

CLIMATE CHANGE

Greenland's ice at mercy of ocean

As the climate warms, changes to the ocean around Greenland could cause its ice sheet to melt where it currently seems stable.

Camille Lique and her colleagues at the University of Oxford, UK, used data from an integrated climate model to study a worst-case scenario: concentrations of atmospheric carbon dioxide that increase by 2% each year for 70 years until they are four times the current level. The authors found that the resulting changes in ocean circulation will contribute to ocean warming across the entire region, by up to 5°C in places. This will lead to increased melting of marine-terminating glaciers across most of Greenland.

The potential for widespread ice loss suggests that ice-sheet monitoring should not be limited to areas of current, rapid melting, the authors say. *Clim. Dynam.* <http://doi.org/ws4> (2014)

ANIMAL BEHAVIOUR

Chimps plan for better breakfasts

Wild chimpanzees plan their days to improve the chance of finding tasty fruit for breakfast.

Chimps (*Pan troglodytes verus*) like ripened figs (pictured), but these treats are available only for short periods of time and are sought by other animals. To find out how chimps secure the prized fruit, Karline Janmaat and her colleagues at the Max Planck Institute for Evolutionary Anthropology in Leipzig,

Germany, monitored five wild female chimps at Tai National Park in the Ivory Coast for 275 days over 2 years. They found that when figs were ripe, the animals often left their bed nests before dawn, and departed earlier when the fig tree was farther away.

Such flexible planning may have supported the evolution of calorie-hungry big brains in other primates and ancient human ancestors, the researchers say.

Proc. Natl Acad. Sci. USA <http://doi.org/ws6> (2014)

NEUROSCIENCE

Nostalgia rewards the brain

Reminiscing about happy times is rewarding to the brain, and people will even give up money for the chance to enjoy some nostalgia.

Mauricio Delgado and his colleagues at Rutgers University in Newark, New Jersey, asked volunteers to recall happy and neutral memories while their brains were scanned using functional magnetic resonance imaging. Participants spent more time recalling happy memories, and when doing so, their brain activity patterns were similar to those seen in people receiving money. When offered a small amount of money to recall a positive memory and a larger amount for a neutral memory, the volunteers were more likely to choose the happy memory.

The researchers say that recalling good memories could be useful for improving mood. *Neuron* <http://doi.org/ws2> (2014)

ATMOSPHERIC SCIENCE

Warming from soot overestimated

Atmospheric soot may not have nearly as much climate warming potential as previously thought.

Tiny carbon particles produced by biomass burning and incomplete combustion of fossil fuels absorb sunlight, warming the planet. Xuan

SOCIAL SELECTION

Popular articles on social media

Conference gender gap revealed

Conferences are a central part of scientific life, but they are also an arena for gender disparities, according to a study proving popular on social media. Researchers in Australia gathered data from the 2013 Australasian Evolution Society meeting and found that male speakers tend to get a bigger share of the exposure — a conclusion shared by past studies of conferences. Even though roughly the same number of men and women attended and presented at the evolution conference, women spoke for less time and were also less inclined to ask for longer slots for their talks. Katie Hinde, an evolutionary biologist at Harvard University in Cambridge, Massachusetts, shared her take-home message on Twitter: “Ladies, request the long talk.” *PeerJ* 2, e627 (2014)



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Wang at the Massachusetts Institute of Technology in Cambridge and his colleagues used a refined chemical transport model, along with actual observations, to study black-carbon behaviour.

They found that previous simulations have substantially overestimated concentrations of soot in remote regions as well as its global lifetime, leading to higher estimates of its warming potential. The authors conclude that the direct warming effect of black carbon might be less than one-quarter of the previously reported value.

Policies aimed at reducing black-carbon emissions could have only a limited impact on mitigating climate warming, the team cautions.

Atmos. Chem. Phys. 14, 10989–11010 (2014)

CHEMISTRY

Vibrations yield new type of bond

Calculations suggest that a new kind of chemical bond proposed in the 1980s might have occurred in a 2012 experiment that coupled two bromine atoms to an exotic

form of hydrogen.

The molecule BrHBr is held together by weak electrostatic attractions known as Van der Waals' forces. Jörn Manz at Shanxi University in Taiyuan, China, and his colleagues calculated what would happen if the hydrogen were swapped for a lighter isotope called muonium, in which a positively charged elementary particle called an antimuon takes the place of the proton.

They predict that the BrMuBr molecule would be held together not by electrostatic forces but with a vibrational bond. The muonium shuttling between the bromine atoms would form a lower-energy system than the vibrations of MuBr alone.

These calculations suggest that the bond might have been produced in the earlier experiment, which combined muonium and bromine.

Angew. Chem. Int. Ed. <http://doi.org/f2vjn6> (2014)

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