

Scientists set sail to unlock secrets of 'lost continent' Zealandia

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The vast underwater 'lost continent' of Zealandia extends from New Zealand north to New Caledonia and west towards the east coast of Australia

Scientists are attempting to unlock the secrets of the "lost continent" of Zealandia, setting sail Friday to investigate the huge underwater landmass east of Australia that has never been properly studied.

Zealandia, which is mostly submerged beneath the South Pacific, was once part of the Gondwana super-continent but broke away some 75 million years ago.

In a paper published in the Geological Society of America's Journal *GSA Today* in February, researchers made the case that it should be considered a new continent.

They said it was a distinct geological entity that met all the criteria applied to Earth's other continents, including elevation above the surrounding area, distinctive geology, a well-defined area and a crust much thicker than that found on the ocean floor.

Covering five million square kilometres (1.9 million

square miles), it extends from south of New Zealand northward to New Caledonia and west to the Kenn Plateau off Australia's east.

Drill ship *Joides Resolution* will recover sediments and rocks lying deep beneath the sea bed in a bid to discover how the region has behaved over the past tens of millions of years.

The recovered cores will be studied onboard, allowing scientists to address issues such as oceanographic history, extreme climates, sub-seafloor life, plate tectonics and earthquake-generating zones.

Zealandia 'new continent'

Scientists set sail Friday to investigate the huge underwater landmass in the South Pacific that has never been properly studied



Source : Geological Society of America's Journal/Nature/Australian National University © AFP

Map showing the Zealandia 'new continent', a massive underwater landmass in the South Pacific that has never been properly studied.

Co-chief scientist Jerry Dickens, from Rice University in Texas, said the region was a vital area to study changes in global climate.

"As Australia moved north and the Tasman Sea developed, global circulation patterns changed and water depths over Zealandia fluctuated," he said.

"This region was important in influencing global changes."

Australian National University's Neville Exon said the two-month expedition, setting out Friday from Townsville, would also help better understand major changes in the global tectonic configuration that started about 53 million years ago.

This is around the time that the Pacific "Ring of Fire", a hotspot for volcanoes and earthquakes, came into existence.

In the February scientific paper, lead author Nick Mortimer said experts had been gathering data to make the case for Zealandia being a continent for more than 20 years.

But their efforts had been frustrated because most of it was hidden beneath the waves.

"If we could pull the plug on the oceans, it would be clear to everybody that we have mountain chains and a big, high-standing [continent](#)," he said at the time.

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