Why So Many Species?

How does all the variation we see in the world today come about? Did God create every single different kind of species in the various families of animals? How did Noah fit all the animals onto the ark?

In his book *Fundamental Biology*, Frank Marsh writes,

"He who thinks that species (modern) of animals and plants remain fixed through successive generations, has but to examine nature's record to discover his error. Variation is one of the most invariable laws in the biological world."[i]

According to the Bible's Genesis account, fish, birds, plants, land animals, and humans originated from separate acts of Creation. The Bible names the creatures God made as "kinds" (Genesis 1:21). Later in Genesis, we read that Noah brought two pairs of every unclean animal and seven pairs of every clean animal onto the ark

How did speciation occur?

According to geoscientist L. J. Gibson, the many varieties of animals may have come into existence in a number of ways. Creationists believe that the Bible is correct when it states that God made "kinds" of animals. However, instead of God creating every single individual species, these kinds had enormous built-in variation that allowed for a vast variety. In our modern classification system, we tend to classify animals that are in the same kind but have different markings or characteristics as different "species."

The animals that came off the ark dispersed around the globe. Today, we see many varieties within a generic family such as finches, deer, and salmon. Creation scientists suggest the following ways that the many species have come about since the flood:

1) Breed selection from existing built-in variation: Each species has built-in possibilities for variation, and if certain characteristics are selected through breeding, a number of apparently separate species can result. Examples would be the wide variety of dog, cat, domestic cattle, pigeon, and poultry breeds. This occurs in nature as well, such as the corn snake, which differs in color and scale number according to geographic area. Seasonal variations in color and fur thickness are further examples of this built-in variation.

2) Loss of genetic material: Loss of flight is common in birds, especially in island areas where flight can be a distinct disadvantage as the birds can be blown out to sea in storms. Related species often retain the capacity to fly. Examples are marsh

hens, flightless cormorants of the Galapagos Islands, and flightless geese from Hawaii.

When genetic material is lost, it never creates a higher category. Science has traditionally taught that the loss of genetic material leads to a new species or genera. However, given the current understanding of how the genome works and how genes are activated and deactivated, it is unlikely that genetic information is really lost in these species. Scientists believe that genes are deactivated when the circumstances do not require the features in question. Mechanisms must obviously exist to deactivate genes coding should the need arise. This means that a flightless cormorant is not a lesser species to a flying cormorant, but simply a cormorant with the genes for flight switched off.

These changes are often perceived as examples of micro-evolution, but in real terms, they merely reflect standard activities common to the genome. Every organism, including humans, has a genome that contains all of the biological information needed to build and maintain a living example of that organism. The biological information contained in a genome is encoded in its DNA and is divided into discrete units called genes.

3) Hybridization: Hybridization is not usually ideal because it can cause loss of fertility, particularly in mammals. Some animals are, however, prone to hybridization which can lead to viable species in animals and plants. Hybrids of horses and zebras, leopards and jaguars, and even sheep and goats have been achieved, whether by natural means or by human intervention through implantation.

4) Changes in chromosome structure and number: Sometimes chromosomes can fuse with each other to form much longer chromosomes, or they can split to form two shorter chromosomes. These changes in structure create different characteristics, which scientists often use as a criterion for a new species. But a closer look at the genetics shows a different story.

Animals were created with an enormous capacity for variation, especially under conditions of stress, or where organisms enter new adaptive zones or low selective pressures. Given this tremendous potential for change, and the obvious relationship between even species with totally different chromosome numbers, we can imagine a situation where a relatively small number of "kinds" can account for large number of "species" in a very short time. For those with faith in the Biblical account of the ark, the problem of fitting the animals into the ark would no longer seem as daunting. Not all the antelope species had to be on board, but rather just a few representative kinds.

Dogs and wolves of the genus canis have 78 chromosomes while foxes have a varied number from 38-78 chromosomes. The uniformity of chromosome number in canid

dogs can be due to free interbreeding over a wide range, whereas foxes live in small family groups and smaller territories so that new arrangements will persist.

Similarities can also be explained on the basis of function rather than ancestry. For example, genes for specific enzyme systems are often situated on chromosomes with similar banding patterns in different species.[ii] In fact, similar linkage patterns between cats and humans are almost as consistent as between humans and chimpanzees.[iii] Similarities in chromosomes of humans and apes could also be explained on this basis.

Conclusion

The potential for change certainly exists, although there are certain barriers that cannot be transgressed. Geneticists have manipulated the genome of the fruit fly Drosophila to such an extent that some believe that all evolutionary events in the history of the earth do not exceed the amount of manipulation to which these fruit flies have been subjected.

Nevertheless, although bizarre forms have been created, the barrier which constitutes "fruit flies" has never been broken. Similarly, a great deal of change from chromosomal rearrangements has probably taken place since creation, and the time frame can be consistent with a short chronology. It is, therefore, possible to envision the changes that happened to the large variety of species present on Earth.

No model of origins can supply all the answers, particularly if our knowledge of many biochemical and genetic mechanisms remains so incomplete. The creationist model does, however supply many plausible answers to some of the many questions that plague us in terms of origins.

There will be areas where faith must supply the lack of knowledge, but the same is true for the evolutionary paradigm. In the final analysis, both paradigms thus require faith. The question that everyone must ask is, which of the two requires more faith?