

Life: Designed by God to Adapt

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When God first created animals, he created them according to their kinds, with the ability to reproduce, and with instructions to increase in number and fill the earth (and seas; Genesis 1:20–22, 24–28). After the Flood, land animals and birds that had been preserved on the Ark again reproduced to fill the earth (Genesis 8:15–19).

Baraminologists (creation scientists who work to identify created kinds) have determined that many animals represented by a single breeding pair on the Ark have diversified so that today they are typically represented by a whole family. For example, the family Canidae is believed to be made up of animals from one baramin, a single created kind.¹ This family includes dogs, wolves, coyotes, foxes, and jackals. It consists of 34 species from 14 genera that are widely distributed on every continent except Antarctica, confirming that they have indeed increased in number and multiplied on the earth (cf. Genesis 8:17).² The Bible mentions dogs,³ foxes,⁴ wolves,⁵ and possibly jackals.^{6,7} Both dogs and wolves are first mentioned less than a millennium after the Flood, indicating that diversification occurred very rapidly.^{8,9}

Historically, evolutionists have told us that changes in living things occur at a slow, deliberate pace.¹⁰ Yet the creation model clearly requires that significant changes be able to occur quite rapidly, if necessary, as animals multiply and fill the earth. Today we see animals that have adapted to a variety of different environments and niches. Is there any scientific evidence that animals can adapt so quickly? Indeed there is! One example in lizards appeared in the *Proceedings of the National Academy of Sciences* earlier this year.¹¹

A Change in Home

Off the coast of Croatia, in the Adriatic Sea, there are a number of islands. Near the island of Lastovo are several smaller islets. One islet, Pod Kopište, has long been home to a particular species of lizard, *Podarcis sicula*. In 1971, researchers moved five adult pairs of this species to a second islet, Pod Mrčaru. After some 36 years, researchers conducted a detailed study that indicated this introduced species had not only thrived, but had also undergone significant adaptive changes.

A Change in Diet and Head Shape

The lizards on the second islet, Pod Mrčaru, had longer, wider, and taller heads. In addition to the increase in size, there were also distinct changes in head shape. An increase in bite force was associated with these changes, which appear necessary to allow the lizard to adapt to a diet that is significantly higher in plant matter. While the parent population on the first islet has a low level of plant consumption (7% of diet in spring; 4% summer), the lizards on Pod Mrčaru have a much higher level (34% and 61%). Roughly half of the plant matter consumed on Pod Mrčaru is of high cellulose content, such as leaves and stems.

A Change in the Digestive Tract

Animals don't have the ability to digest cellulose by themselves. Herbivores rely on microorganisms in their digestive tract to digest cellulose and provide them with usable nutrients. In some animals the microorganisms ferment the food in the foregut (that is, the beginning portion of the stomach, as in ruminants, kangaroos, wallabies, and leaf-eating monkeys), while many others are hindgut fermenters. The lizards on Pod Mrčaru have a cecal valve which slows down food passage allowing the microorganisms time to ferment it in the hindgut. This structure is *not* present in the parent population from Pod Kopište or in a closely related species, *P. melisellensis*, which had previously inhabited Pod Mrčaru but has since become extinct there. The cecal valve is present in other herbivorous lizards in this family (Lacertidae). This suggests that certain structures important to the survival of an animal in one environment may not be retained in the population if they move to a different environment and the structure is no longer useful. However, the structure may reappear if conditions change and it then becomes important to survival.

Nematodes were also found in the hindgut of the lizards on Pod Mrčaru, but not in the parent population from Pod Kopište. Nematodes are a fairly common find in herbivorous lizards.¹² While normally they are recognized as parasites, there has been at least one case, in bullfrog tadpoles, where a mutualistic relationship with a nematode was identified.¹³ In this case, the presence of the nematode was associated with greater fermentation yields and accelerated development of the tadpoles. It remains to be seen if the nematodes in the lizards have a net positive, negative, or neutral effect.

A Change in Population Density and Behavior

The population density on Pod Mrčaru appears to be much greater, likely due to the larger, more predictable food base. The social structure also seems to have changed as the lizards no longer appear to defend territories. The changes in mode of food acquisition (that is, browsing rather than pursuing prey) and social structure may have contributed to the shorter hind limbs and lower maximal sprint speed previously observed in these lizards compared to the parent population.¹⁴

Pondering the Source of the Changes

Since the large heads and cecal valves were present in hatchlings and juveniles, the authors suspect genetic changes may underlie these differences.¹⁵ However, only mitochondrial DNA was sequenced, which was identical in both populations of *P. sicula*. One wonders what the source of such a genetic change might be; 36 years is hardly enough time to suspect that a beneficial random mutation might have occurred. Natural selection can only be invoked after a genetic change has occurred; it doesn't explain the appearance of a genetic change, but can explain why it becomes more or less common in the population. The authors suggest that further studies should address other possible factors (that is, phenotypic plasticity and maternal effects), which may account for this divergence between the two populations. Regardless of the final findings, this study clearly shows that animals can adapt rapidly, just as creationists would expect, given that God provides for His creation and intends the earth to be inhabited (Psalm 147:8, 9; Matthew 6:25–34; Isaiah 45:18).

Has Evolution Occurred?

One of the most confusing aspects of the creation/evolution controversy is that there are several distinct definitions for the word evolution that evolutionists constantly blur together.¹⁶ One definition involves change (presumably with a genetic basis) in a population over time. Given this definition, evolution has certainly taken place. Ironically, it is the creationist model that requires such changes to be able to occur relatively rapidly. There are a number of examples in the available literature that demonstrate rapid adaptive evolution when animals are introduced into a new environment or the environment changes.^{17–19} In fact, evolutionists have had to modify their model to accommodate these observations.²⁰

However, when most people think of evolution, they think of the conjecture that all life on earth has arisen from a common ancestor over millions of years. Obviously no one has observed this. The studies demonstrating adaptive evolution do not show one kind of animal transforming into another, yet evolutionists try to use them to support the common ancestry of all life. Furthermore, the concept that all biological life shares a common ancestor is based on a rejection of the biblical account of history and the possibility of a creator that has interaction with the real world.²¹ Although it is claimed that this is a scientific view, in reality it is a philosophic view that excludes certain explanations without consideration.

Testimony of an Awesome Creator

Christians should be encouraged by the increasing number of articles showing examples of rapid adaptive changes. As more detailed evidence is presented, it should be very interesting to watch evolutionists attempt to explain these changes in their naturalistic model. All we see in these examples of animals adapting rapidly to new environments confirms the Bible's testimony that we truly do have an awesome Creator who created life to inhabit the earth.

Footnotes

1. Wood, T. C., 2006. The current status of baraminology. *Creation Research Society Quarterly* 43(3):149–158.
2. Fahey, B., and P. Myers, 2000. Canidae. Animal Diversity Web. Retrieved from, <http://animaldiversity.ummz.umich.edu/site/accounts/information/Canidae.html>.
3. כֶּלֶב keleb; used 32 times in the Old Testament; first mentioned in Exodus 11:7.
4. שׁוּׁאֵל shuw'al; used 7 times; in NIV translated as fox(es) 4 times and jackals 3 times; in the King James Version it is always rendered fox(es); however the Strong's defines the related proper name, Shual, as meaning jackal; first used in Judges 15:4,5.

5. זע'ב ze'eb; used 7 times; first mentioned Genesis 49:27.
6. אַח 'oach; used once in Isaiah 13:21; refers to howling animal, jackal or hyena. While the word "jackal(s)" appears 19 times in the NIV, it is usually a translation of תַּנְיִן tanniyn which is often translated "dragon" in the King James Version.
7. Kohlenberger, J.R., and J.A. Swanson, 1998. *The Hebrew-English concordance to the Old Testament*. Grand Rapids: Zondervan. BibleWorks™ Copyright © 1992–2005 BibleWorks, LLC.
8. If the Flood is considered to have taken place in the year 1656 Anni Mundi (A.M.; years since creation) and the Exodus occurred in 2513A.M., some 857 years later, then both wolves, זע'ב ze'eb, and dogs, כֶּלֶב keleb, were distinct by then.
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