

Visean affinities of a number of species from the Lower Productus Limestone, and the proposed palaeontological zoning of the Middle and Upper Productus Limestone, are shown to be unsupported by evidence. The present author considers the Productus Limestone to be wholly Permian in age.

This work enables closer correlation to be made with Permian beds in other regions, and extremely close relations are apparent with faunas from West Australia, China and Tunisia. There are many anomalies, however. The rich faunas from Indo-China and Timor, for example, contain few identical species, and many of the gastropods are "extraordinarily like" those of the Pennsylvanian of America. Arctic species occur in all three divisions of the Productus Limestone. The author would prefer to regard many of the differences of fauna between Asiatic regions as indicating ecological (facies) variation rather than actual difference in age.

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ALAN WOOD

### Fishes and Shells of the Pacific World

By John T. Nichols and ~~John~~ Bartsch. (Pacific World Series.) Pp. vi+200+16 plates. (New York: The Macmillan Company; London: Macmillan and Co., Ltd., 1946.) 12s. 6d. net. (Revers)

THIS book provides an authoritative introduction to Pacific fishes and molluscs, and was written primarily to assist the thousands of service men spread over the Pacific Ocean during the latter half of the recent War. The descriptive section on the fishes is illustrated by a number of clear line drawings which are probably of even greater practical value than the photographs which illustrate the section on molluscs. The authors make no attempt to give a complete survey of these groups, but enough detail is provided for anyone to allocate a fish or mollusc to its family or genus. The book is, however, by no means confined to systematics; there are chapters on the origin and distribution of the fishes, on game fishes, and on the collection and preservation of fishes and molluscs.

In the section on molluscs there is a concise account of the chemical and physical factors in the sea, with a discussion of the part played by molluscs in the economy of the sea. There is a good short bibliography appended to the mollusc section of the book, but unfortunately there are no further references on the fishes.

Further popular books of this standard, covering other areas of the world, would be of great value, perhaps even in Great Britain, where many animal groups are still served by handbooks rapidly approaching their centenary.

### Nuts 716

Their Production and Everyday Uses. By Dr. F. N. Howes. Pp. 264+16 plates. (London: Faber and Faber, Ltd., 1948.) 18s. net.

THIS is one of those useful books which present simply and shortly all but the more specialized aspects of the particular and comparatively limited subject—in this case the seeds and fruits that are popularly called 'nuts'. Apart from short introductory sections about the uses of nuts for food and their processing and storage, and an end section of cooking recipes, the book is in four parts, dealing respectively with tropical nuts, temperate nuts, nuts in Great Britain, and less familiar sorts. It is well produced and printed, and the illustrations as good as can be expected with such a subject.

As the author says, "most people relish nuts", especially children, and it is interesting to speculate how far this may come from the earliest days of human history when, it seems likely, nuts were one of the chief sources of food, especially in the warmer forest areas, where, indeed, they are still of much greater importance than elsewhere. Another interesting point is the way in which the book illustrates how various are the circumstances which may make or mar a vegetable commodity for purposes of modern commerce, a fact that may, in part, explain why the commercial plant-products of really first-rate importance are so few. Keeping qualities, the presence of unpalatable substances, the thickness of shells, the clinging of skins, the growth-form of the plant, the length of generation, and difficulties of harvesting or processing are but a few of the reasons why, among nuts at any rate, it seems that "the best is still to come".

Dr. Howes no doubt found it difficult to weigh fairly the claims to space of his different subjects, and on the whole he has kept a reasonable balance; but some disturbance of it might have been justified to allow consideration of so topical a matter as the African groundnut scheme. The statement, too, that this plant, which is assumed to be a native of America, has been cultivated in the Old World for "many centuries" is likely to raise some unnecessary hares. There might also be a more consistent insertion of the names of the families to which the various nuts mentioned belong. A detail of the book which is likely to appeal particularly to readers in Great Britain is the interesting account given of garden almond-trees. These often fruit surprisingly well, even on the rigorous north-east coast, where last year, for example, individual trees bore as much as thirty pounds of good fruit; Dr. Howes' reminder that the nuts from these fruits are usually perfectly palatable and wholesome is timely.

RONALD GOOD

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### Physics and the Surgeon

By H. S. Souttar. Pp. vii+60. (Oxford: Blackwell Scientific Publications, Ltd., 1948.) 7s. 6d.

THE mention of physics in any assembly of surgeons or physicians can be relied upon to arouse an immediate feeling of apprehension. An outstanding exception to this attitude is Mr. Souttar, who, besides being a surgeon of international standing, has acquired considerable repute as a physicist and mathematician. Unfortunately, the hopes raised by this combination of title and author are doomed to disappointment. The first half of the present book deals mainly with the mechanics and hydrostatics of human anatomy. There are fascinating accounts of the forces involved in muscle action, though the author is often so carried away in descriptive anatomy that the physics is left far behind.

The remainder of the book is devoted to atomic physics. In about thirty pages the reader is carried from the Rutherford atom, through the quantum theory, spectra, X-rays and radioactivity, taking in the cyclotron and isotopes in his stride. One is rather surprised to find that in a book dated 1948 the word 'neutron' appears only once, and the only instrument for detecting atomic particles mentioned is the spintharoscope. The many applications of atomic physics to surgery and medicine are not mentioned.

This book would need considerable expansion and revision in order to fulfil the promise of its title.

J. E. R.