<sup>18</sup>Berg, Leo S. 1969. Nomogenesis or Evolution determined by law. Paperback. The M. I. T. Press, Cam-

bridge, Mass.

19Russell, Loris S. (in) Evolution: its science and doctrine. 1960. Edited by Thomas W. M. Cameron. University of Toronto Press, Toronto, Canada; Olson, Everett C. 1959. The evolution of mammalian characters, Evolution, 13, September: 344-353; Reed, Charles A. 1960. Polyphyletic or monophyletic ancestry of mammals, or what is a class?, Evolution, 14, September: 314-322; Romer, Alfred S. 1965. Possible Polyphylety of the vertebrate classes, Zoologische Jahrbücher Abteilung Für Systematik, 92: 143-156; Simpson, G. G. 1950. 1959. Mesozoic mammals and the polyphyletic origin of mammals, Evolution, 13, September: 405-414; Vaughn, Peter P. 1960. On the possibly polyphyletic origin of reptiles, Evolution, 14, June: 274-276; Hanson, Earl D. 1964. Animal diversity. Second Edition. Chapter 7, "Phylogeny." Prentice-Hall, Inc., Englewood Cliffs, N. J.; and Olson, Everett C. 1965. The evolution of life. Chapter 10: "Origins of Higher Categories." Mentor Book MT 648. The New American Mentor Book MT 648. The New American Library, N. Y.

Interestingly, Charles Darwin was undecided as to the beginnings of living things, and wrote near the close of his Origin of Species, "I believe that animals are descended from at most only four or five progenitors, and plants from an equal or lesser number." And on the last page of his book Darwin referred to life starting into "a few forms or into one." Even today there is a minority of scientists who postulate, just as Darwin suggested, that living things have come from more than one organization of matter into living form.

<sup>20</sup>Harland, W. B. and Others (Editors). 1967. The fossil record. London: Geological Society.

<sup>21</sup>McGraw-Hill Encyclopedia of science and technology. 1966. Volume 9. McGraw-Hill Book Co., New York. pp. 500 and 521.

<sup>22</sup>Moore, Raymond C. 1958. Introduction to historical geology. Second Edition. McGraw-Hill Book Company, Inc., New York. Inside book cover.

<sup>23</sup>Buffaloe, Neal. 1968. Animal and plant diversity. Prentice-Hall, Inc., Englewood Cliffs, N. J. Fig. 4.46.

## Additional Bibliography

Ashton, Beryl G. 1969. Genes, chromosomes and evolu-

tion. Houghton Mifflin Company, Boston.

Babcock, E. B. and J. A. Jenkins. 1943. Chromosomes and phylogeny in *Crepis* III. The relationship of one hundred and thirteen species. University of California

Press, Berkeley and Los Angeles.
Bennett, Clifford. 1971. Is the "thread of life" a threat to science education?, The American Biology Teacher,

33, February: 111.

Bostock, Christopher. 1971. Repetitious DNA (in)
Advances in biology. Vol. 2. Edited by David M.
Prescott, Lester Goldstein, and Edwin McConkey.
Appleton-Century-Crofts, New York.

Davis, Bernard. 1970. Prospects for genetic intervention

in man, Science, 170, 18 December: 1279-1283.

Dickerson, Richard E. 1972. The structure and history of an ancient protein, Scientific American, 226(4):58— 72 (April).

Grant, Verne. 1964. The architecture of the germplasm. John Wiley & Sons, Inc., New York. Harris, Harry. 1971. Protein polymorphism in man,

Canadian Journal of Genetics and Cytology, XIII (3): 381-396 (September).

Haskins, Caryl. 1971. Advances and challenges in science in 1970, American Scientist, 59, May-June: 298-307. (See especially "Molecules and evolution" section: 304-306.)

Hennig, W. and P. M. B. Walker. 1970. Variations in the DNA from two rodent families (Cricetidae and Muridae) Nature, 225, 7 March: 915-919.

Holm-Hansen, Osmund. 1969. Algae: amounts of DNA

and organic carbon in single cells, Science, 163, 3 January: 87-88.

Mayr. Ernst. 1963. Animal species and evolution. The Belknap Press of Harvard University Press, Cambridge, Mass. (N. B. "Different forms of life were referred to as 'types' by the comparative anatomists of the last century and even earlier. Bats, whales, birds, penguins, snails, sea urchins, and all the other well-known kinds of animals and plants are such types." - Emphases added to draw attention to apparent ease of inter-changeable use of these three terms.) (p. 588)

## A PHILOSOPHICAL NOTE ON CREATIONISM

HARRY V. WIANT, JR.\*

Those of us in frequent contact with college students recognize that young people at this stage are forming the philosophical framework with which they will henceforth judge reality.

Some develop a materialistic philosophy. To them, life is a struggle for survival, a struggle to obtain money and that which it will buy.

Others adopt socialistic concepts and see the evolution of an all-powerful state as inevitable and as man's only hope.

Most accept an evolutionary explanation of origins and interpret all scientific findings through that theory. These students are usually surprised to learn that some professors, who they assume are educated men, believe in the literal creation as given in Genesis.

It should be understood that most students accept the evolutionary theory with a minimum of study of the evidence; and, one can gently point out to them that their education has been biased in that they have not considered the evidence for creation. It is helpful to indicate that belief in a Creator-God requires no greater faith than that required to believe the complexity of life on this earth was created by the god of time. Time is all the mechanistic evolutionist can be given; if he starts with matter of any kind, he must explain its origin.

Actually creationism or evolution must be accepted by faith, and all reality will be fitted by the believer into his adopted framework. Individuals who try to blend the two theories please neither camp and are confronted with a continually changing frame of reference. Even-

(Continued on page 198)

<sup>\*</sup>Harry V. Wiant, Jr., Ph.D., is Professor and Assistant to the Dean, School of Forestry, Stephen F. Austin State University, Nacogdoches, Texas 75961.