



Australian Government



TOWNSVILLE

DARWIN

PERTH

MEDIA RELEASE 7 April 2021

Threatened fish species thrive at Rowley Shoals

Globally threatened Humphead Maori wrasse and Bumphead parrotfish are “thriving in abundance” in Western Australia’s Rowley Shoals – an isolated chain of coral atolls closed off from fishing for more than 20 years.

New research, led by the Australian Institute of Marine Science, shows fish diversity and abundance has remained remarkably stable at the Rowley Shoals, indicating marine reserves are hugely beneficial in maintaining fish communities at isolated reefs.

Drawing on 14 years of data from baited remote underwater video stations (BRUVS), the research compared fish species at Rowley Shoals with other remote reefs facing ongoing fishing pressure in northern Western Australia.

AIMS lead author and fish biologist Matthew Birt said the long-term study was a rare glimpse at how habitats could thrive in a relatively undisturbed state, offering a unique baseline for scientists.

“Rowley Shoals is one of the last coral reef ecosystems left in the Indian Ocean largely spared from human interference,” he said.

“There’s no human population nearby, low visitation rates and – importantly – has large no-take areas that have been enforced for decades.”

Mr Birt said it was encouraging to see the globally threatened humphead Maori wrasse (*Cheilinus undulatus*) and bumphead parrotfish (*Bolbometopon muricatum*) to also be thriving.

“These species are highly sensitive to fishing pressure because they are large, slow growing and late maturing,” he said.

“Comparably, Ashmore Reef and Christmas Island had no recorded humphead Maori wrasse or bumphead parrotfish – likely a result of historical fishing pressure and a lack of suitable habitat.

“Rowley Shoals is an example of a well-managed marine reserve, with diverse habitat types and low historical fish pressure, making it a unique baseline to compare with other isolated reefs under human pressure.

“This research supports effective environmental management to ensure sustainable use and protection of marine ecosystems, and the marine life that depend on it.”

Rowley Shoals is located 270 kilometres off Broome on the edge of Australia's continental shelf and is also known for its pristine and resilient coral reef habitat.

AIMS coral ecologist Dr James Gilmour said it was one of Australia’s healthiest reef systems.

“It’s one of the only places in Western Australia with consistently high coral cover and diversity for more than 20 years,” he said.



Australian Government



TOWNSVILLE

DARWIN

PERTH

“It is far from the coastline which means it has excellent water quality and largely free of widescale bleaching events.

“Having diverse and abundant fish on coral reefs also support the resilience of coral reef communities.”

This study was conducted as part of AIMS' North West Shoals to Shore Research Program and was supported by Santos as part of the company's commitment to better understanding Western Australia's marine environment.

The research paper [*Isolated reefs support stable fish communities with high abundances of regionally fished species*](#) was published in Ecology and Evolution.