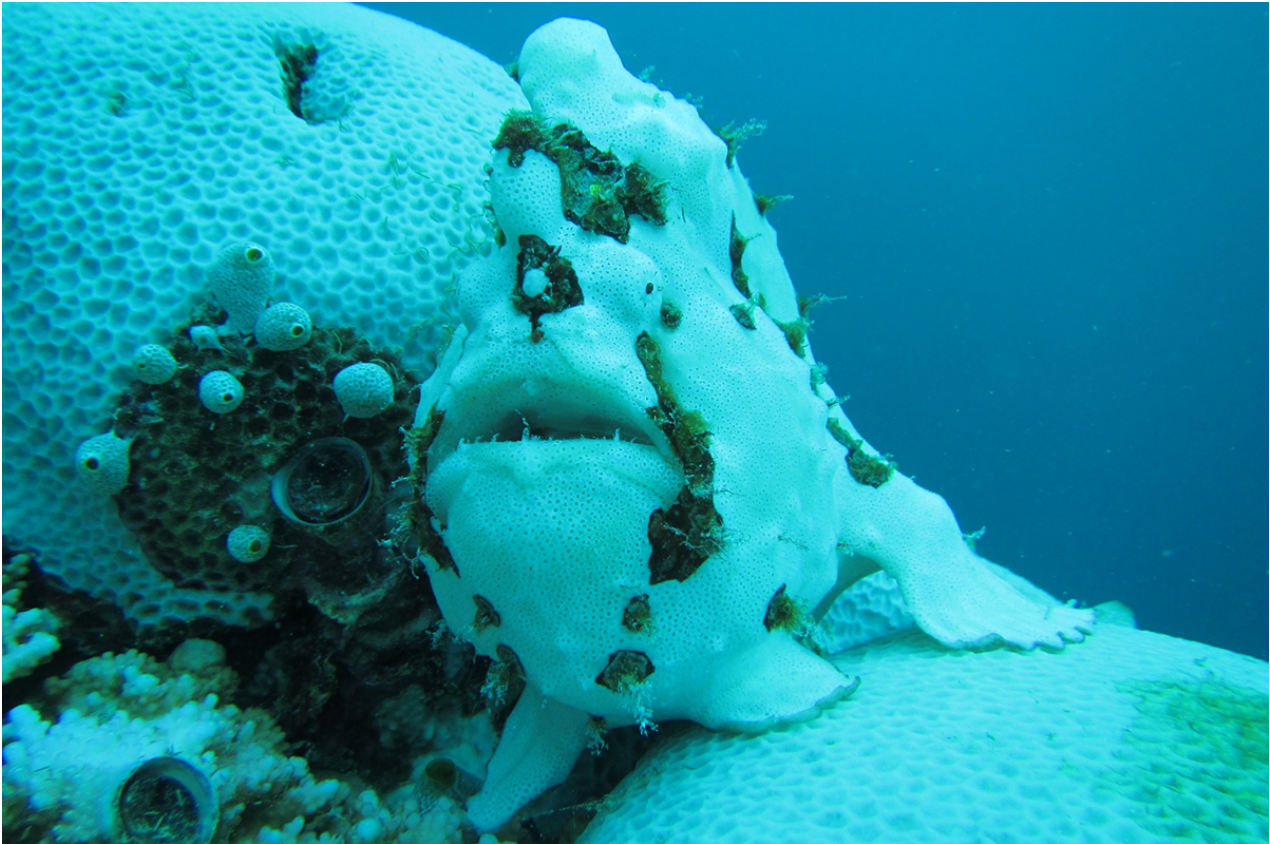


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Frogfish turns itself white to blend in with bleached corals



No longer a colourful character
Gabriel Grimsditch, IUCN

By Agata Blaszcak-Boxe

It's important to fit in. That seems to be the approach taken by this frogfish, which has turned white to match the bleached coral on which it is living.

Warty frogfish (*Antennarius maculatus*) are sedentary seafloor dwellers that can change colour over just a few weeks to seamlessly blend in with their surroundings. Their disguise renders them invisible to unsuspecting prey that they snatch for dinner.

Since the warm waters off the Maldives abound in vibrant-coloured corals, the frogfish living there typically match these orange or pinkish hues, says Gabriel Grimsditch of the International Union for Conservation of Nature Maldives in Malé. But rising ocean temperatures have led to the widespread bleaching of these once-colourful corals.

When Grimsditch and his team were scuba diving in North Ari Atoll in May they photographed an unusual, white frogfish resting among the bleached corals. Its dark, protruding warts

mimicked bits of brownish algae growing on dead parts of the coral skeletons. “We were very excited to see this,” says Grimsditch.

Frogfish rarely change location, so this spooky-looking individual had probably been in that same spot for a while, the team speculated. It is likely to have turned white as the corals were bleached in late April or early May, when ocean temperatures were unusually high.

Frogfish first

“It was fascinating because we had never seen a frogfish that had changed colour to become white because of a bleaching event,” Grimsditch says.

The team thinks this may show how these animals will react to these increasingly frequent events. It would be curious to see whether the frogfish would change colour again if the coral died and turned brown as it became overgrown with algae, Grimsditch says. “I would think it would – that would be my guess,” he says.

The fish’s adaptation to a changing environment recalls the famous peppered moth, which changed from being light to dark coloured during the UK’s Industrial Revolution.

“I just think it is fascinating,” says Caroline Rogers of the United States Geological Survey on St John in the Virgin Islands. “I think most people would be amazed to see that any fish could blend itself so remarkably.”

For John Parkinson at Oregon State University in Corvallis, the observation is a gloomy reminder of the longest-recorded global bleaching event, which has been hammering reefs since 2014. “It is another example of the sad state of affairs,” he says.

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