

Intelligent Design vs. Evolution

Defending God's Creation

Revelation 4:11

“You are worthy, O Lord,
To receive glory and honor and power;
For You created all things,
And by Your will they exist and were
created.”

Review

- Natural Selection
- DNA Mutations
- **Lack of Mechanisms!**

Criticism of Irreducible Complexity

- “Darwin brilliantly addressed this argument by surveying existing species to see if one could find functional but less complex eyes that not only were useful, but also could be strung together into a hypothetical sequence showing how a camera eye might evolve. If this could be done – and it can – then the argument for irreducible complexity vanishes.”
- Jerry Coyne, evolutionary biologist 2005

Behe's response

- “It is no longer enough to consider only the anatomical structure of whole eyes, as Darwin did in the nineteenth century (and as popularizers of evolution continue to do today)....Anatomy is, quite simply, irrelevant to the question of whether evolution could take place on the molecular level.”
- Michael Behe, *Darwin's Black Box*, 1996

Icons of Evolution

- Haeckel's Embryos
- Homology

Definitions

- Ontogeny – the embryonic development of a species
- Phylogeny – the evolutionary history of a species

Darwin in *The Origin of Species*

- “it is probable, from what we know of the embryos of mammals, birds, fishes and reptiles, that these animals are the modified descendants of some ancient progenitor.”

Darwin in *The Origin of Species*

- “Generally the embryos of the most distinct species belonging to the same class are closely similar, but become, when fully developed, widely dissimilar.”
- Cited the work of Karl Ernst von Baer

Darwin in *The Descent of Man*

- “The [human] embryo itself at a very early period can hardly be distinguished from that of other members of the vertebrate kingdom”
- His conclusion: “we ought frankly to admit their community of descent”

Haeckel's Embryos

- German biologist
- “Ontogeny recapitulates phylogeny”
 - The embryo retraces its evolutionary history, i.e. it passes through in its development abbreviated stages that resemble the main evolutionary stages of its ancestors

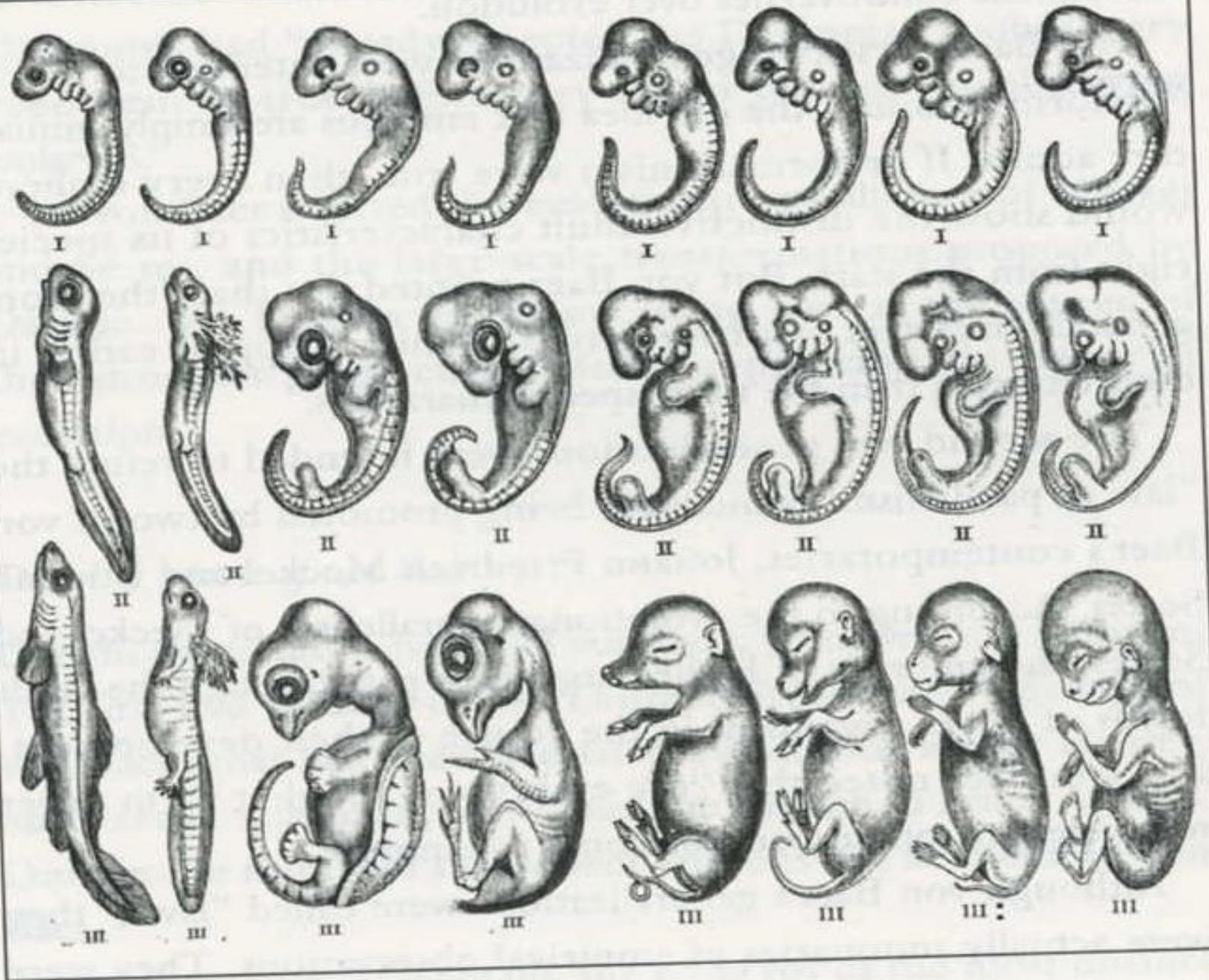


FIGURE 5-1 Haeckel's Embryos.

From Jonathan Wells, *Icons of Evolution*, page 83

Haeckel's Embryos

- Used only 5 of the 7 classes of vertebrates
- Choose select members of each class
 - Example - he used the salamander rather than the frog for the amphibians
- Half his embryos were mammals from the same order (placentals)
- Drawings were distorted (in some cases the pictures were from the same specimen and in others were doctored)

Haeckel's Embryos

- Michael Richardson (embryologist) – “These famous images are inaccurate and give a misleading view of embryonic development”
- Published actual photos of embryos
- Embryos vary in size (Haeckel's all same)
- Amphibians vary widely
- Somites (blocks of cells on backbone vary in number greatly – Haeckel's were close)

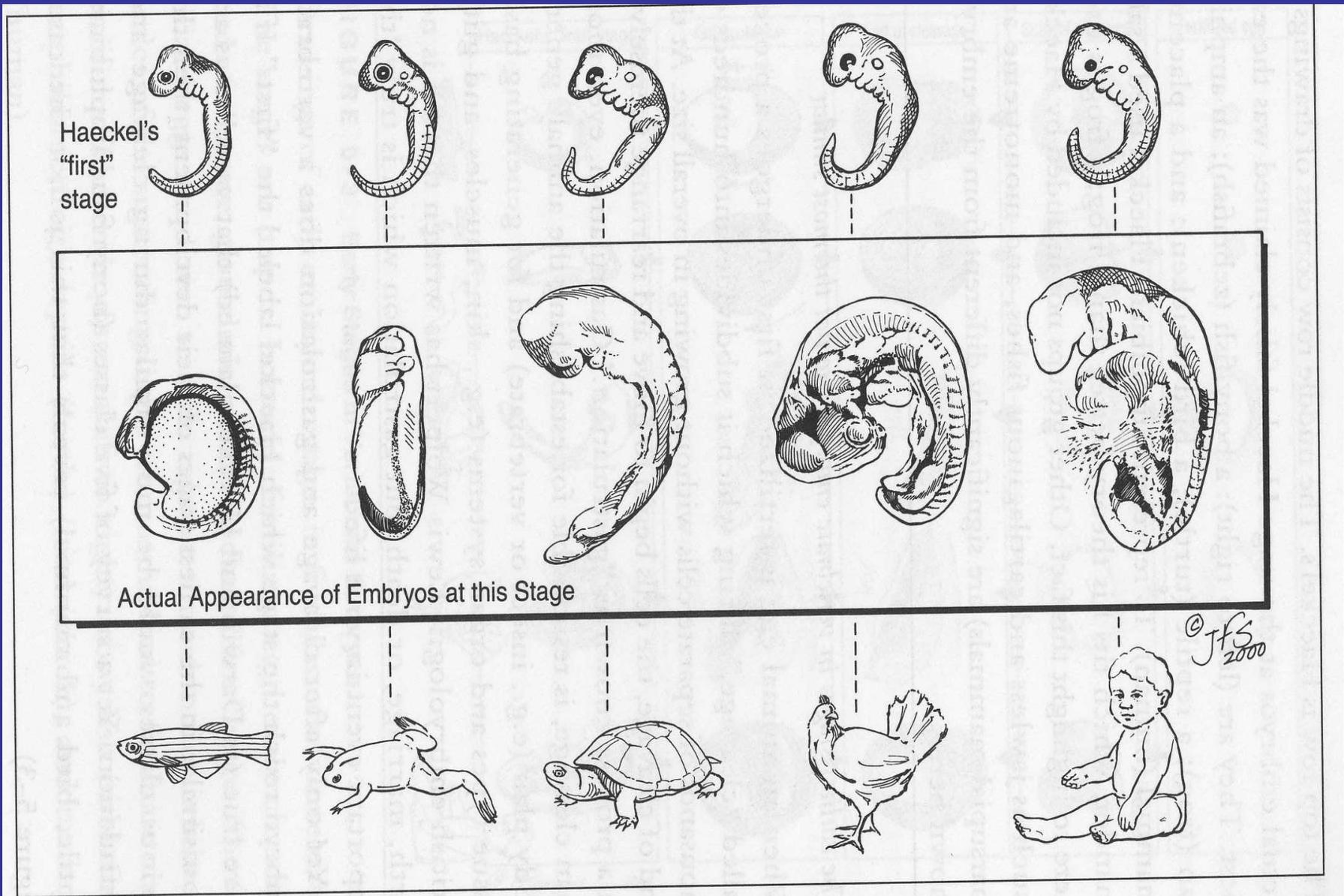


FIGURE 5-2 A Comparison of Haeckel's Drawings with Actual Vertebrate Embryos.

From Jonathan Wells, *Icons of Evolution*, page 93

Haeckel's Embryos

- “It looks like it’s turning out to be one of the most famous fakes in biology.”
 - Michael Richardson
- **Biologists have known for a long time!**

Haeckel's Embryos

- Even worse, the embryos pictured are not even in their earliest stages but rather in a mid stage!

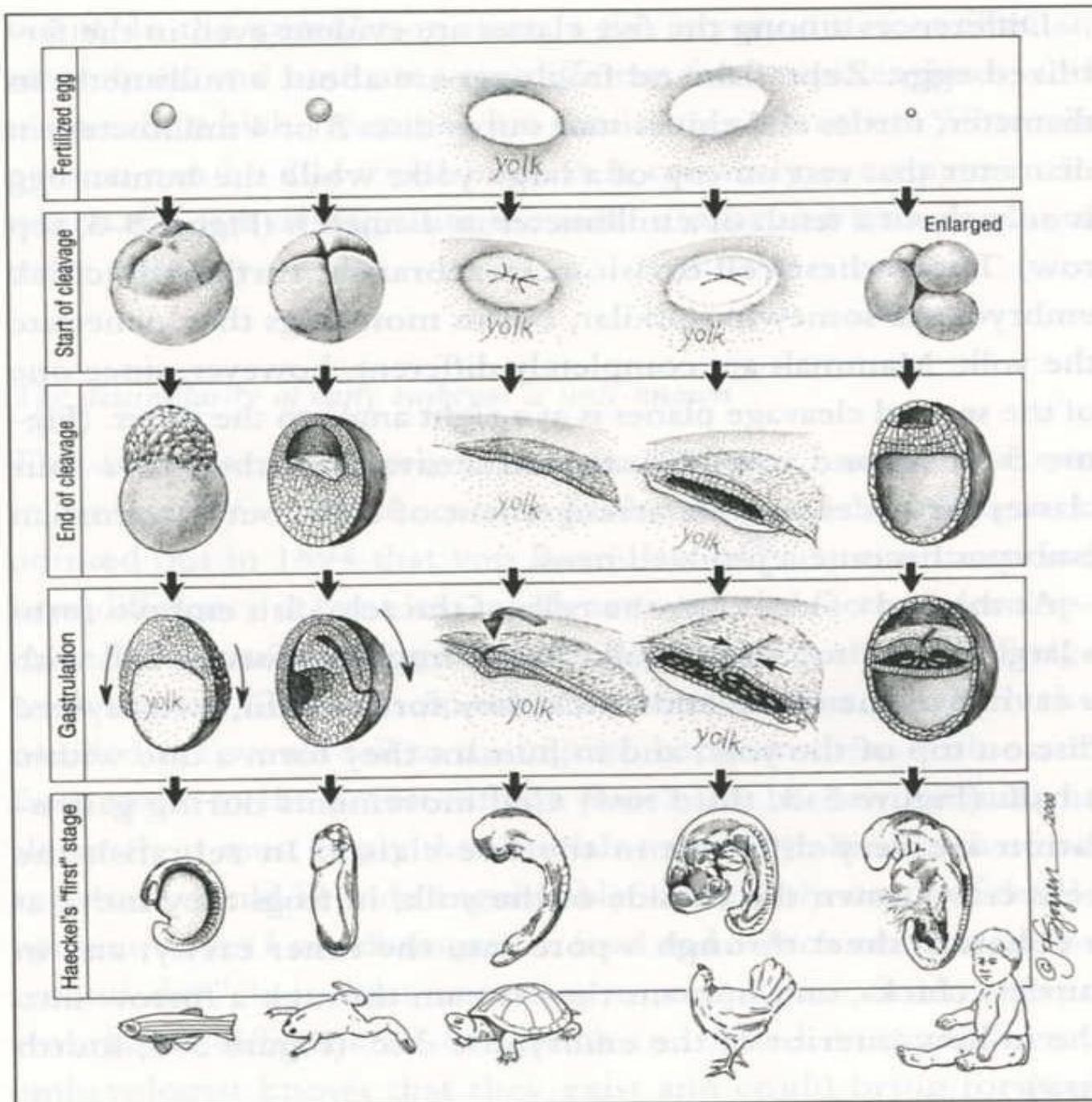


FIGURE 5-3 Early Stages in Vertebrate Embryos.

From Jonathan Wells, *Icons of Evolution*, page 95

Do mammals have gill slits?

- Folds of skin in neck
- Called pharyngeal arches and pouches
- Develop into parts of face, facial muscles, inner ear, and endocrine glands

Icons of Evolution

- Haeckel's Embryos
- Homology

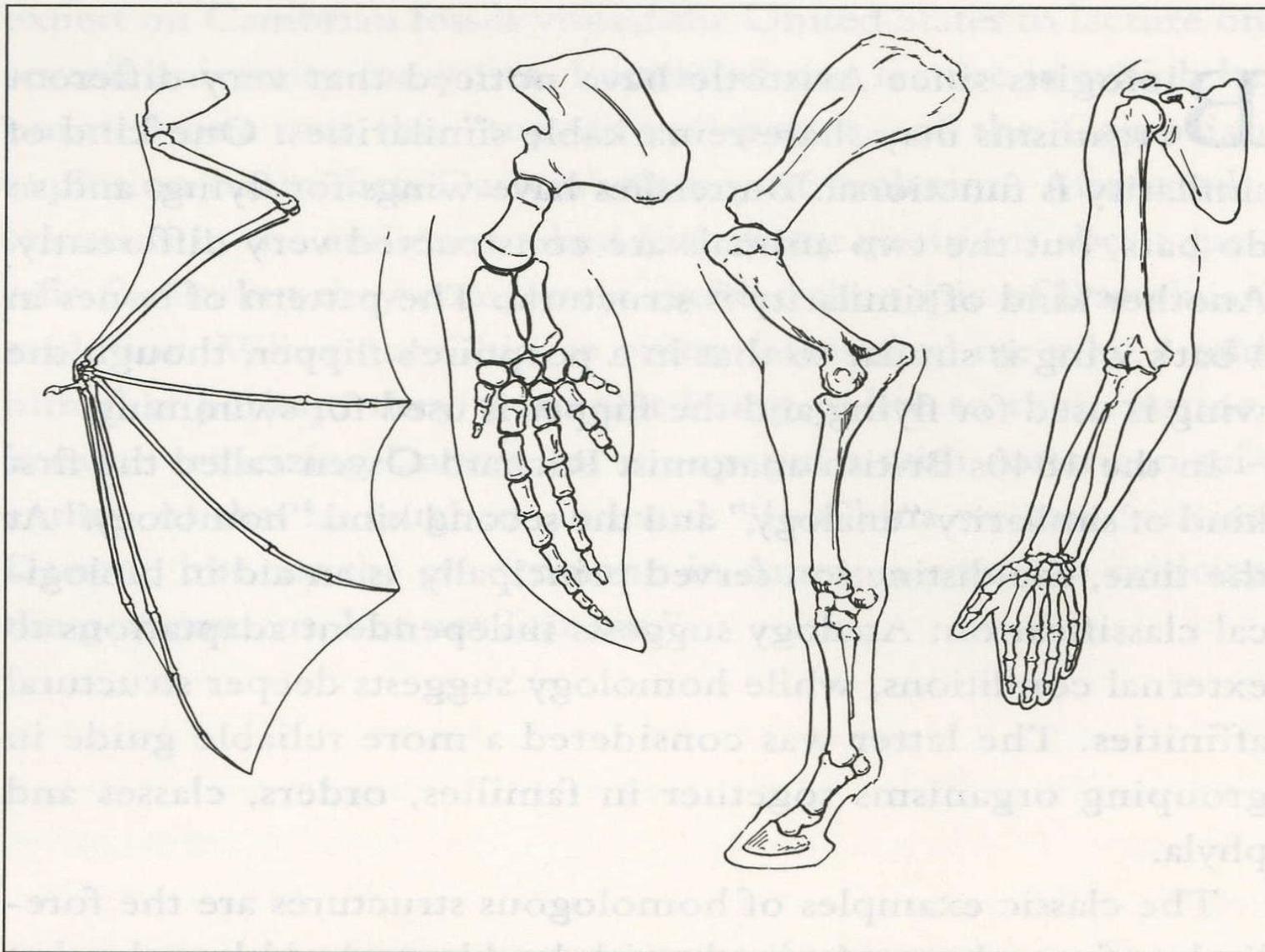


FIGURE 4-1 Homology in Vertebrate Limbs.

Forelimbs of (a) bat, (b) porpoise, (c) horse, and (d) human, showing bones considered to be homologous.

Homology

- Homology is now defined as similarity of structure and position due to a common ancestor

Homology

- This is circular reasoning!
- Common ancestry demonstrates homology which demonstrates common ancestry!

Homology

- “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”
 - Ronald Brady, 1985

Homology

- Consider “Convergent Evolution”
 - Placental and Marsupial Mammals
 - Wolves, cats, squirrels, ground hogs, anteaters, moles, and mice
 - Giant Panda and Red Panda
 - “thumbs” – radial sesamoid
 - Evolutionary speaking, not felt to be related

Homology

- Some homologous structures form from distinct developmental pathways
 - In frogs the digits on limbs form from tail-to-head direction but in salamanders (fellow amphibian) it proceeds from head-to-tail direction

- “Homology is what is perceived as the same trait in different taxa and is a true representation of inheritance and phylogeny at the organismal level (e.g., it is the perceived phenotype, not the processes responsible for generating it). Homoplasy is the diametric opposite of homology--underlying similarity that does not result from inheritance at the hierarchical level (e.g., gene, tissue, organ; developmental pattern) being considered.”
- David B. Wake, Marvalee H. Wake, and Chelsea D. Specht, "Homoplasy: From Detecting Pattern to Determining Process and Mechanism of Evolution," *Science*, Vol. 331:1032-1035 (February 25, 2011).

- “This poses a real problem for Darwinian evolution because it means that on the one hand a trait appears to be entirely convergent, but on the other hand virtually identical genetic mechanisms are being used to generate the trait. They call it "deep homology" because it's extremely unlikely that such a high degree of genetic similarity would appear by chance. Since they are inextricably wedded to material causes, they conclude that the similarity must exist due to common ancestry. However, the traits also cannot possibly be entirely homologous since the traits produced by the genes are not found in the common ancestor. Either way, this data shows that at some level, extremely high patterns of biological similarity appeared independently.”
 - Casey Luskin, Discovery Institute

Molecular Phylogeny

- Attempts to look at DNA, RNA, or proteins to determine evolutionary relationships
- Results often contradictory
 - Some have grouped the fly with humans
 - Some have grouped insects closer to humans than roundworms

Homology

- Homologous structures can be shown to arise from different genes
 - Fruit fly and other insects and their body segments
- Non-homologous structures can be shown to arise from similar genes
 - Fruit flies and mice have similar genes involved in development of appendages

Shared Genetic Errors

- GULO pseudogene
 - Gene that codes for enzyme in synthesis of vitamin C
 - Supposedly broken copy
 - Is it non-functional?
- Not all primates missing enzyme
- Other mammals that are missing enzyme
 - Guinea Pig
- Other aspects of genome vary widely
 - Y chromosome in chimps and humans

Human – Chimp DNA

- Claimed that only 1% difference
 - Supposed “strong” evidence of common ancestry
- Now known that 1% is myth
 - Relative Differences: The Myth of 1%
 - *Science* 316:1836 June 2007
- Depends on how you align DNA and interpret “non-functional” DNA
- Now believe the number maybe in low 70%

- Could researchers combine all of what's known and come up with a precise percentage difference between humans and chimpanzees? "I don't think there's any way to calculate a number," says geneticist Svante Pääbo, a chimp consortium member based at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany. *"In the end, it's a political and social and cultural thing about how we see our differences."*

- Relative Differences: The Myth of 1%
- *Science* 2007

- “The differences we see, when examining these two genomes, are consistent with small changes, of the sort easily accessible to evolutionary mechanisms.”
- From his series on "Evolution and the Origin of Biological Information," BioLogos-affiliated scientist Dennis Venema

- “This evidence alone does not, of course, prove a common ancestor; from a creationist perspective such similarities could simply demonstrate that God used successful design principles over and over again.”
- (Francis Collins, *The Language of God*, p. 134 (Free Press, 2006).)

Homology

- Common structures could arise from a common designer!
- Common genetics could arise from a common designer!

Darwinian Theology

- “How inexplicable are the cases of serial homologies on the ordinary view of creation! ...Why should similar bones have been created to form the wing and the leg of a bat, used as they are for such totally different purposes, namely flying and walking?”
- Darwin, *The Origin of the Species*, page 437

Darwinian Theology

- “Odd arrangements and funny solutions are the proof of evolution – paths that a sensible God would never tread but that a natural process, constrained by history, follows perforce. No one understood this better than Darwin. Ernst Mayer has shown how Darwin, in defending evolution, consistently turned to organic parts and geographic distributions that make the least sense.”
- Stephen Jay Gould, *The Panda's Thumb*, pages 20-21

Darwinian Theology

- “The facts of embryology, the study of development, also make little sense except in the light of evolution. Why should species that ultimately develop adaptations for utterly different ways of life be nearly indistinguishable in their early stages? How does God’s plan for humans and sharks require them to have almost identical embryos?”
- Take any major group of animals, and the poverty of imagination that must be ascribed to a Creator becomes evident.”
- Douglas Futuyma, *Science on Trial*, page 62

Job 39:17

- In speaking of the ostrich:
- “because God has made her forget wisdom and given her no share in understanding”
- God creates things according to his pleasure!
- Where were we?