

IMAGES OF THE YEAR

Science saw farther than ever this year, glimpsing new wonders in the microworld and in the distant reaches of the Solar System. But some of the most powerful images were taken at an all too human scale, as the earth shook, volcanoes blew and mankind continued to threaten other species' survival. Here are 2011's most striking pictures.

Images selected by *Nature's* art and design team
Text by Daniel Cressey



365 DAYS:
the year in science

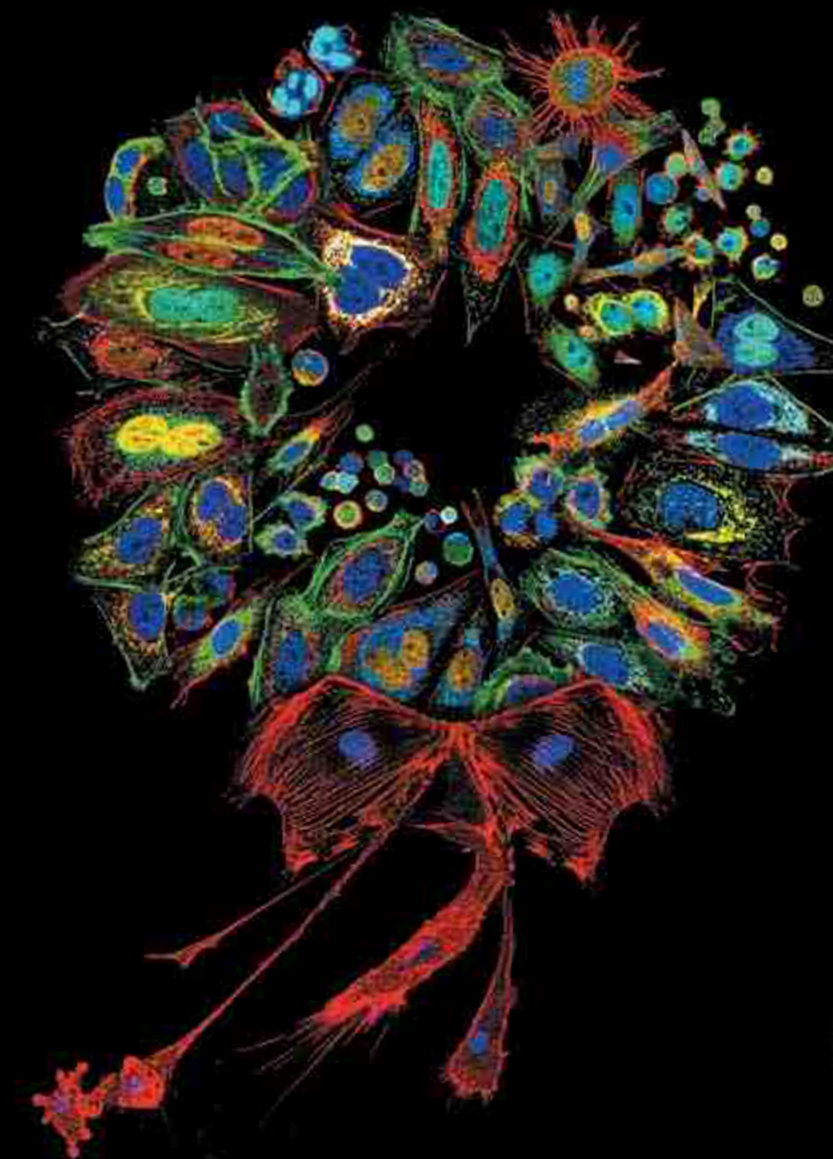
JAPAN'S PAIN

The shattered village of Ōtsuchi testifies to the savagery of the magnitude-9 earthquake and subsequent tsunami that hit Japan's Tohoku region on 11 March. It killed tens of thousands, left hundreds of thousands homeless and triggered a meltdown at the Fukushima nuclear plant.



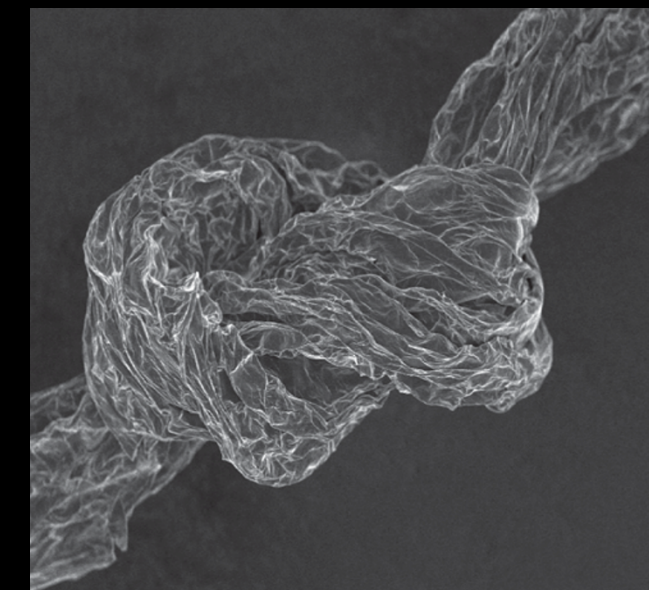
CAGED FURY

Rats don't deserve their bad name, but this ball of fury won't win over many murophobes. Russian scientists bred this aggressive rat strain to compare it with more docile creatures in a study on domestication that has teased out several genetic regions linked to tame traits.



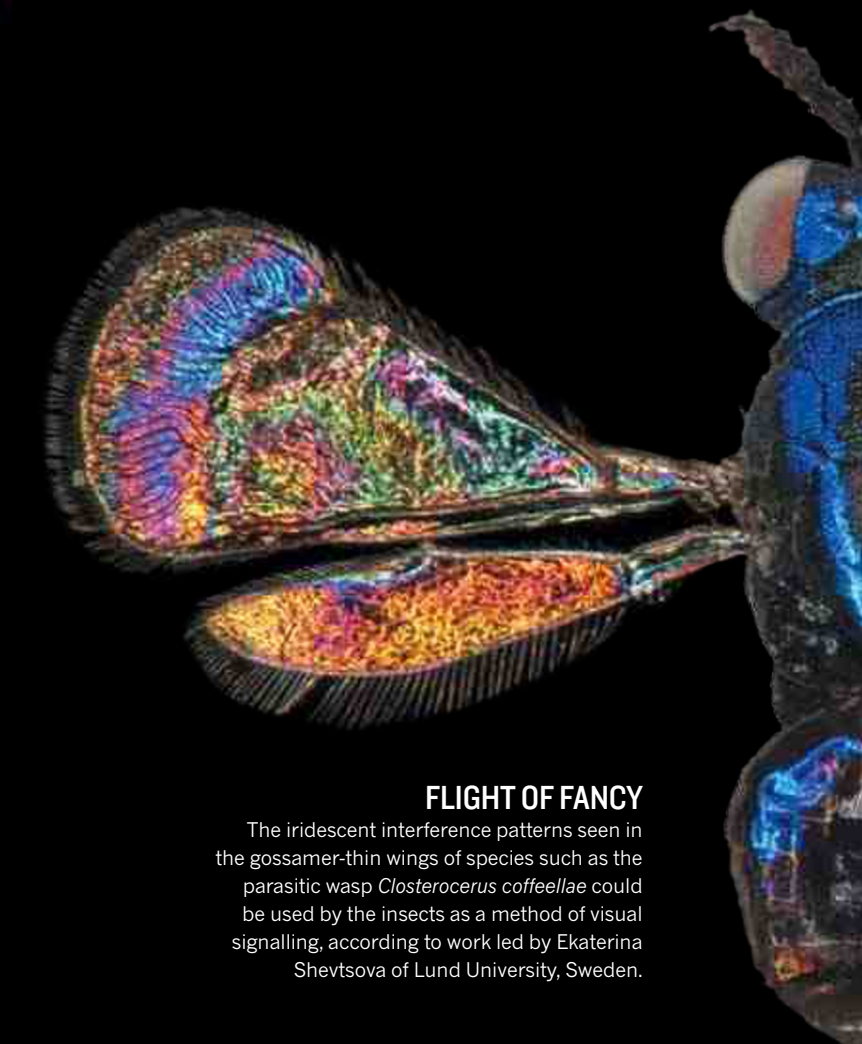
CELLULAR CHRISTMAS

Donna Stolz created a festive wreath by assembling images of mammalian cells from more than 25 experiments. The picture adorned her Christmas card last year and won recognition for the University of Pittsburgh biologist in the 2011 Nikon Small World photography contest.



UNFORGETTABLE

This 400- μm -long knot in graphene, tied by Zhen Xu and Chao Gao at Zhejiang University in China, shows exquisite control at the nanoscale. Xu and Gao spun flat liquid crystals of graphene oxide into flexible fibres metres long, and then converted them into graphene threads.



FLIGHT OF FANCY

The iridescent interference patterns seen in the gossamer-thin wings of species such as the parasitic wasp *Closterocerus coffeellae* could be used by the insects as a method of visual signalling, according to work led by Ekaterina Shevtsova of Lund University, Sweden.

FINAL ENDEAVOUR

We shall never see this sight again. Thirty years, 135 flights and two disasters after the space shuttle first launched, *Endeavour* — pictured here in May docked to the International Space Station — and the rest of the shuttle fleet are retiring to museums.



DOWN TO EARTH

With the demise of the shuttles, Russia's venerable Soyuz capsule is for now astronauts' sole route to the space station. Looking more like a nineteenth-century diving bell than a twenty-first-century spacecraft, this capsule brought three astronauts down to Kazakhstan in November.



DAWN PATROL

Vesta's scarred face was captured by NASA's Dawn craft as it orbited the 530-kilometre-wide denizen of the asteroid belt. The origin of the crater at the centre of this image, which contains a mountain 15 kilometres high, is one of many mysteries Dawn will probe during its year-long reconnaissance.

ULTRA-FLYWEIGHT

Balanced on a dandelion, this ordered metal lattice could usurp other, structurally disordered, ultra-light materials. Tobias Schaedler of HRL Laboratories in Malibu, California, and his team created it by plating nickel-phosphorus onto a polymer microlattice, and then removing the polymer skeleton.



RHINO AIR

A vertiginous helicopter ride took this black rhino on the first leg of a journey from its shrinking habitat in eastern South Africa north to Limpopo. But its cousin the western black rhino was less fortunate: it was one of 13 species and subspecies officially declared extinct this year.



BOOM!

The beauty of a plume from the Puyehue-Cordón Caulle volcano complex in Chile was lost on the thousands of people forced to flee the area, and on those in neighbouring Argentina who were showered in ash from the eruption in June.

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