

## SHORT REVIEWS

## Sir Isaac Newton

By Dr. H. D. Anthony. (Life of Science Library, Vol. 39.) Pp. 224+10 plates. (London: Abelard-Schuman, 1960.) 21s. net.

TO write a readable account of Newton's life and achievements is a task of very great difficulty, as all who have attempted it will agree. Although Newton's extension in time was considerable (85 years), his extension in space was restricted to the neighbourhood of Woolsthorpe, Cambridge and London. His achievements in astronomy and mechanics are not easy to explain, owing partly to the confusion surrounding his definition of 'mass', a definition which was wrongly translated by the exponents of his mathematical principles of natural philosophy from his day until the present. An exception was Henry Pemberton, one of the young men who received generous help from Newton, and who had the privilege of reading over, with him, the manuscript of his *View of Sir Isaac Newton's Philosophy* (1728). Newton defined mass as a 'measure'—not something which a body had, which 'could' be measured.

Dr. Anthony has succeeded in overcoming these difficulties by giving a more balanced account of Newton, including considerably more detail about his early life and contemporary background, his emergence into public life, his activities at the Mint and his theological writings, than has been usual in former biographies. The explanation of Newtonian dynamics is lightly but clearly outlined, with the exception of a paragraph on the tides, where we are unfortunately told that neap tides occur at full moon. Two minor errors are: "Sir" Robert Boyle (p. 102), and "the American airmen who made the first Trans-Atlantic flight" (p. 41). The author has forgotten two of Newton's countrymen who also voyaged "through strange seas . . . alone".

This is a well-produced book with excellent illustrations. An appendix containing interesting notes on the illustrations, a useful short bibliography and an explanatory list of words used with special meanings in British universities (for example, subsizar), all contribute to making this volume one that can be strongly recommended. G. BURNISTON BROWN

## Science in Writing

A Selection of Passages from the Writings of Scientific Authors, with Notes and a Section on the Writing of Scientific Prose. By T. R. Henn. Pp. 248. (London: George G. Harrap and Co., Ltd., 1960.) 20s. net.

IT is a pity that so much scientific prose fails to be beautiful. Yet scientists in the past and of to-day have succeeded in writing with mastery. Mr. Henn has chosen examples from the works of several scientists ranging from Pliny to living authors.

These passages are not presented as models to be imitated, but they help to illustrate very cogent suggestions for good writing which Mr. Henn gives in the last part of his book. He feels that these authors have excelled because they have controlled

their material so well. This control is derived from sheer knowledge of the facts and a persistent quest for what is relevant until "the whole assumes an ordered and organic pattern".

It is intriguing to see how devices of style are used (consciously or otherwise) and how the personality gleams through the prose. Newton's symmetry of thought, his dignified and authoritative tone are evident. Rayleigh's style, as complete in itself as a Mozart string quartet, would suffer loss were attempts made to amplify or compress it in any way. Darwin develops his argument simply and modestly yet evoking excitement. Allbutt's "sweeping brushstrokes" are a contrast to Duke-Elders's gradual unfolding of ideas. Punctuation is used by Whitehead, Max Born, Hinshelwood and Ricardo to give a limpid flow and abounding clarity. As in 'humane' prose, there can be scope for imagery and rhythm. Contrasted and associated rhythmic sequences can give a breathing quality to prose, so making it more pleasurable to digest. Imagery may provide analogies, may convey shades of meaning; sometimes frankly poetic as in Jacquetta Hawkes's writing.

The book should interest any scientist who wishes to write well. RUXTON VILLET

## The Wildbooters

By Fritz Kern. Pp. xi+204. (Edinburgh and London: Oliver and Boyd, Ltd., 1960.) 21s. net.

THIS is an English translation, edited by K. J. Narr, of the late Prof. F. Kern's *Der Beginn der Weltgeschichte* (1953). Its thesis is the same as that put forward by Prof. W. J. Sollas in *Ancient Hunters* (1911), that archaeology and ethnology can be combined to present "a picture of the early history of mankind" (p. 54). Wildbooters, Kern's word for hunters and collectors, replaces ancient hunters, protolithoid Lower Palaeolithic, and instead of Australians (Palaeolithic), Eskimo (Magdalenian) and Bushmen (Mesolithic), Ituri Pygmies, Chenchus and Yamanas are chosen to reveal the "essential traits" of man's "basic culture"; but the objections to this thesis remain the same. Archaeology is a science, ethnology is not; the cultural stratigraphy of the ethnologist is one thing, that of the archaeologist is another; and "reconstructive imagination" is no substitute for factual history. The first six chapters attempt to summarize and synthesize the prehistoric racial and archaeological background, the seventh deals with the oldest cultural (ethnological) stratum, the rest describe the economy, religion and social organization of this stratum as deduced from ethnological accounts of their modern survivors.

There are no bibliography, maps or index. *The Wildbooters* provides a stimulating hypothesis of the life of early man, but archaeologists and ethnologists will demand more detail, social anthropologists will wonder why so many of his sociological data are drawn from such little-known and inadequately studied tribes, while the general reader will be defeated by the morass of conflicting racial and archaeological theories in the first few chapters. G. I. JONES