

# Study: Corals can switch skeletal material

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U.S. marine geologists say they've determined corals can change their skeletons, using different minerals depending on the seawater's chemical composition.

Johns Hopkins University postdoctoral fellow Justin Ries and colleagues say the finding marks the first known case of an animal altering the composition of its skeleton in response to changes in its physical environment.

Ries says the aquatic animal's sensitivity to such changes poses questions about its evolutionary history, as well as the future of the ecologically important coral reefs that it builds, especially since seawater is changing in response to global warming and the buildup of carbon dioxide in the atmosphere.

Reefs are large underwater structures of coral skeletons, made from calcium carbonate secreted by multiple generations of tiny coral polyps during periods ranging to millions of years.

The scientists showed corals can switch from using aragonite to another mineral, calcite, in making the calcium carbonate. They make that switch in response to decreases in the ratio of magnesium to calcium in seawater, Ries said. That ratio has changed dramatically over geologic time.

The research appears in the July issue of the journal *Geology*.

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