

species exist in all stages of ecologic, genetic, cytologic, or morphologic distinctness, some preponderantly morphological, others preponderantly genetical, and still others preponderantly ecological”.

The importance of genetical barriers between taxa is rightly emphasized, but it is explicitly stated (p. 158) that hybrid sterility or genetic incompatibility is not believed to be the sole criterion of specific distinctness. Examples quoted in several places in the body of the book show that it is not invariably an essential criterion. Isolating mechanisms are of many kinds, and every one has numerous variants.

One criticism may be made. I doubt if the statements regarding clines (p. 28) are valid. It is there said, “The term cline can be used only for individual characters, and not for an assemblage of characters of groups of individuals such as a series of populations, for a single individual may with respect to one character belong to one cline and with respect to another character to a different cline. Clines are therefore not commensurable with natural entities, and are oversimplified abstractions dealing with the variation of individual characters”. There is, however, sometimes found to be a high correlation of character variations as the individuals of a cline are scored in a given direction.

Every taxonomist and every botanist, whether a taxonomist or not, is urged to read and consider this book. Very many portions could be quoted from it as proof of the truth of the final paragraph: “Even though we may think we dimly see some of the organization in the intricate network that connects the life of today with that of the past, we still do not know what enables living things to develop as they do, or how they first came into being. The research of the present century has merely opened our eyes to see a remarkable and still quite incomprehensible organization of living things. Faced with such a situation, the scientist becomes humble, for at this point he meets the Great Unknown”.

W. B. TURRILL

THE STONE AGE IN EASTERN PALESTINE

Le paléolithique et le mésolithique du Désert de Judée

Par René Neuville. (Archives de l'Institut de Paléontologie humaine, Mémoire 24.) Pp. 270+20 plates. (Paris: Masson et Cie., 1951.) n.p.

THIS is an important work which gives new information on the prehistory of a hitherto little-known region. The area of exploration lies to the south-east of Jerusalem in semi-desert calcareous country stretching eastwards to the Dead Sea. A number of cave and rock-shelter sites have been excavated and rich flint material unearthed. Culturally speaking, the industries found range from Tayacian and late Acheulean through Mousterian (in one instance, of the Kurdistan variety) to a late Palaeolithic and Mesolithic (Natufian). In at least one site this last-named passes upwards into a Tahunian, which recalls the industry of the lower levels at Jericho. The Stone Age folk must have occupied many of the sites for long periods of time. Their industries show steady evolution; for example, there are no less than three Natufian levels with

development from the early level to the latest. Important is the proof that the Tayacian culture must have existed side by side with the later Acheulean. These two cultures belong to two distinct culture groups, and their co-existence at the same time in this part of Palestine is interesting.

But the author and his collaborators have not been satisfied merely to dig the sites and then to publish accounts of the industries and fauna recovered. Their main interest has been to place the cultures in their geological and climatic settings. A succession of pluvial and interpluvial periods can be demonstrated, roughly coincident with the glacial and interglacial ones of more northern latitudes. There must obviously have been much wetter periods in this region in the past than nowadays, as to-day the country is only able to carry a very small population. Into the framework thus arrived at it has been possible to fit the successive cultures and to compare the results with what is known in other parts of the world.

The volume opens with a general description of the area, and this is followed by an account of the various sites excavated and a description of the finds unearthed. There are plenty of line drawings, both of the implements and of the fauna, and also twenty plates which supply further illustrations. No works of art were encountered except in two cases in Natufian levels where sculptures were discovered. This accords with Prof. Garrod's work at Mount Carmel, where, too, sculpture was encountered in Natufian levels. There is no doubt of the importance of this work to all students of the Stone Age in this part of the world.

M. C. BURKITT

CHEMISTRY IN THE INDUSTRIAL REVOLUTION

The Chemical Revolution

A Contribution to Social Technology. By Dr. Archibald Clow and Nan L. Clow. Pp. xvi+680+110 plates. (London: Batchworth Press, Ltd., 1952.) 50s. net.

WHEN a reviewer sees what by present-day standards is a large and well-produced volume entitled “The Chemical Revolution”, he has visions of a historical account of the way in which chemical discoveries and their technological and commercial applications have revolutionized man's way of life, how they have brought him new sources of wealth, of health, richness of life, new possibilities of professional employment and new techniques of construction.

In the present volume the authors have limited themselves both in time and space in their treatment of the enormous field suggested by their title. Even so, it is quite impossible to deal adequately in this short notice with so important a work. The book treats of the chemical industry as an important concomitant of the Industrial Revolution until about the middle of the nineteenth century.

It was said of the study of acoustics, by Clerk Maxwell, that whole armies of musical scientists and of scientific musicians had fallen into that Serboman bog without in any way filling it up. In a similar way, the scientific historians, economists and ‘historical’ scientists who will be required to deal with the subject under review will be legion.