REVIEWS

THE BIOLOGY OF AFFLUENCE. George Smith and John C. Smyth (eds.). Foreword by Lord Boyd Orr. Oliver and Boyd, Edinburgh, 1972. Pp. xiii+126.

There is no reason why geneticists as geneticists should be especially interested in this book. There is a successful chapter by Professor H. J. Evans on the mutagenic effects of environmental pollutants, and the geneticist will derive some entertainment from Sir David Cuthbertson's statement that (referring to the Hutterites) "generations of inbreeding have produced a superfecund strain of human species". But this accounts for only a small proportion of the book. Yet such organisations as the Friends of the Earth, the Conservation Society and the campaign against SSTs, which seek a political debate on the environment, have in Britain received very little support from the majority of professional ecologists, who have so far only achieved a much-signed but politically ineffective letter in *The Times*—its broad hint that the government set up a commission of ecologists has not been taken. Scientists from other disciplines being perhaps more active politically are likely to be just as interested as their ecologist colleagues in books on "the environment".

The past year has seen the preparation for battle between ecodoom and econoboom, between the pessimists and those who have been "nourishing a youth sublime on the fairy tales of science and the long result of time", between the visionaries of a new technological heaven and a new technological earth, and those whose apocalyptic horseman is of a quite different colour. A small number of universities have even introduced, usually over several dead academic bodies, courses in which students can study both biology and the social sciences. From this debate *The Biology of Affluence* stands strangely aside, no doubt partly because it is the proceedings of a symposium held as long ago as 1969. It explores the biological consequences of affluence, described as "that state of societies or of individuals in which materials and facilities are available in excess of those necessary for the maintenance of physical and psychological health". Within this brief the editors have invited contributions which deal with consequences of affluence likely to be of most interest to the non-biologist, that is the ways in which affluence impinges on human health, although not on psychopathology. To this end, just under half the chapters are by medical men, and the rest are from the directors of institutions directly concerned with the management of our own affluent society, in such aspects as water purification, clean air, food additives and nutrition.

Thus the book gives the impression of never quite getting to grips with the issues of the eco-debate; it is parochial not simply in being medical, but in being Scottish. Only Dr Magnus Pyke, as readable and entertaining as ever, succeeds in presenting a broad view. The medical men, despite the confidence that their profession gives them, are unable to generalise with a sufficient degree of conviction from their clinical experiences. The chapter which attempts to sum up the volume is, bluntly, all over the place, and the introductory chapter, overtly on homeostatic mechanisms, is mainly a plea for a return to draughty houses and cold baths before breakfast (the Scottish puritan tradition appears in other chapters too). Sir Dugald Baird, in a good

chapter on the birthrate, does not succeed in making his data from Aberdeen, or even the UK, tell us what we would like to know about the prospects for demographic changes in other societies as they become affluent.

On the other hand, within its limits the book is readable and informative, with just the right amount of data and tabular material for the undergraduate and sixth-former. An affluent society has to be run from day to day, and must strive for the physical and economic well-being of its members (I found Dr Blaxter's chapter on capitalism and agriculture very enlightening). This is indeed a problem somewhat apart from the great ecology debate, and I would recommend selected chapters of this in a seminar course as a way of reminding students that life has to be lived as well as debated. So much the better if they remember to ask, as nearly all the contributors being true sons of their class and generation do not, whether the affluent society may need something more than a gentle guiding hand on the controls.

JOHN R. G. TURNER

Department of Biology, University of York, YO1 5DD, York

THE GENETICS OF HUMAN POPULATIONS. L. L. Cavalli-Sforza and W. F. Bodmer.

The Genetics of Human Populations can be described as three books in one: embedded in the main text is a book on elementary population genetics and there are two Appendices of about 100 pages on the applications of statistics in genetics.

The whole book is set out with exceptional clarity. It has been carefully designed for use by students—at least for those students who can afford it. Each chapter is divided into numbered sections. Within each section, the text is further divided by a series of statements or propositions set in italics. Each proposition is followed by one or more paragraphs which give the reasons for thinking that the preceding proposition is true. Some of the propositions are analytic. For example, on page 49 we come to the proposition “Random mating is equivalent to random union of gametes”. This is then proved mathematically from the definitions of random mating and random union of gametes. When the mathematics gets more difficult it is either relegated to a “worked example” at the end of the chapter or merely stated as a known result. The mathematics is very clearly set throughout. No attempt is made to prove any of the more difficult results from the stochastic theory of gene frequencies. Thus most of the book can easily be followed by anybody with an understanding of elementary calculus, and only in some of the examples is matrix algebra used. If the propositions depend on empirical evidence then the succeeding paragraphs provide it. Sometimes the evidence is given in detail but occasionally difficulties are evaded. Generally, however, this is not so, and an admirable attempt is made to present a balanced view. There can be no doubt that the method of breaking up the text into a series of propositions to be proved is a great aid to clarity. It should be very easy, for example, for students to make notes from the particular sections of the book that interest them.

Turning first to the statistical appendices, a student will find the statistical methods he requires to analyse data on population genetics. In Appendix I,