afford, and all shelving should be adjustable. Mr. Carter's whole paper is packed with observations, notes on minimum standards, and data for calculations for accommodation and design which should be valuable even to the experienced works librarian, and further comments on a number of his points are to be found in S. Rowland Pierce's "Some Notes on the Planning of Research Libraries", who expresses the opinion that where doors are not provided to the bookshelves there should be no books between twelve or eighteen inches of the floor.

There is room for more discussions of the type that followed Miss M. Bateman's paper on "Some General Desk Reference Books" at the afternoon session on September 16, though the speakers betrayed a tendency to think in terms of specific reference books rather than those of a general, all-round usefulness. This session was followed by a discussion on the great book shortage, over which Mr. L. J. F. Brimble presided. This was opened by a paper by Miss E. M. R. Ditmas who, after recapitulating the causes of the shortage, referred to its effects in education and research and its bearing on Empire intercommunications and the re-establishment of cultural relations with Europe. In regard to research, Miss Ditmas quoted figures supplied by the research department of a large firm carrying on research of vital national importance, showing how the position has steadily deteriorated since 1942 and the dependence on American rather than on British books—a dependence which, with the termination of Lend-Lease, may have serious repercussions on industrial and scientific development if books are regarded as articles of luxury or merely a commodity of trade. The immediate demand for British publications is far in advance of the normal pre-war demand, while stocks are at their lowest. The discrepancy between supply and demand grows monthly, but the remedy must take account of labour in both the paper-making and the printing and bookbinding industries as well as transport and materials.

In the lively discussion which followed, Miss Ditmas's remarks in regard to the effect of the book shortage on research was stressed by Dr. V. E. Parke and other speakers, including the chairman, who expressed the opinion that books needed for research and for the universities were more important than those needed for schools, where the numbers run into hundreds of thousands of volumes. Reference was made to the possible help of the American Library in arranging facilities for inspecting American books which could not be obtained on approval, and the chairman endorsed a deserved tribute paid by Prof. R. S. Hutton to the services of Messrs. H. K. Lewis and Co., Ltd., and other leading booksellers in procuring American literature. Mr. H. L. Jackson, of Messrs. H. K. Lewis and Co., Ltd., thought that Miss Ditmas had given a very good account of the position and that the shortage was most acute in the educational field. Confirming that the labour position rather than the paper shortage* was the most acute difficulty, he suggested that it would be better to send a deputation with a resolution rather than submit a resolution only from the Conference. After further discussion a resolution was approved suggesting that the Council of the Association of Special Libraries and Information Bureaux should take definite action along such lines, either by a deputation to the Ministry of Labour or other Ministry or by way of resolution.

* Since this discussion was held, a fifteen per cent increase in paper allocation has been announced.

CHEMICAL COMPOSITION OF MARINE ORGANISMS

THE data on the chemical composition of marine organisms are widely scattered; hence Prof. A. P. Vinogradov's paper on "La composition chimique élémentaire des organismes marins" (*Trav. Lab. Biogéochimique, Acad. Sci. URSS.*, Pt. 1, 1937, Pt. 2, 1941, Pt. 3, 1944) is a valuable contribution to our knowledge of the elemental chemical composition of marine plants and animals; it is in Russian. Essentially it represents a compilation of many thousands of elemental analyses of marine organisms, and the bibliography alone, printed in double columns in close type, occupies 44 pages. The data presented are accompanied by extensive critical discussion and comments. Part 1 embraces Algæ, Bacteria, Protozoa, Porifera and Cœlenterata; Part 2, the remaining Invertebrata and a part of a chapter on the chemical composition of respiratory pigments; and this chapter is carried over to Part 3, which also contains additional notes on the composition of Invertebrata, composition of Pisces, composition of skeletal parts of animals, a general summary and special chapters dealing with the problems of geology and evolution from the biogeochemical point of view.

Although the collection of analyses appears to be enormous, its usefulness in its present form is somewhat limited, mainly because the analyses are usually confined to certain chemical elements found in certain parts of organisms (soft parts, skeleton, ash, etc.), and there is no attempt made to evaluate the composition of complete organisms. This means that any attempt to give a generalized view of the chemical composition of individual species is bound to be rather vague, and any comparison between them very difficult. This fault certainly does not lie with the author, whose perseverance in collecting these data is truly remarkable. In spite of these difficulties the author makes an attempt to trace the relation existing between the composition of organisms and the composition of the ocean and to find out the major changes in chemical composition of organisms during geological time.

From the point of view of geology, or rather of biogeochemistry, as this branch of science is now called in the U.S.S.R., an especially important question is that of the concentration of certain chemical elements by marine organisms, which often leads to the deposition of rocks of biogenic origin, such as limestone, diatomite, manganese and iron ores and petroleum. "Marine organisms, concentrating certain elements and dispersing others during the process of their living activity, are performing complex and varied geochemical functions. Their chemical elemental composition, as shown by thousands of analyses, does not appear to be a simple reflection of the chemical composition of the surrounding medium. The varying chemical composition of the organism is determined by their physiological character, which in its turn is produced by lengthy interaction between each organism and its medium. On closer investigation we can discover that the chemical composition of the organism reflects its genetic history." According to the author, each species of organism is characterized by its own chemical composition, which has remained more or less constant throughout geological time, and only new species show a marked change in composition.

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