

The Age of the Earth.

by Andy House.

All throughout intelligent man's life, philologists have tried to date the age of the Earth. When serious study of the subject began, the philologists and the scientists referred to earlier writings. eg. In the mid-seventeenth century, Dr. John Lightfoot announced that, as a result of careful study of the Bible, he had determined that the Earth was formed on the 26th. October 4004 B.C. at nine o'clock in the morning. Such authoritative statements were generally accepted, although each successive theory brought initially much controversy.

Right up until the later part of the last century, intelligent men believed, quite sincerely that the world was less than 6,000 years old, but as knowledge accumulated geologists demanded more and more time for accomplishment of all the events they found recorded in the rocks. By the eighteen-sixties they were already into millions of years.

Today, the estimates increase at a fantastic rate from year to year. The largest estimate of age is for some rocks from Southern Rhodesia (or whatever they call themselves now which are thought to be some 3,000 M. years old, but these were Igneous (primary or original) rocks which were intruded into sediment. Thus we still have to go back two further stages to find its origin: the period of the deposition of the sediments and the period of the formation of the rocks, which were eroded to form the sediments. Even then it is possible that yet older rocks will be discovered and it is still not known how far the scientists are away from the Original crust of the Earth.

The uninitiated always demand to know how scientists can possibly estimate such unimaginable lengths of time, and they are rarely satisfied with the answer. This is a matter for the Chemist rather than the Geologist, and concerns the gradual decay of the radio-active elements. It is generally known that certain elements, such as Uranium, break down at a fixed rate to form a stable element such as lead. Some do it very, very quickly, but a number are now known which do it slowly enough to be useful in dating rocks. The rate of decay of radio-active elements does not seem to be affected by varying heat or pressure, and it is a reasonable assumption to suppose that it has gone on at the same rate throughout Earth history. Therefore when a Uranium mineral is found, part of which has changed to lead, it is possible to calculate how long it is since the original mineral was emplaced in the rock.

The piety of the Victorian era, found it difficult to accept the geologist's concept of Earth history, the new ideas reduced man to an extremely insignificant place in the physical world. Today we accept this position from our early years and find it difficult to understand what a shock it was for our grandfathers.