

## CLASSROOM CLADOGRAM OF VERTEBRATE/HUMAN EVOLUTION

### ILLUSTRATION RESOURCES

#### Pictures for Big Cladogram of Vertebrate Evolution

The letters A-H below are used to reference the sources for the illustrations, 1-11

- A. Gould, Stephen Jay. 1989. *Wonderful Life*. Norton & Co. pp. 321-323
- B. Moorehead, Alan. 1969. *Darwin and the Beagle*. Harper & Row
- C. Schmalhausen, L.L. 1968. *The Origin of Terrestrial Vertebrates*. Academic Press
- D. Stahl, Barbara J. 1974. *Vertebrate History: Problems in Evolution*. McGraw-Hill
- E. Strahler, Arthur N. 1987. *Science and Earth History...The Evolution/Creation Controversy*. Prometheus
- F. Strickberger, Monroe W. 1990. *Evolution*. Jones & Bartlett
- G. Time-Life Books. *The Emergence of Man - The First Men*. 1973. Time Inc. Pp. 12-13
- H. Johnson, Elden, & Evelyn Hatcher. *Manual for Introductory Anthropology*. 1965. Burgess. Pg. 15  
=====
- 1a. Pikaia  
A. page 322; Onsite: <http://www.indiana.edu/~ensiweb/c.pikaia.html>
- 1b. Amphioxus (*Branchiostoma*)  
E. page 405, fig. 42.3; Onsite: <http://www.indiana.edu/~ensiweb/c.amphio.html>
- 2a. Agnatha (jawless fishes): Heterostracan (*Pteraspis*); Coelolepid (*Phlebolepis*)  
F. page 325, fig. 16-7 a,b; Onsite: <http://www.indiana.edu/~ensiweb/c.agnath.html>
- 2b. Cyclostomes: Lamprey (*Petromyzon*); Hagfish (*Bdellostoma*)  
F. page 325, fig. 16-7 e,f; Onsite: <http://www.indiana.edu/~ensiweb/c.cyclo.html>
- 3a. Gnathostomes (jawed fishes): *Climatius* sp.  
F. page 327, fig. 16-8; Onsite: <http://www.indiana.edu/~ensiweb/c.climat.html>
- 3b. Modern jawed fish (Sea Perch)  
B. page 253; Onsite: <http://www.indiana.edu/~ensiweb/c.perch.html>
- 4a. Crossopterygian (lobe-fin fishes): *Eusthenopteron* sp.  
E. page 409, fig. 43.2 A; Onsite: <http://www.indiana.edu/~ensiweb/c.cross.html>
- 4b. Coelacanth (*Latimeria chalumnae*)  
F. page 47, fig. 3-14 b; Onsite: <http://www.indiana.edu/~ensiweb/c.coel.html>
- 5a. Amphibian: *Ichthyostega*  
C. page 61, fig. 35; Onsite: <http://www.indiana.edu/~ensiweb/c.ichthy.html>
- 5b. Salamander (*Ranodon sibiricus*)  
C. page 262, fig. 156; Onsite: <http://www.indiana.edu/~ensiweb/c.salam.html>
- 6a. Reptiles (Cotylosaurs): *Captorhinus* sp.; *Hylonomus* sp.  
E. page 420, fig. 43.13 A                      F. page 339, fig. 17-7 c  
Onsite: <http://www.indiana.edu/~ensiweb/c.cotylo.html>

- 6b. Modern reptile: Galapagos Land Iguana  
B. page 194; Onsite: <http://www.indiana.edu/~ensiweb/c.iguana.html>
- 6c. Birds: Archaeopteryx and Pigeon  
E. page 425, fig. 44.3; Onsite: <http://www.indiana.edu/~ensiweb/c.birds.html>
- 7a1. Synapsid: Pelycosaur (*Dimetrodon* sp.): Onsite: <http://www.indiana.edu/~ensiweb/c.dimet.html>  
D. page 298, fig. 7.20 b      Skull: E, page 420, fig. 43.13 C
- 7a2. Synapsid: Therapsid (*Cynognathus* sp.): Onsite: <http://www.indiana.edu/~ensiweb/c.cyno.html>  
D. page 302, fig. 7.21 b      Skull: E, page 420, fig. 43.13 D
- 8a. Early Mammals: *Sinoconodon* sp.; *Megazostrodon* sp: Onsite: <http://www.indiana.edu/~ensiweb/c.sinoc.html>  
E. page 420, fig. 43.13 F      F. page 369, fig. 18-4
- 8b. Mod. Mammal: Dog (from web source: <http://www.geocities.com/~kidsanddogs/skeleton2.html>)  
Onsite: <http://www.indiana.edu/~ensiweb/c.dog.html>
- 9a. Early Primate: Plesiadapid (*Palaechthon* sp.)  
F. page 388, fig. 19-4 b; Onsite: <http://www.indiana.edu/~ensiweb/c.palaec.html>
- 9b. Mod. Prosimians: Ring-Tailed Lemur, Tarsier, Gray Loris  
D. page 472, fig. 9.31; Onsite: <http://www.indiana.edu/~ensiweb/c.prosim.html>
- 10a. Early Hominoids ("Pre-Apes"): *Proconsul* sp., *Aegyptopithecus* sp.  
F. page 388, fig. 19-4 d,e; Onsite: <http://www.indiana.edu/~ensiweb/c.aegypt.html>
- 10b. Modern Apes (all 4)  
F. page 387, fig. 19-2; Onsite: <http://www.indiana.edu/~ensiweb/c.apes.html>
- 11 Hominins (*A. africanus*, *H. erectus*, *H. sapiens*, side views; (+Gorilla skeleton for comparison)  
G. pages 12-13; H. page 15; Onsite: <http://www.indiana.edu/~ensiweb/c.homin.html>

### World Wide Web Sources for Useful Cladogram Illustrations:

- 1a Pikaia: <http://ibis.nott.ac.uk/~plzkjc/pikaia.html>
- 1b Amphioxus: <http://www.ucmp.berkeley.edu/chordata/cephalo.html>
- 2a Pteraspis: <http://nitro.biosci.arizona.edu/courses/EEB182/Lecture11/lect11.html>
- 2b Lampreys: <http://www.ucmp.berkeley.edu/vertebrates/basalfish/petro.html>
- 2b Hagfishes: <http://www.ucmp.berkeley.edu/vertebrates/basalfish/myxini.html>
- 3a Climatius: <http://ibis.nott.ac.uk/~plzkjc/acanth.html>
- 4a Crossopt. Eusthenopteron(2): <http://nettl.usyd.edu.au/bio2animals/images/sem2/wk8/064.JPG>
- 4a Crossopt. Eusthenopteron painting: <http://nettl.usyd.edu.au/bio2animals/images/sem2/wk8/368.jpg>
- 4a Crossopt. Stepsodus: <http://www.sghms.ac.uk/depts/anatomy/webpages/andrews.jpg>
- 4b Coelacanth: <http://www.ucmp.berkeley.edu/vertebrates/coelacanth/coelacanth.html>
- 4b Lungfish: [http://www.museum.siu.edu/Lincoln\\_Middle/Transition%20From%20Sea%20To%20Land](http://www.museum.siu.edu/Lincoln_Middle/Transition%20From%20Sea%20To%20Land)
- 5a Ichthyostega(2): <http://nettl.usyd.edu.au/bio2animals/images/sem2/wk8/065.JPG>
- 5a Ichthyostega:  
<http://phylogeny.arizona.edu/ENTO/tree/eukaryotes/animals/chordata/ichthyostega/ichthyostega.html>
- 6a Captorhinus photos: <http://www.island.net/~jackwhit/reptiles.htm>
- 7a2 Dimetrodon: <http://www.amnh.org/Exhibition/Expedition/Fossils/Specimens/dimetrodon.html>
- 7a2 Dimetrodon: <http://www.prehistory.com/dimetrod.htm>
- 7a1 Cynognathus: <http://www.geocities.com/CapeCanaveral/Hall/1636/synapsida/therapsida.html>
- 8b Dog Skeleton (line drawing): <http://www.geocities.com/~kidsanddogs/skeleton2.html>
- 8b Cat Skeleton (line drwg):  
<http://courses.ncsu.edu:8020/classes/zo370001/AppenMus/TextImages/Catskelcp.htm>
- 10a Aegyptopithecus: <http://erasmus.biol.csufresno.edu/he/25-36.html>