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TASC

TASC's mission is to rebuild and strengthen the foundation of the Christian faith by increasing awareness of the scientific evidence supporting the literal Biblical account of creation and refuting evolution.

January 2019

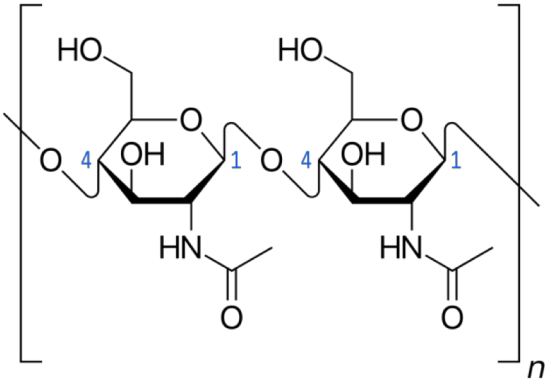
Creation News

By Dan Reynolds

This month we will discuss several notable findings in the recent scientific literature that have relevance to the creation issue. The topics were selected by the author and are by no means exhaustive. Background reading for some of the topics is provided in the references.

Fossils

Evidence for intact chitin-protein complex from 310 Ma scorpion has been found.[1] The authors determined that 59% of the chitin-protein complex survived.



Chitin. *Wikipedia* <https://en.wikipedia.org/wiki/Chitin> Accessed 2018 Dec 10

The authors speculated that an associated saturated fatty acid layer protected the material from water, enzymes, and other organisms.

Intact fossil soft tissue and biomolecules have been reported again,[2] this time from an allegedly 180-million-year-old ichthyosaur. They found evidence for keratin, hemoglobin, blubber, skin cell remnants, possible traces of the liver, and pigments. No explanation was given for the preservation.

Soft lung tissue from an allegedly 120-million-year-old bird fossil has been discovered.[3] Fossil feathers were also found. The structures of the lungs and feathers resembled that of modern birds.

Cosmology

It is well known that the Big Bang model of the evolution of the universe has many problems:[4] the horizon problem, lack of predicted magnetic monopoles, wrong prediction for the abundance of lithium, the flatness problem, the "axis of evil," and many others. The solution for the horizon and flatness problems has been the Theory of Inflation. But Inflation introduces a new set of problems: how to start and stop inflation, unlikely initial conditions, expected evidence for Inflation absent from the cosmic microwave background, most likely versions of Inflation theory are now ruled out by observations, etc. So how did our universe get so finely tuned? Because we live in a multiverse and our universe just happens to have the right physical laws to make life possible? But there is no evidence for other universes! What we do know about the universe speaks clearly of a powerful ingenious creator.

A new study[5] of the inspiral collision of a neutron star binary has once again confirmed Einstein's general rela-

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[1] Cody GD, Gupta NS, Briggs DEG, Kilcoyne ALD, Summons RE, Kenig F, Plotnick RE, Scott AC (2011) Molecular signature of chitin-protein complex in Paleozoic arthropods. *Geology* 39 (3) 255–258

[2] Peake T (2018 Dec 05) Soft tissue shows Jurassic ichthyosaur was warm-blooded, had blubber and camouflage <news.ncsu.edu/2018/12/ichthyosaur-blubber> Accessed 2018 Dec 10

[3] Coppedge DF (2018 Oct 22) Soft lung tissue found in modern-looking bird from dinosaur era. *Creation Evolution Headlines* <https://crev.info/2018/10/soft-lung-tissue-bird-dinosaur-era/> Accessed 2018 Dec 10

[4] Coppedge DF (2018 Oct 26) Big Bang cosmology needs miracles. *Creation Evolution Headlines* <https://crev.info/2018/10/big-bang-cosmology-needs-miracles/> Accessed 2018 Dec 10

[5] Letzter R (2018 Nov 29) Einstein's theory of general relativity just survived a massive crash in outer space. *Live Science* <https://www.yahoo.com/news/einstein-apos-

tivity theory (GR) and has implications about theories predicting a multiverse. The first ever reported merger of a neutron star binary system into a single star was recently discovered by the three gravity wave observatories. The merger produced gravity waves and light. Some quantum theories of gravity (e.g., string theory) predict the universe has many more spatial dimensions than what we experience (length, width, depth). Presumably, these "hidden" dimensions are there but are so "curled up" that they are difficult to observe. According to GR, gravity waves and light waves lose energy as they pass through space in a predictable, quantifiable way. If there are additional unseen spatial dimensions, gravity waves are expected to lose some of their energy through interactions with these extra dimensions. In contrast, the energy associated with electromagnetic radiation (light) would be unaffected. *The new study has shown that the measured energy of the gravity waves is what would be expected if there are only three large spatial dimensions*. The implication is that the alleged other dimensions may not exist. String theory predicts not only extra spatial dimensions but a multiverse populated with countless universes, each having its own particular set of physical laws and constants. Presumably, this "landscape" explains how the fine-tuning of physics in our universe was inevitable without invoking a creator. But with no evidence for the extra dimensions predicted by string theory, there is no reason to believe in the multiverse either, and fine-tuning remains a profound mystery for materialists.

Earth and Exoplanets

The proportion of exoplanets like earth (habitable by life as we know it) is very small according to recent studies.[6] So far, 3826 exoplanets have been discovered with ground and space telescopes. Most of these are "hot jupiters"—gas giants orbiting close to their star. So far, only 23 exoplanets have the required mass and orbital radius. But even some of these are not likely candidates since they orbit red dwarf stars which are known to emit huge solar flares daily, with an abundance of deadly ultraviolet radiation[7] that would remove planetary atmospheres. Other "earth-like" planets have been recently found to orbit very bright stars which would make these planets too hot. So, after all the analysis, scientists estimate there may be between 2 and 12 planets (0.3%) out of the original 3826 that are still in the running. A recent articleon many of the requirements of exoplanet habitability is even more pessimistic.[8]

Beneficial/Adaptive Mutations

A 2014 review of known beneficial mutations observed in evolution experiments concluded most beneficial mutations are associated with a loss of function.[9] The authors also cited limiting nutrient experiments with bacteria where changes in the regulation of some metabolic pathway, as a result of genetic rearrangements, led to better utilization of the available nutrients. Hence the regulation of existing functions changed, but no novel function evolved. These types of regulatory changes have been observed in yeast with limited glucose and in *E. coli* where genetic rearrangements led to the aerobic utilization of citrate; citrate is usually only utilized under anaerobic conditions. It is reasonable to assert that these rearrangements were built-in, ready to be activated and selected under specific environmental conditions. Hence although there was a "gain of function" in these cases, it is unclear and unlikely that there was a *gain in the information content* in the genomes.

The beneficial mutation/loss of function theme has also been observed in eukaryotic organisms:[10]

1. Blind cave-dwelling animals have lost elements necessary for eye development.
2. Yeast lose the ability to reproduce sexually when grown for many generations using exclusively asexual reproduction. Loss of a useless function is beneficial in that resources are conserved and better utilized.
3. Ant species without wings have lost them through gene inactivation.
4. Polar bears differ from brown bears because of loss-of-function mutations in several key genes.

A study of the genomes of 332 budding yeast species, one third of all known yeast species, believed to have descended from a common ancestor dating from the

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theory-general-relativity-170000750.html> Accessed 2018 Dec 10

[6] Uncommon Earth: Kepler supports Denton. (2018 Nov 7) *Evolution News* <https://evolutionnews.org/2018/11/uncommon-earth-kepler-supports-denton/>

[7] Coppedge DF (2018 Oct 23) NASA verdict: Most exoplanets are not habitable. *Creation Evolution Headlines* <https://crev.info/2018/10/nasa-most-planets-not-habitable/> Accessed 2018 Dec 10

[8] Richter H (2018 Oct 18) The frantic search for extraterrestrial life: The odds are stacked against it! <https://creation.com/frantic-seti> Accessed 2018 Dec 10

[9] Lang GI , Desai MM (2014) The spectrum of adaptive mutations in experimental evolution. *Genomics* 104 (6, Part A):412–416

[10] Gauger A (2018 Nov 26) Bacteriophages, budding yeast, and Behe's vindication. *Evolution News* <https://evolutionnews.org/2018/11/bacteriophages-budding-yeast-and-behes-vindication/> Accessed 2018 Dec 10

Devonian Period (420-359 mya), concluded the diversification was a result of "reductive evolution," that is, irreversible evolution caused by widespread losses of traits and genes.[3] In other words, the last common ancestor of today's budding yeast species was more genetically complex than extant species. Budding yeasts are eukaryotes that reproduce both sexually and asexually, so evolution by loss of function is not restricted to bacteria. This is just what we would expect if God created yeast and the yeast genome has been deteriorating ever since.

A review of the dominant modes of evolution published in 2013 concluded "the evolution of genomes appears to be dominated by reduction and simplification, punctuated by episodes of complexification."[11] They go on to argue that this general rule applies to prokaryotes, eukaryotes, animals, and plants. But they offer no new mechanism for the brief periods of innovation other than gene duplication, variation, and selection—a process unlikely to produce the vast amounts of new information in short periods of time. A recent paper has concluded that the origin of animals required the creation of thousands of new genes,[12] and not merely the rewiring of developmental regulatory genetic networks. The emergence of most animals occurred during the Cambrian Explosion. Whatever caused the Cambrian explosion had to *generate massive amounts of information* in the form of genes, organs, tissue types, body plans, developmental regulatory genetic networks, etc. *in a short period of time*. There are no experimentally demonstrated naturalistic explanations up to the task. It is our view that the brief periods of innovation were God's creative acts during creation week. Genomes started deteriorating shortly thereafter because of the Fall. The Genesis creation account of rapid innovation followed by a slow and steady deterioration of genomes fits the data.

A recent study[13,,14] has disproved a long held hypothesis concerning the origin of new genes. Specifically, it was held that divergence in some fruit fly genes, from an inferred common ancestor with other extant fly species, was due to positive selection for an enzyme that more efficiently catabolized ethanol, enabling the consumption of rotting and fermenting fruit. The investigators figured out the structure of the alleged ancestral gene and produced fruit flies with it. However, flies with the ancestral gene were just as able to catabolize ethanol as flies with the modern gene. Hence the acquired mutations in the modern flies were not shaped by natural selection to produce a more efficient enzyme. The learning here is that the markers used to infer evolutionary progress are often misleading. To their credit, the authors recognized that correlation does not necessarily equate with causation, that assertions of evolution must be experimentally verified, not just inferred based upon *a priori* assumptions.

Last for this section is a report that a bacteria, where the control gene for making its flagella had been removed, quickly and repeatably regained the ability to produce flagella via a two-step process when placed in conditions requiring mobility for survival.[15] The authors claimed the study showed how co-option, the idea that a structure or set of genes can be redeployed in a novel way, works in evolution to produce new functions. However, a closer look shows the gain came at a cost.[16] First, the genes for the flagella were always there, it was only the regulatory control that had been removed. Second, the reactivation of flagella production came at a cost to the nitrogen regulation system; the mutants' nitrogen metabolic control was switched to always be "on" by a single point mutation. One of the downstream proteins in the nitrogen regulation system was similar in structure to the original protein that controlled flagella production; this downstream protein could already bind to the site, albeit not as well as the original control protein that switched flagella formation on. With the nitrogen regulatory system permanently switched on, the downstream protein was made in abundance and switched on flagella production. A second mutation at the binding site, that activated flagella production, increased the effectiveness of the downstream protein to turn on flagella production. Note that the alternative protein that could turn on flagella production

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[11] Wolf YI, Koonin EV (2013) Genome reduction as the dominant mode of evolution. *Bioessays* 35:829–837

[12] Groundbreaking paper shows thousands of new genes needed for the origin of animals (2018 Jun 07) *Evolution News* <https://evolutionnews.org/2018/06/groundbreaking-paper-shows-thousands-of-new-genes-needed-for-the-origin-of-animals/> Accessed 2018 Dec 10

[13] On the evolutionary origin of new genes, Stephen Meyer is vindicated again (2018 Oct 26) *Evolution News* <https://evolutionnews.org/2018/10/on-the-evolutionary-origin-of-new-genes-stephen-meyer-is-vindicated-again/> Accessed 2018 Dec 10

[14] Siddiq MA, Loehlin DW, Montooth KL, Thornton JW (2017) Experimental test and refutation of a classic case of molecular adaptation in *Drosophila melanogaster*. *Nature Ecology & Evolution* 1(2):1–6, doi: 10.1038/s41559-016-0025. <https://par.nsf.gov/servlets/purl/10025834> Accessed 2018 Dec 10

[15] Taylor TB, Mulley G, Dills AH, Alsohim AS, McGuffin LJ, Studholme DJ, Silby MW, Brockhurst MA, et al. (2015) Evolutionary resurrection of flagellar motility via rewiring of the nitrogen regulation system. *Science* 347(6225):1014-1017

[16] Behe M (2015 Mar 03) "Resurrected" flagella were just unplugged. *Evolution News* <https://evolutionnews.org/2015/03/resurrected_fla/> Accessed 2018 Dec 10

already existed in the organism. The control of its production had to be broken (always turned on) in order for enough of it to be produced to make flagella. The second mutation was selected because it enhanced the production of the flagella. Note than nothing truly new was produced: all the proteins and genes in the mutant that had regained the ability to produce flagella were there to begin with. Again, the resurrection of flagella production came at the cost of breaking the nitrogen regulatory system. This is adaptation by breaking things, not the kind of change needed to create new genes and proteins, which is what macroevolution requires.

Recent Common Descent

A recent study of the diversity of mitochondrial DNA (mtDNA) sequences in 100,000 extant species has drawn some unexpected conclusions.[17] According the study, 90% of all animal life emerged at the same time in the recent past (they say 100 to 200 kya). Also found was that the mtDNA sequences of each species were unique to that species, being relatively distant to sequences of other species; there were no bridging sequences (intermediates) between species. Apparently, there was a bottleneck through which most species today scarcely survived. The authors even said the data could be interpreted as meaning each species descended from a founding pair of organisms. All this sounds like the repopulation of the earth of the various created kinds after the Flood.

Radiometric Dating

A mathematical modeling study of the diffusion of various isotopes through rock has potential implications for isochron dating.[18,19] The isochron method relies on the measured radiative daughter product to non-radiative daughter isotope ratios ($D_{rad}/D_{non\text{-}rad}$) in making age determinations with radiometric dating. Since different isotopes have different masses and sizes, they are expected to diffuse at different rates. Hence the measured $D_{rad}/D_{non\text{-}rad}$ may be a result of diffusion as well as radioactive decay. In fact, the modeling showed that a fictitious isochron can be formed by diffusion alone. Hence the differential diffusion of isotopes needs to be taken into account when constructing isochrons. The magnitude of the effect and its impact on the resulting predicted ages remains to be experimentally determined.

Abiogenesis

The results of a 2011 study of the oxidation state of early zircons (4.35 bya) suggest that the atmosphere of the early earth was not reducing but was even similar to our modern atmosphere.[20,21] Most origin-of-life experiments aimed at producing the building blocks of proteins and nucleic acids have found that a reducing atmosphere is required; oxygen slows or even stops the synthesis.

Despite evidence to the contrary, some scientists believe many of the major problems for abiogenesis have already been demonstrated experimentally.[22] The greatest mystery of abiogenesis is where the information to form self-replicating chemical systems comes from. How could the needed monomers form, and how were the monomers combined into sequences (polymers) that could serve as both a template (carry sequence information) and catalyst (facilitate the construction of chemical bonds needed to make a clone)? In a 2016 study, a mixture of *artificial* peptides containing five amino acids (glycine, L-leucine, L-phenylalanine, L-serine, and L-lysine) in specific sequences under controlled pH conditions combined into ring systems that then formed fibers by stacking the rings through hydrogen bonding and pi-pi interactions.[23] If the fibers were agitated mechanically, the fibers would cleave to form smaller aggregates which would then begin to grow new fibers (replicate). One commentator wrote:

> A recent breakthrough came from Jan Sadownik and colleagues at the University of Groningen, in the Netherlands. In their experiment, self-replicating molecules emerged spontaneously from a mixture of simpler compounds, then mutated into different species that competed for resources. Quoting from their 2016 paper in Nature Chemistry, "these results mark an important step towards achieving Darwinian evo-

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[17] Stoeckle MY, Thaler DS (2018) Why should mitochondria define species? *Human Evolution* 33(1-2):1-30

[18] Hayes RB (2017) Some mathematical and geophysical considerations in radioisotope dating applications. *Nuclear Technology* 197:209–218. doi:10.13182/NT16-98.

[19] Snelling A (2017 Mar 27) Key flaw found in radioisotope isochron dating. *Answers in Depth* <https://answersingenesis.org/geology/radiometric-dating/key-flaw-found-radioisotope-isochron-dating/> Accessed 2018 Dec 10

[20] DeMarco G (2011 Nov 30) Setting the stage for life: Scientists make key discovery about the atmosphere of early Earth. RPI News <https://news.rpi.edu/luwakkey/2953> Accessed 2018 Dec 10

[21] Trail D, Watson EB, Tailby ND (2011) The oxidation state of Hadean magmas and implications for early Earth's atmosphere. *Nature* 480(7375):79–82 <https://www.nature.com/articles/nature10655> Accessed 2018 Dec 10

[22] Hester J (2018 Jul 26) One step at a time: Walking a not-so-mysterious path to life. *Astronomy* <http://astronomy.com/magazine/jeff-hester/2018/07/one-step-at-a-time> Accessed 2018 Dec 10

[23] Sadownik JW, Mattia E, Nowak P, Otto S (2016) Diversification of self-replicating molecules. *Nature Chemistry* 8: 264–269

lution with a system of fully synthetic molecules and the synthesis of life".[20]

The investigators themselves stated, "The peptide sequence *is designed* to have alternating hydrophilic hydrophobic residues to promote self-assembly into parallel β-sheets." So, let's consider where the information came from for this self-replicating system. First, four of the five amino acids used were enantiomerically pure, something nature (outside of biology) does not spontaneously provide. Next are the amino acid sequences of the peptides—these were *designed* by the investigators and did not form spontaneously. For the replication reactions to take place, the reaction conditions had to be at a controlled pH (8) and exposed to oxygen. *Hence, the information required to make the system work came from the experimenters and not from mere undirected chemistry, which is what abiogenesis requires.* While the experiments are interesting from a chemical perspective, they seem to have litlittle relevance to the question of abiogenesis. They merely showed that a properly *designed* chemical system can replicate itself, but we have known that since the dawn of biochemistry.

James Tour, one of the greatest organic chemists alive, has said concerning abiogenesis:

> I have asked all of my colleagues—National Academy members, Nobel Prize winners—I sit with them in offices. Nobody understands this [abiogenesis]. So if your professors say it's all worked out, if your teachers say it's all worked out, they don't know what they're talking about.[24]

The Flood and Plate Tectonics

A recent study has once again found evidence of subducted slabs of cold rock dozens of miles thick extending hundreds of miles deep to the mantle-core boundary and beyond.[25] Only a recent (thousands of years ago) and rapid burial of these slabs can explain why the temperature differences between the subducted slabs and the surrounding rock persist. Catastrophic Plate Tectonics is a theory that may explain how runaway subduction during the Flood accounts for the placement and temperature of subducted rock slabs observed today.

Origins Truth Conference

On November 10, TASC along with Creation Summit and SIFT (Students Investigating First Things—North Carolina State University student group) hosted an all day conference at NC State in Withers Hall entitled the Origins Truth Conference. The invited lectures were from John Sanford, Russ Humphreys, and Peter Borger. Several breakout sessions were also held throughout the day and were given by the three main speakers, Helmut Welke, and TASC Board members including Gerald Van Dyke, Mark Stephens, Joe Spears, David Greear, and Dan Reynolds. The total attendance was 144, 30% of which were students. The attendees represented 35 churches. Reviews were very positive and encouraging. DVDs of the plenary lectures will be available soon. Please write me, Dan Reynolds, if you are interested in obtaining a copy (dwr51055@gmail.com). ☙

COMING EVENTS

Thursday, January 10, 7:00 PM, Providence Baptist Church, 6339 Glenwood Ave., Raleigh, Room 237

Pastor Matt Holst of Shiloh Presbyterian Church in Raleigh[26] will present "Nature Red in Tooth and Claw: An Exegetical and Theological Assessment of Death Before the Fall."

Since Darwin's *On The Origin of the Species*, the encroachment of unbelieving science on a biblical anthropology has led many to conclude that God created by an evolutionary biological process. This talk will seek to stem the flow and re-establish a biblical anthropology. Examining issues of life, death, the character of God, and ultimately a biblical soteriology, the talk will seek to show that the Genesis account—and for that matter, the rest of Scripture—treats Creation as a literal account, and thus we ought to have confidence in God's Word, as it relates to both the first and second Adam.

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[24] The origin of life: An inside story - 2016 lectures (with James Tour) <https://www.youtube.com/watch?v=_zQXgJ-dXM4&t=111s> Accessed 2018 Dec 10

[25] Clarey T (2018 Nov 08) Cold slabs indicate recent global flood. <https://www.icr.org/article/10976/> Accessed 2018 Dec 10

[26] Matt has been preaching recently through Genesis. You can watch his sermons on the web at <https://www.youtube.com/playlist?list=PLXqNhbObfqJpsmuqatwf9m7-jk8HQL_Ne> Accessed 2018 Dec 10