

Disclosure

of things evolutionists don't want you to know

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SHOCKINGLY FISHY CONCLUSIONS

Evolutionary spin doctors try to explain how the electric eel, and five other groups of electric fish, evolved their electrifying characteristics independently.

Electric eels are well known for their ability to produce an electric shock. What isn't as well known is that there are five other biological groups of fish that contain at least one member capable of producing electricity. One might suppose that all six groups would have a close common ancestor, from which they inherited this shocking ability. But, according to evolutionists, all six groups happened upon this electrifying skill independently, by accident. Last month, a paper authored by 16 biologists tried to explain how this happened.

Here is the abstract of that article:

Little is known about the genetic basis of convergent traits that originate repeatedly over broad taxonomic scales. The myogenic electric organ has evolved six times in fishes to produce electric fields used in communication, navigation, predation, or defense. We have examined the genomic basis of the convergent anatomical and physiological origins of these organs by assembling the genome of the electric eel (*Electrophorus electricus*) and sequencing electric organ and skeletal muscle transcriptomes from three lineages that have independently evolved electric organs. Our results indicate that, despite millions of years of evolution and large differences in the morphology of electric organ cells, independent lineages have leveraged similar transcription factors and developmental and cellular

pathways in the evolution of electric organs.¹

"Little is known" about how the same features seem to evolve over and over again in unrelated creatures because it didn't happen. That's why they are at a loss to explain it.

The article begins by saying,

Electric fishes use electric organs (EOs) to produce electricity for the purposes of communication; navigation; and, in extreme cases, predation and defense. EOs are a distinct vertebrate trait that has evolved at least six times independently (Fig. 1A). The taxonomic diversity of fishes that generate electricity is so profound that Darwin specifically cited them as an important example of convergent evolution.²

It isn't a recent discovery that many fish that generate electricity are so different that they can't reasonably be placed in the same taxonomic category, which means they can't reasonably be assumed to have inherited the ability from a common ancestor. That's why Darwin claimed they must be "an important example of convergent evolution." Convergent evolution is the belief that because the number of solutions to the problem of

¹ Gallant, *et al.*, *Science*, 27 June 2014, "Genomic basis for the convergent evolution of electric organs", pp. 1522-1525, <http://www.sciencemag.org/content/344/6191/1522.full?sid=12e20088-589a-4d39-b69f-8c988496ba81>

² *ibid.*

survival in a particular environment is so small, diverse creatures in that environment will inevitably stumble upon the same solution through the process of natural selection.

There is no evidence that convergent evolution actually happens! Convergent evolution has never been demonstrated in the laboratory. It has never actually been observed in nature. It is just assumed to have happened because so many creatures without a close common ancestor have the same characteristics.

Figure 1A of their report shows this mythical evolutionary relationship.

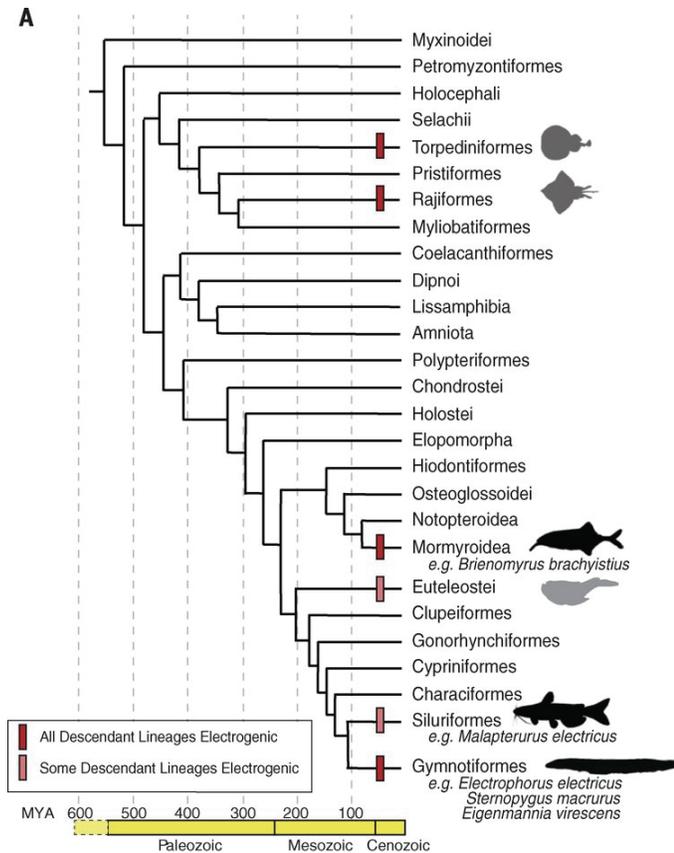


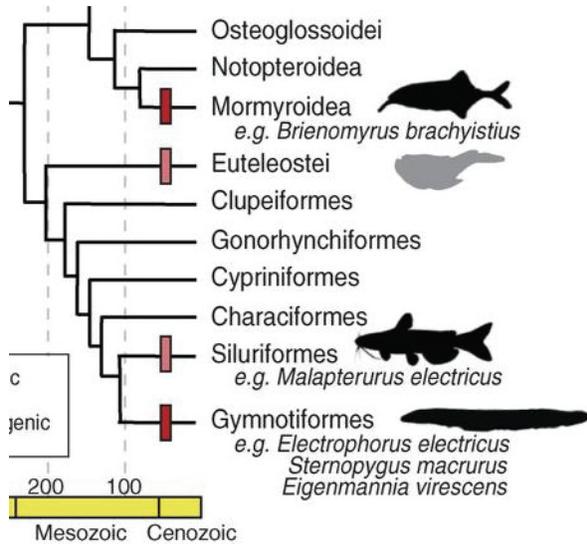
Fig. 1A. Phylogenetic tree of vertebrate orders and major groups of electric fishes, after Alfaro, et al.

Figure 1A is based on the 2009 work of Michael E. Alfaro and his associates.³ The short line in the upper left corner of the figure represents the unknown common ancestor of all the sixteen biological groups listed at the right side of the figure. The mythical evolutionary timescale goes along the bottom from 600 million years ago at the left, to the present time at the

³ Alfaro, et al., *Proceedings of the National Academy of Sciences of the United States of America*, 2009, "Nine exceptional radiations plus high turnover explain species diversity in jawed vertebrates", pp. 13410–13414, <http://www.pnas.org/content/106/32/13410.full>

right. Six of the groups listed on the right have silhouettes of representative members of that group which have electric organs.

Let's look at just the bottom right corner of the figure and explain what the figure is trying to convey.



The familiar electric eel (*Electrophorus electricus*) is a member of the group called Gymnotiformes. The Siluriformes have the most similar genetics to the Gymnotiformes. Evolutionists believe this means they must have both evolved from an unknown common ancestor (a "missing link"). Based on the number of genetic differences, and the rate at which genetic mutations seem to occur, they calculate that both groups diverged from an unknown (mythical) common ancestor 100 million years ago. The Characiformes are believed to be most similar to the presumed genetics of the hypothetical ancestor of the Gymnotiformes and Siluriformes. The number of genetic differences, combined with the presumed mutation rate, leads evolutionists to believe that the Characiformes and the missing link between the Gymnotiformes and Siluriformes diverged from yet another unknown common ancestor about 130 million years ago.

So, according to the bottom right corner of the diagram, there was an unknown common ancestor which did not have electric organs that begat two different lines of descent about 225 million years ago. One of those lines of descent led to the Mormyroidea which evolved an electric organ about 90 million years ago. The other line of descent split 200 million years ago, producing the Euteleostei (some of which have electric organs) in one line, and another line leading to the Gymnotiformes and Siluriformes, which didn't evolve electric organs until 100 million years ago.

Looking at the complete diagram, it shows that the Torpediniformes independently evolved electric

organs nearly 400 million years ago, and the Rajiformes independently evolved electric organs about 300 million years ago.

Remember, this diagram came from the work of Alfaro and his team, published in 2009. Last month's article by Gallant and his associates does not question this at all. So, working under the false assumption that electric organs evolved six times by chance, they are shocked that all the electric organs seem to have such a similar design!

Despite these differences in morphology [shape], the three lineages of electric fish studied here share patterns of gene expression in transcription factors and pathways contributing to increased cell size, increased excitability, and decreased contractility.⁴

They gave a lot of technical detail about how similar the genes are expressed in all these different fish, and came to this conclusion:

Our analysis suggests that a common regulatory network of transcription factors and developmental pathways may have been repeatedly targeted by selection in the evolution of EOs, despite their very different morphologies. Moreover, our work illuminates convergent evolution of EOs and emphasizes key signaling steps that may be foci for the evolution of tissues and organs in other organisms.⁵

We don't disagree with any of their facts—we only disagree with their conclusion.

That is, we agree that genetic analysis shows that if these six lineages did actually evolve from some unknown ancestors, those ancestors did not have electric organs, so their descendants would have had to have evolved these organs late in their supposed evolutionary history. Furthermore, the electric organs in these fish all have the same basic design.

We disagree that natural selection stumbled on the same complex design accidentally six different times. There is no evidence that it happened accidentally.

Electric fish exist—there is no question of that. But their existence does not prove that they evolved. Convergent evolution is their explanation simply because they can't explain it any other way.

⁴ Gallant, *et al.*, *Science*, 27 June 2014, "Genomic basis for the convergent evolution of electric organs", pp. 1522-1525, <http://www.sciencemag.org/content/344/6191/1522.full?sid=12e20088-589a-4d39-b69f-8c988496ba81>

⁵ *ibid.*

JUNE NEWSLETTER REACTIONS

Last month's newsletter generated more email than usual.

We received more than the usual fan mail after our last newsletter. Since we no longer accept donations, we really appreciate the verbal encouragement. It shows us that we are not wasting our time.

We also appreciate the tips that readers send us. Readers often alert us to articles about evolution that we might otherwise miss. In particular, we want to acknowledge this email from Neal, which prompted this month's feature article.

Just came across this "shocking" story: <http://www.npr.org/2014/06/26/325246710/a-shocking-fish-tale-surprises-evolutionary-biologists>

Supposedly evolution came up with same way of producing electricity independently six different times ... but they are all identical.

Just another one of those things that shows that evolution can't possibly be the actual reason for this remarkable coincidence.

The link Neal sent us went to a story on the National Public Radio (NPR) website. Their story referenced an article in the journal *Science* which we had not read because Neal sent us the email on June 27, and the issue of *Science* containing the article didn't arrive in our mailbox until July 2. Clearly, NPR was given an advance copy of the article.

As usual, we chose to review the technical article itself, rather than NPR's story about the article. Of course, NPR didn't question the conclusion that evolution caused the same miracle to happen six times; but they did honestly report that this is something that evolutionists did not expect. We do have to give credit to NPR for actually reporting on the article, and not just parroting whatever was in the press release they were given.

Furthermore, NPR recognized that understanding the genetic codes for creating electric organs could lead to the development of an artificial organ that could produce electric current which could be implanted along with a pacemaker, eliminating the need for batteries. Hopefully, Gallant and his associates will give up looking for proof that natural selection caused electric organs to evolve independently, and turn their attention to how to create a biological organ

(or mechanical device) that converts blood sugar to electrical energy which could power a small rechargeable battery.

SAM'S RESPONSE

Not all of the email we received about our June newsletter was fan mail. Sam was not happy! Here's what he wrote (in its entirety):

How typical of the creationist to use my email without permission.
How typical of the non-scientist religious fanatic to hide behind his personal website - where no rebuttal is allowed - to try to get the last word.
Have you ever heard of the Dunning-Kruger [sic] effect?
You should look into it.
You really should not have used my email without permission.
Now your whole crappy propoganda site is fair game.

Our response to him was simply,

Our whole site has always been fair game.

Our response to you follows.

PERMISSION

If we had published Sam's full name, email address, and physical address, it would have been wrong to invade his privacy and embarrass him by publishing his email. By simply calling him "Sam" (which may not even be his real name) we protected his identity, as we always do. Furthermore, Sam's true identity is not important. We did not try to prove his statements were right (or wrong) based on his educational accomplishments (or lack thereof). We shared portions of Sam's email simply because he expressed erroneous opinions commonly held by many evolutionists. If Sam's statements had been unique to him, we would not have bothered to publish them. We published portions of Sam's email in order to discuss his commonly held incorrect ideas—not to make fun of Sam.

In a free society, one does not need permission to discuss any idea. Sam does not own the rights to the opinions he expressed, especially since he did not originate them. That's why we don't copyright the articles on our website. Anyone may freely discuss everything we have written—and we hope they do.

We are aware that statements have occasionally been taken out of context from our website and ridiculed on evolutionists' websites. That's fine because it usually results in increased traffic on our website. Readers can see for themselves how the evolutionists have stooped to distorting our statements because they can't refute them.

It doesn't matter *who* thinks it, or *why* he thinks

it—all that matters is *what* is true. It is important that people are exposed to both sides of the creation/evolution controversy so they can make up their own minds. That's why some of the sites selected as "Web Site of the Month" are creationists' websites, and some are evolutionists' websites. (By the way, when we started publishing that column 18 years ago, "website" was written as two words. We have retained the archaic spelling in the title of the column for continuity.)

NO REBUTTAL

Sam complained that we allow no rebuttal. It is true that in our last newsletter, we only published part of what Sam wrote. We left out paragraph after paragraph of statements attributed to various people (from whom we doubt Sam received permission). Those paragraphs just contained variations on this same theme:

It may be noted that humans and chimpanzees are more than 98.3% identical in their typical nuclear noncoding DNA and probably more than 99.5% identical in the active coding nucleotide sequences of their functional nuclear genes (Goodman et al., 1989, 1990).

We omitted those portions of his email that were repetitive and irrelevant. We have never disputed that there is tremendous genetic similarity between humans and chimpanzees. There is no dispute between creationists and evolutionists that such similarity exists, so there is no point in belaboring what everyone agrees to be true.

The dispute is about what caused the similarity. Is the similarity a result of a common ancestor or a common design? If Sam had tried to make the case that similarity must be the result of common ancestry, we would have shared that with you—but he didn't.

THE DUNNING-KRUGER EFFECT

Ironically, Sam brought up the Dunning-Kruger effect (even though he did not spell it correctly), presumably because he thinks it applies to me (not himself). According to Wikipedia,

Dunning and Kruger proposed that, for a given skill, incompetent people will:

1. tend to overestimate their own level of skill;
2. fail to recognize genuine skill in others;
3. fail to recognize the extremity of their inadequacy;
4. recognize and acknowledge their own previous lack of skill, *if* they are exposed to training for that skill.⁶

⁶ <http://en.wikipedia.org/wiki/Dunning-Kruger>

Instead of pointing out any factual error in either of the articles in the June newsletter (or any other newsletter), he simply made a personal attack.

Of course, in the article about *Jellyfish, Kiwis, and Moa*,⁷ we were merely reporting the conclusions of an article published in a prestigious, peer-reviewed, scientific journal. If there is anything factually wrong in that article, it is the evolutionists who wrote the article (and the review board that approved it for publication) who were wrong, not us.

In the email column, *Religion and Probability*,⁸ we presented reasons why we believe it is possible to distinguish purposeful design from random chance. Applying that criterion to genetic similarity, we believe it shows that the similarity is the result of design, not chance. Sam could have kept the discussion scientific by contesting the validity of our logic. Or, he could have offered an alternate criterion that he believes to be more valid. But, he didn't; and we doubt that he ever will.

As we said earlier, we shared the parts of Sam's email that are typical of the emails we get from evolutionists. We have lost count of the number of emails we have received in which evolutionists tell us our website is full of factual errors (usually "too many to list"), but they never respond to our request to point out just one.

To his credit, Sam at least replied—but he failed to answer. He simply copied large sections from scientific journals saying that similar creatures have similar DNA (duh!), and made personal attacks on me and the Bible.

Perhaps the strongest argument against the theory of evolution is that its supporters can't present good scientific arguments for the theory. They have to resort to personal attacks because science isn't on their side.

Unfinished Business

ONE LINEAGE

Evolution doesn't follow a straight line.

Sadly, last month our "6-page newsletter" was 10 pages long, so we did not have space to address this quote from last month's feature article:

Heretical hypotheses such as this strike a

⁷ *Disclosure*, June 2014, "Jellyfish, Kiwis, and Moa", <http://scienceagainstevolution.info/v18i9f.htm>

⁸ *Disclosure*, June 2014, "Religion and Probability", <http://scienceagainstevolution.info/v18i9e.htm>

blow against the anthropocentric view that complex animals emerged gradually along one lineage only, culminating in humans, and that complex organ systems did not evolve twice. But such views do not reflect how evolution really works. Evolution does not follow a chain of events in which one lineage progresses continuously towards complexity while other branches stagnate. Instead, it is an ongoing process in all lineages.⁹

The argument that, "Evolution does not follow a chain of events in which one lineage progresses continuously," usually appears in the context of human evolution because evolutionists no longer believe in a straight-line evolutionary path from *Australopithecus afarensis*, to *Homo erectus*, to *Homo habilis*, to Cro-Magnon man, to Neanderthal man, to modern man. There are a whole bunch of fossils that don't really fit that picture, leading to a whole bunch of side branches, which we told you about in our July, 2011, newsletter.¹⁰ Things have not gotten any better for the evolutionists' story about human evolution in the last three years.

Last month, this argument was used to try to explain how two very different central nervous systems could evolve independently. In this month's feature article, evolutionists claimed that nearly identical electric organs evolved independently six times in distantly related groups of fish. Looking at Figure 1A in that article, it is clear that there was no straight line path from non-electric to electric fish, so this argument could have been used by evolutionists again.

The argument is bogus because it doesn't matter if "other branches stagnate." That is, it doesn't matter how many brothers, or uncles, or nephews you have who produced no offspring—you can still trace a direct line from you to your father, to your father's father, to your father's father's father, and so on, as far as ANCESTRY.COM will let you go. It doesn't matter if *Australopithecus garhi* did not leave any descendants if it wasn't on the path of human evolution. The "bushiness" of today's evolutionary fable about human evolution is simply evidence that there is no discernable path from an apelike ancestor to modern humans. There are just a bunch of fragmentary skeletons that evolutionists would like to use to prove we descended from apes—but can't.

⁹ Andreas Hejnl, *Nature*, 21 May 2014, "Evolutionary biology: Excitation over jelly nerves", <http://www.nature.com/nature/journal/vaop/ncurrent/full/nature13340.html>

¹⁰ *Disclosure*, July 2011, "Ancestor Arguments", <http://scienceagainstevolution.info/v15i10f.htm>

HOW TO DEFEND CREATION VS. EVOLUTION

<http://www.creationdefense.org/03.htm>

Insights into how to defend creation vs. evolution

This month's website review looks at a short article originally published in the *Rockdale/Newton Citizen*, a newspaper covering Conyers-Rockdale, GA.

The article attempts to answer the following question: "I believe in creation, but I am not sure how to best defend this belief against evolution. Can you explain where to start?"

The article begins by pointing out that the debate between creation and evolution is not between science and religion. The debate is actually between two different belief systems. Also "assumptions and presuppositions are the starting points of the debate over origins".

The article stresses the point that the facts are the same for both evolution and creation. "Evolution explains the facts based on the assumption of natural, continual processes. Creation explains the facts based on the assumption of a supernatural, completed process. Both views produce logical conclusions based on their starting assumptions." Here the interesting observation is made that logic can be an imperfect tool used to justify incorrect assumptions.

The Grand Canyon is used as an illustration of how it may have been formed. Evolutionists assume the Colorado River carved it out over millions of years, while creationists assume a large flood formed the canyon.

The large canyons that appear on Mars provide an interesting topic for discussion. "One scientific explanation for them is that the canyons were caused by large floods at some point in the past. In other words, they (evolutionists) deny the flood theory on a planet full of water, but accept it on a planet devoid of water." This again shows the problem of basing your views on preconceptions.

The article also makes the point that students should be taught *how* to think and not *what* to think.

In the conclusion of the article a statement is made that "we must always realize that the conclusions that are presented as facts are just interpretations of facts based on a set of assumptions. We must always remember the difference between scientific data and biased interpretation of those data."

At the end of the article you will find a link to a Table of Contents which provides links to many different subjects and questions regarding creation and evolution that have been published in the *Rockdale/Newton Citizen*.



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to copy and distribute this newsletter.**

Disclosure, the Science Against Evolution newsletter, is edited by R. David Pogge.

All back issues are on-line at ScienceAgainstEvolution.info.