

made disastrous inroads into native faunas. The physical removal of great areas of habitat (for example, forests and swamps) and the ravages of introduced rats and cats have been responsible, more often than direct commercial exploitation, pest-control and 'sport', for the decimation of many kinds of animals.

Yet it is gratifying to see from Dr. Greenway's data that the picture is not yet as bleak as one might have thought. For example, the early British settlers freely ravaged the faunas of North America, Australia and New Zealand—yet only one Australian, one New Zealand and two North American 'full' species are known certainly to have disappeared, and only three more species are thought probably to have become extinct in those countries.

Of the thousands of species of modern birds, only 44 are known to have vanished, and a mere 12 probably have done so, although hundreds have become relatively rare and may be in danger. Of those that have gone, almost all were island forms. No less than 12 species—more than one-quarter of total extinctions—have disappeared from islands of the Central and Western Pacific alone. In certain cases at least, the chief factors responsible seem to be the impact of imported eutherians (particularly rats) on highly specialized island (often ground-nesting) natives.

The ecologist and evolutionist, as well as the conservationist, will find a great deal to interest him in this book; and Dr. Greenway is much to be congratulated on its production. A. J. MARSHALL

Georgia Birds

By Thomas D. Burleigh. Pp. xxx+746+48 plates. (Norman, Oklahoma: University of Oklahoma Press, 1958.) 12.50 dollars.

THIS large and handsome volume, published in co-operation with the U.S. Fish and Wildlife Service, is written and illustrated by men who have worked in the field in Georgia. It keeps commendably to the proper purpose of an area study, without attempting to be also a text-book or field-guide for local ornithologists. Thus, the main information for each species relates to its distribution or occurrence in the State, and to its habits as observable there, with a little background on general distribution and on recognition. There are contributed chapters on the history of ornithology in Georgia and on the physiography of the State. The fine colour-plates by G. M. Sutton depict characteristic species in their Georgian habitats; the photographs are primarily of environmental interest; and there are several distribution maps. LANDSBOROUGH THOMSON

British Herbaria

An Index to the Location of Herbaria of British Vascular Plants with Biographical Reference to Their Collectors. Compiled by D. H. Kent, with the assistance of E. B. Bangarter and J. E. Lousley. Pp. 101. (London: The Botanical Society of the British Isles, c/o Dept. of Botany, British Museum (Natural History), 1957.) 20s.

THE native British flora, so far as vascular plants are concerned, is relatively poor in number of species but is of particular interest from the geographical position of the British Isles on the north-western margin of Eurasia and because of the diverse ecological conditions within them. Many of the professional and amateur botanists who have studied British plants accumulated herbaria, and these are in many different institutions or in possession of individuals. To trace

the whereabouts of some and to ascertain their value is not always easy, and the account compiled by Mr. D. H. Kent, with the assistance of others, will be useful to many who are making detailed researches on various aspects of the British flora. The list of universities, museums, and other institutions possessing herbaria of or with British plants is a long one. It is hoped that proper attention is given to the continued preservation of the specimens. The alphabetical index to collectors is "to indicate where material of individual collectors is represented, and often this is to be found in several herbaria". Obviously it is scarcely possible to compile a complete index of this kind and a great deal of dependence was placed on replies from those in charge of museums and other institutions. Useful information as to size of collections, dates of collectors, etc., is given under many of the names. There are, however, a great many gaps and it may be that the present publication will result in these being largely filled for a new edition.

W. B. TURRILL

Commutative Algebra

Vol. 1. By Prof. Oscar Zariski and Prof. Pierre Samuel, with the co-operation of I. S. Cohen. (The University Series in Higher Mathematics.) Pp. xi+329. (Princeton, N.J.: D. Van Nostrand Company, Inc.; London: D. Van Nostrand Company, Ltd., 1958.) 52s. 6d.

THE present book makes its appearance after two decades of intensive research, in which the authors themselves have played a leading part. It will be of great value to graduate students and research workers who wish to specialize in this branch of mathematics, for it is the only connected account of the subject. After a chapter of basic definitions and concepts there is a polished account of the theory. This proceeds via field theory and the theory of ideals and modules to the properties of Noetherian rings. The ideal structure of such rings is thoroughly explored. The last chapter is concerned with Dedekind domains and classical ideal theory. Examples illustrating the theory are given in places. But the reader may find the account rather concentrated. If he asks why certain topics are introduced he will find no answer, for it is hidden in the geometric background to the whole theory and there is no hint of this except in the preface, where we are promised the motivation in the second volume. A surprising feature is the apparently complete lack of any references, either to other books or to original papers. It will be difficult for the reader to link the work with the related literature unless he is under expert guidance.

Commutative algebra began as a branch of abstract algebra in Germany and remained a child until the late thirties. Now it is a towering giant (hence this first of a two-volume work), existing in its own right. One questions whether the subject can expect to attain a position of near immortality, at the side of other branches of 'permanent' mathematics. It is true to say that it only grew because the parlous state of the theory of algebraic geometry seemed to point to the need for a new branch of algebra. Now we have it. But on the whole it has not yet done the job of work for which it was introduced. Nowhere in this first volume is there any indication of the motivation behind the development and the reader or prospective reader may, in looking for the purpose, be disappointed and close the book. It is to be hoped that the book has a better reception than this, but the reviewer has his doubts.

L. S. GODDARD