

INCREDIBLE DNA-FOLDING MECHANISM DISCOVERED

Biological cells are like tiny cities bustling with machines which perform the numerous tasks required to keep cells alive. For decades, one class of these machines, called SMCs (for Structural Maintenance of Chromosomes), have been known to fold strands of DNA into intricate three-dimensional structures. This is crucial for the proper organization and function of the genome.

Insights gained from multiple different studies have paved the way towards a step-by-step model of how these machines might extrude loops of DNA as part of this process. An SMC is a bit like an arm with two hands at one end. Each hand holds either end of a stretch of DNA. One of these hands holds continuously while the other periodically ‘lets go’ when the arm is bending, during which time the DNA loop becomes a little larger. The hand then re-grabs the DNA before the arm re-extends. In this way, SMCs can extrude longer and longer loops of DNA.

The conundrum for evolution: this machine, useless until fully functional, is needed for reproduction, so natural selection (differential reproduction) can’t explain it.

Dekker, C. *et al.*, How do molecular motors fold the genome? *Science* 382(6671): 646–648, 2023.



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EVOLVING NEW SWEETS

Rowntrees confectionery company in the UK (owned by Nestlé) may have been inspired by evolutionary ideas in designing their latest lollies (candies). Their recent fruit-flavoured jellies (gummies) are called ‘Randoms’. The packet claims they are “more random than a monkey playing a saxophone”.

The flavours and colours mixed in each sweet (which come in a wide range of mostly recognizable shapes) are claimed to display “billions of possible combinations”. This apparently means “you’ll never get the same bag twice”.

Given Nestlé’s longstanding international reputation for making quality products, it’s certain there won’t be anything ‘random’ about the ingredients they choose, or their quality control.

Not surprisingly, the 150g packet carries a finite ‘best before’ date. Presumably one is meant to consume them before random, natural processes turn them into something less desirable and even more random.



Images provided by Steve Bewley

THE PATH OF THE LAKE MISSOULA FLOOD SHOWS UP FROM SPACE

The Lake Missoula flood (towards the end of the post-Flood Ice Age) was rejected for 40 years because it was too catastrophically biblical in scale. Starting in the 1960s, thousands of pieces of evidence were discovered. These include satellite pictures like the one here, of the Channeled Scabland of eastern Washington, showing the path of this flood.

The image covers an area 100 km across. Fertile farmland with cultivated paddocks appears as a mottled mosaic of rectangles and circles, the latter from central-pivot irrigation (enlarge this photo at online reference below). The path of the Lake Missoula Flood shows up as grey because it eroded the light-coloured silt down to the underlying black basalt.

Still motivated to downplay the power of such an enormous flood, a lot of secular scientists resort to as many as 90 ‘baby’ floods through the peak of their last ice age to explain these features. But there is obvious evidence of only one very large flood here, and only one Ice Age. If there were dozens of floods, more silt would have been eroded, perhaps even completely removed.

Doermann, L., Scars of ice age floods, 14 May 2023, earthobservatory.nasa.gov.

Oard, M., *The Missoula Flood Controversy and the Genesis Flood*, CRS Books, 2004.



Lauren Dauphin, using Landsat data from the U.S. Geological Survey

'WET DESERTS' AND NOAH'S FLOOD

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During the Ice Age, there were large lakes and rivers in areas of the world that are now arid or semi-arid. These 'wet deserts' were around 30°N and 30°S latitudes—areas that are commonly deserts today. Conventional scientists have great difficulty explaining these lakes with their 'cold, dry ice age' models.

In the semi-arid southwest US, numerous large lakes existed during the post-Flood Ice Age, leaving obvious shorelines around enclosed basins. Lake Bonneville, e.g., the dry bed of which is pictured here, was 300 m (1,000 ft) deep and 12 times the size of the remnant Great Salt Lake, which averages only 4.5 m (15 ft) deep today. Even California's Death Valley, which holds the record for hottest temperature in the world, had a lake 180 m (600 ft) deep.

How did these lakes fill with water in the short time of the post-Flood Ice Age? They didn't. It was the final stage of the Flood, the drainage off the continents, that left water ponded in enclosed basins globally.

The warmer post-Flood waters greatly increased evaporation and hence precipitation. This was as heavier snowfall in high latitudes (building up into ice sheets), and heavier rainfall elsewhere. This would have maintained or even raised some of these lakes. We know that during the Ice Age, Lake Bonneville rose and overtopped a ridge in southeast Idaho, USA, causing the massive Bonneville Flood down the Snake River.

The Flood and the Flood-caused Ice Age solve the mystery of the 'wet deserts'.

Oard, M., Well-watered deserts: how the Flood solves another Ice Age mystery, *Creation* 42(2):46–49, 2020; creation.com/wet-deserts.

Oard, M., *How Noah's Flood Caused a Single Ice Age*, Creation Book Publishers, Powder Springs, GA (in press).



CONFIRMING COSMOLOGICAL CONUNDRUM

There are two methods astronomers use to calculate the Hubble constant, which is thought to tell us the rate at which the universe is expanding. One involves small fluctuations in the cosmic microwave background—long interpreted as the leftover 'heat' from an alleged 'big bang'. The other involves the redshift of light from certain stars known as Cepheid variables.

The problem is that the expansion speed given by these two is *different*—and not just a tiny bit, but “bafflingly different”. It is being called “one of the most troubling conundrums in all of physics”.

Called the 'Hubble tension', the problem has been known for some years, but was first confirmed as real in 2019 by the Hubble Space Telescope (HST). At the time, Nobel-prize-winning theoretical physicist David Gross said, “We wouldn't call it a tension or problem, but rather a crisis”.

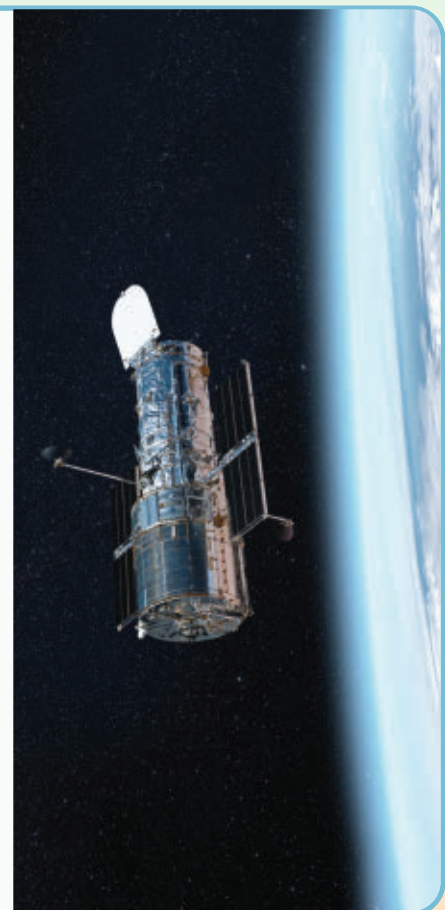
Even more precise measurements by the James Webb Space Telescope (JWST) in 2023 confirmed it again. Nonetheless, since it even had the potential to “upend cosmology”, some still clung to the hope that it was a measurement error.

Now, a triple-check using both the HST and JWST working together confirms it as real, dashing such hopes. It “suggests that there may be something seriously wrong with our understanding of the universe”.

There are many today who reject the Genesis account of the creation of the universe based on the so-called 'settled science' of today's big bang cosmological models. This is a good reminder of the need for humility in all this.

Turner, B., James Webb telescope confirms there is something seriously wrong with our understanding of the universe, livescience.com, 15 Mar 2024.

Riess, A., JWST observations reject unrecognized crowding of cepheid photometry as an explanation for the Hubble Tension at 8 sigma confidence, *Astrophys. J. Lett.*, 962 L17, 2024.



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CANNIBAL STARS HIGHLIGHT A MYSTERY

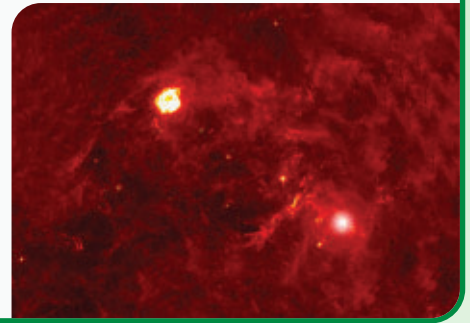
Most larger stars are not solitary, like our sun, but exist in pairs (binaries), one orbiting the other.

If one of them is in the ‘red giant’ phase of burnout, as its outer shell expands to be closer to the gravity field of the other, that other star can start to ‘eat’ it by stripping the hydrogen from its outer layers. What is left behind is a hotter, denser star that glows brightly in the ultraviolet spectrum, but is invisible to the human eye.

Such so-called ‘hot helium’ stars were predicted to exist in substantial numbers, but had mostly eluded observation. Recently, Dr Maria Drout and colleagues from the University of Toronto set out to specifically look for them with both space- and ground-based instruments. Surveying the nearby Magellanic Cloud galaxies, they have already detected over 20, with many more being assessed as likely candidates.

This is rightly being hailed as a successful prediction for theoretical astrophysics concerning the behaviour of stars. But it highlights a yet-unsolved mystery regarding their origin. The fact that so many stars exist in pairs strongly suggests they did not just become a couple by chance, but were pairs from the beginning of their existence. This is not an expected outcome in current big-bang-based (naturalistic) theories of star formation. Nor is it known why very massive stars are especially likely to be paired. Drout says it’s “essentially all of them”, and calls this an “open question”.

Brean, J., Predicted but unseen, these cannibal stars illuminate an astronomical mystery, [nationalpost.com](https://www.nationalpost.com), 25 Dec 2023.



NEW FOSSIL FORGERY DISCOVERED

Yet another fossil forgery has come to light. Regarded as one of the oldest fossil lizards, and therefore significant, *Tridentinosaurus antiquus* seemingly had nice soft tissue preservation, showing a clear body outline. The fossil was discovered in Italy in 1931.

A new study reveals that the clear dark outline of the body does not come from the organic remains of a lizard, but black paint. As the researchers write,

The putative soft tissues of *T. antiquus*, one of the oldest known reptiles from the Alps, are fake and thus this specimen is not an exceptionally preserved fossil.

The poorly preserved long bones of the hind legs seem to be genuine.

No one knows the name of the perpetrator.

Rossi, V. *et al.*, Forged soft tissues revealed in the oldest fossil reptile from the early Permian of the Alps, *Palaeontology* 67(1):e12690, 15 Feb 2024.



THE EARTH—OUR INTENDED HOME

Despite the glamorous appeal of being an astronaut, it’s been known for some time that space travel has serious adverse effects on the human body. Even ignoring the effects of high-level radiation, microgravity alone can cause muscle shrinkage, excessive absorption of bone, flattening of the eye, and cardiovascular complications. These include “loss of vascular tone, reduced total blood volume, and diminished cardiac output”.

Now a study of cells cultured from the smooth muscle in human blood vessels and put aboard the International Space Station has been published in *NPJ Microgravity*. It has revealed more about the way these changes, which can lead to “severe health consequences in astronauts”, occur. Significantly, space flight changed the way in which over 4,000 genes were expressed, with several dozen gene pathways either up- or down-regulated.

Dutta, S.S., Space travel alters human vascular cell function, study finds, [news-medical.net](https://www.news-medical.net), 31 Mar 2024.

