

# CREATION

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## Evading tornadoes

An interesting article on the BBC News website (<http://goo.gl/QeYoPQ>, accessed 30 December 2014) reports on the remarkable behaviour of golden-winged warblers, *Vermivora chrysoptera*. This tiny species of bird has a seasonal migration between Colombia and the USA, travelling some 5000km.

Dr Henry Streby, an ecologist at the University of California, Berkeley, and colleagues had managed to tag a number of these birds with tiny geolocators, enabling them to track the birds' movements. In April 2014 the birds left their winter feeding areas in Colombia and flew to the Great Lakes and the Appalachian Mountains, where they settled down into their usual summer breeding grounds.

Then a strange thing happened: the birds suddenly took an unexpected "facultative migration" to an area about 1500km south. A day or two later, tornadoes ripped through the area where they had been. By 2nd May, after the storms had ended, all the birds were back again in their normal summer breeding areas.

Clearly these birds had somehow sensed the impending tornadoes even whilst they were still far away and had taken evasive action. But how did they do it? Dr Streby believes that the birds were able to detect the tornadoes through the infrasound rumble that they produce even when all other meteorological conditions appear to be normal.



Male and female golden-winged warbler.  
Image: L. A. Fuertes, in the public domain.

So these tiny birds - and, it is believed, many other species of birds as well - must have a sophisticated inbuilt system that can not only detect the infrasound rumble of dangerous weather but can interpret the data received and formulate action in consequence.

How could such a system have developed by chance, through innumerable tiny evolutionary changes over many millennia? To survive such extremes of weather these tiny birds needed a complete and fully-functioning system all at once. Tornadoes do not take millennia to develop! The abilities of these birds are surely yet more evidence of inbuilt design by a Designer, Someone who is not only wise enough to create such sophisticated systems but cares enough about His creations to want to do it.

## Surtsey

On the 14th of November 1963, a steaming, smoking volcanic eruption that had started 426 feet below sea level produced enough cooled rock to peek out of the water. Over the course of that week, the island grew to a height of 145 feet. When the island finally stopped growing in June of 1967, it had risen to a height of almost 500 feet and covered an area of two square miles. The island was named Surtsey after the Norse god of fire, Surtur.

Because of its newness, Surtsey has been closely studied by scientists who want to watch how the flora and fauna of the island develop and by others who have monitored its growth and its subsequent decay. The amazing thing about Surtsey, though, is not just its rapid birth, but its rapid maturity as

well. In 1964, when Surtsey was just a year old, Iceland's top geophysicist Sigurdur Thorarinsson described the island in his book, *Surtsey: The New Island in the North Atlantic*:

"On Surtsey, only a few months sufficed for a landscape to be created which was so varied and mature that it was almost beyond belief... You might come to a beach covered with flowing lava on its way to the sea with white balls of smoke rising high up in the air. Three weeks later you might come back to the same place and be literally confounded by what met your eye. Now, there were precipitous lava cliffs of considerable height, and below them you would see boulders worn by the surf, some of which were almost round... and further out there was a sandy beach where you could walk at low tide without getting wet." The geologist continued his amazement later in *National Geographic* ( 127(5):712–726) in 1965, saying: " ... in one week's time we witness changes that elsewhere might take decades or even centuries ... Despite the extreme youth of the growing island, we now encounter a landscape so varied that it is almost beyond belief."

Perhaps "elsewhere" the changes did not take decades or centuries after all. Perhaps



Surtsey island as photographed on 30 November 1963. Image: NOAA, in the public domain.

geologists just assume they did. Without the ability to watch features form firsthand, geologists can infer the history of a site based more on reasoning than on experimental evidence. Unless they can watch the same geologic processes take place elsewhere, producing the same results, they can err in the story they put together from the rocks.

(Reproduced with kind permission from Koinonia House e-news for 13 September 2011.)

## Why do scientific laws exist?

Why do scientific laws exist at all? Without the rationality of a universe designed by an omnipotent Designer, there is no reason - which is a source of great discomfort and perplexity to atheistic scientists, as indicated by the following quote:

"One thing that's both disconcerting and exhilarating about physics is how many seemingly simple questions remain unanswered. When you hear the questions that physicists struggle with, you sometimes say to yourself, Wait, you mean they don't even know that? Physics might be defined as the subject that tries to figure out why the world may look incomprehensibly complex at first, but on closer examination is governed by simple laws. Those laws, applied repeatedly, build up the complexity. From this definition, you'd presume that physicists have at least sorted out what they mean by "law".

Sorry.

Why should nature be governed by laws? Why should those laws be expressible in terms of mathematics? Why should they be

formulated within space and time? These were the questions posed at a fascinating workshop two weeks ago at the Perimeter Institute, the sequel to a workshop held at Arizona State University in December 2008. One of the participants, Sabine Hossenfelder, talked about it yesterday at Backreaction, one of the most consistently thoughtful of all physics blogs. The bottom line is that the organizers had better start planning on more sequels, because the questions seem as intractable as ever."

(Taken from G. Musser, <http://blogs.scientificamerican.com/WSS/post.php?blog=43&post=641>).

## Cuttings & Comments from **New Scientist**

*by Dr David Rosevear*

### **27 September p.10 – Space-time ripples reduced to stardust**

In its March 22 2014 edition *NS* reported the claim, from an observatory at the South Pole, that scientists had discovered gravitational waves in space. As we wrote in these columns, this would be evidence that a split second after a big bang, the universe inflated at many times the speed of light. The theory goes that inflation leads to the formation of a multiverse, with an infinite number of universes, each with different scientific laws and properties.

Everything that can happen does happen in one or other of these many universes. But only one universe will have all the many properties necessary to support life. Our bit of the multiverse is then the one where everything is fine-tuned for life. The design explanation is thus replaced by the chance one.

Now, it seems, the observation of ripples was misinterpreted, and they were caused by dust in space, according to data from the Planck spacecraft.

**“But other cosmic entities, like dust, can also polarise light, masking patterns from inflation.**

**“In a paper posted online this week, the Planck team says it is very likely that BICEP2’s signal was just down to dust.**

**“This doesn’t mean it’s curtains for inflation. The Planck analysis shows there are some sky regions with around half the dust present in the one BICEP2 studied.”**

‘Hope springs eternal in the human breast. Man never is, but always to be, blessed.’ This certainly applies to astronomical research into the origin and nature of space.

**4 October p.8 – The rise and fall of cosmic inflation**

**“Inflation is dead, long live inflation. The very results hailed this year as demonstrating a consequence of inflationary models of the universe – and therefore pointing to the existence of a multiverse – may now do the exact opposite. If the results can be trusted at all, they seemingly suggest inflation is wrong, and raise the possibility of universes that predate the big bang.**

**“In March, the team behind the BICEP2 telescope in Antarctica announced that they had seen evidence of primordial gravitational waves... Physicists hailed the discovery as preliminary confirmation of inflation, the idea that for a sliver of a moment after the big bang, the universe expanded at blistering speed”**

**“Because of quantum fluctuations, inflation is thought to produce an infinite multitude of universes that exhibit every conceivable property.”**

However, cosmic dust can produce these waves, as reported last week.

**“Preliminary results released last week from the space-based Planck telescope suggest that dust could indeed account for the pattern BICEP2 detected.”**

It turns out now that the waves expected from inflation theory are different from those seen at the South Pole.

**“What inflation predicted was actually the reverse of what we found.**

**“The BICEP2 results may actually rule out any reasonable form of inflationary theory.”**

So if our universe is the only one, and all of its properties are just right for life (the Anthropic Principle), then isn’t it most likely that it was designed, as creationists aver?

**11 October p.19 – Freaky spider has a sticky secret**

The harvestman spider (small body, very long legs) hunts a bug called a springtail. But this bug uses a pre-stressed spring to leap away. The second pair of legs on the spider is coated with hairs that carry droplets of a sticky, viscous, yet stretchy liquid. **“It is a non-Newtonian fluid,**



Underside of a tiny *Papirus* springtail, showing the forked springing organ. The latter, though highly efficient, is no match for the harvestman’s glue. Image in the public domain.

**which means it behaves more like a solid under high stress rates.”** Remember ‘potty putty’? For the hapless springtail bug caught by the spider, resistance is futile. The more it struggles, the stronger the glue holds fast.

**“The harvestman may have evolved the glue specifically to catch springtails”.** Just as well it can’t cross its legs, or it could come to a sticky end. One wonders what prey it hunted while waiting for its non-Newtonian fluid to evolve?

### **11 October p.20 – Bird’s eye for colour coordination**

**“Now here’s a clever design trick. Birds actively match the colour of their nests to their surroundings to blend in.”**

A team at the University of St Andrews offered captive male zebra finches a choice of coloured materials to build their nests. All of them chose coloured material such as twigs and leaves to match the background colour of their cages, but they also included a few bits of contrasting colours to break up the outline of each nest.

I suppose the ‘design trick’ refers to the birds’ flair for interior design, but maybe the birds’ ability to camouflage was also a design trick put there by their Maker.

### **11 October p.51 - The thrill of the chase**

Here is a review by Bob Holmes of the book *The Walking Whales: From land to water in eight million years* by Hans Thewissen, the researcher who claims to have discovered the missing links.

**“Whales evolved from cat-sized terrestrial hoofed mammals, evolutionary biologists tell us. How could a tiny deer-like creature morph into such a radically different leviathan? The notion has often provoked gleeful ridicule from creationists, especially**

**because, until the 1990s, so few intermediate fossils had been discovered. “Little more than a decade later, spectacular finds had bridged the gap so convincingly that whales now stand as one of the best documented fossil transitions – literally a textbook case of evolution in action.”**

One of the missing bits of this fantastic story (we use that adjective advisedly) was a **“little bone that turns out to come from the ear of *Pakicetus*, a transitional species between land mammals and whales.”**

**“We see how limb bones adapted for walking become gradually more specialised for swimming, and how swimming styles shift from paddling to whole body undulation to the even more efficient oscillation of a tail fluke. We see eyes shift to the top of the head – the better to peep above the water, crocodile-style – and then move down to the sides as the proto-whales become more fully aquatic. Diets change from terrestrial plants to fish and oxygen isotope ratios of the teeth reveal the animal’s decreasing need to drink fresh water.**

**“It is rather complex and technical... he never explicitly lays out the whole sweep. Instead, readers have to assemble the story themselves, although all the parts are certainly there to work with.”**

All you need to follow this is a robust imagination, particularly with that little bone from the ear of a transitional species. One wonders how to tell from a fossil, especially ‘a little bone’, whether a creature employs whole body oscillation or some other style to swim. When dogs swim, they employ a dog-paddle, and get onto *terra firma* to shake themselves dry as soon as possible.

One can always place differing specimens in an order that suggests a transitional



Artist's impression of *Pakicetus*, a transitional species between land mammals and whales - if you have a great deal of imagination. Image: N. Tamura, Wikipedia, under Creative Commons Attribution 3.0 Unported licence.

sequence, much as Darwin did with various eyes. And the 'eight million years' is an assumption.

Online sources show *Pakicetus* to have been a dog-sized carnivorous animal from its bones and teeth, with four long legs, so probably a fast mover.

## 25 October p.32 – Transformers

Humans have apparently managed to transform themselves from chimp-like ancestors during at least 7 million years into *Homo sapiens sapiens*, and will continue to manage their own evolution into the future.

**“For most of that time they were ape-like forest dwellers, with the furry bodies, small brains and unsophisticated behaviour to match. Then about two million years ago, everything changed. We began to take evolution into our own hands, starting a series of innovations that changed human history – and made us into the very modern apes we are today.**

**“Our earliest ancestors may have walked on two legs, but their heads were small, their teeth large and their arms long. No one knows for sure why they began to look more human, but unlike the bodies of other species, which are shaped by natural selection, ours may have been sculpted by our own ingenuity.”**

It seems that 1 million years ago we began to control fire. Canadian researchers found deposits of ash and burnt bone in a South African cave. Radio-carbon has a half-life of 5730 years, so a million years represents 175 half-lives. A ton of ash, even if it were entirely composed of radio-carbon, would not have a detectable residue after being halved 175 times.

Fire enabled these proposed ancestors to moult their fur and cook their meat. Being much more easily digested, this diet meant their teeth could shrink and their guts need not be so long. Smaller jaws made room for bigger brains, though how this follows the article doesn't make clear, except to declare: **“Finally, the energy savings made by shrinking body parts went to their heads.”**

Moreover, fire scared off predators so they were safe sleeping on the ground. Not needing to climb trees to sleep, their arms got shorter and their feet lost their grip.

Researchers have also found an unusual collection of fist-sized rocks at a *H. erectus* site in Georgia. Evidently as our ancestors developed the broad shoulders needed to fling weapons accurately, these stones made an impact on our evolution some 1.8 million years ago. This opened the way for other achievements such as homicide and war.

While secularists have stretched the time-span for these transformers, they have contracted it for others. The first writing is put at only 5,000 years ago, yet we read about 'the book of the generations of Adam' that was passed down via Noah to Moses (Gen. 5:1). Again they date the oldest written legal code at only 2,600 years ago, though the law was given to Moses on Sinai more than 3 millennia ago.

So what will transform us still further? Well, either by popping pills or by regular genetic maintenance, aging will become a



thing of the past. Eternal life by our own efforts! Just So.

### 25 October p.47 - Breaking point

One bit of this review of the book *Storm*, by Tim Minchin caught my eye:

**“Science adjusts its views based on what’s observed. Faith is the denial of observation so that belief can be preserved.”**

How true, and creationists would agree. Ours is not a blind faith. Science is best interpreted in terms of Creation.

As a secular scientist, I have *great faith* in the objectivity of science.



### 1 November p.6 - Eau de comet

A probe has been sent to land on a comet and investigate its composition. It will check results against data from other known comets to see if they have a common origin.

**“The team hope it will give them an insight into the molecular origins of life on Earth.”**

If you were to stand on the comet, we are told, you probably wouldn’t notice the smell, but pong it does, and it is these vapours that the probe analyses.

The probe’s sensors have detected traces of the following simple chemicals, all of which occur naturally:

H<sub>2</sub>S, NH<sub>3</sub>, HCN, frozen H<sub>2</sub>O and CO<sub>2</sub>, HCHO, CH<sub>3</sub>OH and SO<sub>2</sub>.

When the comet gets closer to the hot sun and its vapour pressure rises, it is hoped it

will reveal the presence of more complex (less volatile) molecules. The trouble is, the more complex the chemical, the less probable it is to form by chance and remain stable. Millions of years won’t help either, since this only offers time in which improbable things decompose (2nd Law of thermodynamics).

The molecules essential to ‘life on Earth’, such as proteins and nucleic acids, are stereo-specific and contain a code. Such complexity and information can only be created by an intelligent Designer, that is, God.

### 1 November p.17 - Skin cells + chemicals = brain cells

Here is a wonderful example of scientists using their God-given brains and skills to think God’s thoughts after Him. The technique allowed them to make stem cells without sacrificing an embryo, and so destroying a potential life.

Stem cells have been changed into medium spiny neurons (MSNs), the cells that go wrong in Huntington’s disease.

**“To the human skin cells, Yoo’s team [from the University of Missouri] added two short snippets of genetic material called microRNAs – the two they picked turn on genes in brain cells during embryonic development. They also added four transcription factors – another kind of signalling molecule – to turn on genes active in the MSNs.**

**“Within four weeks the skin cells changed into MSNs. When put into mice, the cells survived for at least six months and seemed to behave normally.**

**“The team’s next step is to transplant the cells into mice with a version of Huntington’s to see if the new neurons reduce their symptoms.”**

Before 2000, these microRNAs and transcription factors were dismissed as

‘junk DNA’, left-overs from our imagined evolutionary past (see pamphlet 395). Evolutionary dogma had delayed the march of progress!

### **8 November p.10 – Breast milk stem cells build baby**

**“Breast milk is known for being full of goodies – but could that include stem cells from mum that go on to transform into parts of the baby’s body? Preliminary evidence has shown this happens in mice, suggesting it also does in people.**

**“Stem cells have the unusual ability to regenerate themselves and develop into a variety of tissues. Several sources of stem cells are being developed for therapeutic use, including embryos, umbilical-cord blood and adult tissues.”**

The recent findings suggest that, in mice, breast milk stem cells cross into the offspring’s blood from their stomach and play a functional role later in life. The mother was genetically modified so that the cells were made to glow red under fluorescent light. Glowing red cells were subsequently found as mature cells in the tissues of the pups, including the brain, thymus, pancreas, spleen and kidneys. For example, those in the pancreas were making insulin.

Surely this is not just a lucky leak of cells from the stomach to parts of the pups where they are needed. It strongly suggests that this is a design feature.

There are, at present, no plans to modify human mums so that they and their offspring down the generations can glow red under the fluorescent lights in the supermarket!

### **8 November p.15 – Plants make their own sunscreen**

The leaves of plants require sunshine for photosynthesis. They grow by using sunshine to turn water vapour and carbon dioxide into cellulose. So why are they not damaged by the high-energy UV rays, as our skin is?

**“Many plants use a group of chemicals called sinapate esters to defend against the sun... These aromatic compounds sit in the upper cell layers of these plants’ leaves and one type – sinapoyl malate – provides the bulk of this UV protection.**

**“They found that it filters out the entire spectrum of UVB radiation, which is known to damage plant and human DNA ... with no gaps in coverage.”**

Without this safety mechanism, plants could not develop. It had to be in place in the upper layers of the leaves from the beginning. Sinapoyl malate has an improbably complex structure that must be made by the plant’s DNA and proteins.

Chance? No chance!

### **15 November p. 44 – Past notes**

Bone flutes are the oldest musical instruments found so far. They are unearthed in caves in Europe along with wall paintings. The oldest, the Divje Babe flute, was found in Slovenia among the remains of Neanderthals. While secular dating provides ages between 40,000 and 15,000 years, biblical dating suggests the ice age following Noah’s flood – about 4,000 years ago ... **“at a time when low water levels left Britain connected to the mainland and Europe was a hotbed of innovation”.**

Replicas of these instruments, often found broken, have been made and played. **“Today, developments in technology mean that we can also digitally reconstruct the visual and sonic environments in which these instruments were played.”**



The author, Rupert Till, has played a replica of the Divje Babe flute, and confirms that it sounds convincingly musical. The frequencies of notes are related by ratios of whole numbers.

**“Other systems exist too, and sometimes there is documentary evidence recording exactly how an instrument was tuned. For wind instruments, we can identify tunings and scales from the position of finger holes.”**

Cave paintings sometimes show the instruments being held and played.

We are told that the dates are arrived at from radiocarbon measurements, but here is a source of error. Carbon 14 is the result of cosmic radiation. Before the ‘waters above the firmament’ were deposited at the flood, Earth was shielded from these rays, so early artefacts have less C14 and appear to be far older than they are. (This shielding may also account for the great ages of the antediluvians.)

There is a sense of surprise that ‘primitive’ man was so skilled, but Adam and Eve were made in the image of a Creator, so were creative. Jubal (Genesis 4) ‘was the father of all such as handle the harp and organ’.

## **22 November p.14 – Weeds evolved fast on first farms**

Scientists at Ben-Ilan University in Israel have studied extremely well preserved seeds, waterlogged by seawater, at the site of an ancient settlement now submerged off the Mediterranean coast.

Sea levels were lower during the ice-age following the worldwide Flood.

The seeds include durum wheat, figs, chickpeas (garbanzos) and herbs.

**“Alongside these important crops there is evidence of at least 35 weed species...darnel is sometimes referred to**

**as ‘false wheat’ because of its resemblance to the crop.”**

Interestingly, the various species could be accurately identified from these exquisitely preserved seeds, waterlogged in brine. So seeds could survive a worldwide flood. They had reproduced according to their kind with their seeds within themselves, just as reported in that much-maligned Creation account in Genesis 1.

The wheat and the similar tares, also found here, were mentioned by our Lord Jesus Christ in a parable, and they persist today.

Adam was put to tend the ground in the beginning, but after his disobedience, the thorns and thistles became a problem and he ate his bread in the sweat of his face (Gen. 3).



Darnel looks extremely similar to wheat - until the fruit appears. Image in the public domain.

## 22 November p.32 - How not to be wrong

John Ioannidis, who has dedicated his career to pointing out the flaws in scientific publications and getting rid of them, has written:

**“Science is plagued by bias, sloppy methods and dodgy statistics.**

**Many disciplines have moved to a team approach, so scientists across the field work together, share data and repeat the original study to see if they arrive at the same results. Such changes have transformed human genome epidemiology from an unreliable discipline with a 99 per cent non-replication rate to one with a 99 per cent replication rate, for example.”**

Certainly their understanding of the epigenome of human DNA has recently and suddenly progressed from being 100 per cent wrong, being known as ‘junk DNA’. We now know that the whole genome is useful, controlling genes with a complex system of switches. Teams worldwide (ENCODE, PHANTOM etc.) now test results to ensure the experiments can be repeated.

Ioannides refers to a crisis in the psychological sciences, with some key findings unable to be replicated.

He contrasts the hard sciences such as physics, where results only get published after strict verification, with claims of biomedical sciences. There, less than half of their significant findings get replicated. He suggests that low-credibility papers should still be published (so as not to stifle advances) but should carry a caveat. The pressure to publish is driven by funding agencies, journals, universities and research institutes. Under the current system you get credit for publishing lots of papers, pipping rivals to the post.

Ioannides doesn’t face the fact that the scientific community are prejudiced

towards a naturalistic explanation of origins. God is arbitrarily ignored because they cannot detect Him with their methods and instruments. Nevertheless, the ideas are non-repeatable and so should carry a caveat.

## 6 December p.34 -Roots of consciousness

Although plants lack a brain and animal-like nervous system, they are nevertheless aware of their environment and can communicate with nearby plants.

**“There is also evidence that plants have memory, can integrate massive amounts of information and maybe pay attention... Wounding a tomato plant results in a plant-wide production of certain proteins – and the speed of response could only be due to electrical signals and not chemical signals travelling via the phloem as had been assumed.**



In a tomato plant, chemical production in response to wounding is so rapid that it must be prompted by electrical, not chemical, signals. Image: K. Tuck, www.rgbstock.com.

**“A root is a complex assemblage. There’s the root cap, which protects the root as it navigates through soil, but also senses a wide range of physical properties, such as gravity, humidity, light, oxygen and nutrients. Behind this is the meristem, a region of rapidly dividing cells. Further back is the elongation zone, where cells grow in length, allowing the root to lengthen and bend. And between the meristem and the elongation zone is a curious region called the transition zone... They have found that the transition zone is electrically active. What’s more, within it a hormone called auxin, which regulates plant growth, is ferried around in protein containers called vesicles that are reused once they have released their load... The transition zone is also a major consumer of oxygen.”**

It is suggested that this is where sensory information gathered by the root cap is translated into commands for the elongation zone – and so control of root behaviour.

**“There’s also the curious fact that plants produce chemicals that in animal brains act as hormones and neurotransmitters, such as serotonin, GABA and melatonin.”**

Drugs such as Prozac, Ritalin and methamphetamines that disrupt neurotransmitters in our brains, cause roots to be malformed and disjointed.

This level of complexity in plant roots shouts design.

### **13 December p.12 – Comet water is not like Earth’s**

As reported for 1st November above, a probe was successfully landed on the comet 67P from the ESA’s spacecraft Rosina. Sadly, because of the weak gravitational pull of the little comet, the probe bounced up and slowly touched

down again in a place shaded from the sun by the comet’s irregular shape. It **“was unable to survive due to a lack of solar power”** so its batteries went flat. Hopefully, as its orbit takes it closer to the sun, they may become recharged.

However, some data was transmitted to Rosina for a brief time, and this has been relayed to the European Space Agency.

We reported earlier that no signs of biomolecules had been found that might have explained how life came to Earth. Researchers also hoped to show that as our planet condensed and cooled down from a hot nebula 4.6 billion years ago, comets such as 67P delivered water to make our oceans. They **“have now analysed 67P’s water, by looking at the amount of deuterium, a heavy isotope of hydrogen, and comparing it with the amount of regular hydrogen...The comet’s water has around three times as much deuterium as water on Earth, the researchers found.”**

II Peter 3 tells us of people in the last days scoffing and ignoring Scripture’s account of the creation, flood and coming judgment. **“For this they willingly are ignorant of, that by the word of God the heavens were of old, and the earth standing out of the water and in the water: whereby the world that then was, being overflowed with water, perished: but the heavens and the earth, which are now, by the same word are kept in store, reserved unto fire against the day of judgment and perdition of ungodly men.”** Possibly the Solar Nebular Theory is wrong; like the gravitational waves that predicted inflation and a multiverse, as reported for 27 September above.

### **20/27 December p. 33 – Year in Review**

On the morning when this end-of-year issue of *New Scientist* arrived, I had been reading Exodus 20:4, as you do, about not

making graven images. It mentions “the water under the earth”, and I wondered how this can be. I then read:

**“WATER WORLD How did we miss it? In June we found out that a reservoir of water three times the volume of all the oceans sits deep beneath Earth’s surface. It is hidden in a blue rock called ringwoodite that lies 700 kilometres beneath our feet, in the hot rock of the mantle between us and Earth’s core. It could help explain where Earth’s seas came from.”**

Moreover, it could help explain where the waters of the worldwide flood in the days of Noah went as they abated from off the earth.

## From the postbag

"I would like to say thank you for all the effort that goes into your work. Being a 'newly' born again Christian who had thought he was descended from apes, your work is wonderfully true and inspiring." JM

## CSM on Facebook

CSM is on Facebook at this address:

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Or scan the QR code below to your smartphone.



## Quote

'Theism is said to be a refuge for those who are afraid of the dark. I say atheism is a refuge for those who are afraid of the light!'

*Prof. John Lennox* (Scientists in Congregations seminar, Glasgow, October 2014)

*Articles in the Journal are generally by the editor, R. Cambridge, unless otherwise stated. Articles, letters, notes and other contributions from new writers are warmly welcome.*

# Creation Science Movement

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