of a study looking at the health of dolphins in a heavily-oiled section of the Louisiana coast. This researchers found strong evidence that the ill health of the dolphins in Louisiana's Barataria Bay was related to oil

exposure.

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Dolphins in Barataria Bay showed evidence of adrenal problems, as has been previously reported in mammals exposed to oil.4 Barataria Bay dolphins also were five times more likely than dolphins from unoiled areas to have moderate-to-severe lung disease. Nearly half the dolphins studied were very ill; 17% of the dolphins were not expected to survive. The study concludes that health effects seen in Barataria Bay dolphins are significant and likely will lead to reduced survival and ability to reproduce.

NWF found many other species have also been harmed by the dispersant-oil mixture:

Roughly 500 stranded **sea turtles** have been found in the area affected by the spill every year from 2011 to 2013. This is a dramatic increase over the numbers found before the disaster. Other teams of scientists have reported negative impacts of oil on a number of species of fish, including tuna red snapper and mahi-mahi. As we have learned from previous spills far smaller than the 2010 event, it has taken years to understand the full effects on the environment. In some cases, recovery is not complete even decades later. Twenty-five years after the Exxon Valdez spill in Prince William Sound, clams, mussels, and killer whales are still considered "recovering," and the Pacific herring population, commercially harvested before the spill, is showing few signs of recovery. [One of the main ingredients in Corexit – 2-butoxyethanol – was also used in the Valdez spill] ... the full scope of the Deepwater Horizon disaster on the Gulf ecosystem will likely unfold for years or even decades to come.

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The Atlantic **bluefin tuna** is one of the largest fish in the Gulf, reaching average lengths of 6.5 feet and weighing about 550 lbs. A single fish can sell for tens of thousands of dollars.... The Deepwater Horizon rig exploded while the April-May breeding season in the northern Gulf was underway. In 2011, NOAA researchers estimated that as many as 20% of larval fish could have been exposed to oil, with a potential reduction in future populations of about 4%.

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A more recent study shows that a chemical in oil from the spill can cause irregular heartbeats in bluefin and yellowfin tuna that can **lead to heart attacks**, or even death. The effects are believed to be particularly problematic for fish embryos and larvae, as heartbeat changes could affect development of other organs. The researchers suggest that other vertebrate species in the Gulf of Mexico could have been similarly affected. Scientists found that four additional species of large predatory fish—**blackfin tuna, blue marlin**, **mahi-mahi** and **sailfish**—all had fewer larvae in the year of the oil spill than any of the three previous years.

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The Deepwater Horizon spill occurred during the **blue crab** spawning season, when female crabs were migrating out of estuaries into deeper waters of the Gulf to release their eggs.

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[Reports indicate problems with crabs.] Blue crabs provide evidence of oil tainting Gulf food web. 2. Alabama Local News. 2013. Blue crab stock declines are concern for Gulf Coast fishermen. 3. Houma Today. 2013. Locals say blue crab catches plummeting. 4. Louisiana Seafood News. 2013. Lack of Crabs in Pontchartrain Basin Leads to Unanswered Questions. 5. Tampa Bay Times. 2013. Gulf oil spill's effects still have seafood industry nervous. 6. Presentation at the 2014 Gulf of Mexico Oil Spill & Ecosystem Science Conference. The Effects of the Deepwater Horizon Oil Spill on Blue Crab Megalopal Settlement: A Field Study.

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Marine life associated with the **deep sea corals** also showed visible signs of impact from the oil. In a laboratory study, coral larvae that had been exposed to oil, a chemical dispersant, and an oil/ dispersant mixture all had lower survival rates than the control larvae in clean seawater.

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According to a recently published federal report, **oyster** eggs, sperm and larvae were exposed to oil and dispersants during the 2010 oil spill. Oil compounds known as polycyclic aromatic hydrocarbons (PAHs) can be lethal to oyster

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In the fall of 2010, even after the Macondo well was capped, oyster larvae were rare or absent in many of the water samples collected across the northern Gulf of Mexico.

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There are nearly 1000 known species of **foraminifera** in the Gulf of Mexico. These small marine creatures form part of the base of the marine food web, serving as a food source for marine snails, sand dollars and fish. Previous research has shown that these sediment-dwelling microorganisms are sensitive to oil damage. Rapid accumulation of oiled sediment on parts of the Gulf floor between late 2010 and early 2011 contributed to a dramatic die-off of foraminifera. Researchers found a significant difference in community structure and abundance during and after the Deepwater Horizon event at sites located from 100-1200 meters deep in the Desoto Canyon, nearly 100 kilometers south-southwest of Pensacola, Florida. Deep sea foraminifera had not recovered in diversity a year and a half after the spill.

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Killifish, also known as bull minnows or cockahoe, are prized bait fish and play an important role in the Gulf food web.….This species has been extensively studied in the aftermath of the disaster because of its abundance and its sensitivity to pollution. Oil exposure can alter the killifish's cellular function in ways that are predictive of developmental abnormalities, decreased hatching success and decreased embryo and larval survival. In 2011, Louisiana State University researchers compared the gill tissue of killifish in an oiled marsh to those in an oil-free marsh. Killifish residing in oiled marshes showed evidence of effects even at low levels of oil exposure which could be significant enough to have an impact at a population level. Additional research has found that four common species of marsh fish, including the Gulf killifish, seem to be avoiding oiled areas. These behaviors, even at small scales, could be significant within marsh communities, leading to changes in food web dynamics.

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In the aftermath of the spill, a number of fish, including **red snapper**, caught in Gulf waters between eastern Louisiana and western Florida had unusual lesions or rotting fins. University of South Florida researchers examined red snapper and other fish and determined that their livers contained oil compounds that had a strong "pattern coherence" to oil from the Deepwater Horizon spill.... An analysis of snapper populations in the Gulf that was done between 2011 and 2013 showed an unusual lack of younger snapper. Further research found a significant decline in snapper and other reef fish after the spill. Small plankton-eating fish, such as damselfishes and cardinalfishes, declined most dramatically but red snapper and other larger reef fish also declined.

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Seaside **sparrows** live only in coastal marshes, where they are common year-round residents. Oil from the Deepwater Horizon spill remains in some marshes, putting seaside sparrows at continued risk from direct oiling, contaminated or reduced food supplies, and continued habitat loss. In 2012 and 2013, seaside sparrows in Louisiana salt marshes were found to have reductions in both overall abundance and likelihood to fledge from the nest. Because these birds are not aquatic, exposure to oil would likely come from incidental contact on the shore or from eating oil or bugs and other creatures that have oil in their systems. Other studies have shown a significant decrease in the insect population in oiled marshes, which could be reducing prey availability for seaside sparrows.

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Roughly 700 **sperm whales** live year-round in the Gulf's deep waters off the continental shelf.... A researcher at the University of Southern Maine has found higher levels of DNA-damaging metals such as chromium and nickel in sperm whales in the Gulf of Mexico compared to sperm whales elsewhere in the world. These metals are present in oil from the spill. Whales closest to the well's blowout showed the highest levels.

Nothing has changed ... indeed, the U.S. has let BP back into the Gulf. And BP is going to drill even deeper ... with an even *greater* potential for disaster.

It's not just BP ... or the Gulf. Giant banking and energy companies and the government have a habit of covering up disasters – including not only oil spills, but everything from nuclear accidents to financial problems – ***instead*** of actually ***fixing*** the problems so that they won't happen again.

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