

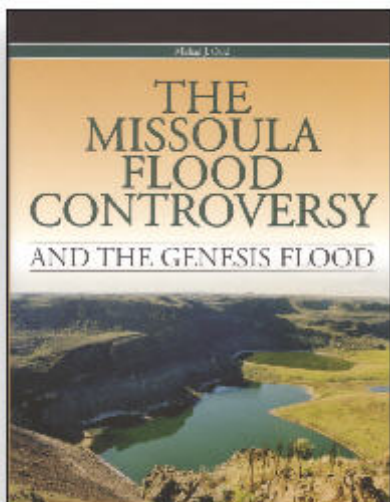


# Creation Matters

Volume 9, Number 2

March / April 2004

— A publication of the Creation Research Society —



... Announcing ...

## **The Missoula Flood Controversy and the Genesis Flood**

by Michael J. Oard

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One of the most spectacular floods in prehistoric times, besides the Genesis Flood, was the great Lake Missoula flood, which left its mark in the Channeled Scabland of the Pacific Northwest in the United States. However, the evidence, which is now considered to be overwhelming and irrefutable, was the subject of intense controversy for 40 years before being accepted. In this book Michael Oard discusses not only the abundant evidence, which at the time was

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## **Is Egg Laying by Birds Evidence of Bird Evolution? The Flight of a Fragile Theory Now Fallen**

by Jerry Bergman, Ph.D.

Life forms judged to have traits which are considered to be “less evolved” are also generally thought to be less advanced. One example of such a trait is viviparity (giving birth to live young). Usually characteristic of mammals, live birth is regarded by Darwinists as a more “advanced” reproductive process than, for example, oviparity (reproduction by laying eggs), which is characteristic of reptiles and birds. The prevailing theory leading to such thinking is this: since more “advanced” animals are viviparous, and since “lower” animals (reptiles, amphibians, fish, etc.) are oviparous, egg-laying behavior thus must be more primitive than giving birth to living young. Oviparity in birds also is seen as evidence that birds evolved from a more primitive animal, namely reptiles.

Birds are the only class of vertebrates that, without exception, lay eggs to bring their young into the world. The common assumption that reptiles and birds are more primitive than mammals is contradicted by much evidence, such as the fact that monotremes (which includes the platypus) are mammals; yet they lay eggs. Darwinists, therefore, assume that monotremes are more “primitive” mammals.

### **Is oviparity more primitive?**

Many Darwinists have taught that birds still lay eggs because they have not yet evolved the “more advanced” function of live birth. Vanderbilt University researcher Daniel Blackburn and Cornell scientist Howard



Evans argued that birds have not yet “experienced selection” for the “reproductive stages that are a prerequisite to bearing live young” (Lewin, 1988, p. 465). Recent research indicates that the theory favoring viviparity as

a superior method of reproduction is based squarely on macroevolutionary assumptions — and little else.

Newer, empirically-based data have vindicated the wisdom of the egg-laying mode of reproduction for birds. It has been discovered that their body temperature, which is high because of the metabolic demands of flight, would endanger the lives of their young if they were to be born alive. The resting body temperature of most birds is between 40° and 41° C — considerably above that of most mammals, which is around 37° C (Anderson, et al., 1987, p. 944). Temperatures only *slightly* above a certain level during the early developmental stages cause deformities in all invertebrate and vertebrate embryos, including humans.

Experimental manipulation has shown that eggs incubated at temperatures above 40° C suffer extremely high mortality and morbidity. If the embryos were in the mother bird's body for a longer period of time, their survival rate would be drastically lower (Bordas and Minvielle, 1997; Dunbrack and Ramsay, 1989). One study found that at just 40.5° C, fully 83.7% of the embryos died, and those that survived often suffered from numerous health problems

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# A Note on Genesis 1:2 and Job 38:8-11

by Ashby L. Camp, J.D., M.Div.

Some creationists argue that Gen. 1:1 is a statement that in the beginning God created two specific things: the heavens, including the heavenly bodies, and planet earth. According to this view, the earth was in darkness in Gen. 1:2 because a thick, global cloud cover did not permit light from the heavenly bodies to reach the earth's surface. Then, at some unspecified time after the beginning, God did the creative work described in Gen. 1:3-31, which included clearing of the cloud cover on Day 4 so as to make visible on earth the heavenly bodies that were created in the beginning. This time gap between the beginning and the six days of creation is thought by some to make it easier to accommodate some conclusions of modern science.<sup>1</sup>

Many of the problems with this interpretation have been pointed out elsewhere.<sup>2</sup> This note focuses on an argument that is used to support the above interpretation; namely, that Job 38:8-11 indicates that the darkness of Gen. 1:2 was the result of cloud cover. The argument may be summarized as follows:

1. Job 38:8-11 alludes to Gen. 1:2.
2. The sea in Job 38:8-11 is in darkness because of cloud cover.
3. Therefore, the deep in Gen. 1:2 is in darkness because of cloud cover.

The problem with this argument is that Job 38:8-11 does not allude to Gen. 1:2. Other than a common conjunction and preposition, not a single word from Gen. 1:2 appears in Job 38:8-11. Even the word translated "darkness" in Gen. 1:2 (*hōšek*) is different from the word translated "thick darkness" in Job 38:9 (*ārāpel*). So clearly, the claim that Job 38:8-11 alludes to Gen. 1:2 must be based on something other than verbal similarity.

An appeal to conceptual similarity fares no better. The description in Gen. 1:2 is of an earth that is covered entirely by the waters of the deep. The picture in Job 38:8-11 is of an earth in which the waters have been confined to the place set for them by God. This is clear in vv. 8a, 10, and 11. God says (ESV): (8) "Or who shut the sea with doors when it burst out from the womb, (9) when I made clouds its garment and thick darkness its swaddling band, (10)

and prescribed limits for it and set bars and doors, (11) and said 'Thus far shall you come, and no farther, and here shall your proud waves be stayed'?"<sup>3</sup>

Since the waters in Gen. 1:2 are not confined and the waters in Job 38:8-11 are confined, Job 38:8-11 is not referring to the state of the earth described in Gen. 1:2. Rather, it is referring to the events of Gen. 1:9-10 where God created the seas by gathering together, into the place he determined, the water that was covering the land.<sup>4</sup>

This is confirmed by the reference in Job 38:8 to "the sea." The waters of the deep were not named "the seas" until God confined them in Gen. 1:9-10. The "seas" are by definition confined waters; they exist in distinction from dry land (as darkness is named "night" only in distinction from "day"). The fact Job 38:8 refers to "sea" (singular) and Gen. 1:10 refers to "seas" (plural) does not negate the connection. The "seas" are spoken of collectively as "the sea" (see, e.g., Gen. 1:26, 28).

Given that Job 38:8-11 pictures an earth with confined waters (seas), and given that the sea, not the earth, is said in Job 38:9 to have been provided clouds as a garment and thick darkness as a swaddling band, Job 38:8-11 clearly is not speaking of a global cloud cover. So it cannot be the alleged cloud cover of Gen. 1:2, which would have to be global to keep the earth in darkness. And given that the garment and swaddling band were given by God *when* the waters were confined, Job 38:8-11 clearly is not speaking of a darkness that existed before Gen. 1:9-10 and, thus, is not speaking of the darkness in Gen. 1:2.

So what is one to make of God's giving to the sea when he created it clouds as a garment and thick darkness as a swaddling band? The key is to appreciate that, unlike Gen. 1:9-10, Job 38:8-11 is a poetic text. Just as bars and doors represent the sea's containment, clouds and thick darkness represent the inscrutability with which God endowed the sea at creation. The obscuring effect of such darkness is evident, for example, in Job 22:13-14 where Eliphaz charges Job with claiming that the thick darkness that enshrouds God prohibits His

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## Missoula Flood

...continued from page 1

considered to be "too biblical," but also the circumstances surrounding the controversy. Given such prejudices, it is not expected that mainstream geologists will ever see evidence for the largest flood of all time — the Genesis Flood.

Once the concept of a Lake Missoula flood was accepted, geologists soon saw what they thought was evidence for anywhere from 40 to 100 floods at the peak of the last ice age. However, Oard shows that the evidence is strong that there was only one major flood, with possibly a few minor floods.

A chapter is dedicated to other ice age floods, including John Shaw's paradigm-busting subglacial flood hypotheses. Evidence for the Genesis Flood is also presented, consisting generally of new information from the field of geomorphology. Another chapter is devoted to a defense of the short time scale of Scripture.

And finally, Oard demonstrates that the Lake Missoula flood also provides analogs for the catastrophic formation of mysterious geomorphological features, such as water and wind gaps.

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## Creation Matters

ISSN 1094-6632  
Volume 9, Number 2  
March / April 2004

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knowing what is occurring on earth. The sea was (and is) what we might call, in parallel imagery, a “black box,” a mysterious realm that is beyond human observation.

This endowment of inscrutability is labeled a “swaddling band” to make the point of God’s dominion over what was represented in ancient cosmogonies as a powerful and hostile force. The sea is pictured as being wrapped up like a baby. God wraps this chaos monster in baby clothes, puts it in a playpen, and tells it to stay in place.<sup>5</sup>

## Notes

1. Perhaps the best-known proponent of this view is Gorman Gray, *The Age of the Universe: What Are the Biblical Limits* (Washougal, WA: Morning Star Publications, 1997).
2. For a recent example, see Don Batten, “Soft-gap sophistry” at [http://www.answersingenesis.org/docs2004/0308soft\\_gap.asp](http://www.answersingenesis.org/docs2004/0308soft_gap.asp) (to be published in *Creation* 26(3) June-August 2004).
3. See also KJV, ASV, RSV, NAS, NIV, NKJV, and NRSV.
4. Robert L. Alden, for example, says of Job 38:8-11: Genesis 1:9 records the gathering of the water to one place and the appearance of dry land. In a general way the pericope after the creation itself deals with the confinement of the seas. In graphic but poetic terms, vv. 8-11 deal with oceans and all their power and mystery. For desert people who were not seafaring, the

limitless expanse of water was not inviting, but fearful. Few Old Testament characters had anything to do with sailing, fishing, or swimming. The sea was something God held back from overflowing the land. Robert L. Alden, *Job*, New American Commentary (Nashville: Broadman & Holman, 1993), 371.

5. See, for example, Norman C. Habel, *The Book of Job*, Old Testament Library (Philadelphia: Westminster Press, 1985), 538.

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# God’s Perfect Asymmetry

by George T. Matzko, Ph.D.

Chris McManus’ scholarly book *Right Hand, Left Hand* begins with the story of John Reid, who died in London in 1835, at the age of 48. The post-mortem was carried out by Dr. Thomas Watson who discovered that John Reid’s heart was on the wrong side, that is, on the right side. In fact, all of his organs were reversed, with the liver on the left and stomach on the right, etc. This was the first modern scientific evidence of a condition known as *situs inversus*.



Because our bodies appear to be more or less symmetrical on the outside, we forget that they are certainly asymmetrical on the inside. Why it should be that way is a subject that has perplexed scientists for years. Some have suggested that it is somehow related to turning tendencies. That is, if subjects are blindfolded and told to walk in a straight line they will usually turn in large circles while under the mistaken impression that they are moving in a straight line.

In any case, there is a fundamental difference between left and right that makes more of a difference than the way we turn when blindfolded, as can be seen from the Scriptural account of Israel’s blessing of Joseph’s sons given in Genesis 48:13-19. It is clear from this account that Joseph considered that the hand that was to be placed on Manasseh’s head was of the utmost importance.

We also carry with us the same symbolic meanings of left and right, and instinctively we understand the meaning of the verse: “And he shall set the sheep on his right hand, but the goats on the left.” (Mt 25:33 AV) After all, we are saying the same type of thing when we describe radical politicians as being on the left wing.

Some people are right-handed, and fewer are left-handed. Ehud the son of Gera (Judges 3:15) was able to turn that fact to his advantage and to the disadvantage of Eglon, king of Moab, around 1200 BC. In Judges 20:15-16 (AV) we read:

And the children of Benjamin were numbered at that time out of the cities twenty and six thousand men that drew sword, beside the inhabitants of Gibeah, which were numbered seven hundred chosen men.

Among all this people *there were* seven hundred chosen men left-handed; every one could sling stones at an hair *breadth*, and not miss.

This passage is usually taken to mean that the seven hundred men were a part of the twenty-six thousand, suggesting that a minimum 2.7% of the population were left-handers. No one thought to count the incidence of left-handedness again until 1871 in England where a figure of 4.25% was obtained.

According to McManus, studies among Americans in the 20<sup>th</sup> Century show a 3% incidence of left-handedness among the population before 1910, rising to a maximum value of between 10 and 11% of women and 13% of men after World War II. However, as one moves east across Asia the proportion falls, becoming 7.5% in the Emirates, 5.8% in India, and 4% in Japan.

There is an obviously complex interplay of biological and sociological factors involved in these figures, but the west-to-east variability in human handedness has been shown to be primarily genetic in nature. It is possible that this is an artifact of the division at Babel. And although I once heard a man say that he would give his right arm to be ambidextrous, there apparently are no truly ambidextrous people from a strictly scientific standpoint.

We also take for granted the ability of

one to tell left from right. Recently, I was judging a science fair where one static electricity project was marked with “+” on the left and “-” on the right. When I questioned the student as to why this should be the case, she confidently asserted that “+” is always on the left. When I asked where it would be if I stood behind her display, she was stumped!

The fact is that we are forced to determine right or left by our own hands. But how do we know which hand is left and which one is right? If we were in communication with an alien on another planet, and we were unable to see any objects in common, how could we agree on left and right? The only way we know the difference between left and right is by being taught it by an adult. By the age of five or six, a child is usually able to show his right hand, and by a couple of years later he is able to know the difference between right and left objects.

As far as our alien friend is concerned, the only way to solve his problem is to appeal to the sub-atomic world. Asymmetry can be found even in the smallest subatomic particles such as electrons and neutrinos. Electrons (spin) are predominately left-handed, and even neutrinos fly through the air like “bullets spinning from a rifle with left-handed rifling.” So, the solution is straight forward, as long as our alien has the equipment to measure the rotation of a large sample of electrons or neutrinos.

Well then, how did asymmetry arise in nature? How did a symmetrical “Big-Bang” lead to all of the asymmetry that we observe today? McManus theorizes that as far as organisms are concerned, there once was a multicellular animal that got tired of being anchored to a rock and decided to flop over on its side and go for a crawl along the ocean bottom. Top-to-bottom then became left-to-right and, ultimately, this arrangement led

to the heart’s being on the left for most future animals.

McManus, however, does express some misgivings:

Lying on one’s right side must have had its inconveniences. The body openings on the right side would now be deep in the mud, and would be better closed up. Likewise, the tentacles on the right side would now be deep in the mud, and would be better lost ... yet there must surely have been some advantage, for the immediate disadvantages seem immense. It seems fair to say that no one, at present, has the faintest idea of a solution to the problem.

Not only are people and animals asymmetric, but so are the chemical compounds from which they are comprised! For example, amino acids, without which life on earth would not be possible, are chiral. That is, they have two mirror image forms, “D” (dextro or right-handed) and “L” (levo or left-handed), and the proteins in our bodies are constructed entirely from L-amino acids. With sugars, the opposite is true, with D-rather than L-sugars making up the molecules of life (e.g., the sugars in DNA and RNA).

Since there is no known way for all of this asymmetry to arise spontaneously, we must conclude that asymmetry in the universe came directly from God’s right hand. How can a spirit be right-handed? In the sense that the right hand is equated with power and strength in the Bible:

Thy right hand, O LORD, is become glorious in power; thy right hand, O LORD, hath dashed in pieces the enemy. (Ex 15:6 AV)

Shew thy marvellous lovingkindness, O thou that savest by thy right hand them which put their trust in thee from those that rise up against them. (Ps 17:7 AV)

Now know I that the LORD saveth his anointed; he will hear him from his holy heaven with the saving strength of his right hand. (Ps 20:6 AV)

Jesus saith unto him, Thou hast said: nevertheless I say unto you, Hereafter shall ye see the Son of man sitting on the right hand of power, and coming in the clouds of heaven. (Mt 26:64 AV)

Thou wilt shew me the path of life: in thy presence is fulness of joy; at thy right hand there are pleasures for evermore. (Ps 16:11 AV)

Most people are right-handed, have their hearts on the left side, and have language in the left hemispheres of their brains because of genetics. Almost all organisms on earth are made with L-amino acids and D-sugars. In fact, because meteorites from deep space contain predominately L-amino acids, and electrons and neutrinos have left-handed spins, we can conclude that the whole of God’s creation was made asymmetrically. It was made with God’s right hand of power.

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## CRS Members Present Creation to Muslim Student Group

**A** Muslim club at Montclair State University (MSU; Montclair, NJ), wanting to hear from scientific creationists, invited Dr. Jack Cuozzo and Dr. Wayne Frair to speak and engage in discussion during a two-hour session. Also representing creation were Mr. Don Mackie and Dr. Stephen Koepp, MSU biology professor. Joining in the proceedings was Muslim professor Dr. Fatih Oncul.

Several Christian students attended, but most were Muslims. In addition to a discussion

of issues relating to scientific creation, clear Christian testimonies were presented which emphasized that the Creator was Jesus Christ, Who created the separate types. One lad came up afterward and said that he had learned more during the session than in all of college so far.

The Muslim professor, who was anti-evolution, focused on bringing scientists together under a religious umbrella. He quoted from the Koran, and it was interesting to learn that God had “created man from a clot” (96:1-5), and in

another passage, “out of dust, then out of sperm, then out of leech-like cloth, then out of a lump of flesh ...” (22:5). He also proclaimed that “the Koran emphasizes the use of reason in hundreds of verses.”

CRS and other creationist literature was distributed. Dr. Frair commented, “Jack, Don, and I came home in the pouring rain rejoicing for the opportunity God had given us.”

ranging from low organ weights to retarded skeletal growth (Anderson, et al., 1987). Chicken, turkey, and quail eggs all pass through the oviduct within only 24 to 26 hours after ovulation. As a result, the mother's body heat would not affect the embryos during their crucial stages of development (Lewin, 1988, p. 465).

Problems that could cause difficulty in the organism at any time during development tend to be far more deleterious if they occur during the embryo's rapid developmental stages. The embryo size increases from 100 to 7,000 per cent in the first few weeks, and it is during this time that major cellular differentiation also occurs. For this reason, the proper environment is crucial during these critical developmental stages (Farmer, 1998).

## What about bats?

Bird egg-laying is, therefore, the most functional means of reproduction for creatures with higher body temperatures. For all flying creatures except bats, giving birth to live young is clearly non-functional for several reasons aside from temperature. One reason is that the added weight of an embryo would cause serious problems during flight, this being especially true for small birds.

Bats (which are mammals, not birds) give birth to live young, but they deal with the temperature problem in other ways. Their wings, which employ a radically different design than do a bird's, consist of a thin membrane of skin stretched over a bony framework. This arrangement is highly effective in lowering body temperature. Bat wings also are proportionately far larger — on the average six times their body length. The temperature of bats is not constant, but drops both at night and also in the winter when most bats hibernate. They also can modify their body temperature to prevent damage to their developing embryos (Bernard, 2002).

The female bat produces only one or two offspring per year and, as the developing embryo becomes heavier, the mother flies less and less, eventually hooking her claws onto a branch or cave ceiling until the young are born (Singh and Krishna, 1997). A bat's "curious" physiology and

reproductive system are not fully understood, but in several major ways they are different from both birds and all other mammals (Coe, 1985, p. 25).

## Oviparity — a highly functional innovation

Research has shown that instead of a bird's mode of reproduction being evidence of evolutionary primitiveness or of a reptilian ancestry, it is actually a highly functional design innovation that allows them to effectively adapt to their environment and way of life (McCorry, 1982). Actually, egg laying by birds is not a primitive means of reproduction, but rather is a very complex method of reproducing. For example, the egg must contain a storehouse of enough of the required complex of minerals, vitamins, proteins, lipids, carbohydrates, water, and other compounds (such as carotenoids) to protect the fetus from free-radical damage, and to help it grow and develop properly until the bird hatches (Blount, et al., 2000). In the words of zoologist Robert Burton (1987), "eggs are nature's perfect package." Clearly, an egg is an example of a very well-designed structure (Budai, 1980).

Furthermore, the mother must take care of and protect her eggs until they hatch. It has even been learned that the cooler the climate, the more the bird sits on its eggs, and the warmer the climate, the less it sits on its eggs. Some animals (such as frogs) surround their eggs with special pouches to protect and insulate them from the environment. Other animals, such as turtles, bury their eggs in deep holes to protect them and keep them warm (McCorry, 1982, p. 628). These complex behaviors require a complete set of built-in behavioral responses (i.e., instincts) that defy any claims of simplicity for oviparity in birds compared to those animals that are viviparous.

## Conclusions

This study illustrates that design considerations, as explanations for a biological trait, are superior to those of Darwinism. The very practical reasons for egg laying provide a better explanation for why this method of reproduction is used by birds. Often a Darwinian explication is used when biologists do not understand the functional design reasons for a biological trait. This practice actually may interfere with the discovery of the real reasons for the existence of biological traits and behaviors in certain groups

of organisms.

**Acknowledgments:** I wish to thank Clifford Lillo, M.A. and Bert Thompson, Ph.D. for their helpful comments on an earlier draft of this manuscript.

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# Speaking of Science

Commentaries on recent news from science

## Can Evolution Create Homologous Structures by Different Paths?

Günter Thebien is baffled about how two plants arrived at similar structures by different evolutionary pathways. In the April 22 issue of *Nature*,<sup>1</sup> he asks,



Structures that occur in closely related organisms and that look the same are **usually considered** to be **homologous** — their similarity is taken to arise from their common ancestry. **Common sense suggests** that the **more complex such structures** are, the **less likely they are to have evolved independently** and the more valuable they should be for studying systematics. But **what if** ‘obviously’ **identical organs** have arisen through **two mutually exclusive developmental routes?** (emphasis added)

He points to a discovery by Glover *et al.* (*Gene* 331, 1–7; 2004) of just such a what-if situation. Two species in the nightshade family (of which tomatoes are a member) have almost identical-looking “pepperpots” or anther cones in their flowers. Yet mutation experiments on the genes that develop the structures show that neither structure could be related to the other by common ancestry, because they develop under different pathways. “So the most plausible conclusion,” he claims, “is that pepperpots originated twice independently in the lineages that led to tomato and bittersweet.” If so, this means trouble for systematists:

Molecular systematic analysis confirms that tomato and bittersweet **are closely related**, and the **traditional view** would be that their pepperpot cones are **obviously homologous**. But genetic tinkering and mutant analysis show that they probably are not — that they are **convergent**, having taken dif-

ferent routes to the same end. Life’s potential to invent complex structures more than once may worry systematists, who depend on reliable characters to reconstruct relationships between organisms. But it **will please anyone** who admires nature’s innovative power. (emphasis added)

*Homology* is one of those words that embeds Darwinian assumptions into the terminology. The Darwin Party’s word games go like this:

- Homologous structures are similarities among different organisms that Darwinians believe are related by common ancestry.
- Analogous structures are similarities that Darwinians believe are not related by common ancestry. In some unspecified way, the structures arrived at the same pattern by “convergent evolution.”

Thus, by waving either hand, the Darwin show can go on. But when both hands are waving, they might collide. Thebein’s hand-waving term “convergent evolution” has just collided with the hand-waving Darwinian concept of homology. Now what? Nature has thrown the Darwinians a curve: a complex structure that “common sense” says could not have evolved twice independently. This is where the Darwinians go to Plan C:

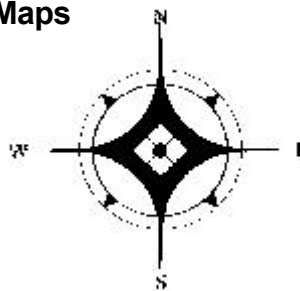
- Homologous-convergent structures prove Nature is tricky.

Since, to a Darwinian, Nature is a personified goddess tinkering with her creations, she has free will and even a sense of humor, in addition to “innovative power.” By employing fast-talking equivocation with the science security guards, the Darwinians avoid having their science badges disqualified. They can remain and enjoy the melodrama, chuckling at the dirty trick “Nature” played on the systematists. They never catch on that the joke’s on them.

<sup>1</sup> Günter Thebien, G. 2004. Developmental genetics: Bittersweet evolution. *Nature* 428:813.

## How Birds Calibrate Their Navigating Maps

Three researchers tracked birds in the wild and concluded that “night-flying thrushes set their course using a magnetic



compass, which they calibrate to the setting sun before takeoff each evening.” The team of three captured thrushes in Illinois, attached small radio transmitters to them, and then followed their flight for up to 1100 kilometers. By tricking them with false magnetic fields, they were able to steer them off course. But after next sunset, the birds were back on track, apparently having recalibrated their maps by the position of the sun. Erik Stokstad, reporting on the research in the journal *Science*, adds more interesting details:<sup>1</sup>

This work may explain why birds don’t get lost when they cross the equator. That had been an enigma because birds can’t tell magnetic north from south. Instead, they check the inclination of the field lines relative to the ground; the angle becomes steeper near the poles. A bird using only its magnetic compass would risk getting turned around near the equator, but calibrating it to the sunset would keep it on track. Of course, the position of the sunset changes with latitude and season, but Wikelski thinks that birds may be able to correct for that through a biological clock that tells them the time of year.

A report is also available online at *National Geographic News*.<sup>2</sup>

This is the first time birds have been monitored for navigation in the wild. The team must have looked odd chasing birds with “meter-tall antenna mounted on top of a battered 1982 Oldsmobile.” According to Stokstad, “Many nights, the team was delayed when suspicious police officers pulled over the electronics-laden car.”

Thus, multiple levels of correction and calibration are involved in this mind-boggling ability of little birdbrains to use natural cues to migrate vast distances unerringly,



day and night, north and south, east and west. Congratulations to creative and diligent scientists who risk jail to find out these amazing feats in the animal kingdom for us to enjoy and ponder.

<sup>1</sup> Stokstad, E. 2004. Songbirds check compass against sunset to stay on course. *Science* 304:37316.

<sup>2</sup> Roach, J. Migrating birds reset "compasses" at sunset, study says. *National Geographic News*, April 15, 2004. [http://news.nationalgeographic.com/news/2004/04/0415\\_040415\\_songbirdmigration.html](http://news.nationalgeographic.com/news/2004/04/0415_040415_songbirdmigration.html)

## Slowing Down the Cambrian Explosion

“Although the cause of the Cambrian radiation is unknown,” states a story in *Science Now*, maybe it wasn’t as rapid as previously thought.<sup>1</sup> Bruce Lieberman (U. of Kansas) is toying with the idea that trilobites, those icons of the Cambrian era, radiated into various ecological niches 65 million years earlier than the ~520 million year age generally accepted. If so, they would have had more time to evolve.

Lieberman compared physical features from 100 species of trilobites to determine their degree of relatedness. Then he teamed up with a geologist, Joseph Meert (U. of Florida), to infer from magnetic field orientations how long ago the southern supercontinent must have begun drifting toward the equator. Then he related the trilobite species to the continental fragments, and concluded that the continental breakup began 580 million years ago and was more gradual. “The analysis suggests that trilobites were already well-diversified by the time most researchers thought the Cambrian radiation began,” author Betsy Mason says.

This study was not motivated by a desire to know the truth about the unseen past, but to preserve evolutionary theory from one of its most damaging counter-evidences — the Cambrian explosion. As Mason explains,

The traditional view of the Cambrian explosion is that life underwent **an extraordinary, rapid diversification** that resulted in the

**nearly simultaneous appearance** of the ancestors for **most major types of animals.**” (emphasis added)

Simultaneous appearance is not evolution. Rapid diversification is not Darwinian gradualism. No wonder the Darwin Party reacts to the Cambrian fossil evidence in either of two ways: (1) sweep the problem under the rug, or (2) stretch out the explosion into slow motion. Problem is, an explosion is hard to hide, and a slow-motion explosion is still an explosion.

Lieberman relies on evolutionary assumptions to validate his evolutionary assumptions. (This is called circular reasoning.) Lieberman assumes evolution occurred, and then uses that belief to teach us about how it occurred in spite of a critical piece of evidence that says it did not occur. Mason says,

Although the cause of the Cambrian radiation is unknown, many scientists **suspect** that the breakup of a southern supercontinent called Pannotia **could have** isolated populations and created new ecological niches **that spurred rapid evolution.** (emphasis added)

Translated, this means that Darwin-Party storytellers have a favorite plot that goes like this: the probability of a frog turning into a prince is low, but if you isolate groups of frogs, it happens faster. Giving the miracle a name like *adaptive radiation* does not make it empirical science.

You can draw any curve through two data points if the error bars are big enough. The error bars for adaptive radiation and for continental breakup and drift are huge. Lieberman merely assumed that rapid evolution would occur if he could get the “primitive” trilobite ancestors geographically isolated. By working with a Darwin Party co-conspirator to tweak the continental breakup dates, he got the continents to slow down by 500% to give his miracle more time. This is how the Darwinians can keep their story going despite any contrary evidence. No matter what, the show must go on.

<sup>1</sup> Mason, B. Long fuse for Cambrian explosion. *Science Now*, April 13, 2004. <http://sciencenow.sciencemag.org/cgi/content/full/2004/413/2>

Trilobite photo courtesy of US Geological Survey. <http://libraryphoto.er.usgs.gov/startlib.htm>

## SETI Researcher Analyzes Language Mathematically

*Space.com* had a story April 22 about Dr. Laurance Doyle, who studies non-human communication with information theory.

The article is mostly about his study of whale and dolphin signaling, but mentions how information theory is related to the intelligence of the communicating entities:



Doyle’s team uses statistical tools from a field known as “information theory” to measure the complexity of different species’ communication systems and thus learn how much information individual animals can transfer between each other. This allows the scientists to draw inferences about the intelligence of the communicating species, which in turn gives *F<sub>i</sub>* researchers a better understanding of intelligence as an evolutionary adaptation.

The term *F<sub>i</sub>* comes from the Drake equation, a well-known SETI formula invented by Frank Drake that seeks to calculate how many intelligent civilizations might exist in space, wishing to communicate with us. It stands for the fraction of habitable planets with life that have evolved intelligence — the most speculative factor in a string of speculative factors that comprise the equation.

Like most evolutionary articles, this evolutionary article merely assumes evolution. It takes for granted that life and intelligence will evolve, given enough time. As such, it provides nothing new in the rhetoric of Darwinism. But it does remind us that communication of information is a hallmark of intelligence. Animals possess intelligence and communicate information to one another in many ways, but only humans lie (see next headline). If we know empirically that information is a telltale sign of intelligence, how can it be honest to assert that human intelligence had a non-intelligent source, ultimately from hydrogen?

<sup>1</sup> Richards, D. 2004. Unlocking language in space and on earth. *Space.com*, April 22, 2004. [http://space.com/searchforlife/seti\\_richards\\_doyle\\_040422.html](http://space.com/searchforlife/seti_richards_doyle_040422.html)

## Another Human Distinctive: Lying

Here's another evolutionary conundrum: animals usually don't tell lies. Why is lying such a well-documented human trait, but rare in the animal kingdom? Animals signal their own and their enemies in many complex ways. It would seem that lying would have evolved as a useful strategy many times in the animal kingdom, yet apparently it has not. In a book review of *Animal Signals* by John Maynard Smith and David Harper (Oxford, 2003), published in the April 23 issue of *Science*,<sup>1</sup> Nils Stenseth and Glenn-Peter Sætre describe the puzzle:

A **central problem for evolutionary biologists** interested in animal communication is **to explain why animal signalers generally are truthful**. A male **nightingale** advertising for a mate reliably signals properties of his qualities through his beautiful song. By dressing in screaming black and yellow colors, the **wasp** reliably warns approaching predators (and us) of her painful sting. The trivial answer to the honesty problem is that it would not pay animals to respond to a signal unless they by and large benefited. If wasps never stung, no one would bother to notice their striking colors. The color pattern would cease to be a signal. However, the more interesting question — the main theme of John Maynard Smith and David Harper's *Animal Signals* — is **what keeps signalers from cheating**? What prevents, say, a poor-quality male nightingale from claiming that he is of higher quality than he actually is? (emphasis added)

It's not that evolutionists never thought about this before. One explanation, for instance, is called the handicap theory: "signals are reliable because they are costly to produce or have costly consequences." Ideas about indices vs. amplifiers and evolving signals vs. equilibrium signals are discussed in the review, along with this puzzler:

The **problem of honest signaling** seems **especially challenging to our intuition** when we consider **contests**, situations in which the contestants prefer different outcomes. In their chapter on signal-

ing during contests, Maynard Smith and Harper explore some consequences of the contestants' **shared interest in avoiding an escalated fight**. They discuss badges of status, minimal-cost signals that indicate need, and aspects such as extended interactions, punishment, and the effects of the divisibility of a resource. (emphasis added)



All this seems to beg the question of why humans are such inveterate liars, if their behavior evolved, too. The authors provide some "suggestions":

In the final chapter, the authors discuss signaling in primates and some other social vertebrates. Here we find several topics that border on other fields such as **psychology** and the **evolution of language**. The chapter provides some of the book's most **entertaining examples** and most thought-provoking **suggestions**. These include **the evolution, through natural selection, of animal signaling into human language**; that is, the **transition** in our past where **genetic change** was **eclipsed by cultural change** and **history began**. (emphasis added)

With that tantalizing impression, they leave us hanging; the reviewers probably expect us to buy the book to hear the suggestions. Are they suggesting that cultural change and history do not evolve by natural selection?

Interesting that they do not mention mimicry, which seems to be a form of deceit: "don't eat me — I'm a stick!" But mimicry is not really lying. The animal can't help the way it was born. Anyway, in terms of vocalizations or behavioral traits, it is striking that animals don't lie to each other like humans do, except in *The Far Side* comic

strips.

So here again, another phenomenon is found that seems counterintuitive to evolutionary expectations, and Darwinians are left employing just-so stories to explain it. How many exceptions to the rule are required before the rules must be changed?

With glittering generalities, evolutionists exercise their fertile imaginations to dream of monkey screeches evolving into Shakespearean soliloquies. Prove it, we say. Interestingly, though human beings can be shown to all have a single genetic ancestor (like Adam), their languages cannot. Dr. Joseph Kickasola, a linguist at Regent University, has shown that all the thousands of human languages and dialects can be reduced to 17 families, but no further. Could this fact be an echo of Babel?

The cynic says, "Everybody lies, but it doesn't matter, because nobody listens." What if enough people stop listening to Darwinian just-so stories? After all, it is a form of deceit to pretend to have an answer when you don't. It would be more honest for a naturalistic researcher to say, "I don't know why humans are liars but animals are not." Maybe this and maybe that doesn't cut it in science. This is an area where science is limited, but there are other sources of information, such as history and eyewitnesses.

The One who cannot lie told us about a father of lies, the devil, who was a liar from the beginning, and that it is not surprising that his followers would follow in his ways. He also commanded us not to bear false witness, and warned that all liars shall have their part in the lake of fire. If you don't like to hear such things, don't ignore the credibility of the source of that information. Don't lie to yourself.

<sup>1</sup>Nils Chr. Stenseth and Glenn-Peter Sætre. 2004. Behavioral ecology: why animals don't lie," *Science* 304:519-520.

*Editor's note: All S.O.S. (Speaking of Science) items in this issue are kindly provided by David Coppedge. Additional commentaries and reviews of news items by David can be seen at: [www.creationsafaris.com/crevnews.htm](http://www.creationsafaris.com/crevnews.htm).*



# Creation Calendar

**Note:** Items in "Creation Calendar" are for information only; the listing of an event does not necessarily imply endorsement by the Creation Research Society.

May 28-31

*Kansas Chalk Formations and Fossil Beds*  
Family Creation Safari, [www.csma.org](http://www.csma.org)  
CSA for Mid-America (Kansas City Area)  
Contact: Tom Willis (816)618-3610, [csahq@juno.com](mailto:csahq@juno.com)

June 3-5

*Annual Meeting, Creation Research Society Board of Directors*  
Phoenix, AZ

June 9-11

*Discovering the Creator* (early registration deadline May 1, 2004)  
Baraminology Study Group Conference  
Bryan College, Dayton, TN 37321  
[www.bryancore.org/bsg/discovering04](http://www.bryancore.org/bsg/discovering04)  
Contact: [conference@bryancore.org](mailto:conference@bryancore.org),

June 27 - July 2

*Twin Peaks Family Science Adventure*  
Fun-filled vacation for families, near Collbran, CO  
Sponsored by Alpha Omega Institute, Grand Junction, CO  
Contact: (970)523-9943, [www.discovercreation.org](http://www.discovercreation.org)

June 26-28

*Ozark Stream Float Trip*  
Family Creation Safari, [www.csama.org](http://www.csama.org)  
CSA for Mid-America (Kansas City Area)  
Contact: Tom Willis (816)618-3610, [csahq@juno.com](mailto:csahq@juno.com)

July 17

*Kansas Univ. Natural History Museum Tour*  
Family Creation Safari, [www.csama.org](http://www.csama.org)  
CSA for Mid-America (Kansas City Area)  
Contact: Tom Willis (816)618-3610, [csahq@juno.com](mailto:csahq@juno.com)

July 20

*Job's Park (Did Humans and Dinosaurs Coexist?)*  
by Dr. Steve Rodabaugh  
Creation Science Fellowship (Pittsburgh, PA area)  
Contact: 412-341-4908, [csficc@csfpittsburgh.org](mailto:csficc@csfpittsburgh.org)

August 1-6, August 8-13

*Redcloud Family Mountain Adventure*  
Fun-filled vacation for families, near Lake City, CO  
Sponsored by Alpha Omega Institute, Grand Junction, CO  
Contact: (970)523-9943, [www.discovercreation.org](http://www.discovercreation.org)

August 14

*Fossils and Geology of Kansas City*  
Family Creation Safari, [www.csama.org](http://www.csama.org)  
CSA for Mid-America (Kansas City Area)  
Contact: Tom Willis (816)618-3610, [csahq@juno.com](mailto:csahq@juno.com)

August 17

*Flood Myths*, by Dr. Jerry Bergman  
Creation Science Fellowship (Pittsburgh, PA area)  
Contact: 412-341-4908, [csficc@csfpittsburgh.org](mailto:csficc@csfpittsburgh.org)

September 3-6

*Southeast Missouri / Johnson Shut-ins*  
Family Creation Safari, [www.csama.org](http://www.csama.org)  
CSA for Mid-America (Kansas City Area)  
Contact: Tom Willis (816)618-3610, [csahq@juno.com](mailto:csahq@juno.com)

September 25

*Carnegie Museum of Natural History Tour*  
Creation Science Fellowship (Pittsburgh, PA area)  
Contact: 412-341-4908, [csficc@csfpittsburgh.org](mailto:csficc@csfpittsburgh.org)

October 19

*New Evidence that Radioactive Decay Has Not Been Constant*  
by Dr. Lionel Dahmer  
Creation Science Fellowship (Pittsburgh, PA area)  
Contact: 412-341-4908, [csficc@csfpittsburgh.org](mailto:csficc@csfpittsburgh.org)

October 23

*KATY Bike Trail, Missouri River Bluffs*  
Family Creation Safari, [www.csama.org](http://www.csama.org)  
CSA for Mid-America (Kansas City Area)  
Contact: Tom Willis (816)618-3610, [csahq@juno.com](mailto:csahq@juno.com)

December 4

*Squaw Creek Game Refuge*  
Family Creation Safari, [www.csama.org](http://www.csama.org)  
CSA for Mid-America (Kansas City Area)  
Contact: Tom Willis (816)618-3610, [csahq@juno.com](mailto:csahq@juno.com)

## What Are Creationists Thinking about ...?

*As new scientific discoveries make the headlines, have you ever wondered how your fellow creationists are reacting? Have you ever thought of a "crazy" new idea about origins and wanted to bounce it off another creationist?*

Now you can keep in contact daily with creationists from all around the world. The Creation Research Society sponsors **CRSnet**, an online community of CRS members who have e-mail access to the Internet. Not only do participants discuss the latest scientific findings related to origins, but they also receive news about the CRS — its research, publications, and activities — and other creation-related news.

For more information, send an e-mail message to Glen Wolfrom at [contact@creationresearch.org](mailto:contact@creationresearch.org).

*Participation is limited to CRS members in good standing.*



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## All by Design

by Jonathan C. O'Quinn, D.P.M., M.S.

## Nature's Loudspeakers

**T**he noisy calls of cicadas are a familiar evening sound in the springtime. To scientists, the sound production equipment of cicadas is an engineering marvel. The best-known example is a species of Australian cicada, the loudest known insect in the world.

Male cicadas sing their hearts out each evening, hoping to attract females. The male cicada has an elastic, resonant structure called a tymbal, on each side of its abdomen, that produces a series of sharp clicks at a frequency of 4.3 kilohertz, forming the cicada's song. Each click produces high sound pressures of up to 158 decibels within the cicada's abdomen.

The abdomen contains a large resonating air sac complete with a pair of large, thin eardrums that act to radiate sound from the body. The eardrums are covered by adjustable plates. By adjusting the length of the abdomen and the position of the



eardrum covers, the cicadas can fine-tune their abdominal resonance to exactly the 4.3 kilohertz frequency produced by the tymbals. This produces a high quality song that is more likely to attract females.

This is a major problem for evolution. The intricate design and function of these structures could not have evolved in stages over millions of years, as evolution teaches. Incomplete evolution of any component would render the male cicadas unable to sing, thus making it impossible to attract

mates, and leading to immediate extinction.

To those questioning their own origin, the cicada testifies loudly to a planned creation as recorded in the Bible.

### Bibliography

Bennet-Clark, H.C. 1998. How cicadas make their noise. *Scientific American* 278:58-61.

*Dr. O'Quinn is a podiatrist with a Master's degree in physiology. This essay is one of a series he has written to illustrate the marvels of design that can be seen all around us.*