POSTSCRIPT

This book traces HARN ancestors back 9 generations and the GLADWISHes 10 generations. The FUSAROs go back 8 generations and the BELLUCCIs 4. This seems like a substantial accomplishment and the amount of energy expended putting things in order was enormous. But this small number of generations seems almost meaningless when you consider this fact:

There have been at least 8,000 generations since the emergence of our species, Homo Sapiens. And they were preceded by about 80,000 generations of the species we evolved from and are very closely related to: Homo Erectus. Weren't they also our ancestors? What do we make of the 87,990 generations who are *not* included in this book?

As we try to understand the meaning of ancestry, we need to keep two things clearly in mind: 1) the powerful influence of the passage of time, and 2) a rapidly expanding world population. The further back we travel in time the more ancestors we have, in terms of sheer numbers, and the less directly each one is tied to us. If we look back just one generation, each of has only 2 direct ancestors (our parents) and each of them are *very* related to us. But if we go back far enough, we find many thousands of direct ancestors and each has only a tenuous influence on us as individuals. While this is interesting enough, the truly fascinating thing is that this fact coexists with a seemingly contradictory fact:

> ***Our own direct ancestors in the very distant past are also the direct ancestors of everyone else alive on the planet today.***

This phenomenon is well understood by people who study evolution and population genetics. If you start with just a dozen or so field mice, you will eventually end up with billions, given enough time, space and food and each one can correctly claim that the original small population were their ancestors. It is the same with people. According to current scientific thinking, about 150,000 years ago the population of Homo Sapiens was very, very small (less than 10,000 individuals on the entire planet, and all of them in Africa). Today there are 6.7 billion of us on every continent and almost every island and, like the field mice, all 6.7 billion of us are descendants of that original small population in Africa.

> ***So when you walk down a busy street, anywhere on Earth, absolutely every single one of the people you see shares a common ancestor with you.***

It doesn't matter if you are walking in your hometown or in your idea of the strangest place on earth. *Each of us shares a common ancestor with every other person alive today, regardless of color or nationality*. It is only a matter of how far back in time we need to travel to find that common ancestor. But find one we will.

> ***Everyone is related to everyone else.***

So in a very real, very fascinating and even a very scientific sense . . . every one of the 6.7 billion of us alive today deserves to be mentioned in this little book.

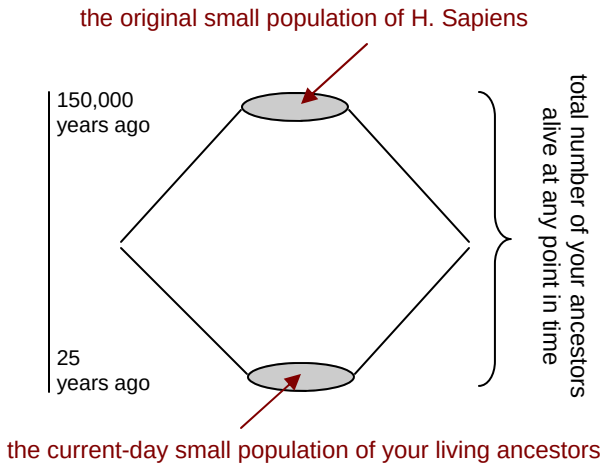
And I guess they just were.

Peace.

John P. Harn, Portland, Oregon, May, 2009

The Backwards Hourglass

The diagram at right shows the number of our direct ancestors alive at any given time as we look backward in time. It is based on these 2 seemingly contradictory ideas: 1)The original population of Homo Sapiens, ancestral to all of us, was small, numbering only several thousand individuals, and 2) The further back in time you go, the more ancestors you have.



POSTSCRIPT, TAKE TWO

The previous pages peer into the past from an utterly secular point of view. This page looks to the future, with the same point of view.

What is in store for our descendents?

No one knows for sure. But some things are likely:

Every species alive today, including our own, will someday become extinct. The average life span of a species is about 1 million years. Some species last much longer, some not as long. Homo Erectus lasted about 2 million years. Neanderthals lasted about 170,000 years. So far, our own species, Homo Sapiens, has lasted about 150,000 years. Will we be a longer-than-average or a shorter-than-average species? And when our species dies out, will it be a "dead-end," leaving no descendents, or we will evolve into a new human species? Neanderthals were a dead-end species. When they died out, they left no descendents Although we may carry some of their genes, which is not proven, we are not their descendants. Homo Erectus had a different fate They are now extinct. But they left descendants in Africa: us. And from there we spread over the globe in a series of migrations.

In the future, there will be many new species that we cannot imagine today. The age of mammals (our age) replaced the age of reptiles 65 million years ago. Mammals will likely be around for a very long time. But they will not be around forever. What will replace the age of mammals? An age of insects? An age of birds? Something not yet evolved?

So far, humans are the most intelligent species ever to have lived on Earth. When our species is gone, will a more intelligent one arise? Or will intelligence never again reach our level? Although intelligence provides many profound advantages for survival, thousands of species have been extremely successful without it. Continued evolutionary progress on this front may be likely, but is not by any means a given.

How long will life exist on Earth in any form? Life began on Earth about 4 billion years ago. Most likely, it will continue, in one form or another, for hundreds of millions and probably several billion more years. But there is no guarantee. Nor is there any certainty it will be as widespread or richly varied as it is today. Or, it could become even more so. It is also possible that life from earth will colonize other planets in our solar system either by human space travel or by bacteria being blasted off Earth by a meteor impact, traveling through space on ejecta, landing on another planet (such as Mars) and actually surviving and evolving. Some scientists think life on earth "arrived" in just this manner and did not actually originate on our planet. This theory is not crackpot in the least and has many adherents. It is a fact that some of the meteorites collected on earth were once part of the surface of Mars.

We can be certain about one thing: Earth will be a very different place in the future. Continents will be in different places, climate will change dramatically and even the moon will be farther away than today. And who knows how the sun will change over time? Without it, there probably would be no life on Earth. Will it weaken? Strengthen? Any fluctuation in it's output will dramatically impact Earth-life, nearly all of which depends on it for survival.

Our sun will last about 4 billion more years and is about half way through its life. In the end, it will quickly grow into an enormous, toxic fireball, engulfing Mercury, Venus and Earth, blasting away whatever atmosphere exists on each and sterilizing whatever survives the blast. This will most likely kill every living thing on earth, right down to bacteria living inside rocks. And even if some life on Earth somehow survives the cataclysm, the sun will afterward shrink to a tiny cold sphere, giving no light or heat to any of the planets ever again.

So life on Earth won't last forever. Earth itself won't last forever. But will life disappear without a trace, lost in complete obscurity, denied memory or record?

No one will ever know for sure.