

UNDERSTANDING EVOLUTION. E. P. Volpe. Wm. C. Brown, 2nd Edition, 1970. Pp. 175. \$2-75.

The stated aim of this short book is to present "a simple, concise account of the scope and significance of evolution for the college student seeking a liberal education". Slightly more than half of the text deals with matters which are directly genetical in content and the remainder covers related topics like adaptive radiation, the origin of life and the evolution of man.

There are many parts of the volume which are lucidly and accurately presented with attractive and informative illustrations (for example the treatment of adaptive radiation), but this book is unsatisfactory in some respects.

The clarity of the initial discussion of heritable and non-heritable variation and of some later parts of the book is reduced by the extensive use of an example of variation (extra legs in frogs) in which the nature of the factors responsible is unknown. In Chapter I recessive genes are mentioned although the treatment of mendelian genetics is found only in the next chapter. In fig. 1.4 the difference between what should be clearly distinguishable as different alleles is minimal. In the chapter on mutation it would not be easy for the innocent eye to follow the discussion of X-linked lethals in man as the mechanism of sex determination is not explained. On pp. 70 and 167 there are numerical errors. Some of these are perhaps relatively minor points although one might hope that criticism of this sort need not be made of a second edition. More substantial critical comment is called for in connection with the discussion of selection which concentrates almost exclusively upon linear selection and single locus heterosis with highly unfit homozygotes. With the evidence available today it would be easy to provide a much more accurate (but still simple) picture of the nature of gene-pools and particularly of genetic polymorphisms than the author has done. It is surprising that while there is a chapter entitled "Non-adaptive evolution" there is not one on adaptation (surely a topic of central importance for a book with "Understanding Evolution" as its title!).

Dr Volpe has worked extensively on problems in evolutionary genetics and his grasp of his subject is clearly evident in many sections of the text. It is, then, unfortunate that his book is marred by these defects which could easily be remedied.

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BARLEY GENETICS II. PROCEEDINGS OF THE SECOND INTERNATIONAL BARLEY GENETICS SYMPOSIUM. Edited by Robert A. Nilan. Washington State University Press, 1971. Paperback, pp. 622.

Some years ago I had the privilege of studying genetics at a research station devoted to a single crop, all aspects of which were covered to some extent, from evolutionary origins to processing. I was frequently asked if one genus provided too confining a milieu in which to work: no better reply could be given than referring the questioner to this account of the Symposium held at Pullman in July 1969.

Under 14 headings Robert Nilan has ably assembled 69 papers, less than half of which originated in the United States. The contents are sufficiently