SOME IMPORTANT PROBLEMS WHICH ARE RELATED TO THE THEORIES OF BIOLOGICAL EVOLUTION By D. E. Wonderly

In the listing below (items 1 through 16) it is intended merely to state in summary form for the benefit of beginning biology students, some of the general problems which are currently recognized by most biologists.\* Further information on these problems may be obtained by consulting the standard textbooks of biology, of biological evolution, and of anthropology. Unless otherwise noted, all quotations and references cited in the sixteen points below are from such standard text books, monographs, or journal articles, all of which assume the evolutionary position. However, practically all these authors openly recognize that the idea of evolution of complex organisms from one-celled organisms is really a theory, rather than a demonstrated fact.

- 1. The almost simultaneous appearance of practically all of the phyla and classes, and most of the orders and suborders, of the invertebrate animals near the beginning of the geological record of animal life (viz. in the Cambrian period). Concerning this circumstance, Paul Weisz (1966) says. "It is a very curious circumstance that rocks older than about 500 million years this date for the beginning of the Cambrian period are so barren of fossils, whereas rocks younger than that are comparatively rich in them. Many hypotheses have been proposed to account for this, but to date a satisfactory explanation has not been found" (p. 403). We can readily answer that the doctrine of Creation by God satisfactorily explains this condition.
- 2. The serious lack of fossil intermediary forms. This greatly weakens the paleontological evidence for demonstrating close evolutionary connections between the various groups of animals. (In spite of the fact that many fossil deposits are very complete, hundreds of thousands of fossil species are found to be distinct from one another, and there are very few forms which could possibly be taken as intermediary between the various phyla and classes.)

Concerning the lack of intermediary forms leading up to the Class Insecta, F. M. Carpenter, in Insects, Yearbook of Agriculture, 1952, says: "There is however, no fossil evidence bearing on the question of insect origin; the oldest insects known show no trans 12 ion to other arthropods [i.e., no evolutionary connections to other genera which are considered to be lower in the phylum Arthropoda " (p. 18). Note that the lack of fossil evidence is not due to any lack of discoveries of fossil deposits, for paleontological studies of insects, as well as other forms mentioned above, have been carried out intensely for many decades; so the paleontological catalogs were very extensive and complete by the time Carpenter wrote the above. On this subject, Dr. D. D. Davis of the Chicago Museum of Natural History has said, "The sudden emergence of major adaptive types, as seen in the abrupt appearance in the fossil record of families and orders, continues to give trouble.... A few paleontologists even today cling to the idea that these gaps will be closed by further collecting...but most regard the observed discontinuities as real, and have sought an explanation for them" (Genetics, Paleontology & Evolution, Princeton U. Press, 1949, p. 74). R. B. Goldschmidt has dealt at length with

Many popular writers appear to be unaware that modern evolutionary biologists admit the existence of these problems, and that they do try to recognize the distinction between fact and theory. One such biologist, Dr. G. A. Kerkut, the well known biochemist and biological editor of the University of Southampton. has recently set forth a number of areas in which evolutionary theories are to be distinguished from facts (The Implications of Evolution, by G. A. Kerkut Pergamon Press, 1960).