How does the Gecko Change His Skin?

The gecko in this picture has colored its skin to match the background

Simple common sense—as well as the absence of substantive proof—shows that the mechanism to reproduce a near-perfect representation of the background on the gecko's back requires planning and design. It is far to comples to have occurred as a result of random genetic mistakes and dying animals, as alleged by the theory of evolution.

How does it happen?

"Chameleons can rapidly change color by adjusting a layer of special cells nestled within their skin, a new study finds."[1]

In March of 2015, *Nature Communications* published a study describing how the chameleon changes the color of its skin.[2] The article states that the skin of a chameleon contains an organized array of guanine nanocrystals that refract light in different wavelengths much like a prism separates sunlight into its colors. None of these nanocrystals are visible by the naked eye; they are visible only under a microscope. The article shows that the chameleon changes the color of its skin by selectively stretching or relaxing its skin and causing the nanocrystals to tilt slightly one way or the other thereby refracting

1. See http://www.livescience.com/50096-chameleons-color-change.html

2. Jérémie Teyssier, Suzanne V. Saenko, Dirk van der Marel, Michel C. Milinkovitch, *Nature Communications* 6, Article number: 6368 | DOI:10.1038/ncomms7368

light of varying wavelengths and different colors. We see the same effect in the edge of a beveled window: as we move slightly, the colors refracted through a particular part of the bevel change from red to violet.

> Here, combining microscopy, photometric videography and photonic band-gap modelling, we show that chameleons shift colour through active tuning of a lattice of guanine nanocrystals within a superficial thick layer of dermal iridophores.[3]

The species of gecko in the photographs on this page is not the same species of gecko that was studied in the Teyssier study above. However, assuming that the method of camouflage in both geckos is the same, we conclude the following from the article and from what is common scientific knowledge:

There are thousands of guinine nanocrystals embedded in the chameleon's skin, all are aligned in the same direction, and all are affixed to the skin so that their angle and the color of the light refracted can be selectively and precisely controlled. The gecko changes the color by stretching or relaxing the skin just enough to change the angle of refraction and thereby render the desired color. The skin is stretched or relaxed by series of muscles or other organs. These organs receive instructions from the gecko's brain to tell them how to relax or contract to achieve the desired effect. These instructions are in the form of electrical impulses through nerves.

Initially, the gecko sees the pattern required for camouflage (in the photograph above it is the surface of a small tree trunk). The gecko's eyes transmit the picture to the brain in the conventional way: by means of a stream of electrical codes that, when processed, precisely describe what has been seen. The code transmitted by the eyes is not simply an analog representation of the background (like a mirror) but instead, it is (as in humans) a digital code carried by electrical nerve impulses; and that code must be translated upon receipt. These impulses define thousands, if not millions, of colors. The codes for all of these colors are non-physical (pure logic) and they are pre-encoded into the brain, so the animal or human does not have to learn them. The code for the colors and the pattern in a scene is expressed by a stream of millions of digital signals to the gecko's brain, which is a living computer that has been programmed to receive and to process the signals for the purpose of creating a copy of the background on the gecko's back.

3. See: http://www.nature.com/ncomms/2015/150302/ncomms7368/full/ncomms7368.html

This living computer processes the code and determines what signals should be sent to the skin and where each signal must be sent in order to reproduce the background on the skin. These signals indicate exactly how much the skin will be stretched or relaxed to tilt the nanocrystals to the appropriate angle so that they refract the desired color and create the desired pattern on the surface of the gecko's skin. Since we are dealing with *nano*crystals, the amount of actual motion of the crystals is extremely slight.

How does the brain of the gecko know which color goes with which degree of tilt? How does it know which nanocrystals to tilt? How does it know which nerve ending effects which nanocrystals? How does the brain know that it is dealing with a background or a foreground? How does it know whether to change the skin at all?

Sunlight has only 7 colors, so in order to create an exact duplicate of the colors of the tree trunk in the picture above, the gecko had to mix the colors much like the video card on a computer mixes three primary colors to achieve several hundred of the millions of possible colors on your screen. Where did the brain of the gecko in the photograph obtain the programming necessary to produce a brownish olive green, the exact color of the tree trunk?

Each color must have a different code attached to it because each color is different. Each color must be determined by a predetermined formula relating to how much of each basic color will be necessary and the tilt necessary to produce it. Where did the logic of these mathematics and encoding come from?

Suppose we took a photograph of a tree trunk with a digital camera. In order to reproduce what happens in the gecko, we would have to have a computer program that could take the digital signature produced by the camera and compute how the background would be spread across the skin. It would then have to determine which nanocrystals to tilt, and the it must determine the exact tilt to produce the matching colors. In doing so, it must also incorporate the irregularities, the shading and the size of the elements in the pattern. After this has been accomplished, the computer program must know how to "divide" or parcel out the proper instructions to the proper nanocrystal or group of nanocrystals. The microscopic nanocrystals would have to be embedded in a skin such that they all faced the same direction, so that the light refracted by each nanocrystal would be the same until altered by the instructions from the brain. The skin would have to have precise control over the imperceptibly small "tilt" of each nanocrystal. We would need a program that could read the color codes from the camera and transform them into a code that could be understood by the muscles so that the muscles would

provide exactly the right amount of tilt to duplicate the same colors on the tree trunk. The program would have to know in advance exactly how much tilt to apply to which nanocrystals.

This is an impossible hurdle for Darwinism because all of the codes that carry the vision to the brain and the tilting instructions to the muscles are entirely non-physical. They are pure logic like the language expressed in the black and white pixels on your computer screen - that is, the language that you are reading is pure logic expressed through the letters on your screen.

As can be seen in the photograph above, the background is so perfectly reproduced that the skin of the gecko takes on all of the inconsistencies of the wood, including the appropriate distances between the inconsistencies, the patterns, the colors, the gradations of the particular shades of the wood, and at the same time it differentiates between the background and the foreground and excludes all of the foreground (green leaves).

Evolution accounts for this magnificent system by saying that a series of random mutations embedded thousands (if not hundreds of thousands) of matching guinine nanocrystals in an array and angulated each one precisely the same and enabled them to be selectively tilted by absolutely minuscule amounts in order to create a mix of colors that precisely matches the background, generated all of the nerves and programmed the brain to read the codes from the eyes and create the requisite instruction set to produce and exact copy of the background on the gecko's back. The brain (a living computer) is about the size of 6 pinheads.

The digital camera that took the picture on this page was constructed only after years of research, computer programming, color mixing, and camera construction. The gecko's brain is inconceivably more complex than any digital camera. But only the simple one was designed. The other came about by random chance and dying animals. No one ever created it. It simply occurred on its own and it is here only because all the chameleons that did not have a brain that contained the mathematics and code and processing power to mix a million colors died.

The argument for evolution is less that persuasive.

The evolution argument can be persuasive in one instance and in one instance only, and that is if the argument rests upon the inflexible presumption that the Creator is either non-existent or irrelevant. And indeed, evolution rests upon that very same inflexible presumption.

Evolution's argument presumes its conclusion before it makes the argument. The conclusion of the evolution argument is that there is no Designer and therefore evolution created everything. But at the outset, evolution disregards any possibility of a Creator because a Creator cannot be measured. Evolution then argues that since there is no Creator, it is the only viable alternative to explain creation.

Evolution therefore presumes that its conclusion is true and then it bases its conclusion on its presumption. In short, evolution refuses to consider the existence of a Creator and then concludes that the Creator does not exist.

It does not take a man or woman of superior intellect to be able to see that this argument is nonsense.

Evolution advocates have a vested and monetary interest in protecting their theory because in protecting their theory, they protect their positions. By protecting their positions, they protect their incomes and their futures and their family's future. It is easy for intellectual integrity to be compromised when one faces discharge and ostracism. Under those circumstances, truth can easily be compromised. Evolution advocates would be far less adamant if they had the freedom to comment on what the evidence really shows.

Thanks to mongabay.com for the use of this photograph. This photograph is used pursuant to the consent published on the mongabay website. Mongabay is a fascinating website that contains numerous similar photographs.