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Volcanic hotspots & marine life focus of Coral Sea voyage

Twenty-three scientists from universities in Australia and Scotland will this week sail from Cairns for a month-long voyage to the Coral Sea on the [CSIRO research vessel \(RV\) Investigator](#).

The main focus of the IMAS-led voyage will be collecting seafloor samples and data to help find out when and how two chains of volcanoes formed and whether an enormous plateau is volcanic or not.

Researchers will also seek to better understand links between marine habits and the region's seafloor, while a separate study will examine the distribution and abundance of seabirds.

The voyage's Chief Scientist, IMAS Associate Professor Joanne Whitaker, said the area's intriguing geology likely holds secrets to understanding the forces from the deep Earth that shaped Australia and its Pacific neighbours, and the Coral Sea remains geologically, ecologically and culturally significant.

"Volcanic hotspots under the seafloor were critical in the evolution of the Coral Sea region between Australia, Papua New Guinea, the Solomon Islands and New Caledonia," Associate Professor Whittaker said.

"However, we don't yet fully understand the timing, extent and history of the hotspots that brought volcanic material to the surface, shaping the Australian plate.

"The data we gather will help us to test hypotheses about the age and evolution of the seabed, the extent of continental crust, and long parallel chains of seamounts that have formed as Australia moved northwards over the hotspots."

Associate Professor Whittaker said the region is also home to important wildlife habitats, including in Australia's Coral Sea Marine Park.

"The seafloor habitats in the marine park are poorly understood and we aim to improve our knowledge of how and why marine life varies in the region.

"The geomorphology of the seafloor is a key influence on the Coral Sea's biodiversity, especially deepwater habitats, so our research will include examining how different habitats are distributed and how this relates to seafloor structures.

“Gathering data about the seabirds that we observe during the voyage will also play an important role in informing future management plans for Australia’s marine environment.

“The Coral Sea is vital to a range of Pacific nations and we hope to be able to survey within the exclusive economic zones of some of our neighbours so we can gather and share data and insights with our international colleagues,” Associate Professor Whittaker said.

The voyage leaves Cairns on Wednesday 7 August and is due to return to Brisbane on Tuesday 3 September.

This research is supported by a grant of sea time on RV *Investigator* from the CSIRO Marine National Facility.

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