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Top Ten Darwin and Design Science News Stories for 2011

1. **50th Peer-Reviewed Pro-ID Scientific Paper Published.** The intelligent design movement hit a major milestone in 2011 with the publication of the 50th peer-reviewed pro-ID scientific paper. Two ID research labs have been major contributors to the list. [Biologic Institute](#), headed by molecular biologist Doug Axe, which is “developing and testing the scientific case for intelligent design in biology.” Biologic conducts both laboratory and theoretical research on the origin and role of information in biology, the fine-tuning of the universe for life, and methods of detecting design. Another ID research group is the [Evolutionary Informatics Lab](#), founded by William Dembski along with Robert Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University. Their lab has attracted graduate-student researchers and has published multiple peer-reviewed articles in technical science and engineering journals showing that computer programming “points to the need for an ultimate information source qua intelligent designer.” Together, these labs and individual researchers have published [peer-reviewed pro-ID scientific papers](#) in journals such as *Protein Science*, *Journal of Molecular Biology*, *Theoretical Biology and Medical Modelling*, *Journal of Advanced Computational Intelligence and Intelligent Informatics*, *Quarterly Review of Biology*, *Cell Biology International*, *Rivista di Biologia/Biology Forum*, *Physics of Life Reviews*, *Annual Review of Genetics*, and multiple others. Collectively, this body of research is converging upon a consensus: complex biological features cannot arise by Darwinian mechanisms, but require an intelligent cause.
2. **The Design of the Butterfly Continues to Inspire and Amaze.** Inventors made an artificial butterfly modeled on the tiger swallowtail. First they made the wing without veins. It didn’t fly as well as when they added veins like the real butterfly, according to a short video clip in an article on [New Scientist](#). The veined wing provided more lift. The inventors at Harvard’s microrobotics lab power their “butterfly-type ornithopter” or BTO with just a rubber band. It’s the first flying insect replica that matches the real thing in size and weight, they said. Meanwhile, another group of researchers say they have shown for the first time that swallowtail butterflies have an array of sensors on their forelegs that allow them to get a flavor of the leaves they land on. The team said the larvae of plant-eating insects need specific types of plants to feed on. They said the female's ability to select the right plant on which to lay her eggs is key to the survival of the larvae when they hatch. Scientists said they found that swallowtails lay eggs only when they detect the presence of specific chemicals in the leaf as they drum their forelegs on the surface. [PhysOrg](#) reported on this, but there is much more information with visuals in the new documentary DVD [Metamorphosis: The Beauty and Design of the Butterfly](#).

3. **Woodpecker Drumming Inspires Shock-Absorbing System.** Through careful study and reverse-engineering of the woodpecker, [scientists](#) have developed a new shock-absorbing system. A woodpecker is known to drum the hard woody surface of a tree at a rate of 18 to 22 times per second with a deceleration of 1200 g, yet with no sign of blackout or brain damage. As a model in nature, a woodpecker was studied to find clues to develop a shock-absorbing system for micro-machined devices. Its advanced shock-absorbing mechanism, which defies common explanation, is analyzed in terms of endoskeletal structures. In this analysis, the head structures (beak, hyoid, spongy bone, and skull bone with cerebrospinal fluid) of the golden-fronted woodpecker are explored with x-ray computed tomography images, and their shock-absorbing mechanism is analyzed with a mechanical vibration model and an empirical method. Based on these analyses, a new shock-absorbing system is designed to protect commercial micro-machined devices from unwanted high-g and high-frequency mechanical excitations. Meanwhile [other scientists](#) are conducting similar research on the woodpecker with hopes of designing a better helmet. This is yet another example of biomimetics revealing advanced design in nature that appears to elude both the inventive mind of man and the limited capabilities of natural selection.
4. **Stylus Aims to Bridge Gap Between Real World and Artificial Evolutionary Simulation.** Many computer simulations that purport to simulate Darwinian evolution have deficiencies: Pro-ID scientists like William Dembski or Robert Marks have shown how programs smuggle in information such that they are pre-directed to evolve their targets. Doug Axe's work demonstrates that such programs typically evolve solutions to artificial, rather than real-world problems. A [new peer-reviewed paper in *BIO-Complexity*](#) by Axe, Philip Lu, and Stephanie Flatau explains that the "functions" of the digital organisms in these simulations are often divorced from real-world meaning. According to Axe they designed *Stylus* to present a more accurate picture of what evolution might be able to accomplish in the real world: "The motivation for *Stylus* was the recognition that prior models used to study evolutionary innovation did not adequately represent the complex causal connection between genotypes and phenotypes." Basic to life is an information conversion, where the information carried in genes (the genotype) is converted into an organism's observable traits (the phenotype). Those biological structures then perform various functions. Stylus uses Chinese characters as digital objects as explained in the paper: "These translation products, called vector proteins, are functionless unless they form legible Chinese characters, in which case they serve the real function of writing. This coupling of artificial genetic causation to the real world of language makes evolutionary experimentation possible in a context where innovation can have a richness of variety and a depth of causal complexity that at least hints at what is needed to explain the complexity of bacterial proteomes." There probably will never be a perfect computer simulation of biological evolution, but the free *Stylus* software brings new and improved methods to the field of evolutionary modeling. This tool will help those interested in testing the viability of Darwinian claims to assess whether complex features can be created by random mutations at the molecular level.
5. **Explosive Radiation of Flowering Plants Confirmed.** In March 2011 [Nature](#) reported the recent fossil discovery in China of a strikingly beautiful mature flowering plant. A taxonomic analysis of the plant's form has led to the fossil being placed among the Ranunculaceae, a family within the eudicots that includes buttercups and crowroot plants. By all assessments, the description in the journal *Nature* reveals a "remarkably developed species" rather than a primitive ancestral form. The sedimentary rock preserving this fossil has also yielded several other significant angiosperm species with an age considered to be about 124 Ma. The earliest flowering plants are represented by pollen grains and considered to be about 130 Ma years old. This fossil find presents new challenges to Darwin's theory to explain the origin of flowering plant species over a relatively short geologic time period by incremental transformations.
6. **Golden Orb-Weaver Fossil Spider Provides New Evidence for Stasis.** The largest fossilized spider was [discovered recently](#) in China providing new evidence for stasis (a period of little or no

evolutionary change in a species). The newly reported fossil golden orb-weaver spider is a giant female with a leg span of about 15 cm. Until this new fossil turned up in Inner Mongolia, the most ancient example from this grouping, or genus, was about 35 million years old. This discovery pushes the existence of the *Nephila* genus back to the Jurassic Period (165 ma), making them the longest ranging spider genus known. Today, these same insects adorn tropical rainforests, with giant females of *Nephila maculate* (legs spanning up to 20 cm), and small males (just a few centimeters across). The incredible detail of this fossil specimen, including the fine hair on the legs, help classify the find a “living fossil” showing very little evolutionary change over 135 million years.

7. **Complexity in the Universe Appears Earlier Than Thought.** More evidence has been discovered that galaxies formed very early. A mature galaxy detected through gravitational lensing was announced by the Hubble Telescope team, with an estimated redshift of 6.027. In the conventional big bang chronology, that dates it at 950 million years after the big bang. Other galaxies have been detected at redshift 10 or more, but this appears to have mature stars, “pushing back the epoch of its formation to about 200 million years after the Big Bang, much further than we had expected,” a NASA spokesperson said in the [Hubble](#) press release. That is about 1.5% of the assumed age of the universe. “This suggests,” he continued, “that the first galaxies have been around for a lot longer than previously thought.”
8. **An Identity Crises for Human Ancestors.** The last decade has witnessed three contenders for the title: earliest identifiable human ancestor. These are *Ardipithecus*, *Orrorin* and *Sahelanthropus*. All of them generated great excitement at the time of their discovery and, for many, they were evidence that the lineage of the human genus was being clarified. However, those willing to read research papers (rather than media reports) were more aware that the research community was not of one mind about the significance of these fossil remains. Recently, Bernard Wood and Terry Harrison have contributed [a major review paper](#) in *Nature* that revisits these arguments and finds that the various claims for human ancestry are not rigorous. They offer alternative explanations for these three fossil hominines. Some scientists are calling for an end to [Ancestor Worship](#), which drives discoverers and news media to claim every new fossil find as the “earliest known human.”
9. **DNA Repair Mechanisms Reveal a Contradiction in Evolutionary Theory.** New research reveals that DNA repair mechanisms limit the capability for evolution by unbounded random change. Both digital codes in computers and nucleotide codes in cells are protected against mutations by complex error correction mechanisms. In the [February 2011 issue of Open Evolution Journal](#) William DeJong and Hans Degens explore how mutation protection affects the random change and selection of digital and nucleotide codes. They illustrate their findings with a computer simulation of the evolution of a population of self-replicating digital amoebae. The authors show that evolutionary programming of digital codes is a valid model for the evolution of nucleotide codes by random change within the boundaries of mutation protection, not for evolution by unbounded random change. The findings are of considerable interest. They show that any evolutionary theory which ignores mutation protection is missing out a factor of great importance. The consequence of protection is that limitations of the evolutionary dynamics of digital and nucleotide codes are highly probable. [Contradiction in evolutionary theory](#) is a short YouTube presentation that summarizes the authors’ findings.
10. **The Limits to Self-Organization Identified.** University of British Columbia professor, Richard Johns, published an article in the philosophy journal [Synthese](#), which argues that there are “limitations on the kinds of structure that can self-organize.” Evolutionists have increasingly turned to theories of self-organization to explain the origin of life as previous theories such as the prebiotic soup have been discarded for lack of evidence. Johns' primary argument is to prove a “limitative theorem” that certain types of objects cannot self-organize through the laws of nature. His limitative theorem entails ideas very much like [Dembski's conservation of information](#). According to Johns, just as there are logical limits to the amount of information that can be derived from a given set of axioms or premises, there are physical limits to the kinds of structures can be derived from a given set of physical laws. At the

[UncommonDescent](#) blog Johns goes on to comment on the implications of his theorem: “While the paper doesn't address intelligent design as such, it indirectly establishes strict limits to what such evolutionary mechanisms as natural selection can accomplish. In particular, it shows that physical laws, operating on an initially random arrangement of matter, cannot produce complex objects with any reasonable chance in any reasonable time. ... My argument is not especially concerned with the creative powers of natural selection, since it covers self-organisation in general. But the limitative theorem does entail that natural selection cannot have the powers that are often claimed. In this respect my argument is similar to, for example, Michael Behe's argument involving the notion of irreducible complexity (e.g. in Darwin's Black Box).”

These stories and many more about the Darwin and Design debate can be found at Access Research Network (www.arn.org), Creation-Evolution Headlines (<http://www.crev.info>), and Evolution News and Reviews (www.evolutionnews.org).

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