



# First Fleet insight on climate changes

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FOR those aboard the First Fleet, sailing towards Australia, the journey was rough, squally, often treacherous and had them praying for their lives.

And they must have wondered where they were headed when, even in January, they could see snow on Van Diemen's Land.

A weather record and diary entries have given scientists a unique view of the weather in 1787 and 1788.

The single record is not enough to assess changes in weather and climate variability, but it does provide information about the Southern Hemisphere to build a database of pre-20th century weather.

Using a logbook from the First Fleet's voyage to Botany Bay, Joelle Gergis of the University of Melbourne and Rob Allan and Philip Brohan of the British Met Office Hadley Centre were able to reconstruct the weather during the voyage.

A young marine on HMS Siri-

us, William Bradley, kept a daily record of weather observations, including temperature, barometric pressure and winds.

"We all know, when we think about Australia, that the fact that we're really profoundly influenced by things like climate extremes, like droughts and floods and bushfires," Dr Gergis said.

"But we still don't have a good or clear understanding of our pre-20th century climate before we had modern-day weather monitoring put in place.

"There really is a lot of information out there; we've only just started to scratch the surface."

International climate scientists met this week in New Zealand as part of an effort to recover weather data from the past.

Scientists hope uncovering and digitising weather information from historical weather station diaries, ship records and explorers' logs will help them understand climate variability

and change.

In 1787, after crossing the equator, the fleet encountered hot and humid conditions, with tropical squalls.

"They started coming across the Southern Ocean and the Indian Ocean," Dr Gergis said. "They hit the Roaring Forties and they really started to rip sails, and it was really a very tempestuous ordeal as we're talking about 1400 convicts who are cramped in the wet hulls of these ships as they were coming across. It was literally just a floating prison.

"Then, as they came across, they actually had a really bad storm that hit them on New Year's Day ... and they had big swells and waves flooding the ships, and their blankets were actually floating away and people were on their knees praying for their life.

"There were patches of snow on Tasmania in the height of summer, which is a fairly unusual thing to see."