

# Can Evolution Explain the Diversity of Life?



## Remembering the Definitions

Is it possible that all of life's diversity could be part of an unexpected, unguided process of natural selection? As we examine the claims of philosophical naturalism related to the power that evolution reportedly has to accomplish something like this, we need to begin by understanding exactly what the theory of evolution proposes. The General Theory of Evolution posits that change occurs not only 'within' a species, but also 'across' species. In this way, change is actually unlimited in the sense that, given the right circumstances and given the right environmental pressures, any form of biological life could eventually be pushed from one species to another. A lizard could be pushed into the form of a bird; a whale could be pushed into the form of a wolf. So, as we take a look at the General Theory of Evolution (AKA Macroevolution), it's going to be important for us to differentiate between the definitions of evolution that are commonly used by people discussing the issue.

The first, most primitive and simplistic definition of evolution, can be described simply as "change over time". Evolution requires that biological forms have the capacity to change over time, and of course we do see that this happens all the time. We get older and our bodies change. We exercise and notice that our bodies change as well. It is obvious that biological creatures change over time and there is nothing un-Biblical about this notion. The second definition commonly included in any discussion of evolution is what is called "micro-evolution". This process describes what happens when a species is exposed to environmental pressures and is forced to adapt through small variations so it can survive in its environment. This idea is also in harmony with what we see in our world, and it is also in harmony with the Biblical record. After all, the Bible maintains that all humans here on planet earth are the offspring of Noah's three sons. We know that Noah's boys looked a lot like each other, yet all humanity is incredibly diverse. What accounts for this diversity? Small changes have occurred within the human species as we have adapted to our environment. This is called 'micro-evolution' and it is clearly recognized and affirmed in the Biblical account of our human history.

But there is another definition of evolution that makes a far more dramatic claim. "Macro-evolution" (also known as the General Theory of Evolution) posits that change can occur not only WITHIN a species as it modifies and adapts to its environment, but also ACROSS species without limit, given enough time and pressure. This form of the theory, therefore, claims to explain our existence as simply a moment in the evolutionary timeline, a snapshot of development, as we move from lower life forms to higher forms of existence. "Macro-evolution" claims that unguided, unexpected and spontaneous mutations occur in individuals within a species at the point of DNA duplication. If these DNA mutations produce a trait that actually increases the individual's 'survivability', this favored individual will be more likely to survive into the next generation. In fact, the favorable mutation will become the standard of the next generation and eventually, over time, new forms of life will evolve as a result of this slow adaptive process.

While the Biblical record may account for (and even embrace) some of the claims of evolution, scripture does not support the idea that life development here on the planet is completely unguided. Any purely natural process that does not require the guidance and intervention of

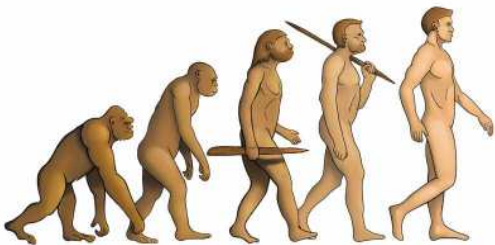
God seems to clearly contradict the creation story that is represented in the Genesis account. But beyond the Biblical record, we need to examine the theory of macro-evolution based on its own naturalistic claims. Is this theory supported by science and evidence, or is the theory of “macro-evolution” presented on the strength of evidence for “micro-evolution”? Over and over again, throughout the history of the theory and its presentation to the public, “macro-evolution” is presented based on the evidence for “micro-evolution”. This seems to be a bit disingenuous, especially when, we as Christians, accept the latter, while rejecting the former. If we are to move from one camp to the other, we should at least make this move based on strong evidence.



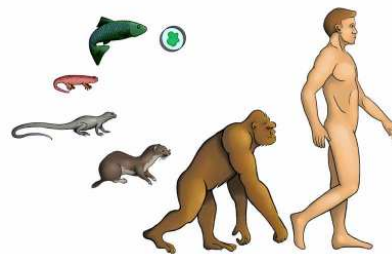
### Not Just A Breed of Dog

Remember that the claim of Macro-evolution is sometimes seen as something as simple as the breeding of dogs. In fact, dog breeding is often given as an example of how a species can adapt. As Christians, we accept this notion completely, within its natural limits, of course. After all, this is how we understand the story of the Ark. We don't believe that Noah had every possible breed of dog on the Ark (or every variation of any other animal for that matter). He didn't have to. All he needed was the ancient biological archetype of the dog. A single pair. All the diversity that we see in our world can come from a single pair simply because we DO believe in micro-evolution; variation WITHIN the species in response to environmental pressures. So all the variations of horses, snakes, squirrels and monkeys can also be accounted for in the same way.

But if macro-evolution is true, far more significant change must occur, for the theory does not simply claim that all dog breeds come from a common ancestor (which is also a dog). Macro-evolution is claims that all dog breeds come from a common ancestor that is a single celled being, and this common ancestor is the ancient parent to ALL the biological diversity on our planet. That is a far greater claim and it is going to require some evidence before we are going to be able (or willing) to step out in faith and acceptance. It is not a monkey to man proposition at all. It is a molecule to man theory that is wide and broad in its claim.



*Monkey to Man*



*Molecule to Man*

So, with that in mind, let's look at some classic evidences that have been presented for “macro-evolution” and see if they have the explanatory power necessary to substantiate these grand claims.



### What They Claim

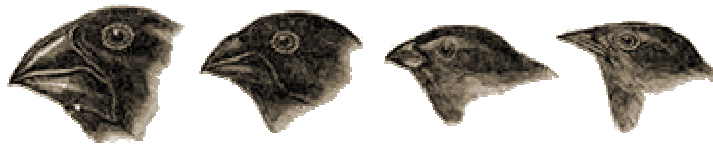
If you've ever been in a high school or college biology class, you are probably familiar with the broad proposition that evolutionary change from one species to another is unlimited. And your textbooks undoubtedly presented a variety of

evidences and examples to attempt to support this claim. These evidences are attempting to provide us with enough proof to accept the idea that everything on the planet has slowly evolved from microscopic lower life forms, across and through the limits and definitions of species. The classic arguments for this type of evolutionary possibility have been Darwin's Finches, the Fruit Fly, and the Peppered Moth. Let's look at these examples and see if they provide evidence for macro-evolution.



### Darwin's Finches

Charles Darwin traveled out to the Galapagos Islands in the 1830's and discovered what is arguably the foundational example cited by supporters of macro-evolution. Darwin, in studying the variety of animal and plant life forms that were thriving on the island, catalogued thirteen varieties of finches. These birds were all clearly finches, but they differed depending on their location on the islands. The most distinctive variation was the length of their beaks; some were much longer than others. Darwin concluded that the differences were the result of environmental pressures and the location of food for each variety. Some finches were located in areas where their food was deeply located and only those birds that had a longer beak survived. Over time, those finches that had the DNA capacity for longer beaks thrived and became regional variants. Clearly, the birds were adapting and changing based on their micro-environments on the islands. Darwin observed this and concluded that all of these finches had evolved from an ancient, original species of the bird. The finches became the poster children for the General Theory of Evolution and the example of the finches is still presented in most modern biology books that present macro-evolution.



*Darwin's Finches*

But as a Christian Creationist, I don't really have any problem with what Darwin observed related to the finches. After all, what are we really seeing here? Is this an example of macro-evolution or of micro-evolution? In the end, after the incredibly long history of life on the Galapagos Islands, have the finches become anything other than finches? When we see this kind of relatively minor variation within a species, we know that we simply have evidence for micro-evolution, a theory that the Bible accepts and often describes as the mechanism provided by God to help all of his creation survive in their environment. This sort of adaptability is already 'pre-wired' into the finch. Variations in the finch population and in the biology of the finch already exist as part of the bird's original design for survivability. In each variation of the bird, as they are examined on various locations on the islands, we see no additional genetic information. The process of change that occurs over time in the birds does not produce new information in the DNA that would enable the birds to become, for example, lizards or mammals. The parent population of finches simply had enough created variability and genetic potential to account for the variety of descendents that we now see on the islands. The 'evolution' we see here is limited. It is micro-evolution. Yet this example of the finches is often presented as a part of the evidential catalogue for macro-evolution. This is an unfair and disingenuous interpretation of the evidence.



### How Much Change Is Possible?

After all, macro-evolution argues that the finch, given enough environmental pressure and time, might change in a much more substantial way. Given the right circumstances, the air-breathing finch might, for example, develop gills and learn to breathe in the water. Or if the open air was no longer available in which to fly, the finch might develop the ability to walk. Philosophical naturalists have often argued for possibilities such as this, especially in propositions in the last century that have posited that present day birds are actually evolved variations of ancient dinosaur ancestors. This theory has been developed in an attempt to explain what happened to all the dinosaurs. The theory has become quite popular, and argues that land walking, scale clad reptilian creatures, given enough pressure and time, could eventually evolve into feather clad flying birds, continuing to lay eggs and display other skeletal similarities with their dinosaur ancestors. Of course most attempts to visualize this sort of transformation ignore the incredibly complex hidden anatomical differences between the species! For example, looking comparatively at just one organ, the lung, we see a structural difference that is difficult to explain through a macro-evolutionary process. In the lungs of reptiles, air is drawn into tiny sacs (alveoli), and it is here where the blood extracts the oxygen and releases carbon dioxide. The expelled air comes out of the lung the very same way that it entered, Birds, on the other hand, have a complicated system of air sacs (even to the point of utilizing hollow bones). In bird lungs, the air flows in only one direction through special tubes (parabronchi) and then the air moves out through another direction (NOT back out the same way it came, like the reptile). The difference between these two lung systems is quite compelling and dramatic. The pathway through which one form of lung would 'evolve' to the other is inexplicable, as each transitional stage of development would be far less effective relative to the biological organism. One thing is for sure, even if this type of macro-evolution DID occur in the species, there is absolutely no evidence that this is what happened.



### We See This Kind of Limited Change All the Time

Our everyday life experience tells us that we, as created beings, have been pre-designed with the genetic capacity to adapt to our environment as needed. Darwin's Finches make sense to us, because we have a first hand experience with the adaptive ability of our own bodies. For example, most of us have spent time exercising and seen the change that can occur in our bodies as they respond to the environmental pressure of a weight training program. If our environment REQUIRED all of us to be physically fit in order to survive, then only the strongest amongst us, and those who have the pre-designed genetic capacity to be physically fit, would survive and thrive. This is a Biblical concept and consistent with our belief in a Creator God who pre-wires us in this way. Have you noticed, however, that our bodies don't STAY in shape when we stop working out? Instead they return to the baseline 'first shape' that God has given us (bummer!). Well the same thing happens when environmental pressures are removed in the finch environment. Even though the long beak works just fine in environments where the food source is shallow, finches RETURN to their 'baseline form' (shorter beaks) even when the food source is no longer deep and difficult to reach. Why should this be the case? The long beak works in EITHER environment, why should it return to its original design? Because this is, in fact, the case: THERE IS AN ORIGINAL DESIGN; an intentional shape for each species that is pre-wired with the ability to adapt (but only within limits). Even micro-evolutionary change is NOT directional. The new forms return to the original shape once the pressure is relieved.



## The Peppered Moth

Even though Darwin's finches are often cited to support macro-evolutionary claims, the peppered moth became the most significant early 'evidence' provided by supporters of the theory. The early studies of peppered moths in England occurred in the late 19th century, but the moth has been studied ever since. The argument is simple: originally, as peppered moths existed in England in the 19th century, the vast majority of them were light in color. Researchers claimed that this was simply the result of peppered moths being able to camouflage themselves on the light colored trees and lichens where they made their home. By the latter part of the 19th century, it was observed that light colored peppered moths were no longer the dominant population. Instead, dark colored peppered moths had become the majority population. Why? Had the moths genetically changed in some way? Had they evolved in some way, and why? The key seemed to be in the fact that the industrial revolution had changed the habitat of the moths. They no longer had light colored trees on which to make their home, and the light colored moths were now plainly visible on the trees that had been darkened by the soot that came from factories that now dominated the environment. Light colored moths were easily seen and eaten by predators. Only dark colored moths survived in this new environment.



### *The Peppered Moth*

The scientific community championed this observation as proof of macro-evolution. The darker moths were a pre-existing genetic mutation of the species, and environmental pressures caused this mutation to flourish in the new polluted environment of the industrial revolution. Researchers and supporters of macro-evolution believed that they finally had the evidence they had been searching for. Now, in the years that have passed since this initial observation, many have argued that the research was not legitimate (that peppered moths didn't actually make their home on the trees that were described and were only pasted on these trees to make the photographs that were used in making the case), but let's not debate that issue here. Let's assume the observations and statistics are actually correct. Does the peppered moth prove that macro-evolution is possible? Is this what is occurring within the peppered moth population? Clearly they are responding to their environment, but is it an example of macro-evolution?



## Simply A Matter of Population

The problem here is that the genetic variation of the dark moth was already in existence as part of the first moth population. Dark moths and light moths lived together as part of the overall population. Over time, as their environment changed and one shade or the other of moth became more visible to birds, that particular shade was eaten and eliminated from the population. It's not as if the moths CHANGED genetically from light to dark. Both types existed from the beginning. No change occurred and no new genetic information evolved. When legal restraints limited the amount of soot that

could be produced by factories in England, the population returned to its normal balance of light and dark colored moths.

Imagine a scenario in which a sniper, resting at the top of a tower, begins to target people in a public square. He decides, in the darkness of his heart, to shoot all the light skinned people he can locate in his scope. One by one, he picks off all the light colored people until only the dark skinned people are left standing. Now imagine if, at the end of this homicidal killing spree, a scientific observer was to look at the surviving dark skinned people and conclude that evolution had actually taken place. If the observer made the case that the transformation of the original public square population toward only dark skinned individuals was the result of macro-evolution, you and I would laugh at the conclusion. We have come to understand macro-evolution as the slow TRANSFORMATION of life forms as they respond to environmental pressures, and the sniper scenario seems to have little explanatory power in this sense. In the same way, the peppered moth example seems very unsatisfying as an example of macro-evolution. It does not demonstrate TRANSFORMATION (only ELIMINATION) and it is hard to see how this might result in a new species. And once again, this appears to be only an example of micro-evolution at best, and not evidence for macro-evolution. To return to the example of the sniper, the remaining courtyard population of dark skinned people (who were in the general population from the very beginning), are still PEOPLE. They have not been pushed across species boundaries as a result of the environmental pressure of the sniper.



### The Fruit Fly

It seems unlikely, from the examples of the finches and the peppered moths, that environmental pressures could actually push these life forms into a completely different species. But many people have argued that we simply cannot form this conclusion (and assume transformational limits) because we cannot understand what is possible given enough TIME. After all, we are looking at a limited number of finch and peppered moth generations. Maybe we would see greater evidence for macro-evolution if we could examine them over hundreds or even thousands of generations! Well, scientists eventually found a way to look at change over a very LONG period of time when they decided to examine *Drosophila Melanogaster*, or the common fruit fly. Fruit flies have a very short gestation (or life cycle) and if temperatures and x-ray radiation are controlled in the laboratory, fruit flies can grow from egg to adult in just about 7-11 days! Given this short life span, hundreds and thousands of generations of this species can be studied by scientists in a relatively short time. Imagine the equivalent in terms of human life cycles. You would have to have precise data on humans for 20,000 to 30,000 years to be able to examine us in a similar way.



*The Fruit Fly*

Scientists have been studying and pushing the genetic limitations of the common fruit fly for a very long time. In fact, scientists have studied more generations of the fruit fly than have ever existed in human beings here on planet earth. Humans have not existed on the planet for as many generations as fruit flies have been harvested, mutated and studied in the laboratory. And what have the scientists learned? They learned that no matter how hard you push the fruit fly in any variety of genetic experiments, you never end up with anything other than a fruit fly. Try as you might, there are limits to the amount of change you can cause within a species before you eventually cause the organism to become sterile or non-functional. As an example, Ernst Mayr wrote about two early experiments with fruit flies that illustrate the problem:

*"In the first experiment, the fly was selected for a decrease in bristles and, in the second experiment, for an increase in bristles. Starting with a parent stock averaging 36 bristles, it is possible after thirty generations to lower the average to 25 bristles, "but then the line became sterile and died out." In the second experiment, the average number of bristles were increased from 36 to 56; then sterility set in. Mayr concluded with the following observation: Obviously any drastic improvement under selection must seriously deplete the store of genetic variability. The most frequent correlated response of one-sided selection is a drop in general fitness. This plagues virtually every breeding experiment." (Jeremy Rifkin, *Algeny* (1983), p. 134)*

In another similar experiment, scientists were able to change color and shape variations on the body parts of these fruit flies. In one experiment, they were actually able to create a fruit fly that had an extra set of wings! This is sure starting to look like another species of fly! But a close examination of the fly revealed that the wings were actually non-functional. In essence, they simply don't work, and they end up debilitating the fly and making it WEAKER in its native environment. This is not an example of viable macro-evolution. In fact, once again, we have proven that small variations can occur within a species (micro-evolution), but as we try our best to push the organism toward something entirely new, we end up making it either sterile or non-functional. The fruit fly demonstrates once again that there are limits to change.

*"Take the example of fruit flies (*Drosophila*). Morgan, Goldschmidt, Muller, and other geneticists have subjected generations of fruit flies to extreme conditions of heat, cold, light, dark, and treatment by chemicals and radiation. All sorts of mutations, practically all trivial or positively deleterious, have been produced. Man-made evolution? Not really: Few of the geneticists' monsters could have survived outside the bottles they were bred in. In practice mutants die, are sterile, or tend to revert to the wild type." (Michael Pitman, *Adam and Evolution* (1984), p. 70.)*

Fruit flies return to their 'wild type' once we stop doing all that we can to push them toward something new. That shouldn't surprise us, the same thing happened with the finches and the peppered moths once the environmental pressures changed.



### Something In Mind

See, the problem with all this experimenting in the laboratory is that it does, in fact, make a case, (just not a case for macro-evolution). Instead, it makes the case for a sort of artificial and intentional design effort that looks a lot like the work of a creator. When species do their best to return to their original form, they start to demonstrate that their form is the 'intended' form of the species; the way the organism is

'supposed to be'. And when scientists are able to push the organism in one direction or another, just as when a breeder is able to create a new breed of dog, this does little to illustrate the power of natural, blind evolutionary forces. All this demonstrates is the power of intelligent intervention and direction (the intelligence of the scientist or breeder)!

In fact, naturalistic, secular science books often use language that exposes the role of intentional design in the things we see in nature. For example, it's not unusual to read expressions like "...what natural selection 'has in mind'..." or "...that's not the 'intention' of natural selection..." When writers use this kind of language, implying that nature has 'intention' or a 'mind', they are describing nature as though it had intentional, intelligent design capacity. They are no longer describing the blind forces of nature but the intelligent acts of a designer God. Even Darwin, in describing the work of Natural Selection, found himself using the language of God:

*"This preservation of favorable variations and the rejection of injurious variations, I call Natural Selection" (Charles Darwin, 'The Origin of the Species')*

Now think about it for a minute. In order for a force to preserve, reject or select, that force must first be able to make a conscious CHOICES. Even the term 'Natural Selection' carries with it the notion that something or someone is selecting. Why does this language implying intelligence slip into the description of what are supposed to be blind natural processes? Because even evolutionists have a hard time denying the most obvious interpretation of what they see. Sometimes it just makes more sense to form the most obvious conclusion from the evidence that is sitting in front of us. The classic TELEOLOGICAL argument still makes the most sense in this regard. When we look at a watch, it's still very hard to imagine that blind natural forces and laws have created something that appears so intentional and purposeful. It's only the rejection of the supernatural that would force us into the pursuit of an explanation that seems to deny all reason. It's only our rejection of God that causes us to interpret the evidence in such an unlikely manner.



### What God Says

Sometimes I wonder what God must think of us. I do think he respects our pursuit of truth, and he is clearly not afraid of our investigations. The Bible tells us that it is through FAITH that we demonstrate our love for God. That is sometimes a mystery. Why FAITH? Why wouldn't God just show up and end all the doubt? I do think it has something to do with the nature of Love. If love is a free will choice, then God's obvious and overbearing presence in our world would seem to remove much of the choice necessary for us to truly love Him volitionally. It seems that the sometimes hidden nature of God may be a pre-requisite for our ability to come to Him of our own free will. But God has clearly given us evidence of His existence. And when we deny what is clearly in front of us, I bet God would like to admonish us in the same way that He spoke to Israel through Isaiah. I bet He would like for us to examine all the evidence, and then be very honest with ourselves about where it leads. In the end, it's going to be hard to deny the work of an intelligent Creator:



### Isaiah 40:12-13

*Who has measured the waters in the hollow of his hand, or with the breadth of*

*his hand marked off the heavens? Who has held the dust of the earth in a basket, or weighed the mountains on the scales and the hills in a balance? Who has understood the mind of the LORD, or instructed him as his counselor?*

God has been good enough to give us enough evidence in our environment to see His creative and intelligent work. He has given us a purposeful and intentional CREATION so that we might begin to look for an intelligent and purposeful CREATOR:



### **Isaiah 45:18-22**

*For this is what the LORD says — he who created the heavens, he is God; he who fashioned and made the earth, he founded it; he did not create it to be empty, but formed it to be inhabited — he says: “I am the LORD, and there is no other. I have not spoken in secret, from somewhere in a land of darkness; I have not said to Jacob's descendants, 'Seek me in vain.' I, the LORD, speak the truth; I declare what is right... Turn to me and be saved, all you ends of the earth; for I am God, and there is no other.”*

God is patient, and He is waiting for us to come to our senses (and actually admit what our senses are revealing about the designed nature of the cosmos and our world)!



### **So, What Now?**

If nothing else comes from this short study of the limits of change within species, we should at least begin to be very sensitive to the language that appears in so many science and evolution textbooks. Remember that nature is blind and has no intention, purpose or intelligent selective power. When authors write as though nature has a mind of its own, they are simply betraying what is true about the world around us. It does appear as though the life and biological diversity on planet earth is the direct result of some intentional, directional and purposeful process. Life and all of its diversity appear to be the product of a creator for a reason. The simplest and most direct conclusion is still the best. The watch continues to require a watchmaker.