

Functional Mammalian Anatomy

(With Special Reference to the Cat). By Prof. William T. Taylor and Prof. Richard J. Weber. Pp. xi+575. (New York: D. Van Nostrand Co., Inc.; London: Macmillan and Co., Ltd., 1951.) 55s. net.

THE authors of this zoology text-book have designed it "to approach the anatomy of the mammal, particularly the cat, in a dynamic way since it is most natural for a student studying the architectural elements of an animal body to know how they function". They have succeeded most admirably. One cannot but regret that the book, being North American in origin, necessarily deals essentially with the cat; but, even though it concentrates on the 'wrong' animal, there is no doubt that it could be of great value to any British student of chordate anatomy.

The volume is divided into fourteen chapters, of which the first is introductory and includes a brief anatomy of the fundamental tissues. The last is a manual for the regional dissection of the cat. The intervening 450 pages are devoted primarily to the anatomy, and secondarily to the function, of the integument, special senses, and the skeletal, muscular, nervous, blood vascular, respiratory, digestive, reproductive and endocrine systems. In addition, the urinary and lymphatic systems are treated in separate chapters. There is a brief appendix on mammalian classification.

"Functional Mammalian Anatomy" is both a text for the college easy chair and a manual for the laboratory bench, and it is a most useful antidote to the course given by the "sound man with the morphological approach". It does not neglect morphology, but it stresses more clearly than do most zoology text-books that the modern approach to anatomy is more than the careful separation and memorization of animal structures.

A. J. MARSHALL

Tempestuous Eden

By Ursula Venables. Pp. 239+28 plates. (London: Museum Press, Ltd., 1952.) 18s. net.

MRS. VENABLES went to the Shetland Islands as the wife of the ornithologist L. S. V. Venables, and the trend of the book is ornithological. Her style is pleasantly buoyant, and the information somewhat heterogeneously presented. They took a croft on the mainland of Shetland, not as crofters but as observers with a boat—in Orkney the native is a crofter with a boat, in Shetland he is a boatman with a croft; and the book tells of the simple but satisfying pleasures of the few years which they spent in their "Tempestuous Eden".

There is an interesting discussion of the human ecology, past and present: the men fish; the women work the land, which produces a subsistence from such basic products as potatoes, turnips and cabbage; hay and corn are grown for cattle, ponies, sheep and poultry; while the sea yields driftwood and a stock of dried fish for winter; and the moor provides a sure and inexpensive supply of peat. The unique Shetland cabbage is grown in stone-walled cisterns (plantie-crubs), and takes two years to mature; its seed is carefully preserved each year. But this independence is dying out, as are the industries inherited from Scandinavian forbears—wool-spinning and the knitting of shawls and jerseys, grinding with water-mills and kiln-drying the home-produced bere or barley for bread, curing mutton in windy unmor-

taired stone huts (skeos), and drying cod on the foreshore.

Compared with the rest of Britain, the species of animal life are few, but interesting. Of the eight wild land-mammals inhabiting this windy, almost coverless main island, six are rodents (only one native), one is the stoat, and the eighth is the hedgehog, a surprisingly successful colonist introduced about 1860. The landrail, driven from most of Britain by the early and mechanical cutting of hay in which it nests, is still common in Shetland, where hay is cut late and with the scythe; but with the coming of early-rotation grasses and hay-machines it is now threatened there. The last two chapters describe visits to the remoter islands, Foula and Fair Isle, where the soil is good but harbours are poor, and the population is dwindling; and Out-Skerries, where the soil is extremely poor but the harbour is safe, and the population remains a strong fishing-community.

The appendixes include lists of breeding and non-breeding birds. The photographs are good; but the reader looks in vain for the convenience of a general map as end-paper.

R. M. LOCKLEY

Advanced Practical Physics for Students

By Dr. B. L. Worsnop and Prof. H. F. Flint. Ninth edition, revised and enlarged. Pp. vii+754+8 plates. (London: Methuen and Co., Ltd., 1951.) 30s.

IT is a real pleasure to welcome another edition of this well-known and excellent text-book of practical physics; for, since the work was first published in 1923, it has been a source of help and inspiration to both students and teachers.

Although the authors state that the course is for students who have completed the Intermediate stage and who are proceeding to a pass or honours degree, yet there are many sixth-form students in schools preparing for the Advanced and Scholarship levels of the General Certificate of Education who have used the book with advantage; no doubt many more will do so in the future. In this connexion it is perhaps a pity that in this latest edition the introductory chapter on the calculus has been omitted, though it must be admitted it has been replaced by a very useful chapter on accuracy of observations.

In addition to this change, the authors have undertaken a complete revision of the whole work, and have added chapters dealing with modern developments in physics, especially in the field of electronics. This feature should certainly widen the appeal of the book, to include students other than those immediately concerned with university examinations. The book is well illustrated, with many new diagrams, and no laboratory in any educational establishment should be without at least one copy.

The Theory and Practice of Wool Dyeing

By C. L. Bird. Second edition. Pp. 231+xvi+34 plates. (Bradford: Society of Dyers and Colourists, 1951.) 15s.

THE character of this book is evident from the fact that 'theory' occupies 22 pages out of 229, and that is all that the reader will find. The 'theory' is made as painless as possible by the relegation of thermodynamics to an appendix. Practice, on the other hand, is very adequately treated from the point of view of a technical art, with ample descriptions and illustrations of modern machinery.

S. M. NEALE