of biological evolution, to the long, thoughtful article of 1949 ("The Concept of Culture in Science") is to follow the development of one of the most provocative ideas of our day.

The section about history and process begins with the famous (1919) article on fashion, containing the germ of his subsequent idea of "styles", which develops into the notions of cultural intensity and climax which underlay his greatest work, "Configurations of Culture Growth". This concept of "styles" is turned and tended until it replaces to some extent the more atomically conceived "culture elements" and "culture traits" as the components, or bits, of culture. All these various threads are brought together in a short, final article dealing tantalizingly, if not exhaustively, with "The Novel in Asia and Europe".

Prof. Kroeber points out that, like all great ideas, the concept of culture was developed by many minds; we must add that one of the greatest and most stimulating of these minds is his own.

PAUL BOHANNAN

ENGINEERING MECHANICS

Mechanics

Part 2: Dynamics. By Prof. J. L. Meriam. Pp. xiii+341-671. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1952.) 32s. net.

THIS elementary work on dynamics is essentially a book for engineers. Its author's aim is to teach fundamentals with the aid of a large number of illustrative examples.

The book starts with prefaces addressed to (a) the student and (b) the instructor. The latter, with its discussion of the "natural learning process", should undoubtedly be read aloud with an American accent.

The introductory chapter, which is evidently common to Prof. Meriam's volumes on statics and dynamics, concerns certain fundamental ideas. These include mathematical and graphical description, "basic concepts" (space, time, force, etc.), scalars and vectors, Newton's laws, units, dimensions, accuracy and so forth. The author's intention is to build an arsenal of what information he considers necessary for the assault on his subject. But his choice seems a little ill-balanced. Some parts of his introduction read like a sermon (for example, that on graphical representation) while others appear to be rather difficult for a beginner (for example, that on dimensions).

Apart from this introduction, the book contains chapters entitled "Kinematics"; "Principles of Kinetics"; "Force, Mass and Acceleration"; "Work and Energy"; "Impulse and Momentum"; "Periodic Motion". The treatment of these subjects is simple and, although vector quantities are mentioned, the methods of vector analysis are not used to any great extent.

All the chapters except the introduction embody a large number of problems, some of which are worked out in the text. Answers are given to many. There are 662 of these examples (in a book of 330 pages) and most of them are well drawn from practical situations. It is the reviewer's opinion that these problems constitute a most attractive feature. There are two appendixes. The first deals with moments of inertia (and contains no fewer than seventy-two

examples) and the second is a useful collection of data.

One or two topics are introduced which have not found their way into many comparable books. Cases in point are (1) the use of polar co-ordinates, and (2) motion "with variable mass". Both are undeniably welcome. Elementary gyroscope theory is introduced in the chapter on impulse and momentum and involves the use of vectors. It is unfortunate that, in a book which deals with Coriolis acceleration, no attempt is made to explain gyro theory after the manner of Inglis.

The collection of examples is excellent, and it alone would make this book a worth-while contribution. The main body of the text is of good quality. It is lucid and contains a large number of helpful diagrams.

R. E. D. BISHOP

ELEMENTARY ANIMAL ECOLOGY

Animal Ecology

By W. H. Dowdeswell. Pp. xv+208+16 plates. (London: Methuen and Co., Ltd., 1952.) 12s. 6d.

ALTHOUGH the subject of plant ecology has been reasonably well covered at different levels in a number of books, the subject of animal ecology has not received the same attention by authors, especially at the elementary level. This, in its turn, has contributed to the comparative neglect of the subject in schools. In this book, the senior biology master at Winchester College has sought to remedy the deficiency by providing a broad introduction to the ecology of animals which will not only cater for existing needs but will also stimulate further interest in animal ecology among sixth-form students in schools and first-year students at universities.

After a description of the range and purpose of animal ecology, the author examines the distribution of animals resulting from changing environment, colonization, isolation, specialization and seasonal change. Then follows an account of some general features of animal communities with particular reference to periods of activity and rest, food relationships and food chains, ecological niches, the size of animal populations, and animal movements. This is succeeded by examination of special animal forms like parasites, commensals and symbionts. Up to this point the book follows along stereotyped lines, its main virtue being that much of the information which is already available in students' text-books is here collected together to form a connected introduction to animal ecology.

The remainder of the book is made up of descriptions of animal communities including land, marine, estuarine and freshwater. For these the author can be warmly commended for accounts which will quicken interest in animal ecology among students who are just beginning their studies of the subject. They will receive some help from the chapter on practical animal ecology but would have profited even more if the author had omitted his trivial introduction to statistics and included some accounts of practical ecological studies which his own sixth-form students had carried out as well as suggestions for practical work of an experimental nature.

The book contains a useful bibliography and is illustrated with well-reproduced half-tone plates and line drawings.

T. H. HAWKINS