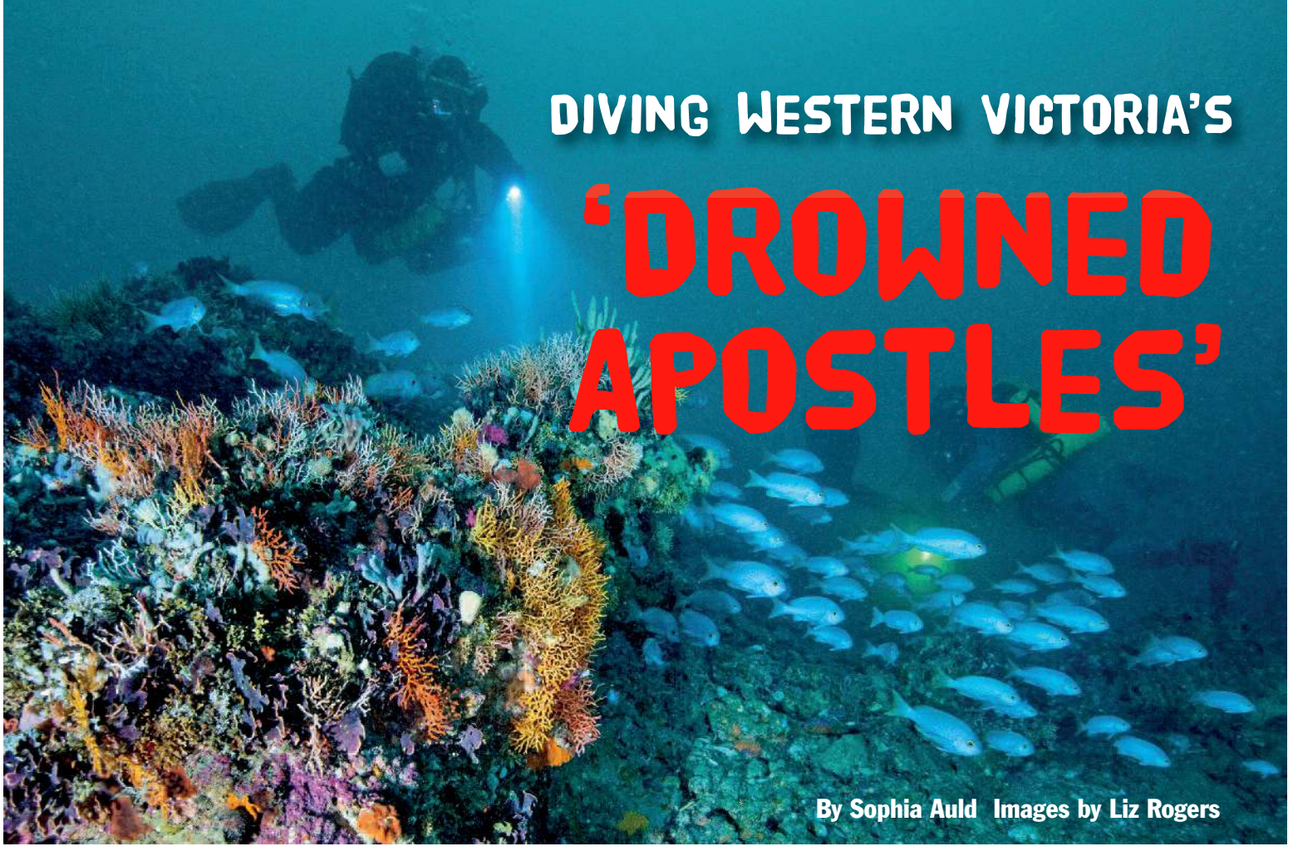

DIVING WESTERN VICTORIA'S 'DROWNED APOSTLES'

By Sophia Auld Images by Liz Rogers

While mapping Victoria's seabed with the most advanced sonar system in the world, scientists were shocked to discover five sea stacks, six kilometres offshore form Victoria's Great Ocean Road. Relatives of the iconic Twelve Apostles, these so-called 'Drowned Apostles' are the only known surviving limestone sea stacks preserved underwater in the world.

The discovery was made jointly by PhD student Rhiannon Bezore, Associate Professor David Kennedy from the University of Melbourne's School of Geography and Deakin University's Dr Daniel Ierodiaconou. 'Only a very fine balance can create sea stacks, with rock needing to be soft enough to erode quickly from a cliff but hard enough to support a rocky pillar,' Dr Ierodiaconou said.

It was Ms Bezore who spotted the Drowned Apostles from the sonar data. 'We had to check what we were seeing because no one has seen stacks submerged at this sea level before,' she said.

In defying usual erosion rates, the Drowned Apostles are unique. 'Sea stacks are always eroding, as we saw with the one that collapsed in 2005, so it is hugely surprising that any could be preserved at that depth of water,' said Associate Professor Kennedy. 'They should have collapsed and eroded as the sea level rose.'

To further explore the site, the research team needed help from technical divers. Stephen Fordyce first met Dr Dan Ierodiaconou at a Wilson's Promontory Cup Day weekend, where Dan was giving a presentation about his underwater imaging techniques. With Dan's research interests, and Steve's engineering and technical diving expertise, the two struck up a conversation. This led to Steve organising the dive on the Drowned Apostles. 'It became apparent that Dan needed to get some rock samples from the Apostles, and I said I'd be more than happy to sort something out,' Steve said.

Steve runs TFM Engineering Australia, which specialises in manufacturing gas mixing and filling systems, caving lights and compressor accessories. His involvement with the Monash Area SCUBA Club meant Steve could organise everything needed for the dive. 'Doing a trip to western Victoria was pretty straightforward,' he said. 'We've got the club boat, the infrastructure and suitably experienced people, so it was just a matter of planning the weekend and diving as we normally would.'

Several technical considerations were involved in planning the dive, including depth, at nearly 60m, cold water, and the location in Bass Strait. 'It's a very weather prone area, so we had to be mindful of what the weather and forecast were doing, and be prepared to deal with swell, surge and less than ideal ocean conditions,' Steve said. 'In terms of the dive itself, the main consideration was the depth, so we had some guys on rebreathers, some on open circuit, but we all used trimix on the bottom to offset the nitrogen narcosis.' Drysuits were worn for the hour long dive in 14 degree water, and high oxygen nitrox mix was used for accelerated decompression.

Having received the co-ordinates from Dan, Steve and the team used a depth sounder to approximate the best location, and dropped a shot line. 'We were hoping to find a spectacular pinnacle in amazing visibility, but we actually came down in greenish water with roughly five metre vis, onto a flat rocky surface,' he said. After swimming round, they located a sloping hill, and also a cliff, where samples were taken. 'It was good that we found the cliff. We were able to collect some mud with shells in it, some sandstone, and other rocks that were embedded in the cliff face.'

The secondary objective of the dive was to collate a visual record of the site. 'When you've gone to all that effort to get down there, it's important to collect as much data as you can,' Steve said. 'You never know what the scientists may be able to recognise from the samples or the footage.'

Underwater photographer Liz Rogers captured the stills, and Timo Friedrich took GoPro footage of the entire dive. Liz's photography captured the beauty of the site, which was difficult to appreciate at the time due to the poor visibility. 'There's very nice colourful sponges and soft corals down there, which are beautiful, but it took a look at the photos afterwards to appreciate it,' Steve said.

The dive team's findings confirmed Dan's imaging research. 'We've found amazing deep water habitats that rival the corals of the Great Barrier Reef in terms of their complexity, colour and beauty,' Dan said.

With five Drowned Apostles spread over a large area, there are more opportunities for exploratory diving, but Steve is happy to have had the experience. 'You could spend weeks out there diving lots,' he said. 'If the scientists needed more samples, or saw something from the video they really wanted to look at, I'm sure we'd be happy to do it again.'