TROPICAL FOREST ARCHÆOLOGY

Archæological Investigations at the Mouth of the Amazon

By Betty J. Meggers and Clifford Evans. (Smithsonian Institution: Bureau of American Ethnology, Bulletin No. 167.) Pp. xxviii+664+112 plates. (Washington, D.C.: Government Printing Office, 1957.) n.p.

THE authors of this report studied an extensive area consisting of the islands of Marajó, Mexiana and Caviana at the mouth of the Amazon, and the territory of Amapá which lies north of it. It is an area in which living conditions are far from pleasant and transport can be excessively difficult. The natural conditions are a great hindrance to archaeological work, but the authors overcame them with great determination.

The area was previously known only for the remarkable pottery burial urns and associated objects belonging to what is now called the Marajoara Phase on Marajó Island, whence have arisen theories that the island was a centre of cultural development, radiating its influence far and wide. The expedition proved that the truth was the precise opposite; not only were seven more lowly phases of culture shown to have come fully fledged into the area and to have maintained themselves at their initial level until absorbed or displaced by the next invader, but also the more elaborate Marajoara Phase was demonstrated to have arrived similarly and at once embarked on a process of degeneration, ending up at the same level as the others. Most of the objects belonging to the living tribes of the lower Amazon are very perishable—wood, gourds, feathers and so on—and they soon disappear when discarded, leaving only pottery and rare objects of stone. The same conditions undoubtedly existed in antiquity, and the present work is of necessity based mainly on pottery, but the application of the most rigorous and painstaking methods of analysis enabled much to be learnt. In this connexion attention must be directed to a misprint in Fig. 141 which vitiates an argument, the pottery titles Inajá Plain and Camutins Plain having been interchanged.

The main outlines of the authors' conclusions have been known for some time to specialists through short communications, and what this report does is to set out the evidence fully and state some of its wider implications. Some years ago, Julian Steward gave strong support to the theory that a tropical forest could only support a culture on what he called the 'Tropical Forest' level, similar to that of the living forest tribes, and that a more advanced culture coming in would, owing to limitations of food supply, decline to tropical forest level. The authors see the behaviour of the various cultural phases, and particularly the decline of the Marajoara Phase, as a triumphant vindication of this theory. In addition, they have developed an ingenious method of building up a time-scale by means of the rate of accumulation, not of deposits but of potsherds; they themselves realize the limitations of this, but it seems to work on the whole, and it gives an indication that the earliest pottery-making tribes in the islands cannot have arrived before about A.D. 700, whereas the mainland of Amapá was not occupied by such people until much later. A further conclusion is that the archaeological record does nothing to support the theory that the tropical forest pattern of culture spread from the

north down the Guiana coast and up the Amazon. By a study of the distribution of traits the authors have indicated probable sources for the various phases, and in particular they believe that the Marajoara Phase originated in the Andean areas of Ecuador and Colombia.

A point which has already involved the authors in controversy is their contention that the way in which a tropical forest environment limits a culture constitutes a law of universal application, not confined to the area where they have applied it so successfully. The Maya appear to be a notable exception, and although Meggers has maintained that they did not develop their high civilization in the tropical forest part of their habitat, many Maya specialists disagree, and whatever their origin, the Maya succeeded in maintaining their culture there for a long time. Parts of the Old World, such as Nigeria and south-east Asia, would repay further study in this connexion. G. H. S. BUSHNELL

BIRDS IN SPAIN

Portrait of a Wilderness

The Story of the Coto Doñana Expeditions. By Guy Mountfort. Pp. 240+59 plates. (London: Hutchinson and Co. (Publishers), Ltd., 1958.) 30s. net.

MANY people saw and enjoyed Mountfort's beautiful colour film, "Wild Spain". His present book gives a report on the expeditions to Coto Doñana, where the film was made. There were three expeditions (in 1952, 1956 and 1957), the last one being the largest and best equipped. All of them consisted of qualified students and experienced photographers, and since the main interest was in birds, the ornithological staff of the expeditions was well selected, the names of the members speaking for themselves.

Coto Doñana, a wonderful spot on the Atlantic coast of Andalucía, is truly a bird paradise of incomparable beauty and richness of bird and animal life. Since the fifteenth century it has been known as a famous hunting ground of the kings of Spain, and, owing to the efforts of its successive owners, it has preserved its unique character of a wilderness unaltered and undevastated by man, where plants and animals live freely and undisturbed by modern civilization. In addition, it lies in a very favourable part of the continent of Europe from the point of view of natural history phenomena, and this makes it one of the most interesting nature preserves in Europe. During the spring migration the numbers of birds and species represented are incomparable. Some rare birds breed there, others appear periodically during the migration.

The aims of the expeditions were to study birds, to photograph them, as well as to collect materials referring to other zoological groups. In this respect they were successful also, and the collections made will add valuable scientific information about this area. The birds, however, are the main objective of the present book and they are described with love, zeal and pure scientific exactitude. It is the author's great merit that, writing on scientific matters and observations, he does so not only in very simple and readable manner but also with humour and much interest. Consequently, his book is by no means a dry and scientifically overloaded account digestible by specialists only. On the contrary, it will be