

# Intelligent Design vs. Evolution

Defending God's Creation

# Genesis 1:1, 21, 25

1 In the beginning God created the heavens and the earth

21 So God created great sea creatures and every living thing that moves, with which the waters abounded, according to their kind, and every winged bird according to its kind. And God saw that it was good.

25 And God made the beast of the earth according to its kind, cattle according to its kind, and everything that creeps on the earth according to its kind. And God saw that it was good.

# Intelligent Design Critics

“The argument for intelligent design basically depends on saying, ‘You haven’t answered every question with evolution.’ Well, guess what? Science can’t answer every question.”

Kenneth Miller

Brown University biologist

Houston Chronicle, 10-22-05

# Fossilization

- Animal or plant must be buried quickly
  - Catastrophic event
  - Before decay or consumed
- Buried with right mixture of minerals
  - Everything is replaced slowly with minerals and becomes hard as rock
- Study of fossils is paleontology

# Nested Hierarchy

- Biology classification developed by Carolus Linnaeus (pre-Darwin)
- Organisms grouped by similarities and differences

## Humans

Kingdom

Animals

Phylum

Chordates

Class

Mammals

Order

Primates

Family

Hominids

Genus

Homo

Species

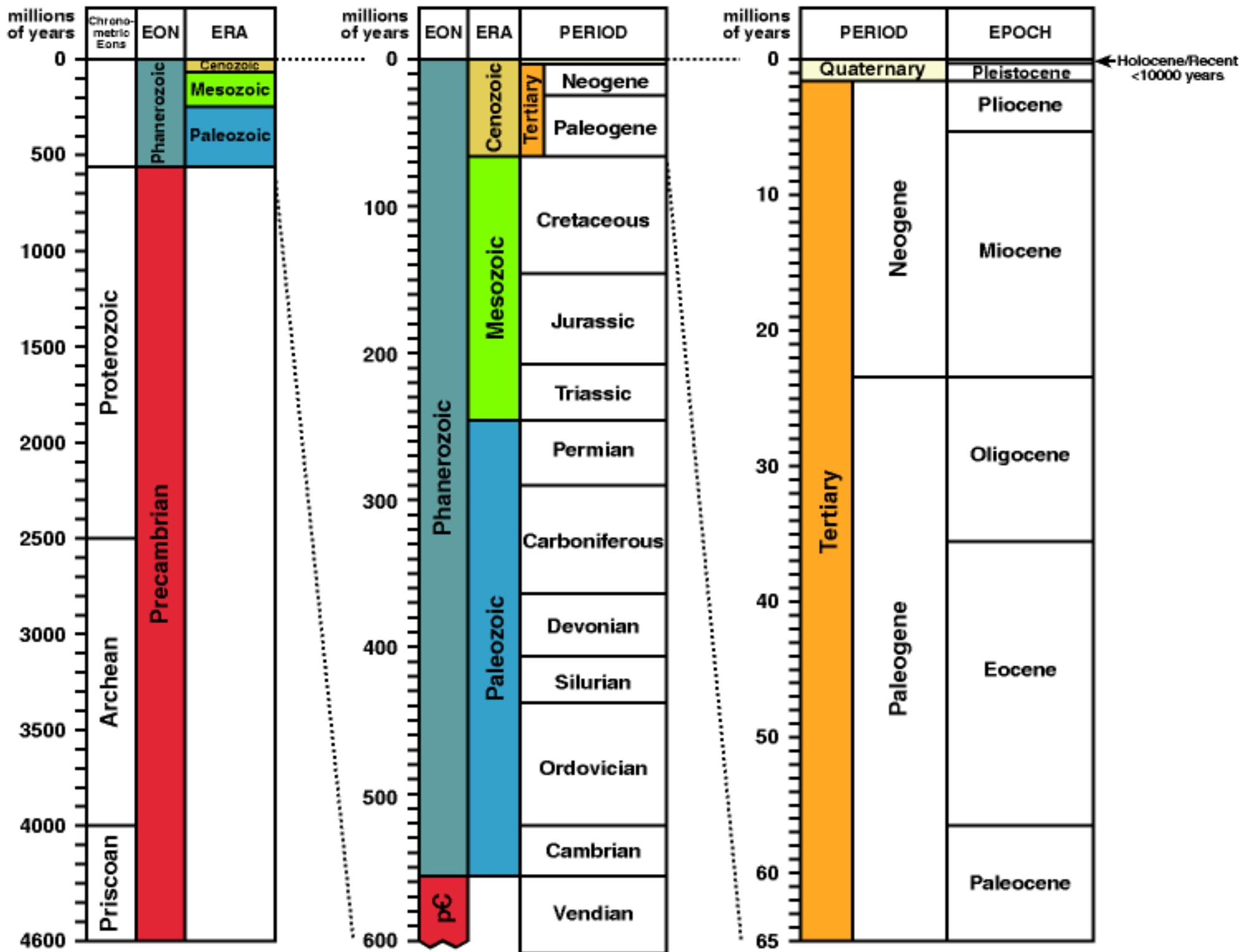
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# Fossil Record

- Cambrian Explosion
  - “Biology’s Big Bang”
- Transitional Fossils
  - Archaeopteryx
- Reptile to mammal evolution
- Whale evolution
- Fish to Amphibian evolution

# Characteristics of Fossil Record

- Sudden Appearance (Saltation)
- Stasis
- Gaps

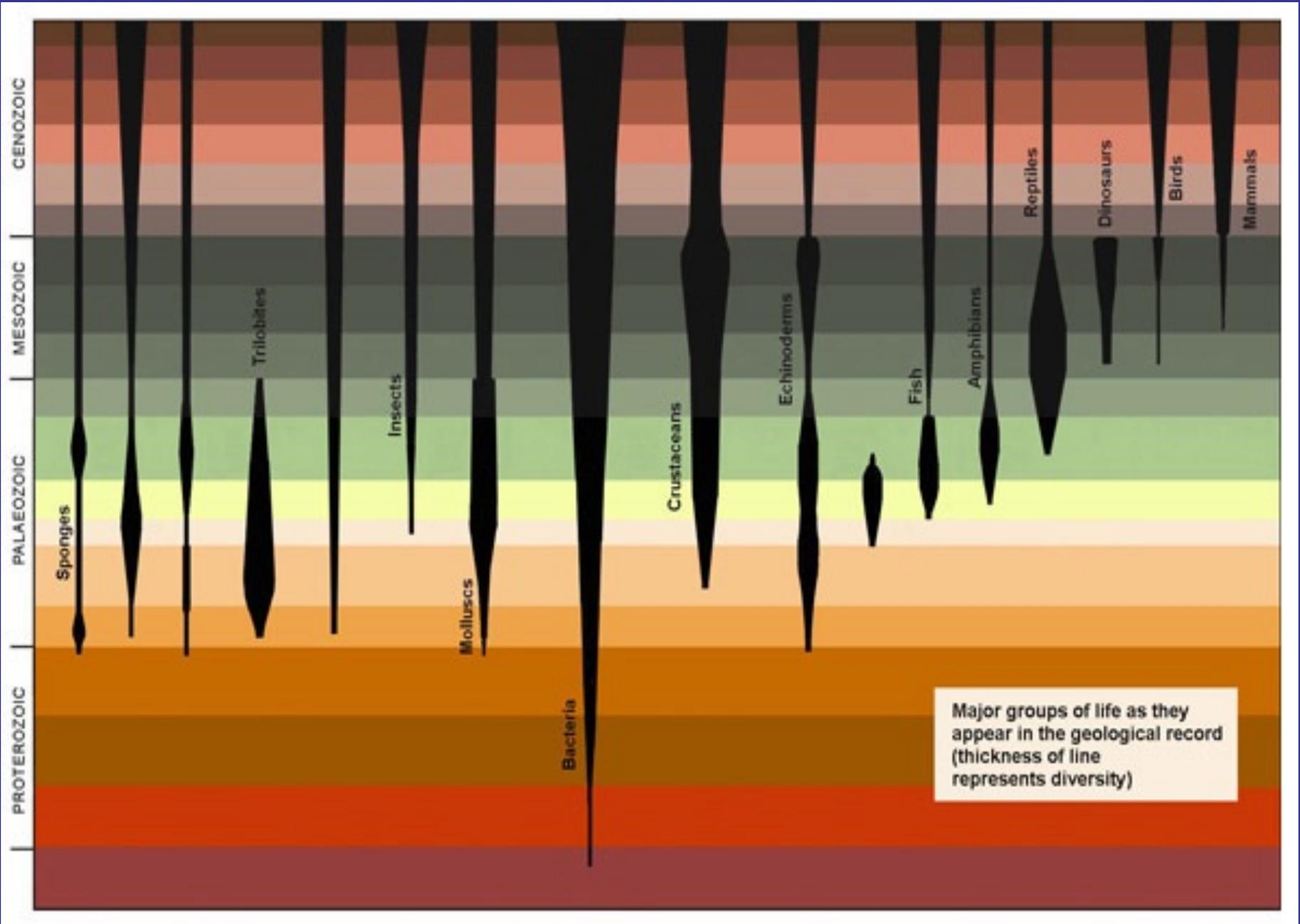


# Cambrian Explosion

- Fossils found in Burgess Shale in Canada, the Sirius Passet in Northern Greenland, and Chengjiang in Southern China
- Marked by an abrupt appearance of animal fossils
- No evidence of any connecting fossils to pre-Cambrian era

# Cambrian Explosion

- Known in Darwin's day
- Supposedly only last 5-10 million years
- Most of the animal phyla alive today appear, as well as some extinct ones
- Turns Darwin's tree of life upside down (Phyla and Class differences appear from the start)



# Cambrian Explosion

On the Cambrian Explosion problem: “at present must remain inexplicable; and may be truly urged as a valid argument against the views here entertained.”

Charles Darwin in *The Origin of Species*

Cambrian Explosion dubbed Darwin's  
Dilemma

- 2009 paper titled “A solution of Darwin’s dilemma of 1859”
  - About discovery of pre-Cambrian fossils
- “fossil organisms we've uncovered from the Precambrian had "bodies" that were so "simple" that they cannot explain the sudden burst of complex animal form that appears in the Cambrian.” - Casey Luskin, Discovery Institute
- “Most of the animal phyla that are represented in the fossil record first appear, ‘fully formed,’ in the Cambrian some 550 million years ago...The fossil record is therefore of no help with respect to the origin and early diversification of the various animal phyla”
  - From Barnes, et. al., *The Invertebrates: A New Synthesis*, pp. 9-10

- “The Ediacaran and Cambrian periods witnessed a phase of morphological innovation in animal evolution unrivaled in metazoan history, yet the proximate causes of this body plan revolution remain decidedly murky. The grand puzzle of the Cambrian explosion surely must rank as one of the most important outstanding mysteries in evolutionary biology.”

- Christopher Lowe, *Science*, 340:1170; 2013

# Transitional Fossils

- “missing links”
- A gradualistic model would predict innumerable transitional forms
- More transitional forms at level of phylum than at lower levels of classification
- Yet only a handful of fossils are claimed to be “links”

# Transitional Fossils

- “the intervals of time that separate fossils are so huge that we cannot say anything definite about their possible connection through ancestry and descent.”
  - Henry Gee, chief science writer for *Nature*

# Transitional Fossils

- “[Since] innumerable transitional forms must have existed, why do we not find them imbedded in countless numbers in the crust of the earth? Why 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 gravest objection which can be urged against my theory”
  - Charles Darwin in *The Origin of Species*

# Transitional Fossils

- “Ghost fossils” used to explain gaps and fossils out of order
- Reasons for not existing?
  - Imperfect record
  - Insufficient search
  - Punctuated equilibrium
  - Abrupt emergence

# Imperfect Record

- By 1994
  - Estimated 250 million fossils or ¼ billion cataloged fossils of 250,000 fossil species

from *The Creation Hypothesis*,  
J.P. Moreland, editor, page 278

# Imperfect Record

- Terrestrial vertebrates
  - Level of orders, 98% found fossilized
  - Level of families, 80% found fossilized
    - 88% if remove birds (poorly fossilized)
  - Level of genus, 66% not uncommon
- Similar analysis can be done for invertebrates

# Insufficient Search

- Maybe in Darwin's day, but can't be argued very convincingly today
- Searches for transitional forms have been performed in sediment where thought to most likely occur
- Number of transitional fossils should be greater for the major divisions than for the minor (i.e., the gaps are still great)

# Punctuated Equilibrium

- Theory characterized by bursts of extensive evolutionary change followed by stasis (proposed by Eldredge, Gould)
- Trying to fit the fossil data
- No mechanisms known for these periods of bursts!

# Abrupt Emergence

- Transitional forms are not there because never existed
- Best fits empirical data
- Difficult to harmonize with evolutionary theory and hard to explain without an intelligent cause

# Archaeopteryx

- First discovered in 1861
- Best preserved specimen in Berlin
- Appeared to be an intermediate between reptiles and birds
- Had wings, feathers, teeth, long-lizard like tail, and claws on its wings

# Archaeopteryx



# Archaeopteryx

- Has lead to dinosaur to bird theory
- No clear cut ancestors or descendents (in fact, supposed ancestor found in fossil record much later)
- No scales found, despite being drawn with a reptile like head

# Archaeopteryx

- Archaeoraptor
  - Found in 1999 and published in National Geographic
  - Later proven to be fake, dinosaur tail glued to the body of a primitive bird
- Bambiraptor
  - Ancestor of archaeopteryx despite lived 75 million years later
  - No feathers found despite pictures looking otherwise

"The idea of feathered dinosaurs and the theropod origin of birds is being actively promulgated by a cadre of zealous scientists acting in concert with certain editors at Nature and National Geographic who themselves have become outspoken and highly biased proselytizers of the faith. Truth and careful scientific weighing of evidence have been among the first casualties in their program, which is now fast becoming one of the grander scientific hoaxes of our age---the paleontological equivalent of cold fusion."

Storrs Olson, curator of birds at Smithsonian,  
1999

# Archaeopteryx

- “Archaeopteryx is not ancestral of any group of modern birds”... it is “the earliest known member of a totally extinct group of birds” - Larry Martin, paleontologist
- “Archaeopteryx is just another dinosaur with feathers” - Henry Gee, chief science writer for *Nature*

- The implication, the researchers said, is that birds almost certainly did not descend from theropod dinosaurs, such as tyrannosaurus or allosaurus. The findings add to a growing body of evidence in the past two decades that challenge some of the most widely held beliefs about animal evolution.
- "For one thing, birds are found earlier in the fossil record than the dinosaurs they are supposed to have descended from," Ruben said. "That's a pretty serious problem, and there are other inconsistencies with the bird-from-dinosaur theories.
- "But one of the primary reasons many scientists kept pointing to birds as having descended from dinosaurs was similarities in their lungs," Ruben said. "However, theropod dinosaurs had a moving femur and therefore could not have had a lung that worked like that in birds. Their abdominal air sac, if they had one, would have collapsed. That undercuts a critical piece of supporting evidence for the dinosaur-bird link.
  - ScienceDaily, June 2009

# Reptile to Mammal Evolution

- Suppose to be best example from fossil record of transitional forms
- 2 bones from reptile jaw form bones of mammalian ear
- Intermediates called therapsids (mammal like reptiles)
- Typically arrange 9 therapsids in order to show transitions

# Reptile to Mammal Evolution

- First 3 are contemporaries from 2 separate orders
  - Some dispute if some are mammalian ancestors
- Lining up fossils often violates temporal order
- Numerous therapsids in fossil record
- No transitional forms of migrating bones to middle ear

# Darwinian Theology

“The gradual transition from therapsid reptiles to mammals is so abundantly documented by scores of species in every stage of transition that it is impossible to tell which therapsid species were the actual ancestors of modern mammals.”

Douglas Futuyma, evolutionary biologist

From Dembski and Wells, *The Design of Life*, page 82

# Whale evolution

- Land mammals evolved into whales over millions of years, gradual changes
- Transitional fossils are not as neat as portrayed (all have distinct characteristics that would have to lose to be ancestors)
  - Most fossils now felt to be terminal side branches
- Molecular data suggests closest relative is hippo, but fossil data suggest hippo close to pigs and camels
- No mechanisms!

# Changes for Whale Evolution

- Counter-current heat exchanger for intra-abdominal testes
- Ball vertebra
- Tail flukes and musculature
- Blubber for temperature insulation
- Ability to drink sea water (reorganization of kidney tissues)
- Fetus in breech position (for labor underwater)
- Nurse young underwater (modified mammae)
- Forelimbs transformed into flippers
- Reduction of hindlimbs
- Reduction/loss of pelvis and sacral vertebrae
- Reorganization of the musculature for the reproductive organs
- Hydrodynamic properties of the skin
- Special lung surfactants
- Novel muscle systems for the blowhole
- Modification of the teeth
- Modification of the eye for underwater vision
- Emergence and expansion of the mandibular fat pad with complex lipid distribution
- Reorganization of skull bones and musculature
- Modification of the ear bones
- Decoupling of esophagus and trachea
- Synthesis and metabolism of isovaleric acid (toxic to terrestrial mammals)
- Emergence of blowhole musculature and their neurological control

# Whale Evolution

- Recent jawbone discovered of fully aquatic whale predates its supposed ancestors, the walking whales
  - Findings released in 2011
- Reduces time frame from 10 myr for all these changes to occur to 4-5 myr

# Fish to Tetrapod Evolution

- *Tiktaalik*, discovered in 2004
- Suppose to be transitional between fish and amphibians
- Hailed because “in the right rocks”

“What evolution enables us to do is to make specific predictions about what we should find in the fossil record. The prediction in this case is clear-cut. That is, if we go to rocks of the right age, and the rocks of the right type, we should find transitions between two great forms of life, between fish and amphibian. ... **What we see when we look at the fossil record, at rocks of just the right age, is a creature like Tiktaalik.**”

Neil Shubin, co-discover

# Fish to Tetrapod Evolution

- *Tiktaalik*, discovered in 2004
- Suppose to be transitional between fish and amphibians
- Hailed because “in the right rocks”
- **But, in January 2010 tetrapod trackways found that 20 myr older than *Tiktaalik***

# Fish to Tetrapod Evolution

- modern species of African lungfish (*Protopterus annectens*) and a walking catfish (*Clarias batrachus*) are air-breathing fish that are able to walk across dry land, and keep itself upright using its pectoral fins.
- Obviously, these are not considered precursors to Tetrapods

- “The fossil record with its abrupt transitions offers no support for gradual change...All paleontologists know that the fossil record contains precious little in the way of intermediate forms; transitions between major groups are characteristically abrupt.”
- Stephen Jay Gould, Harvard biologist, evolutionist

- “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...Most species exhibit no directional change during their tenure on earth...In any local area, a species does not arise gradually by the steady transformation of its ancestors; it appears all at once and “fully formed”.”
- Stephen Jay Gould, Harvard biologist, evolutionist

# Living Fossils

- Species that have remained virtually the same for hundreds of million years
  - Ex., horseshoe crab, the coelacanth, or the ginkgo tree
  - Term coined by Darwin
- Shows evolution lacks theory of generative
- Yet, evolutionary biologists offer this as proof of evolution (despite the lack of )

# Fossil record conclusions

- Animal life explodes onto scene
- Lack of transitional forms
  - Fossils found out of order
- Record not incomplete
- Use fossil record selectively!
- Similarity may not be due to common ancestry!
- Impossible to say with certainty ancestry and descent!
- No mechanisms

# Darwin's Theology

- “This designer has been busy! And what a stickler for repetitive work!”
  - Kenneth Miller, evolutionary biologist
- According to Miller, the fossil record shows a designer who “just can’t get it right the first time. Nothing he designs is able to make it over the long term.”
- “In fact, tallying up all the millions of different species ever found, the Creator must have been constantly at work, and this too, for Miller, is hard to believe”
  - Cornelius Hunter, *Darwin's Proof*, page 80

# Psalm 50:10-11

- For every beast of the forest is mine, the cattle on a thousand hills. I know all the birds of the hills, and all that moves in the field is mine.