

EVENTS

Ice on Ceres

A pair of bright spots on Ceres observed by NASA's Dawn probe, which is currently in orbit around the dwarf planet, could be linked to icy geological activity. New images from the craft show that as Ceres rotates, the spots appear brightest in the light of dawn and dimmest at dusk. That could suggest that sunlight is driving changes on the surface of the water-rich body. The findings were presented at the Lunar and Planetary Science Conference in The Woodlands, Texas, on 17 March. See page 401 for more.

Observatory opens

Mexican and US officials inaugurated a γ -ray observatory near Puebla, Mexico, on 20 March. The High-Altitude Water Cherenkov array uses 300 giant water tanks to detect particles created when high-energy γ -rays and cosmic rays collide with the atmosphere (see *Nature* <http://doi.org/25m>; 2013). Although it has a lower resolution than other cosmic-ray detectors, it can map more of the sky, more quickly. The facility sits at an altitude of 4,100 metres, on Pico de Orizaba, the highest peak in Mexico.

Europe's bee peril

Europe's wild bees face an uncertain future, with about one in ten species at risk of extinction, according to an analysis by the International Union for Conservation of Nature released on 19 March. The organization, headquartered in Gland, Switzerland, says that 7.7% of Europe's 1,965 wild bee species have declining populations, 12.6% are stable and 0.7% are increasing. Data on most



SUE FLOOD/GETTY

Pitcairn islands gain marine protection

The creation of a marine reserve around the Pitcairn islands (pictured) in the South Pacific was announced in the UK budget on 18 March. The status depends on agreeing on satellite monitoring and a way to enforce protection of the area, a British territory. On the same day, an international court in The Hague, the

Netherlands, ruled that when a similar reserve was created around the Indian Ocean's Chagos islands in 2010, the United Kingdom failed in its duty to consult Mauritius, which has fishing rights in the archipelago. The ruling, by the Permanent Court of Arbitration, puts the future of marine protection in Chagos in doubt.

species are lacking, however; 56.7% are so poorly studied that it is not possible to classify their extinction risk. Population trends for 79% of species are unclear.

World water

The world faces a 40% shortfall in water supply by 2030 unless management of this essential resource drastically improves, warns a United Nations report. Released on 20 March in New Delhi, the World Water Development Report highlights the planet's growing thirst, as the global population continues to rise and economic development grows. Demand for water is expected to increase by 55% by 2050.

However, 20% of the world's groundwater is already subject to over-exploitation, and the resource is not being managed sustainably, the report says.

Pluto name call

The mission team for NASA's New Horizons spacecraft has asked the public to suggest names for Pluto's geography in preparation for the probe's fly-by of the dwarf planet in July. The probe is expected to map dozens of features on Pluto and its largest moon, Charon. Anyone can chime in until 7 April on ourpluto.org, hosted by the SETI Institute in Mountain View, California, but the names must relate to mythology or exploration.

The International Astronomical Union will decide on which ones are used.

POLICY

US fracking rules

The US Department of the Interior has finalized its regulations on the use of fracking on public and tribal lands. Released on 20 March, the rules set safety and environmental standards for companies that inject fluids into rock at high pressure to fracture it and release oil and gas. New requirements include extra geological analysis before drilling, and validation of well integrity once drilling

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is complete. The regulations also increase standards for the storage of drilling fluids, and require disclosure of the chemicals used in the fluids. More than 100,000 wells are currently in operation on federal land. Of wells being drilled, more than 90% use fracking.

PEOPLE

Abel maths prize

US mathematician John Nash and Canadian-born Louis Nirenberg were awarded the 2015 Abel Prize, often considered the ‘maths Nobel’, on 25 March. The pair won the prize for their contributions to the theory of partial differential equations. Some of Nash and Nirenberg’s most important accomplishments are in an area called geometrical analysis, which concerns the shapes of objects and surfaces. Nirenberg has also deepened understanding of Navier–Stokes equations, which describe fluid flow. The 6-million kroner (US\$766,000) prize is awarded by the Norwegian Academy of Science and Letters in Oslo.

Royal Society head

Nobel-prizewinning structural biologist Venkatraman (Venki) Ramakrishnan (pictured) will be the next president of the UK’s Royal Society, it was announced on 18 March. He



will take over as head of the country’s pre-eminent scientific institution from geneticist Paul Nurse, also a Nobel laureate, on 1 December. Ramakrishnan shared the Nobel Prize in Chemistry in 2009 for his work on the structure and function of the ribosome, a molecular machine that translates genetic information to build proteins. See go.nature.com/sphc7n for more.

RIKEN leader quits

Ryoji Noyori, president of the beleaguered RIKEN Institute in Wako, Japan, announced his resignation on 24 March. The Nobel prizewinner in chemistry has implemented major reforms at the centre following the scandal around stem-cell researcher Haruko Obakata, which Noyori called “a most unfortunate case of research misconduct that has severely tarnished RIKEN’s good reputation”. Former president of Kyoto University, Hiroshi Matsumoto, will take up leadership when Noyori steps down on 31 March.

FUNDING

Ukraine agreement

Ukraine is to become an associate in the European Union’s (EU) €80-billion (US\$86-billion) Horizon 2020 research-funding programme. An agreement signed on 20 March in Kiev by Carlos Moedas, European Commissioner for Research, Science and Innovation, and Serhiy Kvit, the Ukrainian science minister, foresees that Ukrainian scientists and businesses will become eligible to participate in Horizon 2020 on equal terms with EU member states and other associated countries such as Israel. The Ukrainian parliament has still to approve the agreement. See go.nature.com/bwoebg for more.

GM foods approved

US regulators have approved new breeds of genetically modified (GM) apples and potatoes as safe for human consumption. The decision, the result of a voluntary consultation with the US Food and Drug Administration (FDA), was announced in letters sent on 20 March by the FDA Center for Food Safety and Applied Nutrition to Okanagan Specialty Fruits of Summerland, Canada — makers of a non-browning apple — and to J. R. Simplot

COMING UP

26–27 MARCH
International experts will gather in Paris for the Symposium on Search for Life Signatures, to discuss strategies for SETI (the Search for Extra Terrestrial Intelligent life).
go.nature.com/iimrob

31 MARCH–2 APRIL
The International Human Microbiome Congress takes place in Luxembourg. The meeting will focus on future directions for microbiome research in health and disease.
go.nature.com/eeyw2a

of Boise, Idaho, which has produced a potato that is more resistant to bruising and makes less of the cancer-causing compound acrylamide when cooked. Both products have already been approved by the US Department of Agriculture.

RESEARCH

Alzheimer’s hope

An experimental Alzheimer’s drug slowed cognitive decline in a small trial, said the drug’s manufacturer, Biogen Idec of Cambridge, Massachusetts, on 20 March. Aducanumab targets amyloid-β plaques, high levels of which are found in the brains of people with Alzheimer’s disease. After 54 weeks of treatment, patients taking aducanumab showed reduced levels of amyloid-β — the first time an Alzheimer’s drug has shown a statistically significant effect. The safety study of 166 patients found the drug to be generally safe, although there were side effects at higher doses. Experts caution that the findings are preliminary.

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SOURCE: THE TOBACCO ATLAS

TREND WATCH

The global pattern of smoking is changing as tobacco firms target Africa, Asia and the Middle East, according to *The Tobacco Atlas*, released at the United Nations World Conference on Tobacco or Health on 19 March. If no tobacco control is enacted, Africa will see a large rise in smoking, says the report by the American Cancer Society and World Lung Foundation. China is home to one-third of male smokers, but models suggest that tobacco control could cut smoking there by more than 40% by 2050.

GLOBAL SMOKERS FORECAST

The proportions of the world’s smokers will shift towards Africa over this century.

