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## Fish Poop May be Valuable to Maintaining Oceanic Acidity Balance

Scientists have learned that fish poop may be beneficial to maintaining the delicate balance of the Earth's oceans.

Using computer models, Rod W. Wilson, of the University of Exeter in England, and colleagues from the US, Canada and England discovered that bony fish excrete a crucial amount of inorganic carbon that works to maintain the oceans' ph balance.

Using computer models, researchers estimated that bony fish produce between 812 million and 2,050 million tons of valuable inorganic carbon. This would produce around 110 million tons of calcium carbonate per year, they said.

This natural process helps the Earth's oceans maintain a healthy balance by counteracting the affects of climate change, researchers reported in the journal Science.

"This study is really the first glimpse of the huge impact fish have on our carbon cycle -- and why we need them in the ocean," researcher Villy Christensen and colleagues wrote.

Scientists had previously assumed that the primary source of alkaline chemicals like calcium carbonate was found in the shells of marine plankton.

They estimated that fish poop amounts to between 3 percent and 15 percent of total carbonate in the oceans. That amount is crucial to help control the oceans' acidity balance as well as regulate the amount of carbon dioxide absorbed from the atmosphere.

"Because of the impact of global climate change, fish are likely to have an even bigger influence on the chemistry of our oceans in the future," Wilson said in a statement.

The carbonate produced by bony fish, which make up about 90 percent of marine species, is soluble and dissolves in the upper sea water, while that from the plankton sinks to the bottom, the team noted.

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