

# A hitchhiker's guide to pumice

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Dr Scott Bryan is investigating the marine animals that hitchhiked from New Zealand to Australia aboard a large pumice raft.

A floating raft of pumice created by an underwater volcanic eruption near New Zealand, and teeming with marine hitchhikers, has been spotted in the northern Great Barrier Reef.

Rafts of [porous volcanic rock](#) are a remarkable, but poorly understood, [natural phenomenon](#) which play a unique role in transporting [marine species](#) across oceans.

The floating island of [pumice](#) is thought to have travelled more than 4000 kilometres across the Tasman and the Coral Sea before being spotted off Low Isles, north-east of Cairns, by Low Isles caretaker Wayne Fox.

"We noticed a lot of pumice washing up on the beach a few days ago and saw it was coming from a 600 square metre raft, sitting about two nautical miles away from Low Isles," Wayne said.

"It was unusual for so much pumice to wash up on the shore. Some of the pieces were quite big, about the size of a human head, and I hadn't seen anything like it before.

"On closer inspection, you could see the pieces of pumice had become home to a vast amount of marine life."

Dr Scott Bryan, a world expert in pumice rafts from the Queensland University of Technology, said the pumice was the result of an eruption by the Havre Seamount in July 2012 in the Kermadac Islands, north of New Zealand. The [underwater volcano](#) spewed out a large amount of pumice, creating a raft estimated to be more than 20,000 square kilometres in size.

"Pumice rafts are the only process in evolutionary history that can transport species fairly rapidly—up to 30 kilometres per day—across [deep oceans](#) that would normally act as geographic barriers," Dr Bryan said.

"Species such as goose and acorn barnacles, molluscs, anemones, bristle worms, hydroids and crabs are just some of the creatures floating along on this volcanic rock. In the past, we've seen rafts become home to microcommunities of more than 80 species including corals, and sometimes the weight of the hitchhikers is so great that it causes the

pumice to sink."

Dr Bryan said the raft had previously been spotted in a number of locations.

"The raft washed up in south-east Queensland and northern New South Wales this year before making its way to Heron Island in April. That had been the most northerly report so far, until we got a call to say it had been seen off Low Isles. But rather than coming straight up the coast, some of the species on the pumice indicate that this raft may have taken a different path," he said.

"It's like a big jigsaw puzzle. As we get more reports, we can put the pieces together to tell the whole story."

Scientists monitoring the pumice will also notify biosecurity authorities if any marine pests are found on the raft.

The Havre Seamount eruption went unnoticed for two weeks until a keen-eyed tourist flying back to New Zealand from Samoa spotted the pumice raft from a plane window.

While pumice can float for many years, it can also accumulate on beaches or sink after becoming waterlogged or overloaded with different species.

Provided by Queensland University of Technology

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