SCIENCE & TECHNOLOGY

Survival of the Smallest? Bigger Sea Species More Threatened

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Associated Press

FILE - A blue whale is shown near a cargo ship in the Santa Barbara Channel off the California coast, Aug. 14, 2008. The oceans are turning into a Darwinian topsy-turvy place, where it's survival of the smallest and the bigger a species is, the more prone it is to die off.

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In the Earth's oceans these days, the bigger a species is, the more prone it is to die off. That's unheard of in the long history of mass extinctions, a new study finds.

As subfamilies of marine animal species — called genera — grow larger in body size, the likelihood of them being classified as threatened with extinction increases by an even greater amount, according to a study published Wednesday in the journal *Science*. In past extinctions, smaller creatures were more prone to die off, or size didn't matter, said study lead author Jonathan Payne, a paleobiologist at Stanford University.

Take the blue whale, not only the largest living animal, stretching close to 100 feet long, but the largest to ever have existed, Payne said. It's on the IUCN endangered list and has lost as much as 90 percent of its population in the last three generations, according to the IUCN.

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FILE - A 70-foot female blue whale, that officials believe was struck by a ship, is seen washed ashore near Fort Bragg, California, Oct. 20, 2009. As subfamilies of marine animal species grow larger in body size, the likelihood of them being classified as threatened with extinction increases by an even greater amount, according to a study published Sept. 14, 2016.

On the other end of the spectrum is a grouping of fish, bioluminescent bristlemouths, that are about three inches long. They are the most abundant creatures with a backbone; the population is estimated to be in the trillions.

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Focus on oceans

Payne compared fossil records, looked at past mass extinctions and compared them to current threats, concentrating on 264 genera that have the best modern and ancient records. Payne concentrated on oceans, where the fossil records are better over time. The mass extinction 65 million years ago that killed off the dinosaurs didn't kill off bigger marine species at higher rates than smaller ones, unlike what's happening now, Payne said.

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