

Gulf of Mexico oil spill threatens seahorse species with extinction: researchers

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(PhysOrg.com) -- A species of seahorse unique to the waters of the Gulf Coast could face extinction because of the Gulf of Mexico oil spill, warns marine conservation organization Project Seahorse. Without careful intervention, the dwarf seahorse (*Hippocampus zosterae*) could virtually disappear within a few years, while many other fish populations, including several other species of seahorse, face a similarly bleak future as cleanup continues.

“We’re very worried,” says Assoc. Prof. Amanda Vincent, director of Project [Seahorse](#) at the University of British Columbia and a leading expert on seahorse conservation “All of the seahorse populations in the area will be affected, but the dwarf seahorse is at greatest risk of extinction because much of its habitat has been devastated by the spill.”

Dwarf seahorses are tiny (less than 2.5 cm long), sedentary animals that feed and reproduce in shallow coastal seagrass beds for much of the year. Unusually, it is the males who give birth; they produce very few young, making the species particularly vulnerable to environmental change. The spill has exposed them to high levels of oil toxins and destroyed large swaths of their food-rich habitat. Their numbers are expected to drop, even as the cleanup gains momentum.

“While the spill itself was catastrophic for these animals and ecosystems, the cleanup poses considerable threats, too,” says Assoc. Prof. Heather Masonjones, a seahorse biologist at the University of Tampa. “The [dispersants](#) used to break up the oil cause some of the toxins to sink and

spread, accumulating in their food sources and poisoning more animals.”

To slow the movement of the spill, BP has burned off the oil caught in seagrass mats floating in open water. While the majority of the animals live in seagrass beds in the coastal shallows of the Gulf, others live in these loose mats of vegetation offshore.

The burning of the mats has killed many [marine animals](#) while depriving others of their habitat and exposing them to further toxicity. Seagrass is vital to the long-term health of coastal ecosystems, sheltering marine animals, acting as fish nurseries, improving water quality, and preventing erosion.

Where possible, the use of chemical dispersants and the burning of oil should be avoided, urge the researchers. Booms have been, and should continue to be, used to isolate the slicks. They can then be skimmed, left to evaporate, or treated with biological agents such as fertilizers. These organic agents promote the growth of micro-organisms that biodegrade oil. In extreme cases where animals are at high risk of poisoning, seagrass mats and beds can be cut to reduce toxic exposure.

“It’s absolutely critical that measures be taken to preserve the seagrass mats and beds,” says Masonjones. “We must act quickly and carefully to give these fragile species the best chance of survival.”

The [Gulf of Mexico](#) spill — and the explosion last Thursday of the Mariner Energy platform — raise questions about the safety of oil extraction and transport closer to home, in British Columbia’s coastal waters.

“An [oil](#) spill in B.C. would present a grave threat to several species of pipefish, close relatives of the seahorse, and to plenty of other marine life,” says Vincent. “Because of the coastal topography and wind

patterns, clean up could be extremely difficult, and here, too, we could see a number of species catastrophically affected.”

Provided by University of British Columbia

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