

Study reveals grouper can help control lionfish invasion

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Groupers may be able to limit the invasion of lionfish on Caribbean coral reefs, according to new research conducted by The University of Queensland (UQ).

The discovery by a international research team, led by UQ's School of Biological Science's, Professor Peter Mumby, could help save native fish populations in the Caribbean, which are being decimated by the pretty but ravenous aquarium favourite.

[Lionfish](#) are not found naturally in the Caribbean and it is believed they many have been released from aquariums in the United States and eventually made their way to the Bahamas in 2004.

Professor Mumby said Lionfish numbers have increased dramatically in the past few years and they have now invaded the entire Caribbean.

“Although lionfish are among the most beautiful fish in the sea, they are voracious predators of small fish and conservationists are concerned about their impact on native [fish](#) populations,” Professor Mumby said.

“In 2006 we did not encounter any lionfish, but by 2010 they were at all of our 12 study sites. However, the number of lionfish was 10 times lower in reefs with lots of large groupers.”

The team surveyed reefs inside and outside the Exuma Cays Land and Sea Park, which are some of the most diverse marine reserves in the

Caribbean, having been established in 1959.

"With long-term protection from fishing, grouper numbers are among the highest in the Caribbean in these marine reserves and we believe that groupers are eating enough lionfish to limit their invasion on these reefs," Professor Mumby said.

The lionfish (*Pterois volitans*) are naturally found in the Indian and Pacific Oceans, but have invaded the Atlantic. Lionfish have highly venomous spines to protect them from predators.

There are few known predators of lionfish. Although previous studies have found lionfish in the stomachs of groupers, Professor Mumby said it was exciting to discover that Caribbean groupers are able to control their numbers.

Although this news is positive for conservation efforts, Professor Mumby adds a cautionary note.

"Years of over-fishing means that densities of large grouper, like the Nassau grouper, are low throughout most of the Caribbean," he said.

"If we want groupers to help us control the lionfish invasion we'll have to develop a taste for lionfish instead of grouper and drastically reduce the fishing of this species."

The research team from the University of Queensland (Australia) and American Museum of Natural History (New York) studied the [invasion](#) of lionfish in a remote stretch of coral reef in the Bahamas. Their findings were recently published in the journal *PLoS One* and can be viewed [online](#) .

Provided by University of Queensland

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