

shaft, and the like, are found; what would be the inevitable conclusion? No one would maintain that a naval architect, in possession of his senses, in constructing a screw-steamer would deliberately introduce features which are useful and appropriate only in a paddle-boat. The only reasonable explanation would be that the vessel had originally been built as a paddle-boat and had subsequently been converted into a screw-steamer and in the conversion it had not been found necessary completely to eradicate all traces of the original construction. Obviously, the same reasoning applies to rudimentary organs. The only satisfactory explanation of such useless remnants is that their possessors are descendants of ancestors in which those organs were fully functional. It seems quite absurd to assume that, in a separately and specially created animal, useless structures, reminiscent of other animals in which the same structures are useful and valuable, should be included, merely to indicate ideal relationships and community of plan."

-- W. B. Scott, quoted by Horatio Hackett Newman, *Evolution Genetics and Eugenics* (Chicago: The University of Chicago Press, 1956), pp. 114-23.

2. The Evidence Adduced to Support the Evolutionist Interpretation

"The embryonic development is from the beginning up to a certain point practically alike, looked at in its larger aspect, for all the many-celled animals. That is, there are certain principal or constant characteristics of the beginning development which are present in the development of all many-celled animals.

"The cells which compose the embryo in the cleavage stage and blastoderm stage, and even in the gastrula stage, are apparently all similar; there is little or no differentiation shown among them. But from the gastrula stage on, development includes three important things; the gradual differentiation of cells into various kinds to form the various kinds of animal tissues; the arrangement and grouping of these cells into organs and body parts; and finally the developing of these organs and body parts into the special condition characteristic of the species of animal to which the developing individual belongs. From the primitive undifferentiated cells of the blastoderm, development leads to the special cell types of muscle tissue, of bone tissue, of nerve tissue; and from the generalized condition of the embryo in its early stages, development leads to the specialized condition of the body of the adult animal. Development is from the general to the special, as was said years ago by von Baer, the first great student of development.

"A starfish, a beetle, a dove, and a horse are all alike in their beginning -- that is, the body of each is composed of a single cell, a single structural unit. And they are all alike, or very much alike, through several stages of development; the body of each is first a single cell, then a number of similar undifferentiated cells, and then a blastoderm consisting of a single layer of similar undifferentiated cells. But soon in the course of development the embryos begin to differ, and as the young animals get further and further along in the course of their development, they become more and more different until