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Media Release

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Citizen scientists film black corals at spectacular unexplored reef off Tasmania's East Coast

Deep ocean divers acting as citizen scientists have taken the first close-up look at stunning marine life on a deep granite reef in the Freycinet Commonwealth Marine Reserve (CMR) off Bicheno, eastern Tasmania.

Their footage shows an explosion of colourful sponges, gorgonian fans and other corals, clouds of butterfly perch, and large, tree-forming black corals that may be new to science.

Researchers with the National Environmental Science Programme (NESP) Marine Biodiversity Hub mapped the 200-metre-long reef using multibeam sonar, and conducted surveys using an autonomous underwater vehicle in 2011.

But they couldn't get a closer look because at 60 to 80 metres from the sea surface the reef is well beyond typical scuba-diving depths.

"The reef is brushed by strong currents that deliver non-stop supplies of food," project leader Neville Barrett from the Institute for Marine and Antarctic Studies (IMAS) said.

"This supports an oasis of life that looks highly valuable in terms of biodiversity and conservation.

"It's an area known to local fishers as Joe's Reef but its location had remained a mystery to scientists and managers. It is occasionally fished during good weather when offshore access is possible, but the overall nature of the habitat and the reef fish and invertebrate it supports has been a mystery."

To learn more about the reef the researchers suggested two experienced 'technical' divers, Tasmanian Scuba Diving Club members James Parkinson and Andreas Klocker, might like to explore it.

James and Andreas are among a handful of Tasmanian divers that use re-breathers, scuba devices that recycle breathing gas and remove waste carbon dioxide. This allows them to dive deeper and spend longer on the seafloor.

“I’ve known about the reef since the early 2000s and have been keen to dive there, but it wasn’t until we had the new maps created by Neville’s team that we could pinpoint the location,” Mr Parkinson said.

“We used the maps to plan the dive and spent about 25 minutes exploring a vertical wall on the north-western edge of the reef, to a depth of 68 metres.

“It’s the best, most exciting ocean-diving experience we’ve ever had by a long way,” Andreas Klocker said.

“In Tasmania, the deeper you dive the more colourful it gets. There’s no need to go overseas.

“The lower light levels take you below the greenish realm of kelp forests and into an incredible riot of colour and invertebrate life, with black corals swaying above bright pink corals, bright yellow, orange, red and blue sponges of all shapes and sizes.”

“This is a great case of citizen scientists helping us explore a newly mapped and potentially vitally important area in a Commonwealth Marine Reserve,” Dr Barrett said.

“They’ve made a significant leap forward in our knowledge, including the fish present, and the range of sessile invertebrates such as the black corals.

“This is the first time in Australia that divers have seen tree-forming black corals in coastal shelf waters, and the discovery by James and Andreas is an exciting new find for science.

“We now know the reef is the jewel in the crown of Freycinet CMR as far as unique features go and we’re keen to explore it further.

“It’s really exciting to find these amazing reef communities in areas that most people don’t even realise are marine protected areas.”

Parks Australia’s Dr Andrew Read, who is responsible for managing the Freycinet CMR, said the work carried out to explore and understand these deep water environments was outstanding.

“The citizen scientists involved in this project have shined a light on one of our remarkable marine protected areas,” Dr Read said.

The original video footage along with maps and supporting information can be found at <https://www.dropbox.com/sh/0e1llz6s5ezjc90/AABHTCvdG2RRjpszgsa-ijwDa?dl=0> and the video can also be viewed on YouTube <https://youtu.be/pB7ITxtcR9M>

The NESP Marine Biodiversity Hub (<http://www.nespmarine.edu.au/>), hosted by University of Tasmania, is an Australian Government initiative to provide information and understanding to support biodiversity management and conservation in the marine environment.

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