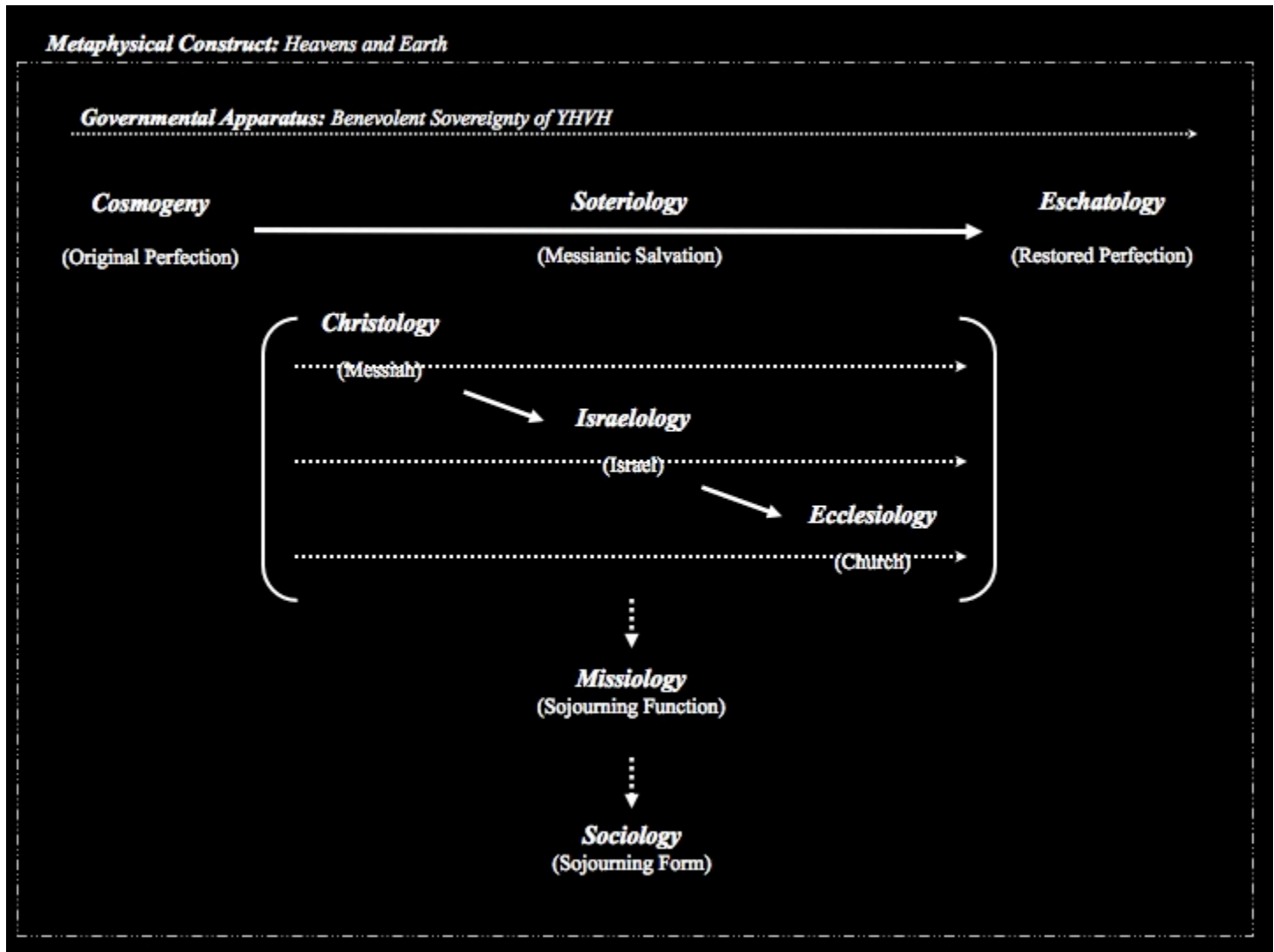


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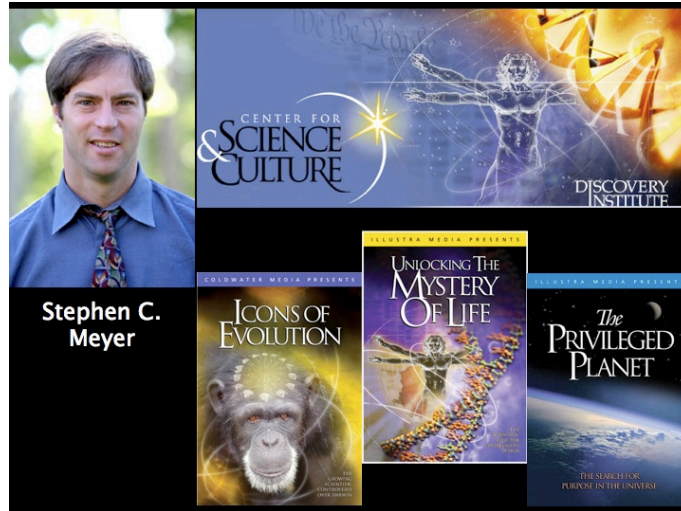
Class 2a: False Evidences For Evolution

John Harrigan

THE SLIDES RELATED TO THIS TEACHING ARE PLACED THROUGHOUT THESE NOTES FOR EASIER INTEGRATION OF THE MATERIAL BEING SHARED. ¹



¹ Useful tools for research in the area of "False Evidences For Evolution" 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/> (note 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/> (note also, general "search" option); 3) Jonathan Wells, *Icons of Evolution: Why Much of What We Teach About Evolution Is Wrong* (Washington, DC: Regnery Publishing, 2000); 4) Jonathan Sarfati, *Refuting Evolution: A Handbook for Students, Parents, and Teachers Countering the Latest Arguments for Evolution* (Green Forest: Master Books, 1999), online edition available at <http://www.creationontheweb.com/content/view/4014/>; 5) Richard Milton, *Shattering the Myths of Darwinism* (London: Inner Traditions, 1997); 6) 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.creation-science.com/onlinebook/index.html>; and 7) CreationWiki Online Encyclopedia of Creation Science (hosted by Northwest Creation Network), available at http://creationwiki.org/Main_Page.



- Here are the videos John describes and relates with this session: **Icon's of Evolution** Documentary by Johnathan Wells (**shows within this class session, links below**).
 - **Icon's of Evolution Documentary:**
 - Part 1: <http://www.youtube.com/watch?v=RVMRBccbINI&feature=related>
 - Part 2: <http://www.youtube.com/watch?v=TNKhI5eDIQE&feature=related>
 - Part 3: <http://www.youtube.com/watch?v=gukde8b3Zxc&feature=related>
 - Part 4: <http://www.youtube.com/watch?v=FriFgkPUq08&feature=related>
 - Part 5: <http://www.youtube.com/watch?v=X-7x3ifgiYQ&feature=related>
 - Part 6: <http://www.youtube.com/watch?v=wk2Zrp27YsY>
 - Part 7: <http://www.youtube.com/watch?v=i78ZbtT6Cn0>
- The two other video's mentioned in teaching: [Unlocking the Mystery's of Life](#) (see additional links on *youtube*) and [Privileged Planet](#) (see additional links on *youtube*)

Because you have said, "We have made a covenant with death, and with Sheol we are in agreement. When the overflowing scourge passes through, it will not come to us, for we have made lies our refuge, and under falsehood we have hidden ourselves." (^{NKJV} Isaiah 28:15)

I. ASTRONOMICAL

Concerning things to come, do you question me about my children, or give me orders about the work of my hands?

¹² It is I who made the earth and created mankind upon it. My own hands stretched out the heaven; I marshaled their starry hosts. (^{NIV} Isaiah 45:11-12; cf. Job 9:8; Ps. 104:2; Is. 40:22; 42:5; 44:24; 51:13; Jer. 10:12; 51:15; Zech. 12:1)

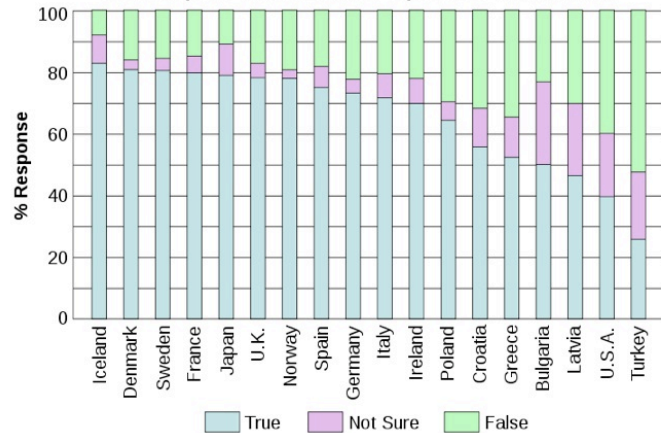
A. Big Bang

1. Origin of Existential Parameters
2. Conservation of Angular Momentum
3. Distribution of Matter
4. Redshift Anomalies
5. Cosmic Background Radiation (CBR)
6. Missing Mass
7. Origin of Heavy Elements
8. Lack of Stellar Births

B. Distant Starlight

1. Decay of c (CDK) / Variable Speed of Light (VSL)
2. "Slow Light" Experiments
3. "Faster-than-light" Experiments

Response to the Statement,
"Human Beings, as We Know Them,
Developed from Earlier Species of Animals"



II. GEOLOGICAL

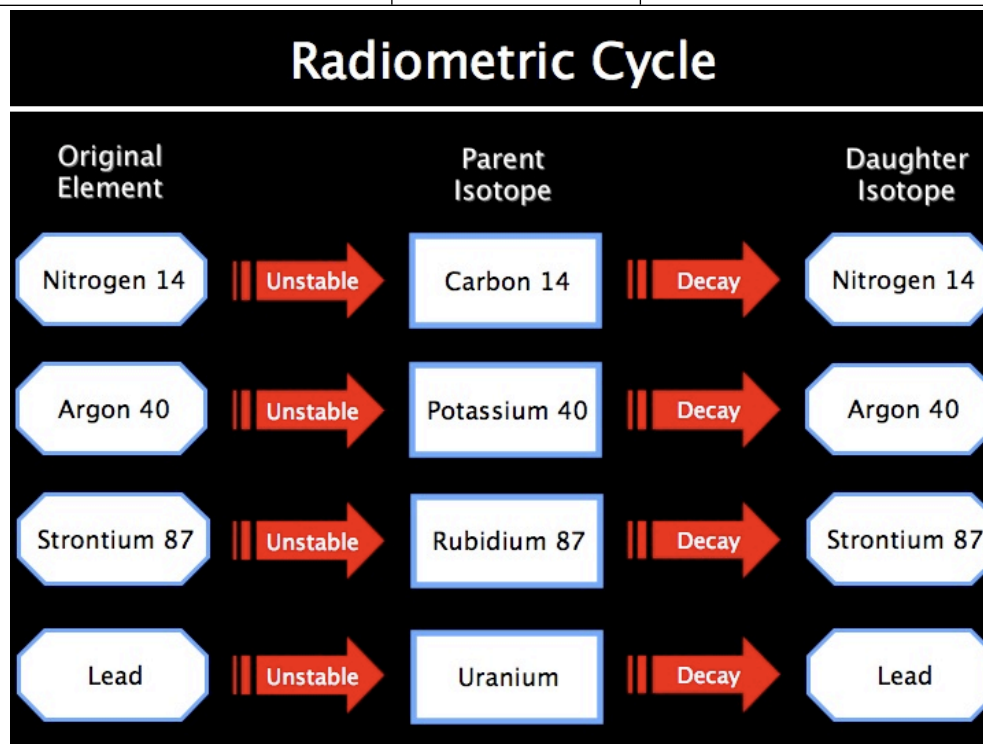
Brace yourself like a man; I will question you, and you shall answer me. ⁴ "Where were you when I laid the earth's foundation? Tell me, if you understand. ⁵ Who marked off its dimensions? ... ²¹ Surely you know, for you were already born! You have lived so many years! (^{NIV} Job 38:3-5, 21)

A. Radiometric Dating

1. Many chemical elements exist as numerous varieties called *isotopes*, some of which are radioactive, meaning they decay over time by losing particles. Radiometric dating is based on the decay rate of these radioactive “parent” isotopes into stable nonradioactive “daughter” isotopes. To date an object, scientists measure the quantity of parent and daughter isotope in a sample, and use the atomic decay rate to determine its probable age. There are four primary types of radiometric dating:

Radiometric Dating			
Isotope		Half-life of parent (years)	Useful range (years)
Parent	Daughter		
Carbon 14	Nitrogen 14	5,730	100 - 30,000
Potassium 40	Argon 40	1.3 billion	100,000 - 4.5 billion
Rubidium 87	Strontium 87	47 billion	10 million - 4.5 billion
Uranium 238 Uranium 235	Lead 206 Lead 207	4.5 billion 710 million	10 million - 4.6 billion

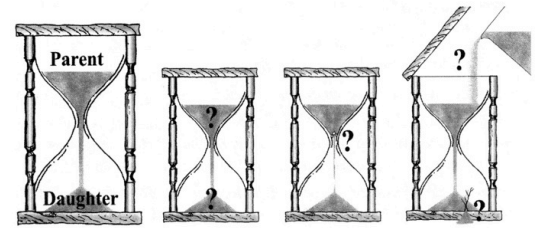
Type	Half-life	Useful Range
Carbon-Nitrogen (^{14}C - ^{14}N)	5730 years	100-30,000 years
Potassium-Argon (^{40}K - ^{40}Ar)	1.3 billion years	100,000-6.5 billion years
Uranium-Lead (^{238}U - ^{206}Pb)	4.5 billion years	10 million - ??? years
Rubidium-Strontium (^{87}Rb - ^{87}Sr)	47 billion years	10 million - ??? years



2. All isotope dating methods rely upon three primary assumptions:

- The *original amount* of both parent and daughter elements is known.
- The *decay rate* has remained constant.
- The sample has remained in a *closed system*.

Three Basic Assumptions



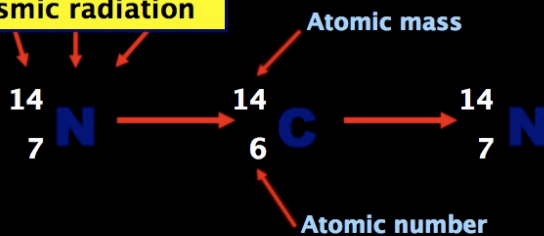
- 1) Original amount
- 2) Decay rate
- 3) Closed system

3. Assumption #1: Initial Conditions

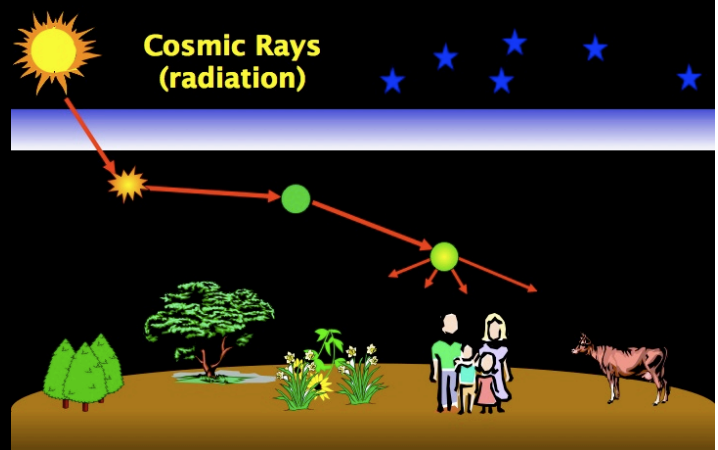
- Unless the original amounts of both parent and daughter elements are actually observed and measured, theoretically nothing can ever be actually known for sure.
- Potassium-Argon composition of an igneous rock often depends on which magma reservoir it came from, as opposed to being the result of decay in the hardened rock.² Moreover, isotope ratios are often used to identify the rock's source reservoir.
- Carbon-14

Carbon-14 Life Cycle

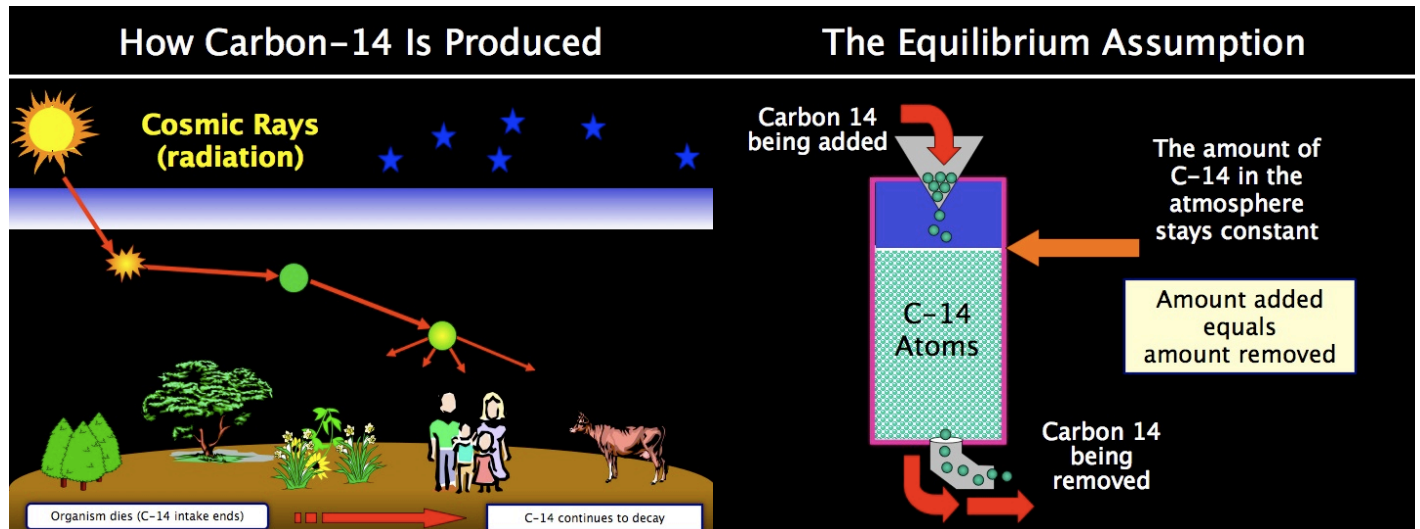
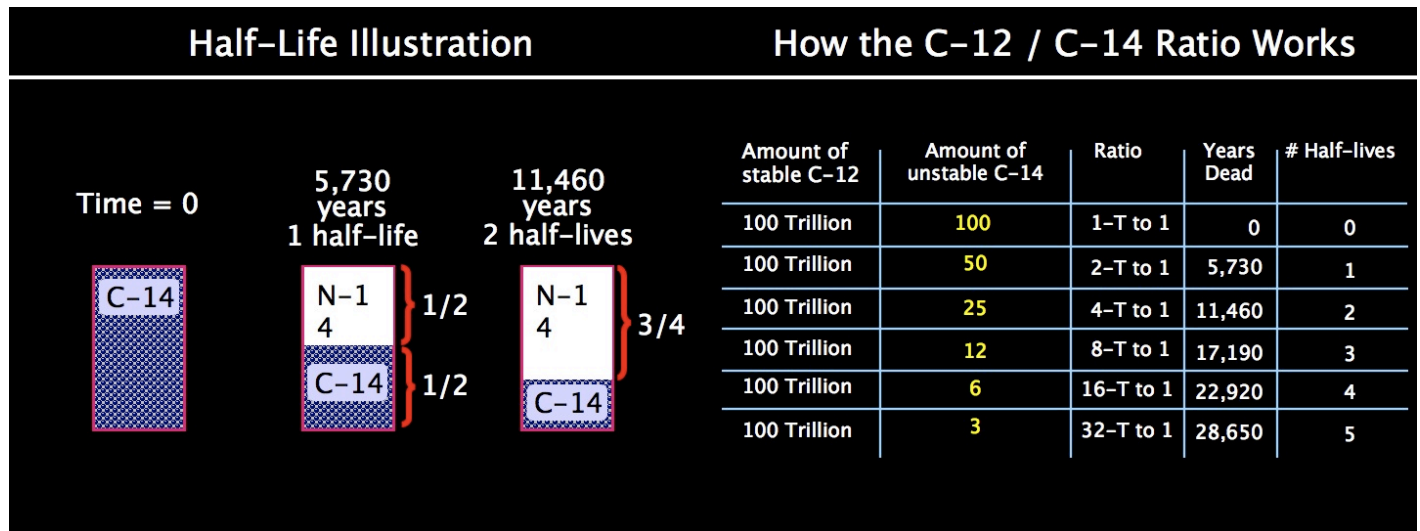
Cosmic radiation



How Carbon-14 Is Produced



² See Andrew A. Snelling, "Geochemical Processes in Mantle and Crust," in L. Vardiman, A. A. Snelling, and E. F. Chaffin (eds.), *Radioisotopes and the Age of the Earth: A Young-Earth Research Initiative* (El Cajon/St. Joseph: Institute for Creation Research/Creation Research Society, 2000), chapter 5, pp. 123-304.



- (1) Willard Libby, the developer of the ^{14}C dating method, found considerable discrepancies in his measurements indicating that radiocarbon was being created in the atmosphere somewhere around 25 percent faster than it was becoming extinct.³ Since this result was inexplicable by any conventional scientific means, Libby put the discrepancy down to experimental error.
- (2) During the 1960s, Libby's experiments were repeated by other chemists, and the new experiments revealed that the discrepancy observed by Libby was not merely an experimental error—it did exist.⁴ Though these figures have been disputed over

³ At this rate, equilibrium (^{14}C influx rate = ^{14}C decay rate) would be reached in approximately 30,000 years, far too quickly for evolutionary timescales [see Willard F. Libby, *Radiocarbon Dating* (University of Chicago, 1955).].

⁴ "There is strong indication, despite the large errors, that the present natural production rate exceeds the natural decay rate by as much as 25 percent." [Richard Lingenfelter, "Production of C-14 by cosmic ray neutrons," *Reviews of Geophysics* 1:51 (February 1963).]; see also Hans E. Suess, "Secular variations in the cosmic-ray produced carbon-14 in the atmosphere and their interpretations," *Journal of Geophysical Research*, 70:5947 (1 December 1965).

the years, one thing is clear: the assumption of a constant ^{14}C biospheric inventory over the past ~50,000 years is simply *not true*.⁵

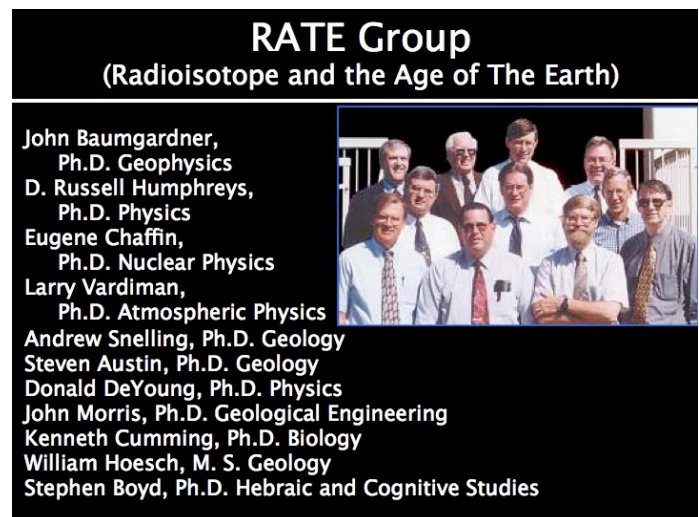
- (3) John Woodmorappe has listed several factors that would lower the initial ratio of this radioactive isotope, which would result in higher ^{14}C “dates.”⁶

4. Assumption #2: Constant Decay Rate

- a) Projecting presently measured processes back over millions or billions of years is a highly speculative act. That is, the assumption that present processes have remained uniform (i.e. “uniformitarianism”) over such long periods of time is questionable, especially when no one knows what causes radioactive decay in the first place.⁷
- b) Since radioactive decay rates have remained basically constant over the last 100 years, many concede on this point without question. However, recent laboratory research has demonstrated that the beta (β) decay rate was sped up a *billion times* when atoms were stripped of their electrons.⁸

5. Assumption #3: System Closure

- a) This assumption states that there is no gain or loss of parent or daughter isotopes from external sources during the decay process—a massive, unsubstantiated assumption.
- b) The RATE Group (“Radioisotopes and the Age of the Earth”) with ICR has shown that nearly all parent/daughter ratios used in radiometric “dating” can be altered by a number of geological processes including: leaching by hydrothermal and ground waters, diffusion through materials, and metamorphism.⁹



⁵ See Elizabeth K. Ralph and Henry M. Michael, “Twenty-five years of radiocarbon dating,” *American Scientist*, Sep/Oct 1974; see also two studies which show that the concentration has been increasing for at least 10,000 years in V. R. Switzer, “Radioactive dating and low-level counting,” *Science* 157:726 (11 August 1967).

⁶ Viz.: 1) More ^{12}C in the pre-Flood biosphere (i.e. more biomass, leading to higher atmospheric CO_2), while the Flood would have buried much ^{12}C , making the post-Flood $^{14}\text{C}/^{12}\text{C}$ ratio higher; 2) less ^{14}C production due to a stronger magnetic field, better deflecting cosmic rays; 3) ^{14}C starts building up at creation, so it would only have had 1,600 years to build up, nowhere near equilibrium; and 4) Volcanoes emit carbon dioxide with no ^{14}C , and plants absorb this. [See John Woodmorappe, “Much-inflated carbon-14 dates from subfossil trees: A new mechanism,” *Creation Ex Nihilo Technical Journal* 15(3):43-44 (December 2001); archived at <http://www.creationontheweb.com/content/view/1801>.]

⁷ “For some inexplicable reason, the nuclei of certain elements become unstable and spontaneously release energy and/or particles.” [William D. Stansfield, *Science of Evolution* (New York: Macmillan Publishing, 1977), 82.]

⁸ F. Bosch, et al., “Observation of bound-state β -decay of fully ionized ^{187}Re ,” *Physical Review Letters* 77(26):5190-5193 (1996); see also Woodmorappe, “Billion-fold acceleration of radioactivity demonstrated in laboratory,” *Creation Ex Nihilo Technical Journal* 15(2):4-6 (August 2001); archived at <http://www.creationontheweb.com/content/view/1795>.

⁹ Specifically, potassium and uranium are easily dissolved in water, and so can be leached out of rocks. Likewise, lead atoms diffuse easily and argon, being a gas, moves quite readily. [See Andrew A. Snelling, “Geochemical Processes in Mantle and Crust,” *Radioisotopes and the Age of the Earth*, chapter 5, pp. 123-304.]

6. Anomalous Data

- a) The nearly complete lack of “blind tests” by geologists (standard procedure in science for overcoming experimenter bias) is an alarming reality that only a few have acknowledged.¹⁰
- b) Many published radiometric dates can be checked by comparisons with the evolution-based ages for fossils that sometimes lie above or below radiometrically dated rock. In a study by John Woodmorappe, more than 400 of these published dates were checked, and the radiometrically determined ages were at least one geologic age in error—indicating major errors in methodology.¹¹
- c) Over the years, various creationists have independently “checked” a number of relatively newly formed lava flows.

(1) Mount St. Helens, WA¹²

- (a) In June 1992, Steven Austin and an ICR team climbed into the crater of Mount St. Helens and collected a 7kg (15lb) block of dacite from high on the lava dome (formed recently by 17 dome building eruptions from 18 October 1980 to 26 October 1986), which was then sent to Geochron Laboratories of Cambridge, MA.¹³



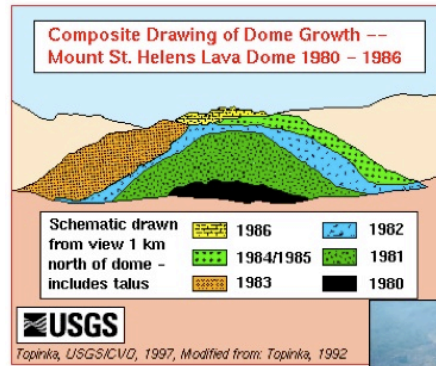
¹⁰ “It is obvious that radiometric techniques may not be the absolute dating methods that they are claimed to be. Age estimates on a given geological stratum by different radiometric methods are often quite different (sometimes by hundreds of millions of years). There is no absolute reliable long-term radiological ‘clock.’” [Stansfield, *Science of Evolution*, 84.]

¹¹ John Woodmorappe, “Radiometric geochronology reappraised,” *Creation Research Society Quarterly* 16:102-129 (September 1979); for similar tests see R. H. Brown, “Graveyard clocks: Do they tell real time?” *Signs of the Times*, June 1982, 8-9.

¹² Steven A. Austin, “Excess argon within mineral concentrates from the new dacite lava dome at Mount St. Helens volcano,” *Creation Ex Nihilo Technical Journal* 10(3):335-343 (Dec. 1996); archived at <http://www.creationontheweb.com/content/view/1521/>. For a less technical summary, see Keith Swenson, “Radio-dating in rubble: The lava dome at Mount St Helens debunks dating methods,” *Creation ex nihilo* 23(3):23-25 (June 2001); archived at <http://www.creationontheweb.com/content/view/396/#r2>.

¹³ Geochron Laboratories is a high-quality, professional radioisotope-dating laboratory, one of the most respected commercial dating laboratories in the world. A portion of this sample was crushed and milled into a fine powder. Another piece was crushed and the various mineral crystals were carefully separated out. The “whole rock” rock powder and four mineral concentrates were submitted for potassium-argon analysis. The laboratory was not told that the specimen came from the lava dome at Mount St. Helens and was only 10 years old. The only information provided to the laboratory was that the samples came from dacite and that “low argon” should be expected to ensure that the laboratory would take extra care to keep out any form of contamination during analysis.

- (b) At the time of the test, the lava dome at Mount St. Helens was only about 10 years old, not millions of years. However, the results returned, ranging from 340,000 years to 2.8 million years old.¹⁴



Mount St. Helens Dome

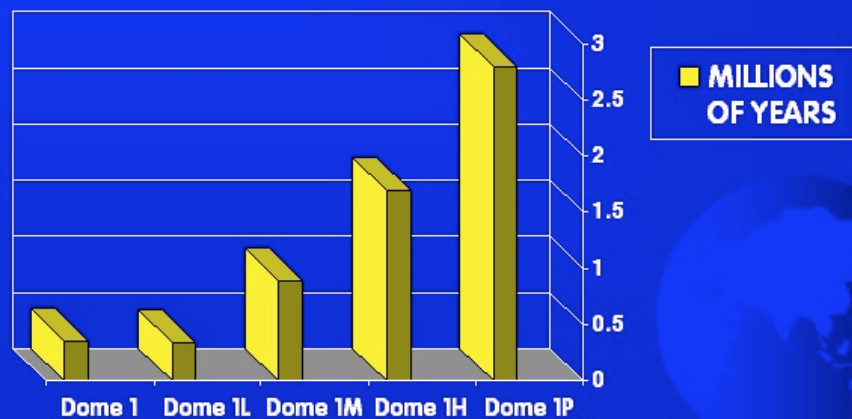
Figure 1. Inside the (Mt. St. Helens) crater with lava dome in background.



- (c) The obvious conclusion is that the initial conditions are unknown and/or the system is not closed. Argon was retained in the rock when it solidified and/or potassium leached out. Thus, there is no "time zero" for radiometric clocks.

MT. ST HELENS LAVA

Formed ~1982, Tested 1992

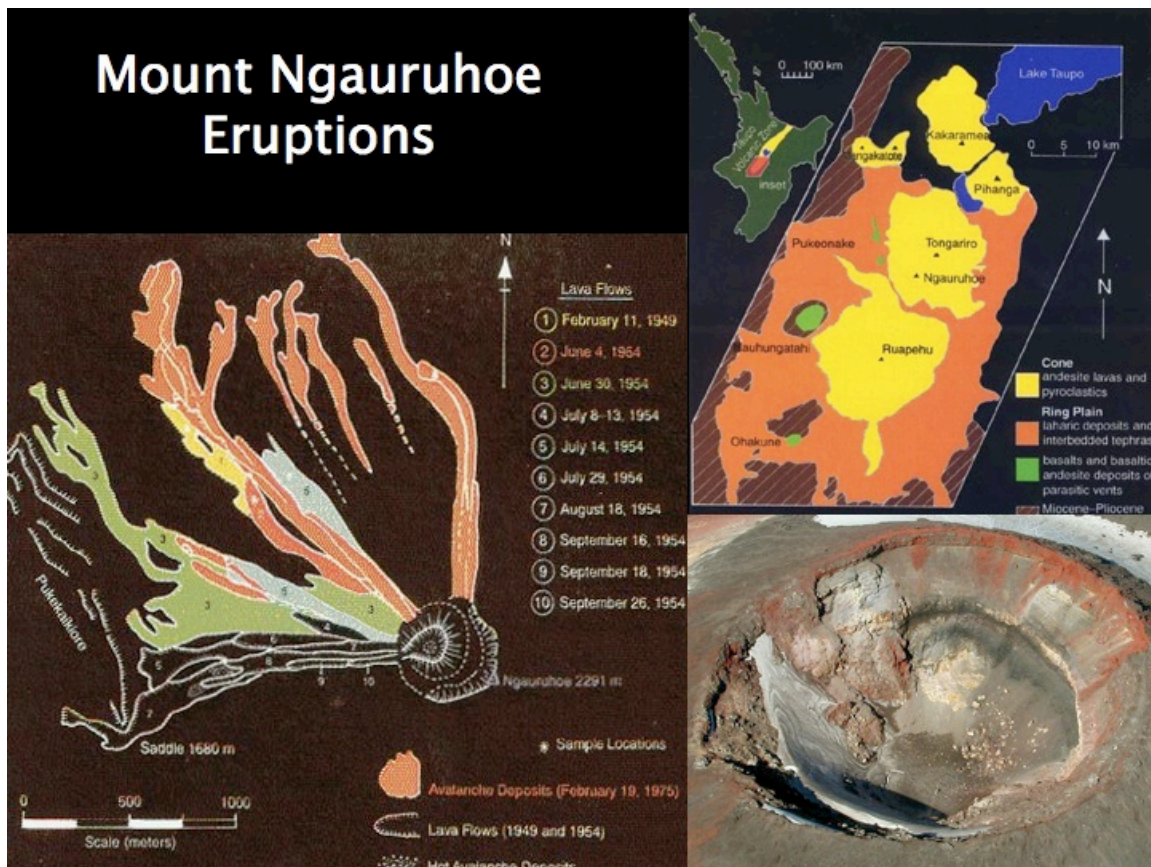


* Results ranged from 340,000 years to 2.8 million years old

¹⁴ Specifically, potassium-argon "ages" for whole rock and mineral concentrate samples are as follows (in millions of years): whole rock (plagioclase)— 0.35 ± 0.06 ; feldspar— 0.34 ± 0.02 ; amphibole— 0.9 ± 0.2 ; pyroxene— 1.7 ± 0.3 ; pyroxene ultra-concentrate— 2.8 ± 0.6 . Note also that the results from the different samples of the *same rock* disagree widely from each other.

(2) Mount Ngauruhoe, New Zealand¹⁵

- (a) Located in the center of New Zealand's North Island, Mount Ngauruhoe has had over 70 eruptions since Europeans first observed it in 1839. Rock samples were taken from the most recent hardened lava flows (specifically eruptions on 2.11.49, 6.4.54, 6.30.54, 7.14.54, and 2.19.75)

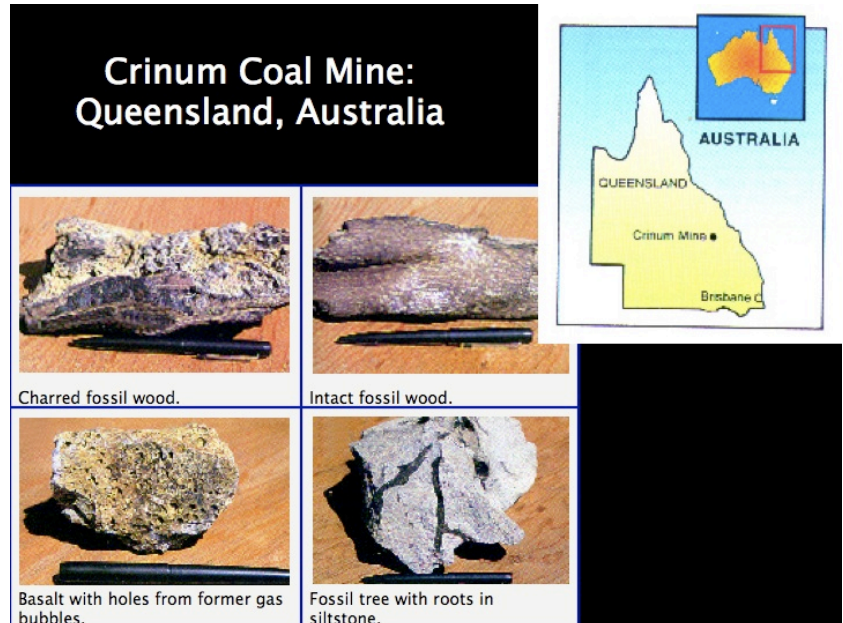


¹⁵ Andrew A. Snelling, "The cause of anomalous potassium-argon 'ages' for recent andesite flows at Mt Ngauruhoe, New Zealand, and the implications for potassium-argon 'dating'," in R. E. Walsh (ed.), *Proceedings of the Fourth International Conference on Creationism* (Pittsburgh: Creation Science Fellowship, 1998), 503-525; archived at http://www.icr.org/index.php?module=research&action=index&page=researchp_as_r01. For a less technical summary, see Andrew A. Snelling, "Radioactive 'dating' failure: Recent New Zealand lava flows yield 'ages' of millions of years," *Creation Ex Nihilo* 22(1):18-21 (December 1999); archived at <http://www.creationontheweb.com/content/view/242/>.

- (b) 13 samples were sent for whole-rock potassium-argon dating to Geochron Laboratories.¹⁶ Though their actual ages were 25-51 years old, their radiometric “dates” ranged from 270,000 to 3.5 million years.¹⁷
- d) Many radiometric dating methods conflict with each other, producing different “ages” for the same rock.

(1) Central Queensland, Australia¹⁸

- (a) In 1993 miners sinking a ventilation shaft for the new Crinum Coal Mine in Central Queensland, Australia unearthed pieces of wood entombed in basalt. Fragments of the fossil wood were sent for radiocarbon (¹⁴C) analysis to Geochron Laboratories and the Antares Mass



Spectrometry Laboratory.¹⁹ The basalt samples were sent for K-Ar dating to Geochron Laboratories and the AMDEL Laboratory in Adelaide, Australia.

¹⁶ The samples were sent progressively, with one sample from each of the lava flows being sent and received before sending the next set. The laboratory was not given any specific information regarding the source of the rock samples, nor were they given any information as to the expected age of the sample. The samples were only described as probably very young with very little argon.

¹⁷ Specifically their ages were as follows: four dated at “less than 270,000 years old,” one was dated at “less than 290,000 years old,” one was dated at “800,000 years old,” three were dated at “1 million years old,” one was dated at “1.3 million years old,” one was dated at “1.5 million years old,” and the last one was dated at “3.5 million years old.” All were said to have a margin of error of about 20 percent in either direction.

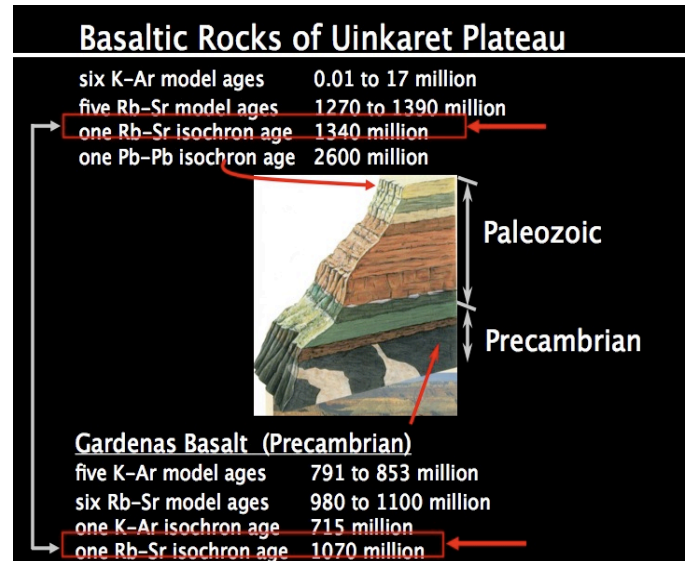
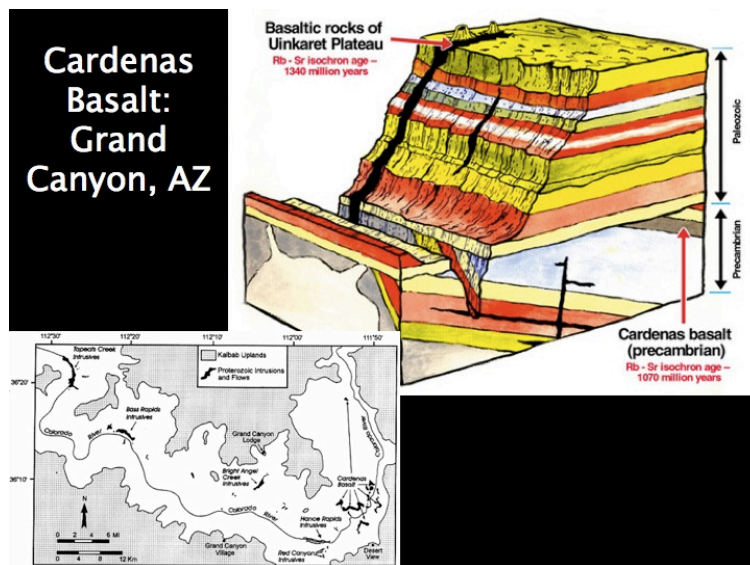
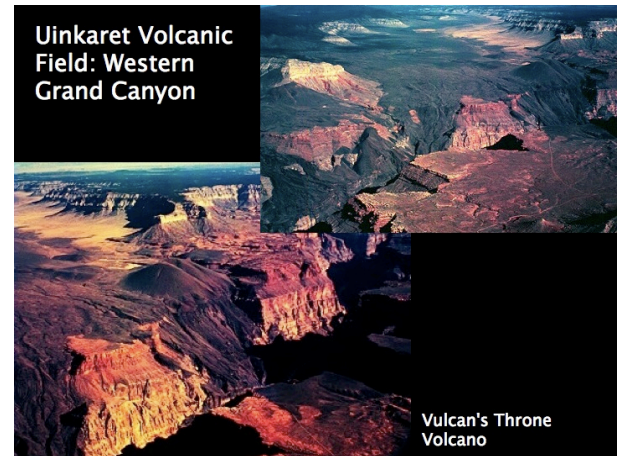
¹⁸ Andrew A. Snelling, “Conflicting ‘ages’ of Tertiary basalt and contained fossilised wood, Crinum, Central Queensland, Australia,” *Creation Ex Nihilo Technical Journal* 14(2):99-122 (August 2000); archived at http://www.creationontheweb.com/images/pdfs/tj/tj_v14n2_crinum.pdf. For a less technical summary, see Andrew A. Snelling “Radioactive ‘dating’ in conflict! Fossil wood in ‘ancient’ lava flow yields radiocarbon,” *Creation Ex Nihilo* 20(1):24-27 (December 1997); archived at <http://www.creationontheweb.com/content/view/731/>.

¹⁹ Antares Mass Spectrometry Laboratory is a major research laboratory at the Australian Nuclear Science and Technology Organisation (ANSTO), near Sydney, Australia. Neither laboratory was told exactly where the samples came from to ensure that there would be no resultant bias. Both laboratories use the more sensitive accelerator mass spectrometry (AMS) technique for radiocarbon analyses.

- (b) The wood was “dated” to ~30,000-45,000 years, while the basalt was “dated” at to ~37-58 million years.²⁰ Contamination was completely ruled out by a method known as the $\delta^{13}\text{C}_{\text{PDB}}$ test.²¹
- (c) Since both of these methods supposedly stand independently, one of them must be wrong. This conflicting data presents a major problem for radiometric dating assumptions in general.

(2) Grand Canyon, AZ²²

- (a) The bottom of the canyon contains an igneous rock layer, the Gardenas Basalt, suitable for radioisotope dating. When dated by the rubidium-strontium method it yielded an “age” of 1.07 billion years, considered a “good” date by most geologists because it agrees with their evolutionary chronology.

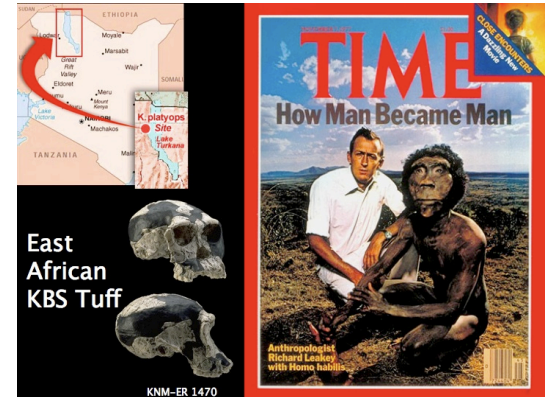


²⁰ The specific dates for the wood samples are as follows: 1) >35,620 (Geochron), 44,700 ± 950 (ANSTO); 2) 29,544 ± 759 (Geochron); 3) 37,800 ± 3,450 (ANSTO). The basalt samples are as follows (in millions of years): 1) 44.9 ± 1.1 (AMDEL), 2) 47.9 ± 1.6 (AMDEL), 39.1 ± 1.5 (Geochron); 3) 58.3 ± 2.0 (Geochron); 4) 36.7 ± 1.2 (Geochron).

²¹ This measures the amount of another stable carbon isotope, ^{13}C , which is about 1 percent of all carbon. Skeptics have questioned these results, but the laboratories' staff had neither hesitation nor difficulties in calculating the ^{14}C “ages”. When subsequently questioned regarding the limits of the analytical method for the radiocarbon and any possibility of contamination, staff at both laboratories were readily insistent that the results were within the detection limits and therefore provided *quotable* finite “ages”.

²² Steven A. Austin and Andrew A. Snelling, “Discordant potassium-argon model and isochron ‘ages’ for Cardenas Basalt (Middle Proterozoic) and associated diabase of eastern Grand Canyon, Arizona,” in R. E. Walsh (ed.), *Proceedings of the Fourth International Conference on Creationism* (Pittsburgh: Creation Science Fellowship, 1998), 35-51; archived at http://www.icr.org/research/index/researchp_sa_r03/. For a less technical summary, see Steven A. Austin, “Excessively old ‘ages’ for Grand Canyon lava flows,” *ICR Impact*, 1 February 1992; archived at <http://www.icr.org/article/353/>.

- (b) Problems arise when the *same rocks* are dated with the potassium-argon method, which gives “ages” of 516 ± 30 Ma,²³ strongly discordant with the published Rb-Sr “ages”.²⁴
 - (c) Steven Austin and an ICR team independently dated lava domes from volcanoes on the north rim of the Grand Canyon (believed by geologists to have erupted only thousands of years ago) by the same method, and ages were given of about 1.34 billion years, indicating that the top of the canyon is actually older than the bottom.²⁵
- (3) East African KBS Tuff²⁶
- (a) Richard Leakey began his expedition of the fossil deposits east of Lake Rudolf in northern Kenya in 1967. Seeking to unravel the geology of the area, he dated a layer of volcanic ash, known as the KBS Tuff, which rendered dates of 212-230 Ma.²⁷
 - (b) However, mammalian fossils later found *below* the KBS Tuff (specifically the infamous hominid fossil KNM-ER 1470 found in 1972) limited its age to only a few million years. New tests were done which then dated the Tuff at 2.61 million years, which Leakey used to date KNM-ER 1470 at 2.9 Ma.²⁸
 - (c) Ten years of fierce debate ensued, which landed the final date of the Tuff at 1.88 million years, in accord with the assumed age of several fossilized pig



²³ T. D. Ford, W. J. Breed, and J. S. Mitchell, “Name and Age of the Upper Precambrian Basalts in the Eastern Grand Canyon,” *Geological Society of America Bulletin* 83:223-226 (1972); see also E. E. Larson, et al., “Lithology, Chemistry, Age and Origin of the Proterozoic Cardenas Basalt, Grand Canyon, Arizona,” *Precambrian Research* 65:255-276 (1994).

²⁴ A recent study has reinforced this, showing three different methods producing conflicting “ages” [see Andrew A. Snelling, “Radioisotope dating of rocks in the Grand Canyon,” *Creation Ex Nihilo* 27(3):44-49 (June 2005); archived at <http://www.creationontheweb.com/content/view/4415/>].

²⁵ Obviously no one believes this to be true, but such conflicting ages speaks eloquently of the great problems inherent in radioisotope dating. Because of the relatively widespread knowledge of Dr. Austin’s research, many mainstream geologists have publicly rejected these results, which do not agree with the commonly believed “right age” of the volcanoes. It speaks volumes about the way anomalous “dates” are accepted or rejected by the geological community.

²⁶ Marvin L. Lubenow, “The pigs took it all,” *Creation Ex Nihilo* 17(3):36-38 (June 1995); archived at <http://www.creationontheweb.com/content/view/1732/>; see also Marvin L. Lubenow, *Bones of Contention: A Creationist Assessment of Human Fossils*, Revised ed. (Grand Rapids: Baker Books, 2004), 326-329.

²⁷ Kay Behrensmeyer, an early geologist with Richard Leakey, was the one who actually found the ash layer. The surrounding excavation was named the Kay Behrensmeyer Site, and the layer of volcanic ash, or “tuff,” thus became known as the KBS Tuff. In 1969 Leakey supplied rock samples to F. J. Fitch (Birkbeck College, University of London) and J. A. Miller (Cambridge University)—recognized authorities in potassium-argon (K-Ar) dating.

²⁸ Concerning this discrepancy, Fitch and Miller said, “From these results it was clear that an extraneous argon age discrepancy was present...” [F. J. Fitch and J. A. Miller, “Radioisotopic age determinations of Lake Rudolf artifact site,” *Nature* 226:226 (18 April 1970).] How did they know their was “extraneous argon” present in the tuff? The associated fossils told them. In spite of our being assured that dating methods constitute independent confirmation of evolutionary dates, associated fossils had already determined the “acceptable” dates. Under other circumstances, and without fossils to guide them, evolutionary geologists would have accepted the original dates as “good.”

teeth.²⁹ The whole scenario reveals the reality that 1) “index fossils” ultimately determine the age of rock strata, and 2) paleoanthropologists have a great degree of control over radiometric results by rejecting the dates that do not fit the evolution scenario of the fossils.

- (4) Creationists are not the only ones who have recognized these dating conflicts.³⁰ Some evolutionists have also published conflicting results:³¹
- (a) Hualalai, basalt (Hawaii, AD 1800-1801): 1.60 ± 0.16 ; 1.41 ± 0.08 Ma
 - (b) Mt. Etna, basalt (Sicily, 122 BC): 0.25 ± 0.08 Ma
 - (c) Mt. Etna, basalt (Sicily, AD 1792): 0.35 ± 0.08 Ma
 - (d) Mt. Lassen, plagioclase (California, AD 1915): 0.11 ± 0.3 Ma
 - (e) Sunset Crater, basalt (Arizona, AD 1064-1065): 0.27 ± 0.09 ; 0.25 ± 0.15 Ma
 - (f) Numerous other examples have also been published.³²

Blind Test Dating Examples			
Name	Location	Real Date	K-Ar date
Kilauea Iki basalt	Hawaii	AD 1959	8.5 ± 6.8 Ma
Mt. Etna basalt	Sicily	May 1964	0.7 ± 0.01 Ma
Medicine Lake Highlands obsidian	Glass Mountains, California	<500 years	12.6 ± 4.5 Ma
Hualalai basalt	Hawaii	AD 1800-1801	22.8 ± 16.5 Ma
East Pacific Rise basalt	Pacific Ocean	<1 Ma	690 ± 7 Ma
Olivine basalt	Nathan Hills, V.L., Antarctica	<0.3 Ma	18.0 ± 0.7 Ma
Anorthoclase in volcanic bomb	Mt Erebus, Antarctica	1984	0.64 ± 0.03 Ma
Kilauea basalt	Hawaii	<200 years	21 ± 8 Ma
Kilauea basalt	Hawaii	<1,000 years	42.9 ± 4.2 Ma; 30.3 ± 3.3 Ma
Sea mount basalt	Near East Pacific Rise	<2.5 Ma	580 ± 10 Ma; 700 ± 150 Ma
East Pacific Rise basalt	Pacific Ocean	<0.6 Ma	24.2 ± 1.0 Ma

²⁹ See D. C. Johanson and M. A. Edey, *Lucy: The Beginnings of Humankind* (New York: Simon & Schuster, 1981), 240.

³⁰ However, they are the only ones to *seriously question* it. For a well-documented demonstration of many fallacies in radiometric dating and documentation of many other discordant “dates”, see John Woodmorappe, *The Mythology of Modern Dating Methods* (El Cajon: Institute for Creation Research, 1999).

³¹ These results are from G. B. Dalrymple, “ $^{40}\text{Ar}/^{36}\text{Ar}$ analysis of historic lava flows,” *Earth and Planetary Science Letters* 6(1): 47-55 (1969); other lists are given in D. Krummenacher, “Isotopic composition of argon in modern surface rocks,” *Earth and Planetary Science Letters* 8(2):109-117 (April 1970); D. E. Fisher, “Excess rare gases in a subaerial basalt from Nigeria,” *Nature Physical Science* 232(29):60-61 (19 July 1971).

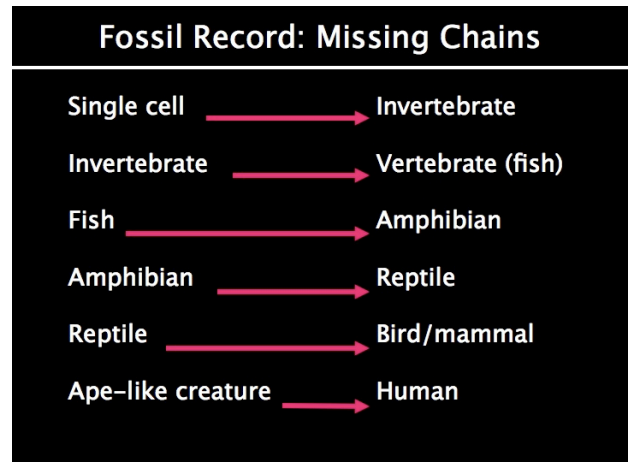
³² See the 15 other examples citing secular sources in Andrew A. Snelling, “The cause of anomalous potassium-argon ‘ages’ for recent andesite flows at Mt Ngauruhoe, New Zealand, and the implications for potassium-argon ‘dating’,” in R. E. Walsh (ed.), *Proceedings of the Fourth International Conference on Creationism* (Pittsburgh: Creation Science Fellowship, 1998), 503-525; archived at http://www.icr.org/index.php?module=research&action=index&page=researchhp_as_r01.

- (5) Evolutionists explain this contradiction by arguing that “excess radiogenic argon” (symbolized $^{40}\text{Ar}^*$) from the magma was retained in the rock when it solidified. However, there is no real way of telling the retained argon from the argon produced by the decay of potassium within the rock. This is an illogical excuse, which defies the very foundation of all radiometric dating: a *known initial condition*.³³ If excess $^{40}\text{Ar}^*$ can cause exaggerated dates for rocks of known age, then why should we trust the method for rocks of unknown age?³⁴

B. Fossil Record

1. Fossil Gaps – If evolution happened, the fossil record should show continuous and gradual changes from the bottom to the top layers. However, the fossil record suffers not from missing links, but rather *missing chains* between: single cell > invertebrate > vertebrate (fish) > amphibian > reptile > bird/mammal > primate > human.³⁵

- a) Darwin himself recognized that the gaps in the fossil record were “the most obvious



³³ The assumption of no radiogenic argon ($^{40}\text{Ar}^*$) when the rocks formed is usually stated dogmatically as self-evident—“The K-Ar method is the only decay scheme that can be used with little or no concern for the initial presence of the daughter isotope. This is because ^{40}Ar is an inert gas that does not combine chemically with any other element and so escapes easily from rocks when they are heated. Thus, while a rock is molten the ^{40}Ar formed by decay of ^{40}K escapes from the liquid.” [G. B. Dalrymple, *The Age of the Earth* (Stanford: Stanford University Press, 1991), 91] The blatant disregard for this rule is evidence that the “accepted” dates are based on the presupposed age of the rock.

³⁴ In summary, rocks are dated by the potassium-argon method (or any other method) according to the following formula: Age of rock $\text{?} = ((\text{Ar in sample today}) - (\text{Ar in sample originally ?})) / (\text{K in sample today}) \times (\text{Half-life of K})$. The argon in the sample today is observable; the potassium in the sample today is observable; and the half-life of potassium is observable. However, the age of the rock and the amount of argon in the sample originally are not observable. As a matter of basic algebra, a *single equation with two unknown variables cannot be solved*. If the scientist assumes that there was no argon in the rock when it was originally formed, but there was, then the scientist’s calculation will be *far too high*.

³⁵ The Field Museum of Natural History in Chicago has one of the largest collections of fossils in the world. Consequently, its former dean, Dr. David Raup, was highly qualified to summarize the situation regarding transitions that should be observed in the fossil record: “Well, we are now about 120 years after Darwin and the knowledge of the fossil record has been greatly expanded. We now have a quarter of a million fossil species but the situation hasn’t changed much. The record of evolution is still surprisingly jerky and, ironically, we have even fewer examples of evolutionary transition than we had in Darwin’s time. By this I mean that some of the classic cases of darwinian change in the fossil record, such as the evolution of the horse in North America, have had to be discarded or modified as a result of more detailed information—what appeared to be a nice simple progression when relatively few data were available now appears to be much more complex and much less gradualistic. So Darwin’s problem has not been alleviated in the last 120 years and we still have a record which does show change but one that can hardly be looked upon as the most reasonable consequence of natural selection.” [David M. Raup, “Conflicts between Darwin and paleontology,” *Field Museum of Natural History Bulletin* 50(1):25 (January 1979).]

“The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology. The evolutionary trees that adorn our textbooks have data only at the tips and nodes of their branches; the rest is inference, however reasonable, not the evidence of fossils... We fancy ourselves as the only true students of life’s history, yet to preserve our favored account of evolution by natural selection we view our data as so bad that we never see the very process we profess to study.” [Stephen Jay Gould, “Evolution’s erratic pace,” *Natural History* 86:14 (May 1977).]

“But the curious thing is that there is a consistency about the fossil gaps: *the fossils go missing in all the important places*. When you look for links between major groups of animals, they simply aren’t there; at least, not in enough numbers to put their status beyond doubt. Either they don’t exist at all, or they are so rare that endless argument goes on about whether a particular fossil is, or isn’t, or might be, transitional between this group or that.” [emphasis in original, Francis Hitching, *The Neck of the Giraffe: Where Darwin Went Wrong* (New Haven, Connecticut: Ticknor and Fields, 1982), 19.]

and serious objection” to his theory.³⁶ He believed that these gaps would one day be filled as fossil exploration continued, but the fossil record has been studied so thoroughly that it is safe to conclude they will never be filled.³⁷

- b) The clear gaps in the fossil record are better explained by the creation model in which plants and animals exist according to created “kind” rather than evolved “species.”³⁸
- 2. Out-of-place fossils – Frequently, fossils are not vertically sequenced in the assumed evolutionary order,³⁹ the vast majority of which the public is almost totally ignorant:⁴⁰
 - a) In Uzbekistan, 86 consecutive horse hoofprints were found beside supposedly 90–100-million-year-old dinosaur tracks.⁴¹
 - b) Hoofprints of some other animal are alongside 1,000 dinosaur footprints in Virginia.⁴²
 - c) A leading authority on the Grand Canyon published photographs of horselike hoofprints visible in rocks that, according to the theory of evolution, predate hooved animals by more than a 100 million years.⁴³
 - d) Scientists in the former Soviet Union (Turkmenistan) have reported a layer of rock containing more than 2,000 dinosaur footprints alongside tracks “resembling human

³⁶ “But, as by this theory innumerable transitional forms must have existed, why do we not find them imbedded in countless numbers in the crust of the earth?” [Charles Darwin, *The Origin of Species*, 6th ed. (New York: Macmillan Publishing, 1927), 163.]

“...the number of intermediate varieties, which have formerly existed [must] truly be enormous. Why then is not every geological formation and every stratum full of such intermediate links? Geology assuredly does not reveal any such finely-graduated organic chain; and this, perhaps, is the most obvious and serious objection which can be urged against the theory [of evolution].” (Ibid., 323.)

³⁷ “It may, therefore, be firmly maintained that it is not even possible to make a caricature of an evolution out of palaeobiological facts. The fossil material is now so complete that it has been possible to construct new classes and the lack of transitional series cannot be explained as due to the scarcity of the material. The deficiencies are real, they will never be filled.” [N. Heribert Nilsson, *Synthetische Artbildung* (Lund, Sweden: Verlag CWK Gleerup, 1953), 1212.]

“...experience shows that the gaps which separate the highest categories may never be bridged in the fossil record. Many of the discontinuities tend to be more and more emphasized with increased collecting.” [Norman D. Newell (former Curator of Historical Geology at the American Museum of Natural History), “The nature of the fossil record,” *Adventures in Earth History*, Preston Cloud ed. (San Francisco: W. H. Freeman and Co., 1970), 644-645.]

³⁸ “Although an almost incomprehensible number of species inhabit Earth today, they do not form a continuous spectrum of barely distinguishable intermediates. Instead, nearly all species can be recognized as belonging to a relatively limited number of clearly distinct major groups...” [Robert L. Carroll, *Patterns and Processes of Vertebrate Evolution* (Cambridge Press, 1997), 9.]

³⁹ Walter E. Lammerts has published eight lists totaling almost 200 wrong-order formations in the United States alone [see “Recorded instances of wrong-order formations or presumed overthrusts in the United States: Parts I–VIII,” *Creation Research Society Quarterly*, September 1984, p. 88; December 1984, p. 150; March 1985, p. 200; December 1985, p. 127; March 1986, p. 188; June 1986, p. 38; December 1986, p. 133; and June 1987, p. 46.].

⁴⁰ The following examples are taken from Brown, *In the Beginning*, 11.

⁴¹ Evolutionists have almost as much difficulty believing that horses and dinosaurs lived together as they do man and dinosaurs. Horses allegedly did not evolve until many millions of years after the dinosaurs became extinct. [See Y. Kruzhilin and V. Ovcharov, “A Horse from the Dinosaur Epoch?” *Moskovskaya Pravda* [Moscow Truth], 5 Feb. 1984.]

⁴² Richard Monastersky, “A walk along the lakeshore, dinosaur-style,” *Science News* 136:21 (8 July 1989).

⁴³ Edwin D. McKee, *The Supai Group of Grand Canyon*, Geological Survey Professional Paper 1173 (Washington, D.C.: U.S. Government Printing Office, 1982), pp. 93-96, 100.

footprints.”⁴⁴ Similar discoveries have been made in Arizona.⁴⁵ Were it not for the theory of evolution, few would doubt that these were human footprints.

- e) Sometimes, land animals, flying animals, and marine animals are fossilized side-by-side in the same rock.⁴⁶
- f) Dinosaur, whale, elephant, horse, and other fossils, plus crude human tools, were reportedly found in phosphate beds in South Carolina.⁴⁷
- g) Coal beds contain round, black lumps called coal balls, some of which contain flowering plants that allegedly evolved 100 million years after the coal bed was formed.⁴⁸
- h) In the Grand Canyon, in Venezuela, in Kashmir, and in Guyana, spores of ferns and pollen from flowering plants are found in Cambrian rocks—rocks supposedly deposited before flowering plants evolved.⁴⁹ Pollen has also been found in Precambrian rocks deposited before life allegedly evolved.⁵⁰
- i) Petrified trees in Arizona’s Petrified Forest contain fossilized nests of bees and cocoons of wasps. The petrified forests are reputedly 220 million years old, while bees (and flowering plants which bees require) supposedly evolved almost a 100 million years later.⁵¹
- j) Pollinating insects and fossil flies, with long, well-developed tubes for sucking nectar from flowers, are dated 25 million years before flowers are assumed to have evolved.⁵²
- k) Most evolutionists and textbooks systematically ignore such discoveries, because they conflict with the evolutionary time scale.

3. Index Fossils

⁴⁴ Alexander Romashko, “Tracking Dinosaurs,” Moscow News, No. 24, 1983, p. 10. [For an alternate but equivalent translation published by an anti-creationist organization, see Frank Zindler, “Man—A contemporary of the dinosaurs?” *Creation/Evolution* 6(1): 28-29 (1986).]

⁴⁵ Paul O. Rosnau, et al., “Are human and mammal tracks found together with the tracks of dinosaurs in the Kayenta of Arizona?” Parts I and II, *Creation Research Society Quarterly*, Vol. 26, September 1989, pp. 41-48 and December 1989, pp. 77-98; see also Jeremy Auldane, et al., “More human-like track impressions found with the tracks of dinosaurs in the Kayenta Formation at Tuba City Arizona,” *Creation Research Society Quarterly* 34:133-146 (December 1997).

⁴⁶ Andrew Snelling, “Tasmania’s fossil bluff,” *Creation Ex Nihilo* 7(3):6-10 (March 1985); Carol Armstrong, “Florida fossils puzzle the experts,” *Creation Research Society Quarterly* 21:198-199 (March 1985); Pat Shipman, “Dumping on Science,” *Discover*, December 1987, p. 64.

⁴⁷ Francis S. Holmes, *Phosphate Rocks of South Carolina and the “Great Carolina Marl Bed”* (Charleston, South Carolina: Holmes’ Book House, 1870); Edward J. Nolan, “Remarks on Fossils from the Ashley Phosphate Beds,” *Proceedings of the Academy of Natural Sciences of Philadelphia* (1876), 80-81.

⁴⁸ A. C. Noé, “A Paleozoic Angiosperm,” *Journal of Geology* 31:344-347 (May-June 1923).

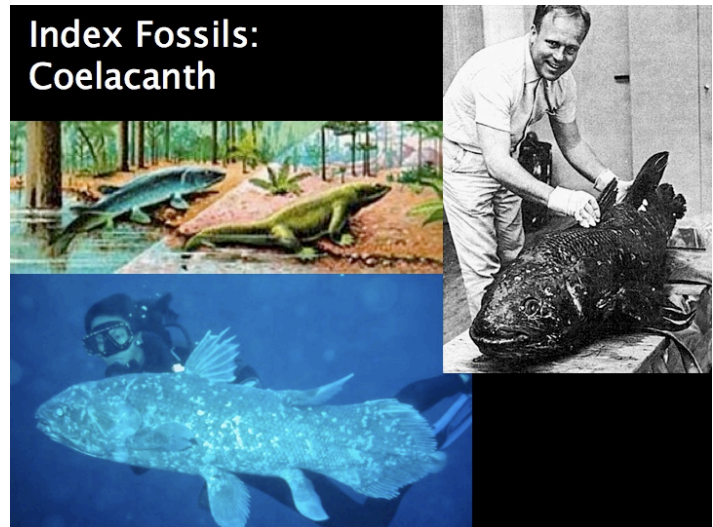
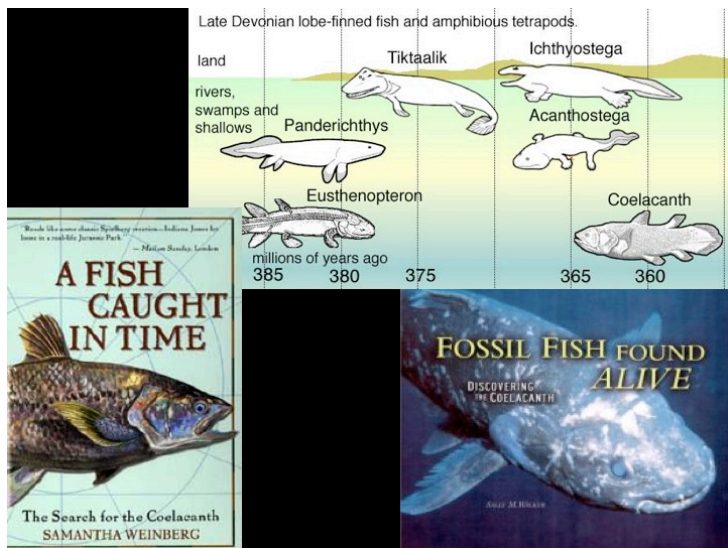
⁴⁹ R. M. Stainforth, “Occurrence of pollen and spores in the Roraima Formation of Venezuela and British Guiana,” *Nature* 210:292-294 (16 April 1966); A. K. Ghosh and A. Bose, “Spores and Tracheids from the Cambrian of Kashmir,” *Nature* 169:1056-1057 (21 June 1952).

⁵⁰ George F. Howe, et al., “A pollen analysis of Hakatai Shale and other Grand Canyon rocks,” *Creation Research Society Quarterly* 24:173-182 (March 1988).

⁵¹ Carl Zimmer, “A Secret History of Life on Land,” *Discover*, February 1998, pp. 76-83; see also Brown, *In the Beginning*, footnote 25, p. 57.

⁵² Dong Ren, “Flower-Associated Brachycera Flies as fossil evidence for Jurassic Angiosperm origins,” *Science* 280:85-88 (3 April 1998).

- a) In the early 1800s, some observers in Western Europe noticed that certain fossils are usually preserved in sedimentary rock layers that, when traced laterally, typically lie above other types of fossils. Decades later, after the theory of evolution was proposed, many concluded that the lower organism must have evolved before the upper organism.
- b) Geologic ages were then associated with each of these “index fossils.” Those ages were extended to other animals and plants buried in the layer of the index fossil. Yet, evolution is supposedly shown by the sequence of fossils. This is clearly circular reasoning, which many honest geologists readily admit.⁵³ However, geologic formations are still almost always dated by their fossil content.⁵⁴
- c) One such index fossil, the coelacanth fossil, dates its layer at 70,000,000 to 400,000,000 years old.



- (1) When a live one was caught in 1938, deep in the Indian Ocean, northwest of Madagascar, scientists were astonished, since they had a large brain, no lungs, nor

⁵³ “The intelligent layman has long suspected circular reasoning in the use of rocks to date fossils and fossils to date rocks. The geologist has never bothered to think of a good reply, feeling that explanations are not worth the trouble as long as the work brings results. This is supposed to be hard-headed pragmatism.” [J. E. O’Rourke, “Pragmatism versus materialism in stratigraphy,” *American Journal of Science* 276:47 (January 1976).] Although O’Rourke attempts to justify current practices of stratigraphers, he recognizes the inherent problems associated with such circular reasoning: “The rocks do date the fossils, but the fossils date the rocks more accurately. Stratigraphy cannot avoid this kind of reasoning, if it insists on using only temporal concepts, because circularity is inherent in the derivation of time scales.” (Ibid., 53.)

“It cannot be denied that from a strictly philosophical standpoint geologists are here arguing in a circle. The succession of organisms has been determined by a study of their remains embedded in the rocks, and the relative ages of the rocks are determined by the remains of organisms that they contain.” [R. H. Rastall, “Geology,” *Encyclopaedia Britannica* 10:168 (1954).]

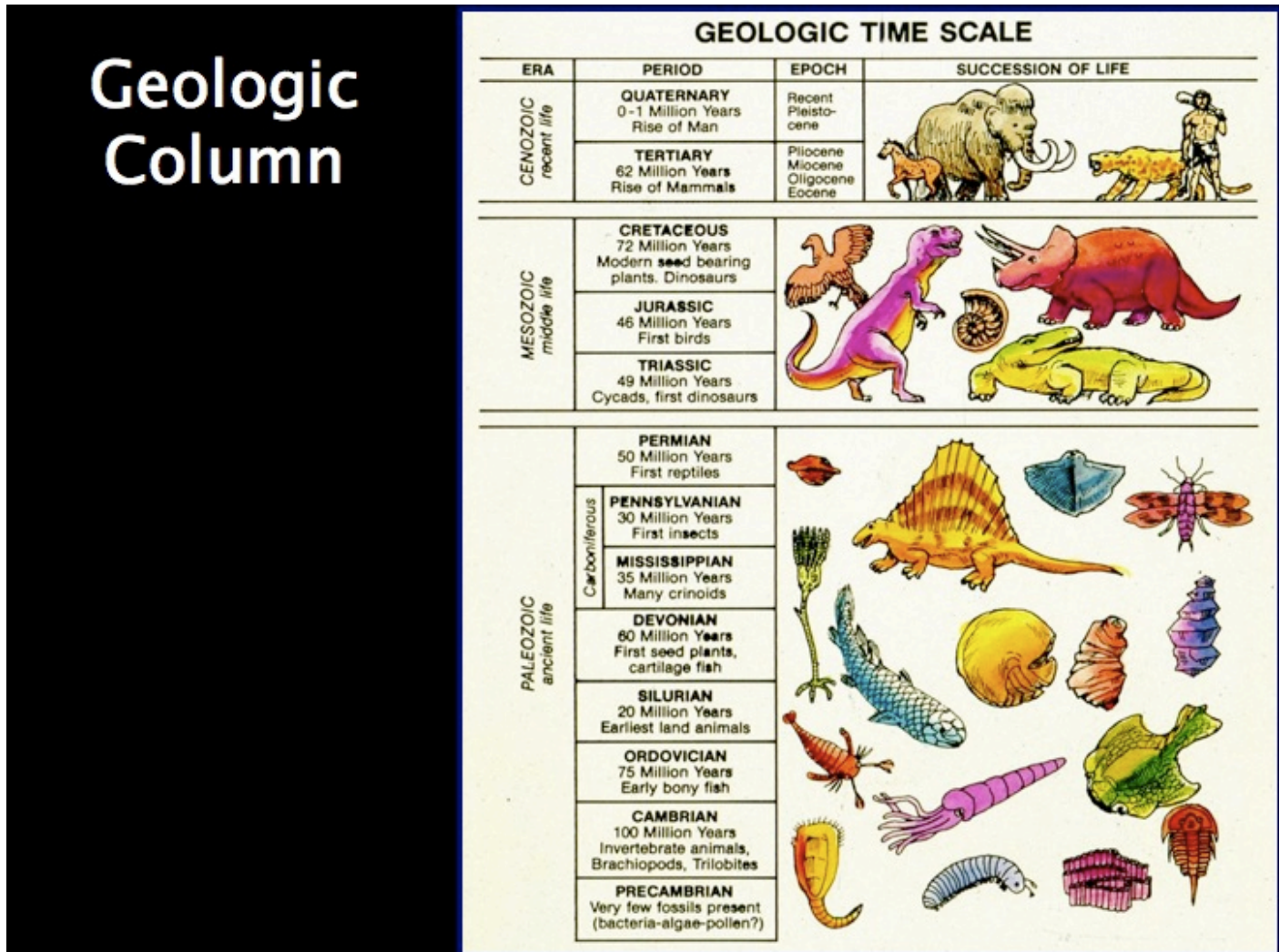
“The charge that the construction of the geologic scale involves circularity has a certain amount of validity.” [David M. Raup, “Geology and creationism,” *Field Museum of Natural History Bulletin* 54:21 (March 1983).]

⁵⁴ “Ever since William Smith [the founder of the index fossil technique] at the beginning of the 19th century, fossils have been and still are the best and most accurate method of dating and correlating the rocks in which they occur... Apart from very ‘modern’ examples, which are really archaeology, I can think of no cases of radioactive decay being used to date fossils.” [Derek V. Ager, “Fossil frustrations,” *New Scientist* 100:425 (10 November 1983).]

four bottom fins about to evolve into legs.⁵⁵ Since then hundreds of others have been found, as far away as Indonesia.

- (2) Today, evolutionists frequently express amazement that coelacanth fossils look so much like captured coelacanths—despite more than 70 million years of evolution.⁵⁶ If that age is correct, billions of coelacanths would have lived and died. Some should have been fossilized in younger rock; their absence implies that coelacanths have not lived for 70 million years.

C. Geologic Column



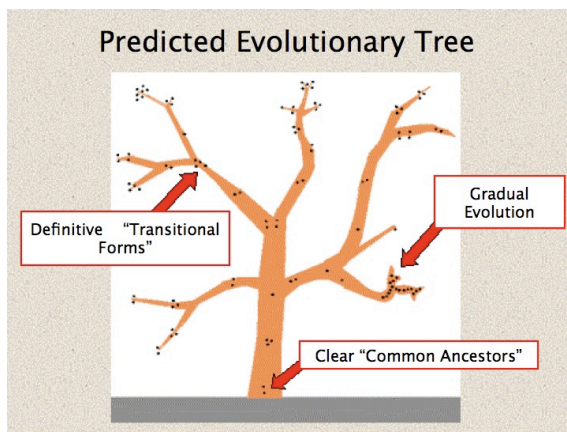
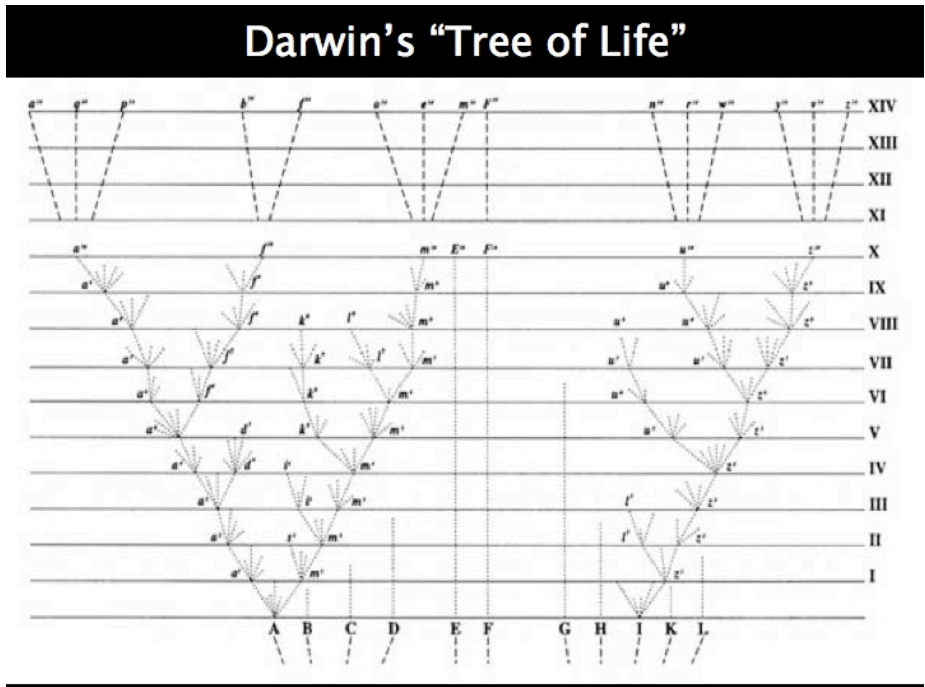
⁵⁵ Evolutionists reasoned that the coelacanth, or a similar fish, crawled out of a shallow sea and filled its lungs with air, becoming the first four-legged, land animal. Thus, millions of students had been erroneously taught that this fish was the ancestor of all amphibians, reptiles, dinosaurs, birds, and mammals, including people.

⁵⁶ "Few creatures have endured such an immense span of time with so little change as coelacanths. The cutaway drawing of a present-day specimen seems almost identical with the 140-million-year-old fossil found in a quarry in southern West Germany. ... Why have coelacanths remained virtually unchanged for eons ... 30 million generations?" [Hans Fricke, "Coelacanths: The Fish That Time Forgot," National Geographic 173(6):833 (June 1988).]

"Throughout the hundreds of millions of years the coelacanths have kept the same form and structure. Here is one of the great mysteries of evolution—that of the unequal plasticity of living things." [Jacques Millot, "The Coelacanth," Scientific American 193:37 (December 1955).]

- D. Correspondingly, nowhere on Earth can one find the so-called “geologic column.”⁵⁷ Most “geologic periods” are missing at most continental locations. Only 15–20% of Earth’s land surface has even one-third of these periods in the correct order.⁵⁸ Even within the Grand Canyon, 150 million years of this imaginary column are missing.
- E. Moreover, the complete lack of erosion markings in the layered strata argues for rapid sedimentation rather than slow deposition.⁵⁹ Using the assumed geologic column to date fossils and rocks is a fallacy.
- F. Darwin’s “Tree of Life”

1. According to Darwinism, the evolution of life looks like a tree, with a common root subsequently splitting up into different branches. According to this tree concept, one phylum must first emerge, and then the other phyla must slowly come about with minute changes over very long periods of time.⁶⁰



⁵⁷ “We are only kidding ourselves if we think that we have anything like a complete succession for any part of the stratigraphical column in any one place.” [Derek V. Ager, *The Nature of the Stratigraphical Record*, 3rd ed. (New York: John Wiley & Sons, 1993), 48.]

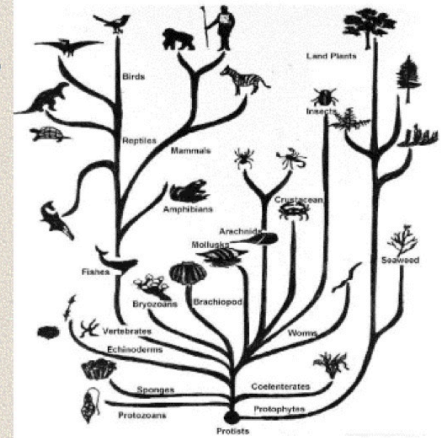
⁵⁸ John Woodmorappe, “The essential nonexistence of the evolutionary-uniformitarian geologic column: a quantitative assessment,” *Creation Research Society Quarterly* 18:46-71 (June 1981).

⁵⁹ See John D. Morris, *The Young Earth* (Master Books, 1994), 98-100.

⁶⁰ Living things are divided by biologists into such fundamental groups as plants, animals, fungi etc., which are then subdivided into different “phyla.” There are about 35 different animal phyla, which are distinguished primarily by physical structure.

2. However, the evolutionary tree has no trunk. In the earliest part of the fossil record (the lowest sedimentary layers of Cambrian rock), life appears suddenly, full-blown, complex, diversified, and dispersed—worldwide.⁶¹ The evidence is so strong that it has become known as the “Cambrian explosion,” or “biology’s big bang.”⁶²

Typical
Evolutionary
“Tree of Life”

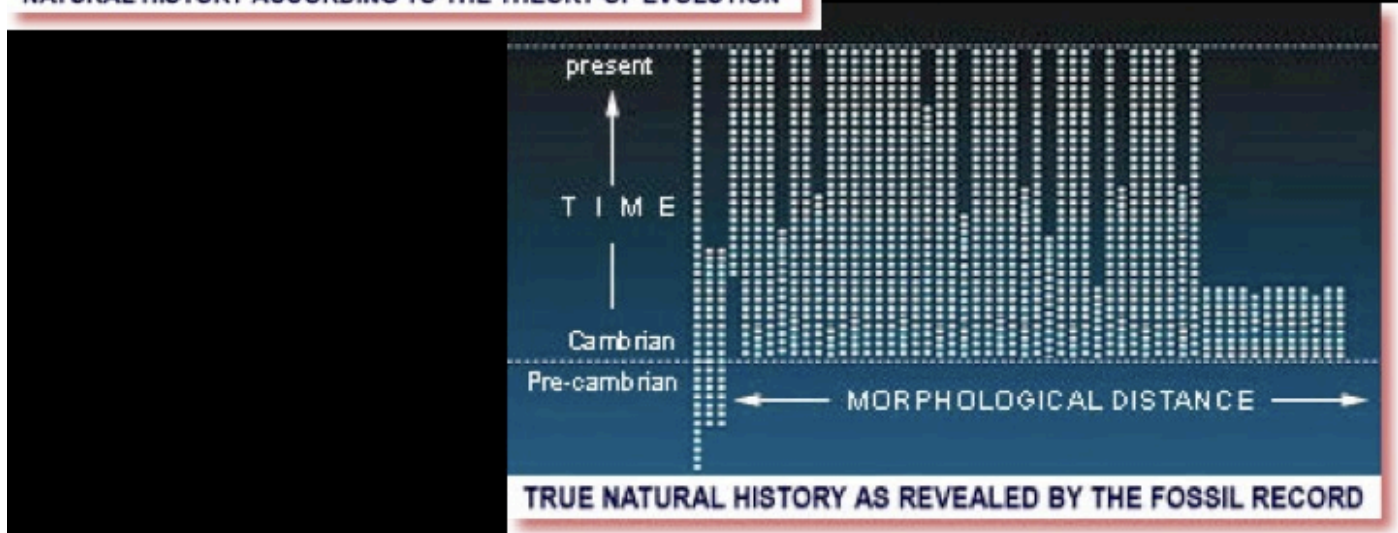
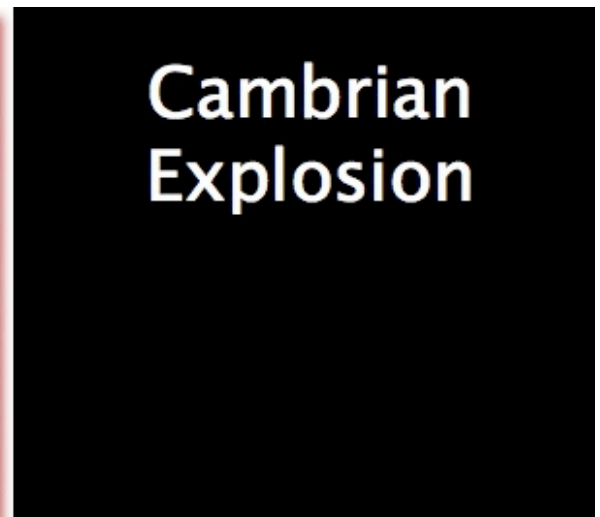
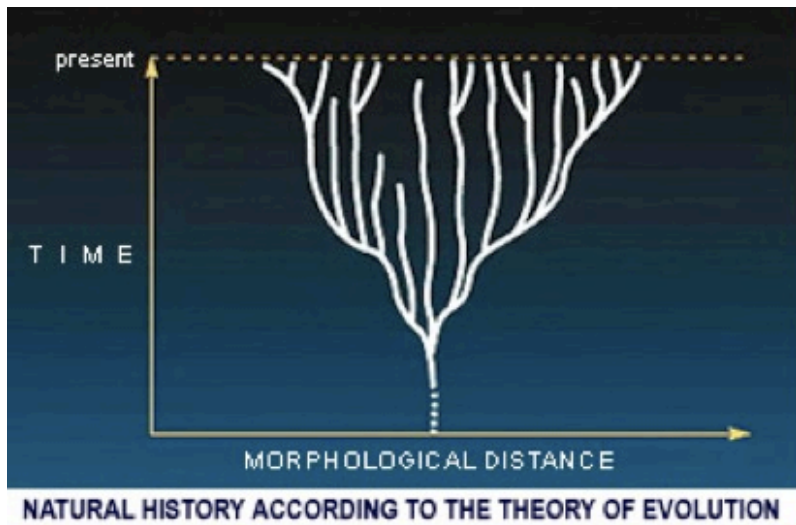
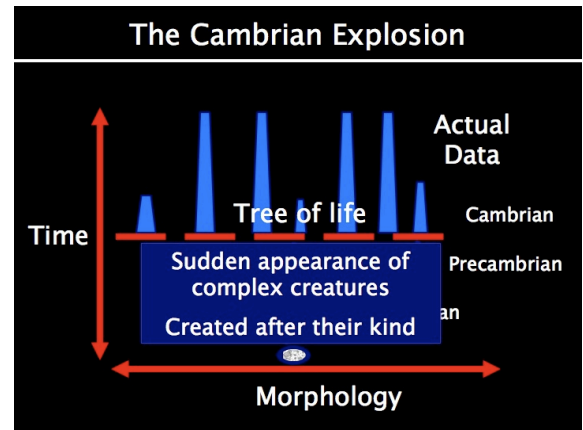


⁶¹ Darwin was fully aware of this problem: “There is another... difficulty, which is much more serious. I allude to the manner in which species belonging to several of the main divisions of the animal kingdom suddenly appear in the lowest known [Cambrian-age] fossiliferous rocks... If the theory be true, it is indisputable that before the lowest Cambrian stratum was deposited, long periods elapsed... and that during these vast periods, the world swarmed with living creatures... [But] to the question why we do not find rich fossiliferous deposits belonging to these assumed earliest periods before the Cambrian system, I can give no satisfactory answer. The case at present must remain inexplicable; and may be truly urged as a valid argument against the views here entertained.” (*The Origin of Species*, Chapter X) Darwin believed that this problem was only apparent because “only a small portion of the surface of the earth has been geologically explored,” assuming that further fossil hunting would provide the missing evidence. However, further exploration has only aggravated Darwin’s problem rather than alleviating it.

⁶² “A half-billion years ago... the remarkably complex forms of animals we see today suddenly appeared. This moment, right at the start of Earth’s Cambrian Period, some 550 million years ago, marks the evolutionary explosion that filled the seas with the world’s first complex creatures.” (Richard Monastersky, “Mysteries of the Orient,” *Discover*, April 1993, p. 40.)

“The Cambrian Explosion occurred in a geological moment, and we have reason to think that all major anatomical designs may have made their evolutionary appearance at that time. ...not only the phylum Chordata itself, but also all its major divisions, arose within the Cambrian Explosion. So much for chordate uniqueness... Contrary to Darwin’s expectation that new data would reveal gradualistic continuity with slow and steady expansion, all major discoveries of the past century have only heightened the massiveness and geological abruptness of this formative event...” [Stephen J. Gould, *Nature* 377:682 (October 1995).]

- a) Radiometric analyses has “shown” that the Cambrian explosion occurred within an exceedingly narrow window of geologic time, lasting no more than 5 million years,⁶³ an extremely small fraction of the Earth’s supposed history.⁶⁴



⁶³ S. A. Bowring, J. P. Grotzinger, C. E. Isachsen, A. H. Knoll, S. M. Pelechaty, and P. Kolosov, “Calibrating rates of Early Cambrian evolution,” *Science* 261:1293-1298 (1993).

⁶⁴ As Chinese paleontologist Chen Junyuan has explained, “compared with the 3-plus-billion-year history of life on earth, the period [of the explosion] can be likened to one minute in 24 hours of one day.” [Cui Lili, “Traditional Theory of Evolution Challenged,” *Beijing Review* (March 31-April 6, 1997), p. 10.]

- b) People estimate that the Cambrian explosion generated 40-100 phyla, many of which have since become extinct.⁶⁵ Thus, rather than a “bottom up” model predicted by evolutionism, in which lower levels in the biological hierarchy emerge before higher ones, the fossil record actually reveals a “top down” model,⁶⁶ in which phylogenetic diversity is becoming simpler (i.e. “devolving”) rather than more complex.⁶⁷

Cambrian Explosion

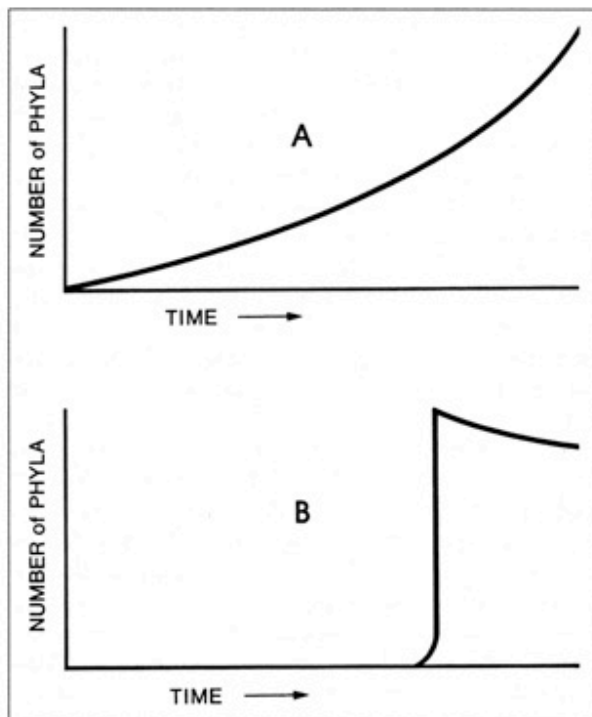


FIGURE 3-5 Evolution of the animal phyla: Theory and fact.

Wells, Icons of Evolution, 40, 43

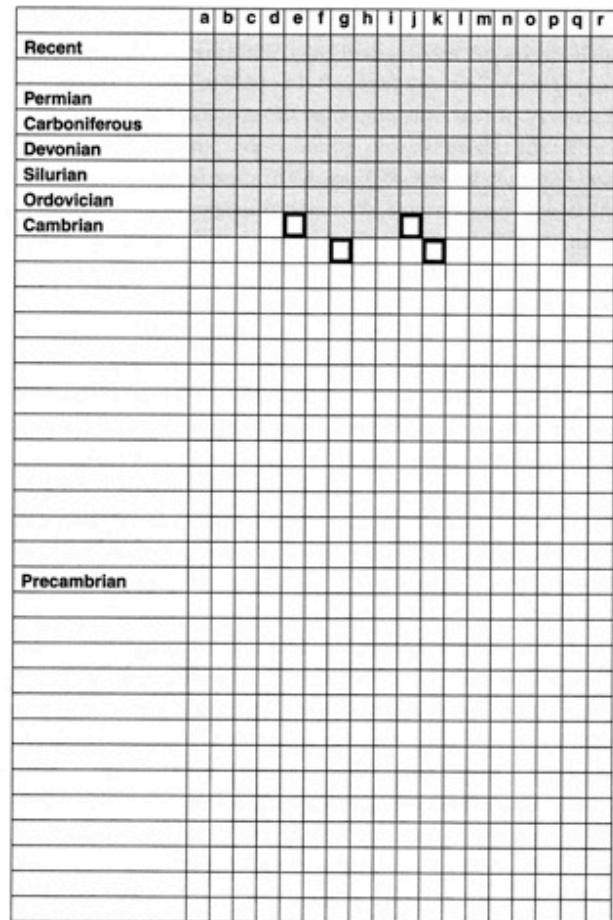


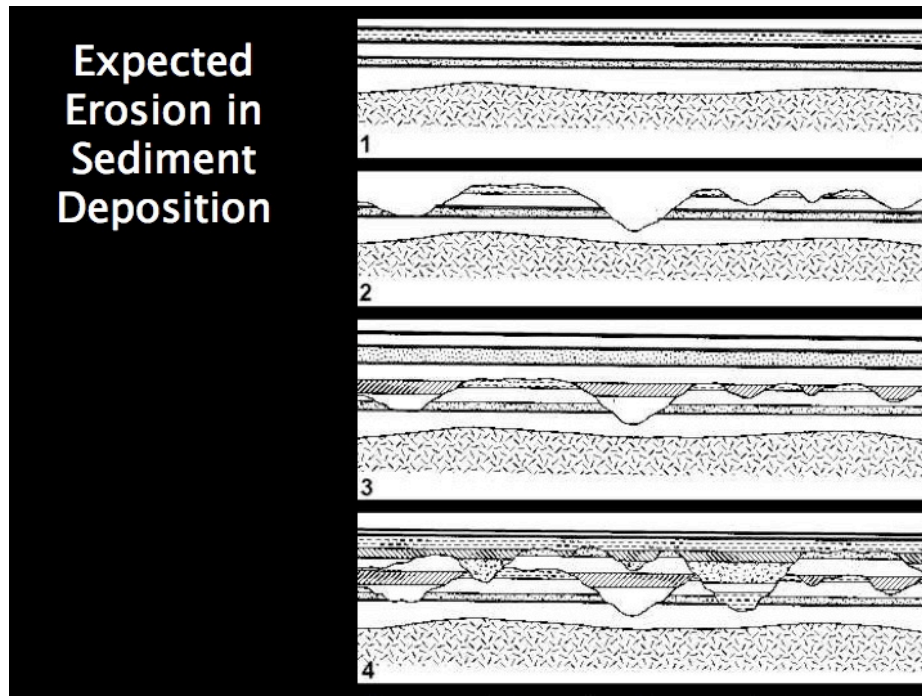
FIGURE 3-4 Actual Fossil Records of the Major Living Animal Phyla.

⁶⁵ “Compared with the 30 or so extant phyla, some people estimate that the Cambrian explosion may have generated as many as 100.” [Roger Lewin, “A lopsided look at evolution,” *Science* 241:291-293 (15 July 1988)] Lewin asks the obvious and unanswerable question standing before evolutionism, “Why, in subsequent periods of great evolutionary activity when countless species, genera, and families arose, have there been no new animal body plans produced, no new phyla?” (p. 291)

⁶⁶ “[The Cambrian pattern] creates the impression that evolution has by and large proceeded from the ‘top down.’” [James W. Valentine, et al., “The biological explosion at the Precambrian-Cambrian boundary,” *Evolutionary Biology* 25:279-356 (1991).]

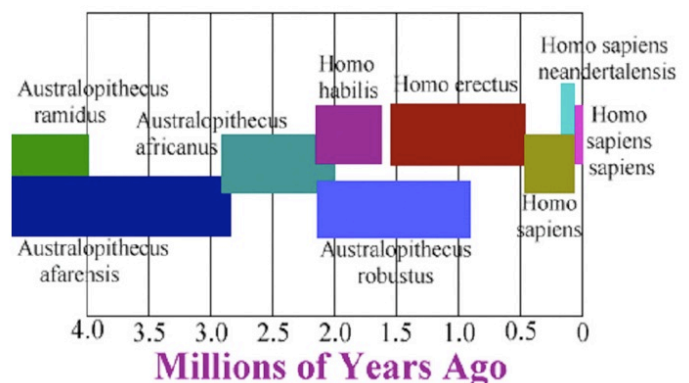
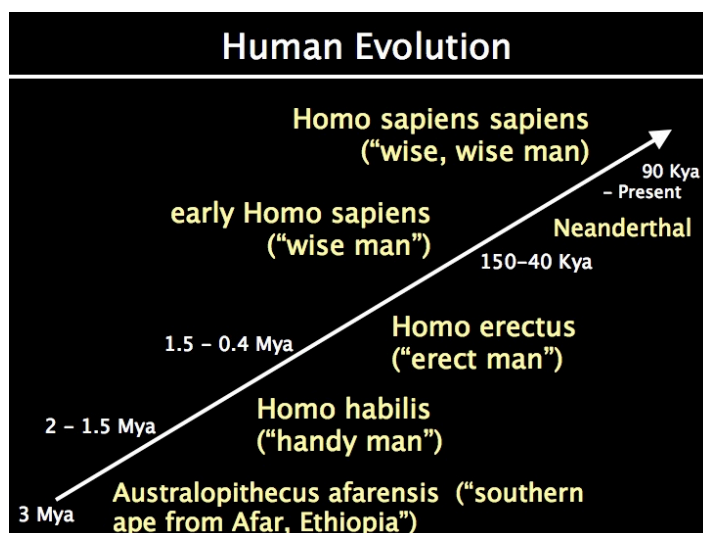
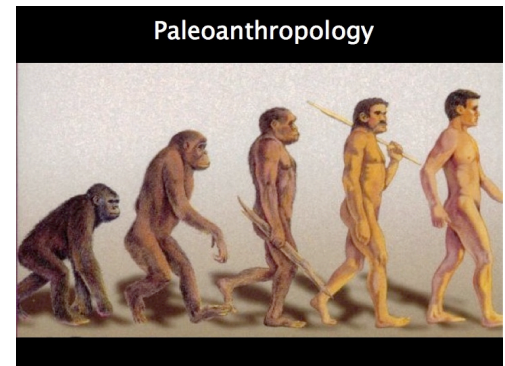
⁶⁷ “Darwinian theory predicts a ‘cone of increasing diversity,’ as the first living organism, or first animal species, gradually and continually diversified to create the higher levels of taxonomic order. The animal fossil record more resembles such a cone turned upside down, with the phyla present at the start and thereafter decreasing.” [Phillip E. Johnson, “Darwinism’s Rules of Reasoning,” in Buell Hearn, *Darwinism: Science or Philosophy* (Foundation for Thought and Ethics, 1994), 12.]

Evolutionists generally respond to the Cambrian explosion in one of three ways: 1) the apparent absence of Precambrian ancestors is due to the fragmentary fossil record (the “artifact theory”), 2) even if the record were continuous the Precambrian ancestors would not have fossilized—either because they were too small, or because they were soft-bodied, or 3) override the fossil evidence with molecular comparisons among living organisms that point to a *hypothetical* common ancestor hundreds of millions of years before the Cambrian period. All three fail to overcome the obvious.



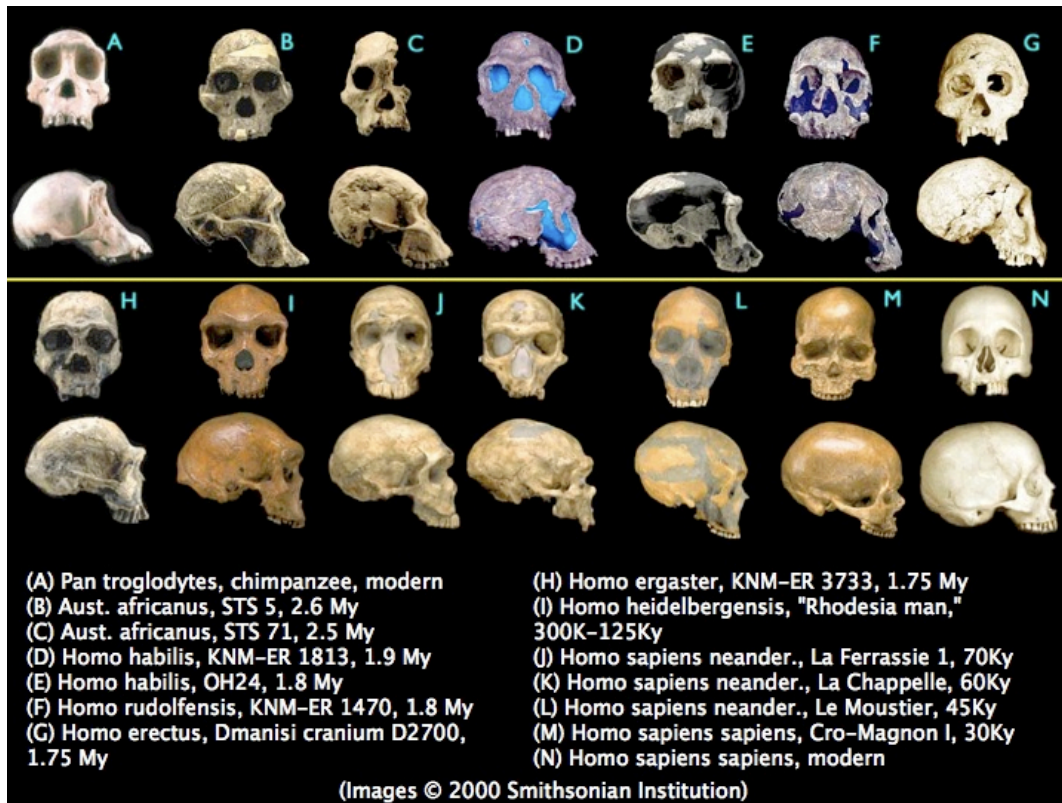
G. Paleoanthropology (Cavemen)

1. The general evolutionary progression from modern humans backwards is as follows: Homo sapiens, Neanderthals, Homo erectus, Homo ergaster, Homo rudolfensis, Homo habilis, Australopithecus africanus, Australopithecus afarensis, and finally Ardipithecus ramidus. Evolutionists often use this sequential type of "proof" because they know how impressive it is, especially in visual form.



2. The actual fossil hominid evidence:

- a) The total number of hominid fossil individuals is universally assumed to be quite small, since paleoanthropologists have for years complained about the lack of fossil material.⁶⁸ However, the reality is that there have been between 7000-8000 hominid remains found, based on the *Catalogue of Fossil Hominids*.⁶⁹



- b) The vast majority of these fossils are anatomically modern *Homo sapiens*, extending all the way back to 4.5 Mya.⁷⁰ So many *Homo sapien* fossils have been found living contemporaneously with other fossils of supposed human "ancestry" that no new "missing link" could cancel out the solid body of factual evidence that has already been accumulated backing the creationist model.

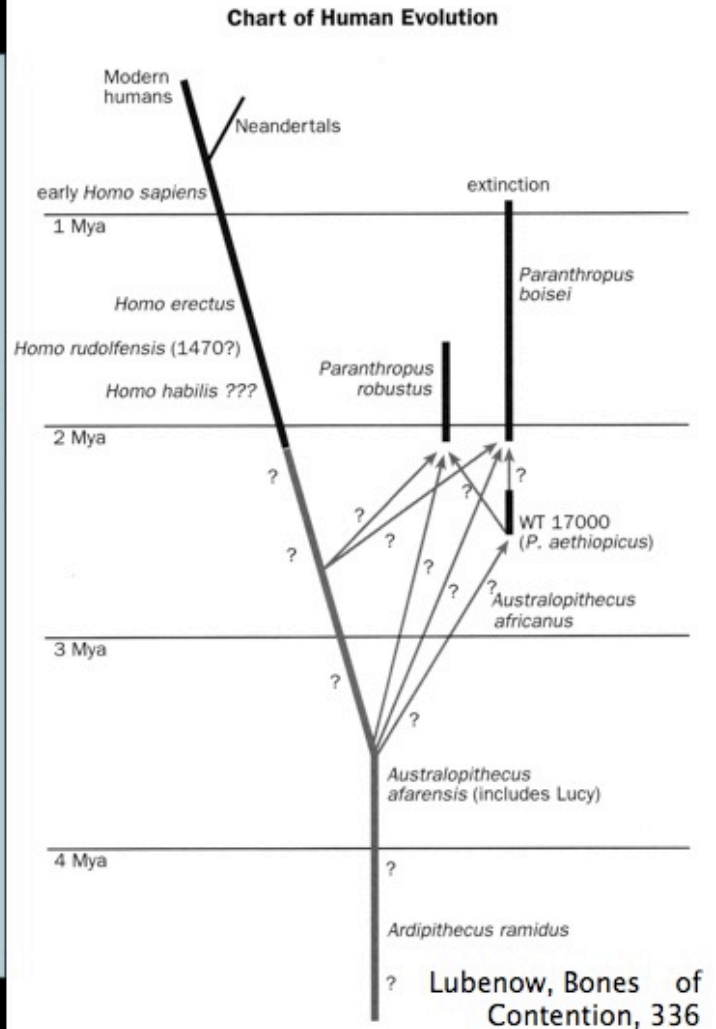
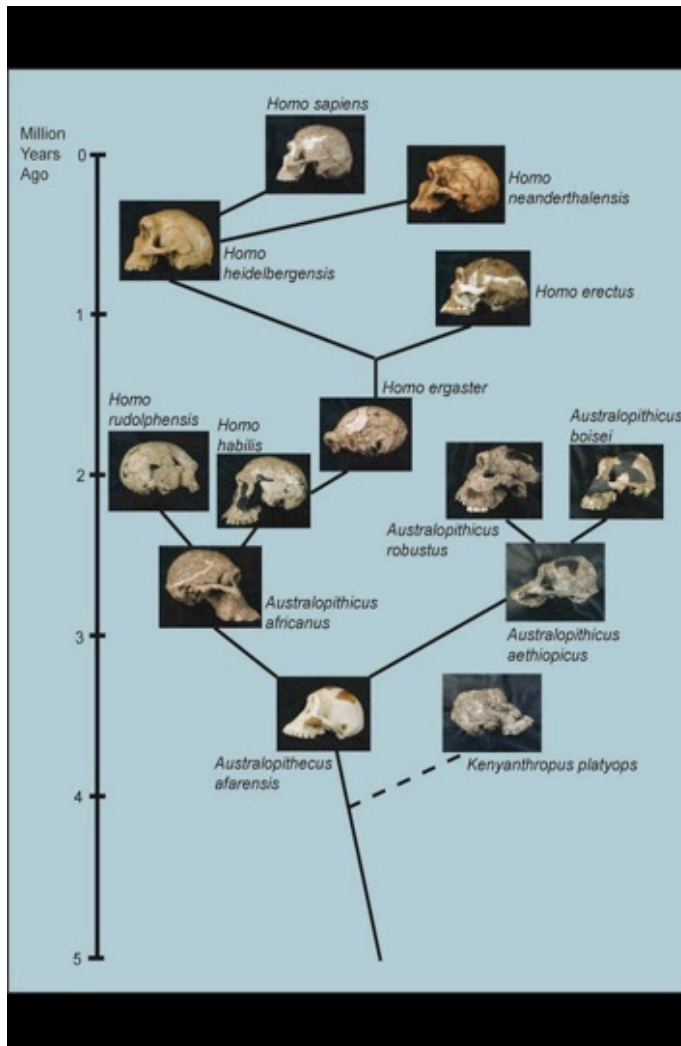
⁶⁸ "The primary scientific evidence is a pitifully small array of bones from which to construct man's evolutionary history. One anthropologist has compared the task to that of reconstructing the plot of *War and Peace* with 13 randomly selected pages." [Constance Holden, "The politics of paleoanthropology," *Science* 213:737 (14 August 1981).]

"The entire hominid collection known today would barely cover a billiard table." (John Reader, "Whatever happened to Zinjanthropus?" *New Scientist*, 26 March 1981, p. 802.)

⁶⁹ Kenneth P. Oakley, Bernard G. Campbell, and Theya I. Molleson, *Catalogue of Fossil Hominids*, 3 Vols., (London: Trustees of The British Museum—Natural History, 1968-1976). The first volume (2nd edition published in 1977) deals with fossil hominids from Africa; volume 2 deals with Europe and the USSR (published in 1971); and volume 3 covers the Americas, Asia, and Australasia (published in 1975). It was intended to serve as a reference for information on the fossil hominids, and its scholarship and authority are beyond reproach. Unfortunately, it is extremely difficult to find, even in the largest universities or city libraries, and thus generally only highly trained paleoanthropologist know of it.

Since it only answers the question of approximately how many hominid fossils had been discovered up to 1969-1976, it is difficult to nail down an exact number of present finds. However, Ian Tattersall and Jeffrey Schwartz are engaged in a project of bringing the hominid fossil discoveries up to date (the first volume, *Extinct Humans*, was published in 2000, and a second volume, *Extinct Non-Humans*, may not be published for some time because of the difficulty in gaining access to the newer discoveries), so 7000-8000 is a conservative estimate that most paleoanthropologists (i.e. those familiar with the *Catalogue*) would agree upon.

⁷⁰ Of course no evolutionist would acknowledge a hominid fossil over 100K years old as *Homo sapien*, but when looked at morphologically, they are virtually identical (see Marvin L. Lubenow, *Bones of Contention*, 338-340.).



- c) Though there is a rich harvest of hominid fossils, why is the public generally unaware of it? Paleoanthropologists are not outright lying about the evidence, but rather they are speaking a different language, which the public has not learned to translate:

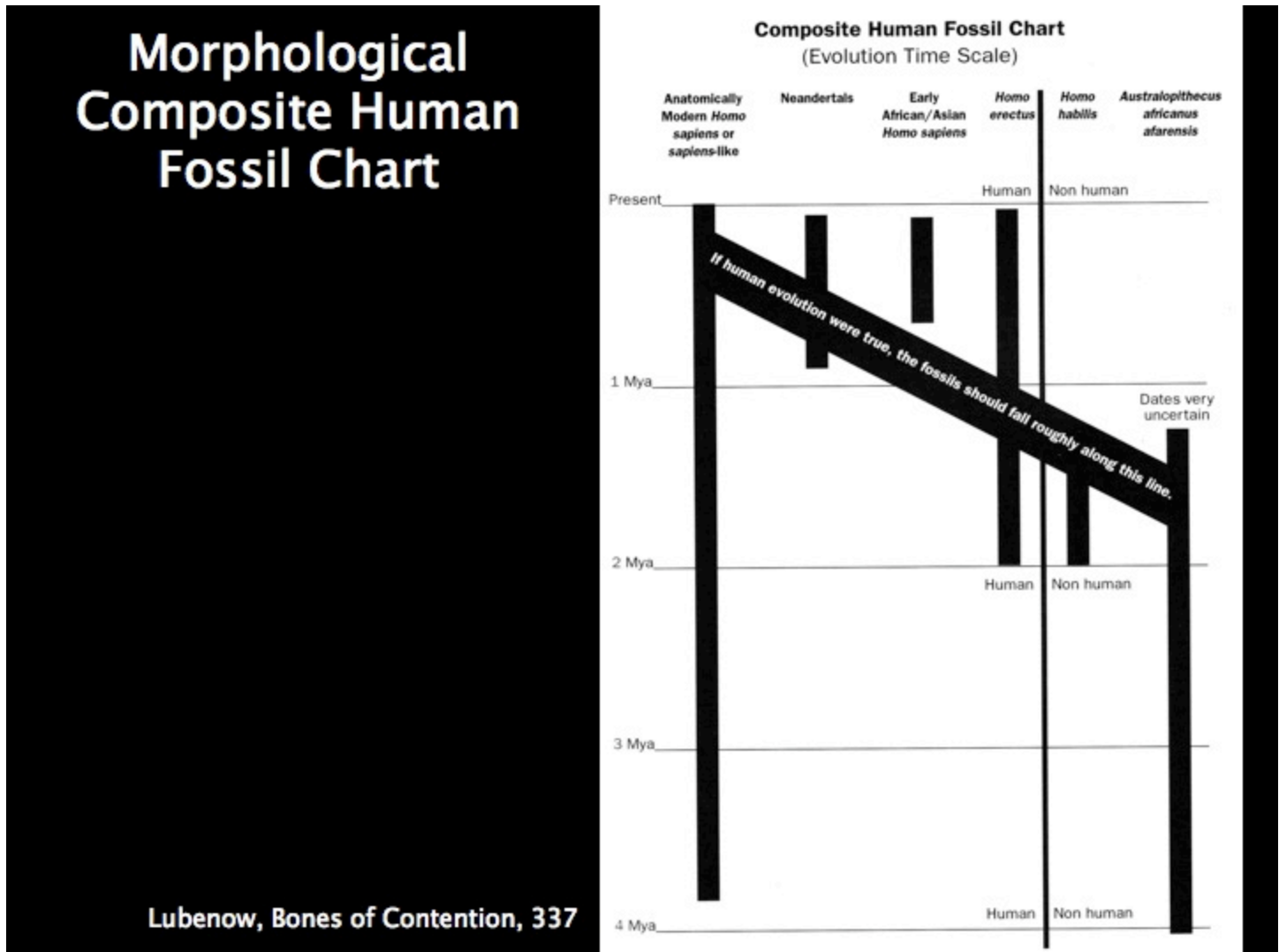
*"When workers in this field speak of the scarcity of the human fossils, they are actually saying, 'Although there is an abundance of hominid fossils, the bulk of them are either too modern to help me, or they do not fit well into the evolutionary scheme. Since we all know that humans evolved, what is so perplexing is the difficulty we are having in finding the fossils that would clearly demonstrate that fact.'"*⁷¹

3. The history of paleoanthropology over the last century has produced unreliable conclusions about man's origin, and fossil evidence allegedly supporting human evolution is fragmentary and open to other interpretations.⁷² Moreover, fossil evidence showing the

⁷¹ Lubenow, *Bones of Contention*, 48.

⁷² "...existing phylogenetic hypotheses about human evolution [based on skulls and teeth] are unlikely to be reliable." [Mark Collard and Bernard Wood, "How reliable are human phylogenetic hypotheses?" *Proceedings of the National Academy of Sciences* 97(9):5003 (25 April 2000).]

evolution of chimpanzees, supposedly the closest living relative to humans, is nonexistent.⁷³



4. Stories claiming that fossils of primitive, apelike men have been found are overstated:⁷⁴
 - a) Piltdown Man – It is now universally acknowledged that Piltdown “man” was a hoax, and yet, it was in textbooks for more than 40 years.⁷⁵

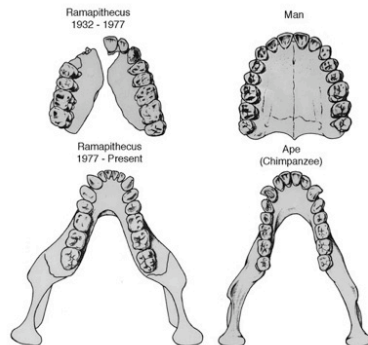
⁷³ “Fossil evidence of human evolutionary history is fragmentary and open to various interpretations. Fossil evidence of chimpanzee evolution is absent altogether.” [Henry Gee, “Return to the Planet of the Apes,” *Nature* 412:131 (12 July 2001).].

⁷⁴ This section is primarily taken from Brown, *In the Beginning*, 11-12; see also Duane T. Gish, *Battle for Creation*, Vol. 2, Henry M. Morris ed. (San Diego: Creation-Life Publishers, 1976), 193-200, 298-305.

⁷⁵ Speaking of Piltdown man, prominent paleoanthropology historian Roger Lewin admits a common human problem even scientists have: “How is it that trained men, the greatest experts of their day, could look at a set of modern human bones—the cranial fragments—and “see” a clear simian signature in them; and “see” in an ape’s jaw the unmistakable signs of humanity? The answers, inevitably, have to do with the scientists’ expectations and their effects on the interpretation of data.” [Roger Lewin, *Bones of Contention* (New York: Simon and Schuster, Inc., 1987), 61.]

- b) Nebraska Man – The only remains of Nebraska “man” turned out to be a pig’s tooth.⁷⁶

Ramapithecus
Remains

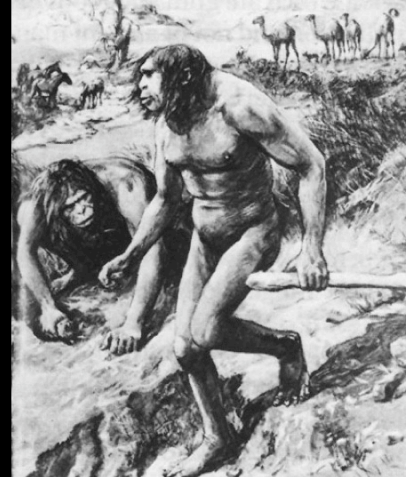


Full Ramapithecus jaw
discovered in 1977



Nebraska Man

Artist’s drawing,
mistakenly based on
one tooth of an
extinct pig,
published in The
Illustrated London
News in 1922
showing our
supposed ancestors.



- c) Ramapithecus – Before 1977, evidence for *Ramapithecus* was a mere handful of teeth and jaw fragments. We now know these fragments were pieced together incorrectly by Louis Leakey⁷⁷ and others in a form resembling part of the human jaw.⁷⁸ *Ramapithecus* was just an ape.⁷⁹
- d) Java Man – Forty years after he discovered Java “man,” Eugene Dubois conceded that it was not a man, but was similar to a large gibbon (an ape). In citing evidence to support this new conclusion, Dubois admitted that he had withheld parts of four other thigh bones of apes found in the same area.⁸⁰
- e) Peking Man (*Homo erectus*) – Many experts consider the skulls of Peking “man” to be the remains of apes that were systematically decapitated and exploited for food by true man.⁸¹ Its classification, *Homo erectus*, is considered by many experts to be a category that should never have been created.⁸²

⁷⁶ Steven J. Gould, “An essay on a pig roast,” in *Bully for Brontosaurus* (New York: W. W. Norton & Co., 1991), 432-447.

⁷⁷ Allen L. Hammond, “Tales of an Elusive Ancestor,” *Science* 83:37-43 (November 1983).

⁷⁸ Adrienne L. Zihlman and J. Lowenstein, “False start of the human parade,” *Natural History* 88:86-91 (August 1979).

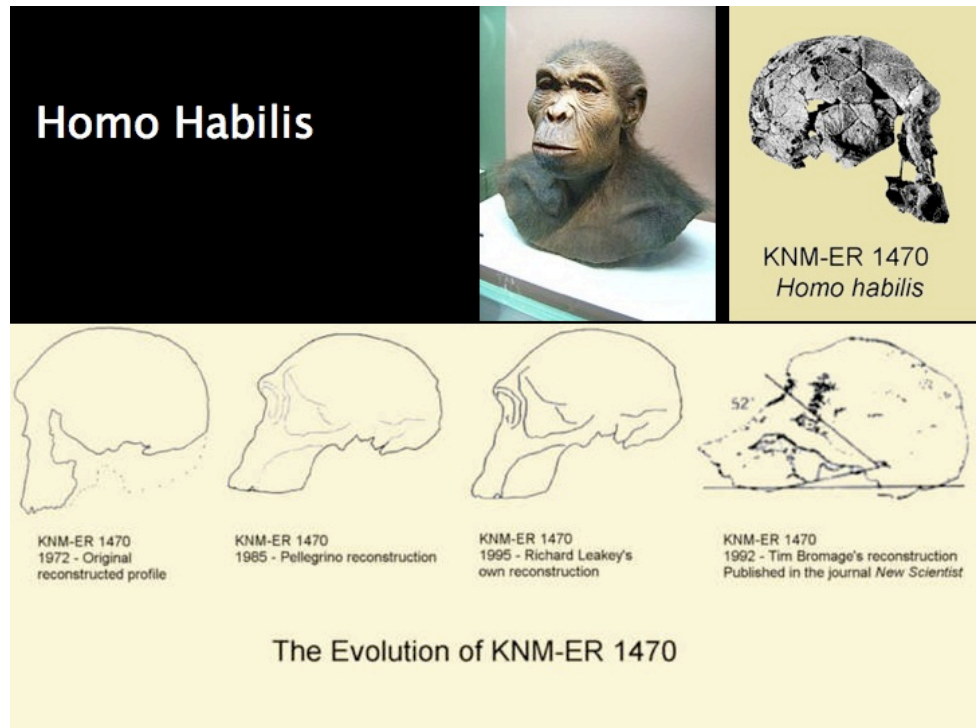
⁷⁹ “The dethroning of *Ramapithecus*—from putative [supposed] first human in 1961 to extinct relative of the orangutan in 1982—is one of the most fascinating, and bitter, sagas in the search for human origins.” [Lewin, *Bones of Contention*, 86.] See also Hammond, “Tales of an Elusive Ancestor,” 43.

⁸⁰ “Pithecanthropus [Java man] was not a man, but a gigantic genus allied to the Gibbons, superior to its near relatives on account of its exceedingly large brain volume, and distinguished at the same time by its erect attitude... Thus the evidence given by those five new thigh bones of the morphological and functional distinctness of *Pithecanthropus erectus* furnishes proof, at the same time, of its close affinity with the gibbon group of anthropoid apes.” [Eugene Dubois, “On the fossil human skulls recently discovered in Java and *Pithecanthropus Erectus*,” *Man* 37:4-5 (January 1937).]; see also Francis Hitching, *The Neck of the Giraffe: Where Darwin Went Wrong* (New Haven, Connecticut: Ticknor and Fields, 1982), 208-209.

⁸¹ Marcellin Boule and Henri V. Vallois, *Fossil Men* (New York: The Dryden Press, 1957), 145; see also M. Bowden, *Ape-Men: Fact or Fallacy?* 2nd ed. (Bromley, England: Sovereign Publications, 1981), 90-137.

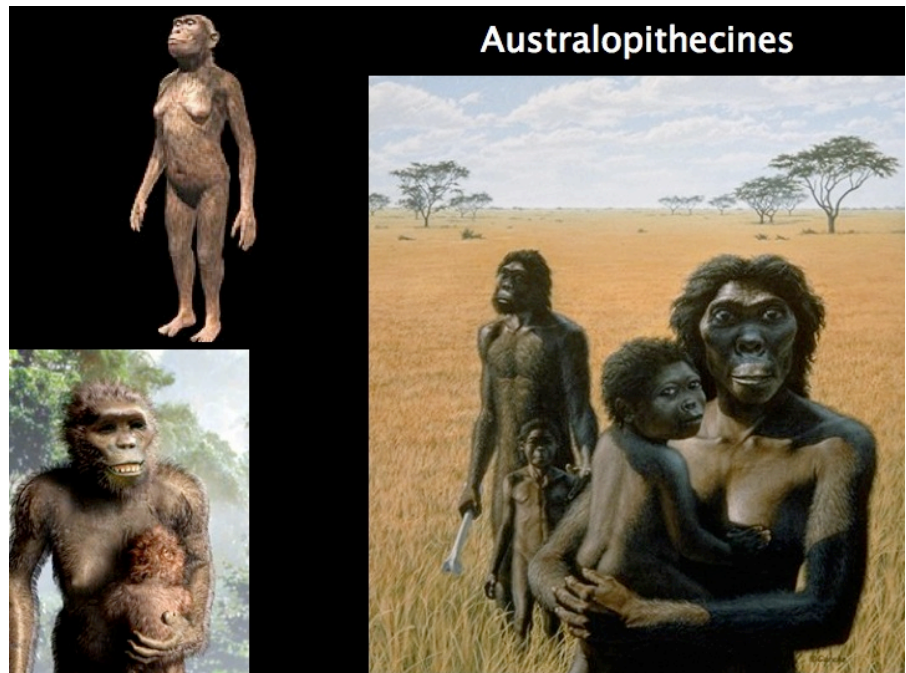
⁸² “[The reanalysis of Narmada Man] puts another nail in the coffin of *Homo erectus* as a viable taxon.” Kenneth A. R. Kennedy, as quoted in “*Homo erectus* never existed?” *Geotimes*, October 1992, p. 11.

- f) *Homo habilis* – First coined by the Leakey's in the early 1960s (“handy man” due to stone tools found near the site), the first confirmed limb bones of *Homo habilis* were discovered in 1986. They showed that this animal clearly had apelike proportions⁸³ and should never have been classified as manlike (*Homo*).⁸⁴



- g) Australopithecines

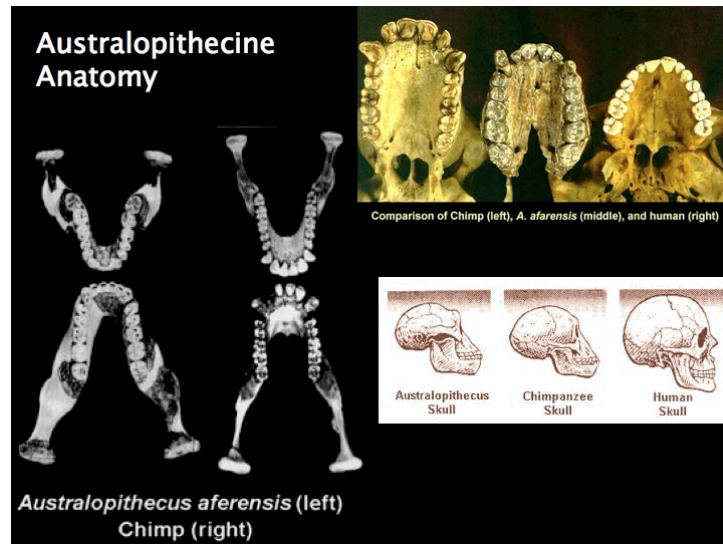
- (1) The australopithecines, made famous by Louis and Mary Leakey, are quite distinct from humans. Several detailed computer studies of australopithecines have shown that their bodily proportions were not intermediate between man and



⁸³ Donald C. Johanson, et al., “New partial skeleton of *Homo habilis* from Olduvai Gorge, Tanzania,” *Nature* 327:205-209 (21 May 1987).

⁸⁴ “We present a revised definition, based on verifiable criteria, for *Homo* and conclude that two species, *Homo habilis* and *Homo rudolfensis*, do not belong in the genus [*Homo*].” [Bernard Wood and Mark Collard, “The human genus,” *Science* 284:65 (2 April 1999).]

living apes.⁸⁵ Another study of their inner ear bones, used to maintain balance, showed a striking similarity with those of chimpanzees and gorillas, but great differences with those of humans.⁸⁶ Likewise, their pattern of dental development corresponds to chimpanzees, not humans.⁸⁷



- (2) One australopithecine fossil—a 3½-foot-tall, long-armed, 60-pound adult called *Lucy*—was initially presented as evidence that all australopithecines walked upright in a human manner. However, studies of Lucy's entire anatomy, not just a knee joint, now show this is very unlikely. She probably



⁸⁵ Dr. Charles Oxnard and Sir Solly Zuckerman were leaders in the development of a powerful multivariate analysis procedure. This computerized technique simultaneously performs millions of comparisons on hundreds of corresponding dimensions of the bones of living apes, humans, and the australopithecines. Their verdict, that the australopithecines are not intermediate between man and living apes, is quite different from the more subjective and less analytical visual techniques of most anthropologists. However, this technique has not been applied to the most famous australopithecine, commonly known as "Lucy": "...the only positive fact we have about the Australopithecine brain is that it was no bigger than the brain of a gorilla. The claims that are made about the human character of the Australopithecine face and jaws are no more convincing than those made about the size of its brain. The Australopithecine skull is in fact so overwhelmingly simian as opposed to human that the contrary proposition could be equated to an assertion that black is white... For my own part, the anatomical basis for the claim that the Australopithecines walked and ran upright like man is so much more flimsy than the evidence which points to the conclusion that their gait was some variant of what one sees in subhuman Primates, that it remains unacceptable." [Solly Zuckerman, *Beyond the Ivory Tower* (New York: Taplinger Publishing Co., 1970), p. 78, 93.]

"Let us now return to our original problem: the Australopithecine fossils. I shall not burden you with details of each and every study that we have made, but... the conventional wisdom is that the Australopithecine fragments are generally rather similar to humans and when different deviate somewhat towards the condition in the African apes, the new studies point to different conclusions. The new investigations suggest that the fossil fragments are usually uniquely different from any living form..." [Charles E. Oxnard, "Human fossils: New views of old bones," *The American Biology Teacher* 41:273 (May 1979).]

⁸⁶ "Among the fossil hominids, the australopithecines show great-ape-like proportions [based on CAT scans of their inner ears] and *H. erectus* shows modern-human-like proportions." [Fred Spoor, et al., "Implications of early hominid labyrinthine morphology for evolution of human bipedal locomotion," *Nature* 369:646 (23 June 1994).]

⁸⁷ "The closest parallel today to the pattern of dental development of [australopithecines] is not in people but in chimpanzees." [Bruce Bower, "Evolution's youth movement," *Science News* 159:347 (2 June 2001).]

Daniel Training Network

swung from the trees⁸⁸ and was similar to pygmy chimpanzees.⁸⁹ The australopithecines thus seem more likely to be extinct apes.⁹⁰

h) Neanderthals

- (1) For about 100 years the world was led to believe Neanderthal man was stooped and apelike. This false idea was based upon some Neanderthals with bone diseases such as arthritis and rickets.⁹¹ Recent dental and x-ray studies of Neanderthals suggest they were humans who matured at a slower rate and lived to be much older than people today.⁹²
- (2) Neanderthal man, Heidelberg man, and Cro-Magnon man are now considered completely human. Artists' drawings of "ape-men," especially their fleshy portions, are often quite imaginative and are not supported by the evidence.⁹³



⁸⁸ William L. Jungers, "Lucy's limbs: Skeletal allometry and locomotion in *Australopithecus Afarensis*," *Nature* 297:676-678 (24 June 1982); Jack T. Stern Jr. and Randall L. Susman, "The locomotor anatomy of *Australopithecus Afarensis*," *American Journal of Physical Anthropology* 60:279-317 (March 1983).

⁸⁹ Adrienne Zihlman, "Pigmy chimps, people, and the pundits," *New Scientist* 104:39-40 (15 November 1984).

⁹⁰ "At present we have no grounds for thinking that there was anything distinctively human about australopithecine ecology and behavior. ... [T]hey were surprisingly apelike in skull form, premolar dentition, limb proportions, and morphology of some joint surfaces, and they may still have been spending a significant amount of time in the trees." [Matt Cartmill, et al., "One hundred years of paleoanthropology," *American Scientist* 74:417 (July-August 1986).]

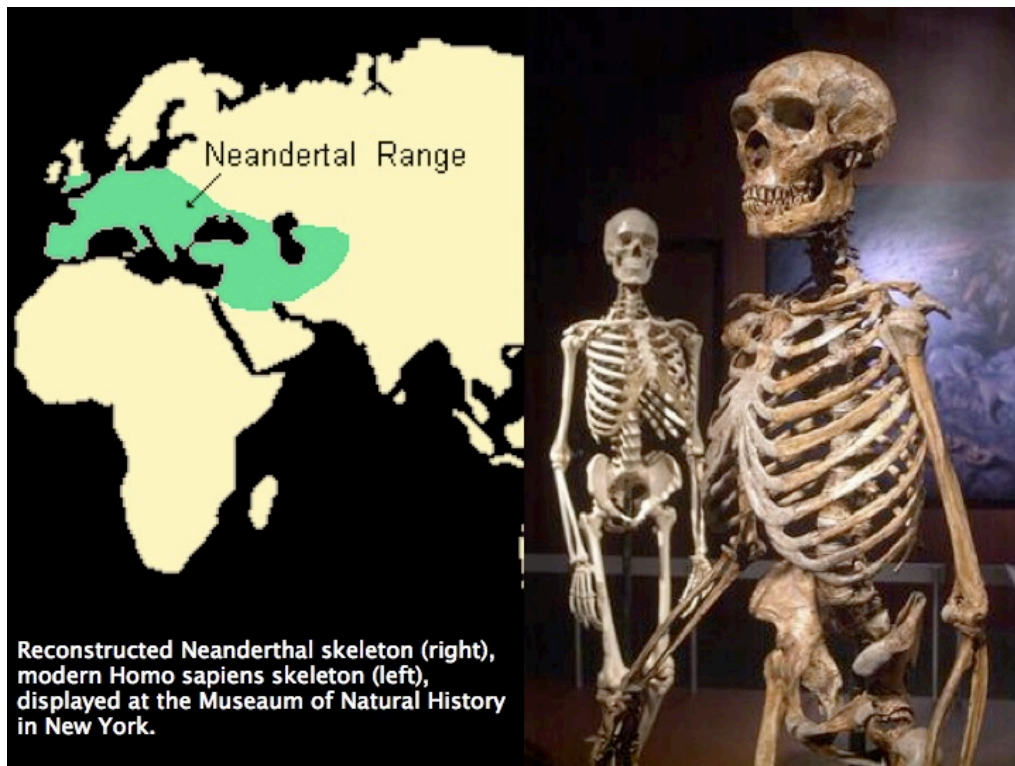
"The proportions calculated for *Africanus* turned out to be amazingly close to those of a chimpanzee, with big arms and small legs. ... 'One might say we are kicking Lucy out of the family tree,' says Berger." [James Shreeve, "New skeleton gives path from trees to ground an odd turn," *Science* 272:654 (3 May 1996).]

⁹¹ Francis Ivanhoe, "Was Virchow right about Neanderthal?" *Nature* 227:577-578 (8 August 1970); William L. Straus, Jr. and A. J. E. Cave, "Pathology and the posture of Neanderthal man," *The Quarterly Review of Biology* 32:348-363 (December 1957).

⁹² Jack Cuozzo, *Buried Alive: The Startling Truth about Neanderthal Man* (Green Forest: Master Books, 1998); Jack Cuozzo, "Early orthodontic intervention: A view from prehistory," *The Journal of the New Jersey Dental Association*, 58(4):33-40 (1987).

⁹³ See Boyce Rensberger, "Facing the past," *Science* 81:49 (October 1981).

- (3) Moreover, Neanderthals are often presented as inferior to modern humans, yet this is not the case.⁹⁴ The evidence actually indicates that they were people of incredible power and strength, far superior to most modern humans.⁹⁵



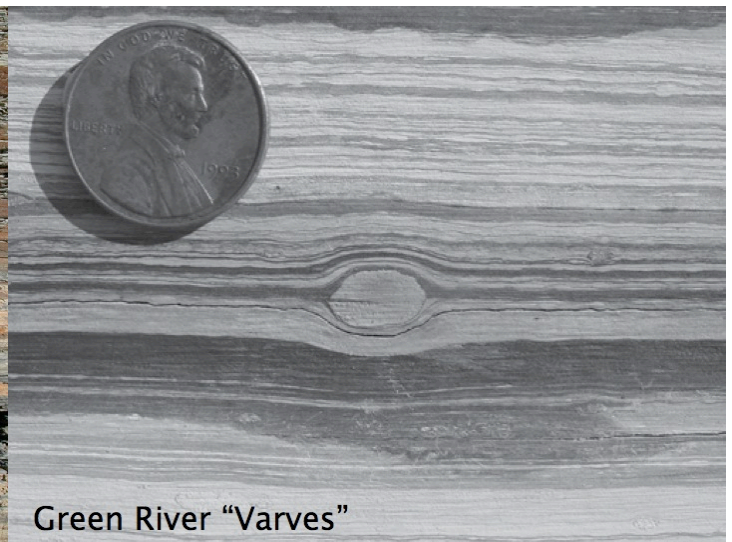
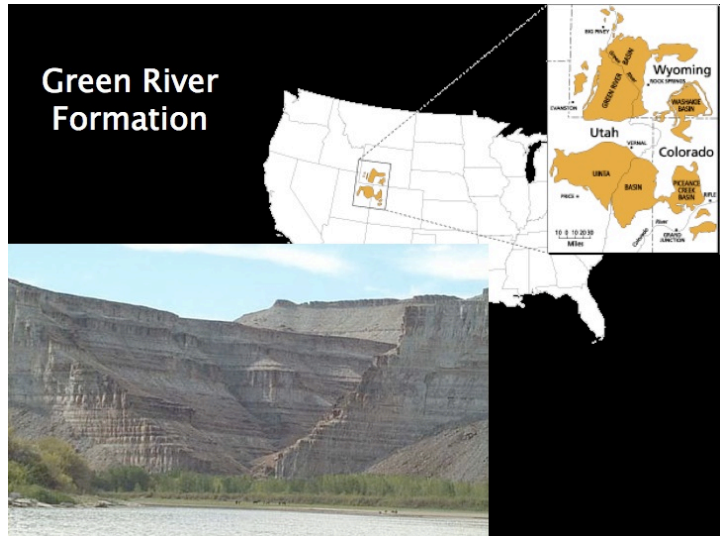
- H. Archaeopteryx
- I. Horse Evolution
- J. Whale Evolution
- K. Fossil and Coal Excesses
- L. Grand Canyon

⁹⁴ "Detailed comparisons of Neanderthal skeletal remains with those of modern humans have shown that there is nothing in Neanderthal anatomy that conclusively indicates locomotor, manipulative, intellectual, or linguistic abilities inferior to those of modern humans." [Erik Trinkaus (Neanderthal authority at Washington University, St. Louis), "Hard times among the Neanderthals," *Natural History* 87(10):58 (December 1978).]

⁹⁵ "One of the most characteristic features of the Neanderthals is the exaggerated massiveness of their trunk and limb bones. All of the preserved bones suggest a strength seldom attained by modern humans. Furthermore, not only is this robustness present among the adult males, as one might expect, but it is also evident in the adult females, adolescents, and even children." [Ibid., p. 58.]

"Neanderthal was far more powerful than modern humans. Whereas archaeologists can experimentally duplicate the wear pattern on tools such as were used by people from the Upper Paleolithic (the people that followed Neanderthal...), the wear patterns on Neanderthal's tools cannot be duplicated. We do not have the strength to do it. Neanderthal's skeleton reflects a supremely powerful musculature." [Valerius Geist, "Neanderthal the hunter," *Natural History* 90(10):30 (January 1981).] Thus, these were probably transitional post-Flood inhabitants whose bodies had not fully digressed to the present modern state.

M. Green River Formation



N. Petrification

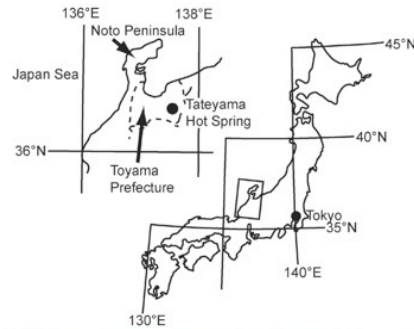
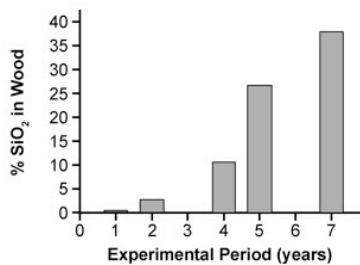
1. Though a significant amount of mainstream work has been done concerning rapid petrification,⁹⁶ most people still believe that it takes wood millions of years to petrify (as we are constantly fed the idea through newspapers, magazines, museums, text books, etc.).
2. Recently, however, five Japanese scientists published dramatic evidence of wood



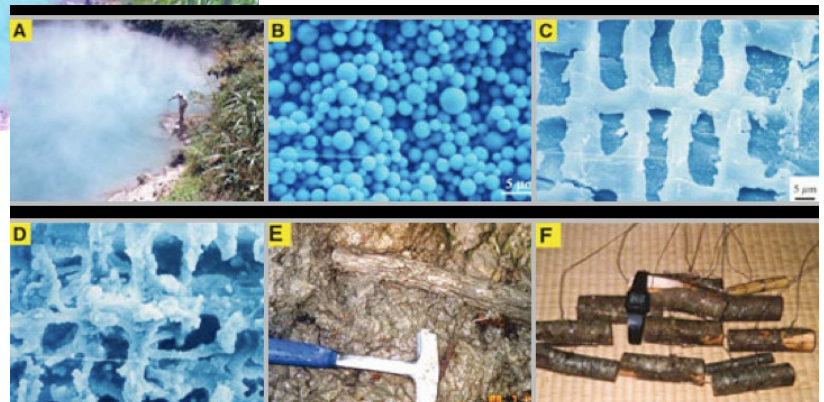
⁹⁶ See R.C. Mernill and R.W. Spencer, "Sorption of sodium silicates and silicate sols by cellulose fibers," *Industrial Engineering Chemistry* 42:744-747 (1950); R.W. Drum, "Silicification of Betula woody tissue in vitro," *Science* 161:175-176 (1968); Anne C. Sigleo, "Organic Geochemistry of Silicified Wood, Petrified Forest National Park, Arizona," *Geochimica et Cosmochimica Acta* 42:1397-1405 (September 1978); G. Scurfield and E.R. Segnit, "Petrification of wood by silica minerals," *Sedimentary Geology*, 39:149-167 (1984).

petrifying in less than ten years.⁹⁷ The scientists, led by Hisatada Akahane, studied a small lake in the explosion crater of the Tateyama Volcano in central Japan, which gushes a silica-rich solution from its bottom, filling the 15m pond with steaming acidic water (~70°C, pH 3). As an experiment, they fastened pieces of fresh wood in the lake with wire. After seven years the wood had turned into stone, petrified with silica.⁹⁸

Tateyama Hot Spring



See Andrew A. Snelling, "Rapid petrification of wood: an unexpected confirmation of creationist research," *Impact* 379 (January 2005); archived at <http://www.icr.org/article/13/>.



"Silica filled wood tissue (C) from wood samples (F) immersed for several years in steaming lake (A). The mineral deposits resemble those in naturally fallen wood (D) petrified at the lake's edge (E). Opal deposits are composed of tiny spheres of silica (B)."

See Tas Walker, "Wood petrified in spring: Creationist's rapid claims recognized," *Creation Ex Nihilo* 28(3):18-19 (June 2006); archived at <http://creationontheweb.com/content/view/5179/>.

⁹⁷ H. Akahane, T. Furuno, H. Miyajima, T. Yoshikawa, and S. Yamamoto, "Rapid wood silicification in hot spring water: An explanation of silicification of wood during the earth's history," *Sedimentary Geology* 169(3-4):219-228 (15 July 2004). Though published in a secular geology journal, their report actually quoted an article by Dr. Andrew Snelling from *Creation* magazine years earlier [see Andrew A. Snelling, "'Instant' petrified wood," *Creation Ex Nihilo* 17(4):38-40 (September 1995); archived at <http://creationontheweb.com/content/view/1752/>].

⁹⁸ For an overview of the work, see Andrew A. Snelling, "Rapid petrification of wood: an unexpected confirmation of creationist research," *Impact* 379 (January 2005); archived at <http://www.icr.org/article/13/>; and Tas Walker, "Wood petrified in spring: Creationist's rapid claims recognized," *Creation Ex Nihilo* 28(3):18-19 (June 2006); archived at <http://creationontheweb.com/content/view/5179/>.

3. Such a condition simulates post-flood petrification, since flood waters were saturated with silica (SiO_2), the world's second most common cementing agent in rocks.⁹⁹ Silica is derived from dissolved quartz, which comprises about 27% of granite's volume, which in turn made up the subterranean chamber's roof and pillars before the flood.¹⁰⁰ Thus, trees floating in warm post-flood lakes became saturated with silica-rich solutions, and petrification occurred as the water cooled and silica precipitated into the tiniest voids in the wood's cells.

O. Cave Formations – Frequently the claim is made that stalactites and stalagmites required millions of years to form. More and more people recognize that this conclusion assumes these limestone formations always grew at today's extremely slow rate.¹⁰¹ Under favorable physical and chemical conditions common after the flood, huge stalactites and stalagmites could have grown rapidly.¹⁰² Many cases of rapid dripstone formation have now been documented.¹⁰³



Cave Formations



Tepee Fountain - "This structure, started in 1903, was created by piping the hot mineral water through a vertical pipe built into a rock pyramid. As the water exits the top and flows over the structure, it cools and deposits travertine, much the same as the Terraces are formed near the Big Horn Spring within the park. The algae within the water colors the deposits." Taken from the picture.

⁹⁹ See Walt Brown's summary of petrification, *In the Beginning*, 155-156.

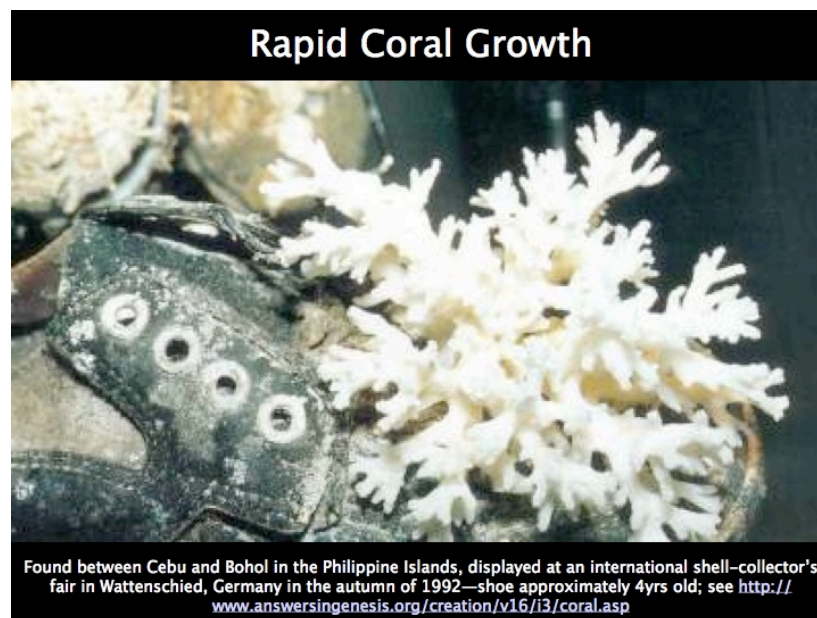
¹⁰⁰ Silica dissolves only 6 parts per million in pure water at 77°F (25°C). As temperatures rise, more silica goes into solution. At 300°F (150°C), silica concentrations reach 140 parts per million. (See Sigleo, "Organic Geochemistry of Silicified Wood.")

¹⁰¹ "...one of the most controversial points is how long it takes for a cave such as S.P. [Kartchner Caverns in Arizona] to form. What geologists used to believe was fact, in terms of dating a cave, now is speculation, [cave expert, Jerry] Trout says... From 1924 to 1988, there was a visitor's sign above the entrance to Carlsbad Caverns that said Carlsbad was at least 260 million years old... In 1988, the sign was changed to read 7 to 10 million years old. Then, for a little while, the sign read that it was 2 million years old. Now the sign is gone. In short, he says, geologists don't know how long cave development takes. And, while some believe that cave decorations such as S.P.'s beautiful icicle-looking stalactites take years to form, Trout says that through photo-monitoring, he has watched a stalactite grow several inches in a matter of days." [Marilyn Taylor, "Descent," *Arizona Highways* 69(1):10-11 (Jan. 1993).]

¹⁰² "In the centuries after the flood, acidic groundwater, more plentiful than ever in the centuries after the flood, frequently seeped into cracks in limestone rocks, dissolved limestone, and formed underground caverns. As ventilation in caverns improved and plant growth removed CO_2 from the atmosphere, CO_2 escaped from this groundwater. Large quantities of limestone precipitated, rapidly forming stalactites and stalagmites worldwide." (Brown, *In the Beginning*, 153.)

¹⁰³ L. S. Helmick, J. Rohde, and A. Ross, "Rapid growth of dripstone observed," *Creation Research Society Quarterly* 14:13-17 (June 1977); see also Ian T. Taylor, *In the Minds of Men* (Toronto: TFE Publishing, 1984), 335-336.

- P. Coral Formation – Many have assumed that coral growth rates have always been very slow (including Darwin himself who observed coral atolls in the south seas), implying that some coral reefs must be hundreds of thousands of years old. More accurate measurements of these rates under favorable growth conditions now show that no known coral formation need be older than 3,400 years.¹⁰⁴



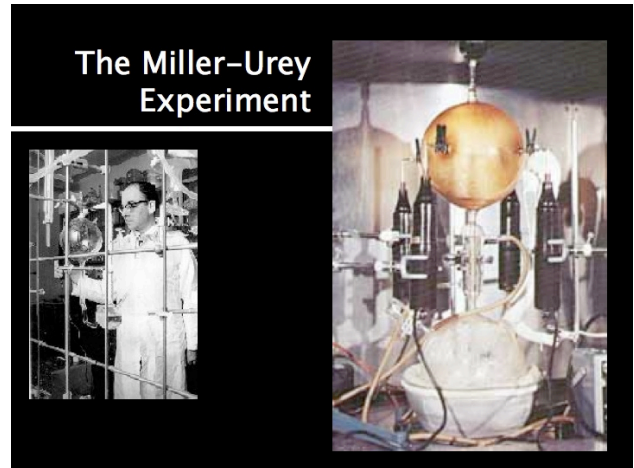
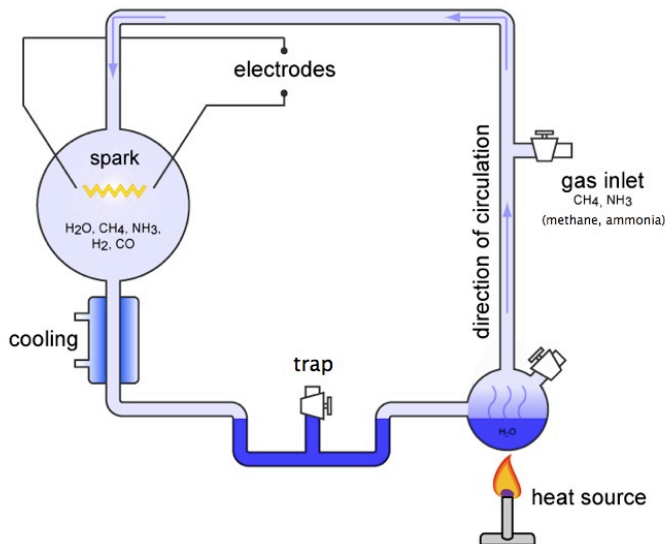
III. BIOLOGICAL

Do you hunt the prey for the lioness...⁴¹ Who provides food for the raven...^{39:1} Do you know when the mountain goats give birth...⁵ Who let the wild donkey go free...⁹ Will the wild ox consent to serve you...¹⁹ Do you give the horse his strength...²⁶ Does the hawk take flight by your wisdom...²⁷ Does the eagle soar at your command and build his nest on high? ...^{40:2} Shall a faultfinder contend with the Almighty? He who argues with God, let him answer. (NIV Job 38:39-40:2)

¹⁰⁴ Peter Read and Andrew Snelling, "How old is Australia's Great Barrier Reef?" *Creation Ex Nihilo* 8(1):6-9 (November 1985); Ariel A. Roth, "Coral reef growth," *Origins* 6(2):88-95 (1979); see also J. T. Verstelle, "The growth rate at various depths of coral reefs in the Dutch East Indian Archipelago," *Treubia* 14:117-126 (1932). Recently, coral was found growing firmly attached to a modern shoe (assessed to be less than four years old) between Cebu and Bohol in the Philippine Islands. It was displayed at an international shell-collector's fair in Wattenschied, Germany, in the autumn of 1992 [see "Coral on a shoe," *Creation Ex Nihilo* 16(3):15 (June 1994); archived at <http://creationontheweb.com/content/view/915/>].

A. Life Created in the Lab (Miller-Urey Experiment)

1. In the 1950s, Stanley Miller, a 23-year-old graduate student at the University of Chicago, and his Ph.D supervisor, Harold Urey, devised an experiment to test their theory on the origin of life on the Earth.¹⁰⁵ To do this, Miller combined three essential components:



- a) Container of boiling water, from which *water vapor* rose (i.e. early earth's oceans),
- b) Entering a compartment filled with a mixture of *methane, ammonia, and hydrogen gases* (i.e. gases in early earth's atmosphere), and this entire gas-mixture was then
- c) Zapped with *electrical spark discharges* between two electrodes (i.e. lightning acting on the "primordial soup").

2. After some time, an orangey-red sludge formed in the bottom of the apparatus. When they examined it, they found that it contained small amounts of amino acids and other organic molecules (mostly glycine and alanine, the two simplest amino acids found in proteins).¹⁰⁶ Scientists hailed the Miller-Urey experiment as demonstrating that life could have formed on the early Earth from lifeless materials. Even today, the "life-in-a-test-tube" experiment of Miller-Urey remains the cornerstone of theories on the origin of life.
3. However, there are major problems with the experiment that are rarely mentioned, much less discussed, even in graduate-level textbooks:

- a) These "building blocks" are the simplest of amino acids. The more complex amino acids have never been produced in the laboratory.¹⁰⁷

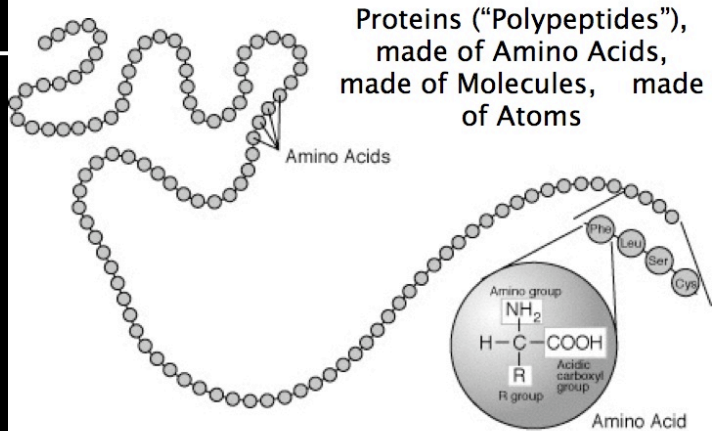
¹⁰⁵ Though the idea was first put forth vaguely by Darwin, that the earth was a "warm little pond" [Charles Darwin, *The Life and Letters of Charles Darwin*, Vol. II, Francis Darwin ed. (New York: D. Appleton & Company, 1887), 202], it wasn't until the 1920s that the Russian scientist A. I. Oparin and the British scientist J. B. S. Haldane put forward the idea that the building blocks of life could have been formed by the action of lightning on the atmosphere of the early Earth (composed primarily of methane, ammonia and hydrogen). These organic chemicals could have dissolved in the oceans to form what they called a "hot dilute soup" (later termed "primordial soup"), which later gave rise to the first living cells having evolved by random chance. [See A. I. Oparin, *Origin of Life* (Moscow, 1924; trans. by S. Morgulis and published by Macmillan in 1938); J. B. S. Haldane, *Rationalist Annual* 148:3-10 (1928).]

¹⁰⁶ The yield of glycine was a mere 1.05%, of alanine only 0.75%; the next most common amino acid produced amounted to only 0.026% of the total—so small as to be largely insignificant. In Miller's own words, "The total yield was small for the energy expended." [S. L. Miller, "A production of amino acids under possible primitive Earth conditions," *Science* 117:528 (1953).]

¹⁰⁷ In successive versions of the experiment there are small changes in the design of the equipment and variations in the mixture of gases used. Yet, after hundreds of replications and modifications, scientists have only been able to produce small amounts of less than half of the 20 amino acids required for life. The rest require much more complex synthesis conditions.

Terminology

- **Atoms** The basic unit of matter
- **Molecules** Specific arrangement of atoms (H₂O)
- **Amino Acids** Specific arrangement of molecules
- **Proteins** Specific arrangement of amino acids



- b) The gap between producing amino acids and creating even the simplest form of life is so vast that it is statistically zero.¹⁰⁸
- c) Most products of these chemical reactions are toxic and poisonous to life.¹⁰⁹
- d) Half the amino acids produced have the wrong "handedness."¹¹⁰ **(See Diagram Next Page)**

¹⁰⁸ See James F. Coppedge, *Evolution: Possible or Impossible?* (Grand Rapids: Zondervan Publishing, 1973), 71-72;

"Whether one looks to mutations or gene flow for the source of the variations needed to fuel evolution, there is an enormous probability problem at the core of Darwinist and neo-Darwinist theory, which has been cited by hundreds of scientists and professionals. Engineers, physicists, astronomers, and biologists who have looked without prejudice at the notion of such variations producing ever more complex organisms have come to the same conclusion: The evolutionists are assuming the impossible. Even if we take the simplest large protein molecule that can reproduce itself if immersed in a bath of nutrients, the odds against this developing by chance range from one in 10⁴⁵⁰ (Marcel Goulay in *Analytical Chemistry*) to one in 10⁶⁰⁰ (Frank Salisbury in *American Biology Teacher*)." [William R. Fix, *The Bone Peddlers: Selling Evolution* (New York: Macmillan Publishing Co., 1984), 196.]

"...the visible universe has fewer than 10⁸⁰ atoms in it... To claim life evolved is to demand a miracle. The simplest conceivable form of single-celled life should have at least 600 different protein molecules. The mathematical probability that only one typical protein could form by chance arrangements of amino acid sequences is essentially zero—far less than 1 in 10⁴⁵⁰. To appreciate the magnitude of 10⁴⁵⁰, realize that the visible universe is about 10²⁸ inches in diameter." (Brown, *In the Beginning*, 14-15.)

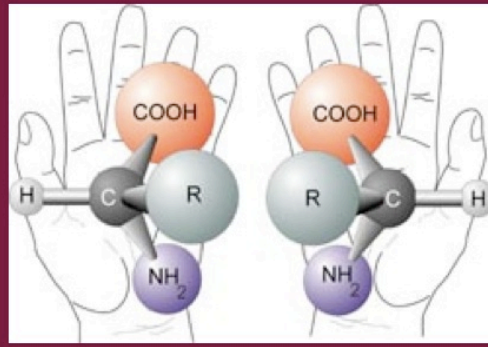
French mathematician, Emile Borel, argued that any occurrence with a chance of happening less than one in 10⁵⁰ is an occurrence with such a slim probability that it is statistically considered to be zero. [See *Probability and Life* (Dover, 1962), translated from the original, *Les Probabilite et la Vie* (Presses Universitaire de France, 1943).]

¹⁰⁹ 85% of the product was an insoluble toxic carcinogenic mixture called "tar" or "resin," 4% was formic acid, and 2.7% was equal parts (0.9% each) of three other caboxylic acids. [See Robert Shapiro, *Origins: A Skeptic's Guide to the Creation of Life* (New York: Summit Books, 1986), 104-108.].

¹¹⁰ Genetic material (DNA and RNA) is composed of "nucleotides" (made up of nucleic acids), which in living things are *always* "right-handed" (so called because polarized light passing through them rotates like a right-handed screw). Conversely, proteins, or "polypeptides" (made up of amino acids), are almost always "left-handed." Laboratory experiments, such as Miller and Urey's, produce amino acids which are half right-handed and half left-handed. No known process can isolate either the left-handed or right-handed variety. The mathematical probability that chance processes could produce merely one tiny molecule with only left-handed amino acids is virtually zero. (See James F. Coppedge, *Evolution: Possible or Impossible?*, 71-79.)

Amino Acids

Over 2,000 types of amino acids
Only 20 are used in life
All must be "left-handed"

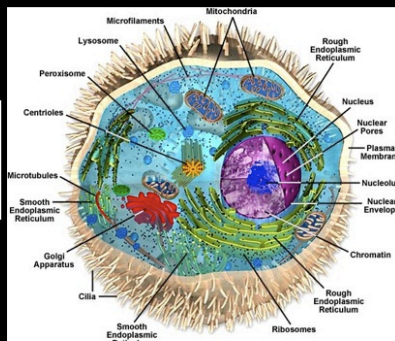


The Cell and Complexity

Boeing 747



4½ million non-flying parts



Billions of non-living parts

Probability and Life

Chandra Wickramasinghe, "Threats on Life of Controversial Astronomer," New Scientist, 1982, p. 140.

"The chances that life just occurred are about as unlikely as a typhoon blowing through a junkyard and constructing a Boeing 747."

e) Urey and Miller's experiments contained a *reducing* atmosphere, which the "early earth" could not have had.

(1) Miller and Urey based the atmosphere in their experiments on the makeup of interstellar gas clouds, because they believed this to be where the early Earth's atmosphere came from, thus including methane, ammonia, hydrogen and water vapor (though there is near consensus

A Comparison of Oxidizing, Neutral, and Reducing Atmospheres

OXIDIZING (present Earth)	NEUTRAL (volcanic outgassing)	REDUCING (Oparin-Haldane)
nitrogen	water vapor (hydrogen + oxygen)	methane (carbon + hydrogen)
oxygen	carbon dioxide (carbon + oxygen)	ammonia (nitrogen + hydrogen)
carbon dioxide (carbon + oxygen)	nitrogen	hydrogen
water vapor (hydrogen + oxygen)	hydrogen (trace; lost to space)	water vapor (oxygen + hydrogen)

FIGURE 2-3 Oxidizing, Neutral, and Reducing Atmospheres.

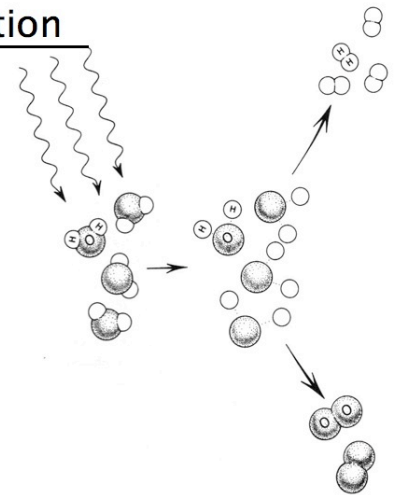
Constituents are listed from top to bottom in order of their prevalence.

today among geochemists that the Earth's early atmosphere probably consisted of gasses released by volcanoes). Chemists call such an atmosphere "reducing" (vs. "oxidizing"), because hydrogen is added rather than oxygen when chemicals combine.

- (2) Oxygen is deadly to Miller-Urey type experiments – If oxygen is present in the atmosphere, any amino acids present would immediately be destroyed through oxidization. Moreover, the combination of oxygen, methane and hydrogen is explosive, which would exclude the introduction of the necessary "spark."
- (3) Oxygen is necessary for life to have evolved on planet earth – If there had been no oxygen on the early earth, there would have been no ozone (O₃, a much less stable form of oxygen) in the upper atmosphere. Without ozone to shield the earth, the sun's ultraviolet radiation would quickly destroy life.
- (4) Oxygen was present on the "early earth" – Most researchers now believe that O₂ was present because of photodissociation of water vapor in the upper layers of the atmosphere which produces oxygen.¹¹¹ Furthermore, it is clear that large amounts of oxidized materials exist in the Precambrian geological strata.¹¹²
- (5) Nature lacks the components found in the Miller-Urey experiments – Components, such as a trap which quickly removes chemical products from the destructive energy sources that make the products, do not exist in nature.
- (6) The problem of dilution – Miller and Urey also speculated that the oceans in the ancient earth must have consisted of about a 10% solution of organic compounds.¹¹³ This level of organic matter would equal a concentration about 100 times higher than a modern American city's sewer water. The total amount of extant

Photodissociation

Water molecules (H₂O) are split by ultraviolet rays from sunlight in the upper atmosphere. The hydrogen (H) is too light to be held by Earth's gravity, and escapes into outer space, while the heavier oxygen (O) remains in the atmosphere.



¹¹¹ Siegfried Scherer, "Could life have arisen in the primitive atmosphere?" *Journal of Molecular Evolution* 22(1):91-94 (1985); R. T. Brinkmann, "Dissociation of water vapor and evolution of oxygen in the terrestrial atmosphere," *Journal of Geophysical Research* 74(23):5355-5368 (20 October 1969).

¹¹² C. Thaxton, W. Bradley, and R. Olsen, *The Mystery of Life's Origin; Reassessing Current Theories* (New York: Philosophical Library, 1984) ch. 5; Philip Morrison, "Earth's Earliest Biosphere," *Scientific American* 250:30-31 (April 1984); Charles F. Davidson, "Geochemical Aspects of Atmospheric Evolution," *Proceedings of the National Academy of Sciences* 53:1194-1205 (15 June 1965); Erich Dimroth and Michael M. Kimberley, "Precambrian Atmospheric Oxygen: Evidence in the Sedimentary Distributions of Carbon, Sulfur, Uranium, and Iron," *Canadian Journal of Earth Sciences* 13(9):1161 (September 1976).

¹¹³ Harold Urey, *The Planets: Their Origin and Development* (New Haven: Yale University Press, 1952), 153.

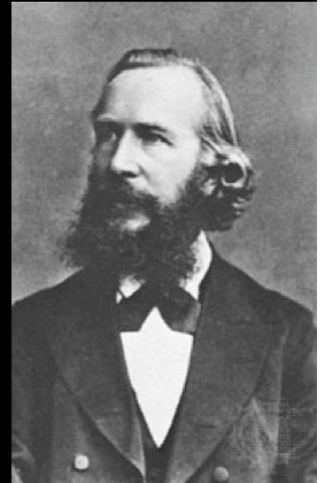
organic compounds on the earth today could not produce even a fraction of that needed to achieve a concentration this high in the primordial oceans.¹¹⁴

B. Embryonic Similarities (Haeckel's Drawings)¹¹⁵

1. One of the leaders in the field of embryology upon whom Darwin leaned heavily was a German biologist, Ernst Haeckel (1834-1919),¹¹⁶ who is known for coining the now-famous phrase, "ontogeny recapitulates phylogeny."¹¹⁷



**Ernst Haeckel
(1834–1919)**



2. Among Haeckel's most notable works were his drawings of early vertebrate embryos, which show that various classes of vertebrates are virtually identical in their earliest stages, and as they develop grow to be widely dissimilar. Darwin was convinced that since human and other vertebrates passed through the same stages of embryonic development, we must all be "modified descendants of some ancient progenitor."¹¹⁸ However, Haeckel's drawings are misleading (or fraudulent) in three primary ways:

¹¹⁴ Michael Denton, a molecular biologist and Senior Research Fellow in the Department of Biochemistry at the University of Otago in New Zealand, summarizes the situation: "In the presence of oxygen any organic compounds formed on the early Earth would be rapidly oxidized and degraded. For this reason many authorities have advocated an oxygen-free atmosphere for hundreds of millions of years following the formation of the Earth's crust. Only such an atmosphere would protect the vital but delicate organic compounds and allow them to accumulate to form a prebiotic soup. Ominously, for believers in the traditional organic soup scenario, there is no clear geochemical evidence to exclude the possibility that oxygen was present in the Earth's atmosphere soon after the formation of its crust... But even if there was no oxygen, there are further difficulties. Without oxygen there would be no ozone layer in the upper atmosphere which today protects the Earth's surface from a lethal dose of ultraviolet radiation. In an oxygen-free scenario, the ultraviolet flux reaching the Earth's surface might be more than sufficient to break down organic compounds as quickly as they were produced. Significantly, the absence of organic compounds in the Martian soil has been widely attributed to just such a strong ultraviolet flux which today continuously bombards the planet's surface. What we have then is a sort of 'Catch-22' situation. If we have oxygen we have no organic compounds, but if we don't have oxygen we have none either." [Michael Denton, *Evolution: A Theory in Crisis* (Bethesda: Adler & Adler Publishing, 1985), 261-262.]

¹¹⁵ This section is primarily taken from Jonathan Wells, *Icons of Evolution: Why Much of What We Teach About Evolution Is Wrong* (Washington, DC: Regnery Publishing, 2000), 81-109.

¹¹⁶ Darwin knew that his theory was highly unstable because it rested on the future discovery of intermediary fossils. Because of this he also looked to other disciplines of study for evidence, and it was the field of embryology that most excited him. Darwin considered it "by far the strongest single class of facts in favor of [his theory]". [Charles Darwin, "September 10, 1860, letter to Asa Gray," *The Life and Letters of Charles Darwin*, Vol. II, Francis Darwin ed. (New York: D. Appleton & Company, 1896).]

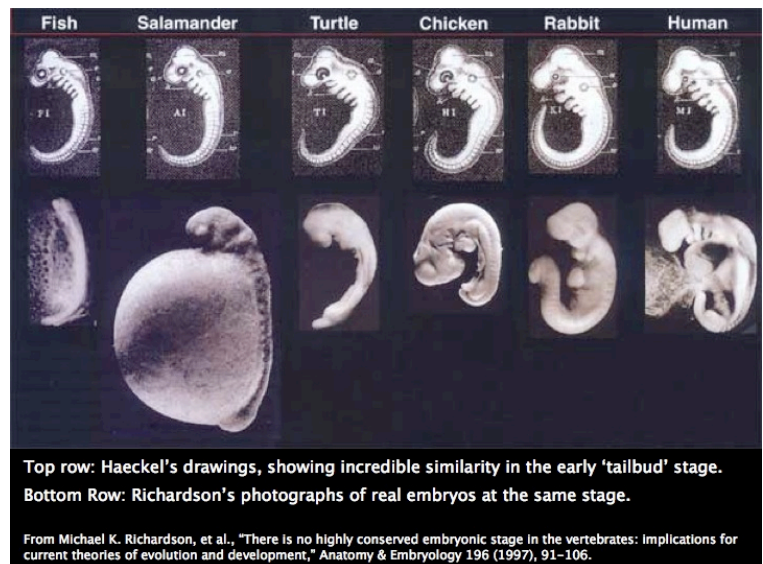
¹¹⁷ Haeckel coined the terms "ontogeny," designating the embryonic development of the individual, and "phylogeny," designating the evolutionary history of the species. He believed that embryos "recapitulate" their evolutionary history by passing through ancient adult forms as they develop. In other words, the development of an embryo (ontogeny) is a speeded-up replay of the evolution of the species (phylogeny), which he deemed "the biogenetic law." "Politics is applied biology" is another of Haeckel's most famous statements. However, since the Nazi propaganda movement used this statement as a slogan to justify their "religion of the blood," it has fallen out of use in the last half century.

¹¹⁸ Charles Darwin, *The Origin of Species*, Modern Library reprint ed. (New York: Random House, 1936), Chapter XIV, 345.

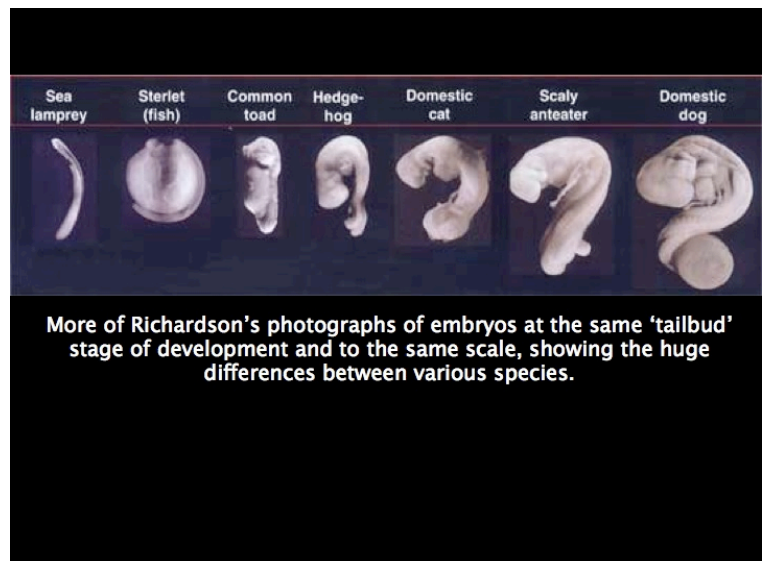


a) They include only those classes and orders that come closest to fitting his theory.

- (1) There are seven classes of vertebrates: jawless fishes, cartilaginous fishes, bony fishes, amphibians, reptiles, birds and mammals. However, Haeckel only drew five, excluding jawless and cartilaginous fishes, which differ most from the others. Moreover, to represent amphibians Haeckel chose a salamander, which appears most similar to the others, rather than a frog, which looks very different.

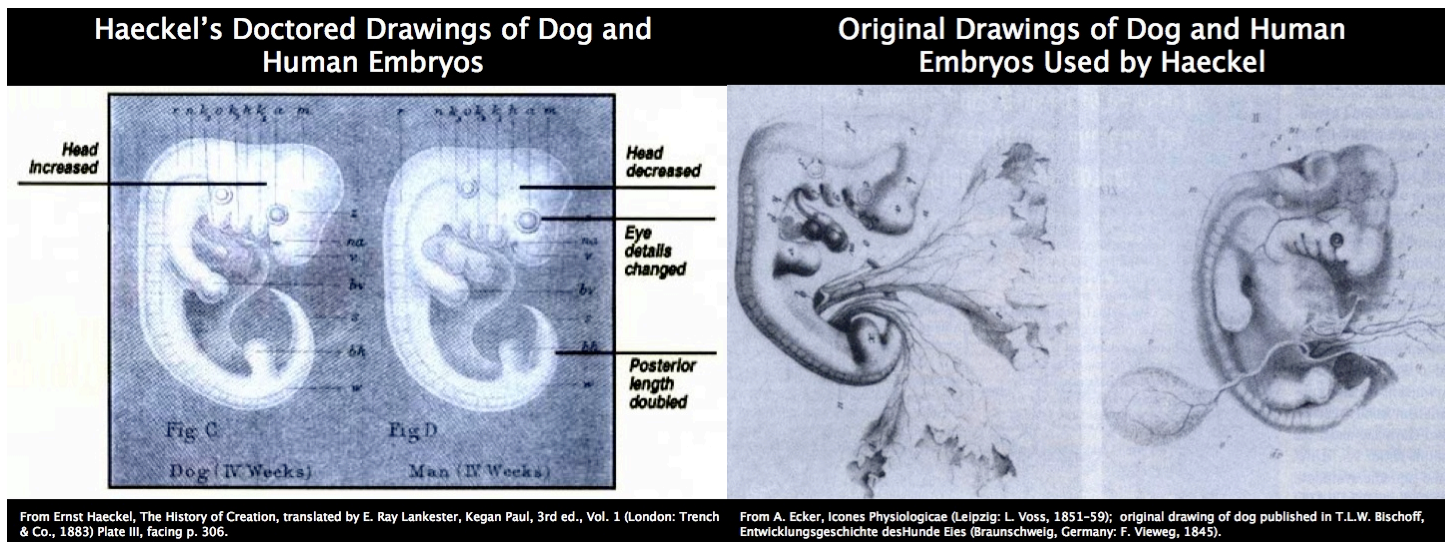


- (2) Half of his eight embryo drawings (fish, salamander, tortoise, chick, hog, calf, rabbit, and human) are mammals, and all of these are from one order (placentals). Other mammalian orders (egg-laying monotremes and pouch-brooding marsupials), which differ widely, are omitted.



b) They distort the embryos they purport to show.

- (1) In some cases, Haeckel used the same woodcut to print embryos that were supposedly from different classes. In others he doctored his drawings to make the embryos appear more alike than they really were.¹¹⁹



- (2) Vertebrate embryos vary tremendously in size, from less than 1 millimeter to almost 10 millimeters, yet Haeckel portrayed them all as being the same size. Moreover, although Haeckel's drawings show in each class approximately the same number of somites (repetitive blocks of cells on either side of the embryo's developing backbone), actual embryos vary from 11 to more than 60.¹²⁰

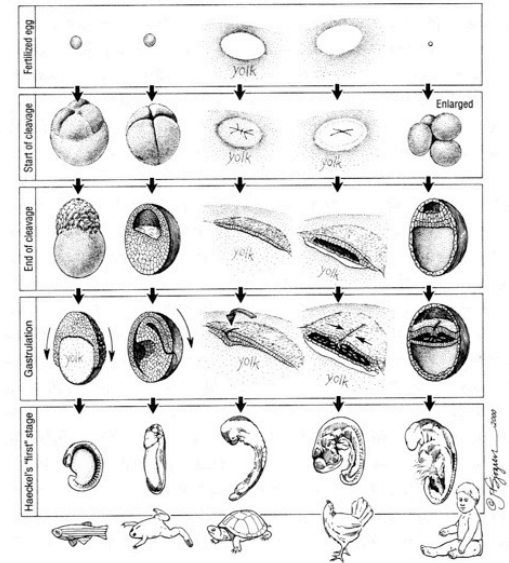
¹¹⁹ Haeckel's contemporaries repeatedly criticized him for these misrepresentations to no avail—most notably by Wilhelm His, professor of anatomy at the University of Leipzig, in 1874. [See J. Assmuth and E. R. Hull, *Haeckel's Frauds and Forgeries* (Bombay: Examiner Press, 1915); and Jane M. Oppenheimer, "Haeckel's Variations on Darwin," 123-135, in H. M. Heonigswald and L. F. Wiener (eds.), *Biological Metaphor and Cladistic Classification* (Philadelphia: Univ. of Pennsylvania Press, 1987).]

¹²⁰ Michael K. Richardson, et al., "There is no highly conserved embryonic stage in the vertebrates: implications for current theories of evolution and development," *Anatomy & Embryology* 196 (1997), 91-106; see also Michael K. Richardson, et al., "Somite number and vertebrate evolution," *Development* 125:151-160 (1998).

Michael Richardson (a prominent British embryologist) stated bluntly in an interview with *Science* after publishing his critique of Haeckel's drawings, "It looks like it's turning out to be one of the most famous fakes in biology." [Elizabeth Pennisi, "Haeckel's Embryos: Fraud Rediscovered," *Science* 277:1435 (1997).] The question naturally arises, "Why are these pictures still in the textbooks of almost every school in the Western world?" There is a clear eschatological demonic purpose for such delusion.

- c) They entirely omit earlier stages in which vertebrate embryos look very different, and start at a point midway through development.

Early Stages of Embryonic Development

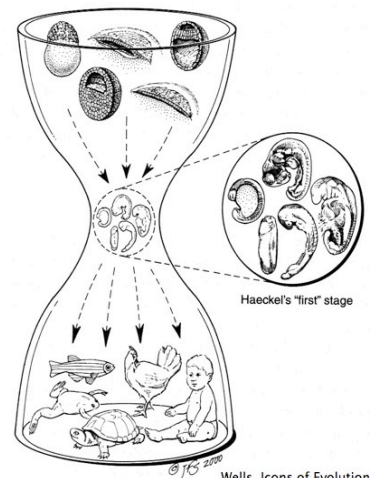


Wells, Icons of Evolution, 95

- (1) The first stage after an egg is fertilized is called “cleavage,” during which it subdivides into hundreds or thousands of separate cells without growing in overall size. After this the process known as “gastrulation” begins in which the cells begin to move and rearrange themselves, establishing the animal’s general body plan, tissue types and organ systems.

- (2) Only after cleavage and gastrulation does a vertebrate embryo reach the stage called “pharyngula” or “phylotypic,” which Haeckel labeled the “first.”¹²¹ Thus, the first stages are not actually most similar, contradicting the basic tenet of Haeckel’s “ontogeny recapitulates phylogeny.”¹²²

Developmental Hourglass



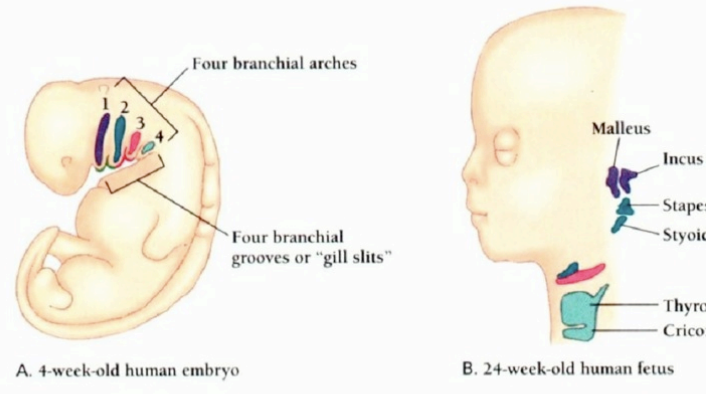
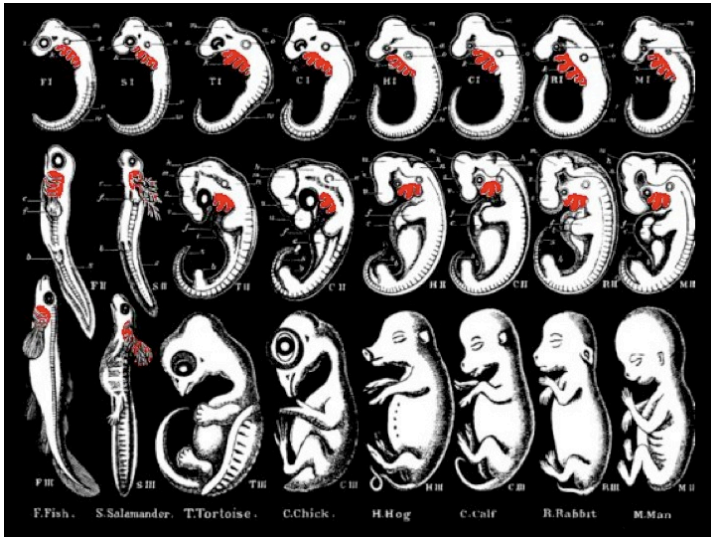
Wells, Icons of Evolution, 100

3. Pharyngeal folds are not “gill slits.” Midway through development, all vertebrate embryos possess a series of folds, four alternating ridges and grooves (called pharyngeal arches and pouches), in the neck region, or pharynx. In fish these pharyngeal folds later develop into gills, but in reptiles, mammals, and birds they develop into other structures entirely (such as facial features, the inner ear and parathyroid gland) that have nothing to do with gills or even breathing.¹²³

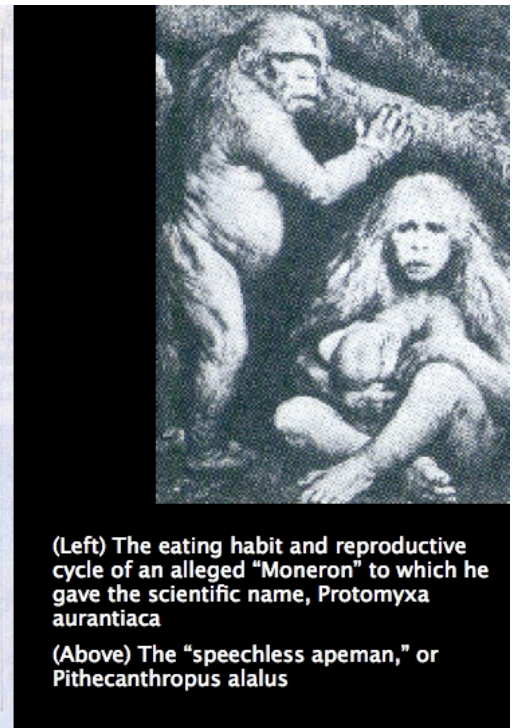
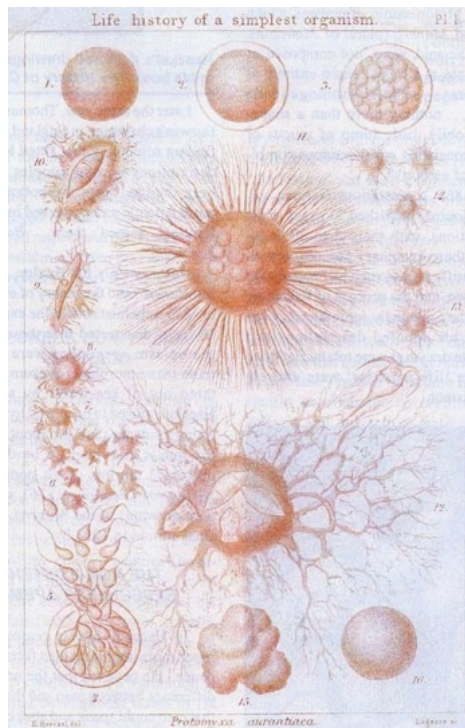
¹²¹ See Jonathan Wells, “Haeckel’s embryos and evolution: Setting the record straight,” *The American Biology Teacher* 61:345-349 (May 1999); Lewis Wolpert, *The Triumph of the Embryo* (Oxford: Oxford University Press, 1991), 12.

¹²² If it is actually true that “ontogeny recapitulates phylogeny” then the various classes would be most similar during fertilization and diverge in similarity through the cleavage and gastrulation stages and on to adulthood, yet this is not the case. Rather, vertebrate embryos start out looking very different, converge in appearance midway through development (though not at the same time), then become increasingly more different as they continue to adulthood. This pattern has been described as the “developmental hourglass” [see Rudolf A. Raff, *The Shape of Life: Genes, Development, and the Evolution of Animal Form* (Chicago: The University of Chicago Press, 1996), 197.].

¹²³ Pharyngeal folds are never even rudimentary gills, and they are *never* “gill-like” except in the superficial sense that they form a series of parallel lines in the neck region. The only way to see “gill-like” structures in human embryos is to read evolution into development. Moreover, gills are not embryological structures, not even in fish. “Seeing” them in other classes of vertebrates is to read an adult structure back into the embryo.



4. Haeckel's enthusiasm for the theory of evolution also led him to fraudulently manufacture other "evidence" to bolster his views, including the missing link *Pithecanthropus alalus*,¹²⁴ and the first "family tree" for mankind.¹²⁵



(Left) The eating habit and reproductive cycle of an alleged "Moneron" to which he gave the scientific name, *Protomyxa aurantiaca*

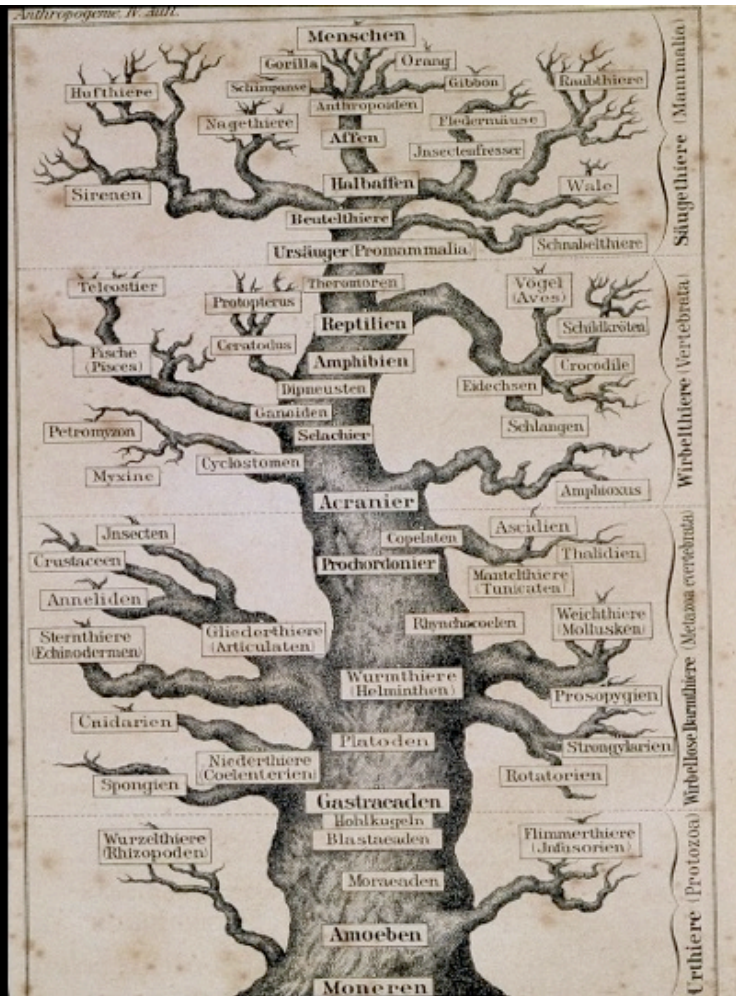
(Above) The "speechless apeman," or *Pithecanthropus alalus*

¹²⁴ To Haeckel the only major difference between man and ape was that men could speak and apes could not. He therefore postulated a missing link which he called *Pithecanthropus alalus* ("speechless apeman") and even had an artist, Gabriel Max, draw the imaginary creature, although there was not a scrap of evidence to support a single detail in the drawings.

¹²⁵ To fill the gap in this between inorganic non-living matter and the first signs of life, he invented a series of minute protoplasmic organisms which he called *Monera* (plural of *Moneron*), which were "not composed of any organs at all, but consist entirely of shapeless, simple homogeneous matter ... nothing more than a shapeless, mobile, little lump of mucus or slime, consisting of albuminous combination of carbon." [Ernst Haeckel, *The History of Creation*, 3rd ed., Vol. 1, translated by E. Ray Lankester, Kegan Paul (London: Trench & Co., 1883), 184.] Unfortunately university academia and the public were duped by these detailed descriptions and elaborate drawing for over 50 years, even though these "life particles" were totally fictional and non-existent.

Haeckel's "Family Tree of the Human Race"

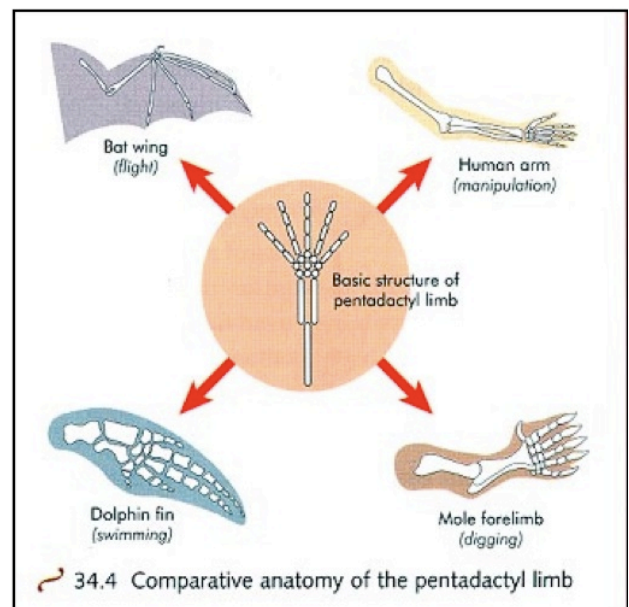
From Ernst Haeckel, *Anthropogenie oder Entwicklungsgeschichte des Menschen. Gemeinverständliche wissenschaftliche Vorträge über die Grundzüge der menschlichen Keimes- und Stammes-Geschichte* (Leipzig, 1874), Tafel XV.



C. Vertebrate Homology¹²⁶

Biologists since Aristotle have pointed out that widely differing organisms have similar or "homologous" structures and functions. The study of these similarities is referred to as "homology." When neo-Darwinism arose in the 1930s-40s, homologous features were attributed to similar genes inherited from a common ancestor, and modern Darwinists continue to use it as one of the primary pillars of evidence to support their

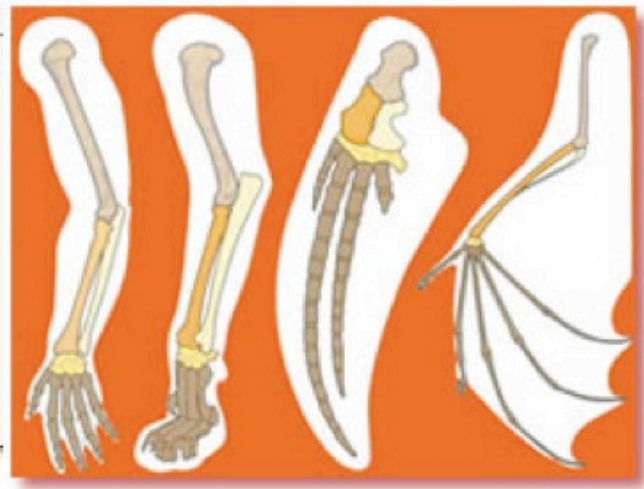
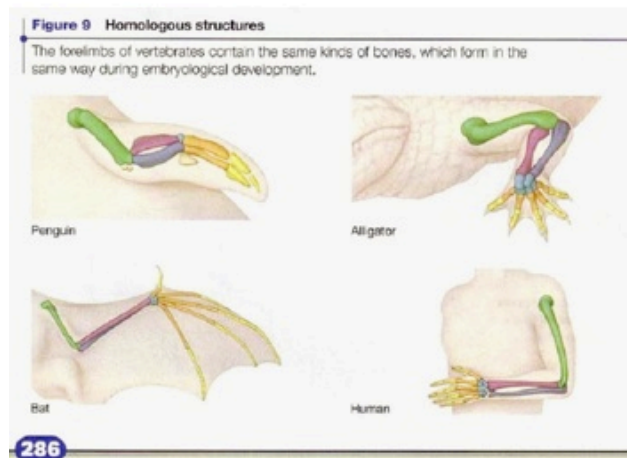
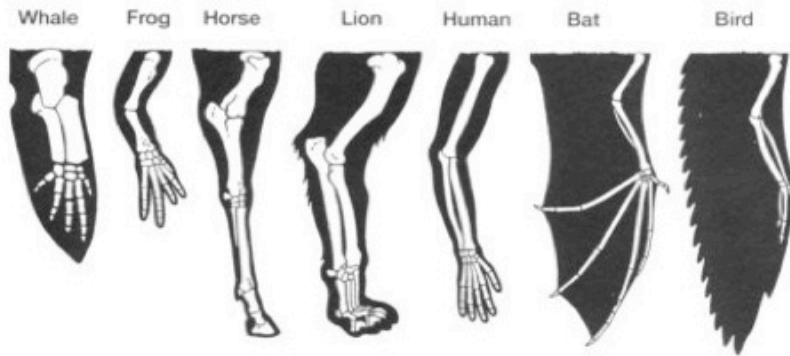
Vertebrate Homology



¹²⁶ This section is primarily taken from Wells, *Icons of Evolution*, 59-80.

theory. However, modern evolutionary homology conceals three serious problems:

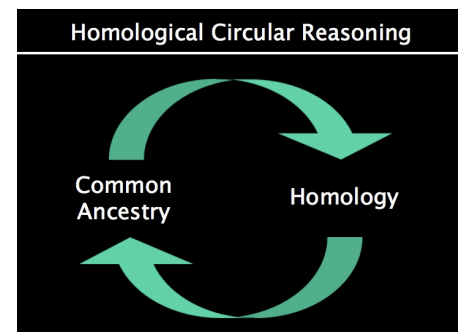
Homologous Structures



1. If homology is defined as similarity due to common descent, then it is *circular reasoning* to use it as evidence for common descent.

- a) With Charles Darwin evolution was a theory, and homology was evidence for it. However, with Darwin's followers, evolution is assumed to be independently established, and homology is its result (thus, the redefining of homology).¹²⁷

- b) However, by redefining homology based on the assumed fact of evolution, it can no longer be used as evidence for evolution without engaging in circular reasoning.¹²⁸ Even among secular biologists and philosophers, this



¹²⁷ Originally, homology was used as an aid to biological classification. However, because it was so central as evidence for Darwin's theory, in time it actually got *re-defined* to mean features inherited from a common ancestor: "common structures reveal a common ancestor."

¹²⁸ For example, consider the classic example of homologous structures in the forelimbs of vertebrates (i.e. bat, porpoise, horse, and human). A neo-Darwinist who wants to determine whether vertebrate forelimbs are homologous must first determine whether they are derived from a common ancestor. To then turn around and argue that homologous limbs point to common ancestry is a vicious circle: *common ancestry demonstrates homology which demonstrates common ancestry*.

circularity has been noticed and criticized by many from the early days of the neo-Darwinist movement.¹²⁹

- c) Darwinists are left with *only* two options: 1) embrace the neo-Darwinian definition of homology, acknowledge that it no longer provides evidence for evolution, and look for evidence in other fields of study, or 2) revert to the pre-Darwinian definition of homology as structural similarity and acknowledge that this reopens the question of whether decent with modification is the best explanation for it.¹³⁰

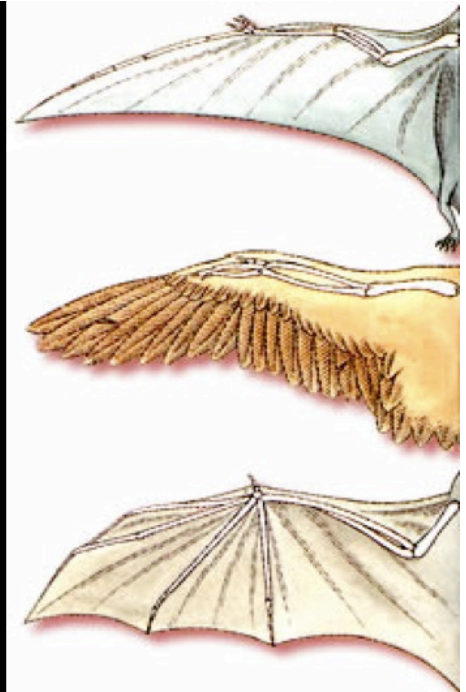
2. There are many examples of common structures that clearly lack common ancestry.

- a) An example is the eye of an octopus or squid and the eye of a human. Because evolutionary biologists believe that the octopus and human are not closely related in terms of evolutionary descent, similarities in the eye structure and function are discounted as an anomaly. This is

selective logic, as similar bone structure is taken as evidence of common descent while similar organ structure is not.¹³¹

Similar Structures with No Evolutionary Relationship

The wings of a flying reptile, bird, and bat



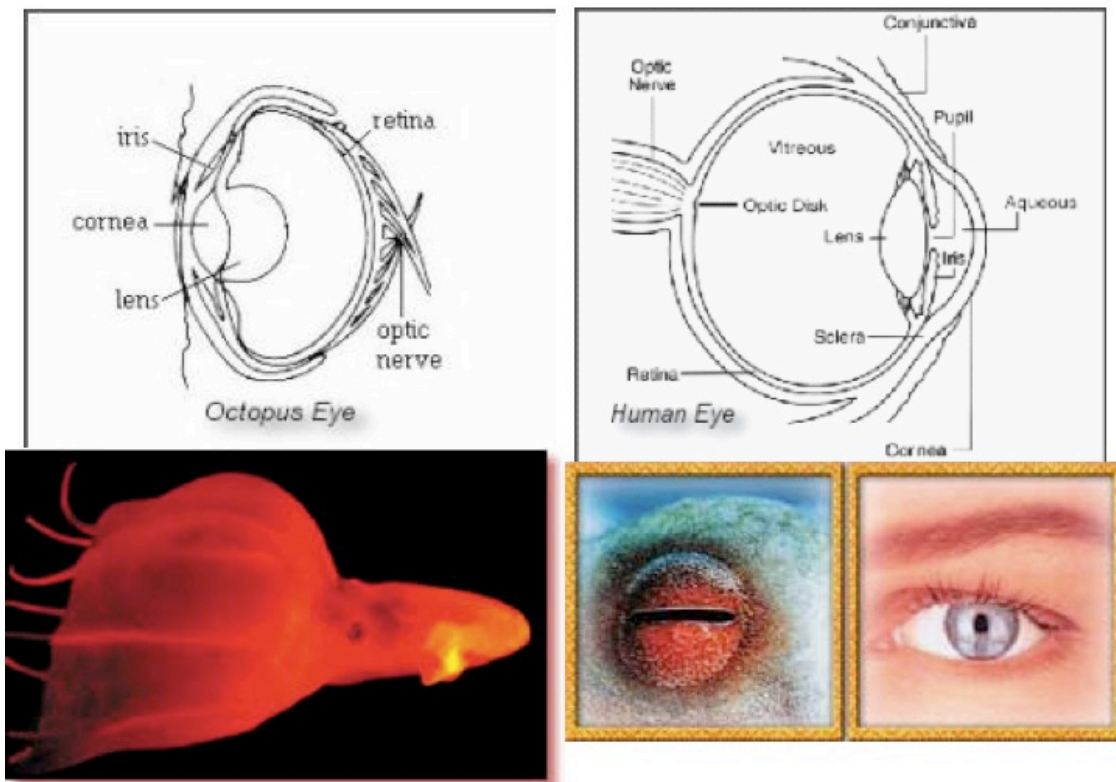
¹²⁹ J.H. Woodger, "On Biological Transformations," 95-120 in W.E. Le Gros Clark and P.B. Medawar (editors), *Essays on Growth and Form Presented to D'Arcy Wentworth Thompson* (Oxford: Clarendon Press, 1945), 109; Alan Boyden, "Homology and Analogy," *American Midland Naturalist* 37 (1947), 648-669; Robert R. Sokal and Peter H.A. Sneath, *Principles of Numerical Taxonomy* (San Francisco: Freeman, 1963), 21.

Especially notable is Ronald Brady, a professor of philosophy from New Jersey's Ramapo College, who wrote in 1985: "By making our explanation into the definition of the condition to be explained, we express not scientific hypothesis but belief. We are so convinced that our explanation is true that we no longer see any need to distinguish it from the situation we were trying to explain. Dogmatic endeavors of this kind must eventually leave the realm of science." [Ronald H. Brady, "On the Independence of Systematics," *Cladistics* 1 (1985), 113-126.]

¹³⁰ Generally not a popular option, since questioning the *fact* of evolution is socially unpopular and professionally dangerous.

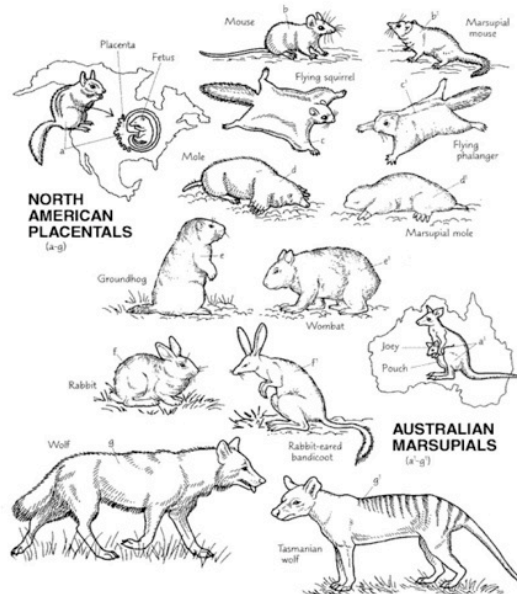
¹³¹ Despite their extraordinarily complex structures, it is quite inconsistent to maintain that this similarity came about as the result of chance mutations. If, as evolutionists claim, the squid eye emerged by chance, how is it that exactly the same coincidences took place in the vertebrate eye? Well-known evolutionist Frank Salisbury, who pondered this question long and hard, writes, "Even something as complex as the eye has appeared several times; for example, in the squid, the vertebrates, and the arthropods. It's bad enough accounting for the origin of such things once, but the thought of producing them several times according to the modern synthetic theory makes my head swim." [Frank Salisbury, "Doubts About the Modern Synthetic Theory of Evolution," *American Biology Teacher* (September 1971), 338.]

This is especially difficult if it is true that the eye evolved independently as many as 60 times! [See Richard Dawkins, *Climbing Mount Improbable* (New York: W.W. Norton, 1996).]



- b) One of the most difficult situations to explain for evolutionary homology is the presence of “twin” species between marsupial and placental mammals.¹³² Wolves, cats, squirrels, ant-eaters, moles, and mice all have their marsupial counterparts with closely similar morphologies.¹³³ For example, the marsupial Tasmanian wolf and the placental wolf found in North America resemble each other to an extraordinary

MARSUPIALS AND PLACENTALS



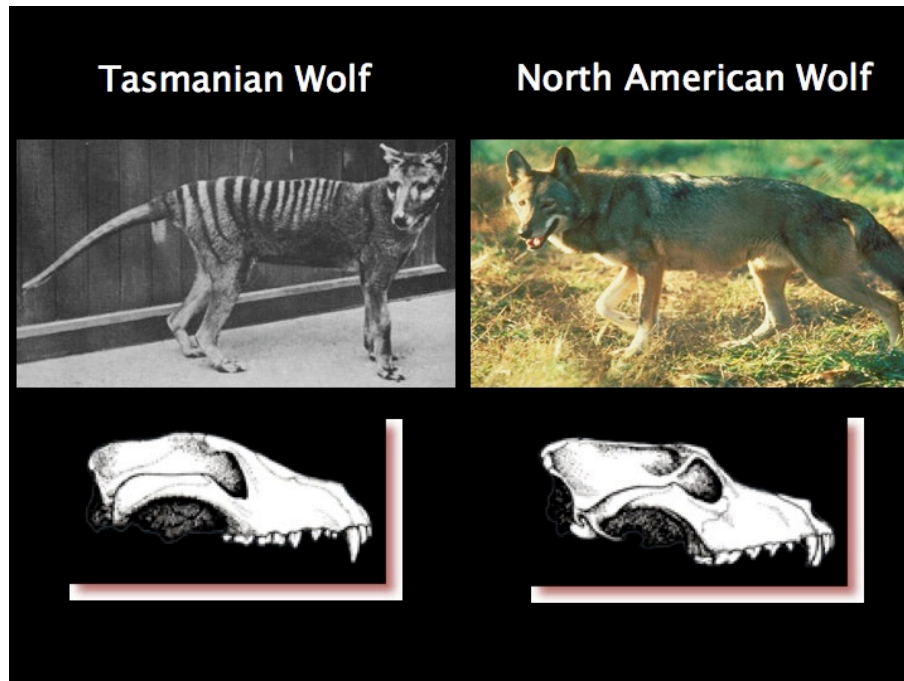
“Convergent Evolution”

Adapted from The Human Evolution Coloring Book, 2d ed., by Adrienne L. Zihlman. Produced by Coloring Concepts Inc. New York: HarperCollins, 2001

¹³² Mammals are generally characterized by: the production of milk in females for the nourishment of young; the presence of hair or fur; specialized teeth; the presence of a neocortex region in the brain; and endothermic or “warm-blooded” bodies—and they are divided into three categories: placentals, marsupials, and monotremes.

¹³³ See Dean Kenyon and Davis Percival, *Of Pandas and People: The Central Question of Biological Origins* (Dallas: Haughton Publishing, 1993), 33.

degree, though their evolutionary history supposedly separated over 100 Ma when Australia broke off of the supercontinent Gondwanaland.¹³⁴



- c) Likewise, according to evolution, wings emerged independently of each other four times: in insects, flying reptiles, birds, and flying mammals. These and a multitude of other examples militate against evolutionary homological logic.
3. Homologous features are not due to similar genes or developmental pathways, so the mechanism that produces them remains unknown.
- a) Developmental Pathways
- (1) The theory that homologous structures are products of similar developmental pathways does not fit the evidence, and honest biologists have known this for over a century.¹³⁵

¹³⁴ According to evolution, completely independent mutations twice chanced to produce these living things in exactly the same way, which evolutionists call "convergent evolution." However, this seems to be a stretch of common sense reason.

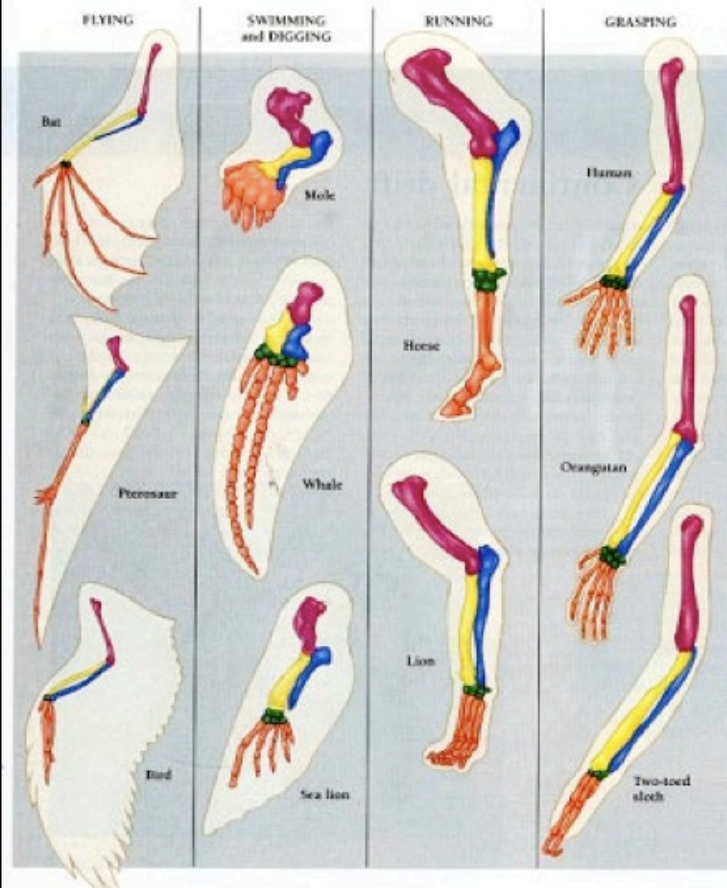
¹³⁵ E.B. Wilson wrote in 1894, "It is a familiar fact that parts which closely agree in the adult, and are undoubtedly homologous, often differ widely in larval or embryonic origin either in mode of formation or in position, or in both." [Edmund B. Wilson, "The Embryological Criterion of Homology," 101-124 in *Biological Lectures Delivered at the Marine Biological Laboratory of Wood's Hole in the Summer Session of 1894* (Boston: Ginn & Company, 1895), 107.]

Prominent British biologist Gavin de Beer stated in 1958, "The fact is that correspondence between homologous structures cannot be pressed back to similarity of position of the cells in the embryo, or of the parts of the egg out of which the structures are ultimately composed, or of developmental mechanisms by which they are formed." [Gavin de Beer, *Embryos and Ancestors*, 3rd ed., (Oxford: Clarendon Press, 1958), 152.]

Twenty years ago eminent developmental biologist Pere Alberch likewise said, "[It is] the rule rather than the exception that homologous structures form from distinctly dissimilar initial states." [Pere Alberch, "Problems with the Interpretation of Developmental Sequences," *Systematic Zoology* 34 (1):46-58 (1985).]

Recently, evolutionary developmental biologist Rudolf Raff, having studied two species of sea urchin which had reached almost identical forms by way of very different paths, expressed the same difficulty: "Homologous features in two related organisms should arise by similar developmental processes . . . [but] features that we regard as homologous from morphological and phylogenetic criteria can arise in different ways in development." [Rudolf Raff, "Larval homologies and radical evolutionary changes in early development," 110-121 in *Novartis Symposium* 222 (Chichester, UK: John Wiley & Sons, 1999), 111.]

The bones develop from different genes and by different pathways in different organisms.

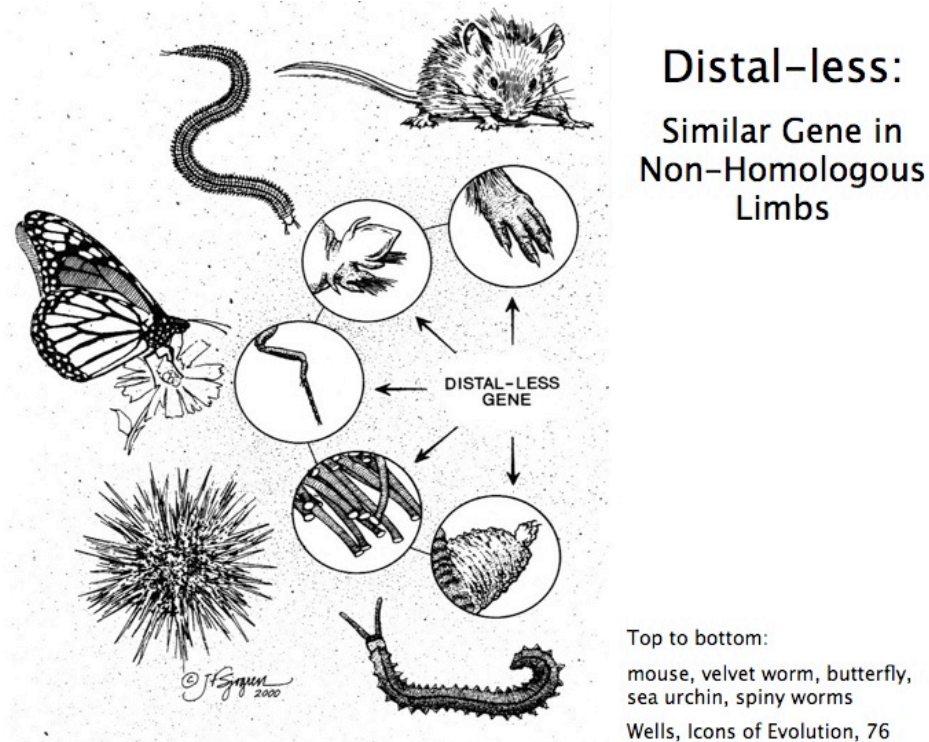


- (2) Quadrupeds (land-living vertebrates) have five digits on their fore- and hindlimbs. Though different in appearance, they are all counted as “pentadactyl” (five-digit) due to their bone structure.¹³⁶ However, these digits have both differing developmental starting points and developmental pathways.
- (a) Forelimbs emerge from different body segments in different species. In the newt, for example, the forelimbs emerge from segments 2, 3, 4, and 5 of the trunk; in lizards, from segments 6, 7, 8, and 9; and in human beings, from segments 13, 14, 15, 16, 17, and 18.¹³⁷
 - (b) Forelimbs also emerge by different developmental pathways in different species. Generally, the development of digits in vertebrate limbs is from the back to the front (i.e. from the tail to the head), as is the case with frogs, for instance. Yet, the manner of development of fellow amphibious salamanders is exactly opposite, from the head to the tail.¹³⁸

¹³⁶ For example, the hands and feet of a frog, lizard, squirrel, monkey, birds, bats, etc., all have this same structure.

¹³⁷ Gavin De Beer, *Homology: An Unsolved Problem* (London: Oxford University Press, 1971); quoted in Richard Milton, *Shattering The Myths of Darwinism* (Park Street Press, 1997), 180.

¹³⁸ The difference is so striking that some biologists have argued that the evolutionary history of salamanders must have been different from all other vertebrates, including frogs [see Neil H. Shubin and Pere Alberch, “A morphogenetic approach to the origin and basic organization of the tetrapod limb,” *Evolutionary Biology* 20:319-387 (1986); and Neil H. Shubin, “History, Ontogeny, and Evolution of the Archetype,” 249-271, in Brian K. Hall (ed.), *Homology: The Hierarchical Basis of Comparative Biology* (Academic Press, 1994), 264-266.]



- (3) Many animal species undergo a process known as “indirect development” on the path to adulthood (i.e. a “larval stage”). For example, many frogs start life as swimming tadpoles and turn into four-footed animals at the last stage of metamorphosis. There are also other frog species which bypass the tadpole stage and develop directly. However, most directly-developed adults are almost indistinguishable from other frogs that go through the tadpole phase.¹³⁹

b) Developmental Genes

- (1) Modern evolutionary theory argues that living things developed by way of small, random changes in their genes, i.e. “mutations.” The genetic structures of living things regarded as close evolutionary relatives should therefore also be similar. However, the results of genetic research has not proven this true.¹⁴⁰
- (2) For example, fruit fly embryos require the gene *even-skipped* for the proper development of body segments; but other insects, such as locusts and wasps, form segments without using this gene.¹⁴¹ These features are considered homologous, which shows that homologous features need not be controlled by the same genes.

¹³⁹ See Rudolf A. Raff, *The Shape of Life: Genes, Development, and the Evolution of Animal Form* (Chicago: The University of Chicago Press, 1996).

¹⁴⁰ In 1971, famous evolutionist Gavin de Beer wrote, “It is now clear that the pride with which it was assumed that the inheritance of homologous structures from a common ancestor explained homology was misplaced... [it] cannot be ascribed to identity of genes.” (Gavin De Beer, *Homology: An Unsolved Problem*, 15-16.)

Australian biologist Michael Denton states, “The evolutionary basis of homology is perhaps even more severely damaged by the discovery that apparently homologous structures are specified by quite different genes in different species.” (Michael Denton, *Evolution: A Theory in Crisis*, 145.)

¹⁴¹ Gavin De Beer, *Homology: An Unsolved Problem*, 15-16. Another example given by De Beer is the gene known as *sex-lethal*, necessary for sex determination in the fruit fly, though not required for the emergence of males and females in other insects.

- (3) Conversely, non-homologous structures arising from identical genes is both more striking and more common. For example, the developmental gene for limbs, *Distal-less*¹⁴² is shared by several different types of animals, though the appendages are not homologous either by similar structure or by common ancestry.¹⁴³ Moreover, the entire network of genes involved in limb development has been found to be similar in insects and vertebrates.¹⁴⁴

D. Vestigial Organs

1. Though Darwin presented functionless “vestigial organs” as evidence for evolution, the existence of human and animal organs whose function is unknown does not necessarily imply that they are vestiges of organs inherited from our evolutionary ancestors.¹⁴⁵
2. In 1895 prominent German anatomist Robert Wiedersheim compiled a list of eighty-six “vestigial” human organs, plus about a hundred he considered “retrogressive” (on their way to becoming functionless).¹⁴⁶ However, as medical knowledge has increased, at least some functions of all these organs have been discovered.¹⁴⁷

¹⁴² *Distal-less* is so named because a mutation in it blocks limb development in fruit flies (“distal” refers to structures away from the main part of the body).

¹⁴³ Genes similar to *Distal-less* in fruit flies have also been found in mice, sea urchins, spiny worms (members of the same phylum as earthworms), and velvet worms (another phylum entirely) [Grace Panganiban, et al., “The origin and evolution of animal appendages,” *Proceedings of the National Academy of Sciences USA* 94:5162-5166 (1997); Gregory Wray, “Evolutionary dissociations between homologous genes and homologous structures,” 189-203, in *Homology* (Novartis Symposium 222; Chichester, UK: John Wiley & Sons, 1999), 195-196. Panganiban, et al. remarked, “These similarities are puzzling,” while Gregory Wray found “surprising” the association between *Distal-less* and “what are superficially similar, but non-homologous structures.” He concluded: “This association between a regulatory gene and several non-homologous structures seems to be the rule rather than the exception.”]

¹⁴⁴ N. Shubin, C. Tabin, and S. Carroll, “Fossils, genes and the evolution of animal limbs,” *Nature* 388:639-648 (1997); C. J. Tabin, S. Carroll, and G. Panganiban, “Out on a limb: Parallels in vertebrate and invertebrate limb patterning and the origin of appendages,” *American Zoologist* 39:650-663 (1999).

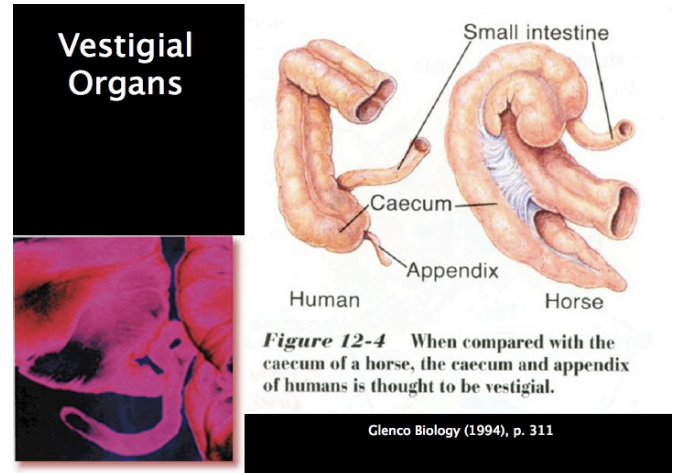
¹⁴⁵ S. R. Scadding (University of Guelph), an evolutionary zoologist himself, acknowledged this fact: “The ‘vestigial organ’ argument uses as a premise the assertion that the organ in question has no function. There is no way however, in which this negative assertion can be arrived at scientifically. That is, one can not prove that something does not exist (in this case a certain function), since of course if it does not exist one cannot observe it, and therefore one can say nothing about it scientifically. The best we can do is to state that despite diligent effort, no function was discovered for a given organ. However it may be that some future investigator will discover the function. Consequently, the vestigial organ argument has as a premise, either a statement of ignorance (I couldn’t identify the function), or a scientifically invalid claim (it does not have a function). Such an argument, from ignorance, or from negative results, is not valid scientifically, and has no place in observational or experimental science. Since it is not possible to unambiguously identify useless structures, and since the structure of the argument used is not scientifically valid, I conclude that ‘vestigial organs’ provide no special evidence for the theory of evolution [beyond that of homology].” [Steve R. Scadding, “Do ‘vestigial organs’ provide evidence for evolution?,” *Evolutionary Theory* [more recently *Evolutionary Theory and Review*] 5:173-176 (May 1981).]

¹⁴⁶ This list included: tonsils, coccyx (tail bone), thymus, little toe, male nipples, ear nodes, pineal gland, adenoids, appendix, wisdom teeth, parathyroid, ear muscles, body hair, and the nictitating membrane of the eye. At the historic Scopes Trial (1925), an evolutionist witness testified: “There are, according to Wiedersheim, no less than 180 vestigial [sic] structures in the human body, sufficient to make of a man a veritable walking museum of antiquities. Among these [is] the...appendix... These and numerous other structures of the same sort can be reasonably interpreted as evidence that man has descended from ancestors in which these organs were functional. Man has never completely lost these characters; he continues to inherit them though he no longer has any use for them.” [Ken Ham and Carl Wieland, “Your appendix...it’s there for a reason.” *Creation Ex Nihilo* 20(1):41 (December 1997); archived at <http://www.creationontheweb.com/content/view/709/>.]

¹⁴⁷ See Jerry Bergman and George Howe, *Vestigial Organs Are Fully Functional* (Terre Haute, Indiana: Creation Research Society Books, 1990).

3. These “non-functional organs” are in fact organs whose “functions have not yet been discovered.” The best indication of this has been the gradual yet substantial decrease in evolutionists’ long list of vestigial organs.¹⁴⁸
4. However, the vestigial concept persists; some common examples of vestigial structures still cited include:

- a) Human Appendix – The appendix plays a role in antibody production and protects part of the intestine from infections and tumor growths.¹⁴⁹ One study done by Dr. Howard R. Bierman on hundreds of patients with leukemia, Hodgkin’s disease, cancer of the colon, and cancer of the ovaries showed that 84% of these patients had their appendix removed, while in a healthy control group only 25% had it removed.¹⁵⁰ Thus, there is a positive correlation, indicating a *possible* role of the appendix in preventing these diseases.



- b) Human Tailbone (Coccyx) – The coccyx, which lies at the lower end of the vertebral column, supports the bones around the pelvis and is the convergence point of many small muscles, without which would be impossible to sit right

¹⁴⁸ Scadding suggests that “Wiedersheim was largely in error in compiling his long list of vestigial organs. Most of them do have at least a minor function at some point in life... As our knowledge has increased the list of vestigial structures has decreased. Wiedersheim could list about one hundred in humans; recent authors usually list four or five. Even the current short list of vestigial structures in humans is questionable.” (“Do ‘vestigial organs’ provide evidence for evolution?”, 175.)

¹⁴⁹ “The appendix is not generally credited with substantial function. However, current evidence tends to involve it in the immunologic mechanism.” [Gordon McHardy, “The Appendix,” *Gastroenterology*, Vol. 4, J. E. Berk ed. (Philadelphia: W.B. Saunders Company, 1985), 2609.]

“Long regarded as a vestigial organ with no function in the human body, the appendix is now thought to be one of the sites where immune responses are initiated.” [Roy Hartenstein, *Grolier Multimedia Encyclopedia* (Grolier Electronic Publishing, 1995).]

¹⁵⁰ Bergman and Howe, “*Vestigial Organs*” *Are Fully Functional*, 45.

among other things.¹⁵¹

- c) Whale Pelvis – The whale pelvis (consisting of only a few small bones) is not an evolutionary throwback, but rather it serves as an anchorage for muscle attachments in the reproductive organs, without which the whale could not reproduce. There is no sign of a “pelvis” or “legs,” nor any attachment of these small bones to the vertebrae as in all other mammals. Moreover, the “vestigial femur” bears little resemblance to the leg bone of any land animal.

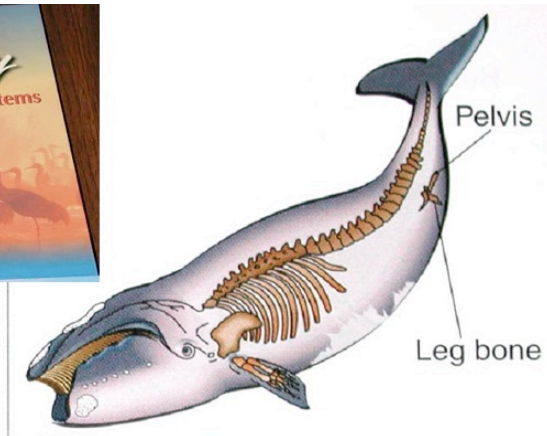
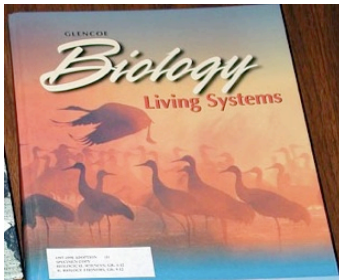
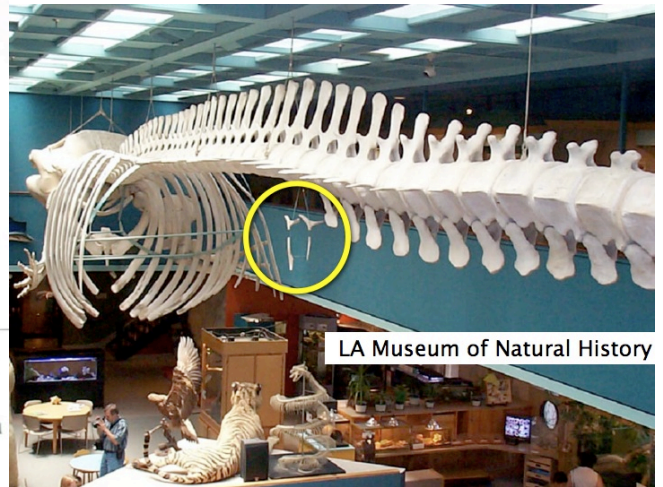


Figure 12-4 Whales have a vestigial pelvis and leg bone that serve no purpose. These structures are evidence of the whale's evolution from four-legged, land-dwelling mammals.

Glencoe Biology—Living Systems (1998), p. 311



- d) Snake Hind Limbs – The small bones at the end of some snakes are not rudimentary hind “legs.” Rather, they are claws that are used during mating, since they have no other means of maneuvering their mate into position.



¹⁵¹ See Jerry Bergman, “Do any vestigial organs exist in humans?” *Creation Ex Nihilo Technical Journal* 14(2):95-98 (August 2000); archived at <http://www.creationontheweb.com/content/view/1663>.

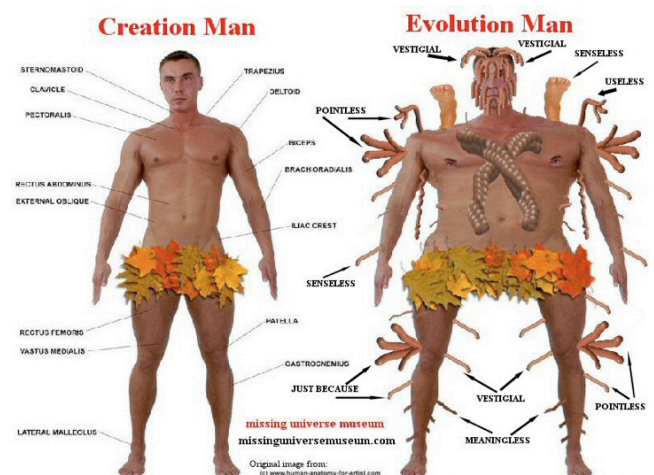
- e) Blind Cave Salamander and Fish – Organs exhibiting reduced function or no function provide poor evidence for a process supposed to generate organs with *new functions*. Obviously, created functions could have been lost as a consequence of the Curse.



- f) Ostrich Wings – Though an ostrich's wings are not used for flight, they are used for courtship and stability while running. If organs do become useless, this would back up



- the second law of thermodynamics and the degenerative process, not evolution, which requires adaptation of organs for new purposes. “Vestigial” organs only prove loss, not evolutionary progression, since evolutionism requires new organs forming for useful purposes, not “old ones” dying out.
5. There is also a very important logical error in the evolutionist claim regarding vestigial organs. This claim is that the vestigial organs in living things are inherited *from their ancestors*. However, some of the alleged “vestigial” organs are not found in the species alleged to be the ancestors of human beings. For example, the appendix is also found in wombats, rabbits, apes, and opossums. Monkeys do not have them, nor the other animals. Thus, which of these descended from which?¹⁵²
6. Moreover, the absence of an abundance of true vestigial organs implies evolution never happened. Creation would logically assume *zero* vestigial organs originally, while evolution would assume *multitudes* of them presently.

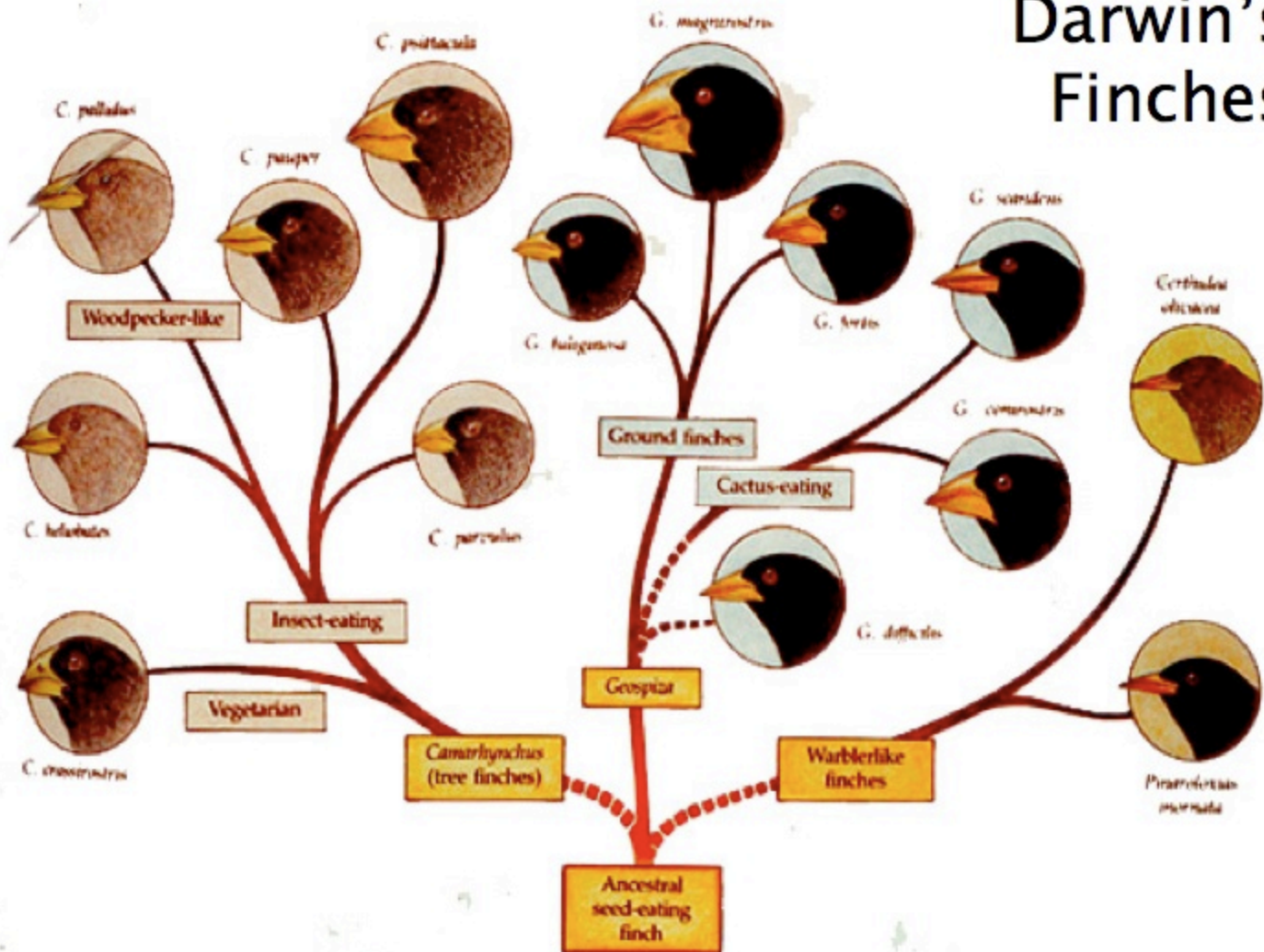


¹⁵² Biologist Hannington Enoch (Professor of Zoology at Presidency College in Madras, India), who challenged the theory of vestigial organs, expressed this logical error as follows: “Apes possess an appendix, whereas their less immediate relatives, the lower apes, do not; but it appears again among the still lower mammals such as the opossum. How can the evolutionists account for this? ... However, the alter absurdity of calling the appendix ‘vestigial’ in man is apparent above all from this fact: that its function is unknown not only in man but also in every other species of animal that possess it. It looks as though evolution has produced a totally useless organ all through the animal world... In order to prove this theory the evolutionists ought to show the existence of ‘nascent organs’ which did not exist in their ancestors.” (Hannington Enoch, *Creation or Evolution* (London: Evangelical Press, 1966), 18-19.)

E. Darwin's Finches¹⁵³

1. When young Darwin visited the Galápagos Islands in 1835, he collected specimens of local wildlife, including some finches. 14 species of finches are scattered among the two dozen or so volcanic islands, which differ mainly in beak size and shape. According to evolutionism, they descended from birds that arrived from the mainland in the distant past, and since their beaks are adapted to the different foods they eat, it seems they are a result of natural selection and thus stand as classic example Darwinian evolution.

Darwin's Finches



¹⁵³ This section is primarily taken from Wells, *Icons of Evolution*, 159-175.



2. The major reason the Galápagos finches are so prominent in modern evolutionary theory is because of research done by Peter and Rosemary Grant, who went to the Galápagos in the 1970s to observe evolution in action.¹⁵⁴

small ground finch medium ground finch large ground finch

sharp-beaked ground finch cactus finch large cactus finch

small tree finch large tree finch? vegetarian finch

woodpecker finch warbler finch

The Fourteen Species of Darwin's Finches		
Common Name	Genus	Species
Ground Finches		
Small Ground	<i>Geospiza</i>	<i>fuliginosa</i>
Medium Ground Finch	"	<i>fortis</i>
Large Ground Finch	"	<i>magnirostris</i>
Sharp-beaked ground Finch	"	<i>difficilis</i>
Cactus Ground Finch	"	<i>scandens</i>
Large Cactus Ground Finch	"	<i>conirostris</i>
Tree Finches		
Small Tree Finch	<i>Camarhynchus</i>	<i>parvulus</i>
Medium Tree Finch	"	<i>pauper</i>
Large Tree Finch	"	<i>psittacula</i>
Woodpecker Finch	<i>Cactospiza</i>	<i>pallidus</i>
Mangrove Finch	"	<i>heliobates</i>
Vegetarian Finch	<i>Platyspiza</i>	<i>Crassirostris</i>
Other		
Warbler Finch	<i>Certhidea</i>	<i>olivacea</i>
Cocos Island Finch	<i>Pinaroloxias</i>	<i>inornata</i>

- a) The Grants and their colleagues caught finches on seven islands and measured the weight of their body and the size of their wings, legs, toes and beaks. They also recorded matings, offspring, rainfall and the different plant seeds produced.
- b) During the early 1970s the islands received regular rainfall (~5 inches). However, in 1977 only about an inch fell, which caused a severe reduction in the availability of seeds, and thus the populations of finches. Those birds that survived and reproduced were those with slightly larger beaks who were capable of cracking the large, tough seeds that remained. As a result of the drought, the average beak depth of medium ground finches increased about 5%.¹⁵⁵

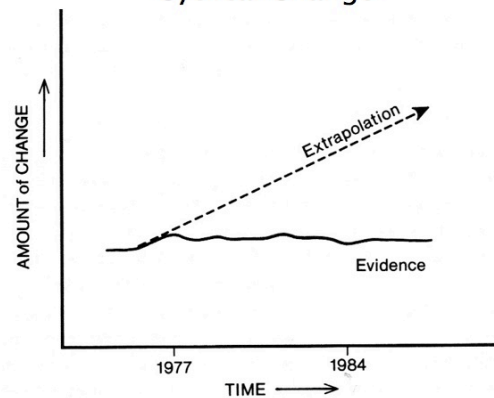
¹⁵⁴ Though labeled "Darwin's Finches," Darwin himself paid little attention to the birds, making only one passing reference to them in his diary and never even mentioning them in *The Origin of Species* [Charles Darwin, *Journal of Researches into the Geology and Natural History of the various countries visited by H.M.S. Beagle*, (1839), Facsimile reprint of the 1st Ed. (New York: Hafner Publishing, 1952), 475]. It wasn't until the rise of neo-Darwinism in the 1930s that the Galápagos finches were elevated to their current prominence. Thus, the "Darwin" in Darwin's Finches is largely mythical. [See Percy Lowe, "The Finches of the Galápagos in relation to Darwin's Conception of Species," *Ibis* 6 (1936), 310-321; David Lack, *Darwin's Finches* (Cambridge: Cambridge University Press, 1947).]

¹⁵⁵ Peter R. Grant, "Natural Selection and Darwin's Finches," *Scientific American* 265 (October 1991), 82-87.

c) Calling the drought a “selection event,” Peter Grant *extrapolated* the data and estimated the number of such events required to transform the medium ground finch into another species.¹⁵⁶

- Grant’s extrapolation depends on the assumption that increases in beak size are cumulative from one drought to the next. However, in the winter of 1982-83, an El Niño brought heavy rains to the Galápagos (over ten times more than normal), and with the abundance of food supply, the average beak size in medium ground finches returned to its previous value. Thus, the evolutionary change that the Grants had their colleagues had observed during the drought of 1977 was reversed by the heavy rains of 1983, and there was *no net evolutionary change*.

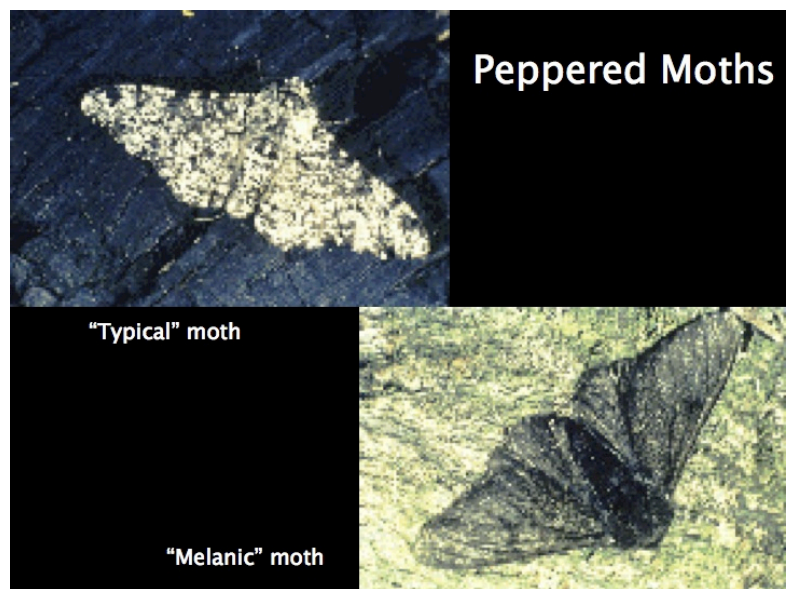
Comparison of Straight-line vs. Cyclical Change



- Ultimately, the entire example of finches on the Galápagos Islands is useless as evidence for evolutionism, since all 14 “species” (though many of them have been observed interbreeding and producing fertile hybrid offspring) of finches are still fundamentally finches. Even if an increase or decrease in beak size were cumulative over successive generations, it would never overcome the *genetic parameters* based on “kind”.¹⁵⁷

F. The Peppered Moth¹⁵⁸

- During the 19th century, British scientists observed that peppered moths (*Biston betularia*) began to change colors over time, especially near heavily polluted cities. Before the industrial revolution, they were mostly “typical” (or “peppered”), mostly light gray with some black speckles, with some coal-black “melanic” forms. However, by the turn of the century more than 90% of the peppered moths near some industrial cities in England were melanic, and the phenomenon was labeled “industrial melanism.”

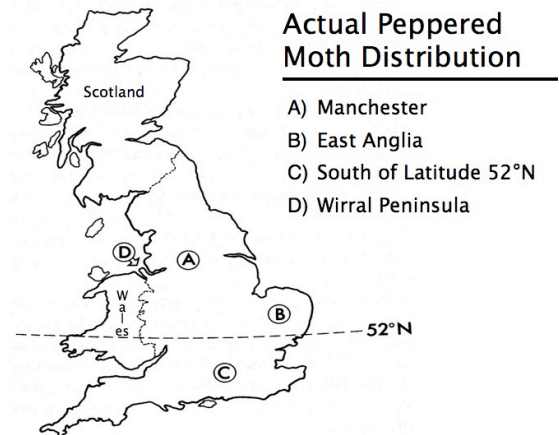


¹⁵⁶ “The number is surprisingly small: about 20 selection events would have sufficed. If droughts occur once a decade, on average, repeated directional selection at this rate with no selection in between droughts would transform one species into another within 200 years. Even if the estimate is off by a factor of 10, the 2,000 years required for speciation is still very little time in relation to the hundreds of thousands of years the finches have been in the archipelago.” (Ibid.)

¹⁵⁷ Likewise, horse racers have bred horses for hundreds of years based on speed, yet there has been absolutely no fundamental change in the animal, because they are genetically bound by the parameters of “kind.”

¹⁵⁸ This section is primarily taken from Wells, *Icons of Evolution*, 137-157.

2. Some speculated that this dramatic reversal was due to natural selection based on predatory birds and a change in camouflage.¹⁵⁹ Others believed the melanism was “induced” by leaves polluted with metallic salts, which the larvae would eat prior to metamorphosis.¹⁶⁰ It wasn’t until the 1950’s that British physician and biologist Bernard Kettlewell set out to test the natural selection theory empirically.¹⁶¹
 - a) Kettlewell marked several hundred peppered moths, typical as well as melanic, with tiny dots of paint on the underside of their wings, and released them *by day* onto nearby tree trunks in the polluted Birmingham woodland. On the following nights he set out traps to recapture as many as he could, catching 27.5% of the melanics and 13.0% of the typicals. Thus, he concluded that a much higher proportion of melanic had survived predation, and that “birds act as selection agents, as postulated by evolutionary theory.”
 - b) Kettlewell immediately dubbed his own results as “Darwin’s missing evidence,” and the scientific community began to rave in unison.¹⁶² Following the passage of anti-pollution legislation in the 1950’s, industrial melanism generally began to decrease throughout England, which continued to bolster the belief in natural selection due to camouflage. Thus, industrial melanism in peppered moths became the classic textbook example of natural selection in action.
3. As time went on, however, biologists began to look beyond the area where Kettlewell had conducted his experiments, and they began to find discrepancies in moth distribution, which brought the role of lichens in Kettlewell’s experiments into question.¹⁶³
4. The death knell for Kettlewell’s experiment came in early 1980s when Finnish zoologists conducted experiments to assess the normal resting places of peppered moths.¹⁶⁴ They concluded that they did not normally rest on tree



¹⁵⁹ See J.W. Tutt, *British Moths* (London: George Routledge, 1896), who argued that as the pollutants increased around industrial cities, the light colored lichen on the trees died and the trees became progressively darker. Thus, the light colored “typical” moths lost their natural camouflage against predatory birds, and the “melanic” forms survived because they were better hidden on the darker tree trunks.

¹⁶⁰ See J.W. Heslop Harrison, “Genetic studies in the moths of the geometrid genus *Oporabia* (*Oporinia*) with a special consideration of melanism in the Lepidoptera,” *Journal of Genetics* 9 (1920), 195-280; J.W. H. Harrison, “The experimental induction of Melanism, and other Effects, in the Geometrid Moth *Selenia Bilunaria* esp.,” *Proceedings of the Royal Society of London B* 117 (1935), 78-92.

¹⁶¹ See H. B. D. Kettlewell, “Selection experiments on industrial melanism in the Lepidoptera,” *Heredity* 9:323-342 (1955); H. B. D. Kettlewell, “Further selection experiments on industrial melanism in the Lepidoptera,” *Heredity* 10:287-301 (1956).

¹⁶² H. B. D. Kettlewell, “Darwin’s Missing Evidence,” *Scientific American* 200:48-53 (March 1959).

¹⁶³ Kettlewell not only did his experiments in Birmingham and Dorset, but near heavily polluted Manchester, for example, where typicals should have been completely replaced, the proportion of melanics was never as high as predicted. In rural Wales, the frequency of melanics was higher than expected, and likewise in rural East Anglia, melanism was 80% despite lichen-covered tree trunks. South of latitude 52°N melanism actually *increased* after the introduction of pollution control, and on the Wirral Peninsula, melanism began decreasing before lichens returned to the trees [see Jonathan Wells, *Icons of Evolution*, 145, note Figure 7-2.].

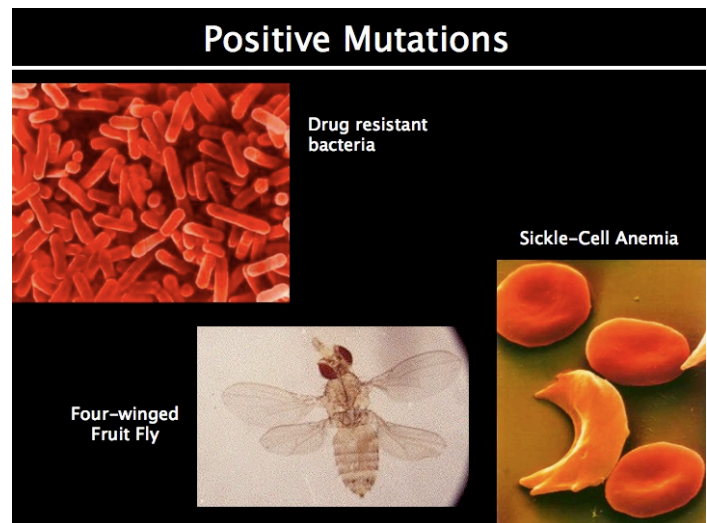
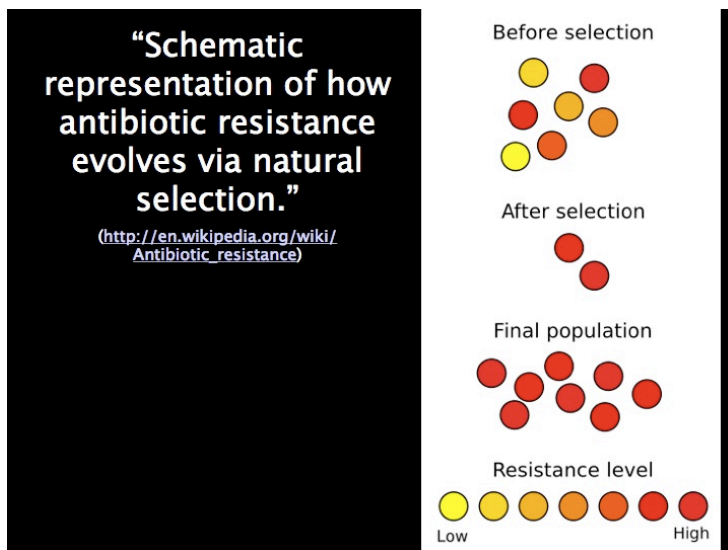
¹⁶⁴ See Kauri Mikkola, “On the selective forces acting in the industrial melanism of *Biston* and *Oligia* moths (Lepidoptera: Geometridae and Noctuidae),” *Biological Journal of the Linnean Society* 21:409-421 (1984).

trunks, but rather on horizontal branches high up in the tree canopy. By releasing moths onto nearby tree trunks in daylight, Kettlewell had created an artificial situation that does not exist in nature.¹⁶⁵

5. The question naturally arises, "If peppered moths don't rest on tree trunks, then where did all those pictures of moths on trunks come from?" The answer is simply that they were staged. Some were made using dead specimens that were glued or pinned to the trunk, while others used live specimens that were manually placed in desired positions, since they are torpid in the daylight and remain where they are put.¹⁶⁶
6. In the end, the entire example is pointless in its use as evidence for evolution. Though the moths changed color, *they remained peppered moths*. The only thing that happened was a change in proportion of two varieties of pre-existing moths, and though dramatic it was no more impressive than the changes domestic breeders have been producing for centuries. Like Darwin's finches, it demonstrated nothing more than gene frequencies shifting back and forth within one created kind.¹⁶⁷

G. Positive mutations

1. Four-winged fruit flies
2. Drug resistant bacteria
3. Sickle-cell anemia and malaria



¹⁶⁵ Peppered moths are night-fliers and normally find their resting places for the daytime on trees before dawn. However, Kettlewell released his moths directly onto tree trunks in the morning. Thus, they remained there docile and exposed on the trucks, becoming easy targets for predatory birds. If the reason for the typical moths' decline was based on their being camouflaged *on the tree trunk*, then the fact that they don't normally rest on trunks completely invalidated Kettlewell's experiment.

¹⁶⁶ Staged photos may have been reasonable when the biologists thought they were simulating the normal resting places of peppered moths. By the late 1980s, however, this practice should have stopped. Unfortunately, it has not. Defenders of the classical story argue that, despite being staged, the photographs illustrate the true cause of melanism. The problem is that it is precisely the cause of melanism that is in dispute.

¹⁶⁷ The issue at hand is not providing evidence for variation (microevolution), but rather providing evidence for universal common descent (macroevolution), which ultimately requires new genetic information to be added in the process. This is the ultimate crisis facing evolutionism: direct observable evidence for the *addition of positive genetic information*.