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# Media Release

## Chiefs of Staff, News Directors

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# Antarctic 'island' named after giant of geophysics

The achievements of a legendary Tasmanian geophysicist have been recognised with the naming of an icebound Antarctic island in his honour.

Samuel Warren Carey, born in NSW in 1911, was Foundation Professor of Geology at the University of Tasmania from 1946 until his retirement in 1976 and is globally recognised for his key role in promoting the concept of continental drift.

The submission to have an icebound island 360 km north east of Australia's Davis Station named Carey Nunatak was made by Matt King, Professor of Polar Geodesy at the University of Tasmania and a Theme Leader for the ARC-funded Antarctic Gateway Partnership.

Professor King said Professor Carey, who died in 2002, was a giant of geophysics and the naming of the outcrop in the West Ice Shelf in his honour was fitting recognition by Australia, with the US having already named an Antarctic mountain range after him.

"He was really foundational in the development of the theory of continental drift and right around the world he's regarded as being a major figure in that area.

"Our current study in Antarctica is in part looking at the plate motion of Antarctica - not using the techniques that were available to Carey in the 1950s but using the latest Global Positioning System - and Carey came to mind as someone who would be great to recognise by naming something for him.

The naming of Carey Nunatak, along with nearby Ravich Nunatak (named for Russian geologist MG Ravich), was approved by the Australian Antarctic Division Place Names Committee in June.

Professor King said it was believed Russian expeditioners had been to the ice-locked island in the 1950s but a visit by the Antarctic Gateway Partnership team next summer would be the first by Australians.

“Even now there might be a question about whether it really is an island. Is it completely surrounded by ocean? We don’t really know that because we haven’t mapped the ice thickness in that area with any great detail.

“Our team is heading there to deploy GPS receivers and seismometers to measure the present-day crustal motion, the tectonic motion of Antarctica in that area, but also its response to past changes in the amount of ice in that area.

“As the ice thinned all that weight lifted off and Antarctica’s been uplifting, so we’re going to try to measure that as well as get some information from the geology about when the ice last covered that bit of rock.

“Potentially it was under hundreds of metres of ice that’s retreated over the last 10 000 years.”

Professor King said understanding past changes in the ice sheet was vital to support accurate predictions of future global sea levels as the climate changes.

“We don’t know enough about the decay of the last ice sheets. We don’t know exactly how the ice changed as the climate changed. We don’t know even how much Antarctica contributed to sea level rise since that last ice age. Was it five metres or was it 20 metres? There’s still a debate about those numbers and obviously the difference between those two figures is 15 metres of sea level, which is a huge amount.

“Knowing this change better would add another way to test our current predictive models of the Antarctic ice sheet.

“If we’re thinking of going forward and trying to understand what it’s going to do in the future these sorts of data sets are really valuable.

“If we can test our models going backwards in time that gives us greater confidence in our prediction,” Professor King said.

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