

automatically appear near the top of every biology student's reading list, in multiple copies on the shelves of student libraries and in more than a few of their lecturers' bookcases. Like its predecessors, the book contains an invaluable selection of articles on various aspects of molecular biology which have appeared in *Scientific American* over the past dozen or so years.

The thirty-four papers are grouped into five sections dealing with increasingly complex levels of organization and function: macromolecules, the virus, gene action in protein synthesis, modification of gene action and radiant energy and the origin of life. Each section has a short historical introduction by either R. H. Hayes or P. C. Hanawalt outlining the state of understanding at the time each article was originally published and subsequent developments. But the meat of the book is, of course, the articles themselves. All the classics are there, with their profuse illustrations; there are the papers of Perutz and Phillips on haemoglobin and lysozyme, Delbrück, Stent, Horne and Benzer on viruses, Crick, Spiegelman, Nirenberg and Yanofsky on the gene in action, and so on.

There can be few better introductions to the literature of molecular biology, and at forty-two shillings the paperback edition is within everyone's reach and is very good value for money.

J. TOOZE

## ISLAND BIRDS

### History of the Birds of the Cape Verde Islands

By David Armitage Bannerman and W. Mary Bannerman. (Birds of the Atlantic Islands, Vol. 4.) Pp. xxxi + 458 + 85 plates. (Oliver and Boyd: Edinburgh, 1968.) 126s.

THIS is the final volume in Dr Bannerman's series dealing with the birds of the island groups lying in the Atlantic Ocean off southern Europe and northern Africa, the earlier volumes having covered respectively the Canaries, the Madeiran Islands and the Azores. Although the inclusion of the more southerly Cape Verde Islands was an afterthought, the resulting volume is in some ways the most interesting. That is partly because a great deal of other than purely ornithological information is given about this relatively unfamiliar archipelago; and partly on account of the zoogeographical questions that arise. These islands of mainly volcanic origin, lying nearly 300 miles from the African coast, are definitely within the tropical zone (15° N lat.); they have, however, an oceanic temperate climate and merely subtropical vegetation. Bannerman reviews the controversy about the origin of the fauna, apart from introductions by man, but in so far as the native birds are concerned it is clear that most are derived from Europe and North Africa, and only a few elements from the mainland tropics. The opposite is nevertheless true of butterflies, on which N. D. Riley contributes a chapter, nearly all of these having been derived from the south-east.

The avifauna is not rich; forty-three species breed or are believed to have bred, and thirty-eight of these may be regarded as regular. Among them are ten species of sea birds, but including no gulls or terns—another problem. The rate of endemism is high, as one would expect, and about two dozen forms are peculiar to the islands. Most of these rank as subspecies, but two endemic species are of special interest and have odd local distributions: the Razo lark (*Alauda razae*) is restricted to the island from which it is named, although others of apparently similar ecology lie within sight; and Dohrn's cane warbler (*Acrocephalus brevipennis*) is found only on three islands and not on others that lie between.

Knowledge of the birds rests almost entirely on the observations of professional scientists and of ornithologists

who have gone there for the purpose. These visitors have not been numerous but represent several nationalities; Darwin was there briefly, and Boyd Alexander twice. Within the past two decades there have been W. R. P. Bourne, who as a young man in 1951 did it the hard way and made valuable observations; the Abbé René de Naurois, who has paid several visits and is preparing a book of his own; and lastly the Bannermans. To the account of their journeys among the islands in 1966, Mrs Bannerman appends extracts from her diary that give a personal touch and exemplify the vicissitudes endured by an octogenarian and his wife in their quest for knowledge.

The book is sumptuously produced, with many colour plates by D. M. Reid-Henry and P. A. Clancey and from photographs; there are also half-tone plates and text figures.

LANDSBOROUGH THOMSON

## WORLD MAMMALS



Oil-palm squirrel (*Protoxerus strangeri*) (photo by George Cansdale) from volume two of *Mammals of the World*, by Ernest P. Walker. A second edition of this well-known work, revised by John L. Paradiso, has now been published (Johns Hopkins Press: Baltimore; Oxford University Press: London, 1968, 285s). There are over eighty new photographs in the first two volumes of the new edition—the third volume, which is a bibliography, has remained essentially unchanged.

## VISUAL WORLDS

### The Eye

Phenomenology and Psychology of Function and Disorder. By J. M. Heaton. Pp. xii + 336 + 10 plates. (Tavistock: London; Lippincott: Philadelphia and Toronto, 1968.) 70s.

THE subtitle of this book—phenomenology and psychology of function and disorder—gives an indication of its wide and unusual scope. As an ophthalmologist I feel unfitted to review in a critical manner the psychological and philosophical aspects, but, as the author's intention is to enlighten the ophthalmologist and remind him that the eye is only part of the whole man, I hope the omission will be excused.

Briefly, Heaton's thesis is that we can never have a full understanding of a disease unless we take into account what Verrey, the Swiss ophthalmologist, calls the *terrain*; that is, the individual as a whole and his reactions to his