

existence of true vestiges . . . is not inconsistent with the theory that every main organic type has been specially created and that some types have degenerated.' (O. Dewar) On the other hand vestigial structures are held by evolutionists to indicate relationship.

"Actually not all organs claimed to be vestigial are useless. 'It is not well to call an organ functionless prematurely and it has ever been the history of anatomy to discover new functions for so-called vestigial structures -- witness the present interest in the endocrine glands.' (W. Shumway) 'So many of the so-called vestiges of embryology may prove to play leading roles in the development of the individual.' (W. Shumway)

"The appendix, generally regarded as vestigial, is a pouch ending blindly at the beginning of the large intestine. In the same position, an adult rabbit has a caecum nearly a foot long in which vegetable material ferments in order to be more completely digested. But the human appendix averages 3 1/2 inches, although it may be absent or as long as 9 inches. Its cavity is too small to permit digestive activity within it. It produces a slight amount of digestive fluid. There are many lymphocytes in the connective tissue. One opinion of the function of lymphocytes is that they are the stem cells from which arise all other types of blood cells, both red and white. It may be that a convenient supply of these cells at the beginning of the large intestine is helpful in combating the action of the numerous bacteria found there. To be sure, the appendix becomes inflamed, necessitating removal. In this, it shares the lot of nearly all the parts of the body, for scarcely any organ is free from the possibility of infection. The appendix may not even be a vestigial structure. In a review of the book *Up From the Ape* by Hooten, William L. Straus, Jr. has commented that 'There is no longer any justification for regarding the vermiform appendix as a vestigial structure.'

"The coccyx . . . 'corresponds to the tail vertebrae of other mammals. It is much reduced in size.' (A.F. Shull) To it are attached two muscles (levator ani and sphincter ani) which act as a cradle for the pelvic contents, constrict the anal opening and assist in the expulsion of the fecal mass. A portion of the heaviest muscle of the thigh is attached to the coccyx, as well as a rudimentary muscle (coccygeus) which assists one of the cradle muscles in upholding the pelvic floor. 'in rare instances the coccyx is overdeveloped and produces a tail-like projection.' (A.F. Shull) 'Specimens as long as 3 inches have been recorded in the newborn; most of these are soft and fleshy, but a few have contained skeletal elements.' (L.B. Arey) In a motion picture made by Dr. P. Kenneth Gieser, there was a Chinese baby with a very evident tail. But should it be presumed that because a part of the body was developed in a manner resembling some animal, that the body is therefore derived from that animal? There are abnormalities of the bodily development that cannot be taken to refer to any ancestral condition, but are merely disarrangements-of the embryological process. To what ancestor does hair-lip point? Are we descended from an animal with an open-roofed skull and virtual absence of brain because the human newborn occasionally has the anomaly called cranioschisis? Because the limbs may fail to develop, were our ancestors limbless? There are no criteria for judging whether an anomaly points to inheritance from a remote ancestor or to a deranged development.

"The external ear muscles are considered vestigial by evolutionists. One extends from the skull to the ear and covers the posterior auricular vessels and nerve; the other two go from the ear to the tough connective tissue of the scalp. These muscles and the epicranium muscle aid in