

WAS THERE LIFE BEFORE ADAM?



TRIUMPH PROPHETIC MINISTRIES (CHURCH OF GOD) * ALTADENA * CALIFORNIA *



What was the world like before the creation of Adam? Why did God create the world millions or billions of years ago? Or did He? Is the creation account found in the Bible mere legend? ancient mythology? Or is it factual -- literal -- historical? How does the evidence of paleontology and the various dating methods relate to this question? Was Neanderthal man really human, or was he a DIRECT predecessor of modern man? Do the Neo-Darwinian evolutionists and the school of anti-catastrophism hold the answers? This article cuts through all the confusion and brings you, the reader, the TRUTH about the world before Adam!

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Many Christians today believe as an article of faith that the *Bible* teaches the earth was created 6,000 years ago. They dispute all the evidence of geology, paleontology and radiometric dating techniques. They argue that such evidence is invalid, grossly misunderstood, and misinterpreted. Some Neo-Creationists claim that all the earth's strata was due to the Noachian deluge, or the original process of Creation. They claim all Creation took place during a six day period approximately 6,000 years ago.

What is the truth?

The *Bible* is a reliable historical witness. However, the *Bible* nowhere says Creation occurred 6,000 years ago. Nor does

it teach that the earth is flat, although Medieval theologians often assumed so and threatened anyone who would teach otherwise with excommunication and torture. The Middle Ages were a sad time in theological history. The supposedly enlightened Church pressured scientists such as Bruno and Galileo with the threat of bodily harm if they chose to believe the earth revolved around the sun.

Biologist George Simpson was right when he observed, "As a matter of fact, most of the dogmatic religions have exhibited a perverse talent for taking the WRONG SIDE on the most important concepts of the material universe" (George Gaylord Simpson, *This View of Life*, p. 214).

Irrational Theology

Catholic theologians made a great mistake in the Middle Ages. They assumed the Scriptures taught things about the material universe which were, in fact, false interpretations or assumptions. Perhaps for the masses, it was enough to listen to and believe dogmas with the stamped sanction of "Church authority." But for THINKING men, "Renaissance Man," for scientists who wished us to "prove all things," as the Scriptures themselves tell us to do (*I Thessalonians 5:21*), mere recitation of Church authority or tradition was not enough.

One author characterizes the problem this way: "The emotionally precious view of earth's

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Galileo With His First Telescope

centrality in a fixed, unchanging universe was crystallized by Ptolemy in the second century A.D., and then taken over by the Christian (i.e., *Catholic*) Church. What had been ancient pagan punishments for contradicting pagan theology became orthodox Christian punishments for questioning orthodox Christian dogma. Despite man's continued secret probing, fourteen centuries brought no serious challenger" (Robert Gorney, *The Human Agenda*, p. 27).

In 1543 Copernicus published his theory of a heliocentric solar system. Although he was a Catholic priest, his theory met with strong opposition from the established Church. In 1600 Giordano Bruno, who endorsed Copernicus' theory, was burned alive at the stake in Rome for his

stubborn heretical beliefs, among which was the heliocentric solar system!

Galileo Galilei observed in 1604 that Copernicus had been right. Through the telescope, he observed that the earth and other planets DO revolve around the sun.

But the clerics of that day did not agree. Martin Luther lambasted the heliocentric or sun-centered solar system. He reasoned that since Joshua had commanded the sun to stand still, it must have been the sun which was moving around the earth. One archbishop of the Catholic Church lampooned the followers of Galileo with a Scriptural pun: "Ye men of Galilee, why stand ye gazing up into the heavens?" he asked, quoting *Acts 1:11* in the New Testament.

During the Inquisition, the Catholic Church resisted the pressures of rational thinking men with the pronouncement: "If earth is a planet, and only one among several planets, it cannot be that any such great things have been done specially for it as Christian doctrine teaches. If there are other planets, since God makes nothing in vain, they must be inhabited; but how can their inhabitants be descended from Adam? How can they trace their origin to Noah's ark? How can they have been redeemed by the Saviour?" (*Ibid.*, p. 28).

Galileo's theory was branded by the Church as "of all heresies the *most abominable*,



the most pernicious, the most scandalous."

During the Middle Ages when *ecclesiastical authority* reigned supreme, the science of geology was attacked as "a dark art," as "infernal artillery," and as "calculated to tear up in the public mind every remaining attachment to Christianity" (P. 53). When scientists accumulated data to show the earth is far older than Archbishop Ussher's date of 4004 B.C., they were vigorously assailed as "infidels," as "atheists," and "heretics."

Archbishop Ussher had concluded from his studies of the *Bible* that Creation must have been October 23, 4004 B.C. When fossil evidence was unearthed to indicate the earth was far older than that, the fossils were dismissed by some Church leaders as deliberate deceptions of the devil!

Unfortunately, some of this Medieval thinking still exists, today. Galileo, Copernicus, Kepler, Newton -- these men were willing to challenge the dogmas of their day. They were called buffoons, they were labeled heretics, they were held up to shame and contempt by ecclesiastical authorities. But they advanced the cause of TRUTH.

Today, too, we must at times take up shield and sword of the mind and spirit and CHALLENGE the Goliaths of modern dogma and conventional orthodoxy.

We must remember the impassioned words of Oliver Cromwell, ruler of England centuries ago, when he said: "I beseech you, in the bowels of Christ, think it possible you may be mistaken."

Blinders On Their Eyes

Why is it that people sometimes insist upon wearing blinders upon their eyes? Why won't they READ, STUDY, LEARN, COMPARE, CHALLENGE, and "PROVE ALL THINGS," holding in abeyance things which they cannot prove one way or another? Why do people insist upon dogmas? The attitudes of many people is like the nervous captain of a ship lowering the anchor down to twenty feet, and then assuming that it must have reached bottom, because that's all the line left on the anchor!

In 1832 citizens of Lancaster, Pennsylvania refused to allow their schoolhouse to be used for a discussion about railroads. They said: "Railroads are impossible and a great infidelity. If God had intended that his intelligent creatures should travel at the frightful speed of 17 miles an hour by steam he would have foretold it in the Holy Prophets. Such things as railroads are devices of Satan to lead immortal souls down to hell."

Some religious people, today, still ascribe the entire geologic record to the Flood of Noah's time. Theologians used to turn to the Flood to explain the effects of erosion, mountain

building, volcanism, and fossil remains. In the infancy of geological science, such a tendency could be well understood, and even pardoned. But, today, after TONS of geologic evidence, it seems strange that some religious folk still cling to the outdated, antiquarian notions of the pre-scientific age. In order to rigorously cling to their notions of the Flood and a shortened chronology of the earth, they reject almost all the evidence of 150 years of geological investigation!

But we should not condemn them too strongly, because on the other side of the fence we have the Neo-Darwinian evolutionists and the school of anti-catastrophism -- those MUDDLE-HEADED GEOLOGISTS and PALEONTOLOGISTS who have been BRAINWASHED to the exact opposite conclusion. That is, they stand on "uniformitarian" geology, and will not admit to any earthshaking, global catastrophes in the past. They discount ALL human testimony, all traditions, all legends from around the world; they IGNORE or attempt to explain away all evidence of a geological nature which supports any kind of catastrophism. Uniformitarian theory has, for all practical purposes, become to them ANOTHER RELIGION.

What we see, then, is dogmatic individuals with BLINDERS on clinging to two opposing viewpoints, neither of which is right, neither of which is supported by the facts. Both unwilling to compromise,

adamant in their authority, staunch in their belief. BOTH interpreting the evidence to fit their own theory.

I take issue with both the neo-Creationists who REFUSE to accept the evidence of an earth which has existed for millions of years, and also with the neo-Darwinists who REFUSE to admit the striking geological evidence for Creation.

Why does it seem so difficult for people to obtain a balance? Why do we humans become so emotionally involved with a particular belief, afraid, nervous, fearful and glandular? Emotional attachment to a false world concept, or fable, is a DANGEROUS thing. It is a little like falling in love with the wrong person -- it hurts.

Infatuation with a false belief or theory can hurt just as bad as romantic infatuation. After the honeymoon, the young couple have to deal with reality. If they were hasty, and rushed into marriage with the wrong person, the trauma and life long pain and regret can be considerable. Even so, if you have clung to out-moded beliefs, or concepts which are not really in the Scriptures, unlearning that false "knowledge" can be difficult and painful at times. It is much more difficult to unlearn false beliefs than to learn something right the first time!

So it is with geology and the existence of the world before Adam's time.

Overwhelming Evidence

All the geological and paleontological evidence PROVES beyond the slightest scintilla of a doubt that THERE WAS A WORLD BEFORE ADAM. Most of the dating techniques of scientists -- uranium-argon, potassium-thorium, racemization and thermaluminescence -- as well as observation and logic -- conclusively show that the rocks under our feet, the bones of ancient animals, and even the charcoal campfires of Paleo-Indians, Neanderthal man, and other ancient hominid remains, are MUCH OLDER than 6,000 years. *There was a world before Adam.* In fact, there were MANY ages before Adam, and these ages can be carefully distinguished through the study of paleontology, paleo-ecology, and related scientific disciplines.

The evidence is INDISPUTABLE. Many independent dating techniques demonstrate that various hominid creatures lived about 500,000 years ago. More primitive types lived as long ago as 1-2,000,000 years. Those creatures, in some cases, were FAMILIAR with fire, used crude chipped stone tools such as hand axes, notched and saw-toothed implements, scrapers, engravers. They were PRE-ADAMIC CREATURES living in a PRE-ADAMIC WORLD. A world which ended in a great catastrophe.

And before their time, OTHER worlds existed. The world of the dinosaurs ended about 70,000,000 years ago.

The evidence is INDISPUTABLE. Many independent dating techniques demonstrate that various hominid creatures lived about 500,000 years ago. More primitive types lived as long ago as 1-2,000,000 years.

That world, too, ended in a cosmic catastrophe.

The pre-Adamic world was a world of growth, change, and progress. It was a world where new life forms were introduced from time to time.

The fact that this world has been in existence for many millions of years is no longer a matter for debate. It is academic. Any serious author, today, must face squarely the many indications of *time* found in the geological record.

Neo-Creationists believe we must choose either the *Bible* or science, particularly scientific dating methods. One typical Neo-Creationist argues:

"The Bible-believing scientist must face squarely the question, In the area of natural science which shall supersede, the clear assertions of God's inspired Book, or modern man's interpretation of what he thinks he sees in nature?"

This particular author continues: "According to Bible chronology only a few thousand years have passed since the creation of the ancestors of our modern plants and animals... Contrariwise, if one accepts the assumption that the inorganic radioisotope clocks were reset wherever they became associated with fossil-bearing material, then apparently at least 600 million years have passed since plants and animals first appeared successively from that time over a duration of some 600 million

years" (Frank Lewis Marsh, *Life, Man and Time*, pp. 67-68).

The truth is, there is NO CONTRADICTION between the Biblical record and scientific knowledge of the earth's past. Those who wish to uphold the *Bible* in the face of new evidence regarding early hominids, homo erectus, homo habilis, or other discoveries of Primitive Man-like creatures, need not worry. There is NO EVIDENCE that such creatures evolved into Modern man. Rather, they lived long ago in a world BEFORE ADAM WAS CREATED -- another world -- another age -- another time.

Such discoveries tell us much about the ancient history of the earth. They tell us nothing, one way or the other, about the Scriptures.

Creation and Recreation

In the pages of Genesis, as it relates to the original creation of the universe, we read the simple, matter-of-fact statement: "In the beginning, God created the heaven and the earth" (*Genesis 1:1*, King James Version). The *Amplified Bible* renders this verse: "In the beginning God (prepared, formed, fashioned,) and created the heavens and the earth." The *Good News Bible* states: "In the beginning, when God created the universe..." The *Moffatt Translation*: "When God began to form the universe..." The *Goodspeed Translation*: "When God began to create the heavens and the earth..."

What exactly does the book of *Genesis* tell us? That God created the universe -- the heavens and the earth -- in a period of time called, simply, "the beginning." How long ago that primeval creation occurred we are not told anywhere in the Scripture. To determine that, God has given us brains and intellect!

That time of beginning could well have been six to ten billion years ago. Astronomers calculate that a "Big Bang" took place at that time, out of which the entire cosmos was created.

Verse two of *Genesis*, chapter one, continues:

"And the earth was without form, and void; and darkness was upon the face of the deep" (*King James Version*).

Is this verse describing the ORIGINAL creation as being formless and void? If so, it would seem a contradiction. Verse one tells us God created the heavens and the earth. When God creates something, it is beautiful, grand, and majestic. In the 38th chapter of the book of *Job*, we read:

"Where wast thou when I laid the foundations of the earth? declare, if thou hast understanding. Who hath laid the measures thereof, if thou knowest? or who hath stretched the line upon it? Whereupon are the foundations thereof fastened? or who laid the corner stone thereof? When the morning stars sang together, and

Verse 16 of Genesis one does NOT describe the sun and moon and stars being created on the fourth day. How could light have been created on the first day, but the sun and stars which IMPART LIGHT not till the fourth day?

all the sons of God shouted for joy?" (vs. 4-7).

If the original earth had been created a chaotic ruin, formless and void, the angels would not have "sang together" or have "shouted for joy."

Isaiah 45:18 adds more light on this enigmatic passage. The prophet declares: "For thus saith the Lord that created the heavens; God himself that formed the earth and made it; he hath established it, he created it *not in vain*, he formed it to be inhabited: I am the Lord; and there is none else" (*King James Version*).

The Hebrew word translated "vain" here is *tohu* and means "to lie waste," "a desolation," "a desert." It can also be translated "confusion," "empty place," "without form," "nothing," "wilderness." It is the very same word used in **Genesis 1:2**, where we read the earth "was without form."

One place says God created the earth and it "was without form"; in another place we read God did **not** create the earth "without form." Is this a contradiction? Not at all!

The KEY to understanding this apparently complex problem lies in the little word "was." It can also be translated "BECAME." In fact, in **Genesis 19:16** it is translated "became." We read: "And Lot's wife *became* a pillar of salt."

What happened, then, is this: When God originally created the earth, it was indeed a lovely place. He created it with no waste, no wilderness, no desolation. It was inhabited. The angels leaped for joy, and shouted with admiration and enthusiasm when they beheld the primeval earth.

But then something happened. It *became* "tohu" -- that is, waste, a ruin, a desolation. The original earth suffered a great cataclysm -- a cosmic catastrophe. The Hebrew words translated "without form and void" in **Genesis 1:2** literally mean a desolation, a wilderness, an empty, uninhabited ruin. These words, *tohu* and *bohu* are very strong words and denote CATASTROPHE. They strongly suggest that some sort of primeval cataclysm, or several such cataclysms, occurred.

Destruction!

Paroxysm!

Chaos!

Scripture gives no data for determining HOW LONG AGO the universe was created. And in the first chapter of **Genesis**, it only records THREE creative acts: 1) the heavens and the earth (verse 1); 2) new animal life (verses 20-21); and 3) human life, Adam and Eve (verses 26-27). The first creative act referred to the DATELESS PAST. The creation of NEW forms of animal life, and Adam and Eve, occurred approximately 6,000 YEARS AGO. Obviously, then,

the first chapter of Genesis is not describing the original creation of the heavens and earth as occurring in seven consecutive days.

After the chaos and destruction which occurred, in verse two of *Genesis* one, God began a process of re-creation, reconstruction, if you please, which lasted for seven days. Verse 16 of *Genesis* one does NOT describe the sun and moon and stars being created on the fourth day. How could light have been created on the first day, but the sun and stars which IMPART LIGHT not till the fourth day? The original Hebrew for "made" in verse 16 actually means "made to appear, made visible." The sun and moon were created "in the beginning." The light came from the sun, of course, but the VAPOR in the earth's atmosphere diffused the light. After the great cataclysm, the earth was cut off from the light of the sun, moon and stars. Darkness prevailed everywhere. As verse two says: "And the earth was (BECAME) without form and void (TOHU and BOHU); and DARKNESS was upon the face of the deep. And the spirit of God moved upon the face of the waters."

What do we see then? An earth destroyed, in pitch darkness, covered by water, the continents submerged, due to some great cataclysm.

During the process of RECONSTRUCTION or RE-CREATION, God first caused the light from the sun to

penetrate the atmosphere once again, in a DIFFUSED manner (*Genesis 1:3-5*), allowing day and night to become discernible. He created order in the atmosphere (verses 6-8). He caused the dry land to appear once again (verse 10). He caused the earth to once again bring forth life, plants, vegetation, of all kinds. As the turgid clouds and atmospheric disturbances cleared away, He caused the sun, moon and stars to once again become visible from the earth's surface (verses 14-18).

Then, having REFASHIONED the surface of the earth, and having prepared it, God created NEW living creatures -- NEW animal life of all kinds, from great whales to small fish, from elephants to rodents, from flying birds to flying fish and insects -- to REPOPULATE the earth, and to REPLENISH it (verses 20-25).

Something had happened to the Pre-Adamic earth. It had been overwhelmed in a MIGHTY CATASTROPHE, or a long series of catastrophes, which is briefly described in verse 2 of *Genesis* chapter 1.

But what happened?

The world before Adam came to an ABRUPT, screeching end. It was cut short by flooding and upheaval, stroke upon stroke of catastrophe. This one short enigmatic, much misunderstood verse of the *Bible*, contains within its cryptic message a story that will amaze you. This one little verse may hold a CLUE as to

what happened to the earth, after the original time when it was created, beautiful, and to be "inhabited," and before the time of Adam and Eve, when it had to be refashioned, reshaped, refurbished, and rebuilt.

This one verse, in essence, may cover a time span of MILLIONS of years. If God originally created the earth six to ten billion years ago, and over millions of years created VARIOUS and sundry life forms, causing them to become buried in massive burials to form deposits of coal, peat, and oil and natural gas; if He spent millions of years preparing the world for the eventual time when He would create Man IN HIS OWN IMAGE [not some amorphous BLOB]; who are we to complain?

Vast Periods of Time?

Vast periods of time, and many successive ecological niches, had to exist in the earth, for algal reefs of hundreds of feet to grow in place. Much time was required for vast quantities of vegetation to live, grow, and die, and to become entombed, to create vast deposits of coal in Kansas, Oklahoma, Illinois, Indiana, Kentucky, West Virginia and Pennsylvania.

This vast period of time God put to good use.

As Robert Macdonald shows, in a paper entitled "Geology":

"The fossil record contains hundreds of zones, each with its own particular faunal assemblage. What is the chance that such an invariant worldwide sequence of life forms could be built up if they all lived CONTEMPORANEOUSLY, and the sequence in which they are found were only a burial order? How could a burial order based not on water sorting, but on environments do the job?...

"Suppose that in a worldwide catastrophe, one group of organisms were brought in from one area and deposited, then another assemblage from another area were deposited on top of that, and so on. A local sequence of life forms would be built up. But the chances would be against the deposition of fossils in the same order in a local sequence in another area. Consider the chance that the same order would occur in all sequences worldwide. It would be NIL!

"There is NO WAY to account for the sequence in faunal succession by ONE catastrophe. Nor is there any way to account for this sequence by a SERIES of catastrophes, or by a LONG DRAWN-OUT catastrophe. If all these Paleozoic and Mesozoic organisms were contemporaneous, there would inevitably have been some mixing of early and late forms.

"The ONLY explanation is that each geologic horizon does indeed represent a DIFFERENT time in the past during which a unique assemblage of life forms was living and being

deposited in many parts of the world. Slow or incremental deposition is therefore essential to give time for worldwide changes in populations of fauna whose remains preserved as fossils vary from one stratum to another."

During the geologic ages of the earth's past, life went on in a normal fashion for millions of years. Fossil reefs obviously grew in the place in which they are found. Standing trees, with their roots in place, tracks and trails both on land and on the sea bottoms, layer upon layer containing burrows and borings made by animals just as they do in the sea-bottoms today, all show that most of the geologic column was created OVER MILLIONS OF YEARS, not in the Flood of Noah's time, or some other isolated catastrophe.

Although the record in the earth's strata clearly shows that great catastrophes did take place, in the earth's past, the record also shows that there were periods of millions of years in which no violent cataclysms occurred. During these calm, relatively nonviolent periods, great CREATIVE PROCESSES were going on. Cyclothem of coal were formed. As Macdonald points out, coal is commonly found in a sequence of beds called a cyclothem -- a cycle of beds repeated over and over again, perhaps dozens of times. Much time would be needed for such deposits to be made, one on top of another.

"I therefore do not consider the pre-Adamic world as a series of creations, but one creation, even though the acts of new life forms were not all simultaneous."

The Pre-Adamic World

How, then, are we to understand the "Pre-Adamic world"? What was it like?

Robert Macdonald gives a good answer:

"The fossil record shows that new organisms appeared in the record from time to time, and at other times groups of organisms have become extinct. This shows that at times God created new organisms, and at other times, species were destroyed or allowed to die out. There is a continuity to this pre-Adamic world. It would appear that there is no record of the COMPLETE destruction of all life during that period before Adam."

Macdonald continues: "I therefore do not consider the pre-Adamic world as a series of creations, but one creation, even though the acts of new life forms were not all simultaneous.

"Why the sequence of life we find in faunal succession? What possible reason could there be for God creating the organisms of the pre-Adamic world 'by stages' instead of all at one time? Perhaps a better question would be 'Why a pre-Adamic world at all?' Human answers to these questions are bound to be somewhat speculative since God has not revealed this knowledge, but a few ideas have been proposed.

"It has been suggested that there was pre-Adamic life so that the *angels* could have

something to rule over and work with. This seems a likely possibility, but there must be more to it."

Robert Macdonald goes on:

"The first life forms created apparently were bacteria, algae and possibly worms, 'simple' organisms that could survive in a barren and sterile environment. The points in the sequence which mark the first appearance of new life forms indicate where God created new species, and added them to an already viable ecological system. These new organisms were added from time to time as the environment became prepared for them by the former ecological system.

"The succession of life forms added by creation was one of generally increasing complexity and size. Thus the sequence observed in faunal succession was not a result of evolution, but one necessitated by practicality. It took a few 'simple' small varieties of organisms in the beginning to prepare the way for more numerous varieties of larger and more complex organisms, and so on."

Macdonald asserts:

"Understanding the reasons for this sequence imparts an understanding of at least one possible purpose of the pre-Adamic creation -- to prepare the earth for man. This preparation was not only of the environment, but also of the fossil fuels and our mineral resources which

made possible the industrial revolution."

The world before Adam can only be understood by studying the evidence of that world contained within the earth's strata. The Scriptures allude to such a world in the very briefest of terms. But there is not a word in the Bible that would lead one to understand that physical life on earth existed before Adam. The *Bible* is largely silent about that ancient world. It remains, therefore, for the study of geology and paleontology to guide us and to provide information about that by-gone world.

The fact that geology shows us that various forms of animal and plant life became extinct, at different periods of the earth's geologic past, would indicate that God allowed these extinctions for a purpose. At times, to accomplish His purpose, the extinctions were widespread and general, and involved catastrophe.

At the end of the Cretaceous period, the dinosaurs were exterminated. However, frogs, turtles, lizards, snakes and crocodiles CONTINUED ON THROUGH the boundary, into a new world. The destruction, although vast and global in nature, was NOT universal.

Fundamentalists, who attempt to account for all life remains and fossils within the past 6,000 years, simply dismiss the 100 miles of evidence in the geologic column!

Even more embarrassing to Creationists of the old school, however, is the **PERVERSE FACT** that more than one dating method reveals the same essential **TRUTH** of the antiquity of fossil man.

As Bertrand Russell, the famous philosopher, once wrote: "The world was created in 4004 B.C., complete with fossils, which were inserted to try our faith. The world was created suddenly, but was made such as it would have been if it had evolved. There is no logical impossibility about this view. And similarly, there is no logical impossibility in the view that the world was created five minutes ago, complete with memories and records" (*An Outline of Philosophy*, p. 27).

Theodosius Dobzhansky, professor of genetics at the University of California, at Davis, and professor emeritus at the Rockefeller University, points out it is foolish to try to make the **Bible** into a primer on natural science. If *all* the radiometric evidence is wrong, if the duration of the geological and paleontological record is grossly distorted, he adds, then the Creator must have seen fit to play deceitful tricks on geologists and biologists. If fossils were placed by the Creator where we find them now, so as to deliberately give the appearance of great age and antiquity, then God must be absurdly deceitful. Dobzhansky added: "This is as revolting as it is uncalled for."

Sir Albert Einstein once said, "I shall never believe that God plays dice with the world." The God revealed in the pages of the **Bible** is a loving Creator. He is not malicious, spiteful, capricious, or a "Practical Joker." Nor is He a cosmic Magician pulling rabbits out of a hat.

The God of the **Bible** is a Creator -- a Builder -- a Designer -- an Architect, Engineer, Supreme Draftsman, and Originator. Everything He does it with plan and purpose. NOTHING is haphazard. His original creation was PERFECT. And every addition He has made was PERFECT, for the purpose for which He designed it.

Creation is an ongoing process. It is still continuing, today. Each new life which is born is, in effect, a "new creation."

Embarrassed Creationists?

In the book of Genesis we read the account of the creation of man. The chronicler relates: "Then God said, 'Let us make man **IN OUR IMAGE**, after our likeness; and let them have dominion over the fish of the sea, and over the birds of the air, and over the cattle, and over all the earth, and over every creeping thing that creeps upon the earth.'

"So God created man **IN HIS OWN IMAGE, IN THE IMAGE OF GOD** he created him; male and female he created them" (*Genesis 1:26-27, RSV*).

More information is given in chapter 2, verse 7: "Then the Lord God formed man of dust from the ground, and breathed into his nostrils the breath of life; and man became a living being."

Is this creation account mere legend? ancient

mythology? Or is it factual -- literal -- historical?

How does the evidence of paleontology relate to this question?

A person searching for TRUTH must recognize that he must not prejudge an issue before he gets all the facts -- before all the available evidence is in. And he must be willing to change his views if at any future time new evidence comes along which controverts his previous conclusions.

So it is with the field of anthropology and early man and dating techniques as they have been applied to fossil man. In past years, most if not all creationists have argued that radiometric dating methods, particularly RADIOCARBON dating, must be in absolute error because they would indicate that the earth is much older than 6,000 years. Also, POTASSIUM-ARGON dating, and radiocarbon dating, using this reasoning, must a priori be in error because they show that early man lived on the earth for anywhere FROM 40,000 YEARS TO THREE OR FOUR MILLION YEARS.

Potassium-argon dating methods have been used to date geologic material associated with remains of HOMO ERECTUS and NEANDERTHAL MAN. If these creatures are true men, and if the dates are essentially accurate, then man has indeed been on the earth for many scores of thousands of years, as

anthropologists insist on telling us. And they don't have any ax to grind; they are merely reporting what they find in the fossil fields of the earth. They are not striving to prove evolution. They DID NOT invent these dating methods merely to embarrass creationists.

Even more embarrassing to creationists of the old school, however, is the realization that more than one dating method APPEAR to reveal the same essential TRUTH of the antiquity of fossil man.

Creationists continually assert that radiocarbon dating is a fraud; is unreliable because of the Noachian deluge; is based on false assumptions related to the influx of cosmic rays into the earth's atmosphere; and is therefore untrustworthy and must be categorically rejected.

As if that were not enough to disturb the quiescent theories dates for the last 8,000 years have been carefully examined and tested by comparison with tree-ring dating methods, or DENDROCHRONOLOGY. And to the consternation of most creationists, the two methods APPEAR to be IN GENERAL AGREEMENT as far back as they have been compared!

As if that were not enough to disturb the quiescent theories of creationists, and give them nightmares in their sleep, now a new dating method has entered the field -- RACEMIZATION, or the comparison of the proportion of D amino acids in

fossil remains with L amino acids. This new, totally INDEPENDENT dating method, unfortunately, APPEARS to agree with dendrochronology and radiocarbon 14 dating and potassium-argon dating, and APPEARS to provides an independent check on the other systems.

What does all this mean?

Pity the poor creationist who believes that the earth was just created by divine fiat 6,000 years ago because that is what he thinks, sincerely, the *Bible* says.

Such discoveries have rocked the faith of many erstwhile believers in the Bible and the inspiration of Scripture. But do such discoveries really CONFLICT with revelation? Is there really a CONTRADICTION in the Biblical revelation and the apparently well attested, authenticated discoveries of paleontology?

It is time we re-examine some of the basic theological premises we have taken for granted and assumed to be true without adequately testing them by the *Bible* record itself. It is also time to re-examine some of the pet theories of the evolutionists and the dating methods they use to determine the age of the fossils they uncover!

Radiocarbon Dating

In 1963 two British scientists, Don Brothwell of the British Museum and Eric Higgs of Cambridge, took stock of the many methods developed up to

that time to answer archaeological questions, including dating methods. Only twenty years before that time, nobody would have dreamed of such scientific discoveries relating to the dating of artifacts.

Of all the dating methods, C-14 or radiocarbon dating has created the greatest interest to date. Developed by Willard F. Libby of the University of Chicago -- between 1941 and 1945 Libby participated in the development of the atomic bomb -- this method of dating has become the touchstone of all fossil dating up to 40,000 years.

Libby postulated that cosmic ray-produced radiocarbon might be a key to age determination. Supposing that C-14 atoms produced by cosmic rays would be readily oxidized to carbon dioxide and would mix freely with the atmospheric carbon dioxide, and because of the rapid turnover of the earth's atmosphere, Libby assumed the radiocarbon portion of carbon dioxide would achieve uniform global distribution, and would logically be taken up in the same proportion by all plant life during photosynthesis. All animal life, which indirectly or directly lives off of plants and vegetation could also be expected to contain the same UNIVERSAL proportion of C-14. Similarly, even sea life would be thus affected, because carbon dioxide of the atmosphere is in exchange equilibrium with the oceans.

Adds E.H. Willis, "Upon the death of an organism, further

uptake or exchange of radiocarbon would cease, leaving the trapped radiocarbon to decay exponentially with time" (Brothwell, Don, and Higgs, Eric, *Science in Archaeology: A Comprehensive Survey of Progress and Research*).

Simply explained, cosmic rays continually bombard our planet earth. Upon striking our atmosphere, neutrons are produced that react with atoms of nitrogen in our atmosphere, creating tiny quantities of C-14. This newly formed C-14 forms a chemical bond with oxygen as the polymer carbon dioxide. Plants cannot distinguish between carbon dioxide containing radiocarbon and the normal kind and absorb both into their tissues and convert them into food by photosynthesis. Animals and men eat the plants. Thus C-14 passes into the body of every living thing.

Since C-14 is radioactive, and radioactive substances decay at FIXED rates, it is possible to determine that after a specified amount of time the amount of radioactivity in a substance will be reduced exactly one half, or one fourth, and so on. This is called the "half life" of the radioisotope.

The half life of C-14 was at first thought to be 5,567 years. Thus a tree cut down 5,568 years ago theoretically ought to produce only half as many Geiger counter ticks as one chopped down today, because it would have exactly half as much radiocarbon remaining in its tissues.

Libby's theory was quickly thought to be confirmed. Comparisons of radiocarbon dates of material with dates derived archaeologically often turned out to be strikingly similar.

In January 9, 1948, the first conference took place to study the usefulness of Libby's method for archaeology. After that time, a flood of materials from the world over poured into Dr. Libby's lab to be analyzed. Bits of Egyptian mummies, charcoal from an ancient caveman's fire, the tooth of a mammoth, a piece of a beam of a Hittite temple, and hundreds of other objects, were tested.

Libby's theory was quickly thought to be confirmed. Comparisons of radiocarbon dates of material with dates derived archaeologically often turned out to be strikingly similar. Although Libby always estimated an uncertainty factor of about ten percent in his datings -- thus a piece of wood 4,000 years old would be said to be 4,000 plus or minus about 400 years -- Libby's method helped archaeologists pin down dates which could not otherwise be determined.

It is not possible, however, to give PRECISE radiocarbon dates in practice because of UNCERTAINTIES involved in the measurement of samples. As a result, C-14 dates are always quoted with what is called a "Standard Deviation" which represents their degree of accuracy. "For example, a date of 1,000 BP (Before Present) with a Standard Deviation of fifty years has a 68.3 per cent chance (*one* Standard Deviation) of lying between 950 and 1,050 BP, a 95.3 per cent chance (*two* Standard Deviations) of lying between 900 and 1,100 BP, and a 99.8 per

cent (*three* Standard Deviations) of lying between 850 and 1150 BP" (Peter James, *Centuries of Darkness*. New Jersey: Rutgers University Press, 1991. Appendix I, p. 322).

Unfortunately, a large number of problems have been encountered in applying C-14 dating to ARCHAEOLOGY. First, the vast majority of results have a Standard Deviation greater than 50 years in practice, so that single dates for excavations are of LITTLE VALUE where a century or two is often the scale of the debate. Therefore, the accepted practice today, where C-14 samples are actually taken, is to produce a SERIES of dates for each site.

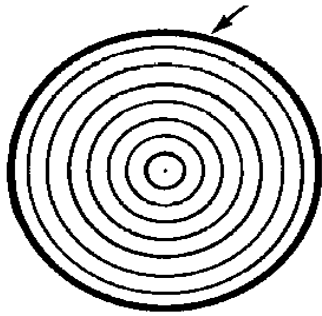
Second, in certain circumstances OLD CARBON can be absorbed by living organisms and produce radiocarbon dates that are TOO OLD. Notes author Peter James: "For example, VOLCANOES often release OLD CARBON before their eruption, something which may well be a contributory source of CONFUSION in the debate over dating the explosion of Thera [in the Aegean]" (*Ibid.*, p. 323). The dating of both shellfish and reeds create further problems because they are affected by the presence of OLD CARBON in seawater and freshwater respectively. Ironically, archaeologists tried to apply C-14 dating methods to reeds in Egypt because of their use as a bonding material in the brick walls of temples and tombs.

Several difficulties are encountered when assessing the CLOSENESS of the association between dated samples and the event for which a date is required. Because of its presence in large quantities on most archaeological excavations, CHARCOAL is commonly used to produce the vast majority of radiocarbon dates. This is primarily due to the fact that in acid soils charcoal is usually about the only organic material to survive.

As Peter James explains, "there are TWO distinct problems related to the use of CHARCOAL. One is that large WOODEN BEAMS used for construction may well be fashioned from trees which had grown for several hundred years. If the building is then burnt down, the OUTER PART of the timbers will be destroyed, leaving behind pieces from the CENTRE of the beams. If these remaining sections of the original timbers are then sampled for radiocarbon dating they will give a FALSELY OLD READING...Of course, if the timbers were REUSED from older buildings the discrepancy would be even greater" (*Ibid.*). Dendrochronologist Peter Kuniholm produced a good example of this when he dated a house in the Phrygian capital on the city mound at Gordion. While one group of timbers had been felled in the 7th century B.C., "three other pieces were cut about FOUR CENTURIES EARLIER. If only the latter had been collected the result would have been an entirely ERRONEOUS notion

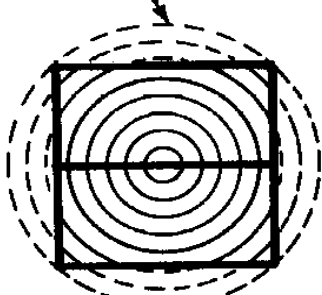
This EQUILIBRIUM is vital to the theory! The production of C-14 MUST equal the amount leaving the system in disintegration if this method of dating is to be valid.

Date of felling given by outer ring (bark)



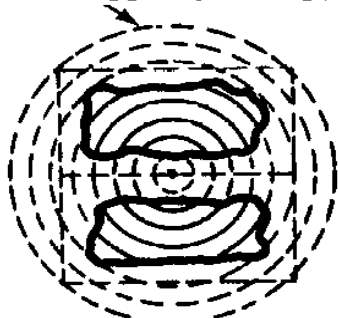
**Section of log
as felled**

Date of felling given by outer ring (bark)



**Beams
as cut for use**

Date of felling given by outer ring (bark)



**Datable wood
after rotting/burning**

about the date of [the building]" (*Dendrochronology and Radiocarbon Dates for Gordion and Other Phrygian Sites*, 1988).

R.B. Warner, writing in the *Ulster Journal of Archaeology*, explained that the other problem with CHARCOAL SAMPLES is that many C-14 dates have been produced by collecting together large amounts of FRAGMENTARY charcoal. The problem with this is that fragmentary charcoal can easily be moved around sites by continuing activity and differs from bones in that the CONDITION of the sample cannot indicate how QUICKLY it was buried. "The consequence of these two drawbacks is that it has been argued that the estimate of the potential AGE-LAPSE between a sample and the stratum in which it was found should be around 200 years in the case of charcoal from long-lived species of trees" (Peter James, *Century of Darkness*. P. 324).

In the more recent historic period -- the last 2,000 years or so -- radiocarbon dates generally agree with historical dates. So with the seeming success of radiocarbon dating in this period, Libby cautiously stated that "in terms of physical principles of course, a method which works for three thousand years might extend all the way to fifty thousand...."

He went on to admit, "However, this is MERE CONJECTURE" (Willard F. Libby, "History of Radiocarbon Dating," *Symposium on Radioactive*

Dating and Methods of Low Level Counting, March 1967, p. 24).

He was in for a shock!

Writing in the January 1956 issue of the *American Scientist*, Dr. Libby briefly related the history of C-14 dating: "The first SHOCK Dr. Arnold and I had was that our advisors informed us that history extended back only 5,000 years.

"We had thought initially that we would be able to get samples all along the curve back to 30,000 years, put the points in, and then our work would be finished.

"You read in the books and find statements that such and such a society or archaeological site is 20,000 years old.

"We learned rather abruptly that these numbers, these ancient ages, are not known; in fact, it is at about the time of the first dynasty of Egypt that the earliest historical date of any real certainty has been established. So we had, in the initial stages, the opportunity to check against knowns, principally EGYPTIAN ARTIFACTS, and in the second stage we had to go into the great wilderness of pre-history to see whether there were elements of internal consistency which would lead one to believe that the method was sound" (Willard F. Libby, "Radiocarbon Dating," *American Scientist*, Vol. 44, No. 1, Jan. 1956, p. 107).

But what about the "historical" dates? According to the most liberal estimates Egyptian history begins approximately 5,000 years ago. Some historians, with good reason, believe that Egyptian history does not extend that far into the past. The idea that the various Egyptian dynasties (as recorded by the Egyptian priest Manetho) existed consecutively in time has been seriously questioned by many scholars and is, in fact, totally in ERROR.

This very fact alone has a tremendous bearing on the radiocarbon method of dating. If the dates propagated by the history books are in error, what is there for Libby to hang the accuracy of his dating method on? Without KNOWN historical dates to check an object to be dated against, how can we know for certain that the indicated radiocarbon years are the same as actual calendar years?

And what about dating artifacts OLDER than 5,000 years?

"There was only one way to check the reliability of radiocarbon dating over a longer span," noted archaeologist Edward S. Deevey, Jr., "and that was to test it on the materials of GEOLOGY and PREHISTORIC ARCHAEOLOGY. The age of such materials is not 'known' in the same sense as that of mummy cases or trees [and these are suspect]" (Edward S. Deevey, Jr., "Radiocarbon Dating," *Scientific American*, Vol. 186, No. 2, Feb. 1959, p. 25).

The bottom line is that there are no ACCURATE historical dates over 3,000 years with which to check Libby's dating method. Radiocarbon was entirely alone.

Dr. Libby was forced to make this point clear by heavily QUALIFYING his statements. But most books on evolution -- and also history and archaeology -- simply gloss over such points as if they didn't matter. Laymen are led to believe that the radiocarbon dating method is infallible -- just like the Pope!

If this was not enough, there is a HUGE ROADBLOCK to the accurate determination of dates using this dating method -- C-14 EQUILIBRIUM!

When cosmic-ray particles collide with the earth's atmosphere, free neutrons are produced that react with nitrogen atoms. A neutron, when it enters the nitrogen nucleus, knocks out a proton -- which changes the nitrogen atom to a C-14 atom.

Dr. Libby calculated the PRESENT PRODUCTION RATE of these C-14 atoms, and postulated that if this rate has been going on for thousands upon thousands of years at its PRESENT rate, then the following evidence MUST be found:

"If this production has proceeded at a constant rate for many thousands of years, then the amount of C-14 present on the surface of the earth should reach a CONSTANT value" ("Radiocarbon Dating,"

McGraw-Hill Encyclopedia of Science and Technology, 1966 edition, Vol. 11, p. 291).

Libby himself commented on this "constant" value or amount: "...We can see that IF the cosmic rays have been bombarding the earth in essentially THEIR PRESENT INTENSITY for 10 or 20 thousand years, we can expect that a STEADY-STATE CONDITION had been established, in which the rate of formation of carbon-14 is EQUAL to the rate at which it disappears" (Willard F. Libby, "Radiocarbon Dating," *American Scientist*, Vol. 44, No. 1, Jan. 1956, p. 99).

If this ASSUMPTION is correct, the C-14 ratio of any ancient specimen or artifact could be related to the PRESENT ratio of C-14 in modern specimens. Dating then becomes very simple. *IF NO OTHER UNKNOWN FACTORS* had disrupted the method, a radiocarbon year would equal a calendar year.

This EQUILIBRIUM is vital to the theory! The production of C-14 MUST equal the amount leaving the system in disintegration if this method of dating is to be valid. However, it takes a LONG TIME to bring the C-14 level into equilibrium.

If the system is not yet in equilibrium, it simply means that not enough carbon-14 has been produced to match the decay of this atom. It also means that old dates determined by this method would therefore be MUCH MORE RECENT!

Is C-14 equilibrium a fact? Is this dating method viable?

Dr. Libby, and those working with him, estimated that there were 18.8 atoms of radiocarbon being produced every MINUTE, per gram of carbon.

Now, logically, if there were an equilibrium between the rate of production and disintegration, LIVING samples should show a disintegration rate of 18.8 C-14 atoms per minute per gram of carbon.

Can this be verified?

When 18 samples taken from various latitudes were analyzed, they did NOT show an equilibrium! The disintegration rate of the sample only averaged 15.3 disintegrations per minute per gram; therefore the production rate was almost 19 % greater than the rate of disintegration!

Libby himself preferred a value of 16.1 (the value for sea shells) for the disintegration rate -- even though the average for organic specimens was 15.3. This still represents a sizable discrepancy -- almost 15% between the production rate and the disintegration rate.

Why is it so IMPORTANT to have this equilibrium? Again, Dr. Libby puts his finger on the crucial point:

"If one were to imagine that the *cosmic radiation had been turned off until a short while ago*, the enormous amount of

radiocarbon necessary to the equilibrium state WOULD NOT have been manufactured and the specific radioactivity of living matter would be MUCH LESS than the rate of production calculated from the neutron intensity" (Willard F. Libby, *Radiocarbon Dating*, Chicago: University of Chicago Press, 1955, p. 8).

Yet, the 18 samples from the various latitudes indicated that equilibrium has NOT YET BEEN REACHED. If this is so, the cosmic system may have been turned on just A SHORT TIME AGO! This, of course, has other implications

The fact is, there simply may not have been enough elapsed time to produce the amount of radiocarbon necessary to bring the system into steady-state equilibrium.

If this is true, how would it affect the radiocarbon dating method? It means that of two samples -- one registering, for example, 26,000 C-14 years, and the other 18,000 C-14 years -- both might be only about 5,500 years old or less, and almost contemporaneous.

Now how did Libby overcome this problem in his mind? He answers this very question in his book *Radiocarbon Dating*: "The agreement seems to be sufficiently within the EXPERIMENTAL ERRORS involved, so that we have reason for confidence in the theoretical picture set forth above" (p. 7).

So why, pray tell me, have thousands of C-14 dates been published as if they are fact? How can newspapers, magazines and school text books be written as though C-14 dating is certain?

Is this true -- was it just an "experimental error"?

In 1963, a significant report in the journal *Reviews of Geophysics* was published by geophysicist Richard E. Lingenfelter. With his calculations and conclusions he seemed to put to rest the possibility that the lack of equilibrium was only "experimental error."

Lingenfelter came to the conclusion that "there is strong indication, despite the large errors, that the present natural production rate EXCEEDS the natural decay rate by as much as 25 percent...it appears that equilibrium in the production and decay of carbon-14 MAY NOT BE MAINTAINED in detail" (Richard E. Lingenfelter, "Production of Carbon-14 by Cosmic Ray Neutrons," *Reviews of Geophysics*, Vol. 1, No. 1, Feb. 1963, p. 51).

Some years later, Hans E. Suess commented on Lingenfelter's experiments by saying: "it seems probable that the present-day inventory of natural C-14 DOES NOT CORRESPOND to the equilibrium value, but is INCREASING" (*Journal of Geophysical Research*, "Secular Varieties of the Cosmic-ray Produced Carbon-14 in the Atmosphere and Their Interpretations," Vol. 70, No. 23, Dec. 1, 1965, p.5947).

Naturally, the evolutionists felt that any discrepancy could be explained without jeopardizing the method. But none-

theless all explanations are still UNPROVED hypotheses.

The production rate seemed to be 20 to 30 percent GREATER than the disintegration rate -- depending on what base figures were used.

Many different "explanations" were concocted to rectify this discrepancy but, once again, there was simply NO WAY to be sure! A lack of equilibrium could be a FACT! This could mean there was some DRASTIC CHANGE in the radiocarbon inventory in prehistoric times -- such as the period of time mentioned in *Genesis 1:2*. Was the C-14 system nonfunctional in terms of its effect on the earth until just a short time ago? Have other factors disturbed or changed the crucial C-14-to-ordinary-carbon ratio? Should all the great stretches of time scientists claim for tested fossils be TELESCOPED into a few thousand years? Could it just be possible?

Laboratories around the world continued pouring out thousands of dates. Meanwhile, the layman was convinced that science had proved that relatively recent animal and human fossils were anywhere from 8,000 to 53,000 B.P. (Before the Present). One date of 65,000 B.P. was measured!

However, if the discrepancies are indeed a fact, these dates may have only been 6,000 years old -- or younger.

In the meantime, Dr. Lingenfelter pressed forward in his studies of cosmic radiation and its relationship to C-14 production. Despite his positive findings published in 1963, he felt it necessary to RECONSIDER them and, in 1969, made the following admission: "The uncertainties in...the production rate and the inventory are LARGE ENOUGH to accommodate a wide range of Ro [ratio between production and decay of carbon-14] including PERFECT EQUILIBRIUM" (personal communication).

So what it boils down to is that after 50 years scientists still cannot be sure that a BASIC ASSUMPTION of the C-14 dating method is true! They are not even sure of the production rate of radiocarbon!

So why, pray tell me, have thousands of C-14 dates been published as if they are fact? How can newspapers, magazines and school text books be written as though C-14 dating is certain?

Another source of error is inherent in the material. Some aquatic animals have flesh that shows fewer traces of C-14 than their shell. Some plants do not take in as much C-14 as other plants in different environments. Only as enough evidence of these anomalies is accumulated can the errors be corrected.

Another problem is exhaust gases from automobiles. As vast quantities of carbon compounds are belched into the

According to the author, the above results were on young branches of LOW-ELEVATION trees. These, the dendrochronologists admitted, might grow rings SEVERAL times a year during a long frost-free season.

air, diluting the carbon compounds naturally found in the atmosphere, diminishing the percentage of C-14 found there, this makes certain plants and animals in such areas appear to have decayed MUCH MORE than they have.

There are many more sources of MINOR ERROR. Even the "half life" of C-14 has had to undergo revision, and it is now assumed to be 5,730 years. All the measurements taken before 1961, therefore, have had to be recalibrated. Nevertheless, radiocarbon dating has become a KEY tool in the hands of archaeologists. But another highly touted tool, providing a cross check of C-14 dates, is the use of DENDROCHRONOLOGY, or TREE RINGS.

Tree Rings from the Past

Scientists have tried to solve their dating problems by submitting C-14 to the TREE RING dating method for verification. This, in itself, was a tacit admission that all the attempts to verify their BASIC assumptions of the C-14 method were inconclusive at best!

Many geophysicists, like Richard Lingenfelter, were now falling back on tree ring dating methods to TEST the viability of radiocarbon dating. In Lingenfelter's own words, "Because of the UNCERTAINTIES in the calculation of both the production rate and decay rate of C-14 we find that the BEST DETERMINATION of the ratio of these two rates is obtained from the C-14

variations determined from dendrochronology [tree ring dating]" (Richard E. Lingenfelter and R. Ramaty, *Astrophysical and Geophysical Variations in C-14 Production*, Maryland: Goddard Space Flight Center Publication, July 1969, p. 29).

With the development of tree-ring dating sequences, one way, it was thought, in which the validity of radiocarbon dates could be tested was against the separately developed tree-ring chronologies of oaks from Germany and Ireland -- and the bristlecone pines from California. The outcome was that these comparisons revealed that before about 500 B.C. C-14 dates are TOO YOUNG. Peter James notes that "the 'calibration' required to convert Carbon-14 results into calendar years rises to OVER A MILLENNIUM for the Neolithic of Europe" (*Centuries of Darkness*, p. 325).

The trouble is, calibration is not a simple matter -- the amount of C-14 in the atmosphere FLUCTUATED tremendously in the past, falling at times and then rising again significantly within a SINGLE CENTURY. According to Peter James "the calibration curve produced by comparing radiocarbon dates to the tree-ring chronology, rather than being a smooth progression, is full of SHORT-TERM WIGGLES. At certain points a radiocarbon result can be calibrated to *several* alternative calendar dates, without any way of being sure which is the correct choice."

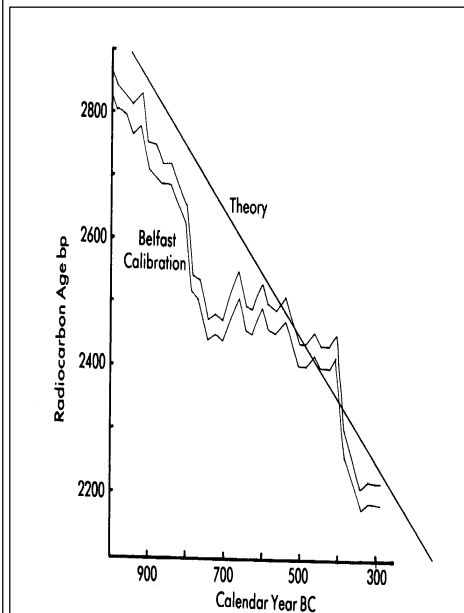


FIG. Appendix 1:3 The radiocarbon disaster area: objects whose real date lies between 800 and 400 BC (in calendar years) will all produce radiocarbon dates between 2450 bp (500 bc) and 2550 bp (600 bc) (after Baillie & Pilcher 1983).

There is a complex period of time known to the chronologists as the "1st-millennium B.C. radiocarbon DISASTER"! It appears that between 400 and 800 B.C. the calibration curve is essentially FLAT, with ALL the calendar dates within that range equating to a C-14 date of around 500 B.C.! Michael Baille, who developed the Irish oak dendrochronology, came to the conclusion "that it is *IMPOSSIBLE* to sensibly resolve the radiocarbon dates of ANY samples whose true ages lie between 400 and 800 B.C. This is a *CATASTROPHE* for Late Bronze Age/Iron Age archaeology although one which has been predicted for some time" ("Some Observations on the High-Precision Calibration of Routine Dates," *Archaeology, Dendrochronology and the Radiocarbon Calibration Curve*. University of Edinburgh Dept. of Arch. Occas. Paper 9, 51-63).

But, my friends, how ACCURATE is tree ring dating?

Tree ring analysis was proposed in 1837 by Charles Babbage, although the beginnings go all the way back to Leonardo da Vinci. Evidently da Vinci was the first to note that the yearly growth of trees in spring-time produces an apparent sequence of annual tree-rings in the wood.

The real investigator of tree-ring dating, however, is Dr. Andrew Ellicott Douglass, physicist and astronomer, formerly director of the University of Arizona's Steward Observatory.

In 1929 he wrote that by reading the story told by tree rings, the horizons of history in the United States had been pushed back nearly eight centuries before Columbus, establishing an accurate chronology for the south-western United States.

Dr. Douglass died some time ago. Through his intensive investigations of tree rings he claimed that trees add a new ring EACH YEAR, and counting the rings can tell you the age of the tree. But he discovered that all rings are not of equal thickness -- some are narrow, some wide, and often a series of narrow rings or broad rings would occur. Douglass reflected that the fat rings represented "fat years" and the lean rings "lean years" -- or moist and dry years, respectively.

Most people believe that trees produce ONE ring each year. Is this true? Does one tree ring ALWAYS represent one year? Not necessarily so! It is common knowledge in botanical circles that some trees produce "false rings."

In the book *Botany*, the authors make the following assertion: "The occurrence of FALSE growth rings may cause the age of the tree to be OVERESTIMATED. Such rings are produced by a temporary slowing of growth during the growing season" (Carl L. Wilson, et al. New York: Holt, Rinehart, Winston, 1966. P. 130).

In another book entitled *Botany*, author Wilfred W.

Robbins states that other phenomena causing false rings could be defoliation by insects, drought, and variation in rainfall (New York: John Wiley, 2nd edition, 1959. Pp. 110-111).

Amazingly, Libby challenged the ring-per-year theory himself. "Recently, it has been reported that some trees add MORE THAN ONE ring per year, and thus a question has been raised about the accuracy of tree ring dates.

"This finding indicates that rings sometimes have been INCORRECTLY correlated with years, TOO GREAT AN AGE having been assigned from tree rings" (Willard F. Libby, "Accuracy of Radiocarbon Dates," *Science*, Vol. 140, No. 3564, April 19, 1963, p. 270).

Libby's statement was not based on thin air! He was familiar with the work done in the state of Texas by W.S. Glock -- which revealed that SPECIAL conditions are required for trees to put on only one ring per year consistently.

W.S. Glock and S.R. Agerter put their findings in writing in the journal *Endeavor*:

"It has long been supported that tree rings are formed annually and so can be used to date trees. The studies of tree ring formation...have shown that this is NOT always so, as MORE than one ring may be formed in one year.

*The more lengthy chronologies of 8,200 tree ring years (touted by dendrochronologists) are built up from **DEAD** tree stumps that are pieced together in a very delicate manner.*

"Two growth layers, one THICK, the other THIN and lenticular, proved to be more common than one growth layer in this particular increment [that was studied]. THREE growth layers, in fact, were NOT unusual. A maximum of FIVE growth layers was discovered in the trunks and branches of two trees.

"It must be pointed out that these intraannuals were as distinctly and as sharply defined on the outer margin as any SINGLE annual increment" ("Anomalous Patterns in Tree Rings." Jan. 1963, Vol. 22, pp. 9, 13).

The researchers concluded that it would have been IMPOSSIBLE to know which rings were put on in what year -- except for effects of frosts in various years visible in the trees.

Douglass tried to push his research back further and further into the past, collecting cores and samples of wood from ancient trees used in old pueblos and Indian villages. He believed that he could "cross-date" or

"overlap" the tree rings of different trees of different ages, and gradually push the new chronometer back to before the birth of Christ.

Since that time, new advances have been made, using the redwoods and giant sequoias of California, and the bristlecone pines, which are up to 4,500 years old -- the oldest living organisms in the world.

By cross checking bristlecone pine dates with radiocarbon dates, the reliability of the method was thought to be verified. Using dead wood, C.W. Ferguson of the University of Arizona has obtained an "unquestionably accurate back-dating to the year 5,200 B.C." (C.W. Ceram, *The First American*, New York: Harcourt Bace, Inc., 1971, p. 134).

Tree ring experts (Dendrochronologists) claim that the BRISTLECONE PINE puts on only ONE ring per year. In their researches, so they say, they found no false or additional rings per year.

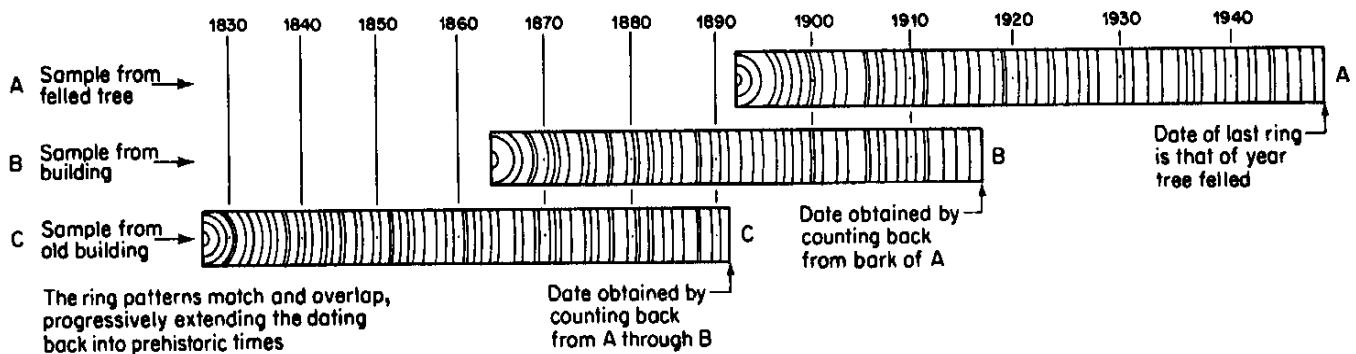


FIG. Appendix 1:1 How a dendrochronological sequence is built up by matching patterns of rings of varying thickness from different trees (drawing by Rosemary Burnard).

They said: "These results are in contrast to the findings...where branches from a wide variety of Texas-grown trees reveal multiple growth layers attributed to varying temperatures and soil moisture" (Harold C. Fritts, *Bristlecone Pine in the White Mountains of California*, Tucson: University of Arizona Press, 1969, p. 32).

According to the author, the above results were on young branches of LOW-ELEVATION trees. These, the dendrochronologists admitted, might grow rings SEVERAL times a year during a long frost-free season.

But, according to Harold C. Fritts, this multiplicity of tree rings in young, low-elevation trees "led Libby [in 1963] to improperly infer that discrepancies between tree-ring and radiocarbon dates in HIGH-ELEVATION bristlecone pine may be attributed to frequent double rings. All studies that have been conducted in the White Mountains indicate that distinct double rings rarely occur" (*Ibid.*, p. 32).

So what caused the discrepancies?

Once again, the present had to be used as a key to the past. Let us suppose the White Mountain region was a LOW-LEVEL area for a long period of time in the past and, then, was dramatically RAISED UP during a period of mountain building? Is it also possible the climate of the White Mountain area was similar to the climate of Texas at this

time? How can one know? How do we know it WAS THE SAME as it is today?

But that's not all.

Very few people know that NO LIVING TREES older than about 4,900 years have ever been found. The more lengthy chronologies of 8,200 tree ring years (touted by dendrochronologists) are built up from DEAD tree stumps that are pieced together in a very delicate manner. When did these stumps die? How long have they been sitting there dead?

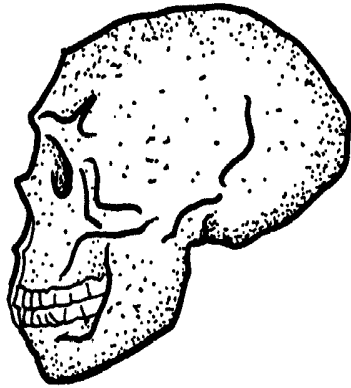
According to the "experts" trees growing in the same area at the same time will produce similar successions of ring widths. "Thus if a newly felled tree some 200-300 years in age is examined, the rings from its EARLY LIFE can be matched with their counterparts in the LATER RINGS of a tree long since dead. The rings in this older tree can then be matched with those from even older ones, and so on, extending the sequence back in time as far as possible" (Peter Jones, *Centuries of Darkness*. New Jersey: Rutgers University Press, 1991. Appendix I, p. 321).

There are a number of problems with this. When this method of dating is used, allowance has to be made for the growing time represented by the sapwood (the soft outer part of the tree that has not yet developed into proper rings) on the timber.

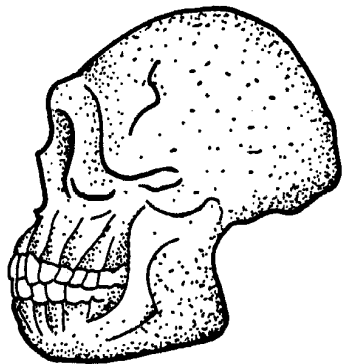
Another difficulty lies in the fact that trees of different species VARY GREATLY in their sensitivity to the weather, so that "effective sequences have to be built up using a SINGLE SPECIES" (*Ibid.*). Even trees of the *same* species from the *same* locality will react DIFFERENTLY to growing conditions -- the absolute widths of the rings they form in a given year will not be the same. We have already seen that some species (especially in lower elevations) can form MORE THAN ONE ring per year!

There are further difficulties when dendrochronology is applied to certain areas of the world. In some countries, such as Egypt, trees are so scarce that local tree-ring dating could NEVER be built up. Further more, in large parts of the world LONG SEQUENCES are still being developed. Douglass' attempts to push dendrochronology back to before the birth of Christ are highly suspect and, in the Eastern Mediterranean, juniper succession so far stretches back ONLY to 1073 A.D. Even when a sequence does exist, "its application to archaeological dating can still be difficult, since there is a real LACK of archaeologically significant timbers. Most excavations produce NO wooden objects, because they have simply rotted away. Only at those sites in very dry or very wet conditions will wood survive" (*Ibid.*, p. 322). When one or two pieces of wood from a site are proven to be datable, they may have been REUSED from older buildings, but this

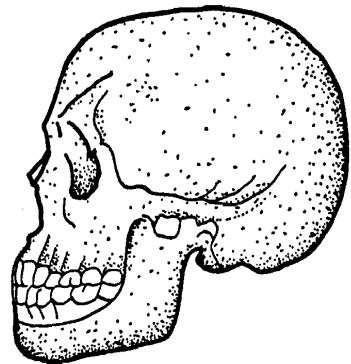
In order to reconcile these findings with the biblical record of creation, we conclude that these creatures -- Homo erectus, Homo habilis, Swanscombe man -- WERE ALL PRE-ADAMIC CREATURES.



Australopithecus Africanus



Homo Erectus



Homo Sapiens Sapiens

may not always be apparent to the archaeologists present.

Dendrochronology, therefore, was forced to extrapolate -- just as radiocarbon was. Tree rings may also need correcting if conditions were different in pre-historic times.

Puzzling Age Limit?

There are no LIVING 50,000-year-old trees. None at 25,000. None at 10,000. None at 8,200.

Not only that, but the oldest known trees -- the bristlecone pines -- present an enigma to uniformitarian, noncatastrophic thinking evolutionists.

Speaking of these remarkable trees, dendrochronologist Edmund Schulman noted: "Microscopic study of growth rings reveals that a bristlecone pine tree found last summer at nearly 10,000 feet began growing more than 4,600 years ago...Many of its neighbors are nearly as old; we have now dated 17 bristlecone pines 4,000 years old or more" (Edmund Schulman, "Bristlecone Pine, Oldest Living Things," *National Geographic Magazine*, Vol. 113, No. 3, March 1958).

Years before Dr. Schulman had been puzzled by the SAME APPROXIMATE AGE LIMIT to the giant sequoia trees that he had been studying. It was even more puzzling when he considered that these magnificent trees enjoy near-perpetual life in the absence of

catastrophic destruction. They also appear to be immune to insect attack.

With this in mind, Dr. Schulman asked the obvious question as early as 1934:

"Pertinent also is the well-known fact that standing snags of this species, other than those resulting from factors of gross destruction, are unknown. Does this mean that shortly preceding 3,275 years ago [or 4,000 years ago if John Muir's count was correct] ALL the then-living giant sequoias were WIPED OUT BY SOME CATASTROPHE?" (Edmund Schulman, "Longevity Under Adversity in Conifers," *Science*, Vol. 119, March 26, 1934, p. 399).

Did you catch that?

Why is it that these still-living trees seem to be the ORIGINAL trees that grew in the present stands?

It CANNOT be disputed that some series of cataclysmic occurrences eradicated numerous forms of mammal life on the earth. Did a great cataclysmic event occur just beyond the historical era -- around 4,300 years ago? Were the trees killed during this cataclysm? And, did the effects from a catastrophe or series of catastrophes gravely DISTORT dates from the prehistoric period? Were conditions so DIFFERENT in the pre-historic period that radiocarbon and tree ring dating are gravely affected? The evolutionists cannot adequately answer these questions.

Potassium-Argon Dating

A simple method of dating that appears to be essentially reliable is that of potassium-argon -- discovered in 1948. Potassium is the lightest element possessing a naturally occurring radioactive isotope, K-40, with a half life of 1,280 million years. K-40 transmutes to either calcium 40 or argon 40, a gas, about one atom of K-40 in seven becoming argon.

By measuring the amount of potassium and argon in a lava or rock specimen, the specimen can be accurately dated with very refined techniques. The method is based on two assumptions: that no argon was trapped within the specimen at the time of its formation; and that no potassium or argon was added or subtracted by external processes during the lifetime of the mineral (Stokes, *Essence of Earth History*, page 23).

Potassium, a common mineral found in sedimentary and igneous rocks, offers great promise of dating many formations, and should therefore be a useful tool for the scientists.

The potassium-argon dating method helps fill the gap between uranium dating and the more accurate time frames of carbon 14 dating. It is useful for geological strata older than 40,000 years. Theoretically, it helps us establish the age of those NEAR-HUMAN CREATURES which existed and roamed various parts of the earth during the Pleistocene age and

before. This dating method has been crucial in establishing the dates of the Australopithecines, HOMO ERECTUS, HOMO HABILIS and similar creatures dating from several hundred thousand years to a few million years in antiquity.

Use of this clock dated the Fort Ternan fossils found by Louis Leaky at about 14 million years, give or take a few hundred thousand years. Similarly the technique was useful in dating volcanic minerals at Olduvai, and the deposits containing the 1959 skull of Zinjanthropus turned out to be 1,750,000 years old, twice as old as had been estimated on the basis of geological studies.

The basis for these dates, by and large, appears to be irrefutable. Certainly, we must not reject out of hand, without due reason, these and many other established dates. The scientific evidence is substantial. In order to reconcile these findings with the biblical record of creation, we conclude that these creatures -- Homo erectus, Homo habilis, Swanscombe man -- WERE ALL PRE-ADAMIC CREATURES.

Meanwhile, another useful dating technique has come into vogue.

Racemization

Two researchers at the University of California at San Diego report that men were living in the North American continent at least 50,000 years ago.

Dr. Jeffrey L. Bada, an assistant professor of oceanography at the university's Scripps Institution of Oceanography, and Roy A. Schroeder, a graduate student, analyzed skeletal remains found between 1920 and 1935 around La Jolla, Del Mar, and ranging to Laguna Beach and the Baldwin Hills section of Los Angeles.

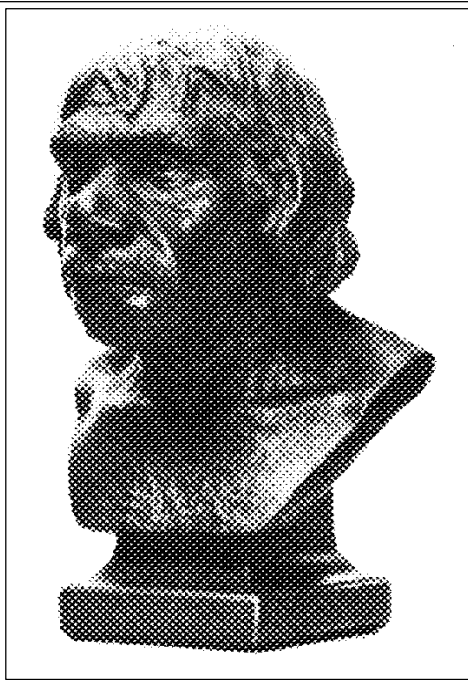
Using a technique called "racemization," which determines how much one form of an amino acid has changed into a slightly different form, they dated one skull found near Del Mar at 48,000 years old. Previously the oldest dated Amenzar skull was called Los Angeles Man, and was dated by UCLA scientists using carbon-14 at 23,600 years. A small sample of the same skull was analyzed by Bada and he arrived at an age of 26,000 years.

The Scripps team dated a fragment of another old skull found near La Jolla Shores at 44,000 years.

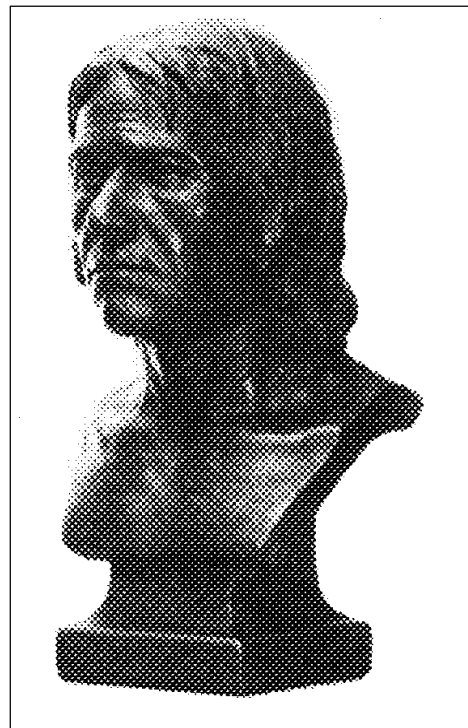
This discovery would indicate that early man came to the New World long before 20,000 years ago, the date most anthropologists have generally believed to be most accurate.

The findings have added a "new chapter in the history of man," the scientists claim.

Dr. Jeffrey Bada's new technique for dating bones can be used for dating purposes for fossils millions of years old. Bada measures the amount of the



Neanderthal Man



Cro-Magnon Man

Were the Nephilim remnants of a pre-Adamic stock of men, whom anthropologists refer to as NEANDERTHAL MAN? Is it possible?

"D-form" of certain amino acids found in all fossils.

Bada's technique is based on the fact that the amino acid components of proteins can have two optical forms, or isomers -- the D-form and the L-form. After an organism dies, the L-form gradually converts to the D-form. Modern amino acids consist almost totally of the L-form, but ancient bones and fossils have a progressively higher ratio of the D-form. Using his technique, Bada has dated a shark's vertebra at 8.7 million years and an ancient goat bone from the island of Majorca at 26,000 years.

Pre-Adamic Man?

If we accept the combined evidence of the various dating systems, then we must conclude that various HOMINID CREATURES lived 500,000 years ago, were familiar with fire, used stone tools such as had been made for hundreds of thousands of years -- hand axes, notched and saw-toothed implements, scrapers, engravers -- the basic Acheulian-type tools. These beings must have been PRE-ADAMIC creatures, primitive hunters and cave dwellers. Everything about them speaks of a primitiveness and antiquity, a life style and mental ability that was distinctly NOT human.

Is such a thing possible?

The answer is simple enough. First, not only do the geologic evidence and the dating techniques of modern science demonstrate the ANTIQUITY of

these beings, but the biblical record clearly shows that Adam was NOT a brute or subhuman specimen. He was human in every respect. Adam was highly intelligent, articulate, sophisticated, knowledgeable. He was not only able to provide names for every creature God brought before him, but he was capable of language, and he was familiar with the art of cultivation and agriculture. To pinpoint WHEN Adam was created, then, we must search the geologic and archaeological record for the BEGINNING of animal husbandry and agriculture, as well as the beginning of civilization as such.

The scrapers, knives, hand axes, cleavers, and flint tools of the early and middle Pleistocene times were PRIMITIVE, PRE-HUMAN, PRE-ADAMIC. The really astonishing thing, witnessed by geological evidence, archaeological discoveries, and radiometric dating, is the SUDDEN FLOWERING of civilization and truly human enterprise roughly 6,000 YEARS AGO!

Neanderthal Man

The strange breeds that arose during middle Pleistocene times and during the next to last glaciation had large brains, overlapping modern man, but their PRIMITIVE features included lower cranial vaults, heavy bone ridges over the eyes and at the back of the neck, and sharply receding chins. Their bodies were stocky, short, and heavy limbed.

"These were the classic Neanderthal people, the people who come to mind whenever CAVEMEN are mentioned and who almost invariably serve as models for artists depicting early man," says Pfeiffer (*The Emergence of Man*, p.159).

Neanderthal man -- a PREDECESSOR of modern man, but NOT necessarily directly related by lineage -- was ALMOST human in many respects. He was crude, dwelled in caves, hunted wild game to survive, and crudely buried his dead. His DIFFERENCES were more remarkable than his similarities to modern man. It has been said that if a Neanderthal man got on a subway in New York, dressed up in modern clothes, he could not be distinguished from certain others on the train. However, such a statement is merely discussing the PHYSICAL appearance of Neanderthal. True, he didn't look too unlike certain of the more robust, physical specimens of mankind, today. However, the paleontological evidence shows that his society and living conditions were EXTREMELY PRIMITIVE, created no lasting forms of art such as evidenced by Cro-Magnon man, and was NOT able to speak or articulate true language.

How does Neanderthal fit into the biblical record then? One historian and geologist, Kenneth C. Hermann, a scientist associated with Ambassador University in Texas, has come up with a remarkable theory. He suggests that Neanderthal man

was truly PRE-ADAMIC, but also CO-EXISTED with Adamic man. Adam, he suggests, was truly MODERN MAN in every respect -- HOMO SAPIENS SAPIENS -- and was of the CROMAGNON stock in antiquity.

Neanderthal man, if this theory is correct, may have been representative of the beings called in the biblical record NEPHILIM. These beings are barely alluded to in the Scriptures. But we read in *Genesis 6:4* that during the pre-Flood world, when the descendants of Adam were multiplying on the face of the earth: "The NEPHILIM were on the earth in those days, and also AFTERWARD..." (RSV).

The Hebrew *nephil* means bully or tyrant. The *Nephilim* were the sons of Anak, a strong, powerful race. The King James Version refers to the *Nephilim* as "giants," though that may be a mistranslation. At any rate, they were a FEARSOME race of beings.

Were the *Nephilim* remnants of a pre-Adamic stock of men, whom anthropologists refer to as NEANDERTHAL MAN? Is it possible?

Is it also possible that there was a certain amount of limited intermarriage between the two stocks, as appears to be evidenced at Carmel, in the Middle East, before Neanderthal man died out and became extinct?

The physiognomy of Neanderthal man would be enough to throw fear into more modern,

gracile man. He was an excellent hunter. Short, stocky, with massive jaw, and evidently cannibalistic, there was good reason for modern man to view this competitor with alarm.

Neanderthal's remains have been found at Shanidar Cave in the Zagros Mountains of Iraq, excavated by Ralph Solecki of Columbia University. The deposits in the cave were up to 100,000 years and seven Neanderthal skeletons were found. Three had been crushed by falling rocks; one was recovering from a spear or knife wound in the ribs; one was a man buried deep in the cave with a special ceremony, attested to by the presence of fossil pollen collected from the burial site. The pollen was from the ancestors of present day grape hyacinths, bachelor's buttons, hollyhocks, and yellow-flowering groundsel.

Violence was COMMON in Neanderthal times. says John E. Pfeiffer:

Some sort of mayhem took place in a sandstone-rock shelter overlooking a river in northern Yugoslavia, where at the turn of the century investigators recovered more than five hundred bones and bone fragments representing at least a dozen individuals. A number of the bones are charred, suggesting that cannibalism may have been practiced, while others show definite signs of having been cut (p. 172).

Extinction of Neanderthal Man

In most deposits in Europe, there is a DEFINITE INTERVAL between the last deposits of Neanderthal man and

Western Europe is generally regarded as one place where this evolutionary record SHOULD be preserved. "Yet," declares Constable, "no fossil INTERMEDIATE between the local Neanderthals and Cro-Magnons has EVER been found there."

the earliest fossils of modern man, or what is called Cro-Magnon man.

The stone tools of Cro-Magnon were markedly MORE SOPHISTICATED than Neanderthal implements. When archaeologists dug through successive layers in European caves, they sometimes found toolless -- STERILE -- layers between earlier Neanderthal deposits and later Cro-Magnon deposits.

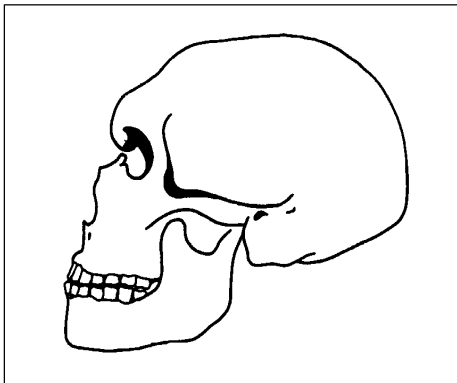
But during the early 1930's an Anglo-American expedition searching for fossils in what was then called Palestine, struck it rich in two caves on the slopes of Mount Carmel, near Haifa. At Mugharet es-Skhul remains of ten individuals were uncovered, some resembling Neanderthals, and others approaching the appearance of modern man. Some anthropologists concluded the fossil men were HYBRIDS -- products of intermarriage between Neanderthals and true modern-type men. Louie Leakey even surmised that any marriage between the two races might well have produced STERILE offspring. At any rate, the fossils uncovered at Mount Carmel possess a BLEND of Neanderthal and modern traits. But mysteries remain. For example, why did modern man SUDDENLY seem to replace Neanderthal man? What led to the extinction of this formidable and widespread species of Homo? Why the SUDDEN revolution in tool-making with the arrival of modern man? Why the STERILE LAYERS that often separate

Neanderthal and Cro-Magnon periods of cave occupancy?

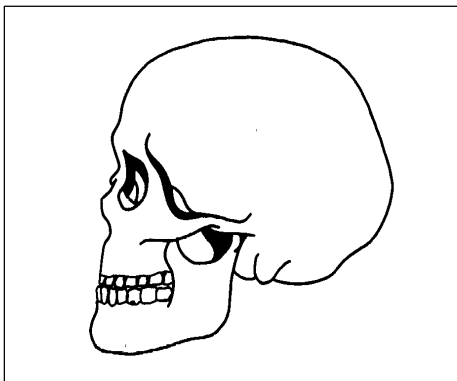
We don't know. But we can speculate. Was much of Neanderthal man wiped out in a pre-Adamic destruction associated with upheavals in climate and terrestrial cataclysms -- such as we read about in ***Genesis 1:2?*** Were the REMAINING remnants of Neanderthal wiped out by Cro-Magnon man?

Neanderthal man, however, must have largely been pre-Adamic. This contention is supported by an investigation of the linguistic capabilities of Neanderthals by Philip Lieberman of the University of Connecticut and Edmund Crelin of Yale in 1971. Measuring the neck vertebrae and skull base of the fossil found at La Chapelle-aux-Saints, they concluded that Neanderthal man lacked a modern kind of pharynx. He was unable to utter the vowel sounds *ah, oo, ee, ou*, and could not form the consonants *g* and *k*. Thus European Neanderthal fossils give indication of only 10 percent the speaking ability of modern man.

The findings are hotly disputed, but if true, Neanderthal may have been very limited in verbal communication. Somehow, these creatures SUDDENLY DIED OUT, replaced by modern man, the Cro-Magnons, who were accomplished artists who made marvelous cave paintings, engravings and statuary. The passing of Neanderthal man was THE PASSING OF AN ERA.



Neanderthal Man



Cro-Magnon Man

A few Russian anthropologists, however, believe that the strange Asian beast-men variously called the Yetis or Abominable Snowmen, encountered in central Asian deserts and mountains, are the last surviving Neanderthals who managed somehow to survive in the harsh climate of the Asian heartland which suits their adaptability.

Says author George Constable:

The disappearance of the Neanderthal seems to have the makings of a soul-stirring PLAN, with the world as a stage, and the happiest ending imaginable -- the ASCENDANCY of ourselves. The only trouble is that no one really knows what happened....The twists and turns of the drama that brought about the REPLACEMENT of the Neanderthals constitute the greatest of all prehistoric mysteries (*The Neanderthals*, p. 124).

Says this same author, discussing the various theories to account for what happened, "And still others -- a minority nowadays -- insist that ALL NEANDERTHALS BECAME EXTINCT AND WERE REPLACED BY MODERN MEN WHO HAD EVOLVED FROM AN UNKNOWN GENETIC STOCK IN AN UNLOCATED EDEN."

Precisely!

Creation of Modern Man

The Neanderthal period of domination is classified by archaeologists as the Middle Paleolithic, or Middle Old Stone Age. The Cro-Magnon phase which followed it is termed the

Upper Paleolithic. The tools of Neanderthal were VERY CRUDE. The Upper Paleolithic tools, however, are more finely made, and include blades and burins or chisel-like tools.

Cro-Magnon man, which belongs to the same species as modern man, was generally smaller than we are, had straight limbs, and high foreheads. They wore animal skins as clothing, were hunters and fishermen and gatherers of fruits and berries. They had not learned to plant crops or domesticate cattle. Remains indicate that few men reached the age of 50, or few women the age of 35. They are believed to have been of superior intelligence and sensitivity, "if only on the basis of their cave art," writes Ronald Schiller (*Ibid.*, p. 127). They may have believed in life after death since they placed food and tools in graves to accompany the deceased on their journeys in the afterlife.

The most recent reliably dated Neanderthal fossil is dated as 40,000 years old, although some may have indeed come down closer. The oldest carbon-dated Cro-Magnon man lived about 26,000 years ago in Czechoslovakia. Between the two is a HUGE FOSSIL GAP that remains a mystery. How, when, where, and why human evolution crossed this gap CANNOT be explained by evolutionists (*Ibid.*, p. 130).

Western Europe is generally regarded as one place where this evolutionary record

SHOULD be preserved. "Yet," declares Constable, "no fossil INTERMEDIATE between the local Neanderthals and Cro-Magnons has ever been found there" (Pfeiffer, *Emergence of Man*, p. 242).

The mystery remains. How hundreds of thousands of the Neanderthal race could have SUDDENLY perished, in Asia, Africa, and Europe where they are known to have existed, boggles the mind. Perhaps the ONLY solution to the riddle is some ECOLOGICAL CATASTROPHE, as some experts have speculated.

But if Neanderthal man can reliably be identified with the NEPHILIM of the *Bible*, then their extermination becomes apparent. Both ecological factors, climatic changes before and after the time of Adam, when the earth suffered *tohu* and *bohu*, and later the Flood, may well have been partially responsible for their demise; and the coup de grace may well have been administered by Cro-Magnon man, or modern man, thousands of years ago.

Who, Then, Was Adam?

If the radiometric and related dating systems are basically reliable, then how can we account for the Biblical epic of the creation of Adam? Who was Adam? When -- and how -- was he created?

Biblical evidence leads us to conclude that Adam -- the first true man in whom God breathed

the spirit of man -- was created by God and endowed with fully human understanding and consciousness probably 4024 B.C. -- if the generations of men, related in the book of *Genesis*, are complete and entire and omit none of the historical record.

Adam, then, actually was a fully modern man who was created AFTER a period of pre-Adamic hominid existence. He was a relatively late comer to the scene. He was apparently PRECEDED by "Neanderthal."

But the time came when God chose to impart His unique gift to man -- the spirit of man -- to Adam, and CREATED him in the garden of Eden.

Now He was ready for His supreme masterpiece -- the first man created in His very own image and likeness, PHYSICALLY, mentally, and psychologically.

And this new creature -- Adam -- was the FIRST TRUE MAN, the FOREBEAR of the entire modern human race!

The biblical account reveals that Adam was highly intelligent; modern in every way; sophisticated in knowledge and language; and was definitely religious and knew God. The Scriptures also indicate that written history began in Adam's lifetime, and agriculture was practiced by Adam and his descendants. Does this FACT square with the archaeological record?

INDEED IT DOES. The earliest beginnings of true agriculture, according to anthropologists, are currently dated at the close of the last Ice Age (Hamblin, Dora Jane, *The First Cities*, p. 9). The earliest signs of agriculture are in the "fertile crescent" along a 2,000 mile arc extending from Israel and Jordan up the eastern Mediterranean coast, swinging through Turkey and arcing to Iran and the Persian Gulf. Within this spot Adam was created and his descendants took up agriculture (compare *Genesis 3:14-19*). Adam's own son Cain, we read, was a TILLER OF THE GROUND (*Genesis 4:2*). Abel was a HERDSMAN (same verse).

Archaeologically, the FIRST CITIES appear about this same time. "By 3500 B.C. cities were tightly organized, well governed and sophisticated, and by 2500 B.C. metropolises with the comforts and complexity of modern urban centers were in existence," says Dora Jane Hamblin (*Ibid.*, p. 10).

How are these dates arrived at? Says Hamblin:

The refinement of scientific dating systems, such as those that measure the age of ancient relics by the radioactivity of carbon in charcoal or from the glow emitted by heated pottery, has taken much of the imaginative guesswork out of prehistoric chronology.

These dates, of course, may not be entirely correct. But they are at least in the right ballpark. Refinements in dating techniques, in the light of Scriptural

The waters above the firmament may have acted as a shield, absorbing much of the cosmic radiation, vastly reducing the formation of C-14 prior to the Deluge.

evidence, should continually be made. Since the Noachian deluge may have affected dates of the pre-flood world, the accuracy of carbon-14 dating, prior to the **DISTURBANCES** caused by a global cataclysm, such as a dramatic deluge, may well have been jeopardized.

Before the Deluge

There is, of course, the possibility that dating techniques for early man are in error due to unknown factors. In particular, the dates assigned to Cro-Magnon man are still primarily based on C-14 dating. Is it possible that this particular dating method is **INVALID** for the period before the Noachian deluge?

During the pre-diluvian world, we find described waters **ABOVE THE FIRMAMENT** as well as beneath (*Genesis 1:7*). At the time of the Deluge, the **WINDOWS OF HEAVEN** were opened like a mighty sluice, and the fountains of the great deep were broken up (*Genesis 7:11*). The waters which were **ABOVE THE FIRMAMENT** apparently cascaded down to the earth, altering the composition of the atmosphere. The waters above the firmament may have acted as a shield, absorbing much of the cosmic radiation, vastly reducing the formation of C-14 prior to the Deluge. The absence of cosmic radiation may be partly responsible for the long life spans of man before the Flood, as recorded in the book of *Genesis*. But after the Deluge, and the break up of the concentration of waters above the firmament,

cosmic radiation would have **INCREASED** in the atmosphere and on the earth, resulting in a rapid increase of C-14 (which still hasn't reached equilibrium), and also in **SHORTENING** the life span of man on the earth.

If this theory is true, then we can account for the apparent great age given Cro-Magnon man and Neanderthal man by the C-14 method. For Example, if 4,000 years ago the C-14 in the atmosphere had reached equilibrium, a sample would now be dated close to 4,000 years by the C-14 method. However, if C-14 had not yet reached equilibrium, the sample might have received only **ONE HALF** the expected amount of C-14 in its tissues. Thus it would appear to have been **8,000 YEARS OLD** according to the C-14 method. If a sample started its decay curve with a level of C-14 content **LESS THAN ONE EIGHTH** the strength of a fresh sample, today, it would appear to be **15,000 YEARS OLD**, when it might be only 5,000 years old. If originally there was **VERY LITTLE** or **NO** C-14 content, a sample from 4,000 years ago (or from the pre-diluvian world) would appear to be extremely ancient -- **35,000 OR 40,000 YEARS OLD**.

This is a very strong possibility which we should keep in mind. Several creationist schools of thought tend to think this is the proper explanation for early dates of man derived from the C-14 dating technique.

A Deceitful God?

If **ALL** the radiometric evidence is wrong, and the duration of the geological and paleontological eras is grossly distorted, then God must have seen fit to play **DECEITFUL TRICKS** on geologists and biologists. If fossils were placed by the Creator where we find them now, deliberately giving the appearance of great antiquity, then God must be absurdly deceitful.

Does it make sense that God created the universe to appear much older than it really is? The idea that God created the universe and the earth with "apparent age" is a common belief among creationists.

Would God go to the trouble of making the universe appear older than it really is? Why would He do this? Is such a "universal joke" in keeping with the character of a God "**THAT CANNOT LIE**"?

God is not a great deceiver, or a cosmological practical joker. God had no reason to create a world which appears old, but in reality is only 6,000 years old. The great age of the earth, and life upon it, **DOES NOT** conflict with the Scriptures in any way.

When we take both the Biblical record, and the data amassed by scientists, and let the facts speak for themselves, then we must conclude that God indeed created the world, and life upon it. But much time passed in the process. The geologic record

indicates that God created new forms of life at VARIOUS STAGES of His Divine plan. Thus in the earliest strata of the earth containing abundant fossil remains, we find trilobites and brachiopods and other creatures of the sea predominate. At a

much later era, we find that dinosaurs -- huge reptilian creatures that cause us to stand in awe, today -- suddenly appear. At a later time, deciduous trees, mammals, and finally MAN, take their place in the creation.

WHAT DO YOU MEAN, "BORN AGAIN"?

The Scriptures speak of a "NEW BIRTH," but millions are confused as to just what it is, how it happens, and what it involves! The overwhelming majority who profess to be "BORN AGAIN" are deceived, and don't even know what they are talking about! Being "born again" involves FAR MORE than merely "accepting Christ." The true spiritual birth is a LIFELONG PROCESS! Here is the PLAIN TRUTH about being BORN AGAIN!

THE DYNASTY OF THE EXODUS!

Some say the Israelites labored in Egypt during the 6th Dynasty; while others claim the dynasty of the Exodus was the 19th. Still others proclaim the 18th to be the one -- or the period of the Hyksos rulers of Egypt! Can we know for sure when the Israelites were held captive in Egypt and when they escaped to Canaan? By turning to the Bible and examining the works of early historians, the dynasty of the Exodus becomes very apparent to those who are seeking the TRUTH with an open mind!

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