***Eleven Kinds of Evolution*:**

**Number One through Number Six --** *(Discovery Institute)*© 2000 **:**

***1.*** **Change over time**; history of nature; any sequence of events in nature Yes this occurred- SFK

***2****.* **Changes in the frequencies of alleles** in the gene pool of a population

 Yes this occurred - SFK

***3.*** **Limited common descent**: the idea that particular groups of organisms have descended from

a common ancestor. Yes this occurred - SFK

***4***. The mechanisms responsible for the change required to produce **limited descent with**

**modification**; chiefly natural selection acting on random variations or mutations

Yes this occurred - SFK

***5.*** **Universal common descent**: the idea that *all* organisms have descended from a single

common ancestor. Being debated intelligently – SFK

***6.*** **Blind watchmaker thesis**: the idea that all organisms have descended from common

ancestors through unguided, unintelligent, purposeless, material processes such as natural

selection acting on random variations or mutations; the idea that the Darwinian mechanism

of natural selection acting on random variation, and other similarly naturalistic mechanisms,

completely suffice to explain the origin of novel biological forms and the appearance of

design in complex organisms. SFK and *Reasons.org* and the *Discovery Institute* state **this did not occur**. This meaning is being conflated by naturalists into the other meanings of evolution.

**Five More Kinds of Evolution**

*(Reasons to Believe Ministry - RTB)* **©** 2009 **- Numbers 7 - 11**

1. ***Microevolution***refers to changes happening within a species. A textbook example would be the change in wing color of the peppered moth in response to changes in pollution levels in the UK. Proved. SFK agrees.
2. ***Speciation***occurs when one species gives rise to a closely related sister species. Take for example the evolution of the [finches on the Galapagos Islands](http://en.wikipedia.org/wiki/Darwin%27s_finches) from an ancestral finch species that came to this archipelago from South America. Upon arrival this ancestral finch evolved into a variety of species that vary primarily in body size and in beak size and shape. Both microevolution and speciation have been repeatedly observed in nature and, in my opinion, are noncontroversial. Proved SFK agrees.
3. ***Microbial evolution*** helps make sense of the evolutionary changes associated with the Long Term Evolution Experiment (LTEE - 1988 –2010) at MSU, which don't really fit in any of the previous categories. These types of transformations involve changes in viruses, bacteria, archaea, and single-celled eukaryotes—changes like the acquisition of antibiotic resistance in bacteria, the ability of viruses to hop from one host to another (such as [SARS](http://en.wikipedia.org/wiki/Severe_acute_respiratory_syndrome#SARS_coronavirus) and [HIV](http://en.wikipedia.org/wiki/HIV#History)), and the emergence of drug-resistant strains of the malaria parasites. Microbial evolution would also include [horizontal gene transfer](http://en.wikipedia.org/wiki/Horizontal_Gene_Transfer) between microbes, which accounts for the evolution of pathogenic bacteria from non-pathogenic strains (like *E. coli*). Again, we don't find microbial evolution particularly controversial. A preponderance of evidence exists for it, including the LTEE at MSU. Proved. SFK agrees.
4. ***Macroevolution***refers to putative changes that require that evolutionary processes have genuine creative potential. Examples include humans evolving from a primate ancestor, whales evolving from a terrestrial wolf-like mammal, and birds evolving from theropods. Whether or not macroevolution has occurred **defines much of the creation/intelligent design/evolution controversy**. Fuz Rana at *Reasons RTB*, is skeptical that macroevolution is a real process that shaped life's history on Earth. Darrell Falk is certain God used this process to create new life forms. Good articles from knowledgeable Christians on both sides of this issue. See Darrell Falk’s *Coming to Peace with Science*, Chapter 4, © 2004. Being debated intelligently – SFK
5. ***Chemical evolution*** is another type of evolutionary process I'm skeptical about. This term refers to the processes that presumably generated the initial life-forms. According to this model, chemical selection naturalistically transformed a complex chemical mixture of simple compounds into proto-cellular entities that further evolved to yield the first true cells. (Refer to the book Fuz Rana coauthored with Hugh Ross, [*Origins of Life*](http://www.reasons.org/catalog/origins-life), for a detailed rationale for skepticism about chemical evolution.) RTB, *Discovery Institute* & SFK Ministry **do NOT** believe this kind of evolution ever happened.

From the viewpoint of evangelicals, we see good evidence for seven of the eleven definitions above. Also we believe that two of the definitions (#6 and #11) are used too often by evolutionary naturalists to conflate all the above terms. We would do well to continue research into the two definitions (#5 and #10) where intelligent and thoughtful discourse may abide in the realms of science and faith.

Red items – SFK Ministry position on this *kind* of evolution.