

concentrated on war work. According to him, many firms readily fell in with the suggestions of the Department to depart from routine practice and embark on experimental work, often at a considerable financial loss to themselves.

#### OUR BOOKSHELF.

*Pre-History in Essex, as Recorded in the Journal of the Essex Field Club.* By S. Hazzledine Warren. (Essex Field Club Special Memoirs, vol. v.) Pp. vii+44. (Stratford, Essex: The Essex Field Club; London: Simpkin, Marshall, and Co., Ltd., 1918.) Price 2s. 6d. net.

THE title "Pre-History in Essex" would suggest that the subjects treated in this special memoir are entirely prehistoric. But we find mentioned papers such as "Fifty Years Ago in Essex," "Tree-Trunk Waterpipes," "The Coming of Age of the Essex Field Club" (1901), etc. Indeed, the number of papers on various subjects mentioned is such that in most cases two or three lines comprise all the explanation of their nature.

Among the few subjects to which more space is given are the Deneholes of Hangman's Wood. Mr. Warren does not take the view given in the report on the Denehole Exploration at Hangman's Wood (*E. Nat.* 1, 1887), but considers that "they possess in every way the normal character of comparatively modern chalkpits" (p. 34). Now about half a mile west of Hangman's Wood is the eastern margin of an area of bare chalk extending thence to Purfleet, besides much smaller exposures of chalk near Little Thurrock and East Tilbury, with modern chalkpits in each place mentioned. Hence modern chalkpits at Hangman's Wood, where the chalk is about 60 ft. beneath the surface, where each pit occupies a very small horizontal space, and is separated from the other pits, and shaped so as to show intended separation, are surely incredible. And the evidence is surely in favour of the E.F.C. Exploration view that these deneholes were family stores. Then the notion of the E.F.C. explorers that *deneholes* meant *denholes* was considered by that eminent philologist, the late Sir J. A. H. Murray, to be incorrect, *deneholes* being *Daneholes*.

However, "Pre-History in Essex" will form a decidedly useful list of the papers published by the Essex Field Club since 1880.

T. V. HOLMES.

*The Chemists' Year-Book, 1918-19.* Edited by F. W. Attack, assisted by L. Whinyates. Vol. i., pp. vi+422; vol. ii., pp. iv+423-1146. (London and Manchester: Sherratt and Hughes, 1919.) Price 15s. net 2 vols.

THE chemical pocket-books used in this country before the recent war were chiefly of German origin. Mr. Attack brought out the first edition of his "Year-Book" in 1915: its appearance indicated that, as with sundry other chemical products and adjuncts, we were quite capable of supplying our own requirements in this respect.

A large amount of information has been packed

into the two small volumes. Much of the space is devoted to tables showing the chief physical and chemical properties of numerous organic and inorganic substances—their formulæ, molecular weights, boiling-points, and so on. There are also the ordinary tables of specific gravity, solubility, etc., and much useful matter of a miscellaneous kind, including historical references, mensuration data, and lists of scientific journals. In addition, the volumes include a number of short articles which summarise the theory and practice of various branches of chemical technology. Thus, to mention only a few by way of examples, there are sections on electro-chemical analysis, fuels, dairy products, brewing materials, textile fibres, dyestuffs, tobacco, and photography. These condensed accounts serve to furbish up the reader's acquaintance with branches of work in which he may have become "rusty."

Several new sections have been added to the present edition. They include one on agricultural chemistry by Dr. E. J. Russell, and one on the analysis of ceramic materials by Dr. Mellor. Other parts of the work have undergone a general revision, and chemists will find the "Year-Book" a convenient and useful *vade mecum*.

*The Geographical Part of the Nuzhat-Al-Qulub.* Composed by Hamd-Allāh Mustawfī of Qazwin in 740 (1340). Translated by G. Le Strange, and printed for the Trustees of the "E. J. W. Gibb Memorial." Vol. xxiii. Pp. xix+322. (Leyden: E. J. Brill; London: Luzac and Co., 1919.) Price 8s.

WE have here an English translation of the original Persian text of the "Nuzhat-Al-Qulub" published in this valuable series three years ago. The author, Hamd-Allāh, was a man of note in his day, holding the post of Mustawfī, or State Accountant, to Abu Sa'id, the last of the decadent Ilkhan dynasty, the first Mongol rulers of Persia, and great-grandson of Hulāqu, the conqueror of Baghdad. The author must have been in possession of much geographical and statistical information, and in many ways his account of Persia and Mesopotamia in the middle of the fourteenth century is valuable; but he depended largely on materials collected by other writers, much of which is now available in published texts. The book takes the form of a gazetteer, but, except as regards places like Qazwin, the author's native city, little new information is forthcoming. Perhaps the best chapter is that describing the mines of western Asia producing metals, precious stones, and other minerals. His science is that of his own day, that of the scriptures and traditions of Islam, as when he tells us that one of the chief values of mountains is that they prevent the ground from moving. But the treatise abounds in miracles and folklore. Mr. Le Strange's special local knowledge is well exhibited in his identification of many of the obscure places mentioned in the text. The volume is in every way creditable to the editor and to the trustees of the E. J. W. Gibb Memorial Fund.