

McCombs and co-workers describe a new fast-migrating ceruloplasmin variant in a healthy Negro woman (though why she came to be tested is not stated), which migrated identically to ascites fluid ceruloplasmin from one alcoholic cirrhotic and three ovarian carcinoma patients.

Ohno and his colleagues report a sex difference in alcohol metabolism. Their paper concerns experiments on female and castrated male mice given testosterone and the results are of great basic interest though a long way from the bedside. They postulate that the alcohol dehydrogenase (ADH) locus of kidney, but not of liver, is under the control of a secondary repressive genetic regulatory mechanism. If this block is completely removed by androgenic steroid, the ADH locus of kidney functions at about the same rate as that of the liver.

Finally there is a long paper by Vyas and Fudenberg on the immunobiology of human anti-IgA. It is principally concerned with the serological system which they have developed for the detection of this antibody, but the biological significance of it when found—whether it be due to previous transfusion of blood or injection of gammaglobulin or to iso-immunisation in pregnancy—is not yet known.

Some general comments (biased perhaps since the reviewer is the editor of the rival U.K. journal) are that this first number is slim, and it will be interesting to see if there is enough material to justify publication every two months; all the contributions are from the U.S.A. and one would have thought that the all-Scandinavian editorship would have produced something home-grown in their first number; and, if this is a representative issue, the journal would be too difficult for most practising physicians in this country. The papers nevertheless have value for geneticists, and research workers in allied fields.

C. A. CLARKE

*Department of Medicine, University of Liverpool*

THE MOLECULES OF LIFE. Gisela Nass. World University Library. Wiedenfield and Nicolson, London, 1970. Pp. 256. 35s.

This is an unsatisfactory book. Published in "The World University Library" aimed at providing "authoritative introductory books for students which will be of interest also to the general reader", Gisela Nass's *The Molecules of Life* is an example of how not to popularise science.

Elementary introductions to science have a vital educational role. However, they should avoid the pitfalls of speaking down to their audience and of oversimplification to the point of misinformation. They should also attempt a balanced view of their subject. It is extraordinary that this book covers such a wide range of topics as the structure of the nucleic acids, mechanisms of protein synthesis, cell structure, vitamins, pheromones, the circulation of blood in vertebrates, the evolution of *Equus*, mutation, antibodies and the origin of life yet fails, for example, to give any account of basic genetics, or cell division or even to mention mitosis, meiosis and recombination.

Giving the reader the complete amino acid sequence of human haemoglobin, or a whole page table of the details of 29 different amino acid substitutions in human haemoglobins (from S to Shimonoseki), is no substitute for the basic general information, which even at an elementary level I would have considered essential to the purpose of this book.

Perhaps some examples will illustrate my complaint of oversimplification to the point of misinformation; from the glossary we learn that "phylogeny is caused by mutation and selection" and that lipids are "molecules composed, amongst other substances, of fatty acids" (what price cholesterol?). We are treated to some pretty electron micrographs of cell structure and a diagrammatic illustration of "the cell" with successive enlargements of the nucleus portraying polytene chromosomes, a step-ladder DNA helix and a deoxyribonucleotide. The reader of this book would, were he not a sceptic, come to believe that spontaneous mutations are mainly the result of cosmic radiation (p. 129), that evolution is the result of mutation (chapter 11), that development is to be explained by Haeckel's law of recapitulation (chapter 12), that vitamins (along with antibiotics and more appositely pheromones) are molecules of communication between organisms (chapter 9), and that there are three types of virus, those that multiply "only in certain bacteria", those that multiply "only in the cells of plants" and those that multiply "only in the cells of animals or human beings" (p. 165).

Despite the fact that this book cannot be recommended for any audience it is attractively produced, abundantly illustrated with relevant as well as irrelevant material, and only rarely (*e.g.* transfer RNS on p. 51) gives clues that it is a translation from the German.

M. ASHBURNER

*Department of Genetics, Cambridge*

GENETICS OF THE POTATO, *SOLANUM TUBEROSUM*. H. W. Howard. Logos Press Ltd., London. £3.

Books on potato genetics are not common, the only other recent treatments having been written by Dr Howard in 1960 and by the same author in collaboration with Dr M. S. Swaminathan in 1953. These appeared in the journal *Bibliografia Genetica*, and thus suffered from the disadvantage that they were not available to the general reader in book form. The present work is therefore to be welcomed for its availability even though this will be marred to some extent by the high price of £3 set on it by the publishers.

The two previous treatments surveyed the literature on wild as well as cultivated potatoes. The present work limits itself largely to the cultivated species, *S. tuberosum*, and mentions the wild species and the other cultivated species only in so far as the work on these relates directly to *S. tuberosum* itself. In the opinion of the reviewer this limitation seems unfortunate, since wild species have been used to a very great extent in breeding work and genetical studies, especially during the last ten years, subsequent to the publication of Dr Howard's previous review. Since the present work is a slim volume of less than 100 pages of text (excluding references and indexes) it would not have been too difficult to include work on the wild species and still provide a book of reasonable dimensions.

The amount of work of a strictly genetical nature is somewhat limited in potatoes as contrasted, for instance, with wheat, maize and barley. One reason for this has undoubtedly been tetrasomic inheritance in potatoes which renders it difficult to find linkage groups. Even though dihaploids of potatoes have been known since 1957, potato breeders and geneticists do not seem to have taken general advantage of this situation, in looking for linkage groups, but have, perhaps understandably, concentrated their efforts more