Scientists anxiously await Barrier Reef coral spawn off north Qld

AM
By Stephanie Smail

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Photo: Scientists do not know exactly which night each species will spawn. (GBR National Park Authority: Reuters - file photo)
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Researchers waiting to catch coral spawn from 10 different species off Townsville in north Queensland, will have to move fast as it happens on just one night a year.

However, scientists do not know exactly which night each species will spawn.

Dr Sylvain Foret from the Australian National University is trying to capture some of it for research.

"Coral spawning is a little bit like snow except it goes from the bottom to the top of the ocean and so you see all these tiny particles of yellow, red and white floating slowly towards the surface," she said.

Dr Foret says researchers do have a rough idea when coral will spawn, but it can keep them waiting for weeks and does not last long once it has started.

She says to get a clean sample, scientists moved corals into tanks on Orpheus Island off Townsville, which are checked every 20 minutes.

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"You know roughly that it's going to be within a week or two weeks interval, but you don't know exactly which night it's going to be, so slowly the stress builds up," she said.

This year's coral spawning is a crucial part of a study that is mapping the DNA of 10 types of coral for the first time.

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Dr Sylvain Foret

Only two species out of an estimated 1,000 in the world that have been mapped before.

Dr Foret says coral spawn is the purest sample of the coral animal.

"If you take coral on the reef you have all these additional components - the algae and the microbes," she said.

"If you should try to extract DNA from this complex community, it is extremely hard to make sense of it."

Professor Eva Abal, the chief scientific officer of the Great Barrier Reef Foundation coordinating the project, says researchers are applying the techniques used to map the human genome to coral to see how it can adapt to global warming.

"If we understand the human body, the human function, and we know what our DNA composition is, we are able to look at how our body responds to treatment for cancer for example," she said.

"For a coral, that's exactly the same.

"If we're able to understand the genetic composition of a coral, we're able to understand how it can adapt, if it does adapt."

Professor Abal says analysing the coral spawn is a baby step toward finding ways to protect the Great Barrier Reef.

"Can we develop a test that will actually determine stress before the corals die off by looking at the DNA?" she said.

"Can we come up with a map of the Great Barrier Reef that will look at connectivity, that these coral species are connected to these coral species because of their DNA composition and as such, they are probably are more resilient compared to the other.

"This will hopefully lead us to looking at areas in the reef that we need to protect."

Topics: marine-biology, research, great-barrier-reef, marine-parks, townsville-4810

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