

## Science News Digest - Monday 6<sup>th</sup> October 2008

Produced by the Science  
Development Team at



The Centre for Life produces a weekly email digest of the latest science news. To receive a copy, please email [sciencenews@life.org.uk](mailto:sciencenews@life.org.uk).

Monday 29<sup>th</sup> September

### Large Hadron Collider: Judge dismisses 'doomsday' lawsuit

**The Telegraph**

A judge in Hawaii has dismissed a so-called "doomsday" lawsuit seeking to halt operation of the Geneva-based atom-smashing Large Hadron Collider.

The two men who filed the suit, Walter Wagner, a retired nuclear safety officer, and Luis Sancho, a Spanish science writer, argued the vast experiment could create tiny black holes or trigger other matter-morphing effects that could threaten the Earth.

The action was filed in Hawaii where the men live and sought to delay the launch of the collider pending a new safety review.

<http://www.telegraph.co.uk/earth/main.jhtml?xml=/earth/2008/09/29/scihadron129.xml>

### Europe warms fast: Med drier, north ever wetter



**Reuters**

Europe is warming faster than the world average and governments need to invest to adapt to a changing climate set to turn the Mediterranean region arid and the north ever wetter, a study showed on Monday.

Europe's mountains, coasts, the Mediterranean and the Arctic were most at risk from global warming, according to the report by the European Environment Agency and branches of the World Health Organization and the European Commission.

"Global average temperature has increased almost 0.8 C (1.4 F) above pre-industrial levels, with even higher temperature increases in Europe and northern latitudes," it said.

<http://www.reuters.com/article/environmentNews/idUSTRE48R4GU20080928?feedType=RSS&feedName=environmentNews>

## Why 2 to the power of 43,112,609 - 1 = \$100,000 for prime number hunters

### The Guardian

Computer scientists are hoping to claim a \$100,000 prize after discovering the largest known prime number. At 12,978,189 digits long, it would take the best part of two and a half months to write out by hand.

Prime numbers, which can only be divided by one and themselves, have long fascinated mathematicians as the building blocks of other numbers. They are now central to techniques used to encrypt data such as credit card details as they are sent around the internet.

The new prime was discovered by Edson Smith of the University of California Los Angeles mathematics department. He installed software on to the department's computers from the Great Internet Mersenne Prime Search (Gimps), which uses downtime on volunteers' PCs to hunt for ever larger prime numbers. Around 100,000 computers add up to what has been called a "grassroots supercomputer" that performs 29 trillion calculations a second.

<http://www.guardian.co.uk/science/2008/sep/29/maths>

## Tuesday 30<sup>th</sup> September

### 'Iceman' row ends after 17 years



#### BBC

A legal battle sparked by the discovery of the world-famous 5,300-year-old "Iceman" known as Oetzi in northern Italy in 1991 has finally been settled.

German hikers Erika and Helmut Simon found the remains, but officials in the north Italian province of Bolzano had refused an adequate finders' fee.

A court ruled against the province in 2006, and it has finally agreed to pay 150,000 euros (£120,000; \$216,000).

<http://news.bbc.co.uk/1/hi/world/europe/7643286.stm>

### Martian winter: Nasa's Phoenix Lander detects snow falling on Red Planet



Mail Online

Mars could experience white winters, Nasa's scientists have revealed.

A laser instrument on the Phoenix probe has detected snow falling from clouds about 2.5 miles above where the lander touched down on the northern plains.

Jim Whiteway, the lead scientist for Phoenix's meteorological station, said the busy lander had sent data back to Earth revealing snow, frost and clouds forming, although the snow is vaporizing before reaching the ground.

'Nothing like this view has ever been seen on Mars,' Whiteway said.

'We'll be looking for signs that the snow may even reach the ground.'

<http://www.dailymail.co.uk/sciencetech/article-1064591/Martian-winter-Nasas-Phoenix-Lander-detects-snow-falling-Red-Planet.html?ITO=1490>

## Dinosaur breathed like a modern bird



### Reuters

Scientists have unearthed the remains of a large meat-eating dinosaur with a breathing apparatus much like a modern bird, fortifying the link between birds and dinosaurs and helping to explain the evolution of birds' unique system of breathing.

Pulled from 85-million-year-old rock along the banks of Rio Colorado in Argentina's Mendoza Province, this 33-foot-long (10 meter), two-legged predator weighed as much as an elephant and likely had feathers, the scientists said.

But its method of breathing makes this dinosaur stand out, said Paul Sereno of the University of Chicago, who wrote about the find on Monday in the journal PLoS ONE.

<http://www.reuters.com/article/scienceNews/idUSTRE48S8ZO20080930?feedType=RSS&feedName=scienceNews>

## Wednesday 1<sup>st</sup> October

## Colonial clue to the rise of HIV



### BBC

The arrival of colonial cities in sub-Saharan Africa at the dawn of the 20th Century may have sparked the spread of HIV.

US experts analysed one of the earliest samples of the virus ever found, in the

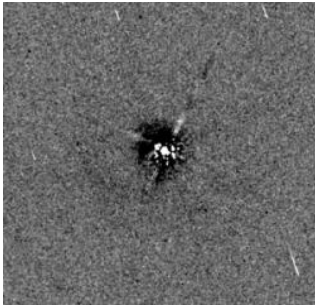
Democratic Republic of Congo in 1959.

The study, published in the journal Nature, suggests the virus may have crossed from apes to humans between 1884 and 1924.

They believe newly-built cities may have allowed the virus to thrive.

<http://news.bbc.co.uk/1/hi/health/7646255.stm>

## **Precocious galaxy's magnetic field is bizarrely strong**



### **New Scientist**

A young galaxy has been found with a magnetic field that is 10 times stronger than the Milky Way's. The find could challenge the prevailing idea of how galaxies 'spin up' their own fields.

Large galaxies are spanned by fairly strong magnetic fields. Astrophysicists think these fields are slowly built up from smaller 'seed fields' that surround

the charged particles blasted out by supernovae. Over billions of years, the galaxies' slow spin whips up these particles and acts like a dynamo to align and amplify the fields.

[http://space.newscientist.com/article/dn14856-precocious-galaxys-magnetic-field-is-bizarrely-strong.html?feedId=online-news\\_rss20](http://space.newscientist.com/article/dn14856-precocious-galaxys-magnetic-field-is-bizarrely-strong.html?feedId=online-news_rss20)

## **Pterodactyls were too heavy to fly, scientist claims**



### **The Telegraph**

They carried away Raquel Welch in One Million Years BC and were ferocious in the Jurassic Park series of films.

But now it seems pterodactyls, the terror of the prehistoric skies, may have struggled to get off the ground.

The new research claims that the ancient reptiles, which could grow to the size of small aeroplanes, were too heavy to fly - even with their massive wings.

The problem, according to a leading scientist, is that they could not flap fast enough to create the thrust to keep their enormous bulk airborne.

<http://www.telegraph.co.uk/earth/main.jhtml?xml=/earth/2008/10/01/sciptero101.xml>

## How lessons from frogs could boost supplies of transplant livers



### Mail Online

A hibernating technique used by frogs could boost the supply of transplant livers, reports say.

Scientists have pioneered a process that freezes the organ very slowly, as some frogs do when they hibernate, to prevent the formation of damaging ice crystals.

They have already tested the system by successfully freezing, thawing and transplanting a pig's liver.

If human livers are found to survive the process, more of the organs would be made available to patients.

<http://www.dailymail.co.uk/sciencetech/article-1066277/How-lessons-frogs-boost-supplies-transplant-livers.html?ITO=1490>

## Thursday 2<sup>nd</sup> October

### Double win for Britain at the Ig Nobels

#### The Guardian

It's that time of year again, when scientists around the world wait nervously to hear who has joined that elite list of winners of the most prestigious prize in the business. But enough of the real Nobel prizes. They can wait until next week.

Last night, it was the turn of their subversive cousins, the Ig Nobels, those considerably less lucrative, but far more fun prizes, which reward research that makes people laugh first and think later.

This year, Britain can lay claim to two winners. David Sims of Cass Business School in London received the Ig Nobel for literature with his narrative exploration of bastards in the workplace. His research was prompted by a fascination of how seemingly fair and balanced people could suddenly abandon hopes of understanding another's viewpoint and instead write them off as a bastard. "There's almost a relief in branding someone a bastard, after spending years trying to accommodate their views. It's liberating," he told me before the ceremony.

<http://www.guardian.co.uk/science/blog/2008/oct/03/ig.nobel.awards>

The Ig Nobel UK Tour returns to The Centre for Life 9<sup>th</sup> March 2009. For more information see <http://www.life.org.uk/>.

## Black rhinos released into wild





#### **BBC**

For the first time in more than 25 years, captive-bred black rhinos have been released back into the wild in Kenya.

Experts have hailed it as a landmark step for African wildlife conservation.

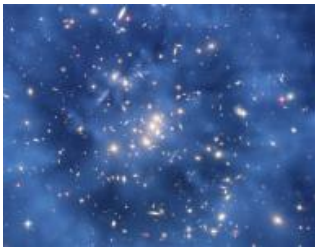
Black rhinoceroses were once widespread in Africa, but in recent years these huge horned creatures have suffered dramatic declines, thanks to poaching and habitat loss.

In particular, Kenya has suffered huge losses, with numbers plummeting from an estimated 20,000 in the 1970s to some 500 today.

Those that remained were confined to sanctuaries.

<http://news.bbc.co.uk/1/hi/sci/tech/7649043.stm>

### **Dark matter and nanotech may vie for Nobel prizes**



#### **Reuters**

A scientist who helped prove the existence of dark matter and a researcher who used the power of jellyfish to glow green in experiments may win Nobel prizes, Thomson Reuters said on Wednesday.

The analysis makes use of the way scientists credit one another for their work to find out who has done the most influential basic research in the fields of physics, chemistry, medicine and economics.

Using these credits, called citations, the Scientific division of Thomson Reuters Corp tipped 21 potential winners for the prestigious prizes.

<http://www.reuters.com/article/scienceNews/idUSTRE49088V20081002?feedType=RSS&feedName=scienceNews>

### **Friday 3<sup>rd</sup> October**

### **Hackers reveal serious flaw in biometric passports after cloning one for Elvis Presley**



#### **Mail Online**

A group of computer security experts have revealed serious security problems with biometric passports after they made one for Elvis Presley and used it in an airport.

The team, known as 'The Hacker's Choice', have released a video showing a cloned passport being approved by a self scanner at a Dutch airport.

When the reader scans what appears to be a standard European Union passport, it reveals the details of one Elvis Aaron Presley, complete with picture and passport ID number.

<http://www.dailymail.co.uk/sciencetech/article-1067370/Hackers-reveal-flaw-biometric-passports-cloning-Elvis-Presley.html?ITO=1490>

### **Nerds rejoice: Braininess boosts likelihood of sex** **New Scientist**

Lonely men ought to flaunt their copies of New Scientist. Women looking for both one-night stands and long-term relationships go for geniuses over dumb jocks, according to a new study of hundreds of university students.

"Women want the best of both worlds. Not only a physically attractive man, but somebody in the long term who can provide for them," says Mark Prokosch, an evolutionary psychologist at Elon University in North Carolina, who led the study.

To many women, a smart man will appeal because he is likely to be clever enough to keep his family afloat. But he may also pass on "good" genes to his children, say Prokosch and his colleagues at the University of California, Davis.

[http://www.newscientist.com/channel/sex/dn14868-nerds-rejoice-braininess-boosts-likelihood-of-sex.html?feedId=online-news\\_rss20](http://www.newscientist.com/channel/sex/dn14868-nerds-rejoice-braininess-boosts-likelihood-of-sex.html?feedId=online-news_rss20)

## Lord Drayson takes science brief



**BBC**

The UK has a new science minister - the third in two years.

Lord Drayson takes up the post in the recently created Department for Innovation, Universities and Skills.

It is a quick return to government for the multi-millionaire businessman who quit a position in defence in 2007 to pursue his interests in motor racing.

The scientific community, however, will welcome the appointment of "one of their own" - Lord Drayson holds a PhD in robotics.

The government, on the other hand, has a man who knows how to exploit innovation for the benefit of UK PLC.

Lord Drayson helped set up the Oxford-based Powderject company, which developed a revolutionary needle-free injection system.

<http://news.bbc.co.uk/1/hi/sci/tech/7651607.stm>

## Saturday 4<sup>th</sup> October

## Help red squirrels, public urged



**BBC**

The public are being urged to track the UK's red squirrel population to help protect it from a deadly virus.

The Wildlife Trusts charity wants to guard against the threat posed to the UK's estimated 160,000 red squirrels by squirrel pox, carried by greys.

By people reporting sightings of reds during Squirrel Week, which starts later, it hopes to identify areas where protective measures may be required.

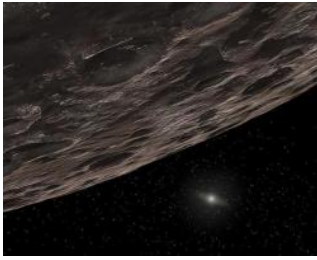
These could include culling of grey squirrels, which are more common.

Conservationists say culling is a necessary evil to help preserve red squirrels for the future.

<http://news.bbc.co.uk/1/hi/uk/7652154.stm>



## What happened to the Kuiper Belt's smallest objects?



### New Scientist

The hunt continues for the outer solar system's tiniest residents. A two-year search to find small objects there has turned up nothing, bolstering theories that 'all hell broke loose' in the solar system just a few hundred million years after it formed.

Astronomers have found more than 1000 objects in the Kuiper Belt, a ring of icy bodies beyond Neptune. There are fewer large Kuiper Belt Objects than smaller ones, but the exact size distribution is unknown because only a handful of KBOs smaller than 70 kilometres across have been found - they simply reflect too little sunlight to be observed.

[http://space.newscientist.com/article/dn14858-what-happened-to-the-kuiper-belts-smallest-objects.html?feedId=online-news\\_rss20](http://space.newscientist.com/article/dn14858-what-happened-to-the-kuiper-belts-smallest-objects.html?feedId=online-news_rss20)

## S.Korea reports new case of suspected bird flu

### Reuters

South Korea on Saturday reported a suspected bird flu outbreak at a duck farm in Yesan city, south of Seoul, the first since the latest confirmed case about five months ago, local media reported.

The suspected case is currently under tests, and the final results were due by the end of the day, Yonhap News said, citing Seoul's agriculture ministry.

Initial tests at the suspected farm, home to 5,000 ducks, had given positive readings for the avian virus, it said.

The government plans to slaughter all birds in the farm as a pre-emptive measure.

<http://www.reuters.com/article/healthNews/idUSTRE4930JX20081004?feedType=RSS&feedName=healthNews>

## Sunday 5<sup>th</sup> October

## Scare stories have drowned out the good that GM could do

### The Guardian

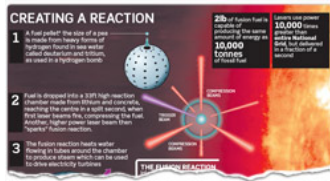
Acres of newsprint and hours of television have been devoted to the GM crop controversy - quite an achievement for a foodstuff that is grown in no significant quantities in this country, or for that matter in this continent. Britain, like the rest of Europe, was long ago frightened away from

producing and eating GM food by a media campaign that has been based mainly on hearsay and only marginally on science.

And that is a shame. As senior scientists have pointed out, GM crops have considerable potential to help the planet, despite the claims of their opponents. Environment groups such as Greenpeace claim the stuff is dangerous. But not a single verifiable case of illness that has been triggered by GM produce has been established in the US, even though Americans have been eating genetically modified food since 1994 and 75 per cent of all processed foods in the US now contain a GM ingredient. Opponents claim there are long-term health risks but offer no concrete evidence.

<http://www.guardian.co.uk/environment/2008/oct/05/gmcrops.food1>

## Nuclear fusion energy project could lead to limitless clean electricity



### The Telegraph

The power of the sun is to be recreated in a new £1 billion science project which aims to provide a clean and almost limitless source of energy.

British scientists will this week begin work to create a nuclear fusion reactor, which will use the same powerful reactions that take place in the Sun to provide energy and, ultimately, electricity.

Scientists have previously only been able to replicate the reaction inside hydrogen bombs.

Now, however, they believe they are on the verge of achieving controlled fusion in a laboratory for the first time.

Laser beams with enough power to light up every home in Britain for a few microseconds will be used to heat up the nuclear fuel to millions of degrees centigrade in order to trigger the reaction.

<http://www.telegraph.co.uk/earth/main.jhtml?xml=/earth/2008/10/05/scisun104.xml>

## Maths helps bees read the waggle dance

### New Scientist

WHEN honeybees dance to point their hivemates towards nectar-rich flowers, they waggle in a slightly different direction each time. It is sometimes claimed that this variability benefits the hive by helping bees locate new resources, but an experiment by David Tanner and Kirk Visscher from the University of California, Riverside, seems to have overturned this theory.

By observing bees trained to visit artificial sugar-traps, Tanner and Visscher discovered that rather than picking a flight path based on the angle of any one waggle, the bees flew off in a direction that more closely matched the mean

angle of several waggles (Behavioral Ecology and Sociobiology, DOI: 10.1007/s00265-008-0619-z). "Bees apparently keep a mental log of the directions indicated in the dance," says Tanner. "I find it remarkable that, with a relatively simple brain, they can do something so mathematically complex."

[http://www.newscientist.com/channel/life/mg20026764.800-maths-helps-bees-read-the-waggle-dance.html?feedId=online-news\\_rss20](http://www.newscientist.com/channel/life/mg20026764.800-maths-helps-bees-read-the-waggle-dance.html?feedId=online-news_rss20)

## Scientists develop solar cells with a twist



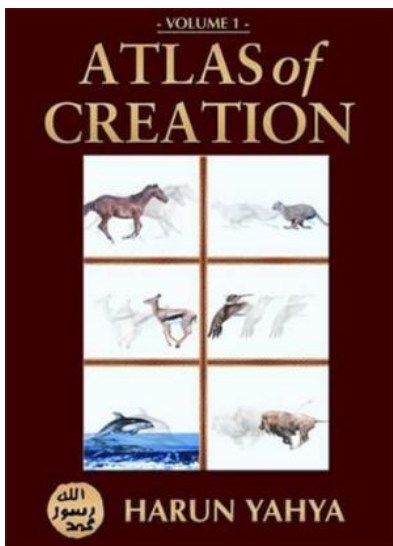
### Reuters

U.S. researchers have found a way to make efficient silicon-based solar cells that are flexible enough to be rolled around a pencil and transparent enough to be used to tint windows on buildings or cars.

The finding, reported on Sunday in the journal Nature Materials, offers a new way to process conventional silicon by slicing the brittle wafers into ultrathin bits and carefully transferring them onto a flexible surface.

<http://www.reuters.com/article/scienceNews/idUSTRE49429H20081005?feedType=RSS&feedName=scienceNews>

## And Finally....



## Creationist offers prize for fossil proof of evolution

A controversial creationist who successfully campaigned for Richard Dawkins' official website to be banned in Turkey has offered a multitrillion-pound challenge to scientists.

Adnan Oktar said that he has "issued a call to all evolutionists" that he will give "10 trillion Turkish lira to anyone who produces a single intermediate-form fossil demonstrating evolution" - a sum roughly equal to £4.4trn.

The Muslim writer, who uses the pen name Harun Yahya, is a fierce critic

of what he calls "the Darwinist dictatorship" and a popular figure in his home country, where - according to a 2006 survey - only a quarter of the population believe in Darwin's theory.

The 52-year-old former architecture student, who has been heavily criticised in the West, claims there are no fossils

to support Darwinist theories. "Evolutionists are at a dead-end in the face of the fossil record," he said. "Not one [fossil] belongs to strange-looking creatures in the course of development of the kind supposed by evolutionists." However, scientists reject his claims that these fossils do not exist. Dr Kevin Padian at the University of California told The New York Times that Mr Oktar "does not have any sense of what we know about how things change through time. If he sees a fossil crab, he says, 'It looks just like a regular crab, there's no evolution,'" Dr Padian said. "Extinction does not seem to bother him."

<http://www.independent.co.uk/news/science/creationist-offers-prize-for-fossil-proof-of-evolution-945289.html>