

Focus on sudden change in evolution provokes interest in biological development for several reasons. One is that changes in an organism's development can be envisioned as a mechanism by which a small genetic change can be amplified into a major difference in the adult. A small genetic change that delays or enhances pigmentation early in development of a moth, for example, can cause large differences in the color pattern of the fully grown caterpillar. Delayed metamorphosis may be the origin of the axolotl, which reproduces in a form resembling a salamander tadpole. And prolonged brain growth may be the major difference between monkey and human brain size."

-- Julie Ann Miller, "Evolution: Return of the Embryo," in *Science News* Vol. 120: July 4, 1981, p.12.

3. A Creationist Interpretation of the Data

"In view of the resemblances between adult animals, one would expect their embryos to be similar also. For development to occur at all, it must begin with a single cell fertilized by a sperm. The processes leading to the differentiation of the germ layers are fundamentally the same in all animals as also are processes which produce the organs.

"All vertebrates are characterized by a dorsal nerve cord, an internal skeleton and 'gill slits opening from the throat to the outside or touching the outside wall in at least the developmental stages.' In the human embryo, 'the ectoderm of each groove and entoderm of its complementary pouch then meet and unite; the thin plates thus formed only rarely rupture and complete the gill slit condition.' Associated with these pouches are blood vessels, muscles, cartilaginous arches and grooves entering between the arches from the outside. A study of the derivatives of the gill arches will convince one that practically all of the material which becomes gills in a fish is used for the construction of certain of the structures of the throat region in man. A common plan is followed in all vertebrates and modified for the needs of the developing individual and the fully formed organism. This common plan may be attributed to descent from an ancient vertebrate or to a Creator who uses the same fundamental process for all vertebrates but varies it at will for specific purposes

"Such modification of a common plan to the needs of the organism surely could be the result of thought. Each class of vertebrate, whether fish, amphibian, reptile, bird or mammal, has an efficient circulation. Creative activity is not bound to make an entirely different arrangement of blood vessels for each class. It has done well if it makes an efficient arrangement. If certain of the blood vessels are found only for a short time in the embryo and then degenerate, one need not say this is to a Creator's discredit. Rather let him notice that the Creator is more sparing of His plans than of material."

-- Russell L. Mixer, *Creation and Evolution* (Monograph Two of the American Scientific Affiliation, 1953), p. 11.

"An organ which remains undeveloped in the adult is called vestigial. Creationists have felt that vestigial organs are evidence of degeneration in animals whose former condition was nearer perfection . . . 'Genesis 3:14 may be interpreted as perhaps implying that there was a time when the snake did not crawl in the dust but walked.' (F.E. Hamilton) 'The