"As comparative anatomy is the field from which inferences of relationship among animals are most commonly drawn, it is an especially important source of evidence for evolution. If any particular organ system is studied in diverse representatives of a single phylum, one gets the impression that the system is based upon a prototype which is simply varied from class to class (with finer variations within each class).

"The same principle holds true within each class. The forelimb of the mammals may be taken as an example. In any, there is a single long bone, the humerus, in the upper arm. In the forearm there are two parallel bones, the ulna and the radius. In the wrist there are typically eight carpal bones arranged as two rows of four. Five parallel metacarpals form the skeleton of the palm of the hand, while rows of three phalanges each form the skeleton of the digits, excepting the first digit, which has only two phalanges.

"The shrews (order Insectivora, family Soricidae) show a very primitive arm structure. Their close relatives, the moles (family Talpidae) are, however, highly modified for digging. All of the bones of the limbs are short and broad, giving the limb a shovel-like appearance. Thus adaptation is attained by mutual fitting of structure (the shovel-like limb), function (digging), and environment (the subterranean habitat). in the order Chiroptera (bats), the humerus, radius and ulna, and four of the digits are greatly elongated to support the wing membrane. In the ungulates, the humerus is short and heavy. The remaining bones of the forelimb are generally elongated, and the digits are reduced in number. Fusion of bones is quite common in adults, but in the embryos the primitive centers of ossification can be identified. The details naturally differ considerably among the various orders of ungulates.

"Examples could be multiplied indefinitely but the principle remains the same throughout. Within any taxonomic category, all of the members appear to be built upon common plan, with variation among the various members resulting in the adaptation of each to its mode of life. The higher the category examined, the greater the scope of variation. But the common plan is always discernible."

-- Edward 0. Dodson, *Evolution: Process and Product* (New York: Reinhold Publishing Company, 1960), pp. 31, 39.