BIBLICAL THEOLOGY OF MISSION

Class 2b: Evidences For Recent Creation — John Harrigan

THE SLIDES RELATED TO THIS TEACHING ARE PLACED THROUGHOUT THESE NOTES FOR EASIER INTEGRATION OF THE MATERIAL BEING SHARED.

The wrath of God is being revealed from heaven against all the godlessness and wickedness of men who suppress the truth by their wickedness, [19] since what may be known about God is plain to them, because God has made it plain to them. [20] For since the creation of the world God's invisible qualities-- his eternal power and divine nature-- have been clearly seen, being understood from what has been made, so that men are without excuse. ([NIV] Romans 1:18-20)[1]

I. ASTRONOMICAL

A. Apparent Design

The heavens declare the glory of God; the skies proclaim the work of his hands. [2] Day after day they pour forth speech; night after night they display knowledge. [3] There is no speech or language where their voice is not heard. [4] Their voice goes out into all the earth, their words to the ends of the world. ([NIV] Psalm 19:1-4)

B. Galactic Formation

1. It is increasingly acknowledged that natural processes are inadequate in explaining galactic formation.[2] Moreover, there is growing debate in the scientific community concerning the

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[1] Useful tools for research in this area are as follows: 1) Creation Ministries International (CMI) archives of *Creation Ex Nihilo* and *Creation Ex Nihilo Technical Journal*, available at http://www.creationontheweb.com/content/view/3868/89/ (use also general "search" option), 2) Institute for Creation Research (ICR) archives of *Impact*, some *Creation Research Society Quarterly* issues, and other minor publications, available at http://www.icr.org/topics/ (use also general "search" option), 3) Walt Brown, *In the Beginning: Compelling Evidence for Creation and the Flood*, 7th ed. (Phoenix: Center for Scientific Creation, 2001), updated online edition available at http://www.creationscience.com/onlinebook/index.html, 4) CreationWiki Online Encyclopedia of Creation Science (hosted by Northwest Creation Network), available at http://creationwiki.org/Main_Page, 5) Ian Taylor, *In the Minds of Men: Darwin and the New World Order*, Fifth ed. (Zimmerman: TFE Publishing, 2003), online edition available at www.creationism.org/books/TaylorInMindsMen/, 6) Paul D. Ackerman, *It's a Young World After All* (Grand Rapids: Baker Publishing Group, 1986), updated online edition available at www.creationism.org/ackerman/, and 7) Henry M. Morris, ed., *Scientific Creationism*, 2nd ed. (Green Forest: Master Books, 1985).

[2] "The problem of explaining the existence of galaxies has proved to be one of the thorniest in cosmology. By all rights, they just shouldn't be there, yet there they sit. It's hard to convey the depth of frustration that this simple fact induces among scientists." [James Trefil, *The Dark Side of the Universe* (New York: Charles Scribner's Sons, 1988), 55; Trefil explains the basis for this frustration in his fourth chapter titled, "Five Reasons Why Galaxies Can't Exist"]

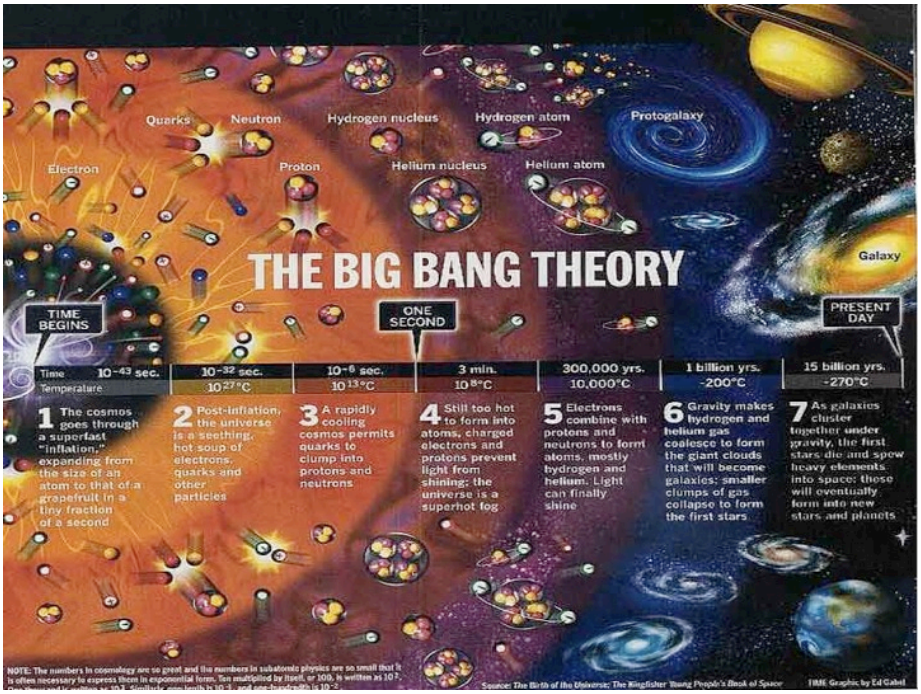
"The theory of the formation of galaxies is one of the great outstanding problems of astrophysics, a problem that today seems far from solution." [Steven Weinberg, *The First Three Minutes* (New York: Bantam Books, Inc., 1977), 68.]

"A completely satisfactory theory of galaxy formation remains to be formulated." [Joseph Silk, *The Big Bang* (San Francisco: W. H. Freeman and Company, 1980), 22.]

age of the universe because the Hubble Space Telescope has found distant galaxies whose age, based on big-bang assumptions, exceeds the age of the universe.[3]

2. There is simply not enough time in the age of the universe (even as evolutionists imagine it, *multiple times over*) for gravity to pull together all the particles comprising clusters of galaxies.[4] Specifically, a less widely known problem is the recent discovery of distant galaxies containing heavy chemical elements.

   a) A big bang would have produced only hydrogen, helium, and lithium (the three lightest chemical elements), while the heavier elements would have been created later when enough hydrogen nuclei were squeezed together under high temperatures inside stars. To form elements heavier than iron, it is theorized that something even hotter is required—a supernova (a violently-exploding star). Much later, a second generation of stars supposedly formed with the heavy elements from that exploded debris. So, if the big bang happened, there would have to be enough time to:



   (1) Form the first generation of stars out of hydrogen, helium, and lithium.

   (2) Have many of those stars quickly pass through their *complete life cycles*, then finally explode as supernovas to produce the heavier chemical elements.

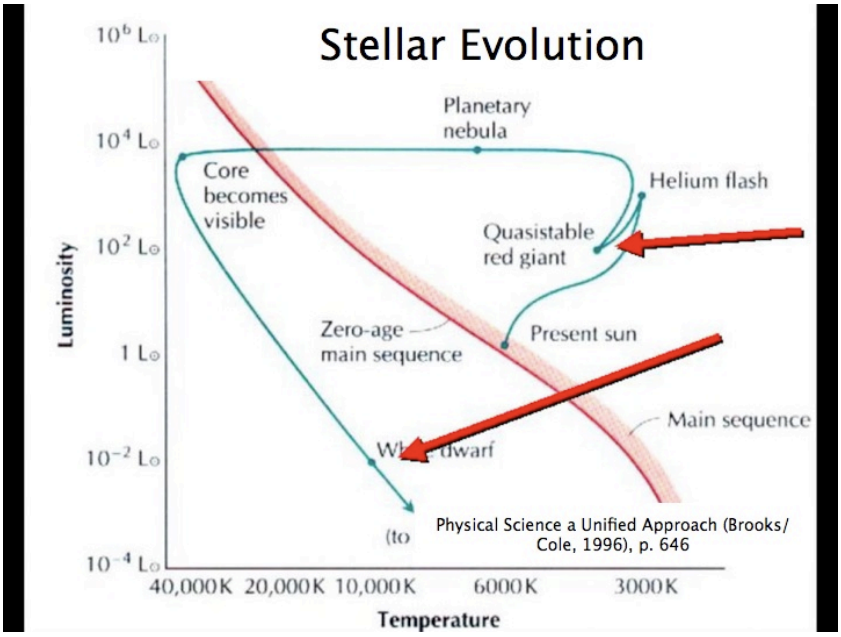
   (3) Recollect enough of that exploded debris to form the second generation of stars.

   (4) Transmit the light from these heavy elements to Earth, immense distances away.

[3] Robert C. Kennicutt Jr., "An old galaxy in a young universe," *Nature* 381:555-556 (13 June 1996); James Dunlop, "A 3.5-gyr-old galaxy at redshift 1.55," *Nature* 381:581-584 (13 June 1996); Ivan R. King, "Globular clusters," *Scientific American* 25:279-288 (June 1985).

[4] This problem for conventional astronomy has been quietly recognized for several decades. Recent photographs of so many galaxies so far away simply makes the public more aware of it—"Gravity can't, over the age of the universe, amplify these irregularities enough [to form huge clusters of galaxies]." [Margaret Geller, as quoted by John Travis, "Cosmic structures fill southern sky," *Science* 263:1684 (25 March 1994)]; see also M. Mitchell Waldrop, "The large-scale structure of the universe gets larger—maybe," *Science* 238:894 (13 November 1987); Ivars Peterson, "Seeding the universe," *Science News* 137:184 (24 March 1990).

b) Unfortunately, new and sophisticated light-gathering instruments have enabled astronomers to discover heavy elements in many extremely distant galaxies and quasars.[5] One such galaxy would have taken 94% (12.9 by) of the age of the universe to reach us.[6] This means that only the first 6% (.8 by) of the age of the universe would have been available for events i–iii above—not likely.



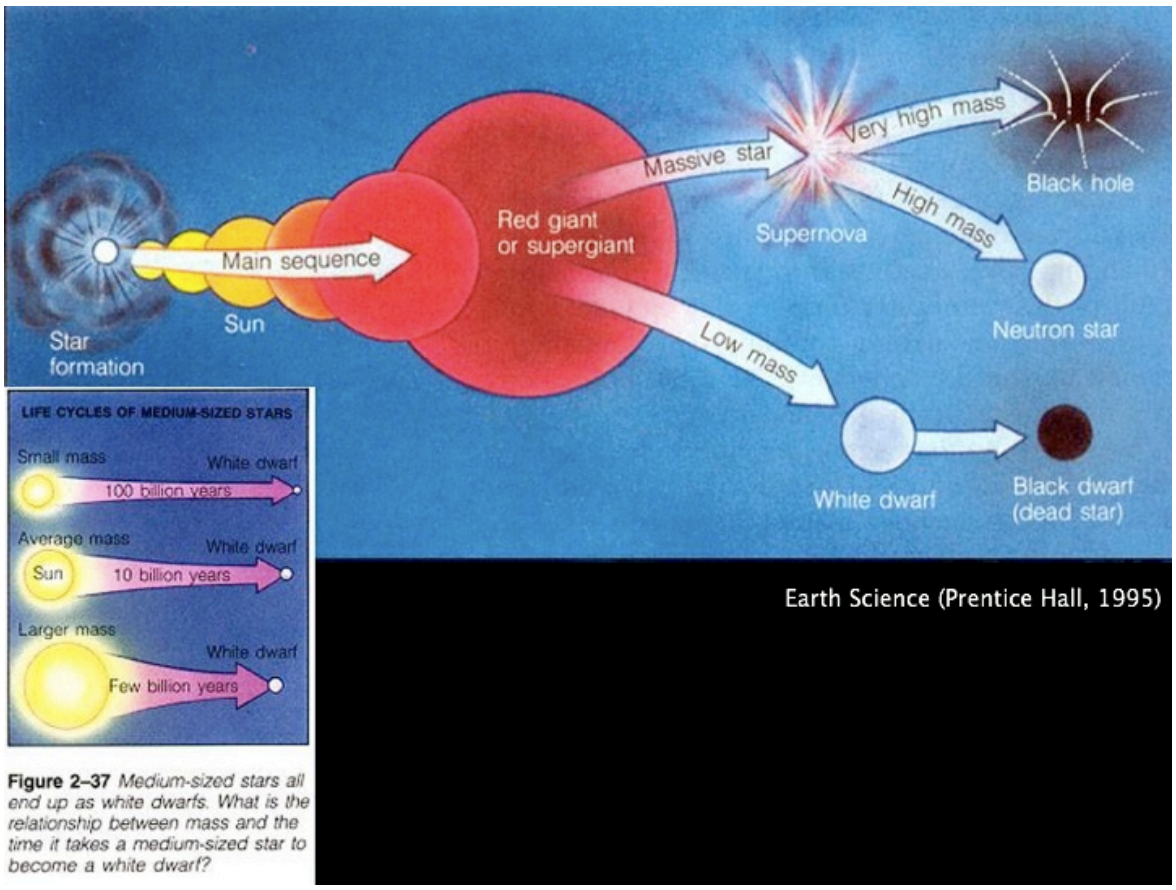
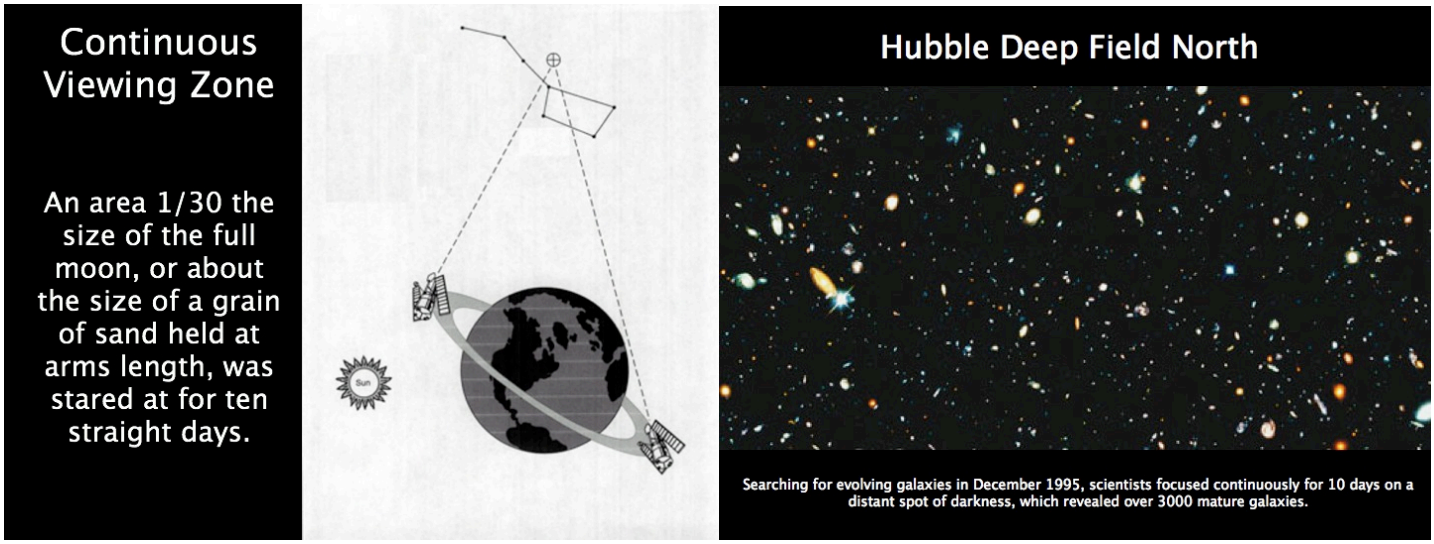


Figure 2–37 *Medium-sized stars all end up as white dwarfs. What is the relationship between mass and the time it takes a medium-sized star to become a white dwarf?*

[5] "The presence of these [25] elements, particularly those heavier than iron, in such a young [distant] galaxy is striking. Fundamentally, it seems to indicate that in the galaxies (or at least in this galaxy) that formed relatively shortly after the Big Bang, the onset of star formation and related element production was very rapid." [John Cowan, "Elements of surprise," *Nature* 423:29 (1 May 2003)]; James Glanz, "CO in the early universe clouds cosmologists' views," *Science* 273:581 (2 August 1996); Jason X. Prochaska, et al., "The elemental abundance pattern in a galaxy at z=2.626," *Nature* 423:57-59 (1 May 2003).

[6] Fabian Walter et al., "Molecular gas in the host galaxy of a quasar at redshift z=6.42," *Nature* 424:406-408 (July 2003).

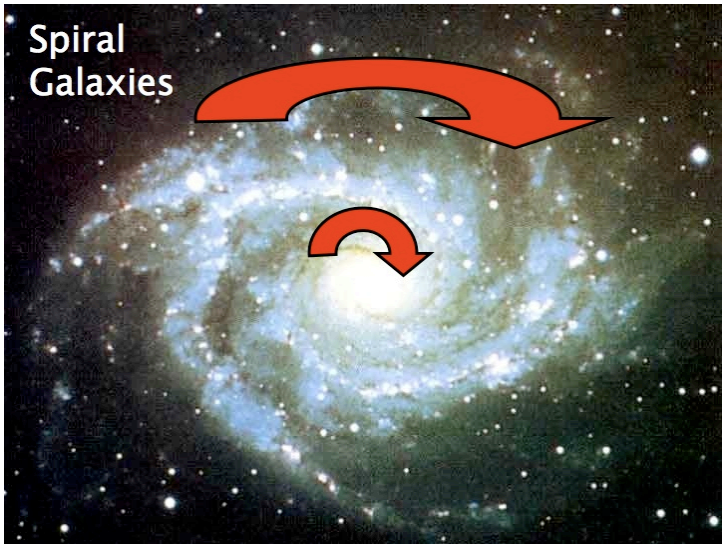
3. The Hubble Space Telescope, searching for evolving galaxies in December 1995, focused for 10 continuous days on a tiny patch of sky, so small when viewed from Earth that a grain of sand held at arm's length would cover that area. This picture of that tiny patch of sky is called "Hubble Deep Field North." Most objects in it are not isolated stars, but galaxies, each containing billions of stars. Of the 3,000 galaxies photographed that emitted enough light to measure their redshifts, all were surprisingly mature.[7] Moreover, fully formed *clusters of galaxies*, not just galaxies, are seen at the greatest distances visible to the Hubble Space Telescope.[8]



[7] As stated in *Scientific American*, "The formation of 'ordinary' spiral and elliptical galaxies is apparently still out of reach of most redshift surveys." [F. Duccio Macchetto and Mark Dickerson, "Galaxies in the Young Universe," *Scientific American* 276:95 (May 1997).]

[8] Govert Schilling, "Early start for lumpy universe," *Science* 281:1593 (11 September 1998); see also E. J. Ostrander et al., "The Hubble Space Telescope medium deep survey cluster sample: methodology and data," *The Astronomical Journal* 116:2644-2658 (December 1998).

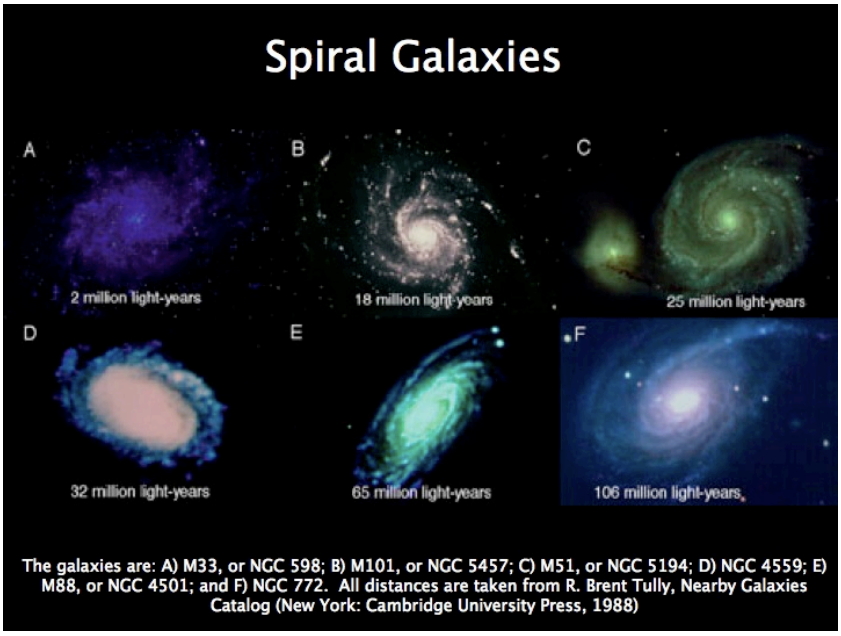
C. Spiral Galaxies



1. The stars of our own galaxy, the Milky Way, rotate about the galactic center with different speeds, the inner ones rotating faster than the outer ones. The observed rotation speeds are so fast that if our galaxy were more than a few hundred million years old, it would be a featureless disc of stars instead of its present spiral shape.[9]

2. Having known this for about fifty years, evolutionists call this "the winding-up dilemma," because our galaxy is supposed to be at least 10 billion years old. They have devised many theories to try to explain it, each one failing after a brief period of popularity. The same "winding-up" dilemma also applies to other galaxies.[10]

3. Spiral galaxies with about the same amount of "twist" are seen throughout the universe. However, for the light from all these galaxies to arrive at Earth tonight, the more distant galaxies, which had to release their light long before the closer galaxies, did not have as much time to rotate and twist their arms. Therefore, farther galaxies should have less twist. Since this is not the case, recent creation becomes the logical alternative.



D. Supernova Remnants

1. According to astronomical observations, galaxies like our own experience one supernova every ~26 years.[11] The gas and dust remnants from such explosions (like the Crab

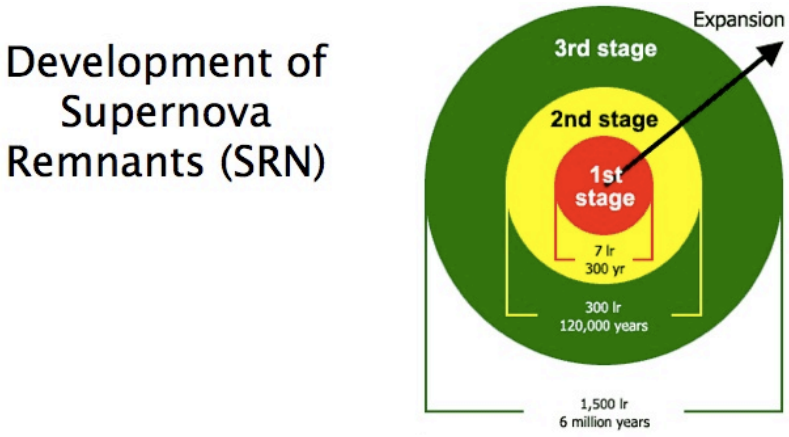
[9] H. Scheffler and H. Elsasser, *Physics of the Galaxy and Interstellar Matter* (Berlin: Springer-Verlag, 1987) 352-353; Paul W. Hodge, *The Physics and Astronomy of Galaxies and Cosmology* (New York: McGraw-Hill, 1966), 122-123; see also Harold S. Slusher, "Clues regarding the age of the universe," *ICR Impact* 19:2-3 (January 1975).

[10] For the last few decades the favored attempt to resolve the puzzle has been a complex theory called "density waves" (Scheffler and Elsasser, 401-413). The theory has conceptual problems, has to be arbitrarily and very finely tuned, and has been called into serious question by the Hubble Space Telescope's discovery of very detailed spiral structure in the central hub of the "Whirlpool" galaxy, M51 [see D. Zaritsky, H-W. Rix, and M. Rieke, "Inner spiral structure of the galaxy M51," *Nature* 364:313-315 (22 July 1993).].

[11] G. A. Tammann, "On the frequency of supernovae as a function of the integral properties of intermediate and late type spiral galaxies," *Astronomy and Astrophysics* 8:458 (October 1970).

Nebula[12]) expand outward rapidly and should remain visible with radio telescopes for over a million years. However, only about 7,000 years worth of supernova debris are seen.[13]

2. The supernova remnants (SNRs) should keep expanding for hundreds of thousands of years, according to the physical equations. Yet there are no very old, widely expanded (Stage 3) SNRs, and few moderately old (Stage 2) ones in our galaxy, the Milky Way, or in its satellite galaxies, the Magellanic clouds. This is just what we would expect if these galaxies had not existed long enough for wide expansion.[14]



Supernova remnant Stage	Number of observed SNRs predicted if our galaxy was: billions of years old	7,000 years old	Number of SNRs actually observed
First	2	2	5
Second	2,260	125	200
Third	5,000	0	0

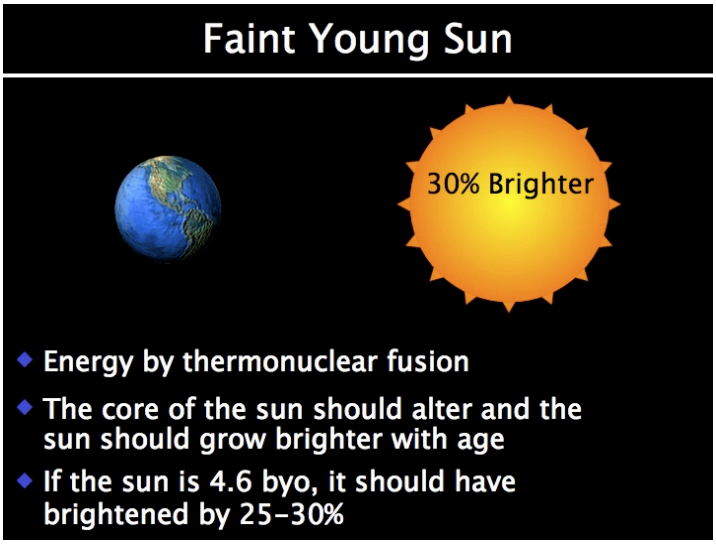
[12] In A.D. 1054, Chinese observers (and perhaps Anasazi Indians of New Mexico and Arizona) witnessed and described a supernova. It was visible in daylight for 23 days and was about as bright at its peak as a full moon (Walt Brown, online edition of *In the Beginning: Compelling Evidence for Creation and the Flood*, 7th ed., available at http://www.creationscience.com/onlinebook/AstroPhysicalSciences53.html#wp1641905; to be published in the 8th edition).

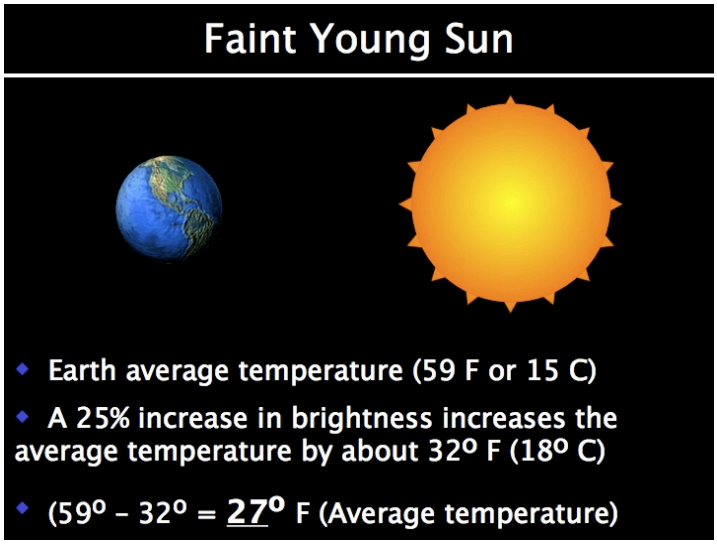
[13] Keith Davies, "Distribution of supernova remnants in the galaxy," *Proceedings of the Third International Conference on Creationism*, vol. II (Pittsburgh: Creation Science Fellowship, 1994), 175-184; available from http://www.icc03.org/proceedings.htm; see also Astronomy Survey Committee of the National Research Council, "Where have all the remnants gone?" *Challenges to Astronomy and Astrophysics* (Washington, D.C.: National Academy Press, 1983), 166.

[14] Jonathan D. Sarfati, "Exploding stars point to a young universe," *Creation Ex Nihilo* 19(3):46-49 (June-August 1998); archived at http://www.creationontheweb.com/content/view/693/.

E. Faint Young Sun

1. If the solar system evolved from a spinning dust and gas cloud 4.5 billion years ago, the slowly condensing Sun would have radiated 25–30% less heat during its first 600 million years than it radiates today.[15] However, a drop in the Sun's radiation of *only a few percent* would freeze all our oceans. Had this happened anytime in the past, let alone for 600 million years, the icy earth's mirror-like surfaces would have reflected more of the Sun's radiation into outer space, cooling Earth even more in a permanent, runaway deep-freeze. If so, all agree that life could not have evolved.





2. Evolutionists have tried to solve this "faint young Sun paradox" in a number of ways:

   a) First, by assuming Earth's atmosphere once had up to a thousand times more heat-trapping carbon dioxide than today. There is simply no evidence for this,[16] and large amounts of carbon dioxide on a cool Earth would have produced "carbon dioxide ice clouds high in the atmosphere, reflecting the Sun's radiation into outer space and locking Earth into a permanent ice age."[17]

   b) Second, by assuming Earth's atmosphere had a thousand times more ammonia, methane, and other heat-trapping gases. Unfortunately, sunlight quickly destroys both gases. Besides, ammonia would readily dissolve in water, making oceans toxic.

   c) Third, by assuming Earth had no continents, had much more carbon dioxide in its atmosphere, and rotated once every 14 hours, so most clouds were concentrated at the equator. With liquid water covering the entire Earth, more of the Sun's radiation would be absorbed, raising Earth's temperature slightly. Though theoretically plausible, it is highly improbable and speculative.

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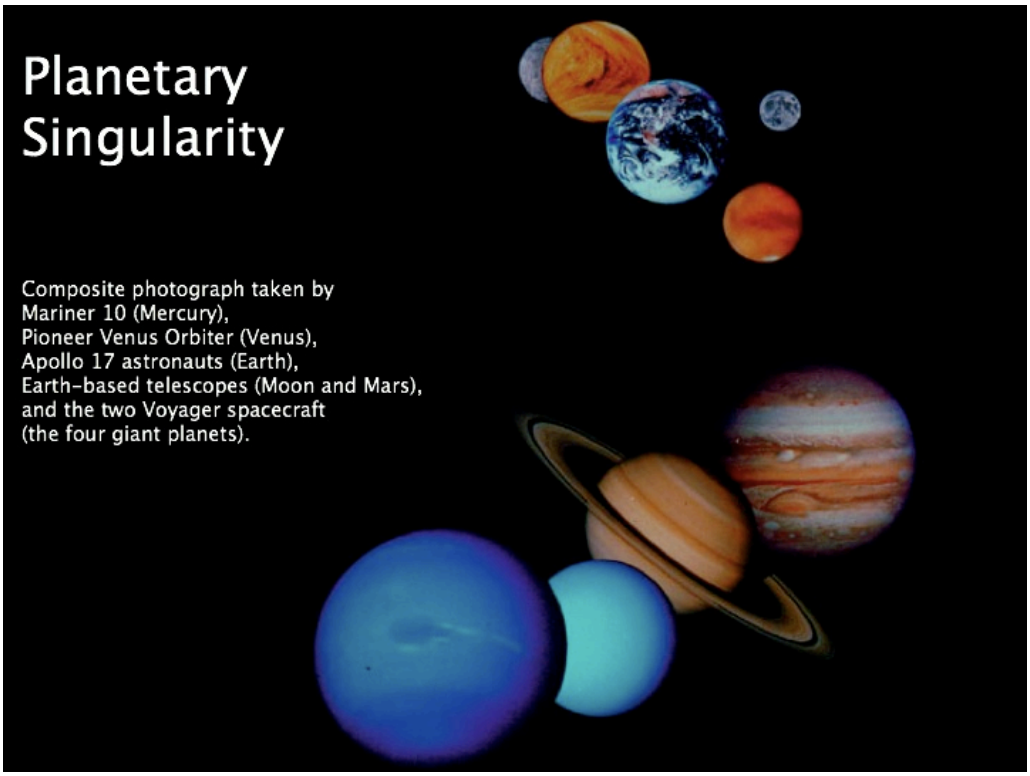
[15] Gregory S. Jenkins, et al., "Precambrian climate: the effects of land area and earth's rotation rate," *Journal of Geophysical Research* 98:8785-8791 (20 May 1993).

[16] "There is no direct evidence to show that carbon dioxide levels were ever a thousand times higher." [Tim Folger, "The Fast Young Earth," *Discover*, November 1993, p. 32.]

[17] William R. Kuhn, "Avoiding a permanent ice age," *Nature* 359:196 (17 September 1992).

3. Evolutionists have never explained in any of these approaches how such drastic changes could occur in almost perfect step with the slow increase in the Sun's radiation. Until some evidence supports such "special pleadings," it does not appear the Sun evolved.[18] If the Sun, a typical and well-studied star, did not evolve, then why presume that all other stars did?

F. Planetary Singularity – Theories for the origin and evolution of the solar system have left scientists vexed for decades.[19] Most modern evolutionary theories hold that the solar system formed from a cloud of swirling gas, dust, or larger particles. If the planets and their 156 known moons evolved from the same material, they should have many similarities.[20] However, after several decades of planetary exploration, this expectation is now recognized as false.[21] Many undisputed observations contradict current theories on how the solar system evolved.



[18] For a frank admission of these and other "special pleadings," see Carl Sagan and Christopher Chyba, "The early faint sun paradox: organic shielding of ultraviolet-labile greenhouse gases," *Science* 276:1217-1221 (23 May 1997).

[19] "Attempts to find a plausible naturalistic explanation of the origin of the Solar System began about 350 years ago but have not yet been quantitatively successful, making this one of the oldest unsolved problems in modern science." [Stephen G. Brush, *A History of Modern Planetary Physics*, vol. 3 (Cambridge: Cambridge University Press, 1996), 91.]

"…most every prediction by theorists about planetary formation has been wrong." [Richard A. Kerr, "Jupiters like our own await planet hunters," *Science* 295:605 (25 January 2002).]

"To sum up, I think that all suggested accounts of the origin of the Solar System are subject to serious objections. The conclusion in the present state of the subject would be that the system cannot exist." [Harold Jeffreys, *The Earth: Its Origin, History, and Physical Constitution*, 6th ed. (Cambridge: Cambridge University Press, 1976), 387.]

[20] Thus, most planetary studies begin by assuming that the planets evolved and are therefore similar. Typical arguments are as follows: "By studying the magnetic field (or any other feature) of Planet X, we will better understand how Earth's magnetic field evolved." Actually, each magnetic field is surprisingly different. Or, "By studying Earth's sister planet, Venus, we will see how plate tectonics shaped its surface and better understand how plate tectonics works on Earth." Likewise, it is now recognized that plate tectonics does not occur on Venus.

[21] "The most striking outcome of planetary exploration is the diversity of the planets… I wish it were not so, but I'm somewhat skeptical that we're going to learn an awful lot about Earth by looking at other planetary bodies. The more that we look at the different planets, the more each one seems to be unique… You put together the same basic materials and get startlingly different results. No two are alike; it's like a zoo." [Richard A. Kerr, "The Solar System's new diversity," *Science* 265:1360-1 (2 September 1994).]

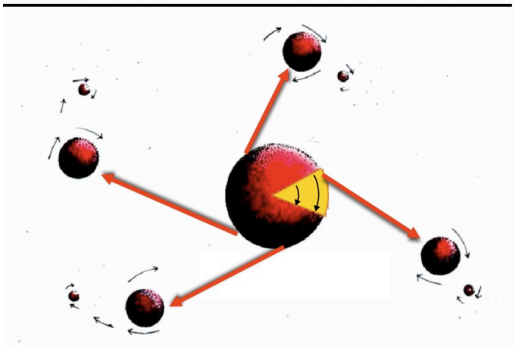
1. Backward-spinning planets – all planets should spin in the same direction (cf. law of conservation of angular momentum), but Venus, Uranus, and Pluto rotate backwards.[22]

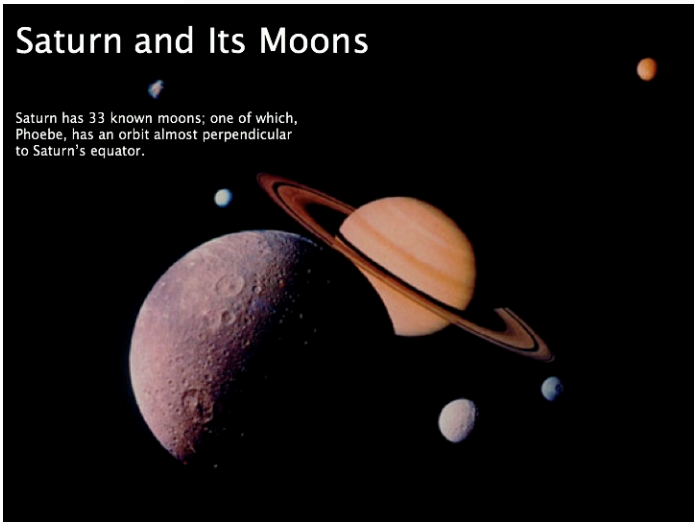
2. Backward orbits – all 156 moons in the solar system should orbit their planets in the same sense, but more than 30 have backward orbits. Furthermore, Jupiter, Saturn, Uranus, and Neptune have moons orbiting in both directions.[23]

3. Tipped orbits – the orbit of each of these 156 moons should lie in the equatorial plane of the planet it orbits, but many, including the Earth's moon, are in highly inclined orbits.[24]

4. Angular momentum – the Sun should have about 700 times more angular momentum than all the planets combined. Instead, the planets have 50 times more angular momentum than the Sun.[25]

Conservation of Angular Momentum





G. Planetary Rings

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[22] *The Astronomical Almanac for the Year 2003* (Washington, D.C.: U.S. Government Printing Office, 2003), F2.

[23] Ibid.

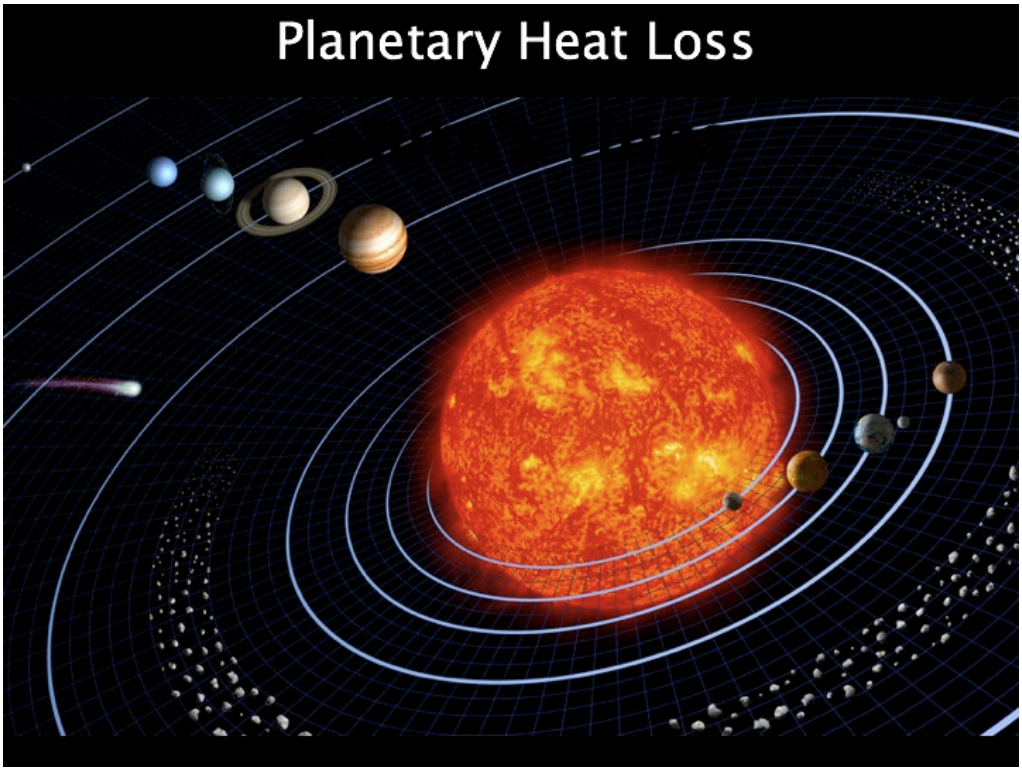
[24] Ibid.

[25] R. A. Lyttleton, *Mysteries of the Solar System* (Oxford: Clarendon Press, 1968), 16; see also Fred Hoyle, *The Cosmology of the Solar System* (Hillside: Enslow Publishers, 1979), 11-12; "One of the detailed problems is then to explain how the Sun itself acquires nearly 99.9% of the mass of the solar system but only 2% of its angular momentum." [Frank D. Stacey, *Physics of the Earth* (New York: John Wiley & Sons, 1969), 4.]

1. Evolutionists believe that after planets formed from a swirling dust cloud, rings remained, as seen around the giant planets: Saturn, Uranus, Jupiter, and Neptune.[26] However, rings have nothing to do with a planet's origin.

2. Rings form when material is expelled from a moon by a volcano, a geyser, or the impact of a comet or meteorite—debris that escapes a moon because of its weak gravity and a giant planet's enormous gravity then orbits that planet as a ring.[27] If these rings were not constantly replenished (which is not observed), they would be dispersed in less than 10,000 years.[28]

H. Planetary Heat Loss



1. Jupiter, Saturn, and Neptune each radiate away more than twice the heat energy they receive from the Sun.[29] Uranus and Venus also radiate too much heat.[30]

2. Calculations show it is very unlikely that this energy comes from nuclear fusion, radioactive decay, gravitational contraction, or

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[26] Similar faulty logic claims that, because we see comets, asteroids, and meteoroids, the solar system must have evolved.

[27] For example, Jupiter has a few moons large enough to be hit frequently by meteoroids or comets, small enough to have little gravity so the debris can escape the moon, and close enough to Jupiter that tidal effects can spread the moon's debris into rings [see Ron Cowen, "Mooning over the dust rings of Jupiter," *Science News* 154(12):182-183 (September 1998); see also Gretchen Vogel, "Tiny moon source of Jupiter's ring," *Science* 281:1951 (25 September 1998).].

"Saturn's moons are bombarded by comets or micro-meteoroids. Those collisions knock off ice particles and send them into orbit around Saturn, forming rings." [Ron Cowen, "Ring shots," *Science News*, 170:263 (21 October 2006).]

[28] "Yet nonstop erosion poses a difficult problem for the very existence of Saturn's opaque rings—the expected bombardment rate would pulverize the entire system in only 10,000 years! Most of this material is merely redeposited elsewhere in the rings, but even if only a tiny fraction is truly lost (as ionized vapor, for example), it becomes a real trick to maintain the rings since the formation of the solar system." [Jeffrey N. Cuzzi, "Ringed planets: still mysterious—II," *Sky & Telescope* 69:22 (January 1985).]

"Saturn's rings (as well as the recently discovered ring system around Uranus) are unstable, therefore recent formations." [S. K. Vsekhsvyatsky, "Comets and the cosmogony of the Solar System," *Comets, Asteroids, Meteorites*, ed. A. H. Delsemme (Toledo: The University of Toledo, 1977), 473.]

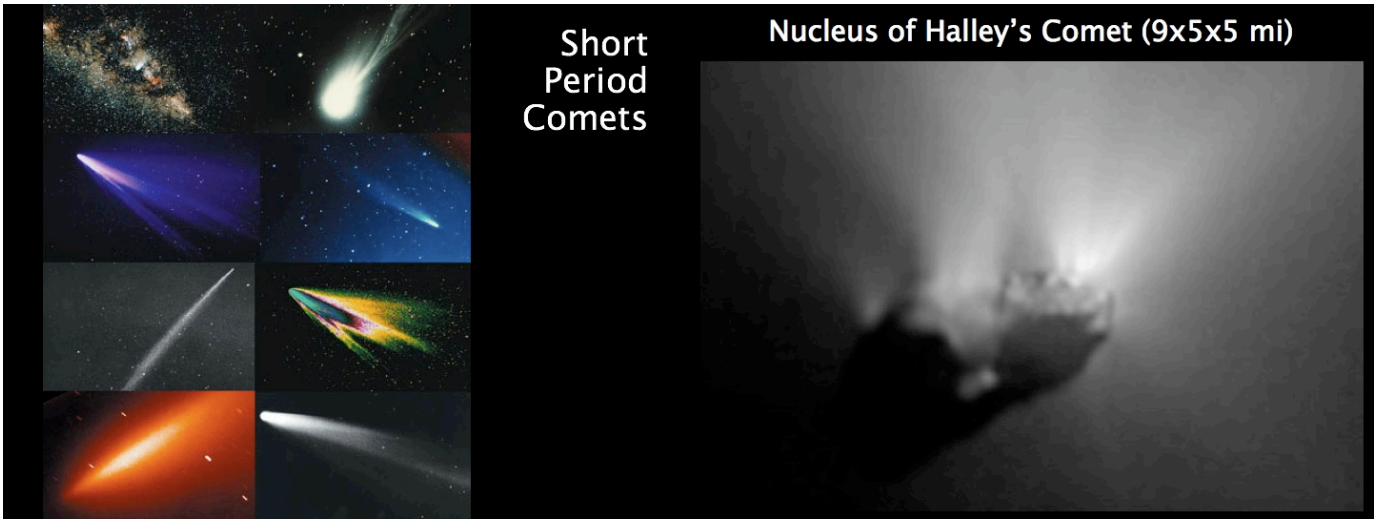
[29] H. H. Aumann and C. M. Gillespie Jr., "The internal powers and effective temperatures of Jupiter and Saturn," *The Astrophysical Journal* 157:L69-72 (July 1969); M. Mitchell Waldrop, "The puzzle that is Saturn," *Science*, 18 September 1981, p. 1351; Jonathan Eberhart, "Neptune's inner warmth," *Science News* 112:316 (12 November 1977); "Jupiter radiates into space rather more than twice the energy it receives from space." [G. H. A. Cole, *The Structure of Planets* (New York: Crane, Russak & Company, 1978), 114.].

[30] "The mystery of Venus' internal heat," *New Scientist* 88:437 (13 November 1980).

phase changes within those planets.[31] These planets have simply not existed long enough to cool off. Likewise, the Earth's Moon is also radiating a surprising amount of heat, which limits its age.[32]

I. Short Period Comets

1. Comets (giant, dirty, exceedingly fluffy "snowballs") are divided into two groups: short-period comets (< 200 year orbit), such as Halley's (76 years); and long-period comets (> 200 year orbit). However, the comets from both groups are essentially the same in size and composition. Short-period ones normally orbit in the same direction as the planets (prograde) and in almost the same plane (ecliptic); long-period comets can orbit in almost any plane and in either direction.



2. According to evolutionary theory, comets are supposed to be the same age as the solar system (~5 billion years). However, as comets pass near the Sun, some of their mass vaporizes, producing a long tail and other debris.[33] Comets also fragment frequently or crash into the Sun or planets.[34] Thus, comets should disintegrate after several hundred orbits, and for most this is less than 10,000 years.[35]

3. Evolutionists explain this discrepancy by assuming that (a) comets come from an unobserved spherical "Oort cloud" well beyond the orbit of Pluto, (b) improbable

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[31] As many anti-creationists frequently site; however, see Paul M. Steidl, "The solar system: an assessment of recent evidence—planets, comets, and asteroids," *Design and Origins in Astronomy*, ed. George Mulfinger Jr. (Norcross: Creation Research Society Books, 1983), 87, 91, 100; to initiate nuclear fusion, a body must be at least ten times as massive as Jupiter [see Andrew P. Ingersoll, "Jupiter and Saturn," *Scientific American* 245:92 (December 1981).].

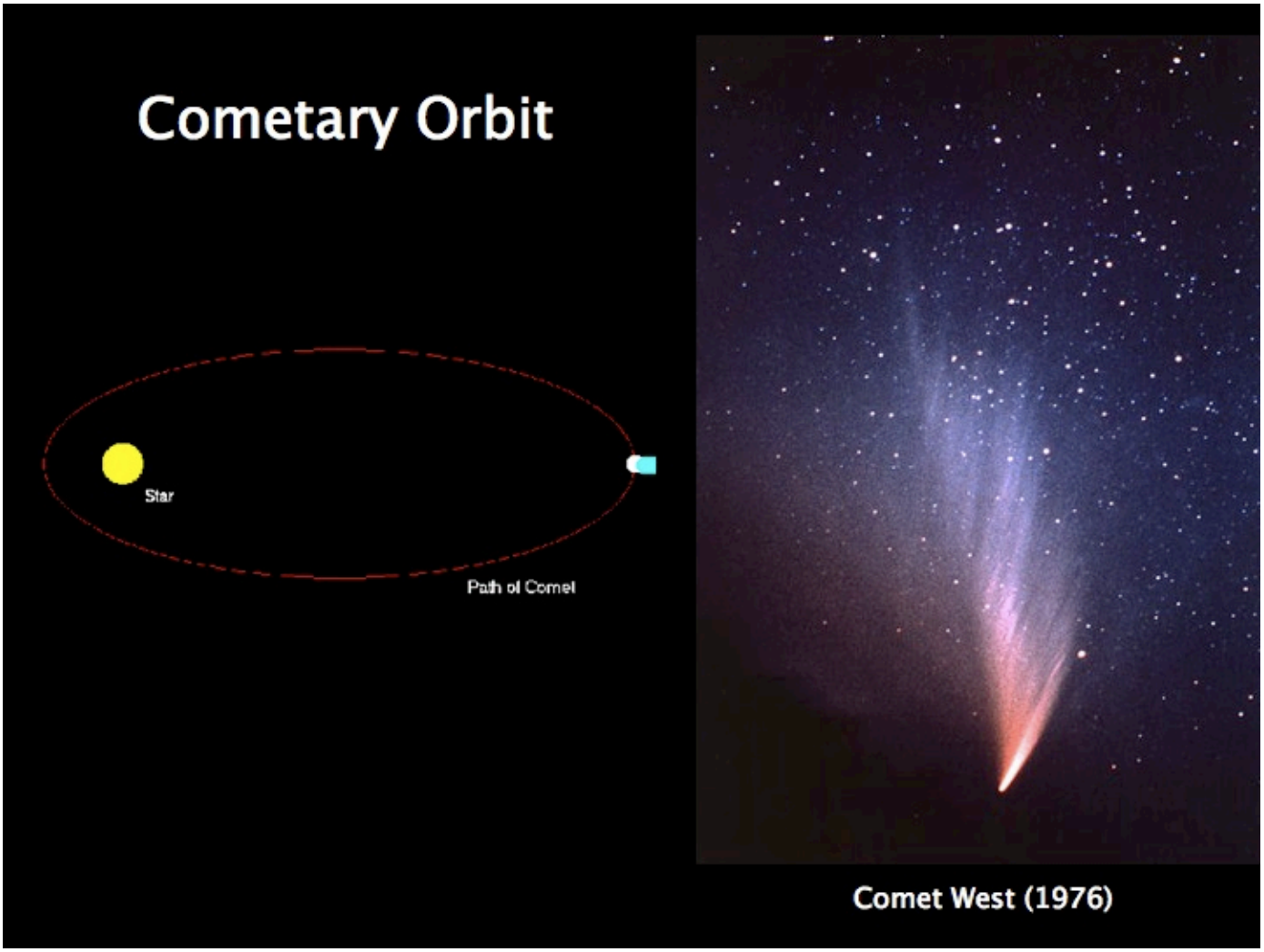
[32] "[The following is] a somewhat surprising outcome considering the size of the Moon and the assumption that most of its heat energy had been lost… These unexpectedly high lunar [heat flow] values seem to indicate the Moon's interior is much hotter than most thermal models had anticipated. If the temperature gradient in the lower regolith is extrapolated to great depths, the lunar interior would appear to be at least partly molten—a condition contradicted by other evidence." [Nicholas M. Short, *Planetary Geology* (Englewood Cliffs: Prentice-Hall, 1975), 184.]

[33] Ron Cowen, "Comets: mudballs of the solar system," *Science News* 141:170-171 (14 March 1992).

[34] Ray Jayawardhana, "Keeping tabs on cometary breakups," *Science* 264:907 (13 May 1994).

[35] See Paul F. Steidl, "Planets, comets, and asteroids," *Design and Origins in Astronomy*, ed. G. Mulfinger (Creation Research Society Books, 1983), 73-106.

gravitational interactions with infrequently passing stars often knock comets into the solar system, and (c) other improbable interactions with planets that slow down the incoming comets often enough to account for the hundreds of comets observed.[36]



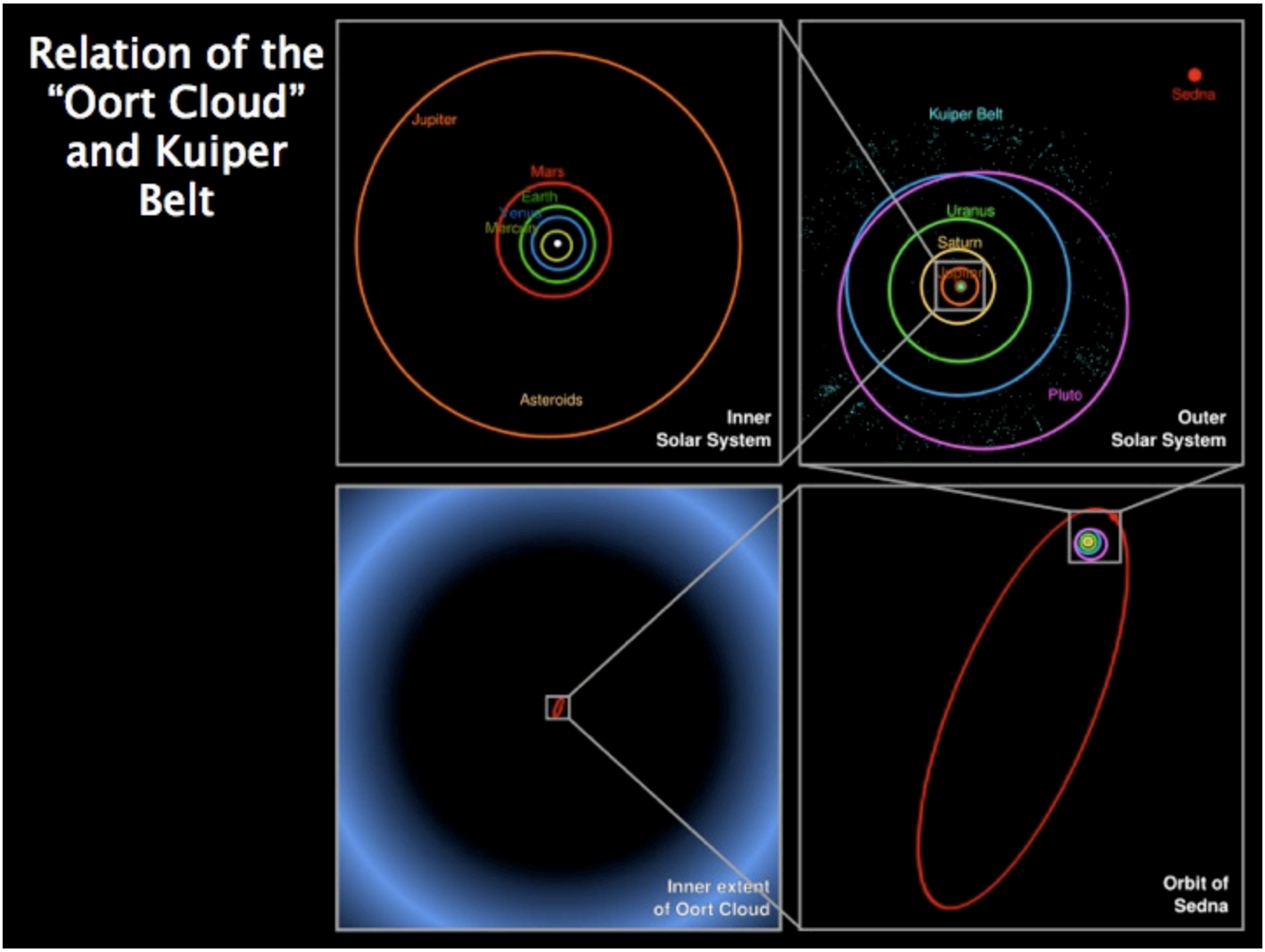
4. However, there is absolutely no evidence for a distant shell of cometary material surrounding the solar system (i.e. the "Oort cloud" or its hock, the "Kuiper Belt"[37]), and there is no known way to add comets to the solar system at rates that even remotely balance their destruction. [38] Actually, the gravity of planets tends to expel comets from the solar

[36] See Fred L. Whipple, "Background of modern comet theory," *Nature* 263:15-19 (2 September 1976); or Harold F. Levison, et al., "The mass disruption of Oort Cloud comets," *Science* 296:2212-2215 (21 June 2002).

[37] Recently studies have shown that the Kuiper belt is dynamically stable. Thus, the theoretical source of short-term comets has been pushed to the farther "scattered disc" [see Harold F. Levison and Luke Donnes, "Comet Populations and Cometary Dynamics," in Lucy Ann Adams McFadden, Paul Robert Weissman, and Torrence V. Johnson, *Encyclopedia of the Solar System*, 2nd ed. (Academic Press, 2007), 575-588.

[38] Raymond A. Lyttleton, "The non-existence of the Oort Cometary Shell," *Astrophysics and Space Science* 31:385-401 (December 1974);
"Many scientific papers are written each year about the Oort Cloud, its properties, its origin, its evolution. Yet there is not a shred of direct observational evidence for its existence." [Carl Sagan and Ann Druyan, *Comet* (New York: Ballantine Books, 1997), 210]; however, Sagan and Druyan believe the Oort cloud exists, and go on to predict (p. 211) that "with the refinement of our scientific instruments, and the development of space missions to go far beyond Pluto," the cloud will be seen, measured, and studied.

system rather than capture them.[39] Thus, comets and the solar system appear to be less than 10,000 years old.



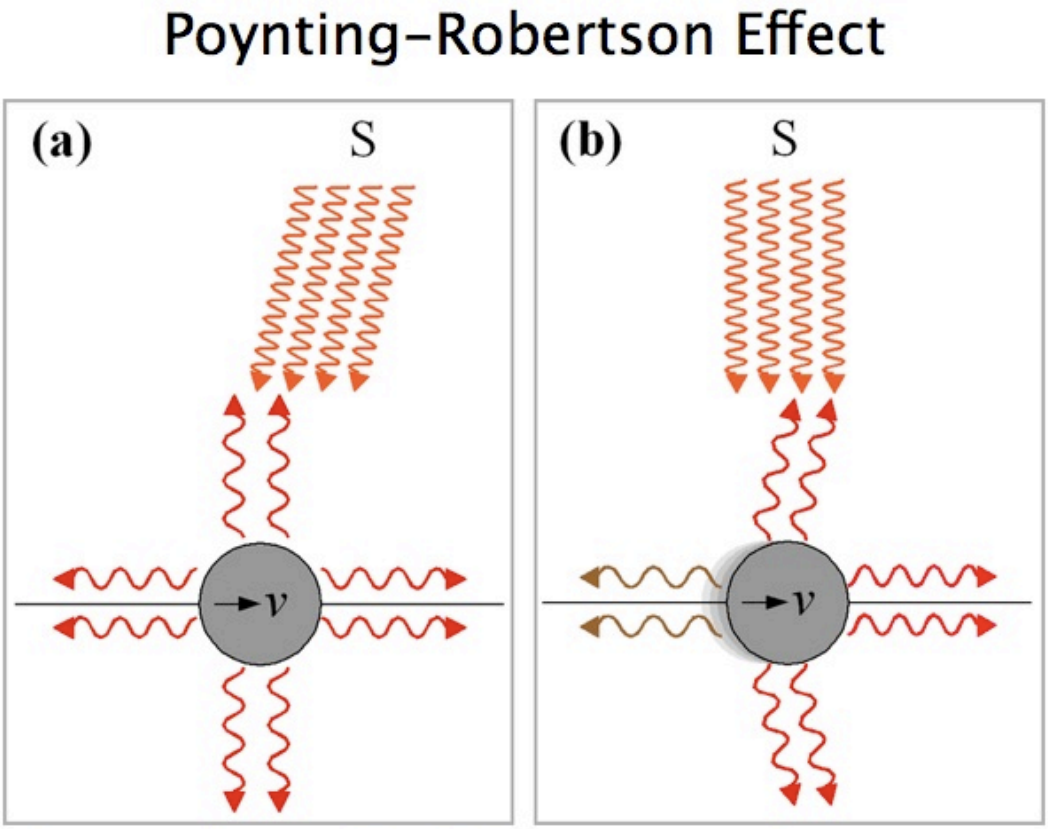
J. Poynting-Robertson Effect

1. Dust particles larger than about a 100,000th of a centimeter in diameter form a large disk-shaped cloud that orbits the Sun between the orbits of Venus and the asteroid belt. Forces acting on these particles, known as the Poynting-Robertson effect,[40] should spiral most of

[39] Lyttleton, "The non-existence of the Oort Cometary Shell," 393.

[40] Also known as the "Poynting-Robertson drag," it works like this: rain falling on a speeding car tends to strike the front of the car and slow it down slightly. Similarly, the Sun's rays that strike particles orbiting the Sun tend to slow them down, causing them to spiral into the Sun. Thus, the Sun's radiation and gravity act as a giant vacuum cleaner that pulls in about 100,000 tons of nearby micrometeoroids per day.

them into the Sun in less than 10,000 years, since known forces and sources of replenishment cannot maintain this cloud.[41]



Radiation from the sun (S) and thermal radiation from a particle seen (a) from an observer moving with the particle and (b) from an observer at rest with respect to the sun.

2. A disintegrating comet becomes a cluster of particles called a meteor stream. The Poynting-Robertson effect causes smaller particles in a meteor stream to spiral into the Sun more rapidly than larger particles. After about 10,000 years, these orbits should be visibly segregated by particle size. Because this segregation is generally not seen, meteor streams are probably a recent phenomenon.[42]

3. Huge quantities of microscopic dust particles also have been discovered around some stars.[43] However, according to the theory of stellar evolution, those stars are many millions of years old, so that dust should have been removed by stellar wind and the Poynting-Robertson effect. Until some mechanism or process is discovered that continually resupplies vast amounts of dust, evolutionism should be questioned.

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[41] Disintegrating comets and asteroids add dust at less than half the rate at which it is being destroyed [see Paul M. Steidl, *The Earth, the Stars, and the Bible* (Grand Rapids: Baker Book House, 1979), 77-79; and Harold S. Slusher and Stephen J. Robertson, *The Age of the Solar System: A Study of the Poynting-Robertson Effect and Extinction of Interplanetary Dust*, ICR Technical Monograph No. 6, revised ed. (El Cajon: Institute for Creation Research, 1978).].

[42] Stanley P. Wyatt Jr. and Fred L. Whipple, "The Poynting-Robertson Effect on meteor orbits," *The Astrophysical Journal* 3:134-141 (January 1950); see also Ron Cowen, "Meteorites: to stream or not to stream," *Science News* 142:71 (1 August 1992).

[43] David A. Weintraub, "Comets in collision," *Nature* 351:440-441 (6 June 1991).

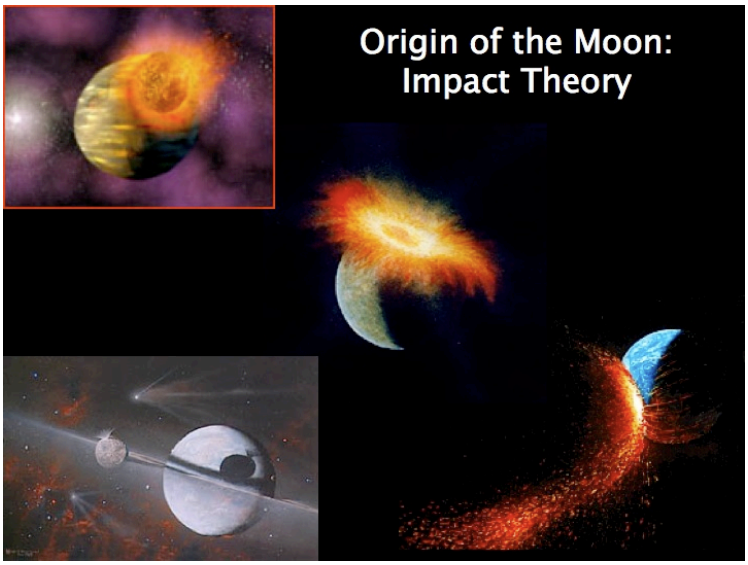
K. Origin of the Moon – Evolutionists deny the moon's direct creation by God, so they have come up with several theories, all of which are highly speculative and completely inadequate (similar difficulties exist for evolutionary explanations of the other 155 moons in the solar system):[44]

1. *Fission theory* – invented by the astronomer George Darwin (son of Charles), who proposed that the earth spun so fast that a chunk broke off. Universally discarded today, the earth could never have spun fast enough to throw a moon into orbit, and the escaping moon would have been shattered while within the Roche Limit. Furthermore, the relative abundances of its elements are too dissimilar from those of Earth.

2. *Capture theory* – the moon was wandering through the solar system and was captured by Earth's gravity. However, the chance of two bodies passing close enough is minute, and the moon would have been 'slingshotted' rather than captured. Finally, even a successful capture would have resulted in an elongated comet-like orbit, rather than its nearly circular orbit.[45]

3. *Condensation theory* – the moon grew out of a dust cloud attracted by Earth's gravity. However, no such cloud could be dense enough, and it doesn't account for the moon's low iron content. Moreover, if the Moon formed from particles orbiting Earth, other particles should be easily visible inside the Moon's orbit; none are.

4. *Impact theory* – the currently fashionable idea is that material was blasted off from Earth by the impact of another object. If so, many small moons should have formed.[46] Even if only one moon formed, the impactor's glancing-blow would either be too slight to form our large Moon, or the act would be so violent that Earth would end up with an excess of angular momentum (i.e. spinning too fast).[47]



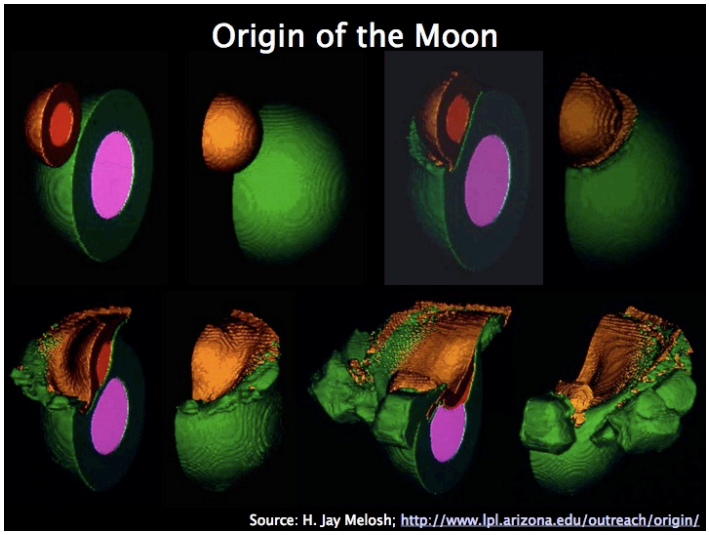
[44] "In astronomical terms, therefore, the Moon must be classed as a well-known object, but astronomers still have to admit shamefacedly that they have little idea as to where it came from. This is particularly embarrassing, because the solution of the mystery was billed as one of the main goals of the US lunar exploration programme." [David W. Hughes, "The open question in selenology," *Nature* 327:291 (28 May 1987).]

"The whole subject of the origin of the moon must be regarded as highly speculative." [Robert C. Haymes, *Introduction to Space Science* (New York: John Wiley & Sons, 1971), 209.]

[45] See Paul M. Steidl, *The Earth, the Stars, and the Bible* (Grand Rapids: Baker Book House, 1979), 77-79; M. Mitchell Waldrop, "The origin of the Moon," *Science* 216606-607 (7 May 1982).

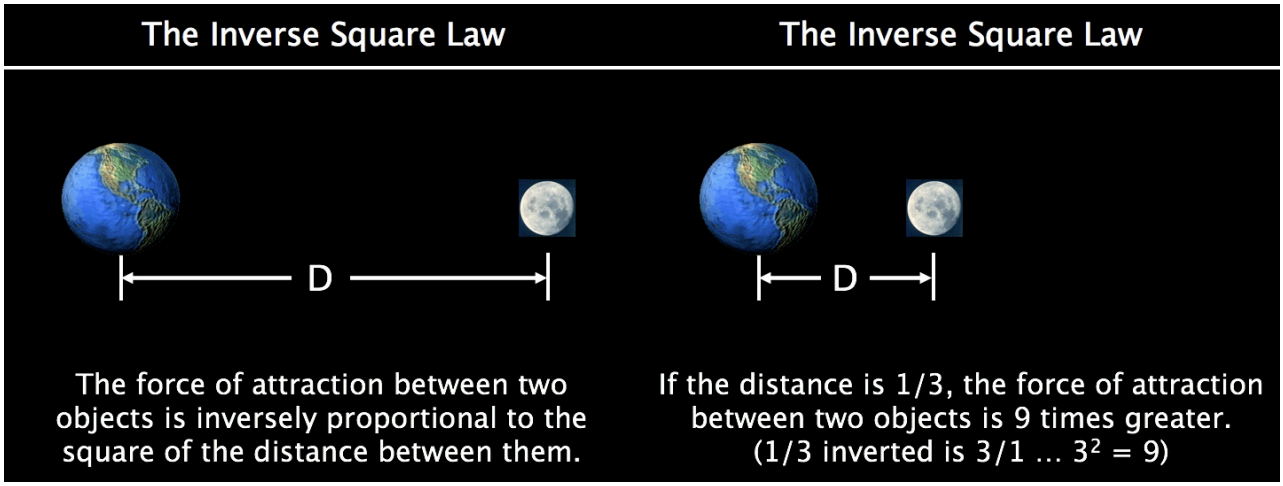
[46] "We conclude that an Earth system with multiple moons is the final result unless some particularly severe constraints on initial conditions in the disk are met." [Robin M. Canup and Larry W. Esposito, "Accretion of the Moon from an impact-generated disk," *Icarus* 119:427 (February 1996).]

[47] "…no reasonable means to rid the Earth/Moon system of this excess angular momentum has yet been proposed." [Shigeru Ida et al., "Lunar accretion from an impact-generated disk," *Nature* 389(2):357 (25 September 1997); note also comment in the same issue by J. J. Lissauer, "It's not easy to make the moon," 327-328.]



L. Recession of the Moon

1. First observed by Edmond Halley in 1695, the moon is slowly receding from Earth at about 4 cm (1½ inches) per year. Labeled "the lunar crisis" among those aware of the problem,[48] the moon could never have been closer than 18,400 km (11,500 miles), the *Roche Limit*, because Earth's tidal forces would have broken it apart (the result of different gravitational forces on different parts of the moon). But even if the moon had started receding from being in contact with the earth, it would have taken only 1.37 billion years to reach its present distance (far too young for evolution and much younger than the radiometric 'dates' assigned to moon rocks).[49]



[48] A phrase used by astronomers at two international conferences which tried to address this problem [see P. Brosche and J. Sündermann, editors, *Tidal Friction and the Earth's Rotation* (New York: Springer-Verlag, 1978) and P. Brosche and J. Sündermann, editors, *Tidal Friction and the Earth's Rotation II* (New York: Springer-Verlag, 1982).].

[49] Technical note: since tidal forces are inversely proportional to the cube of the distance, the recession rate (dR/dt) is inversely proportional to the *sixth power* of the distance. So, $dR/dt = k/R^6$, where k is a constant = (present speed: 0.04 m/year) x (present distance: 384,400,000 m)^6 = 1.29x10^{50} m^7/year. Integrating this differential equation gives the time to move from R_i to R_f as $t = {}^1/_{7k}(R_f^7 - R_i^7)$. For R_f = the present distance and R_i = the Roche Limit, t = 1.37 x 10^9 years. There is no significant difference if R_i = 0, i.e. the earth and moon touching, because of the high recession rate (caused by enormous tides) if the moon is close. See Don DeYoung, "The Earth-Moon system," *Proceedings of the Second International Conference on Creationism*, vol. II (Pittsburgh: Creation Science Fellowship, 1990), 79–84; available from http://www.icc03.org/proceedings.htm.

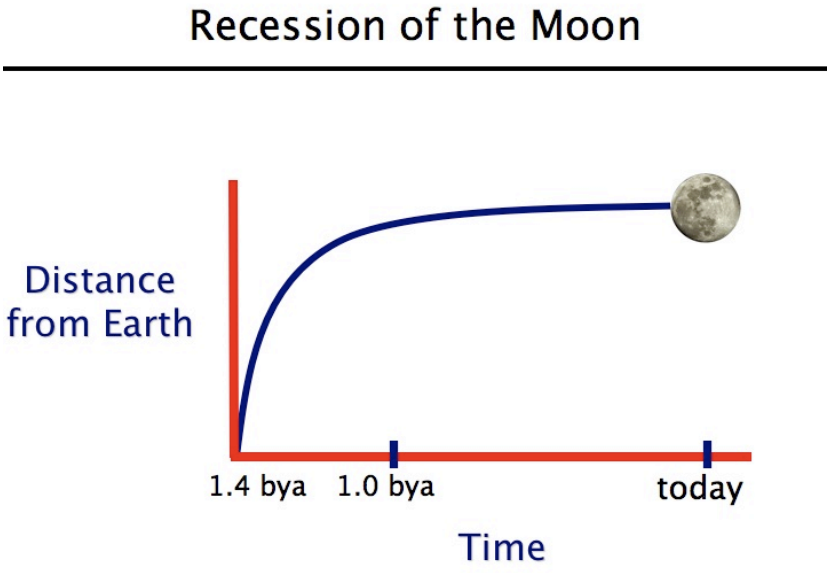
2. 1.2 billion years ago the centers of the Moon and Earth would have been only 15,000 km apart (within the Roche Limit), the ocean tides would have steadily grown to a ridiculous 12.8 km (8 miles) high, and would have left marks on Earth that would be—but obviously are not—visible.[50]

Earth-Moon Distances

1,000 years ago	125 feet closer
1 million years ago	28.4 miles closer
10 million years ago	284 miles closer
100 million years ago	2,840 miles closer
1 billion years ago	28,400 miles closer
1.4 billion years ago	contact

3. One of the most fascinating sights in the sky is a total eclipse of the sun. This is possible because the moon is almost exactly the same angular size (half a degree) in the sky as the sun—it is both 400 times smaller and 400 times closer than the sun. This has the appearance of design.[51]

4. A recent study of varve beds (layers of finely grained mud and sand caused by tidal effects) spanning the last 900 Ma (according to evolutionary dating) presents strong evidence that tidal amplitudes have remained relatively constant since that time.[52] Thus, the Moon has remained relatively constant in its position and relation to the Earth during that time, approximating its age with that of the Earth's.[53] However, present lunar recession rates contradict this possibility. The logical alternative is a recent creation of both the Moon and the Earth with little lunar recession since that time.



[50] See Walt Brown's calculations [*In the Beginning: Compelling Evidence for Creation and the Flood*, 7th ed. (Phoenix: Center for Scientific Creation, 2001), 302-306; archived at http://www.creationscience.com/onlinebook/TechnicalNotes2.html].

[51] See also Danny R. Faulkner, "The angular size of the moon and other planetary satellites: an argument for Design," *Creation Research Society Quarterly* 35(1):23-26 (June 1998); archived at http://www.creationresearch.org/crsq/articles/35/astrodesign.html.

[52] C. P. Sonett, E. P. Kvale, A. Zakharian, M. A. Chan, and T. M. Demko, "Late Proterozoic and Paleozoic tides, retreat of the Moon, and rotation of the Earth," *Science* 273:100-104 (1996).

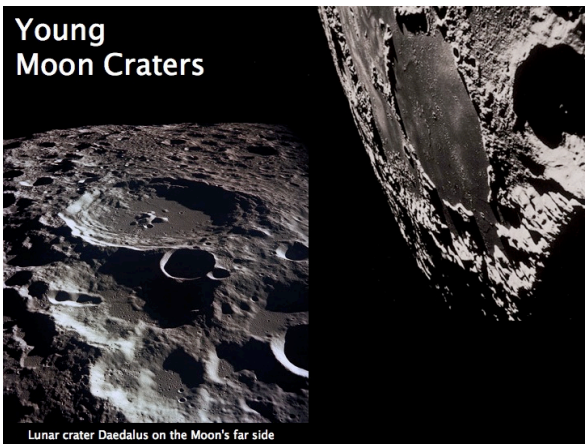
[53] "It can also be concluded on the basis of the record that the moon has been present at least since the Proterozoic and that tides have not changed significantly (have not changed past our ability to reasonably interpret them according to modern patterns) in that time… a Moon formation of not less than about 3.5 billion years ago and much more likely about 4.5 billion years ago, making the age of the Moon on par with the age of the Earth." (Ibid.)

M. Lunar Surface Features

1. The same side of the Moon always faces the Earth during its monthly orbit. Thus, it has a "near side" and "far side," which are surprisingly different.[54] The surface of the far side is rougher, while the near side has most of the Moon's volcanic features, lava flows, dome complexes, and giant multi-ringed basins, which give it its "man-in-the-moon" appearance. Almost all deep moonquakes are on the near side,[55] and large lava flows (darker regions) have smoothed over many craters on the near side.[56]

2. These giant basins were formed by large impacts, whose energy melted the rock and generated lava flows. This is why the lava flows came after the craters formed, which appear to have happened recently, because a surprising amount of heat is flowing out of the Moon from just below its surface, yet the Moon's interior is relatively cold.[57] The concentration of these large impact features on the near side indicate that the impactors *came from the Earth*,[58] which would be expected if the "springs of the great deep burst forth." (Gen. 7:11).

3. Young Craters – large craters on the Moon have high, steep walls that should be slowly slumping and deep floors that should be bulging upward. Neither is seen, so these craters appear relatively



[54] "Astronomers were stunned by the first images of the moon's farside, captured by the Soviet spacecraft Luna 3 in 1959. The two hemispheres seemed like different worlds. The face we see has fewer large craters and far greater areas of smooth, dark, frozen lava. Nobody really knows why." [Bob Berman, "Worlds out of balance," *Discover* 24:38 (December 2003); see also Paul D. Spudis, "The new Moon," *Scientific American* 289:89 (December 2003).]

[55] "For unclear reasons, deep moonquakes seem largely confined to the side of the moon facing Earth." [Elizabeth Svoboda, "New computers uncover old quakes on the Moon," *Discover* 27:38 (January 2006); see also Yosio Nakamura, "Farside deep moonquakes and deep interior of the Moon," *Journal of Geophysical Research* 110:E01001 (18 January 2005).]

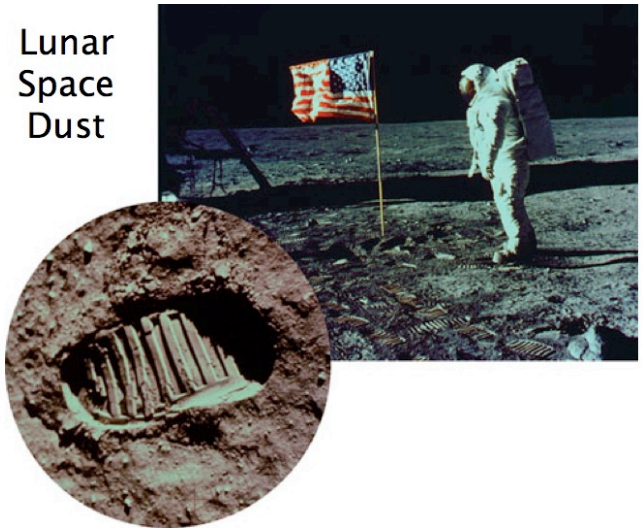
[56] Some have proposed that the Moon's crust must be thinner on the near side, so that lava can squirt out more easily on the near side than on the far side. However, no seismic, gravity, or heat flow measurements support this hypothesis, and the deeper lunar interior is cold and solid [see J. O. Dickey et al., "Lunar laser ranging: a continuing legacy of the Apollo Program," *Science* 265:487 (22 July 1994)], making the Moon's density throughout almost as uniform as that of a billiard ball and thus showing that little distinctive crust exists.

[57] "[The following is] a somewhat surprising outcome considering the size of the Moon and the assumption that most of its heat energy had been lost… These unexpectedly high lunar [heat flow] values seem to indicate the Moon's interior is much hotter than most thermal models had anticipated. If the temperature gradient in the lower regolith is extrapolated to great depths, the lunar interior would appear to be at least partly molten—a condition contradicted by other evidence." [Nicholas M. Short, *Planetary Geology* (Englewood Cliffs: Prentice-Hall, 1975), 184.]

[58] If the impacts that produced these volcanic features occurred slowly from any or all directions *other than Earth*, both near and far sides would be equally hit. Moreover, The Moon *as a whole* has relatively few volatile elements (e.g. nitrogen, hydrogen, and the noble gases); however, lunar soil is rich in these elements, which implies their extralunar origin, and the relative abundances of isotopes of these elements in lunar soils correspond not to the solar wind but to what is found on Earth [see M. Ozima et al., "Terrestrial nitrogen and noble gases in lunar soils," *Nature* 436:655-659 (4 August 2005).]. Furthermore, if large impactors came from Earth recently, most moonquakes should be on the near side, and they should still be occurring, which is the case.

young.[59] Similar conclusions can be made for Venus and Mercury where gravity and temperatures are much greater, which should speed up the process.

N. Lunar Space Dust – If the Moon were billions of years old, it should have accumulated (at today's low and diminishing rate) a thick layer of dust and debris from meteoritic bombardment. Before instruments were placed on the Moon, some scientists were very concerned that astronauts would sink into a sea of dust—possibly a mile in thickness.[60] However, this did not happen because very little meteoritic debris is on the Moon. In fact, after examining rocks and dust brought back from the Moon, scientists learned that only about 1/67th (1.5%) of the dust and debris came from outer space, while the rest was



[59] Calculations show that the growing upward bulges of large crater floors on the Moon should occur to their current extent in only 10,000 to 10,000,000 years [see G. R. Morton, H. S. Slusher, and R. E. Mandock, "The age of lunar craters," *Creation Research Society Quarterly* 20:105-108 (September 1983).].

[60] Isaac Asimov first made predictions such as, "I get a picture, therefore, of the first spaceship, picking out a nice level place for landing purposes, coming in slowly downward tail-first and sinking majestically out of sight." (Isaac Asimov, "14 million tons of dust per year," *Science Digest*, January 1959, p. 36.) Raymond Lyttleton felt that the dust from only the erosion of exposed Moon rocks by ultraviolet light and x-rays "could during the age of the moon be sufficient to form a layer over it several miles deep." [Raymond A. Lyttleton, *The Modern Universe* (New York: Harper & Brothers, 1956), 72.]

Fears about the dust thickness were reduced when instruments were sent to the Moon from 1964 to 1968 (i.e. experimental programs *Ranger* and *Surveyor*). However, some concern still remained, at least in Neil Armstrong's mind, as he stepped onto the Moon [see transcript of "Conversations from the Moon," *Chicago Tribune*, 21 July 1969, Section 1, p. 1, and Paul D. Ackerman, *It's a Young World After All* (Grand Rapids: Baker Book House, 1986), 19.].

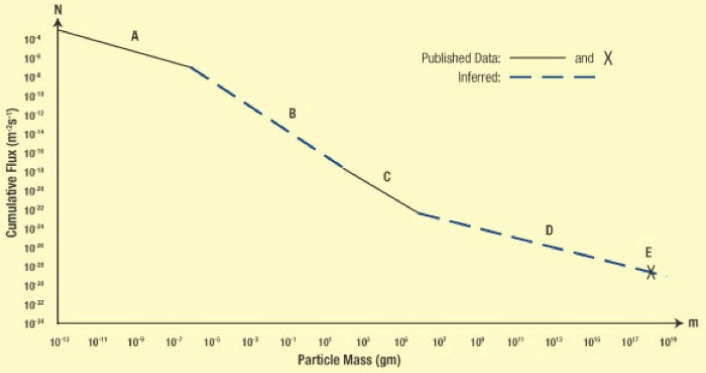
pulverized Moon rock.[61] Recent measurements of the influx rate of meteoritic material on the Moon also do not support an old Moon.[62]

Theoretical Thickness of Lunar Dust*

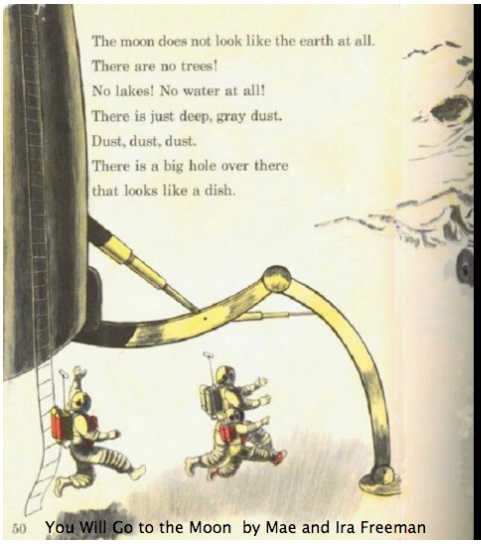
Region	a	b	Mass Range (gm)	67 × t_{A-D} (meters)
A	-10.08	-0.55	10^{-13} to 10^{-6}	0.98
B	-14.77	-1.33	10^{-6} to 10^{2}	3.17
C	-15.12	-1.16	10^{2} to 10^{6}	0.01
D	-18.91	-0.53	10^{6} to 2.71 x 10^{18}	310.86
			Total Thickness =	315 . 02 m

*Based on Walt Brown's calculations of 4.6 billion years of meteoritic influx [Walt Brown, In the Beginning: Compelling Evidence for Creation and the Flood, 7th ed. (Phoenix: Center for Scientific Creation, 2001) , 384-386].

Cumulative Meteoritic Flux vs. Particle Mass

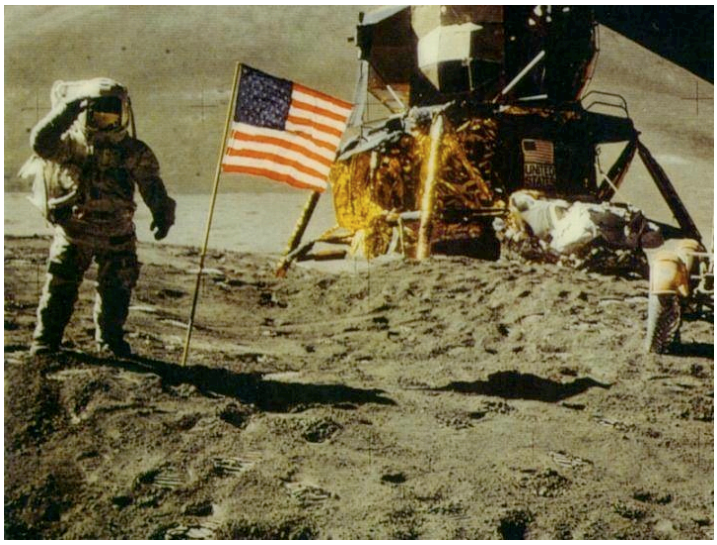


Cumulative flux: how many particles (N) greater than a certain mass (m) pass through a square meter on the Moon's surface each second?



Children's book about going to the moon written in 1959.

"There is just deep, gray dust. Dust, dust, dust."



[61] Meteorites that strike the Moon travel about 10 times faster than a bullet—averaging 20 km/sec (Brown, *In the Beginning*, 307). When they strike the Moon, they are not slowed down by an atmosphere (as on Earth), because the Moon has no atmosphere. Therefore, each projectile, regardless of size, instantaneously fragments and vaporizes upon impact, kicking up a cloud of pulverized Moon rocks. Vaporized portions of the meteorite then condense on the pulverized Moon rocks. This was discovered by slicing Moon rocks and finding them coated by meteoritic material rich in nickel. Pure Moon rocks have little nickel. In this way, NASA arrived at the factor of 67 [see Stuart Ross Taylor, *Lunar Science: A Post-Apollo View* (New York: Pergamon Press Inc., 1975), 92.].

[62] Because of its wide publicity in the late 50's and early 60's, evolutionists quickly concocted many arguments to deal with the lunar dust problem, which are still used today (e.g. Matson, Dave E. "How Good Are Those Young-Earth Arguments?" available at http://www.infidels.org/library/modern/dave_matson/young-earth/). Consequently, many creationists have conceded and abandoned support of it (e.g. Andrew A. Snelling and David E. Rush, "Moon dust and the age of the solar system," *Creation Ex Nihilo Technical Journal*, 7(1):2–42, April 1993; archived at http://www.creationontheweb.com/content/view/1763). However, *cumulative meteoritic influx* clearly limits the age of the moon. For a response to evolutionist claims and a comprehensive treatment of the subject, see Brown, *In the Beginning*, 307-309; archived at http://www.creationscience.com/onlinebook/TechnicalNotes4.html.

II. GEOLOGICAL

A. Apparent Design

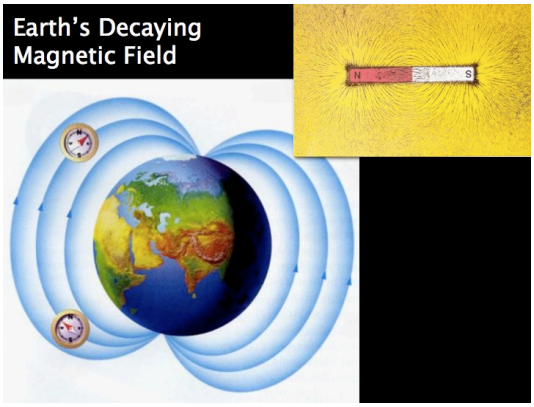
In his hand are the depths of the earth, and the mountain peaks belong to him. [5] The sea is his, for he made it, and his hands formed the dry land. [6] Come, let us bow down in worship, let us kneel before the LORD our Maker. ([NIV] Psalm 95:4-6)

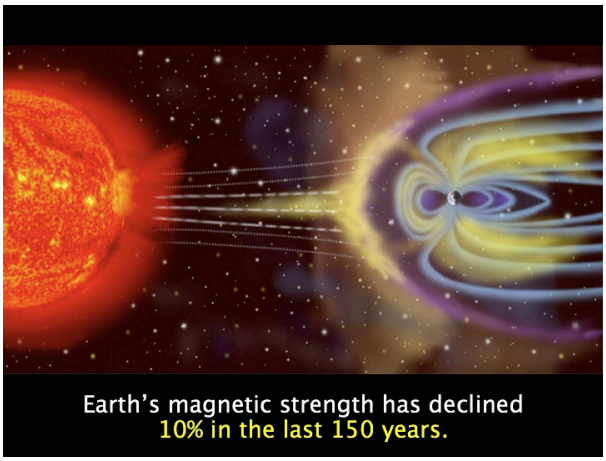
B. Shallow Meteorites – Meteorites are steadily falling onto Earth. This rate was probably much greater in the past, because planets have swept from the solar system much of the supposed original meteoritic material. Therefore, experts have expressed surprise that meteorites are almost always found in young sediments, very near Earth's surface.[63] Even meteoritic particles in ocean sediments are concentrated in the topmost layers.[64] If Earth's sediments, which average about a mile in thickness on the continents, were deposited over hundreds of millions of years, as evolutionists believe, we would expect to find many deeply buried iron meteorites. Because no meteorites are found immediately above the basement rocks on which these sediments rest, these basement rocks were not exposed to meteoritic bombardment for any great length of time.

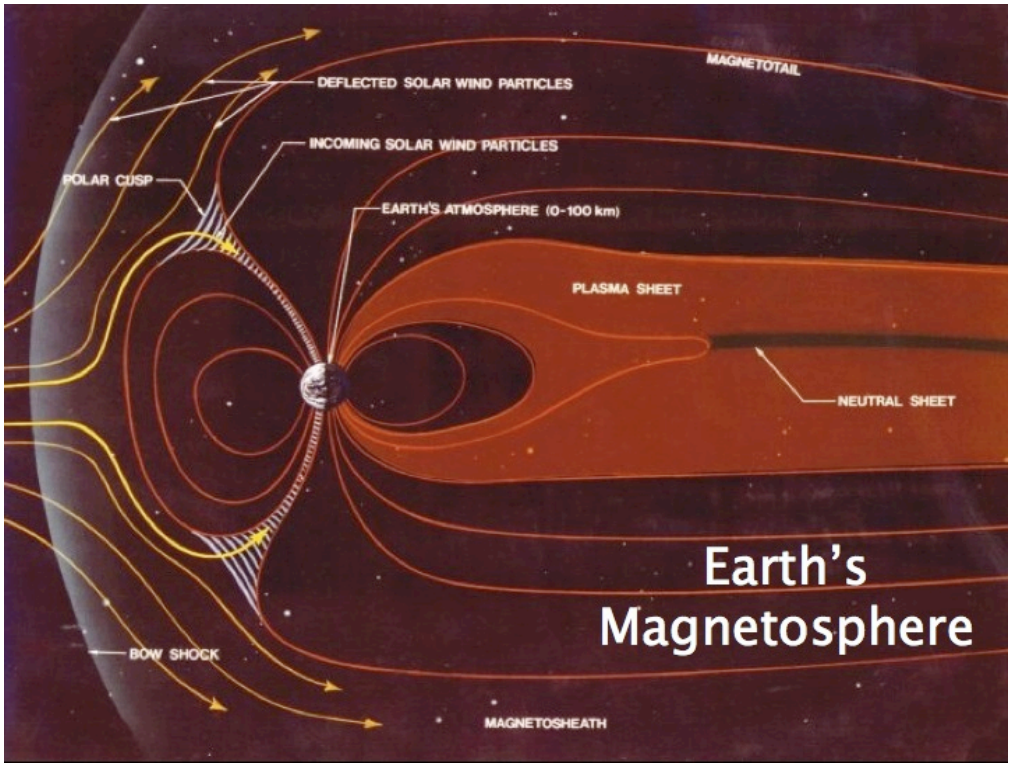
[63] "No meteorites have ever been found in the geologic column." [William H. Twenhofel, *Principles of Sedimentation*, 2nd ed. (New York: McGraw-Hill, 1950), 144]; Fritz Heide, *Meteorites* (Chicago: University of Chicago Press, 1964), 119; N. T. Bobrovnikoff, "Comets," *Astrophysics*, ed. J. A. Hynek (New York: McGraw-Hill Book Company, 1951), 352.

[64] Hans Petterson, "Cosmic spherules and meteoritic dust," *Scientific American* 202:123-129 (February 1960).

C. Earth's Decaying Magnetic Field – The total energy stored in the earth's magnetic field ("dipole" and "non-dipole") is decreasing with a half-life of 1,465 (± 165) years.[65] The earth's magnetic strength has declined almost 10% in the last 150 years, and at the present rate the field could not be more than 20,000 years old, because the electrical current would have been so vast that Earth's structure could not have survived the heat produced.[66] Evolutionary theories explaining this rapid decrease, as well as how the earth could have maintained its magnetic field for billions of years are overly complex and remain inadequate.[67]







[65] D. Russell Humphreys, "The earth's magnetic field is still losing energy," *Creation Research Society Quarterly* 39(1):3-13 (June 2002); archived at http://www.creationresearch.org/crsq/articles/39/39_1/GeoMag.htm; Thomas G. Barnes, *Origin and Destiny of the Earth's Magnetic Field*, 2nd ed. (El Cajon: Institute for Creation Research, 1983).

[66] See also Donald DeYoung, *Astronomy and the Bible*, (Grand Rapids: Baker Books, 1989), 18; and Jonathan D. Sarfati, "The earth's magnetic field: evidence that the earth is young," *Creation Ex Nihilo* 20(2):15-19 (March-May 1998); archived at http://www.creationontheweb.com/content/view/760/.

[67] With complexity comes an increased number of variables, and with enough possibilities, anything can happen; see D. Russell Humphreys, "Can evolutionists now explain the Earth's Magnetic Field?" *Creation Research Society Quarterly* 33(3):184-185 (December 1996).

D. Carbon-14 Dating

1. In the years following Willard Libby's development of the C_{14} dating method in 1947, "radiocarbon swept the scientific world with all the fervor of religious fanaticism, as the new and 'absolute' chronology was established."[68] In those early days the method was applied to almost anything containing carbon, and the results were published in the newly formed *Radiocarbon Journal,* a kind of clearing house for C_{14} data from all the various laboratories. Hundreds of fossil bones of Neanderthals, Cro-magnons, mammoths, sabre-tooth tigers, and other extinct animals, as well as fossil trees, coal, oil, and natural gas, were all reported having ages, by the C_{14} method, of only several thousand years.[69]

2. The great number of these results, indicating a young age for material in some cases believed to be millions of years old, had disturbing implications for the geological time scale. In more recent years, C_{14} dates on such items as coal, oil, or dinosaur bones no longer appear in *Radiocarbon Journal,* because by now it has been impressed on research workers from their student years that the C_{14} method does not give results with materials "known" to be older than about 50,000 years; this is clearly untrue as shown by the early published results.[70]

3. Carbon-14 in Deep Geologic Strata – With their short 5,700-year half-life, no carbon-14 atoms should exist in any carbon older than 250,000 years. Yet it has proven impossible to find any natural source of carbon below Pleistocene (~1.8M–11K ya) strata that does not contain significant amounts of carbon 14, even though such strata are supposed to be millions or billions of years old. Conventional carbon 14 laboratories, long-aware of this anomaly, have striven to eliminate it and are unable to account for it.[71]

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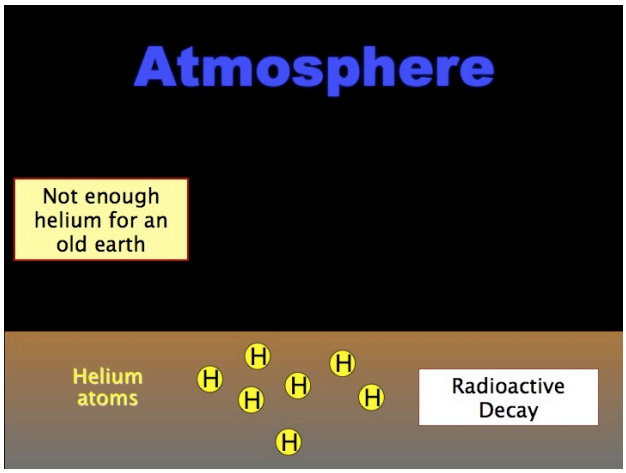
[68] Robert E. Lee, "Radiocarbon: ages in error." *Anthropological Journal of Canada* (Ottawa) 19(3):9 (1981).

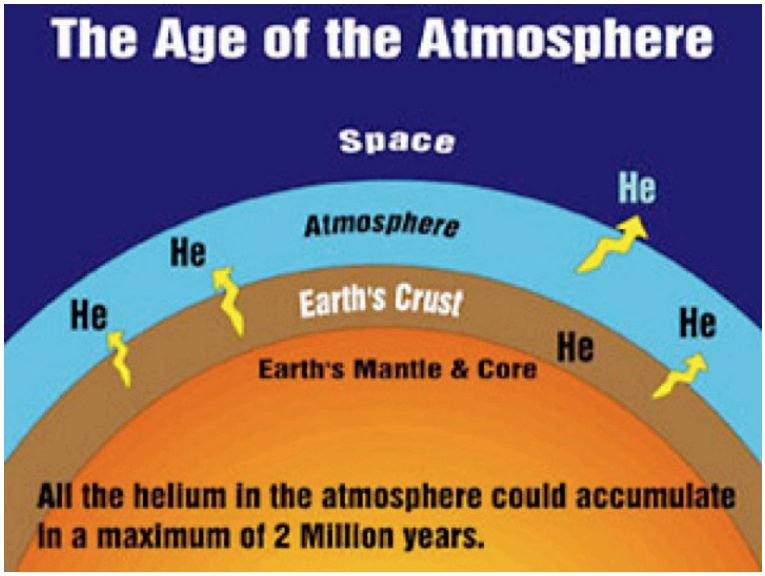
[69] Willard F. Libby, *Radiocarbon Dating* (University of Chicago Press, 1952); see also "Appendix J" in Ian Taylor, *In the Minds of Men: Darwin and the New World Order*, 5th ed. (Zimmerman: TFE Publishing, 2003); available at http://www.creationism.org/books/TaylorInMindsMen/TaylorIMMp16.htm.

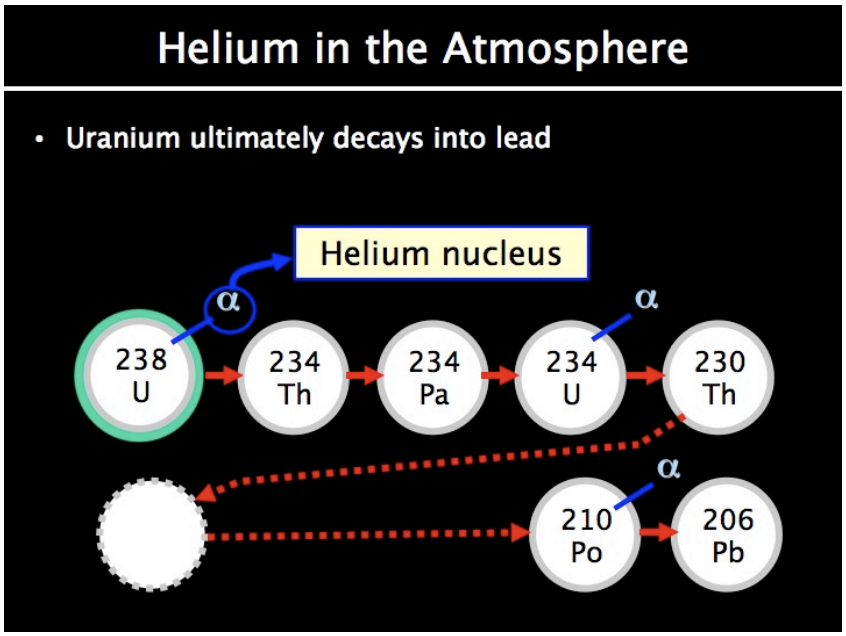
[70] The public, which ultimately pays for all this research, is generally quite unaware of the unbelievable circularity in the procedure for submitting samples to laboratories for C_{14} analysis. The investigator is first asked what date he will accept; then, when a figure is obtained that comes near this date, it is duly reported together with the tolerance value, and these figures become sacrosanct, reported in journal after journal, year after year. Ogden, the director of a radiocarbon laboratory, has made the remarkable confession: "It may come as a shock to some, but fewer than 50 percent of the radiocarbon dates from geological and archaeological samples in northeastern North America have been adopted as 'acceptable' by investigators." [J. Ogden, "The use and abuse of radiocarbon." *Annals of the New York Academy of Science* 288:167 (1977).]

[71] See John R. Baumgardner, et al., "Measurable ^{14}C in fossilized organic materials: confirming the young earth creation-flood model," *Proceedings of the Fifth International Conference on Creationism*, vol. II, (Pittsburgh: Creation Science Fellowship, 2003), 127-142; archived at http://www.icr.org/pdf/research/RATE_ICC_Baumgardner.pdf; see also poster presented to American Geophysical Union, Dec. 2003, http://www.icr.org/pdf/research/AGUC-14_Poster_Baumgardner.pdf.

E. Helium-4 Equilibrium – Helium is pouring into the atmosphere from radioactive decay, but not much is escaping. The total amount in the atmosphere is only 1/2000th of that expected if the atmosphere were really billions of years old.[72] Radioactive decay of uranium and thorium alone would produce all the atmosphere's helium in only 40,000 years.[73]







[72] Larry Vardiman, *The Age of the Earth's Atmosphere: A Study of the Helium Flux through the Atmosphere* (El Cajon: Institute for Creation Research, 1990); see also J. D. Sarfati, "Blowing old-earth belief away: helium gives evidence that the earth is young," *Creation Ex Nihilo* 20(3):19-21, (June-August 1998); archived at http://www.creationontheweb.com/content/view/774/.

[73] Melvin A. Cook, "Where is the Earth's radiogenic helium?" *Nature* 179:213 (26 January 1957); "What happened to the Earth's helium?" *New Scientist* 24:631-632 (3 December 1964).

F. Helium Excess in Minerals – Uranium and thorium generate helium atoms as they decay to lead. A study published in the *Journal of Geophysical Research* showed that such helium produced in zircon crystals in deep, hot Precambrian granitic rock has not had time to escape.[74] Though the rocks contain 1.5 billion years worth of nuclear decay products, newly measured rates of helium loss from zircon show that the helium has been leaking for only 5,680 (± 2,000) years.[75]

G. Buckled Rock Strata – In many mountainous areas, strata thousands of feet thick are bent and folded into hairpin shapes. The conventional geologic time scale says these formations were deeply buried and solidified for hundreds of millions of years before they were bent. Yet the folding occurred without cracking, with radii so small that the entire formation had to be still wet and unsolidified when the bending occurred. This implies that the folding occurred *less than thousands of years* after deposition.[76]

H. Continental Erosion

1. Sedimentologists have researched many of the world's rivers and calculated how fast the land is disappearing. The measurements show that some rivers are excavating their basins by more than 50 inches of height per 1,000 years, while others move only .04 inches per 1,000 years.[77] The average height reduction for all the continents of the world is about 2.4 inches per 1,000 years, which equates to some 24 billion tonnes of sediment per year.

2. At this average rate, North America should have been leveled in 10 million years,[78] and the upper limit of all continental erosion to sea level is 14 million years.[79] If the continents were billions of years old, they would have eroded by wind and water many times over. Mountain uplift and other 'recycling' processes are nowhere near capable of compensating for this.[80] **(see slides on next page)**

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[74] R. V. Gentry, G. L. Glish, and E. H. McBay, "Differential helium retention in zircons: implications for nuclear waste containment," *Geophysical Research Letters* 9(10):1129-1130 (October 1982).

[75] D. Russell Humphreys, et al., "Helium diffusion age of 6,000 years supports accelerated nuclear decay," *Creation Research Society Quarterly* 41(1):1-16 (June 2004); archived at http://www.creationresearch.org/crsq/articles/41/41_1/Helium.htm.

[76] Steven A. Austin and John D. Morris, "Tight folds and clastic dikes as evidence for rapid deposition and deformation of two very thick stratigraphic sequences," Proceedings of the First International Conference on Creationism, vol. II (Pittsburgh: Creation Science Fellowship, 1986), 3-15; available from http://www.icc03.org/proceedings.htm; see also Brown, "The Hydroplate Theory: An Overview," in *In the Beginning*, 87-119.

[77] Ariel Roth, *Origins: Linking Science and Scripture* (Hagerstown: Review and Herald Publishing, 1998), 264.

[78] "North America is now being eroded at a rate that could level it in a mere 10 million years…" Robert H. Dott Jr. and Roger L. Batten, *Evolution of the Earth*, 3rd ed. (New York: McGraw-Hill, 1981), 133); George C. Kennedy, "The origin of continents, mountain ranges, and ocean basins," *American Scientist* 47:491-504 (December 1959).

[79] Tas Walker, "Eroding ages," *Creation Ex Nihilo* 22(2):18-21 (March 2000); archived at http://www.creationontheweb.com/content/view/230/.

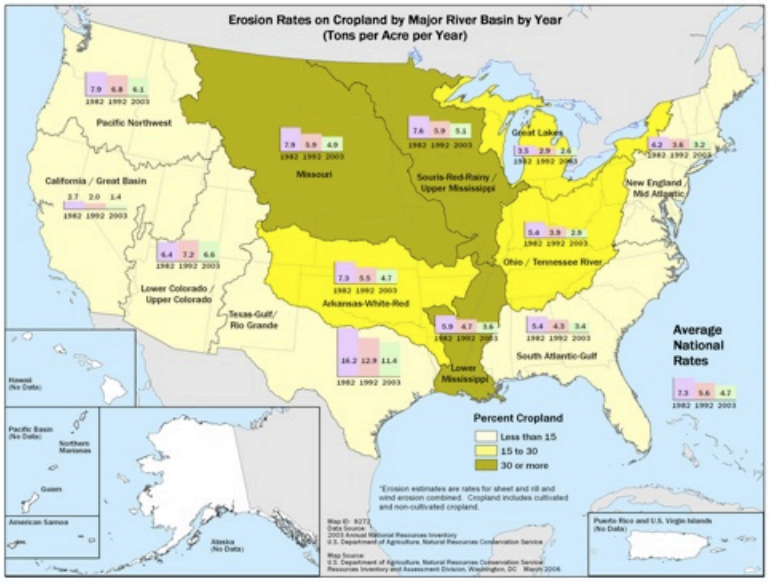
[80] Evolutionists have retorted with condescension that creationists are simply ignorant of replenishing mechanisms such as lava flows, delta and continental shelf buildup (from eroded material), coral reef buildup, and uplift from colliding tectonic plates. However, this overlooks the fact that uplift balancing the erosion would mean that the mountains would have been eroded and replaced many times over in 2.5 billion years. Thus, there should be no ancient sediments in mountainous areas; however, sediments of all ages from young to old (by evolutionary dating methods) are found mountainous regions. This clearly contradicts an old earth.

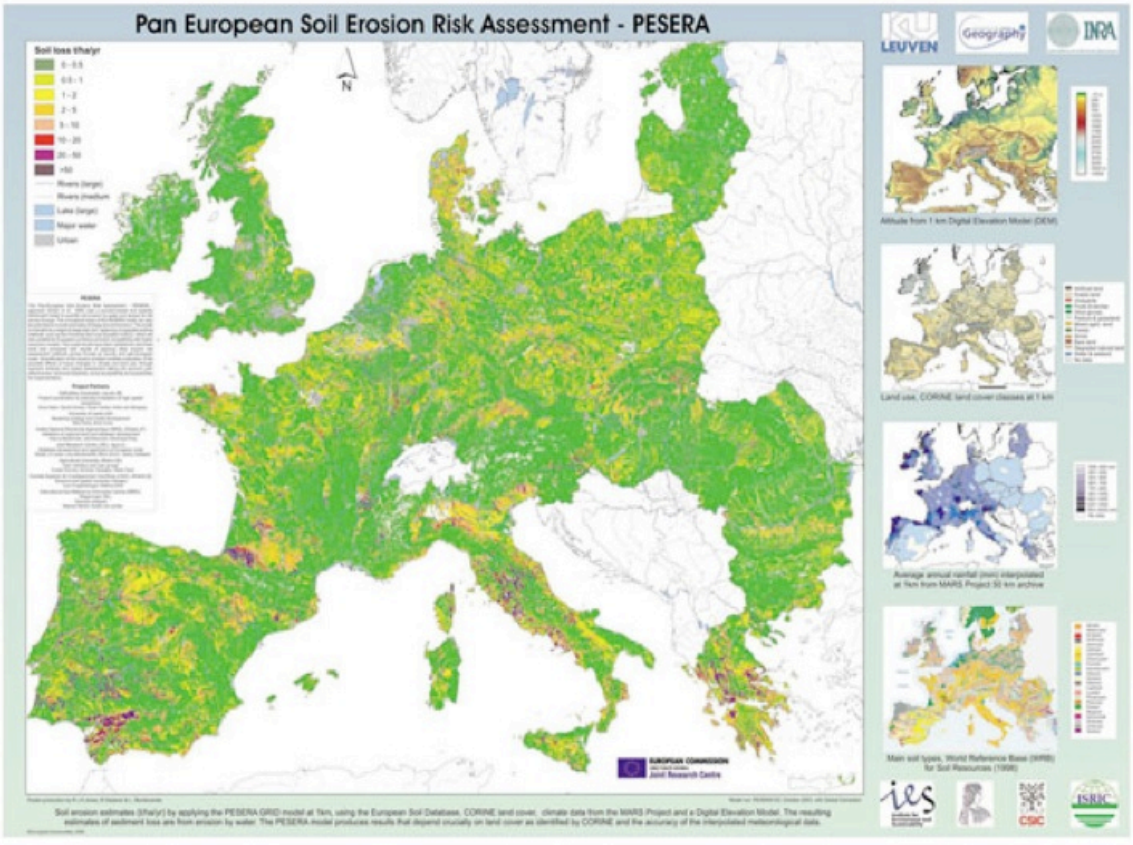
Table 11.1 — Erosion Rates of Some Major Rivers of the World

Average lowering of the land surface within the drainage basin in mm (inches) per 1,000 years.[96]

River	Surface lowering/ mm (inches) per millennium
Wei-Ho	1,350 (53)
Hwang-Ho	900 (35)
Ganges	560 (22)
Alpine Rhine and Rhone	340 (13)
San Juan (USA)	340 (13)
Irrawaddy	280 (11)
Tigris	260 (10)
Isere	240 (9.4)
Tiber	190 (7.5)
Indus	180 (7.1)
Yangtse	170 (6.7)
Po	120 (4.7)
Garonne and Colorado	100 (3.9)
Amazon	71 (2.8)
Adige	65 (2.6)
Savannah	33 (1.3)
Potomac	15 (0.59)
Nile	13 (0.51)
Seine	7 (0.28)
Connecticut	1 (0.04)

Continental Erosion





3. The problem of erosion is particularly acute with mountains and plains, since evolutionists believe fossils of animals and plants at high elevations have somehow avoided this erosion for more than 300 million years. Moreover, vast allegedly ancient plains, such as Kangaroo Island in southern Australia, are "dated" at over 160 million years old, based on the fossil content and radiometric dating.[81] One would expect that exposure to millions years of rain would result in some sort of channelization of the landscape, but there is very little.

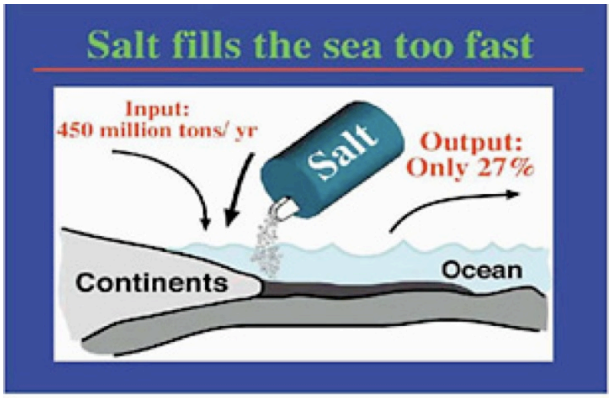
4. Erosion in Stratification – The almost complete absence of evidence of erosion or soil layers or the activity of living things (plant roots, burrow marks, etc.) at the upper surface of the various strata shows that the stratum did not lay there for thousands or millions of years before the next layer was deposited.

I. Seafloor Sedimentation – Each year, water and winds erode about 20 billion tons of dirt and rock from the continents and deposit it in the ocean.[82] The assumed means of sediment removal from the ocean floor is by plate tectonic subduction. That is, the sea floor slides slowly (a few cm/year) beneath the continents, taking some sediment with it. According to secular scientific literature, that process presently removes only 1 billion tons per year.[83] As far as anyone knows, the other 19 billion tons per year simply accumulate. At that rate, erosion would deposit the present mass of sediment in less than 12 million years.[84]

J. Ocean Salinity

1. Every year, rivers and other sources dump over 450 million tons of sodium into the ocean.[85] Only 27% of this sodium manages to get back out of the sea each year. As far as anyone knows, the remainder simply accumulates in the ocean.

2. If the sea had no sodium to start with, it would have accumulated its present amount in less than 42 million years at today's input and output rates.[86] This is much less than the evolutionary age of the ocean, ~three billion years.



[81] Ariel Roth, *Origins*, p. 272; see also C. D. Ollier and M. J. F. Brown, "Erosion of a young volcano in New Guinea, *Zeitschrift für Geomorphologie* 15:12-28 (1971).

[82] J. D. Milliman and J. P. M. Syvitski, "Geomorphic/tectonic control of sediment discharge to the ocean: the importance of small mountainous rivers," *The Journal of Geology*, vol. 100, pp. 525-544 (1992).

[83] W. W. Hay, et al., "Mass/age distribution and composition of sediments on the ocean floor and the global rate of sediment subduction," *Journal of Geophysical Research*, 93(B12):14,933-14,940 (10 December 1988).

[84] See also Steven A. Austin, "Evolution: the ocean says no!" *Symposium on Creation V* (Grand Rapids: Baker Book House, 1975), 77-83; archived at http://www.icr.org/article/56/.

[85] John N. Holeman, "The sediment yield of major rivers of the world," *Water Resources Research* 4:737 (August 1968); and F. L. Sayles and P. C. Mangelsdorf, "Cation-exchange characteristics of Amazon River suspended sediment and its reaction with seawater," *Geochimica et Cosmochimica Acta* 43:767-779 (1979); see also M. Meybeck, "Concentrations des eaux fluviales en elements majeurs et apports en solution aux oceans," *Revue de Géologie Dynamique et de Géographie Physique* 21(3):215 (1979).

[86] Steven A. Austin and D. Russell Humphreys, "The sea's missing salt: a dilemma for evolutionists," *Proceedings of the Second International Conference on Creationism*, vol. II, (Pittsburgh: Creation Science Fellowship, 1991), 17-33; available at http://www.icc03.org/proceedings.htm; see also Jonathan D. Sarfati, "Salty seas: evidence for a young earth," *Creation Ex Nihilo* 21(1):16-17 (December 1998-February 1999); archived at http://www.creationontheweb.com/content/view/578/.

3. The usual reply to this discrepancy is that past sodium inputs must have been less and outputs greater. However, calculations that are as generous as possible to evolutionary scenarios still give a maximum age of only 62 million years.[87] Calculations for many other seawater elements also give much younger ages for the ocean.[88] Thus, recent creation seems a more plausible explanation.

K. Volcanic Debris – Volcanoes eject on average almost a cubic mile of material into the atmosphere each year. At this rapid rate, about 10 times the entire volume of Earth's sedimentary rock should be produced in 4.5 billion years. Actually, only about 25% of Earth's sediments are of volcanic origin, and much greater volcanic activity existed in the past. No means have been proposed for removing or transforming all the missing volcanic sediments.[89]

L. Fossil Radiohalos – Radiohalos are rings of color formed around microscopic bits of radioactive minerals in rock crystals. They are fossil evidence of radioactive decay.[90] "Squashed" Polonium-210 radiohalos indicate that Jurassic, Triassic, and Eocene formations in the Colorado plateau were deposited within months of one another, not hundreds of millions of years apart as required by the conventional time scale.[91] "Orphan" Polonium-218 radiohalos, having no evidence of their mother elements, imply accelerated nuclear decay and very rapid formation of associated minerals.[92]

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[87] This is based on the standard accretion of sodium at ~457 million tons/year being reduced to 356 million tons/year, and the removal of sodium at ~122 million tons/year being raised to 206 million tons/year, the maximum upper and lower limits (see Austin and Humphreys, "The sea's missing salt: a dilemma for evolutionists").

[88] Peter G. Brewer, "Minor elements in sea water," *Chemical Oceanography*, editors J. P. Riley and G. Skirrow, vol. 1, 2nd ed. (New York: Academic Press, 1975), 427; see also Steven A. Austin, "Evolution: the oceans say no!"

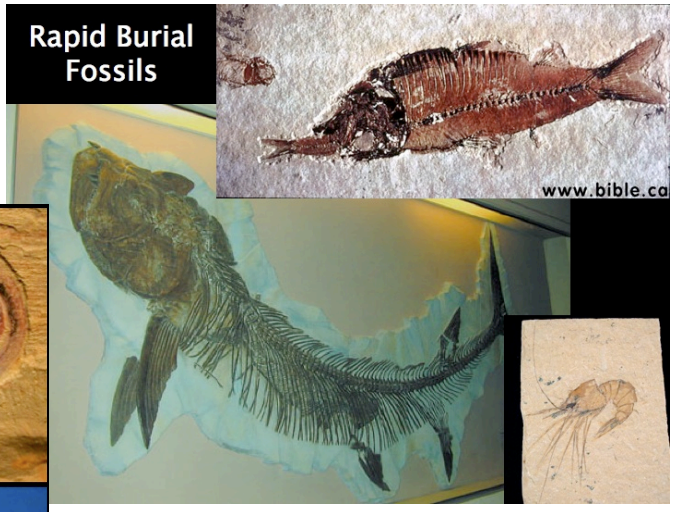
[89] "It has been estimated that just four volcanoes spewing lava at the rate observed for Paricutín [a Mexican volcano that erupted in 1943] and continuing for five billion years could almost account for the volume of the continental crusts." [William D. Stansfield, *Science of Evolution* (New York: Macmillan Publishing Co., 1977), 81]; see also Ariel A. Roth, "Some questions about geochronology," *Origins*, 13(2):75-76 (1986).

[90] Robert V. Gentry, "Radioactive halos," *Annual Review of Nuclear Science* 23:347-362 (1973).

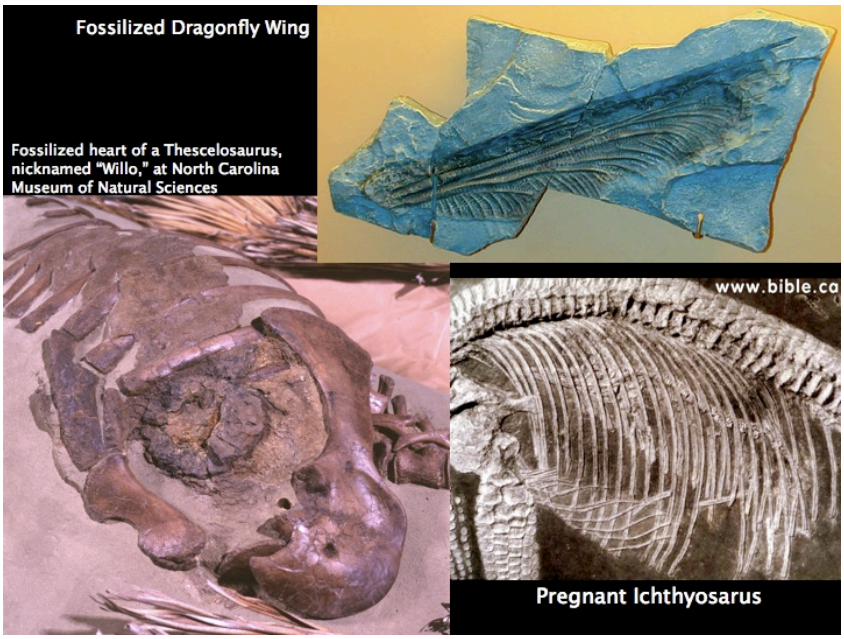
[91] Robert V. Gentry, et al., "Radiohalos in coalified wood: new evidence relating to time of uranium introduction and coalification," *Science* 194:315-318 (15 October 1976).

[92] Robert V. Gentry, "Radiohalos in a radiochronological and cosmological perspective," *Science* 184:62-66 (5 April 1974); see also A. A. Snelling and M. H. Armitage, "Radiohalos—a tale of three granitic plutons," *Proceedings of the Fifth International Conference on Creationism*, vol. II (Pittsburgh: Creation Science Fellowship, 2003), 243-267; archived at http://www.icr.org/pdf/research/ICCRADIOHALOS-AASandMA.pdf.

M. Rapid Burial Fossils – Many fossils show and require very rapid burial and fossilization. For example, soft parts (e.g. jellyfish, animal feces, scales and fins of fish, etc.) and whole, large, fully-articulated skeletons (e.g. whales or large dinosaurs such as T-Rex) are preserved, often in contorted positions. All this evidence shows that these creatures were buried rapidly, and in many cases even buried alive, and fossilized before scavengers, micro-decay organisms and erosional processes could erase the evidence.[93]



N. Parallel Strata – The earth's sedimentary layers are typically parallel to adjacent layers.[94] Such uniform layers are seen, for example, in the Grand Canyon and in road cuts in mountainous terrain. Had these parallel layers been deposited slowly over thousands of years, erosion would have cut many channels in the topmost layers. Their later burial by other sediments would produce nonparallel patterns. Because parallel layers are the general rule, and the earth's surface erodes rapidly (see "Continental Erosion"),

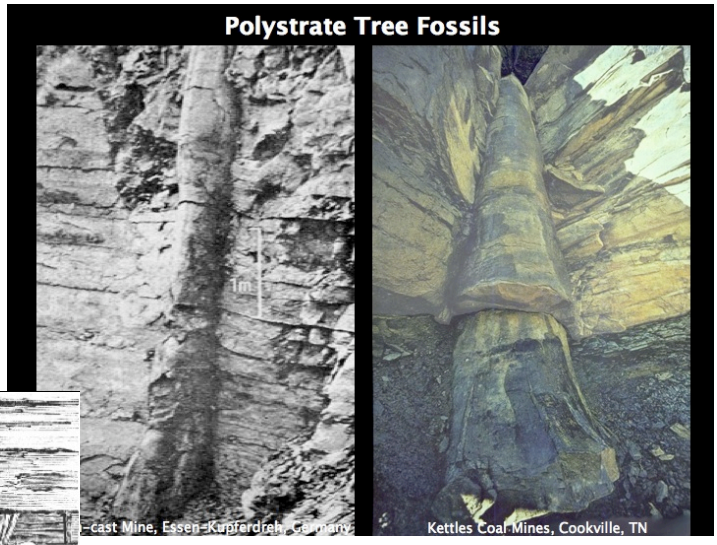


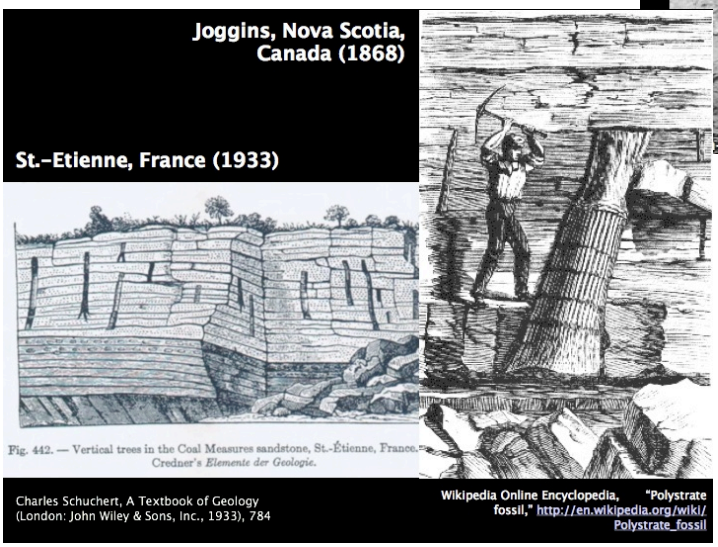
[93] Evolutionists argue that rapid burial fossils are caused by local catastrophes such as: burial in sediments in a river delta, burial in sediments from a local river flood, burial in a small landslide as along an eroded stream bank, burial in ash from a volcano, or burial in a blown sand dune. However, the size of many of these fossils, their contorted positions, and their global placement seem to indicate a massive, global event.

[94] Rock units are separated by obvious bedding planes, but frequently even small-scale banding is visible, which is interpreted as yearly indicators, much like tree rings in a tree. Counting these yearly bands of dividing rock thickness by today's meager accumulation rates, give support to the millions-of-years concept of geological ages. The question is, were past sedimentation rates equivalent to today's rates (or perhaps higher to account for minor catastrophes), or were they accomplished by processes whose rates, scales, and intensities are not occurring, or perhaps not even possible today?

one can conclude that almost all sedimentary layers were deposited rapidly relative to the local erosion rate—not over long periods of time.

O. Polystrate Fossils – Strong evidence for rapid burial is seen in "polystrate fossils," which are usually trees that cross two or more sedimentary layers (often different kinds of rock supposedly deposited over thousands or millions of years). They are found all over the world, but are especially common in the Eastern U.S., Eastern Canada, England, France, Germany, and Australia.[95] Entire "fossil forests" have even been discovered.[96] Some polystrate trees are also upside down, which could occur in a large flood. Soon after Mount St. Helens erupted in 1980, scientists saw trees being buried in a similar way in the lake-bottom sediments of Spirit Lake.[97] Since polystrate fossils are seen throughout the world within stratification otherwise associated with slow sedimentation, a global flood with rapid sedimentation is the most likely mechanism.[98] **(see slides on next page)**



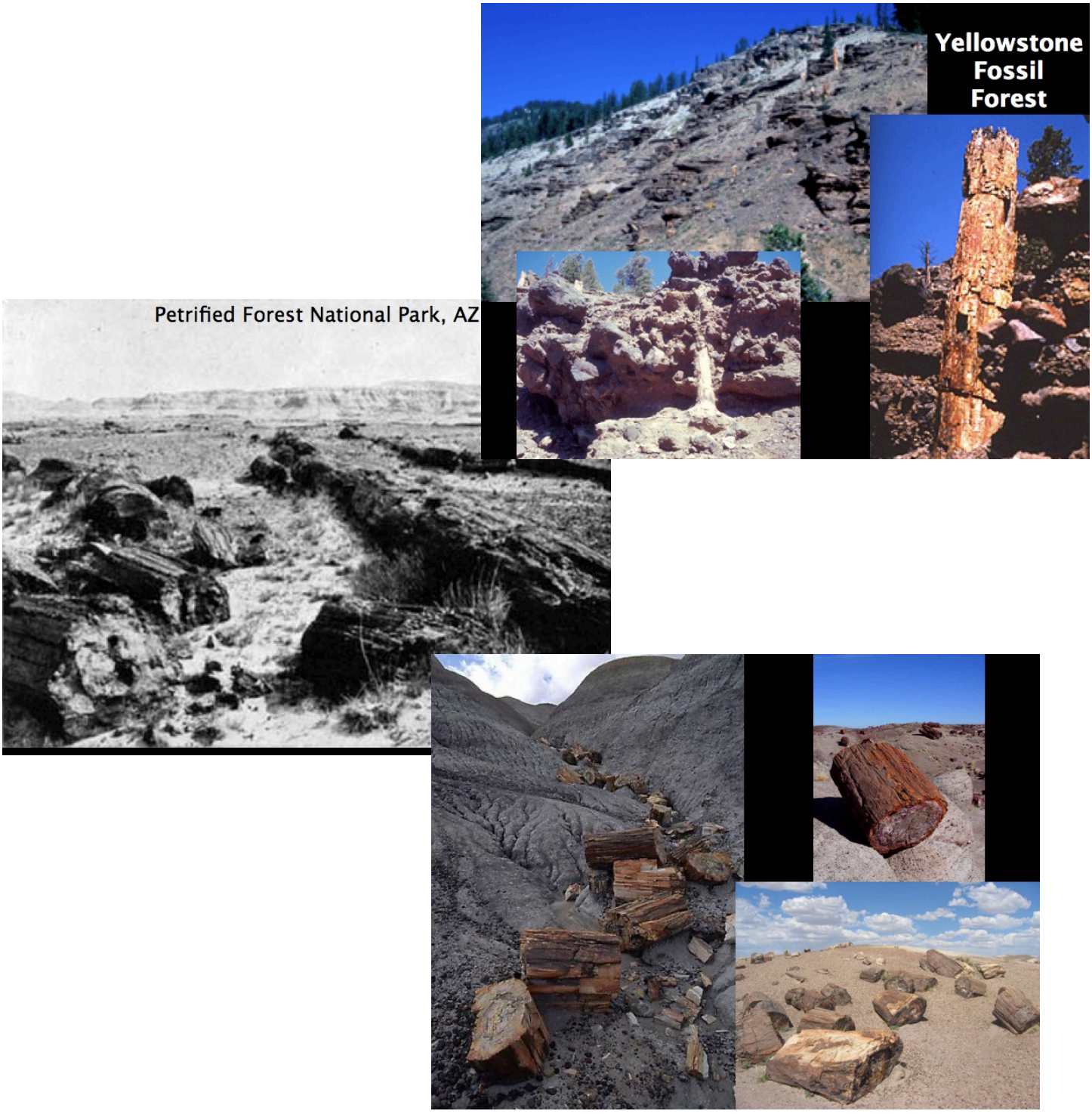


[95] Obviously, these trees could not have grown up through the strata without sunlight and air, and had the deposition rate been over thousands or millions of years, their tops would have decayed and left no fossil evidence. The only alternative is *rapid burial*, which all mainstream geologists have now turned to—"Geologists have long accepted that a layer or set of layers containing polystrate fossils was created by a brief period of rapid sedimentation. Typically, this period of rapid sedimentation was followed by a period of time, decades to thousands of years long, characterized by very slow or no accumulation of sediments." (Wikipedia Online Encyclopedia, "Polystrate fossil," available from http://en.wikipedia.org/wiki/Polystrate_fossil).

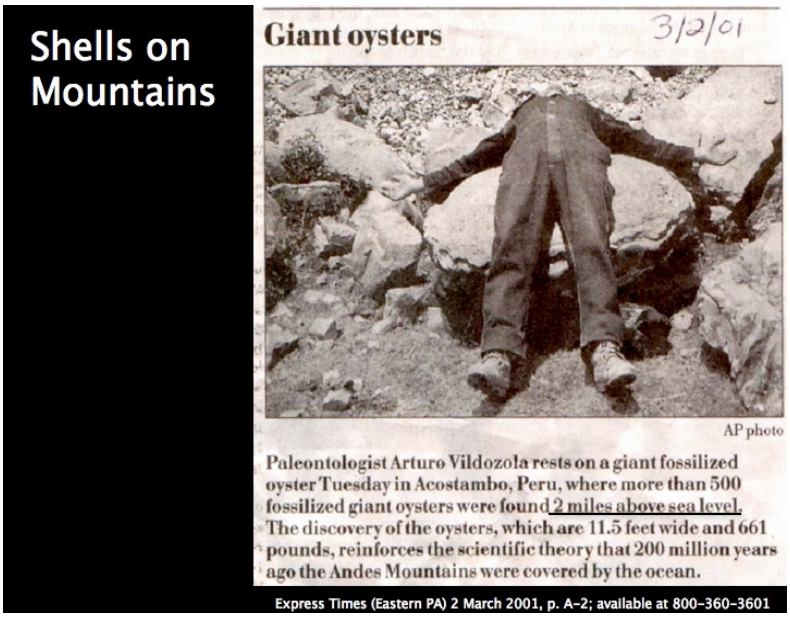
[96] E.g. M. C. Rygel, M. R. Gibling, and J. H. Calder, "Vegetation-induced sedimentary structures from fossil forests in the Pennsylvanian Joggins Formation, Nova Scotia," *Sedimentology* 51:531-552 (2004); G. J. Retallack, "Reinterpretation of the depositional environment of Yellowstone fossil forest," *Geology* 9:52-53 (1981); P. V. Heinrich, "Buried forest provide clues to the past," *Louisiana Geological Survey News* 12(2):1 (2002).

[97] There are an estimated 20,000 trees in the bottom of Spirit Lake, many of which are already 15 feet deep in sediments and have begun to petrify because of the lack of oxygen. They also seem to settle out and sink by species giving the appearance of a complete forest. See H. G. Coffin, "Mount St. Helens and Spirit Lake," *Origins* 10:9-17 (1983); Steven A. Austin, "Mount St. Helens and catastrophism," *ICR Impact* #157 (1 July 1986), archived at http://www.icr.org/article/261/.

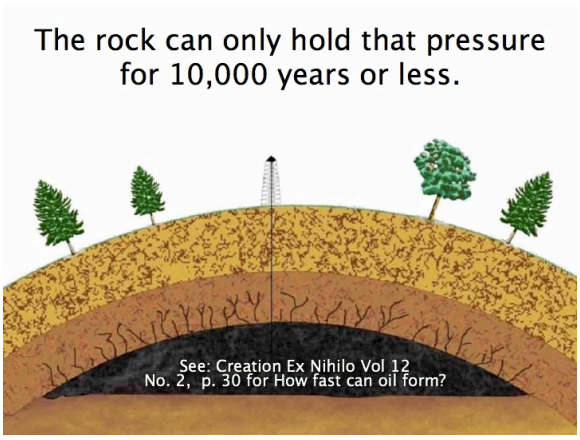
[98] For an explanation of the mechanism for rapid sedimentation during the Flood (i.e. "liquefaction"), see Brown, *In the Beginning*, 138-149; see also Guy Berthault: "Experiments on lamination of sediments," *Creation Ex Nihilo Technical Journal* 3(1):25-29 (April 1988), and his other sedimentation experiments archived at http://www.creationontheweb.com/content/view/1760.

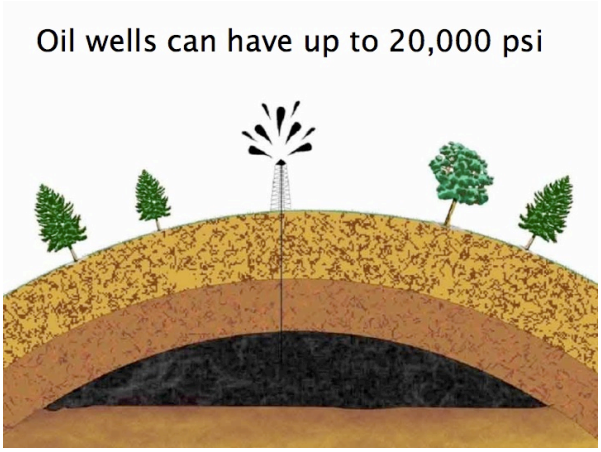

Yellowstone
Fossil
Forest
Petrified Forest National Park, AZ

P. Shells on Mountains – Every major mountain range on earth contains fossilized sea life—far above sea level and usually far from the nearest body of water, which has generated controversy for centuries. Modern geologists argue that ancient shallow seas were lifted by plate tectonics to present altitudes.[99] However, mountain tops erode rapidly, and so should fossils slowly lifted by them. Furthermore, mountain tops accumulate few sediments that might protect such fossils. A global flood with a rapid compression event, uplifting soft sedimentation, seems to be a superior explanation.



Q. Subterranean Fluid Pressure – Abnormally high oil, gas, and water pressures exist within relatively permeable rock.[100] If these fluids had been trapped more than 10,000 to 100,000 years ago, leakage would have dropped these pressures far below what they are today.[101] This oil, gas, and water must have been trapped suddenly and recently.[102]





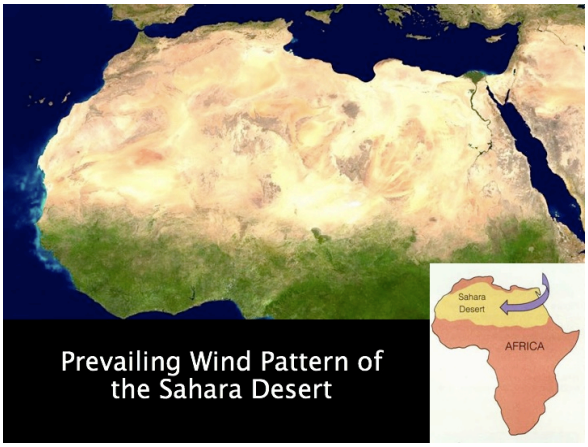
[99] Stephen J. Gould, *Leonardo's Mountain of Clams and the Diet of Worms* (New York: Three Rivers Press, 1998) 17-44; see also TalkOrigins Archive, "Claim CC364," available at http://www.talkorigins.org/indexcc/CC/CC364.html.

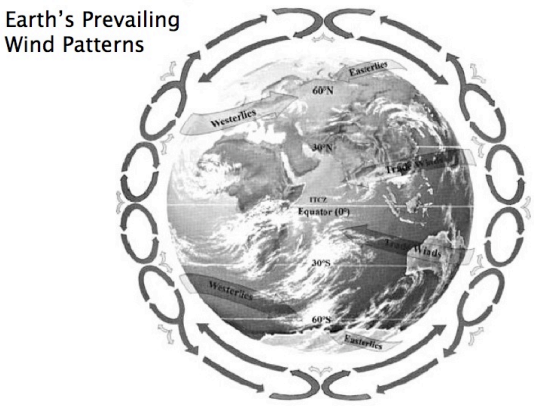
[100] For example P. A. Dickey, C. R. Shriram, and W. R. Paine, "Abnormal pressures in deep wells of southwestern Louisiana," *Science* 160(3828):614 (10 May 1968).

[101] "Some geologists find it difficult to understand how the great pressures found in some oil wells could be retained over millions of years. Creationists also use this currently puzzling situation as evidence that oil was formed less than 10,000 years ago." (Stansfield, *Science of Evolution*, 82); Stansfield gives no alternative explanation. See also Melvin A. Cook, *Prehistory and Earth Models* (London: Max Parrish, 1966), 341.

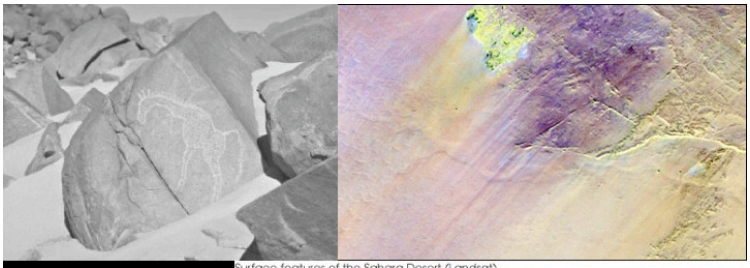
[102] See also Andrew A. Snelling, "How fast can oil form?" *Creation Ex Nihilo* 12(2):30-34 (March 1990); archived at http://www.creationontheweb.com/content/view/1182/.

R. Sahara Desert – The Sahara Desert is the world's largest hot desert, spanning over 3,500,000mi² (~1300mi top to bottom) and growing ~4mi/yr.[103]





Fossil evidence[104] and satellite radar[105] show that the desert was once a wet environment with numerous drainage networks. People even once lived in the Sahara, leaving behind countless stone tools, pottery, pictures of animals carved on the rocks, and even fishhooks and harpoons.[106] Though previously thought to be much older, scientists at Potsdam Institute for Climate Impact Research in Germany recently estimated the desert to be about 4000 years old,[107] confirming its post-Flood time scale.

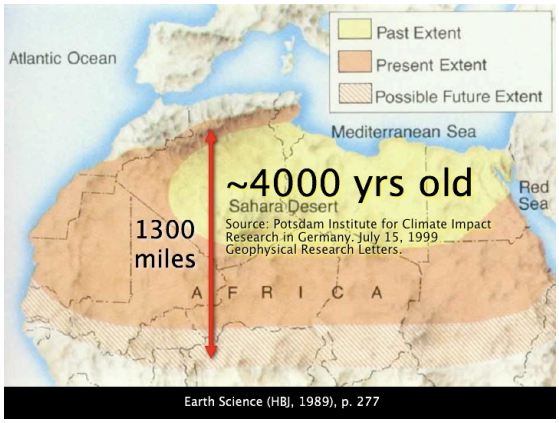

Surface features of the Sahara Desert (Landsat)

Sahara "Ice Age art" (above)

Sahara Surface and Safsaf Oasis (top)

Radar of rock layer underneath (bottom)

Ancient features hidden beneath the surface (radar)



Earth Science (HBJ, 1989), p. 277

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[103] Deserts or semi-arid regions are especially abundant on the earth around 30°S and 30°N because of the dry circulation of the atmosphere in those belts. These "prevailing wind patterns" (i.e. the wind almost always blows the same way) result in a process known as "desertification." Deserts tend to grow on their own because hot winds from the desert cook the vegetation at the edge and sterilize the soil.

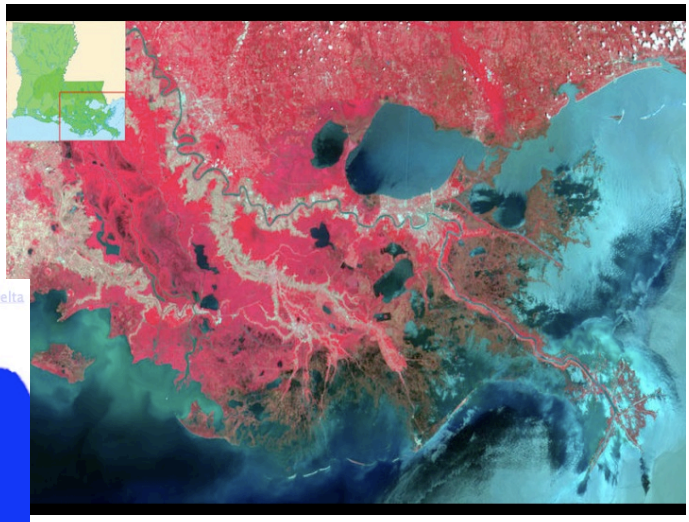
[104] E.g. various amphibians, hippopotami, crocodiles, fish, clams, and other aquatic organisms—as well as elephants, giraffes, buffaloes, antelopes, rhinoceroses, and other animals found today in the African savannas.

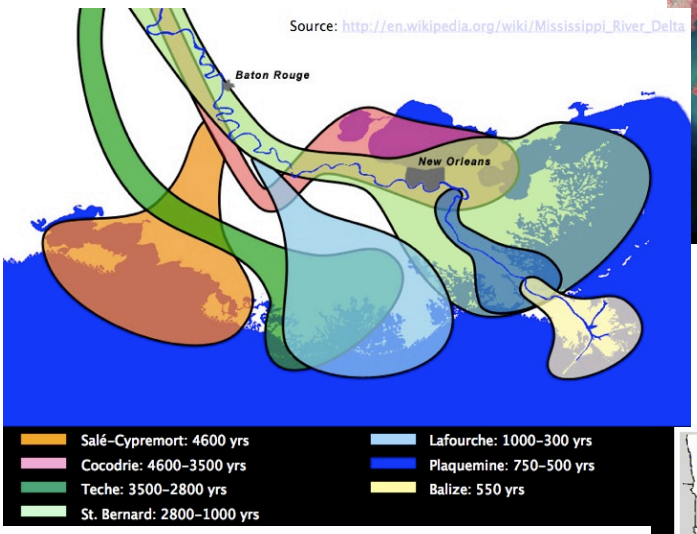
[105] J. F. McCauley, et al., "Subsurface valleys and geoarcheology of the eastern Sahara revealed by shuttle radar," *Science* 218:1004-1020 (1982); J. Chorowicz and J. Fabre, "Organization of drainage networks from space imagery in the Tanezrouft plateau (Western Sahara): Implications for recent intracratonic deformations," *Geomorphology* 21:139-151 (1997).

[106] B. D. Shaw, "Climate, environment and prehistory in the Sahara," *World Archaeology* 8(2):142 (1976); S. Kröpelin and I. Soulié-Märsche, "Charophyte remains from Wadi Howar as evidence for deep Mid-Holocene freshwater lakes in the Eastern Sahara of Northwest Sudan," *Quaternary Research* 36:210-223 (1991); D. Coulson, "Preserving Sahara's prehistoric art," *National Geographic* 196(3):82-89 (1999).

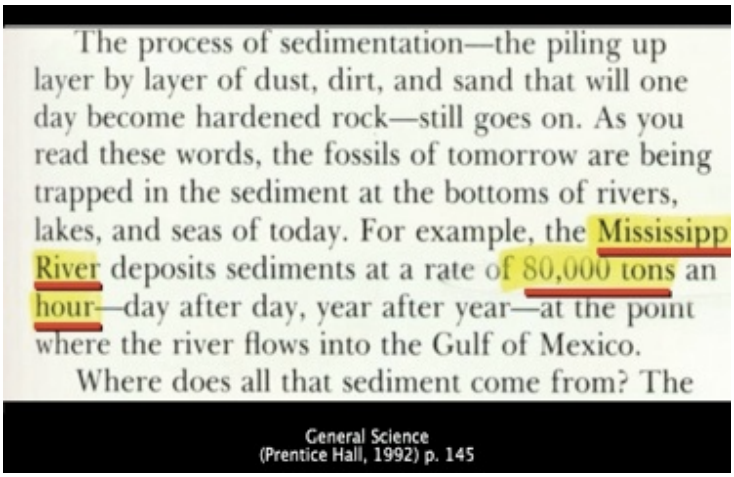
[107] Martin Claussen, et al., "**Simulation of an abrupt change in Saharan vegetation in the Mid-Holocene,**" ***Geophysical Research Letters*****,** 26(14):2037-2040 (15 July 1999). The point of this article is evolutionary—the Sahara was once like Central Africa, full of vegetation and animal life, and shifts happened 6000-4000 years ago because of "subtle variations in the Earth's orbit which were [then] strongly amplified by atmosphere-vegetation feedbacks in the subtropics." This supposedly moved the vegetation zone southward to its present location.

S. Mississippi River Delta – The Mississippi River slows down as it enters the Gulf of Mexico and deposits sediments, which build up and extend the land gulfward.[108] The modern deltaic Coastal Plain of Louisiana, with a total area of 28,000km^2, is believed to have been formed by seven delta "lobes"





within the last 5,000 to 6,000 years.[109] In the wake of a global flood these numbers would be slightly reduced and fit well within biblical chronology.[110]


The process of sedimentation—the piling up layer by layer of dust, dirt, and sand that will one day become hardened rock—still goes on. As you read these words, the fossils of tomorrow are being trapped in the sediment at the bottoms of rivers, lakes, and seas of today. For example, the Mississipp River deposits sediments at a rate of 80,000 tons an hour—day after day, year after year—at the point where the river flows into the Gulf of Mexico.

Where does all that sediment come from? The

General Science
(Prentice Hall, 1992) p. 145

[108] The average discharge of the river at the Mississippi River delta apex is approximately 15,400 cubic meters per second (~80,000 tons/hour), with a maximum of 57,900 cubic meters per second and a minimum of 2,830 cubic meters per second. Sediment discharge is generally about 240 billion kilograms annually [C. R. Kolb and J. R. Van Lopik, "Geology of the Mississippi River deltaic plain—southeastern Louisiana" (Vicksburg, Mississippi: U.S. Army Corps of Engineers) *Waterways Experiment Station Technical Report* 2:3482.].

[109] J. M. Coleman, *Deltas: Processes of Deposition and Models for Exploration* (Champaign: Continuing Education Publishing Co., 1976), 102 pp. Evolutionists believe this to be in context to the last ice age—"10,000 years ago, the glaciers began to melt, and the sea level began to rise. 5,000-6,000 years ago, the sea level stabilized, and formation of recognizable modern deltas began." Wikipedia Online Encyclopedia, "Mississippi River Delta," available from http://en.wikipedia.org/wiki/Mississippi_River_Delta.

[110] See Benjamin F. Allen, "The geologic age of the Mississippi River," *Creation Research Society Quarterly* 9:96-114 (September 1972); Larry Vardiman, "The sands of time: a biblical model of deep sea-floor sedimentation," *Creation Research Society Quarterly*, Volume 33 (December 1996); archived at http://www.icr.org/research/index/researchp_lv_r01/.

T. Niagara Falls Erosion

1. Few realize that Niagara Falls is one of the chief reasons why the West abandoned biblical chronology. More than any other person, Charles Lyell, influenced the scientific community to accept the idea that the earth had been shaped by "slow and gradual" processes over countless millions of years instead of a Noahic flood. In 1841 he hiked out to Niagara Falls (much more difficult to reach than today) to prove that biblical chronology was false.[111] Rejecting the local reports that the falls had receded more than 150 feet in 40 years (~3.75ft/yr = <12,000yrs), Lyell returned to England and reported that he had scientifically determined that the Niagara Gorge was 35,000 years old, much older than the Bible allowed.[112]

2. Though he does not explain how, Lyell claims to have conducted his own investigation of the local residents and arrived at the reduced rate of .3m/yr (~1ft/yr), and since the gorge was 35,000 feet long, he concluded that it must be 35,000 years old.[113] However, later analysis of eyewitness reports from 1842 to 1927 confirmed a high rate of erosion—1.2 to 1.5m/yr (4-5ft/yr),[114] which places an upper limit of 7,000 to 9,000 years for the gorge. However, other factors indicate that the gorge eroded faster in times past,[115] which would place its formation within a post-Flood timeframe. **(See Slides On Next Page)**

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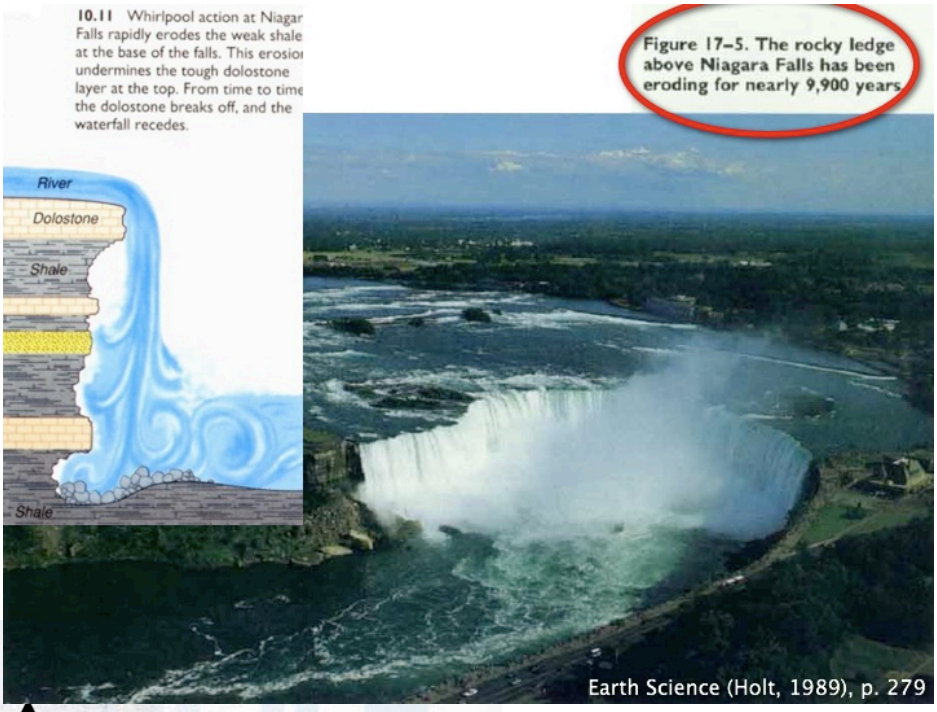
[111] The Niagara River flows northward from Lake Erie along a rather calm path for about 15 miles, dropping in elevation only ~1ft/mi. It then enters about a mile stretch of rapids foaming wildly and suddenly dropping 182 feet to the rocks below (i.e. Niagara Falls). The river then continues through a canyon, varying from 600 to 1200 feet in width with the canyon walls rising some 200 to 300 feet above the river, for another ~7 miles to the city of Queenston. Here the river exits suddenly onto rather flat table land, flowing calmly for ~8 miles, where upon it enters Lake Ontario. A precipitous cliff can be seen at Queenston on either side of the river, marking the end of the ravine and giving the distinct impression that the falls were once here, having eroded the ravine upstream for seven miles to reach their present location. If the present process continues, eventually the falls will near Lake Erie.

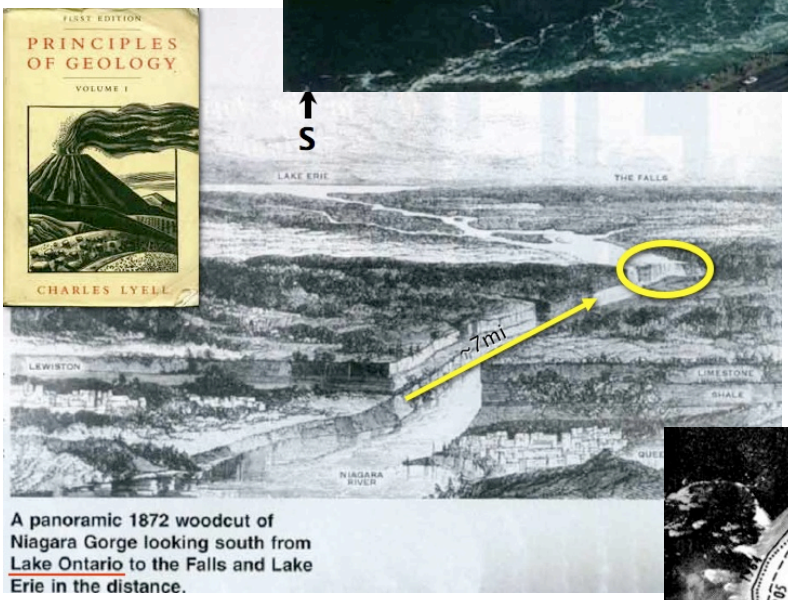
[112] See Henry Rodgers, "On the Falls of Niagara," *American Journal of Science and Arts* 27:326-335 (January 1835); and Charles Lyell, *Principles of Geology*, 11th edition, vol. 1 (New York: D. Appleton and Co., 1873), 354-358.

[113] Lyell, *Principles of Geology*, 358. Lyell saw the Bible as the major obstacle to the general acceptance of his geological theories, so his chief end was simply to undermine the commonly accepted date of ~6000 yrs. Since Lyell was a respected "scientist," most people blindly accepted his estimate, and rather than adopting a "wait and see" attitude, the Church capitulated to these long ages, even though they contradicted the Bible. Increasingly people began to doubt the Bible (including Darwin himself), assuming its chronology was not reliable in the light of what Lyell had claimed. Thus, it laid the groundwork in the corporate consciousness of the West for the later widespread acceptance of Darwinism.

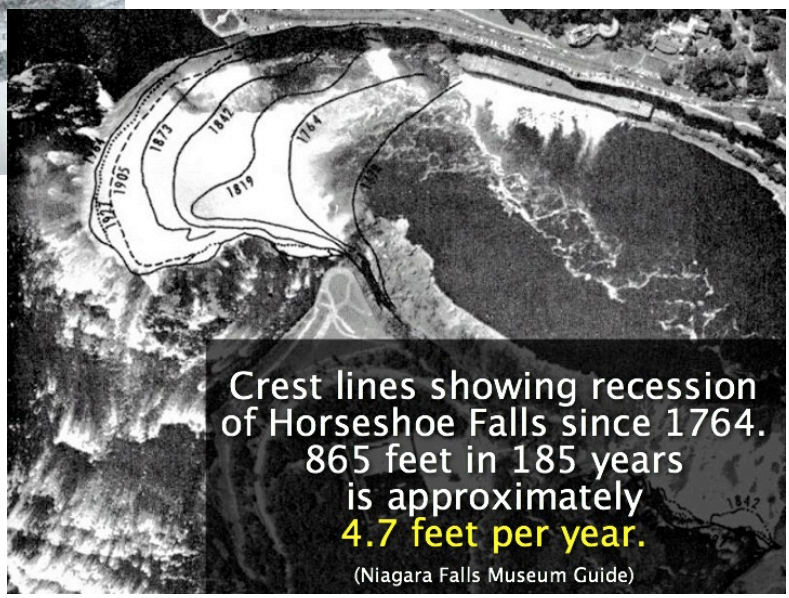
[114] W. M. Tovell, *The Niagara River* (Toronto: Royal Ontario Museum, 1979); quoted in Ian Taylor, *In the Minds of Men*, 4th ed. (Toronto: TFE Publishing, 1999), ref. 1, note 5, p. 447.

[115] See Larry Pierce, "Erosion at Niagra Falls supports the biblical time-scale," *Creation Ex Nihilo* 22(4):8-13 (September 2000); archived at http://www.creationontheweb.com/content/view/276/. See also John D. Morris, *The Young Earth* (Green Forest: Master Books, 1994), 48-49; and John D. Morris, "Dating Niagara Falls," *ICR Impact* #359 (May 2003); archived at http://www.icr.org/article/123/.

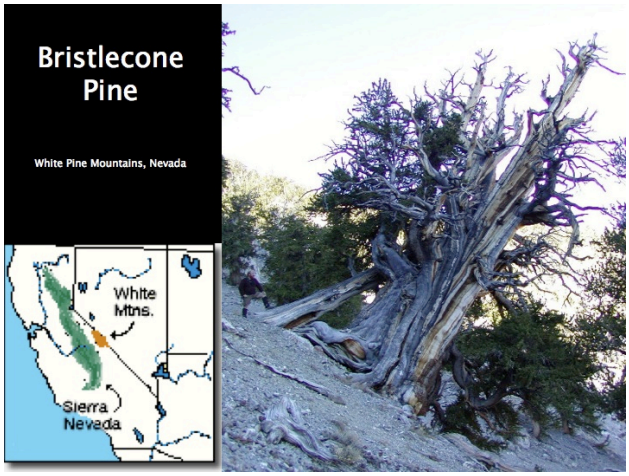


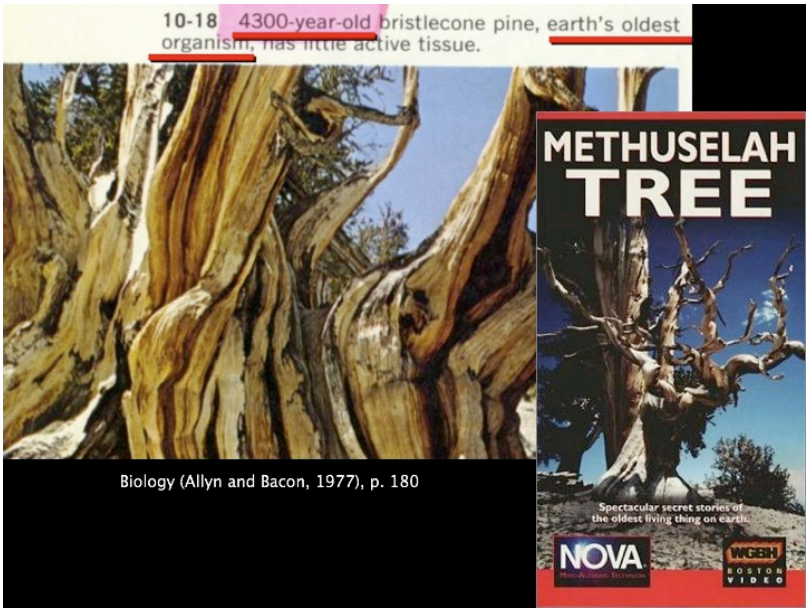


A panoramic 1872 woodcut of Niagara Gorge looking south from Lake Ontario to the Falls and Lake Erie in the distance.



U. "Methuselah" Tree – The world's oldest known living specimen, the "Methuselah" tree (a Bristlecone pine[116]), was found in 1957 by Dr. Edmund Schulman in the White Mountains of eastern California. Though originally dated by Schulman at ~4800yrs, it has ~4600 rings (obtained from drill-core sampling of growth rings in the main trunk), but many estimate it at ~4300yrs because of the likelihood of multiple ring growth,[117] which approximates the Flood.[118]





III. BIOLOGICAL

A. Apparent Design

How many are your works, O LORD! In wisdom you made them all; the earth is full of your creatures. (NIV Psalm 104:24)

1. DNA
2. Proteins
3. Bacterial Flagellum

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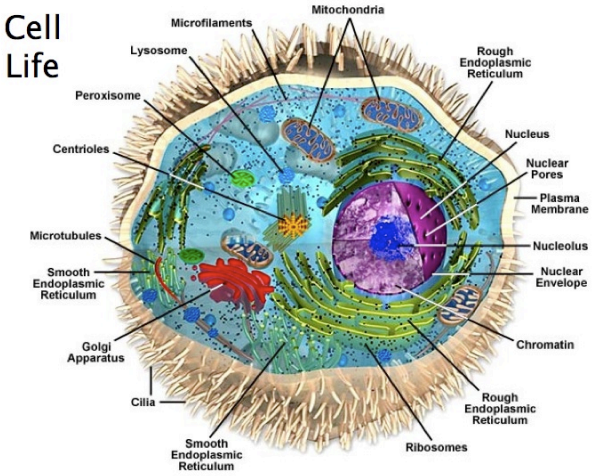
[116] The Bristlecones live between the elevations of 9,500 and 11,500 feet in the White Mountains, which lie in the rain shadow of the Sierras. Because of the harsh environment (average annual rainfall of 10-13 inches), they are sculptured into stubby, gnarled, and twisted shapes, comprised mostly of dead wood [see Russ and Anne Johnson, The Ancient Bristlecone Pine Forest (Bishop: Chalfant Press, 1970).]. Though being the oldest known living thing in the world, far surpassing the vastly more famous Sequoia, few people have heard of these trees, much less visited the area of their growth, due to their remote location.

[117] Gerald E. Aardsma, "Tree-rings dating and multiple growth ring per year," *Creation Research Society Quarterly* 29:184-189 (March 1993); Greg J. Beasley, "Long-lived trees: their possible testimony to a global flood and recent creation," *Creation Ex Nihilo Technical Journal* 7(1):43-67 (April 1993).

[118] See also Frank Lorey, "Tree rings and biblical chronology," *ICR Impact* #252 (1 June 1994); archived at http://www.icr.org/article/381/.

4. Human Cell

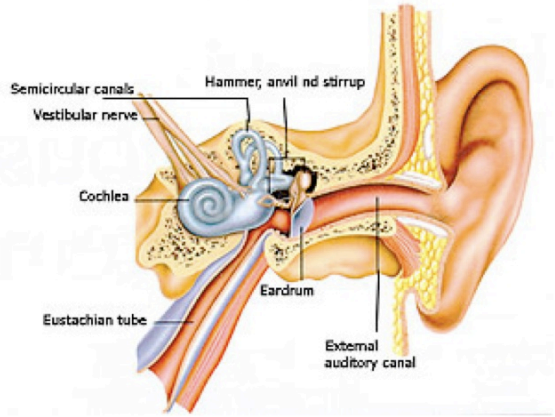


5. Human Eye

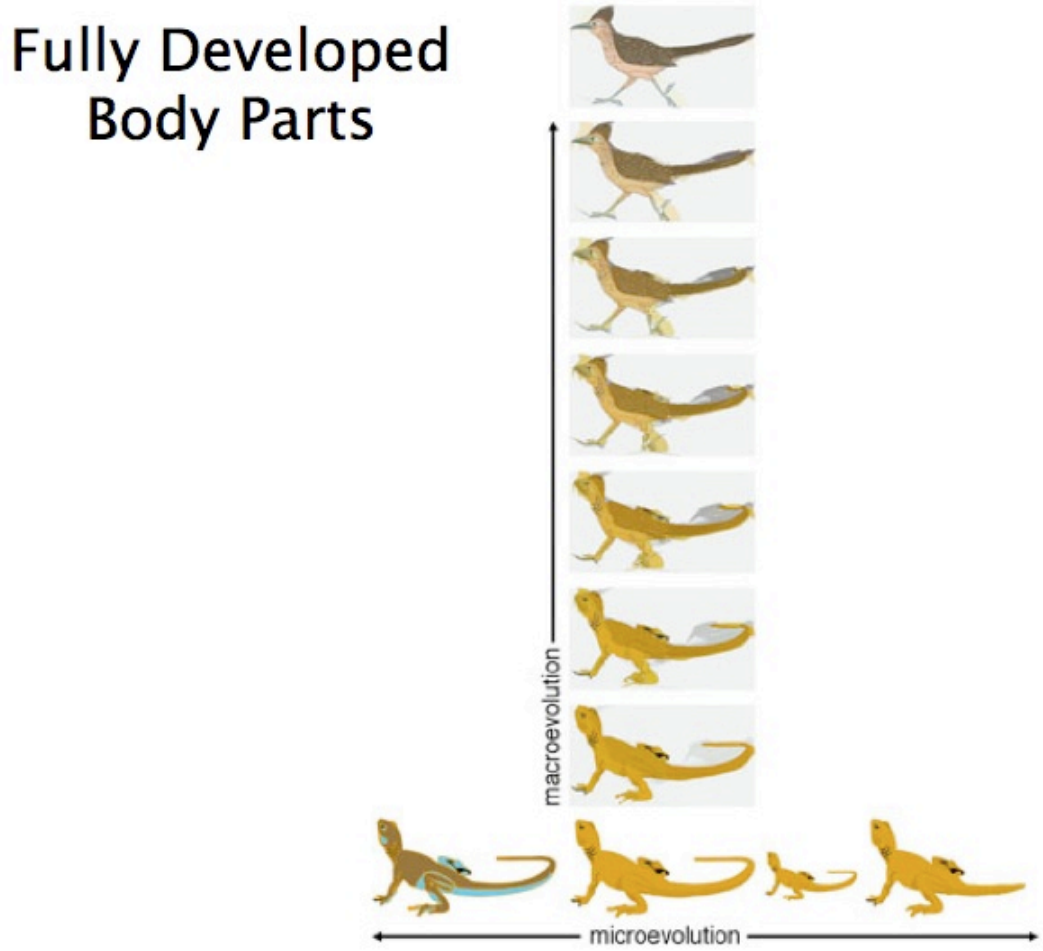
The Human Eye

6. Human Ear

The Human Ear



7. Fully Developed Organs – All species appear fully developed, not partially developed, which shows design. There are no examples of half-developed feathers, eyes, skin, tubes (arteries, veins, intestines, etc.), or any of thousands of other vital organs. Tubes that are not 100% complete are a liability; so are partially developed organs and most body parts.



B. Rapid Decay of Biological Material – Natural radioactivity, mutations, and decay degrade DNA and other biological material rapidly. Measurements of the mutation rate of mitochondrial DNA recently forced researchers to revise the age of "mitochondrial Eve" from a theorized 200,000 years down to possibly as low as 6,000 years.[119] DNA experts insist that DNA cannot exist in natural environments longer than 10,000 years, yet intact strands of DNA appear to have been recovered from fossils allegedly much older: Neanderthal bones, insects in amber, and even from dinosaur fossils.[120] Moreover, bacteria allegedly 250 million years old have been revived with no DNA damage.[121]

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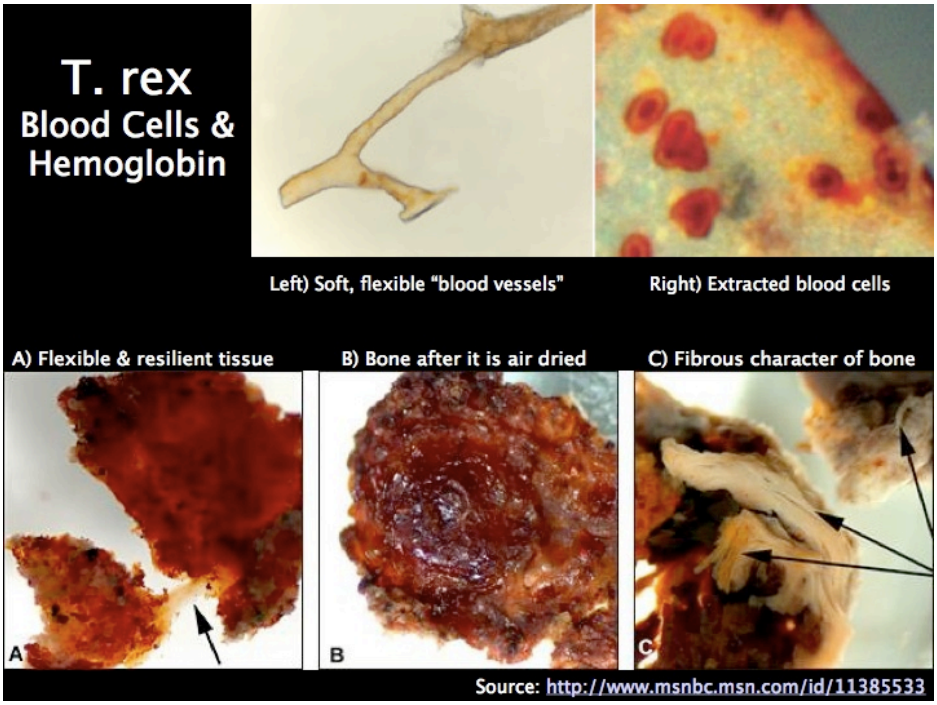
[119] A. Gibbons, "Calibrating the mitochondrial clock," *Science* 279:28-29 (2 January 1998).

[120] J. Cherfas, "Ancient DNA: still busy after death," *Science* 253:1354-1356 (20 September 1991); R. J. Cano, H. N. Poinar, N. J. Pieniazek, A. Acra, and G. O. Poinar, Jr., "Amplification and sequencing of DNA from a 120-135 million-year-old weevil," *Nature* 363:536-8 (10 June 1993); M. Krings, A. Stone, R. W. Schmitz, H. Krainitzki, M. Stoneking, and S. Pääbo, "Neandertal DNA sequences and the origin of modern humans," *Cell* 90:19-30 (11 July 1997); and T. Lindahl, "Unlocking nature's ancient secrets," *Nature* 413:358-359 (27 September 2001).

[121] R. H. Vreeland, W. D. Rosenzweig, and D. W. Powers, "Isolation of a 250 million-year-old halotolerant bacterium from a primary salt crystal," *Nature* 407:897-900 (19 October 2000).

C. Dinosaur Blood Cells



1. Red blood cells and hemoglobin have been found in unfossilized dinosaur bones of a *Tyrannosaurus rex* unearthed in eastern Montana.[122] However, these could not last more than a few thousand years—certainly not for 65 million years, the "date" for the extinction of the last dinosaurs.

2. When first discovered by scientists in 1995, most were in total disbelief.[123] The bones were confirmed to hold actual hemoglobin, which when injected into lab mice created antibodies specific to hemoglobin.[124] Since then, the presence of structures that appear to be blood vessels and blood cells with nuclei (where DNA may be found) have been detected.[125] Many of the tissues could be stretched repeatedly and returned to their original shape indicating the presence of elastic proteins commonly found in blood vessels.

3. Though not as dramatic, there are other findings of DNA extracted from samples twice as old as Schweitzer's *T. rex*,[126] prior reports of immunological responses from biomolecules

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[122] M. Schweitzer and T. Staedter, "The Real Jurassic Park," *Earth*, pp. 55-57, June 1997; see also Carl Wieland, "Sensational dinosaur blood report!" *Creation Ex Nihilo* 19(4):42-43 (September 1997); archived at http://www.creationontheweb.com/content/view/606/. Many have criticized Wieland for characterizing the bones as "unfossilized," yet classically "fossilization" has been defined as the *mineralization* of organic plant or animal life—"the process of being turned to stone." (HyperDictionary.com) Since these bones were not completely mineralized, they were "unfossilized." This is a smokescreen to avoid dealing with the obvious, blaring issue of soft tissue in a supposedly 65 million year old specimen.

[123] Mary Schweitzer, student of the famous paleontologist "Dinosaur" Jack Horner, describes the incident as it happened at Montana State University, "The lab filled with murmurs of amazement, for I had focused on something inside the vessels that none of us had ever noticed before: tiny round objects, translucent red with a dark center. Then a colleague took one look at them and shouted, "You've got red blood cells. You've got red blood cells!" Unfortunately, her evolutionary worldview completely distorted a reasonable interpretation of the evidence, "It was exactly like looking at a slice of modern bone. But of course, I couldn't believe it. I said to the lab technician: 'The bones are, after all, 65 million years old. How could blood cells survive that long?'" (Schweitzer and Staedter, "The Real Jurassic Park".)

[124] M. H. Schweitzer, et al., "Heme compounds in dinosaur trabecular bone," *PNAS* 94:6291-6296 (June 1997); archived at www.pnas.org/cgi/reprint/94/12/6291.pdf.

[125] M. H. Schweitzer, J. L. Wittmeyer, J. R. Horner, and J. K. Toporski, "Soft-tissue vessels and cellular preservation in *Tyrannosaurus Rex*," *Science* 207:1952-1955 (25 March 2005).

[126] G. O. Polinar, H. N. Poinar, and R. J. Cano, "DNA from amber inclusions," in B. Herrman and S. Hummmel (eds.), *Ancient DNA: Recovery and Analysis of Genetic Material from Paleontological, Archaeological, Museum, Medical and Forensic Specimens* (New York: Springer-Verlag, 1994), 92-103.

extracted from hadrosaur bones in Alberta, Canada,[127] and ligaments of bivalves "dated" to 165 million years old in Wiltshire, England.[128]

4. Under the best circumstances, it's hard for soft tissue to survive thousands of years, let alone millions. However, instead of questioning the ancient age of the bones, researchers are conjuring up new theories about fossilization.[129] This evidence better fits the creation model, asserting that dinosaurs have lived recently alongside man.

D. Lack of Stone Age Skeletons – Evolutionary anthropologists now say that *Homo sapiens* existed for at least 185,000 years before agriculture began, during which time the world population of humans was roughly constant, between one and ten million.[130] All that time they were burying their dead, often with artifacts. By that scenario, they would have buried at least eight billion bodies.[131] If the evolutionary time scale is correct, buried bones should be able to last for much longer than 200,000 years, so many of the supposed eight billion stone age skeletons should still be around (and certainly the buried artifacts). Yet only a few thousand have been found. This implies that the Stone Age was much shorter than evolutionists think, perhaps only a few hundred years in many areas.

E. Recent Agriculture – The usual evolutionary picture has men existing as hunters and gatherers for 185,000 years during the Stone Age before discovering agriculture less than 10,000 years ago.[132] Yet the archaeological evidence shows that Stone Age men were as intelligent as we are. It is very improbable that none of the eight billion people mentioned in "Lack of Stone Age Skeletons" should discover that plants grow from seeds. It is more likely that men were without agriculture for a very short time after the Flood, if at all.[133]

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[127] G. Muyzer, P. Sandberg, M. H. J. Knapen, C. Vermeer, M. Collins, P. Westbroek, "Preservation of the bone protein Osteocalcin in dinosaurs," *Geology* 20:871-874 (1992).

[128] Dr. Neville Hollingworth, paleontologist with the Natural Environment Research Council in Swindon, England, exclaimed: "There are the shells of bivalves which still have their original organic ligaments and yet they are millions of years old!" [M. Nuttall, "Mud Springs a Surprise after 165 Million Years," *Times*, London, p. 7 (2 May 1996)]; see also W. I. Stanton, "Wootton Bassett: fame at last for mud springs," *Geology Today* 11(5):172 (September-October 1995); Andrew A. Snelling, "A '165 million year' surprise," *Creation Ex Nihilo* 19(2):14-15 (March 1997); archived at http://www.creationontheweb.com/content/view/699.

[129] "It was once thought that fossil bones were completely mineralized, destroying all traces of the organic chemicals within. 'We know now that it has the real organic matter in it,' [Michigan State University zoologist Peggy] Ostrom said… It might have something to do with the increased density of the bones involved, or whether the bones were preserved in sandstone as opposed to mudstone." (Alan Boyle, "Proteins could reveal new dinosaur secrets," *MSNBC.COM*, 20 February 2006, available at http://www.msnbc.msn.com/id/11385533.)

[130] I. McDougall, F. H. Brown, and J. G. Fleagle, "Stratigraphic placement and age of modern humans from Kibish, Ethiopia," *Nature* 433(7027):733-736 (17 February 2005).

[131] E. S. Deevey, "The human population," *Scientific American* 203:194-204 (September 1960).

[132] Ibid.

[133] J. O. Dritt, "Man's earliest beginnings: discrepancies in evolutionary timetables," *Proceedings of the Second International Conference on Creationism*, vol. II, (Pittsburgh: Creation Science Fellowship, 1991), 73–78, available from http://www.icc03.org/proceedings.htm.

F. Human Footprints – Humanlike footprints, supposedly 150–600 million years old, have been found in rock formations in Utah,[134] Kentucky,[135] Missouri,[136] and possibly Pennsylvania.[137] At Laetoli, in the east African country of Tanzania, a team headed by Mary Leakey found a sequence of humanlike footprints which were dated at 3.7 million years.[138]

If human feet made any of these prints, then evolutionary chronology is drastically wrong.

[134] In 1968, William J. Meister found a number of apparent human shoe prints inside a 2-inch-thick slab of rock 43 miles northwest of Delta, Utah. Also in that slab were obvious trilobite fossils, one of which was squashed under the heel of a 10-inch-long shoe print. See Melvin A. Cook, "William J. Meister discovery of human footprints with trilobites in a Cambrian formation of western Utah," *Why Not Creation?* Walter E. Lammerts ed. (Phillipsburg: Presbyterian and Reformed Publishing Co., 1970), 185-193; see also Michael A. Cremo and Richard L. Thompson, *Forbidden Archeology* (San Diego: Bhaktivedanta Institute, 1993), 810-813.

[135] "Geology and ethnology disagree about rock prints," *Science News Letter* (10 December 1938), 372.

[136] Henry R. Schoolcraft and Thomas H. Benton, "Remarks on the prints of human feet, observed in the secondary limestone of the Mississippi valley," *The American Journal of Science and Arts* 5:223-231 (1822).

[137] "Human-like tracks in stone are riddle to scientists," *Science News Letter* (29 October 1938), 278-279.

[138] "In sum, the 3.5-million-year-old footprint trails at Laetoli Site G resemble those of habitually unshod modern humans. None of their features suggest that the Laetoli hominids were less capable bipeds than we are. If the G footprints were not known to be so old, we would readily conclude that they were made by a member of our genus, Homo. … we should shelve the loose assumption that the Laetoli footprints were made by Lucy's kind, Australopithecus afarensis." [Russell H. Tuttle, "The pitted pattern of Laetoli feet," *Natural History* 99:64 (March 1990).]

G. Human Artifacts – At various times and places, man-made objects have been found encased in coal. Examples include a thimble,[139] an iron pot,[140] an iron instrument,[141] an 8-karat gold chain,[142] three throwing-spears,[143] and a metallic vessel inlaid with silver.[144] Other "out-of-place artifacts" have been found inside deeply buried rocks: nails,[145] a screw,[146] a strange coin,[147] a tiny ceramic doll,[148] and other objects of obvious human manufacture.[149] By evolutionary dating techniques, these objects would be hundreds of millions of years older than man.

[139] J. Q. Adams, "Eve's thimble," *American Antiquarian* 5:331-332 (October 1883).

[140] Wilbert H. Rusch, Sr., "Human footprints in rocks," *Creation Research Society Quarterly* 7:201-202 (March 1971).

[141] John Buchanan, "Discovery of an iron instrument lately found imbedded in a natural seam of coal in the neighbourhood of Glasgow," *Proceedings of the Society of Antiquarians of Scotland*, Vol. 1, Part 2, Section IV, 1853.

[142] "A necklace of a prehistoric god," *Morrisonville Times* (Morrisonville, Illinois), 11 June 1891, p. 1.

[143] Robin Dennell, "The world's oldest spears," *Nature* 385:767-768 (27 February 1997); Hartmut Thieme, "Lower palaeolithic hunting spears from Germany," *Nature* 385:807-810 (27 February 1997).

[144] "A relic of a by-gone age," *Scientific American* 7:298 (5 June 1852).

[145] David Brewster, "Queries and statements concerning a nail found imbedded in a block of sandstone obtained from Kingoodie (Mylnfield) Quarry, North Britain," reported to the British Association for the Advancement of Science, 1844.

[146] Rene Noorbergen, *Secrets of the Lost Races* (New York: The Bobbs-Merrill Co., Inc., 1977), 42.

[147] J. R. Jochmans, "Strange relics from the depths of the Earth," *Bible-Science Newsletter*, January 1979, 1.

[148] Robert E. Gentet and Edward C. Lain, "The nampa image—an ancient artifact?" *Creation Research Society Quarterly* 35:203-210 (March 1999);

[149] Frank Calvert, "On the probable existence of man during the Miocene Period," *Anthropological Institute Journal* 3:127-129 (1873); J. B. Browne, "Singular Impression in Marble," *The American Journal of Science and Arts* (January 1831), 361.

IV. CULTURAL

A. Apparent Design

For you created my inmost being; you knit me together in my mother's womb. [14] I praise you because I am fearfully and wonderfully made; your works are wonderful, I know that full well. (NIV Psalm 139:13-14)

1. Languages – If humans evolved, then so did their language, yet there is absolutely no evidence for it.[150] The earliest languages should be the simplest; however, language studies show that the more ancient the language (e.g. Latin-200BC, Greek-800BC, Vedic Sanskrit-1500BC), the more complex it is with respect to syntax, case, gender, mood, voice, tense, verb form, and inflection, showing that languages have actually devolved.[151] Since language did not evolve, it seems logical that humans also did not evolve.[152]
2. Speech – Speech is uniquely human, because only humans have both a "prewired" brain capable of learning and conveying abstract ideas and the physical anatomy (mouth, throat, tongue, larynx, etc.) to produce a wide range of sounds.[153]

B. Altruism – Humans and many animals will endanger or even sacrifice their lives to save another—sometimes even the life of another species.[154] If evolution were correct, selfish behavior should have completely eliminated unselfish behavior. Likewise, cheating and aggression should have "weeded out" all forms of cooperation, which are commonly seen.

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[150] "Nobody knows how [language] began. There doesn't seem to be anything like syntax in non-human animals and it is hard to imagine evolutionary forerunners of it." [Richard Dawkins, *Unweaving the Rainbow* (Boston: Houghton Mifflin Co., 1998), 294]; "Many other attempts have been made to determine the evolutionary origin of language, and all have failed… Even the peoples with least complex cultures have highly sophisticated languages, with complex grammar and large vocabularies, capable of naming and discussing anything that occurs in the sphere occupied by their speakers… The oldest language that can reasonably be reconstructed is already modern, sophisticated, complete from an evolutionary point of view." [George Gaylord Simpson, "The Biological Nature of Man," *Science* 152:477 (22 April 1966).]

[151] "Yet it is incredible that the first language could have been the most complex." [George Gaylord Simpson, *Biology and Man* (New York: Harcourt, Brace & World, Inc., 1969), 116]; "The evolution of language, at least within the historical period, is a story of progressive simplification." [Albert C. Baugh, *A History of the English Language*, 2nd ed. (New York: Appleton-Century-Crofts, Inc., 1957), 10]; "The so-called primitive languages can throw no light on language origins, since most of them are actually more complicated in grammar than the tongues spoken by civilized peoples." [Ralph Linton, *The Tree of Culture* (New York: Alfred A. Knopf, 1957), 9.]

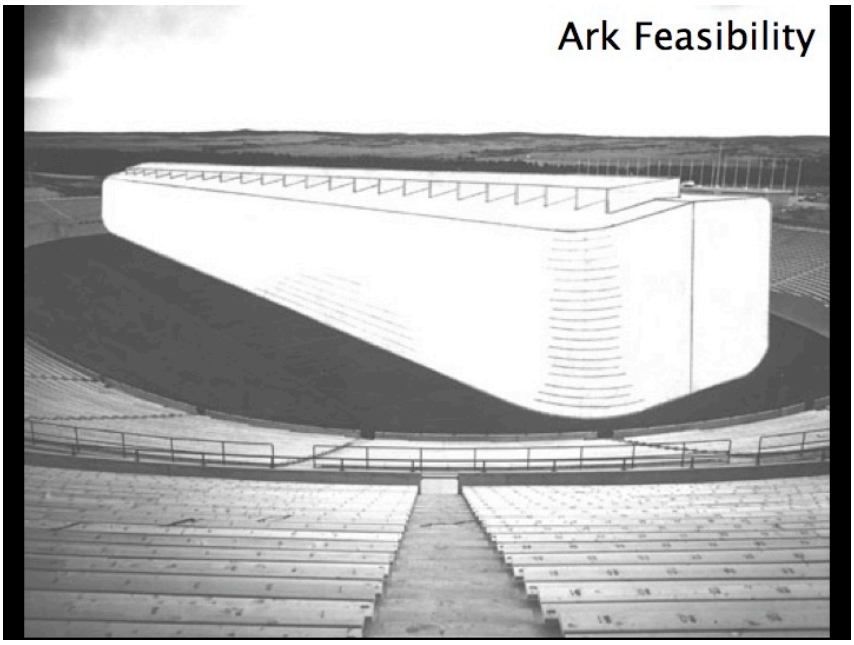
[152] "It was Charles Darwin who first linked the evolution of languages to biology. In *The Descent of Man* (1871), he wrote, 'the formation of different languages and of distinct species, and the proofs that both have been developed through a gradual process, are curiously parallel.' But linguists cringe at the idea that evolution might transform simple languages into complex ones. Today it is believed that no language is, in any basic way, 'prior' to any other, living or dead. Language alters even as we speak it, but it neither improves nor degenerates." [Philip E. Ross, "Hard Words," *Scientific American* 264:144 (April 1991), 144.]

[153] "If we are honest, we will face the facts and admit that we can find no evolutionary development to explain our unique speech center [in the human brain]." [Mark P. Cosgrove, *The Amazing Body Human* (Grand Rapids: Baker Books, 1987), 106-109.] Even if an ape could evolve all the physical equipment for speech, that equipment would be useless without a "prewired" brain for learning language skills, especially grammar and vocabulary—"Chimpanzees communicate with each other by making vocal sounds just as most mammals do, but they don't have the capacity for true language, either verbally or by using signs and symbols… Therefore, the speech sound production ability of a chimpanzee vocal tract is extremely limited, because it lacks the ability to produce the segmental contrast of consonants and vowels in a series… I conclude that all of the foregoing basic structural and functional deficiencies of the chimpanzee vocal tract, which interfere or limit the production of speech sounds, also pertain to all of the other nonhuman primates." [Edmund S. Crelin, *The Human Vocal Tract* (New York: Vantage Press, 1987), 83.]

[154] Some inherited behavior is lethal to the animal but beneficial to unrelated species. For example, dolphins sometimes protect humans from deadly sharks. Many animals (goats, lambs, rabbits, horses, frogs, toads) scream when a predator discovers them. This increases their exposure but warns other species—"…the existence of altruism between different species—which is not uncommon—remains an obstinate enigma." [Gordon R. Taylor, *The Great Evolution Mystery* (New York: Harper & Row, 1983), 225.]

C. Flood Myths – A colossal flood is the most common of all legends. Almost every ancient culture has legends telling of a traumatic flood in which only a few humans survived in a large boat.[155] This cannot be said for other types of catastrophes, such as earthquakes, fires, volcanic eruptions, disease, famines, or drought. More than 230 flood legends contain many common elements, suggesting they have a common historical source that left a vivid impression on survivors of that catastrophe.[156]

D. Ark Feasibility – Many question how Noah could build a boat large enough to hold representatives of every air-breathing land animal, perhaps 16,000 in all.[157] The Ark, having at least 1.5 million cubic feet of space (450ft long x 75ft wide x 45ft tall), was adequate to hold these animals (based on "kind" rather than species), their provisions, and all their other needs for one year.[158]



[155] "It has long been known that legends of a great flood, in which almost all men perished, are widely diffused over the world…" [James George Frazer, *Folk-Lore in the Old Testament*, Vol. 1, (London: Macmillan Publishing Co., 1919), 105]; Byron C. Nelson, *The Deluge Story in Stone* (Minneapolis: Bethany Fellowship, Inc., 1968), 169-190.

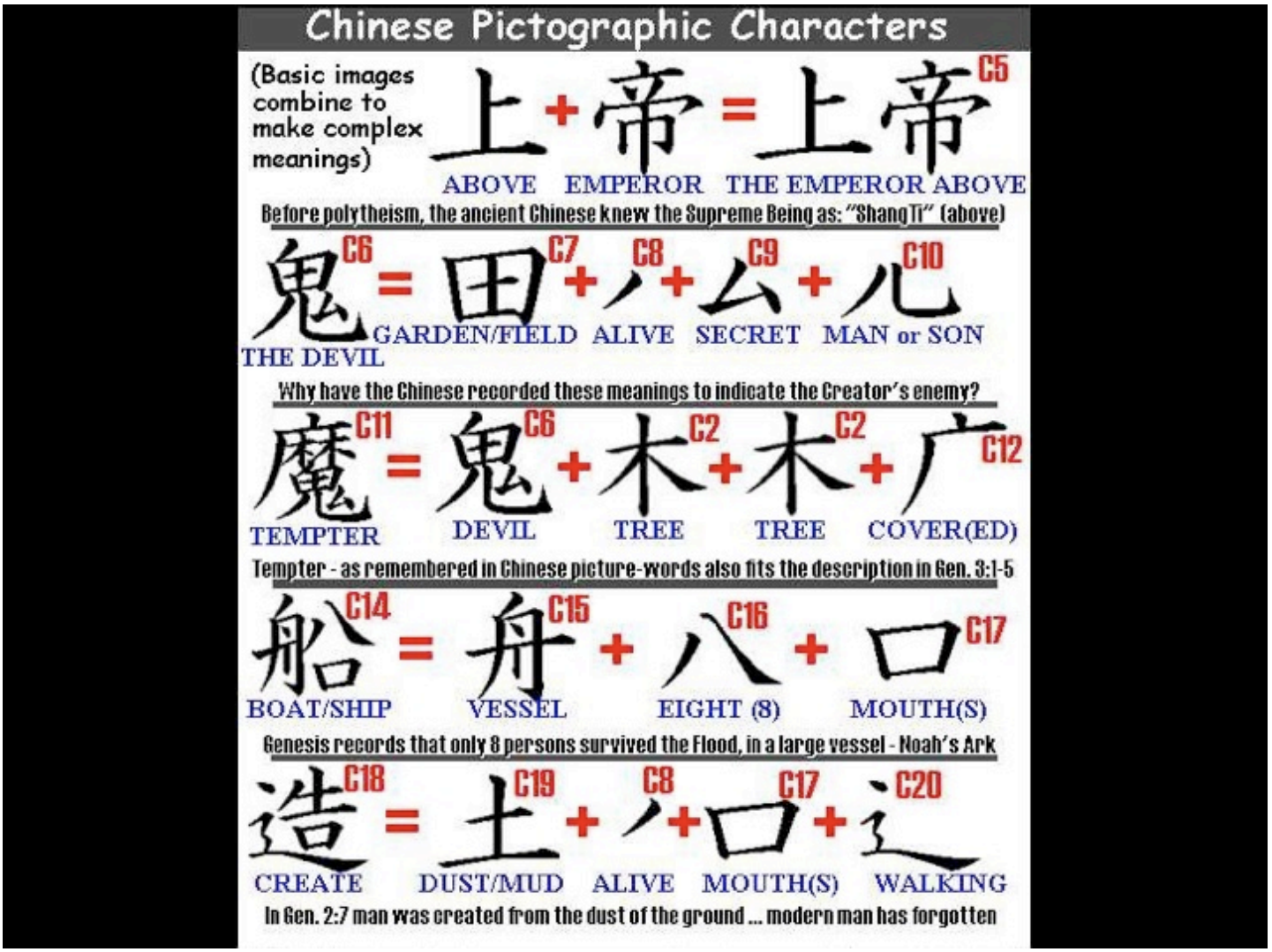
[156] For a descent overview of the major flood stories see also Wikipedia Online Encyclopedia, "Flood Myths," available from http://en.wikipedia.org/wiki/Flood_myths.

[157] Sea creatures, amphibians and insects did not need to be on the Ark—only mammals, birds, reptiles, and humans.

[158] The most detailed study of the many logistical requirements for the Ark and the number of animals on board is by John Woodmorappe, *Noah's Ark: A Feasibility Study* (El Cajon: Institute for Creation Research, 1996).

E. Chinese Language – Classical Chinese, dating to about 2500 B.C., is one of the oldest languages known. Its "words," called pictographs, are often composed of smaller symbols that themselves have meaning and together tell a story. For example, the classical Chinese word for "boat" is composed of the symbols for "vessel," "eight," and "mouth" or "person" (i.e. "eight-person-vessel").[159]

Chinese Word for "Boat"



[159] See C. H. Kang and Ethel R. Nelson, *The Discovery of Genesis* (St. Louis: Concordia Publishing House, 1979). This book shows how the classical Chinese pictographs contain many stories and details found in the early chapters of Genesis, since the earliest people of China (4,000-5,000 years ago) brought with them stories of past events which became imbedded in their language.