stellatus, each with its own ecological requirements, the latter generally demanding greater exposure and extending higher. Where they overlap the two species in some places compete, in others occupy distinct zones indicating other controlling factors. Nor is distribution static; the two follow the present general northward trend of marine populations. Added to these is the Australasian *Elminius modestus* the spread of which since 1945 has been so carefully followed. Here other ecological needs, structural limitations and more frequent reproduction, have all to be considered.

All is admirably dealt with and, if Dr. Lewis does in places labour somewhat too desperately for exact description and explanation, he does in text, photograph and diagram convey an impression of the richness and variety of intertidal life on Britain's rocky shores which will come as a revelation to many and be of the greatest value to all who study these shores. This book is a major addition to knowledge concerning the fauna and flora of these islands.

C. M. Yonge

BIRDS OF THE AMERICAS

Birds of the Labrador Peninsula and Adjacent Areas

A Distributional List. By W. E. Clyde Todd. Pp. xii+819+8 plates. (Toronto: University of Toronto Press; London: Oxford University Press, 1963. Published in association with Carnegie Museum.) 18 dollars; 144*s*. net.

The Birds of Colombia and Adjacent Areas of South and Central America

By R. Meyer de Schauensee. Pp. xvi+427 (20 plates). (Narberth, Pennsylvania: Livingston Publishing Company, 1964.) 10.00 dollars.

EACH of these books deals with the avifauna of a particular area in the New World, one sub-arctic, the other tropical; both are products of the expeditionary enterprises of museums in, as it happens, Pennsylvania. There the resemblance ends. The work on Labrador is purely a research report, with the limited scope indicated by its sub-title. The other is a dual-purpose book, presenting the results of research in summary form and at the same time serving as a guide to the identification of the birds to be found in Colombia and adjacent areas.

Clyde Todd is indeed a veteran worker, having entered on his career as a professional ornithologist in 1891. This has been mainly associated with the Carnegie Museum in Pittsburgh, where he now has the status of curator emeritus of birds. From there, in the period 1901–58, he organized 25 ornithological expeditions to Labrador; most of these he led in person, and occasionally he was single-handed. The object was to study the distribution of the bird species found in that inhospitable area, and the existence of such 'life-zones' as climatic and physiographic factors could be shown to determine.

The result of these prolonged and arduous investigations has been a massive accumulation of detail, all this time deliberately withheld from publication. The information is now presented in its entirety, and fully documented with references to other sources; it makes a volume of outsize dimensions and more than 6 lb. in weight. Inevitably, it is strictly a work of reference.

Meyer de Schauensee is curator of ornithology at the Academy of Natural Sciences of Philadelphia, where he and various colleagues have made special investigations of the immensely rich bird-life of Colombia. As a work of reference his book usefully summarizes what is known about the distribution of species and sub-species in Colombia, with indications of the wider range. It is, however, designed primarily as a handbook, and is accordingly provided with descriptions to aid identification and with numerous illustrations both in colour and in line; habits are mentioned only briefly, in the general introduction to the systematic treatment of each family. It is an attractive volume, admirably adapted to its purpose.

The work has much more than a local relevance, and its appearance is particularly to be welcomed because, as the author puts it, "no modern book exists in English on tropical birds of continental South America". In these circumstances the book will be very useful beyond the confines of Colombia itself; it covers three-fourths of the birds found in a much larger adjacent area, and more than half of those found in the tropics of Central and South America from Yucatan to Paraguay.

It is interesting to contrast the two areas. In Labrador there are only 49 species or sub-species that are found throughout the year, with 4 others that are winter visitors from further north; 200 are breeding summer visitors, and 34 others (excluding 'accidentals') are migratory transients or non-breeding summer visitors. The total compares with 1,556 species (2,640 sub-species) recorded from Colombia—a figure without known parallel. This is a sign not only of the richness of the tropics, and of the neotropical region in particular, but also of the great diversity of the country; Colombia has coasts to the Caribbean and the Pacific, parts of the Orinoco and Amazon systems, grassy plains, continuous forests, and mountains rising above the snow-line to 19,000 ft.

Landsborough Thomson

CARPENTRY TOOLS

The History of Woodworking Tools

By W. L. Goodman. Pp. 208. (London: G. Bell and Sons, Ltd., 1964.) 45*s*. net.

THE History of Woodworking Tools provides the first comprehensive account of such tools in the Western hemisphere. It seems surprising that objects which play such a vital part in everyday life have not been more often investigated but, as Mr. Goodman points out, there seems to be a general impression that through the ages there has been very little change in the form of the more common tools. He goes on to suggest that this is not the case, but that in almost every detail of their design and construction, changes and improvements have occurred.

Woodworking tools are described in this book under eight headings, starting with the axe and adze. The earliest of these were the antler axes, used by small groups of people living in Denmark in the Mesolithic period. Axes and adzes of flint and stone followed, hafted in various ways, and then a variety of tools in bronze, iron and steel, some of them very specialized forms.

The origin and development of the plane are not so clear. The Greeks had a word for it, but the earliest examples are Roman, and numerous fragments survive from this period as well as representations carved on tombstones. The old belief that this tool was forgotten in the Dark Ages and re-invented in the twelfth and thirteenth centuries is disproved by new evidence from Frisia and Anglo-Saxon England. Few tools of any kind of the period from 800 until 1600 survive, but there is much pictorial evidence, sometimes puzzling or obviously inaccurate, according to the interest taken by the artist in practical matters. In this context, the building of Noah's Ark is often a fruitful subject for contemplation. From 1600 until the present day there is abundant material. Indeed, the two centuries after 1600 are described as the 'Golden Age' of woodwork, because the rising standard of living and the appearance of new types of wood from the New World and the Far East demanded increasing skill from joiners and cabinet-makers, and a wide range of special tools.

The first true saws seem to date back to the early Bronze Age, although flint knives with a serrated edge go back to earlier times. The saws were made of copper, and the arrangement of the teeth shows that they must have been used with a pulling action. The far more effective saw with