

Early civilisation sleeping giant waits off north west coast

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The untold story of how ancient Australians once walked a vast submerged sand plain dissected by rivers and rugged outcrops awaits discovery off WA's north-west coast, according to a leading expert from The University of Western Australia.

Dr Ingrid Ward has spent the last eight years in the UK, where the creation of three-dimensional reconstructions of the submerged landscape of Europe's North Sea has helped bring to life a wealth of existing and new archaeological finds and fossils, including Palaeolithic hand-axes, Mesolithic bone and antler implements, and fossil mammoth, elk and other fauna. Yet almost nothing is known about the submerged landscapes of the [southern hemisphere](#).

Now based at UWA, Dr Ward is confident that there are equally amazing landscapes waiting to be discovered 20km off the north-west Australian coastline and 30m below sea level around the Dampier Archipelago.

High-resolution surveys for oil and gas development reveal evidence for past [coastal lagoons](#), [salt marshes](#) and [river channels](#): environments which together may have combined to support Aboriginal communities. These surveys also reveal drowned and hardened sand dunes which could contain artefacts linked to Aboriginal cultures more than 7000 years ago.

Sea levels have risen over the past 20,000 years so that old coastal hills became surrounded by sea and cut-off from the mainland. Lowlands that once connected hills became permanently submerged. Similar changes occurred in many other parts of the world, and such submerged landscapes have been explored in Europe and the Mediterranean, leading to astounding [archaeological discoveries](#).

"Australia has the advantage of having an extraordinary amount of living history still available in [rock art](#) and knowledge handed down by Indigenous elders," Dr Ward said. "Ultimately what needs to be done is to create a 3-D visualisation of what the landscape looked like before it was submerged and to link this with the [traditional knowledge](#) and archaeological evidence on the islands and adjacent mainland so we can determine how people lived. With high-resolution airborne surveying, an initial map of the area could be obtained within weeks.

"WA is unique in having one of the most stable coastlines in the world, relatively uncomplicated by tectonics, so might produce a record of [sea-level](#) change that goes back far beyond 10,000 years," Dr Ward said. "It's mainly through oil and gas industry development that we are able to gather the information to find out about these things. We want to collaborate further with industry and indigenous communities to help us

to begin to understand more about past human use of Western Australia's submerged landscapes."

Provided by University of Western Australia

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