

English, compiled by the respective Geological Surveys. The text on Norway, by 21 authors, carefully summarizes the extensive literature and is particularly valuable for its well-chosen bibliographies. It is accompanied by an attractively coloured 'solid' map of the country on the scale 1:1,000,000, a 'drift' map (1:2,000,000), and nineteen other maps on various scales illustrative of classical Norwegian districts and of the economic geology. The memoir on Sweden is the work of five authors and, like the maps, relates to the solid geology only; but a comparable monograph by G. Lundqvist on the Quaternary formations (Stockholm: Sveriges Geologiska Undersökning, Ser. Ba, No. 17, 1960), with drift maps, has been published separately at the same price. All these publications will have a long life and should find a place even in the smaller geological library.

C. F. DAVIDSON

The Early Lectures of Ralph Waldo Emerson

Vol. 1: 1833-1836. Edited by Stephen E. Whicher and Robert E. Spiller. Pp. xxvii+545. (Cambridge, Mass.: Harvard University Press; London: Oxford University Press, 1959.) 100s. net.

SOON after his resignation from the pastorate of the Unitarian Church at Boston, Emerson considerably extended the cultural activities of the district by a series of lectures for which he has become well known. They were particularly concerned with the elucidation of natural phenomena, the biographies of great men and literature. To each lecture Emerson brought the fruits of keen observation, wide reading and powerful thinking. The result was a many-sided contribution to knowledge and philosophy, which, in this new work, emerges with a freshness which is remarkable for material published one hundred and twenty years ago. Reasons for the study of natural history, man's place in the universe, Emerson's keen analysis of the place of water in Nature; notes on his wanderings in Italy; the life-histories of Luther, Michel Angelo Buonarroti, Mellor, George Fox, Burke; an account of the traits of the "English National Genius", all reveal Emerson as a man whose contributions to cultural life were deep and wide-ranging.

Profs. Whicher and Spiller have worked long and patiently to produce the lectures in a form complete with extensive technical and informative notes which make them invaluable for reading material originally intended for oral communication.

Subject Catalogues

Headings and Structure. Pp. 186. (London: The Library Association, 1960.) 22s.; 3.30 dollars.

IN this book Mr. Coates, who has been in charge of the cataloguing side of the "British National Bibliography" almost from its inception, deals with some of the problems which arise when an attempt is made to build subject catalogues, classified or alphabetical, on some systematic basis. It is concerned essentially with first principles, but assumes some background knowledge such as can be acquired from a standard text-book on cataloguing, and it not only directs attention to the shortcomings of some of the classification schemes in general use but also provides a timely warning against excessive reliance on mechanical information retrieval, and a reminder that a machine cannot produce more than has origin-

ally been put into its construction. After describing C. A. Catto's contribution to the systematization of alphabetical subject indexing, Mr. Coates reviews the subsequent contributions to subject-heading theory of Keiser, Ranganathan and Faradane. Then, after a chapter on the dictionary catalogue since Cutler, he examines the contribution of classification and outlines the application of Ranganathan's chain procedure to the colon classification and to the decimal classification. Finally, after considering the use of group arrangement in the subject index, Mr. Coates discusses the subject catalogue from the point of view of the user. Comprehensive references to the literature enhance the value of a scholarly book not merely to practising cataloguers and to students of cataloguing but also to those concerned with the further research in classification which is still required.

Britain's Scientific and Technological Manpower

By George Louis Payne. (Prepared for the President's Committee on Scientists and Engineers.) Pp. xiii+466. (Stanford, Calif.: Stanford University Press; London: Oxford University Press, 1960.) 45s. net.

THIS book is based on a review of British official documents dealing with technological man-power undertaken at the request of President Eisenhower's Committee on Scientists and Engineers. Essentially it is an expansion of an annotated bibliography of official documents and publications concerning British scientific and technological man-power and education, and this literature is covered comprehensively up to the time of Lord Hailsham's appointment as Minister for Science. With the exception of the Crowther Report and the second White Paper on Industrial Research and Development Expenditure, 1958, there is very little of importance that is not covered, and the value of the survey both to the American and to the British reader is enhanced by the effort made to present where possible comparable American statistics.

The scope of the survey and the broad view taken are sufficiently indicated by the chapter headings. Introductory notes on terminology, etc., and a chapter on the problem and its background are followed by chapters on technical man-power and its employment in 1956 and on current and expected demand for scientists and engineers. Three chapters follow on the secondary schools, the universities and on non-university channels to a technical education. Next come two chapters on the expansion of educational facilities and on the expansion of educational opportunities, the latter dealing with scholarships, student release by employers and the like; and finally two chapters on research and development and on technological expansion and the social scene. There are some supplementary notes on professional terms and institutions and on the universities in an appendix, and also some notes on American man-power statistics.

What critical comment the book contains is mainly in the last chapter; but the value of the book lies in its comprehensive presentation of published information on the scientific and technological man-power situation in Great Britain since the Second World War in all its varied aspects. It is an admirable reference work, and British as well as American readers should be grateful for the thoroughness with which the information has been collected and the clarity of its presentation.

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