

Creation Matters

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Cicada Killer Wasps Know Neural Anatomy

by E. Norbert Smith, PhD

The beautiful yellow and black cicada killer *Sphecius speciosus* is the largest wasp in North America, capable of reaching a length of 5 cm (ca. 2 inches). Although they are huge and appear menacing, they are normally not aggressive. Adults feed on the nectar from a variety of flowers. Cicada killers are found from the Midwestern United States, south across Mexico, and into Central America. They are ground-burrowing, solitary wasps classified in the family Crabronidae.

Males do not sting, but are often seen in groups challenging one another for a female. It is not unusual to see two or three males flying erratically while locked in midair combat.



Cicada killer, *Sphecius speciosus* (Drury)

Photo credit:

Ronald F. Billings, Texas Forest Service,
www.bugwood.org, Image Number: 3226055

As a boy growing up in western Oklahoma, I often watched as they captured, immobilized, and finally flew off with the

paralyzed cicadas. The process often took more than an hour to complete. Cicadas are known locally as “locusts” and are three times larger than the wasps. Many years later, as a zoologist, I came to understand and appreciate some of the details of this complex and highly orchestrated feat.

Large female cicada killer wasps are commonly seen skimming across lawns looking for nest sites, or searching for cicadas in trees and shrubs. Their reproduction process is complex, involving specialized anatomical structures as well as several intricate steps.

... continued on p.2

Did Jesus Christ Walk on the Sea of Galilee?

by Carl R. Froede Jr., PG

Naturalists have a new strategy. Instead of openly ridiculing the Bible, they filter God from its stories via a “scientific” explanation. That allows them to appear respectful of “religion,” while still seeking to destroy it. Examples of this can be found in the imaginary Black Sea “Flood” of marine geologists William Ryan and Walter Pitman (1998), and the opening of a Red Sea passage by unique hurricane-force winds (Reed and Froede, 2014).

The latest in this line of secular faint praise is an “explanation” for the miracle of our Lord Jesus Christ’s walking on the water of the Sea of Galilee (Nof et al., 2006; Koren, 2013; Kovacs, 2013). Despite a superficial enthusiasm, the authors are trying to invalidate this miracle, not validate Scripture. Their efforts prove to be inconsistent with both Scripture and reason.

The Sea of Galilee

Modern Lake Tiberias has historically had many names, such as the Sea of Galilee,



FIGURE 1. The modern nation of Israel. Modified from U.S. Geol. Survey world topographical map. Note the location of Nazareth from which Jesus and His disciples departed, on their way to the Sea of Galilee (Mark 6:1–6, 32).

Lake of Gennesaret, and Lake Kinneret. It is approximately 13 miles long and 8.1 miles wide. Its maximum depth is about 141 feet. Since the lake is located in the northern portion of the Jordan-Dead Sea Rift Valley (a tectonic graben), the lake level is about 686 feet below sea level, making it the lowest freshwater lake on Earth, and the second-lowest lake overall (after the Dead Sea, a saltwater lake). The lake is partly fed by underground springs, although its main source is the Jordan River which flows through it from north to south (Wikipedia, 2013) (Figure 1).

The Scriptural Account

One of the miracles that demonstrated Jesus’ control over nature (and thus his deity) was his walking over the surface of the lake to his disciples, who were sailing across it. The New Testament contains three separate records of this miraculous event: (1) Matthew 14:22–33; (2) Mark 6:45–52; and

... continued on p. 7

Constructing a burrow

First, the female digs an extensive underground burrow 25 to 50 cm (10 to 20 inches) deep and 1.5 cm (0.6 inches) wide. In order to dig the burrow, the female dislodges the soil with her jaws and, using her hind legs, pushes the loose soil behind her as she backs out of the burrow. Her hind legs are equipped with special spines that aid her in pushing the dirt out of the hole.

The burrow, which is sometimes shared with other females, has several individual compartments or rooms where the cicadas are placed, and where the young wasps will develop and grow. A single burrow may contain 10 or more separate chambers or rooms.

Capturing the prey

After construction of the burrow is complete, she must find and sedate the large and elusive cicada. Upon finding a cicada she first, systematically, stings the nerve ganglia that control the flight muscles, rapidly subduing the huge struggling insect. When the cicada's wings have stopped thrashing about, she then stings the ganglia associated with movement of each of the six legs.

The journey home

Once the prey is totally paralyzed, she crawls up the nearest tree trunk, fence post, or other upright structure, dragging the huge cicada beneath her. She then flies toward

the previously dug burrow, clutching the large prey tightly with her legs. The weight of the cicada is too much for her to maintain altitude, and she gradually sinks to the ground.

Upon landing, she again drags the heavy prey up a nearby post or tree trunk and repeats the process until she arrives at the burrow. She then drags the prey underground and lays a single egg in its body. The entire process often takes an hour or more.

Food for the young

After she gets the cicada inside her burrow, she places it in one of the previously built chambers. Like queen bees, she knows which egg will develop into a male or female. She often puts two or three cicadas together in a single room for depositing eggs to produce females, but she puts only a single cicada in a chamber to deposit the egg to produce a male.

An egg hatches in 1 or 2 days, and the larva completes its development in about 2 weeks. The larva instinctively avoids eating the vital organs until it is nearly mature. Finally, it eats the vital organs, killing the cicada, and quickly pupates. Pupation lasts about a month. There is only one generation of wasps per year.

Conclusion and implications

Even as a young boy, I was impressed at the instinctive knowledge the adult cicada wasp has of the cicada's nervous system, and how much to sting it without killing the

prey. I was also amazed at its ability to find the burrow that had been dug, often hours before capturing the prey, not to mention the arduous task of actually reaching the burrow with its heavy prey.

Each component of this complex behavior must be complete and passed on genetically to the next generation. Evolutionists have no rational explanation for the origin of such complex and elaborately-orchestrated, inherited behavior.

Consider carefully the extreme complexity of the entire process and the overwhelming evidence of design displayed by this fascinating wasp. It is impossible that the female wasp could accidentally find each of the nerve ganglia controlling movement in the cicada, or could accidentally inject the correct amount of venom.

No matter how much time is invoked, such complex and highly-orchestrated behavior could not have happened by chance alone. Rather than time and chance, the entire process screams design...and where there is design there must be a Designer.

How can anyone not see the unmistakable evidence of God all around us?

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Matters of Fact

by

Jean K. Lightner, DVM, MS

Editor's note: You may submit your question to Dr. Jean Lightner at jean@creationresearch.org. It will not be possible to provide an answer for each question, but she will choose those which have a broad appeal and lend themselves to relatively short answers.

Q What does genetic redundancy have to do with the creation-evolution debate?

A Genetic redundancy refers to the situation when two or more genes carry out the same function; the elimination of one gene has little or no effect on the phenotype (physical characteristics) of the organism (Nowak et al., 1997).

To determine its function, a specific gene may be eliminated in laboratory mice through genetic manipulation. These are called “knockout” mice because the DNA sequence for the gene is “knocked out” or disrupted so that it cannot function. The surprising result is that many times a gene could be eliminated with little or no effect on phenotype (Borger, 2008a). Scientists observed that although the gene is functional; eliminating it does not result in significant deficits!

Redundancy is important in engineering. Components that carry out essential functions can be designed with backup devices which allow for continued operation in case one component fails. Redundancy is thus a hallmark of sophisticated design. So, the presence of many genes in higher organisms that are “backed up” with such redundancy is consistent with the corollary that life is well-designed.

Surprisingly common

Redundancy is surprisingly common, having been best documented in the most commonly studied laboratory organisms: *Arabidopsis* (a plant in the mustard family), *Saccharomyces cerevisiae* (yeast), *Drosophila* (fruit fly), *Caenorhabditis elegans* (a roundworm), and mice. It has been reported for a diverse array of genes, including transcription factors, protein kinases, cytokines, cell adhesion proteins, receptors, trafficking proteins, growth factors, chaperones, neuro-peptides, oncoproteins, and promoters (Cooper, 2003). What is interesting is watching evolutionists try to account for redundancy in their naturalistic paradigm.

Evolutionists have proposed gene duplication as an explanation for the origin of redundancy (Cooper, 2003). Creationists recognize that duplications may explain some patterns, including adaptations that were important as creatures filled the earth. However, evolutionists invoke gene duplication in cases where it is implausible, because they avoid considering the possibility of a Designer (Liu and Moran, 2006; Lightner, 2009; Lightner, 2010).

Problems for evolution

Since the organism can survive without the second gene, at first it may seem like gene duplication could be a plausible explanation for redundancy. At least the scenario starts with a viable organism. However, on closer inspection there are several problems. Evolutionists are confined to naturalistic explanations. Therefore, they must assume that duplications are essentially random. The first problem, then, is that random duplications of segments of DNA are far more likely to interrupt genes than they are to duplicate them.

A second problem for evolutionists is how beneficial redundant genes become fixed in a population. Realistic mathematical modeling demonstrates that the vast majority (>99%) of beneficial mutations are lost due to genetic drift (random fluctuations in frequency) almost as soon as they enter a population (Rupe and Sanford, 2013). Even if they escape such a loss, they are not likely to become fixed in the population unless they have a strong beneficial effect (Patwa and Wahl, 2008). By definition, redundant genes lack such strong, beneficial fitness effects.

This leads to a third problem. While most beneficial and deleterious mutations are eliminated due to genetic drift, the deleterious mutations should be generated (at least in a naturalistic model) orders of magnitude more commonly than are beneficial ones. Therefore, deleterious mutations are more likely to escape loss through genetic drift simply because there are so many more

Genetic Redundancy

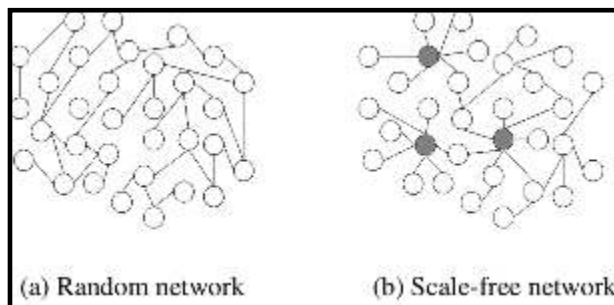


FIGURE 1. Examples of a random network and a scale-free network (Castillo, 2004). A scale-free network has components linked together in such a way that eliminating one can often be compensated for through other connections. Redundancy appears to generally be a result of such a design.

of them. Natural selection may eliminate those that are lethal or significantly affect reproduction. However, deleterious mutations that have less significant effects (which could easily be in a redundant gene) can become fixed in a population by genetic drift. This leads to a strong, downward pull in the genome, which has been called “Haldane’s Ratchet” (Rupe and Sanford, 2013). The naturalistic model is not one that favors the appearance of redundancy, but instead is one that is very effective at removing it!

Impressively designed

While in some cases redundancy may be from highly similar genes which evolutionists would attribute to gene duplication, in many cases it is not. There is good evidence that genes are placed into networks which have been designed in such a way that eliminating one component of the network can be compensated for through other connections (Borger, 2008a; Cooper, 2003; see Figure 1). This is impressive design! It appears to have been an important, designed feature which was necessary for organisms to adapt as they spread out to fill the earth after creation (Borger, 2008b).

In general, when discussing the evolution of redundant genes, the topic of their origin is rarely mentioned. Instead, evolutionists have a variety of theories of how this redundancy could have been maintained throughout the vast ages of evolutionary time (Cooper, 2003). According to evolutionary thinking, highly conserved regions of the genome can only be maintained if they carry out critical functions without which the organism would fail to

reproduce. Thus, evolutionists do recognize some of the problems outlined above. Redundant genes should have decayed long ago from random mutation since natural selection cannot “preserve” them.

Genetic redundancy is therefore important because it is one of many findings in biology that is at odds with reasonable evolutionary predictions. While evolutionists try to account for it in their naturalistic worldview, their imaginative explanations are not compelling. In contrast, the finding is entirely consistent with the historical account in Genesis, providing another glimpse of the incredible wisdom of our Creator, who is the author and sustainer of life. Creatures are endowed with incredible design that has allowed them to reproduce and fill the earth as their Creator intended (Genesis 1:21–22, 8:17; Isaiah 45:18).

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Math Matters

by

Don DeYoung, PhD

Mathematics Prodigies

A prodigy is a person with exceptional talents or abilities in particular areas. There are many examples of prodigies who excelled at a young age, especially in mathematics and the arts. Blaise Pascal (1623–1662) at age twelve made up original geometric axioms and proofs. Wolfgang Mozart (1756–1791) published four musical compositions by age seven. Maria Gaetana Agnesi (1718–1799) mastered 6–10 languages as a child and conversed with the mathematicians of her day. Electronics pioneer Andre-Marie Ampere (1775–1836) performed detailed mental calculations at age three. Karl Friedrich Gauss (1777–1855) corrected errors in his father’s payroll records at age three.

Kansas State University graduate student Rajan Mahadevan demonstrated a great ability in memory. Before an audience in his hometown of Mangalore, India, he recited the value of pi to 31,811 decimal places (Reid, 1989), earning him a place in the Guinness Book of World Records. This



Blaise Pascal
(Wikimedia Commons)

performance required nearly four hours to complete. And why did he stop? As Rajan explained, “The 31,812th digit, I am always stumbling over that one.”

The unfortunate term *idiot savant* (better called savant syndrome) describes individuals who are mentally slow, yet show genius ability in a specialized area, such as mathematics. Simple math problems may stump such a person, yet complex mental computations are quickly accomplished. This talent was featured in the 1988 film *Rain Man*.

What is the explanation for outstanding mathematical skills? It may be an urban myth that we typically use only 1–10 percent of our brain capacity (Boyd, 2008). At the same time, however, the human brain apparently has great potential for computation and memorization, and certain individuals are able to tap into this ability. This raises a fundamental problem for evolutionary theory. There is no reason why an evolved mind should have a capacity far beyond what most of us utilize. Instead, prodigies and savants demonstrate the potential which was created within us.

Our first parents, Adam and Eve, in their unfallen sinless state, surely were able to fully utilize their minds. At the end of this age, when the creation is renewed, the potential of the human mind may once again be fully restored.

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Speaking of Science

Editor's note: Unless otherwise noted, S.O.S. (Speaking of Science) items in this issue are kindly provided by David Coppedge. Opinions expressed herein are his own. Additional commentaries and reviews of news items by David, complete with hyperlinks to cited references, can be seen at: <http://crev.info/>. Unless otherwise noted, emphasis is added in all quotes.

Imagining Worlds—No Evidence Required

Science fiction is fun, but science demands evidence, not imagination. Imagination sometimes leads to scientific discovery, but until it does, it remains imagination—better suited for theaters. The demands on science for empirical verification are stringent. Yet often, in the secular science press, and even in the journals, speculation is allowed to wander unleashed. Three recent examples illustrate the problem.

Life from the ashes: We usually think of meteor strikes as destructive—but not *LiveScience*:¹

...a **remarkable discovery** has cast **these aerial assaults** into a **surprising new light**—because, **as well as destroying life, it now seems that ancient collisions might also have helped create it.**

From that phrase “remarkable discovery,” the reader expects empirical support for life crawling out of a meteorite, but gets only eight amino acids. Yet the reader is told this “remarkable discovery” has “the **potential to radically change our perception** of how life **might first have arisen.**”

Life from the depths: Water is a pretty simple molecule: H₂O. It has no carbon, nitrogen, phosphorus, iron, copper, zinc, or other elements life uses. Moreover, it is not arranged into any orderly informational code. Its mere presence, though, conjures up living worlds where no life has been observed. *PhysOrg* reported on a “study” that alleges “**life on other planets far more widespread,**”² just because it is conceivable that some worlds outside their stars’ habitable zones might have subsurface oceans. Astrobiology (the “science without a subject”) has made this kind of plot so common that most readers don’t even consider it unusual.

Life from the unseen: *New Scientist*³ (note: not “New Science Fiction”) reviewed three books about life in outer space that exhibit varying degrees of speculation: *From Dust to Life: The origin and evolution of our solar system* by John Chambers and Jacqueline Mitton; *Life Beyond Earth: The search for habitable worlds in the universe* by Athena Coustenis and Thérèse Encrenaz; and *Alien Universe: Extraterrestrial life in our minds and in the cosmos* by Don Lincoln. Reviewer Marcus Chown leaps into the realm of alien life from one empirical fact: the vastness of space. “Yet, in all this immensity, **there is only one place where we know there is life—the tiny, fragile ‘blue dot’ we call Earth,**” he acknowledges. “**This rather hand-caps our speculations about life elsewhere.**” No kidding.

Since none of these articles can produce empirical evidence for life beyond Earth, it seems only fair that anyone should be able to participate in the speculation game. What’s to stop someone

from claiming Earth alone has life? That idea is, at least so far, supported by observation.

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Mother of All Carnivores

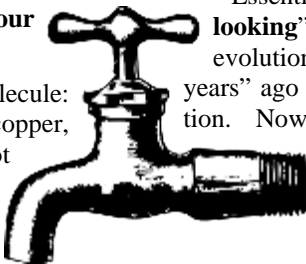
The artist’s reconstruction in *ScienceDaily* shows a mysterious, sleek animal prowling in a tree, sporting a long tail, colorful coat, and pointy ears.¹ What’s it based on? Just teeth and a few ankle bones. All the rest is imaginary. Yet that scanty fossil evidence props up a story about the mother of all carnivores: an animal that gave rise to “Cats and dogs, as well as other carnivorous mammals (like bears, seals, and weasels),” the article claims.

Essential to the tale is calling the fossil “**very primitive looking**” so that readers are assured that the world has made evolutionary progress since the imaginary time “55 million years” ago when this animal lived. Imagination breeds imagination. Now, the evolutionists can imagine still more imaginary ancestors: “Although **close to the origin** of carnivora-forms, the fossils **suggest there were even more primitive species** in the group in an **earlier time period**, the Paleocene.”

Extremely rare is the reporter or scientist who considers whether the same bits might confirm some other paradigm. Philosophers understand a concept called “underdetermination of theory by data.” For any evidence, there is an infinite number of theories that could be confirmed by that evidence. Some ankle bones and teeth do not, therefore—indeed, cannot—provide necessary and sufficient evidence to confirm the Darwinian theory. The same evidence could be used, for instance, to support a story of degeneration and decreasing diversity over time.

Readers are generally not surprised by such articles, because evolutionists have drummed this kind of speculation into “the way science is done” these days—ever since Darwin popularized the genre. The grand story comes first: then, the “scientist” imagines ways to incorporate discoveries into the story, using bits of bone or DNA to prop it up and keep it going.

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Clearly Invisible

a devotional by Kenneth G. Dale, DDS

We can clearly see all of God's creation through tiny bundles of energy called photons. The photon is the basic unit of light (as well as all other forms of non-visible electromagnetic radiation, like x-rays and microwaves). Photons are mobile energy forces that do not occupy any space, and they do not have any mass (they are weightless).

Here's how they work: Photons are generated from things like the sun or other light sources. They travel from their source of origination, reflect off objects, enter our eyes, and terminate when their energy is transferred to our eyes. Through the energy of the photon, God has created a way for us to see every part of His visible creation. How incredible is that?

Not incredible enough? There's more! Everything we see around us (more specifically, all matter) is surprisingly made up of only three different sub-atomic particles:

Protons, Neutrons and Electrons.

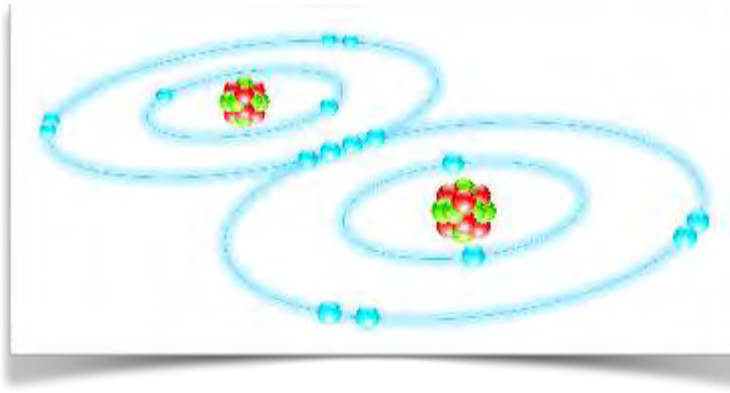
That's it—a trinity! Yes, the air we breathe, the water we drink, and the food we eat all have the same three sub-atomic ingredients, just combined in different ways.

**For ever since the world was created,
people have seen the earth and sky.
Through everything God made, they can
clearly see his invisible qualities—his eternal
power and divine nature. So they have no
excuse for not knowing God.**

—Romans 1:20 (NLT)

LORD, everything you have made will praise you.

—Psalm 145:10 (NCV)



He combines only three basic particles of matter. He further makes clear His eternal power and divine nature by the way in which He beautifully displays His creation through only one particle of light. If anyone wants to see God, as Romans 1:20 says, just look at what He's created. All of creation reflects His wonderful, incredible, glorious, and matchless name! And all of creation praises Him (Psalm 145:10).

Oh, may the qualities of our "clearly invisible" God be seen today just by opening our eyes and receiving His light! And may the light of creation that we see every waking moment remind us of the true "light of the world" and the only "light of life"—Jesus Christ!

Now that's the Master Chef at work! And consider for a moment the complex function of the human body, or the exquisite metamorphosis of a caterpillar to a butterfly. This all happens from the interaction of only three components. Now that's the design of a Supreme Engineer.

God's eternal power and divine nature, though invisible, are clearly expressed in the phenomenal and majestic ways in which

When Jesus spoke again to the people, he said, "I am the light of the world. Whoever follows me will never walk in darkness, but will have the light of life."—John 8:12 (NIV)

Note: The diagram above is of an oxygen molecule (O₂) created, by God, from protons, neutrons and electrons.

Killer Wasps *...continued from page 2*

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Sea of Galilee

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(3) John 6:16–21. In summary, once hearing of John the Baptist's beheading, Jesus and His disciples cross a portion of the Sea of Galilee by a probable beginning at Magdala, and land near Tiberias. They ascended the side of a mountain and Jesus saw multitudes of people approaching who followed Him on foot. There, using five barley loaves and two small fish, Jesus miraculously fed five thousand men. To circumvent the crowd's desire to forcibly crown him King of Israel, Jesus instructed His disciples to proceed down the mountain, get into their boat, and sail to Bethsaida (Figure 2). Alone, Jesus ascended the mountain to pray. A storm rose, impeding the disciples when they were three or four miles away, near the middle of the lake. So Jesus walked to them between 3:00 a.m. and 6:00 a.m. Upon His entering the boat, the winds ceased, the disciples worshiped Him, and the boat landed near Capernaum where the crowd that followed later found Him.

The exact locations of some of these events can only be approximated, but a fair interpretation is shown in Figure 2.

Two Naturalistic Explanations

In what passes for a new “charm offensive,” naturalists cherry-pick a few verses to support a predetermined unusual natural event, which was “misinterpreted” by the ignorant witnesses. Like so many others, they judge revelation by human wisdom rather than allowing God's word to shape human wisdom. There is never complete acceptance of Scripture because it is viewed as an inaccurate account of events that can be explained naturalistically to the educated, open-minded, non-religious individual. Two different schemes have been proposed to explain this miracle.

(1) The Submerged Rock Pile Theory

A recent article by several Israeli scientists identified a large, completely submerged, slightly asymmetric, cone-shaped pile of basalt boulders approximately 1,640 feet from the southwestern shore of the Sea of Galilee (Paz et al., 2013). In summary, the base of the structure is shallowly buried in gently, southeastward-sloping sand. The boulders rise approximately 33 feet from the bottom to within 4.6 feet of the water surface, on the western (shallowest) side of the structure. The feature is 230 feet in circumference. The boulders are up to 3.3 feet in size and are not hewn or assembled

into any organized or constructed pattern, but are believed to have been emplaced by humans, probably during the Hellenistic/Roman/Byzantine period. The basalt rocks and boulders were derived from outcrops located along the adjacent shoreline.

Regarding its origin, it is possible that an earthquake or subsidence topographically dropped this structure beneath the water, but its shape and proximity to shore suggest that it may be a cairn (i.e., burial monument) that was created when the Sea of Galilee was at a lower level (Paz et al., 2013). Interestingly, there is no mention of Christ Jesus' walking on the Sea of Galilee in this article.

Since its publication, two internet bloggers have collectively christened this structure as the place where Jesus and Peter walked on water (Koren, 2013; Kovacs, 2013). Both of these individuals apparently spoke to one of the Israeli authors (i.e., Shmuel Marco) who conveyed to them information that was not presented in the published article. Koren (2013) most clearly conveys the link between the submerged rock pile and the miraculous event:

...Professor Shmulik [sic] Marco of Tel Aviv University has recently uncovered a third-century set of stones in the Sea of Galilee. What makes this set of stones worth discussing, however, is the theory that these exact stones are what provided Jesus with a platform of sorts, creating the illusion that he was able to walk on water, and rescue his followers.

It is this secondary assertion, regarding the possible link between the submerged rock pile and the miracle of Jesus' walking on water, that instantly elevated this article from an archaeological enigma to an internet sensation.

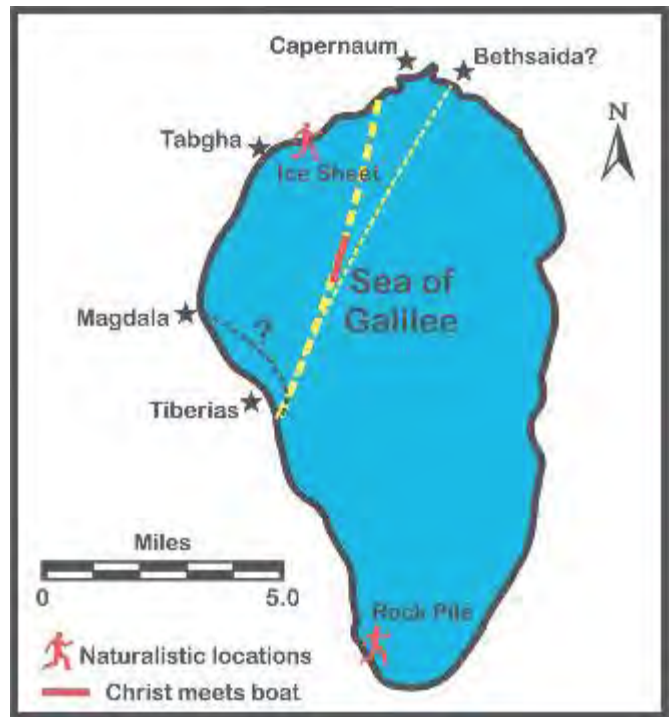


FIGURE 2. The Sea of Galilee around the time of Christ Jesus. At this time, the road from Nazareth to the Sea of Galilee went to the city of Magdala, not Tiberias (Rogerson, 1985). Perhaps this is why Jesus and His disciples traveled by boat southward to near the city of Tiberias, where the feeding of the 5,000 occurred (John 6:23). Following the feeding, the disciples were directed by Christ Jesus to depart for Bethsaida (Mark 6:45) and Jesus apparently walked on the Sea of Galilee three or four miles to eventually reach them (John 6:19). The location of the rock pile is nowhere near the city of Tiberias, and the 100-foot-long ice sheet just north of the city of Tabgha would have been insufficient to reach the disciples well away from shore. Map constructed from Rogerson (1985) and www.searchingthescriptures.net/.

(2) The Ice Sheet Theory

Several years ago, secular scientists examined a rather unique but scientifically plausible atmospheric event that froze the northwestern Sea of Galilee off the coast of Tabgha (Nof et al., 2006). In summary, Nof et al. (2006) acknowledge that the reconstruction of most lake histories is derived from cores and sediment analysis, but in this case they relied primarily on computer models. Using paleoceanographic temperature data, derived from the central Mediterranean from 13,000 years ago, they mathematically and theoretically demonstrate the possibility that freezing the top of the Sea of Galilee is impossible. They then proceed to model how a brief period of freezing temperatures (as few as two days), combined with stratified freshwater over warm salt springs, can create a sheet of ice of sufficient thickness (four inches) to support human weight. They acknowledge that this could only occur if the water was calm, with wind speeds no more than 13 miles

per hour. The ice sheet would extend approximately 100 feet from land, and if they added a thin rainwater layer on top, a human might appear to be walking on water.

Analyzing the Science of the Naturalistic Proposals

For naturalism, science is the benchmark of truth. While concepts and ideas can be proposed, they have to be validated by the scientific method. Without that validation, they are just stories told to entertain the scientific establishment.

Paz et al. (2013) never combine their newly-identified rock pile with Jesus Christ's walking on water. This link was made outside of the "scientific" article. Why? Perhaps because this would move the article from an important archaeological discovery to "cultural history." The scientific establishment generally discourages any support for a Biblical event. Secondly, it raises the finding to a new level of scrutiny from not only naturalists but theologians. There is no "science" involved in proposing this is where Jesus Christ "fooled" His disciples into believing He was walking on water, when all He did was supposedly swim a short distance to climb atop the submerged rock pile. Instead, it is a hermeneutical and theological claim with the purpose of eliminating God's miraculous activity from Scripture.

As such, it would have numerous hermeneutical and theological problems to overcome. A few common sense observations provide a short cut to truth. First, the location of the rock pile is at the other end of the lake from the location where Jesus walked on water. The authors cannot explain this discrepancy. Second, the night in question was stormy. Walking along uneven, rugged, submerged rocks would be difficult under calm weather conditions; it would be impossible in a storm. Third, the rock pile is a cone. Moving any distance away from its apex would remove any subsurface support. And finally, the disciples were experienced fishermen. They would not willingly bring their boats anywhere near a submerged hazard in stormy weather. This theory is a clumsy attempt to denature Scripture.

What of the ice sheet hypothesis? Nof et al. (2006, p. 438) conclude their article with this waffling statement:

Our springs ice calculation may or may not be related to the origin of the account of Christ walking on water. The whole story may have

originated in local ancient folklore which happened to be told best in the Christian Bible. It is hoped, however, that archeologists, religion scholars, anthropologists and believers will examine such implications in detail.

But in an earlier statement, Nof et al. (2006, pp. 436–437) reveal their true motivation to neutralize the miraculous:

With the idea that much of our cultural heritage is based on human observations of nature, we sought a natural process that could perhaps explain the origin of the account that Jesus Christ walked on water. Our general approach is similar to that we adopted earlier to explain the parting of the Red Sea where we proposed that a strong wind action caused a wind set-down which exposed a usually submerged ridge (Nof and Paldor 1992). It is also similar to Ryan and Pitman (1998), who attempted to explain the biblical flood arguing that it originated in the abrupt initiation of strong flows into the (then fresh water lake) Black Sea at the very end of the last glaciation (about 6000 years ago). These strong flows came about when, due to the melting of ice sheets, the sea level rose above the sill depth in the Bosphoros (Ryan et al. 2003). *Neither one of these theories provide an exact explanation of the biblical stories — our own Red Sea parting theory does not fit the biblical story in terms of the wind direction, and Ryan and Pitman's explanation does not fit in terms of its limited nonglobal extent. Similarly, our present explanation does not exactly address 'walking on water' but rather provides a plausible physical process that has some characteristics similar to those described in the New Testament.* Despite these differences, and mismatches, we believe that all of those explanations add to our understanding of our own and our ancestors' lives. [Italics added]

In other words, truth is not really at issue. Simply providing "explanations" that ring of science and can supply the secular faithful with excuses to continue rejecting the Bible's clear narratives is what counts. And if the historicity of the Bible can be impugned in the same breath... then so much the better.

Discussion/Conclusion

Previous generations of secularists took

truth seriously, and strove to make cogent and consistent arguments against Christianity. Today's post-modern crowd is careless with truth...whatever it is. Thus, the arguments for natural explanations of Jesus' walking on water seem only ridiculous when evaluated against the facts of the narrative. This is merely fodder for "low-information" secularists.

As noted, just the location of the biblical account precludes the rock pile theory. And the likely location of the boat and the weather conditions preclude the ice sheet theory. The proposed ice bridge only extended 100 feet from shore. Such a bridge would not extend far enough offshore to be within sight of the disciples. Nor would experienced fishermen be frightened if they were only 100 feet away from the safety of the shore. Science is not really involved in these theories. Speculations about local weather conditions are no less speculative, whether done by a computer model or by an individual. No experiments were performed to see if a man could walk on submerged rocks over a significant distance in a storm.

In conclusion, no scientific evidence was presented by these naturalists to explain the miraculous event recorded three times in the Bible. This is simply an attack on Scripture and the Lordship of Jesus Christ. These accounts are rejected for the anti-science that they represent as well as for the nonsense they convey. We should stand ready to explain why naturalistic stories such as those presented here cannot address the miracle of our Lord Jesus' walk across the Sea of Galilee.

Acknowledgments

I am grateful for my wife's continuing support of my research and writing efforts. I thank John Reed for bringing this topic to my attention. Both Jerry Akridge and John Reed provided helpful reviews and insightful comments. Any errors that may remain are my own. Glory to God in the highest! Proverbs 3:5–6.

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Amazing Animals

The capabilities of animals, large and small, continue to fascinate scientists and the public. Here are some recent findings.

Elephant IQ: *National Geographic* describes experiments that show elephants “think” with their noses. Smell is an important part of their cognition and puzzle-solving ability.¹

Dolphin speed: How dolphins swim so fast has been a mystery called Gray’s Paradox: physics seems to demand more power than they are capable of generating. It’s been solved, *National Geographic* reported: their tail flukes are powerful and flexible enough to propel them against the predicted drag.²

Fish light: More fish glow in the dark than realized, *Live Science* reported—some 180 species of fish in 11 orders exhibit biofluorescence, some all over their bodies and even internally.³ Biofluorescence is the process of absorbing light at one wavelength and emitting it at another, as opposed to bioluminescence, which is light produced through enzyme reactions. The fish absorb the sun’s blue light and re-emit it as green, red, and orange. It’s only visible when the blue light is filtered out. The article (and another on *Science Now*⁴) has pictures of different fluorescent fish species. A 4-minute video explains how the researchers began their findings by accident. “There’s a whole light show going on down there, and people never see it,” said a co-author of a paper in *PLoS ONE*, “The Covert World of Fish Biofluorescence—A Phylogenetically Widespread and Phenotypically Variable Phenomenon.”⁵

Bee now my vision: Honeybees “dance the light fantastic,” *PhysOrg* announced.⁶ They convert invisible polarized light into information in their “waggle dances” to direct their hivemates to food sources they’ve discovered.

Spider electricity: *ScienceDaily* reported findings about the static electricity in spider webs.⁷ The static actually propels the web toward flying insects, so they get captured before they can sense the local electric field. The static also makes spider webs efficient traps for pollutants in the air—an effect scientists are thinking of utilizing for environmental monitoring.

Ladybug aeronautics: What can fly as high as 1100 meters at 60 km per hour? A ladybug, or ladybird beetle. Their “extraordinary flight paths” were discovered with radar, *PhysOrg* reported.⁸

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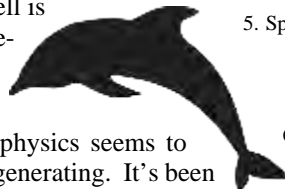
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Formation Flight Physics Mastered by Birds

Birds fly in that beautiful V formation for a reason, and it requires sophisticated abilities in high precision aerodynamics. Scientists have finally confirmed that the V-formation used by geese and other large migratory birds provides an energy benefit. A new paper in *Nature*¹ describes the work of Steven Portugal and team, who trained rare northern bald ibises to trust them as surrogate moms. First outfitting the birds with data collectors, they took them up on practice flights following an ultralight aircraft and filmed their flying dynamics.

According to the *BBC News*, the birds not only found the ideal positions behind their flockmates, but timed their wing-flaps for best advantage, too.² The ideal position behind and to the side of a front bird allows them to take advantage of the “upwash” of the front bird’s flap, and the synchronized flapping (in phase with wave trains) avoids the downwash. As a result, the flock propagates a wavetrain down both arms of the V that gives them an extra lift on a cushion of air, saving energy.

Analysis of the films showed that the birds were matching theoretical ideals for energy conservation. Being able to do this requires sophisticated math, sophisticated senses, or both. In a *Nature News* piece entitled “Precision formation flight astounds scientist,”³ Chelsea Wald wrote that “the models also indicated that the birds’ coordination would have to be exceptionally precise to make a difference, and many scientists had doubted



that the animals could achieve such a feat during flight.” Well, they can:

Portugal collected data for three flight days of the 36-day paraplane-led migration. From that, he selected a problem-free seven-minute segment to analyze. **To his surprise**, the analysis showed that the **birds’ formation fitted the theoretical predictions** of aerodynamics. **“They’re placing themselves in the best place and flapping at the best time,”** he says.

The birds instinctively adopted the energy-efficient strategy, even though, as orphans raised in captivity, they had no parents to teach them. Something built into the birds allows them to do the math and optimize the physics.

None of the articles made much use of evolutionary theory. The original paper mentioned kin selection only to dismiss it, then only made a meager suggestion that “aerodynamic mechanisms that reduce the energetic cost of (albeit only very infrequent) migratory flight **may** present considerable **selection advantage.**” The statement fails, though, to explain how that advantage arose by unguided processes in the animals’ brains and sensory equipment. The word “evolution” did not appear in the articles and papers. In its place were words like *amazing*, *astounding*, *remarkable*, and *exciting*. Indeed, design was the focus: the capability is so interesting, aircraft designers want to learn how the birds do it, so that they, too, can conserve energy.

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Here Comes Cosmos Again

Carl Sagan’s TV series *Cosmos* is coming back in version 2.0 with a new cast of atheists to spread the gospel of scientism. Two generations have passed since *Cosmos* became a hit TV series in 1980, with the atheist popularizer of science, Carl Sagan. Now, Neil deGrasse Tyson, the PhD astrophysicist and director of New York’s Hayden Planetarium, is reviving it with the help of PBS and Sagan’s widow, Ann Druyan. Tyson, no less enthusiastic and articulate than his predecessor (if not more so), is also, like Sagan,

an atheist, a staunch believer in cosmic evolution, and a passionate defender of science as the fountainhead of all certifiable knowledge.

The new 13-episode *Cosmos* series will begin airing in March on Fox and the National Geographic channel. *Space.com* tells about the “rebooting” of the series and how, 34 years later, it is being recast for a new generation that expects cutting-edge video and audio.¹ A video clip promoting the new series begins with Sagan’s memorable opening manifesto of materialism from the old series, **“The cosmos is all that is, or ever was, or ever will be”**—an assertion beyond science that launched a thousand commentaries and criticisms, such as the book *Cosmos: Carl Sagan’s Religion for the Scientific Mind*, by Christian apologist Norman Geisler.

Producer of *Cosmos* 2.0 Brannon Braga (Star Trek) describes the series as, if not opposed to religion, at least one-up to it:

“Science doesn’t have to be the opposite of religion in terms of its emotional value,” he said. “Science can move you like any other story. Science can be a visceral, emotional experience. **Religion doesn’t own awe and mystery. Science does it better.**”

The producers expect the new series to continue on past its initial release in reruns, disks and other media platforms for many years. Undoubtedly there will be a book and website. While clips of Sagan will be interspersed in the shows, Tyson will have many advantages not available to Sagan in 1980: the internet, social media, and 34 more years of planetary and astronomical discoveries. The original *Cosmos* was criticized for its promulgation of a largely debunked “warfare hypothesis” of science vs religion. Judging from the trailer, that theme will still be prominent. Sagan portrayed religion as anti-intellectual, responsible for all the wars and regresses of nations. Science was always the savior and liberator of mankind. Central to the plot was Darwinian evolution—not just biological, but cosmic. The trailer includes flashbacks that will probably make it into the “reimagining” of *Cosmos*: religion burning Giordano Bruno at the stake for suggesting the possibility of life on other worlds, for instance (a largely distorted, though inexcusable, incident—he was killed for other sins, historians say).

As *Cosmos* 2.0 makes “the case for science,” it will undoubtedly equate science with cosmic evolution.

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Testing Faith

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Sometimes the evidence supporting the validity of Scripture is obvious. Sometimes it is not. However, in either case God expects us to believe Him. From His perspective the person who refuses to believe Him has no excuse.

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The Bible provides a historical record of God's continual testing of man's willingness to believe Him. Sometimes, the evidence for faith can be compelling, such as when Christ appeared to Paul on his way to Damascus, and Paul was blinded by a brilliant light (Acts 9:3–6). Other times, everything a person knew about the physical world taught against what God had said. God still expected to be believed. Abraham was honored for his faith about God's promise that Isaac would be the heir of promise. This faith was so great that Abraham believed that if Isaac died, God would bring Him back to life in order to fulfill His word (Hebrews 11:19). God honored him greatly for this (Romans 4:12–22).

By contrast, the story of the Israelites on their Exodus from Egypt to the Promised Land is a story of failure after failure. Humanly speaking, the Israelites were justified in their concerns about the risks posed by Pharaoh, by starvation, and by dying of thirst. God was not interested in their reasons for disbelief, for He had clearly spoken. He wanted them to believe Him.

2 Peter 3:3,5–6 teaches us that scoffers are *willingly ignorant* of the evidence God offers:

³...Knowing this first, that there shall come in the last days scoffers, walking after their own lusts...⁵ For this they willingly are ignorant of, that by the word of God the heavens were of old, and the earth standing out of the water and in the water: ⁶Whereby the world that then was, being overflowed with water, perished." (KJV)

They are this way in order to justify their living a sinful life. The testimonies of creation and of the world-wide Biblical flood are, specifically, willingly ignored.

Supporting evolution

We see this in the approach the modern atheist uses in his support of Darwinian evolution. This is his typical pattern: (1) A new discovery in science is made. (2) If this discovery can be interpreted as a support for evolution, however thin the evidence might be or how much unjustified extrapolation is required, then this discovery and its interpretation are immediately broadcast widely and authoritatively. (3) In time, God

allows more evidence to be uncovered, revealing the error of the original evolutionary interpretation. (4) The evolutionist will ignore this new evidence and hang onto his original, faulty proclamations as long as he can do so to his advantage. (5) Those who disagree with him are mocked and scoffed at as unqualified to discuss the issues; thus, there is no necessity to listen to their arguments.

Almost every argument that has been used to support evolution follows this pattern. Here are a few examples: Darwin's comment that a living cell was merely an uncomplicated sac of protoplasm. Geologists' historical claim that fossils were laid down in a calm lake bed, a layer at a time, not by floods. Assertions that Miller's experiment proves the inevitability of abiogenesis. Ontogeny recapitulates phylogeny.

Kings and judges

The evolutionist typically prides himself on the effectiveness of his approach. It seems to be working quite well. From a Biblical perspective though, the situation appears to be similar to that described in Psalm 2:2–5:

² The kings of the earth set themselves, and the rulers take counsel together, against the LORD and against His Anointed, saying, ³"Let us break Their bonds in pieces and cast away Their cords from us." ⁴He who sits in the heavens shall laugh; the LORD shall hold them in derision. ⁵ Then He shall speak to them in His wrath, and distress them in His deep displeasure. (NKJ)

We see today how court judges have thrown out laws passed by elected officials desiring to have public schools acknowledge the known scientific problems in Darwinian evolution. While the judges may think that they are successfully casting off the restraints of God, He just laughs at them. He can create a galaxy of 200 billion stars in an instant, placing every individual particle exactly where He chooses to place it, and not even be tired. And mere man thinks he can overrule Him?

Example: distant starlight

A current argument the evolutionist uses against the Bible is the supposed billions of years that is required for distant starlight to

reach Earth. This argument is currently at step 2 of the above process. According to historical patterns, we should eventually move into step 3, although God chooses when this will be—perhaps soon.

I once read a creationistic hypothesis that if light were to travel faster in the remote regions of intergalactic space than it does within and near a galaxy, then the apparent conflict between a creation 6,000 years ago and the observation of light supposedly 10 billion or more years old disappears. Surprisingly, this idea might not be farfetched. There are many peer-reviewed journal articles showing that the speed of light might be variable. For example, M. Rao (2013) shows that the light from sunspots appears to vary according to photon energy. M. Urbana, *et al* (2013) propose that the speed of light can vary "if the vacuum properties vary in space or in time."

Historically, science has taught us the dangers of untested extrapolation. Suppose that for some yet unknown reason, vacuum properties vary on a large scale between intergalactic space and within galaxies. Suppose, also, that this results in an increase in the speed of light by a factor of 10 million within intergalactic expanses. Then, perhaps those events evolutionists claim happened 10 billion years ago were actually quite recent; i.e., supposed distant starlight is being seen in close to real time?

The issue is not whether this hypothesis is valid, but that rational hypotheses exist which can provide alternative, viable explanations of observed data, and which are consistent with Scripture. From a Biblical perspective, God made stars to be seen from the earth (Genesis 1:14–18). It does not seem consistent with this purpose for the laws of physics to require ten billion years for light to reach us in order to be seen. Perhaps a variable speed of light model can explain what appears to be a difficulty to our limited understanding.

The distant starlight "problem" can be a test. There are incomplete physical data to support either the evolutionist's position or a creationistic alternative. The position a person takes on this matter, then, becomes a measure of where his or her heart is.

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All by Design

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

Giraffe-necked Weevils

Giraffe weevils are small, brightly-colored beetles that live on the island of Madagascar, off the eastern coast of Africa. They are black with bright, scarlet wing covers called elytra. The male beetles have very long necks, making them look, indeed, like small giraffes. They use these long necks to build nests and spar with other males to win approval of females during mating season. Not only do these beetles live only in Madagascar, but they live in certain trees of the genus *Dichaetanthera*, which provide shelter as well as food.

During the mating season, female giraffe beetles go to great lengths to take care of their young. Unlike many insects, which may lay hundreds of eggs at one time, female giraffe beetles lay only one egg. In preparation for this, a female giraffe beetle will select one leaf in good condition, roll it up into a tube, and secure it in this position. Then, she will lay a single egg inside the leaf tube. This keeps the egg safe from



potential insect predators that might otherwise find the egg a tasty treat. It turns out that the leaves are also very nutritious, and when the baby giraffe beetle hatches from its egg, it will begin to eat the leaf tube as its first meal.

This begs the question: How did the giraffe beetles know to select this particular tree, and from whom did this insect get the ability to lay just one egg, and the wisdom to care for it so tenderly? When the unique

characteristics of this weevil are considered in light of the biblical account of creation in Genesis, it becomes readily apparent that in nature there is a perfect sense of order that can only come from an intelligent and purposeful Designer.

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Photo caption: Male specimen of *Trachelophorus giraffa* (Attelabidae; en: Giraffe weevil); picture taken in Ranomafana National Park by Axel Strauß. January 13, 2008. Made available through Wikimedia Commons.