

worldwide. Wenju Cai of the Commonwealth Scientific and Industrial Research Organization in Bendigo, Australia, and his colleagues analysed the occurrence of significant La Niñas and related El Niño events from 1900 to 2009, simulated under rising concentrations of greenhouse gases in the atmosphere. The researchers found that the number of extreme La Niña events increased from one every 23 years to one every 13 years in the twenty-first century.

Most of the severe La Niñas will follow severe El Niños, resulting in wide, annual swings between opposite extreme weather events, the authors suggest.

Nature Clim. Change <http://doi.org/zph> (2015)

PALAEOANTHROPOLOGY

Ancient hands built for tools

The hands of hominins that lived about 3 million years ago were capable of clutching tools.

The first tool-using hominin is widely believed to have been *Homo habilis* — known as the handyman — in part because its appearance in the fossil record 2.4 million years ago coincides with the earliest stone tools. To search for earlier signs of tool use, a team led by Matthew Skinner and Tracey Kivell at the University of Kent, UK, analysed the composition of the hand bones of *Australopithecus africanus* fossils from South Africa, which are between 2 million and 3 million years old. The ends of *A. africanus* metacarpal hand bones (pictured), which form the palm, resembled those of later toolmakers such as *Homo sapiens* and Neanderthals.

The team concludes that *A. africanus* could forcefully grip objects using an opposable thumb. *Science* 347, 395–399 (2015)



ECOLOGY

Pumas feel the fear near humans

Female pumas that live near human populations hunt more often but spend less time eating their prey than do those in less populated areas.

Humans can cause declines in wildlife populations, but their effect on animal behaviour is less well understood. Justine Smith and her colleagues at the University of California, Santa Cruz, tagged 30 pumas (*Puma concolor*) in California and tracked their movements in areas with four different densities of human housing. They found that at kill sites near the most densely populated areas, female pumas spent 42% less time consuming their prey than those in the least populated regions. To compensate, the females in the more developed habitats killed 36% more deer.

Fear of humans is probably driving this behavioural change, which could have further ecosystem effects, such as boosting scavenger populations and even compromising the reproductive health of female pumas, the authors speculate. *Proc. R. Soc. B* 282, 20142711 (2015)

ENVIRONMENTAL SCIENCE

Methane escapes from major city

The ageing pipeline infrastructure of Boston, Massachusetts, is leaking natural gas — mostly methane, a potent greenhouse gas — at more than double the rate of previous estimates.

Atmospheric methane levels had plateaued but have been growing worldwide since 2007, for reasons that are unclear. Kathryn McKain at Harvard University in Cambridge, Massachusetts, and her colleagues monitored

SOCIAL SELECTION

Popular articles on social media

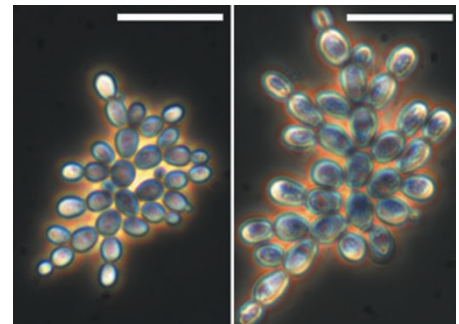
Celebrating beauty in science writing

Not many people read research articles for the snappy writing. But Stephen Heard, an ecologist at the University of New Brunswick in Fredericton, Canada, argues in a blogpost (go.nature.com/a2xh1m) that scientific writing could be more readable and even elegant, an observation that set off a widespread social-media reaction. Heard wrote that researchers should try livening up their scientific prose to attract and keep more readers. Isabelle Côté, a marine ecologist at Simon Fraser University in Burnaby, Canada, tweeted: “Let’s put some whimsy, humour and beauty in scientific writing.” Anthony Caravaggi, a conservation biologist at Queen’s University Belfast, UK, tweeted: “I’d love to see less turgidity & more charm.”

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methane levels at four locations in Boston for a year. They also used a model of atmospheric processes to determine methane emissions. They found that 60–100% of the emitted methane was from the city’s natural-gas system, and that the Boston region is losing about 2.7% of its natural gas: 2–3 times more than other estimates.

Cities that consume natural gas could be a bigger source of atmospheric methane than was previously thought. *Proc. Natl Acad. Sci. USA* <http://doi.org/zpk> (2015)



EVOLUTION

How yeast go multicellular

A genetic mutation in single-celled yeast turns it into a multicellular organism — hinting at how multicellularity might have evolved.

William Ratcliff at the Georgia Institute of Technology in Atlanta and his co-workers studied a strain of yeast (*Saccharomyces cerevisiae*) in which the daughter cells remain attached to the mother cells after dividing, resulting in multicellular ‘snowflake’ yeast.

By mathematically modelling the way that clusters break off, the authors conclude that this way of growing makes the cells in each cluster genetically similar. This allows natural selection to act on the clusters rather than on individual cells, speeding up multicellular evolution. A mutation in a gene encoding the protein ACE2 causes the clusters to form.

After 60 days of selection (400 generations), the yeast evolved bigger cells (pictured, right; scale bars are 50 μm) compared with those at 14 days (left). The results show how a single mutation can create multicellular clusters and set the stage for the future evolution of organismal complexity. *Nature Commun.* 6, 6102 (2015)

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