Gene Editing: The Last Impossible

There are three primary divisions of natural selection (evolution). The first is where several varieties of a species already exist and an external influence diminishes the population of one variety and leaves the other to predominate. The second is where there is a beneficial mutation in the genetic structure that amplifies the ability of the altered organisms to survive and those altered organisms predominate and become a separate species. This is classic evolution or macro-evolution. The third is where there are changes in the genetic structure within a species that adapts that sub-species to a different or altered environment. This is called microevolution. Evolutionists use all three of these instances as evidence of evolution.

An example of the first instance is the moths in the smoky industrialized area of England. In this instance, the gray moths predominate over white moths because they are less visible to birds. Another example is short dandelion flowers in a well kept lawn. The tall flowers get cut by the lawnmower so the short ones predominate. For the creationist, these predominations are easy to explain because short stemmed and long stemmed flowers occur naturally and so do moths with different colors. The environment kills some of the moths and flowers and the others predominate. There is no evidence that the different kinds of moths and flowers do not exist in normal course, just like different kinds of humans. This is not natural selection because it is not caused by changes in the genetic structure and it is not evolution because it is not a change of species.

The evolutionist's classic argument for natural selection and cross-species evolution (classic evolution or Darwinism) is not difficult to discount because there is little or no actual evidence to demonstrate it. The evolutionist simply looks at two species and presumes that there is no Creator other than evolution. Therefore, natural selection (evolution) must be the explanation for the difference in species. As long as the absence of the Creator is presumed, that is an easy argument to make because the theory is grossly over-broad. The theory holds that anything that helps a species survive is proof of the theory. But then, if something does not help a species survive, it is also seen as proof of the theory. And if something is too complex to have been created by chance mutations and natural selection, then the theory still prevails because it is the only theory. And it is the only theory because all other theories (creationism) are excluded no matter how complex the organism happens to be. For the open mind, the absence of logic here is not terribly difficult to see.

Therefore, the problem for the creationist does not lie in the absent logic and absent evidence of cross-species evolution. The problem for the creationist lies in the fact that there is ample evidence of within-species adaptation that goes far beyond the simple dying out of white moths. There is clear evidence that a single species can undergo alterations of its genetic make-up in order to adapt to its environment. Darwinists call this phenomenon microevolution or evolution within a species. Although it is true that these alterations have not been shown to create a new species, if the cause of the alterations is natural selection, then it is easy to see how natural selection could indeed create a new species.

Thus, the true issue for the open mind has always been whether the vast complexity of life is sufficient to negate microevolution as being good evidence of natural selection. Given the dearth of evidence for demonstrable cross-species evolution, this issue has been the only remaining issue for many a creationist.

So, is within-species adaptation natural selection? If it is natural selection, then it is indeed evidence for at least some form of Darwinian evolution even though it does not create a new species. But if within-species adaptation is not true natural selection, then cross-species evolution is effectively without evidentiary support and must bow before the massive weight of the inconceivable complexity in life. Accidental mutations and dying animals cannot hope to explain the wonders that are now common knowledge. See creationdesign.org.

Indeed, natural selection should be provable by simply examining the difference in the genes between the un-adapted version of a particular species and the adapted version of the same species. Even if the two are two versions of the same species, if it can be shown that the genes have been altered in such a way as to adapt, then that observation could be an example of natural selection. Just a few more alterations would arguably produce a new species.

In 2012 two scientists set out to prove exactly that. This is the Garrett and Rosenthal study.[1] The subject that they chose to study was an octopus that had adapted to live both in the tropics and in the frigid waters of Antarctica.

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1. (Garrett, S. and J.J. C. Rosenthal. 2012. RNA Editing Underlies Temperature Adaptation in K+ Channels from Polar Octopuses. Science, 334 (6070): 848-851)

There is a significant problem for this octopus in Antarctica because the temperature of the water drastically slows the transmission of its nerve impulses. It should not be able to survive in polar cold, but it does. So something has to be different between the warm water octopus and the polar octopus. What is it?

The study found that the primary difference between the warm water octopus and cold water octopus is a protein that facilitates nerve impulse transmissions. The protein is different in each octopus because it is manufactured by a different amino acids. Each of these different amino acids are produced from the genetic code in the octopus DNA and RNA (RNA is a copy of the relevant portion of the DNA).

The amino acid used in the warm water octopus is called isoleucine and the instructions (the chemical formula) for the manufacture of isoleucine is written in code in the octopus DNA. These instructions are the octopus isoleucine gene. The octopus cells make a copy of the isoleucine instructions and then uses them to manufacture a molecule of isoleucine. This copy is called RNA and the instructions are written in code in the arrangement of the atoms and molecules of the RNA molecule. The RNA copy is then used to manufacture isoleucine.[2]

The Antarctic octopus does not use isoleucine. The Antarctic octopus uses a different amino acid called valine which produces a different protein that works in frigid cold. How did the Antarctic octopus get the different DNA to produce

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2. It is practically inconceivable how any educated person could believe that accidental mutations somehow devised a 4 letter code and then used that code to inscribe 20,000 chemical formula into a molecule. But that is the Darwinist.

valine instead of isoleucine? The Darwinist answer is that the isoleucine gene mutated so that it produces valine instead of isoleucine. How else would the octopus produce valine instead of isoleucine?

Garrett and Rosenthal set out to show that natural selection had changed the isoleucine gene. First they mapped the octopus genes and located the isoleucine gene. Then they looked at the same gene in the cold water octopus to see how natural selection (evolution) had changed it.

But Garrett and Rosenthal were surprised because they did not find what they expected to find. In fact, they found precisely the opposite. They found that both genes were the same. The gene had not mutated.

> On the basis of conventional natural selection, we hypothesized that the channels' genes would have evolved mutations to help tune them to their respective environments. Surprisingly, the primary sequences encoded by the two genes were virtually identical.[3]

But if the genes were identical, how could they produce different amino acids? Where does the valine come from? The answer to that question closes the lid of the coffin on evolution.

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3. (Garrett, S. and J.J. C. Rosenthal. 2012. RNA Editing Underlies Temperature Adaptation in K+ Channels from Polar Octopuses. Science, 334 (6070): 848-851)

The Garrett and Rosenthal study discovered a molecular mechanism inside the cell that takes the RNA copy that is normally used to produce isoleucine and reprograms it to produce valine.

> [T]he transcribed messenger RNAs are extensively edited, creating functional diversity. One editing site, which recodes an isoleucine to a valine in the channel's pore, greatly accelerates gating kinetics by destabilizing the open state.[4]

The cell has a molecular engine that recodes the isoleucine RNA to become valine RNA instead.

Therefore, Whoever created this molecular engine had to:

1. Know the DNA coding language;
2. Know which gene to change;
3. Know where to locate the particular gene in the billions of instructions that are in the DNA molecule;
4. Know the formula and the coding for valine;
5. Know the formula and the coding for isoleucine;

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4. (Garrett, S. and J.J. C. Rosenthal. 2012. RNA Editing Underlies Temperature Adaptation in K+ Channels from Polar Octopuses. Science, 334 (6070): 848-851, quoting from the Abstract

6. Know how to alter the arrangement of the molecules to change the RNA instructions from isoleucine to valine;

7. Construct a molecular apparatus that could (without eyes and a brain) locate and physically move or remove the molecules of the isoleucine code to change it to produce valine instead (gene editing);

8. Know how cold the water would have to be before the change would be necessary;

9. Create the "connection" between the coldness of the water and the switch that turns on the gene editing mechanism;

10. Know how to make this apparatus reproduce itself so that every new cell would have it;

11. Know that the "fix" for the warm-water octopus is valine. This would mean understanding how valine works and *before* valine was manufactured.

All of this would be wholly useless to the survival of octopus in cold water unless it were all in place and operational. So none of this can be incremental changes over generations.

> This demonstrates that not all genome changes occur at random and that cells produce specific mechanisms to optimize their genome in response to the environment.[5]

5. (Garrett, S. and J.J. C. Rosenthal. 2012. RNA Editing Underlies Temperature Adaptation in K+ Channels from Polar Octopuses. Science, 334 (6070): 848-851)

The Creator has built in a mechanism that moves around or replaces particular molecules to change the "wording" of a code that produces one amino acid so that it produces another amino acid instead.

This is natural adaptation, not natural selection.

To believe that theoretical accidental mutations devised a non-physical code with only four letters and then used that knowledge to encode 20,000 chemical formula into a molecule is absurd.

But then to believe that more accidents created another mechanism that rearranges the molecules of one chemical code to become the chemical code for a different chemical—and to do so only when the water is frigid—is beyond absurd.

No one with a truly open mind could believe that.

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