

A Land of Drought, Bushfires and Flooding Rains

Melbourne has always been disparaged for being cold and wet, but it is anything but that these days. It has been in the grip of drought for several years now, with reservoirs dropping to 30% capacity.

It has also endured record temperatures in recent months. While summers have generally been characterised by heatwaves of 2–3 days broken by thunderstorms, only 4 mm of rain fell in total during January and February.

A record of 3 days in excess of 45°C left shrubs burnt and prompted water-stressed deciduous trees to start shedding their leaves early, but the storms never arrived to end the heatwave. It was 3 weeks before sufficient rain could quench the Black Saturday bushfires that ensued, ringing half of Melbourne during Australia's most deadly natural disaster.

Bizarrely, while Victoria was burning, Queensland was enduring extensive flooding that left some towns stranded for several weeks.

Then, no sooner had the Victorian bushfires been quelled and the Queensland floodwaters subsided but Cyclone Hamish stalked the Queensland coastline as emergency evacuation plans were put in place from Mackay to Hervey Bay.

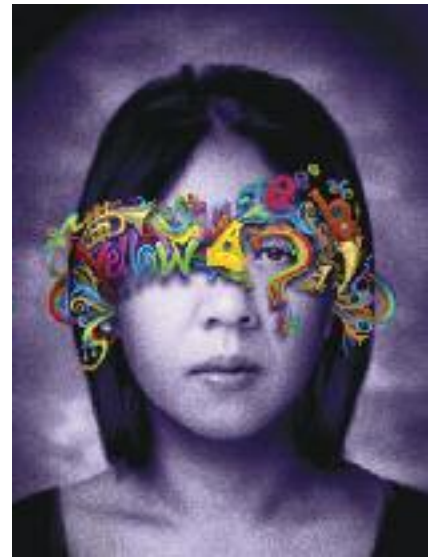
Are the weather gods angry, or is there something to these climate change warnings of severe weather events and shifting rainfall patterns?

While the events of February and March may be just a statistical blip in weather records, they tie in with a trend that has seen 16 of the past 18 years warmer than the mean for 1961–90. Further evidence suggests that these trends will continue.

In this edition of *Australasian Science* Nerilie Abram reports on climate records obtained from corals (p.25). They reveal why predictions of drought-breaking rains brought about by El Niño cycles in the Pacific Ocean have failed: there is a confounding pattern in the Indian Ocean, and it is being influenced by global warming.

Furthermore, Abram found that these Indian Ocean Dipole events are becoming more frequent and severe, and will result in a continuing decline in the amount of winter rainfall reaching southern parts of Australia.

Abram's findings add to overwhelming evidence for climate change, but it is unlikely to stop the climate change deniers from confusing the public about the strength of scientific consensus.



Cover Story

Up to 4% of people have their senses crossed, associating letters with a flavour, numbers with a gender or sounds with a colour. Lindsay Hearne is studying a person with an extreme case of synaesthesia. "Sally" associates individual letters and words with a specific taste, a feel of an object in her hands, and a position that places her relative to furniture or other objects. (see p.14). Image: tufrey.com

According to the US Centre for Public Integrity there are now 2430 Washington lobbyists opposing climate change action – a 300% increase over the past 5 years. The centre estimates that 15% of all lobbyists in Washington are now working to stop Congress from putting a cap on carbon emissions.

**Australasian
Science**
australasianscience.com.au

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Australasian Science is supported by Nobel Laureate Professor Peter Doherty and renowned science broadcaster Robyn Williams, representing excellence in science and its communication.

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Rates are at australasianscience.com.au

DISTRIBUTION:

Gordon & Gotch Ltd

PRINTING:

BPA Print Group, 11 Evans St, Burwood,
Vic. 3125, Australia.

PRINT POST APPROVED PP 331379/0032

ISSN 1442-679X *RRP \$7.95 incl. GST

Australasian Science is published 10 times per year. The opinions expressed in this publication are those of the authors and do not necessarily represent those of the publisher.

CONTRIBUTIONS

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