

Florida Tech researchers diagnose coral disease

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Marine diseases are killing coral populations all over the world, threatening the livelihoods of millions of people who depend on reefs for food and protection from storms. Are these diseases new and unprecedented infections, or do they erupt from the stresses of environmental change?

Florida Institute of Technology biologist Robert van Woesik and his former student Erinn Muller—now a researcher at the Mote Marine Lab in Sarasota, Fla.—used a mapping technique to examine disease clustering and determine what might have caused the recent increase of [coral diseases](#) in the Caribbean. Their results appear in the October 9 issue of [Global Change Biology](#).

[Public health officials](#) have been mapping diseases since the first outbreak of cholera in London in 1854. Mapping provides clues about the origin of diseases and how rapidly diseases can spread. According to Muller, "When diseases cluster they are usually contagious and are spreading rapidly. When they don't cluster, environmental stress is usually the cause."

Muller and van Woesik mapped the clustering of three coral diseases in the Caribbean and concluded that they are stress-related rather than contagious. "These coral diseases in the Caribbean are likely caused by stress," said van Woesik, "and that stress is the warming seas that are the result of climate change." The researchers suspect the corals' immune systems are compromised by increasing [water temperatures](#), making

them more susceptible to infection.

"We more easily catch a cold when we are stressed, and corals are likewise responding to stress by getting sick," said van Woesik. "The ocean will continue to warm, increasing the likelihood of coral diseases."

Provided by Florida Institute of Technology

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