

Into the Blue

The Lake Tana Expedition. By Lionel Ferguson. Pp. 255+16 plates. (London: William Collins, Sons and Co., Ltd., 1955.) 16s. net.

NUMEROUS undergraduate expeditions have gone, either privately or under the auspices of clubs such as the Oxford University Exploration Club, to many parts of the world in recent years. Their success generally depends upon the adequacy of their preparation and organization, the nature of the guidance received from individuals and from institutions like the Royal Geographical Society, the assistance given by governments and commercial firms, and, above all, upon the enterprise and determination shown by the individual members. Success came to this party of five Cambridge undergraduates—three geographers, a historian and an economist—because their expedition showed signs, in varying degrees, of all these requirements.

As an expedition to undertake a geographical survey in the Lake Tana area of Ethiopia it failed, since barely two out of the eighteen weeks of the expedition could be spent there. Thus its 'findings' are superficial and of no scientific value, which is unfortunate, for there must be a wealth of unrecorded material in the region. The party met with a long chain of misfortunes, including frequent mechanical trouble with their car, and the withholding of official permission to follow certain routes across the Sudan. All types of people, whatever their colour, status or wealth, showed great kindness and gave much practical help, both before and during the expedition. From the geographer author one might have hoped for more about the landscape and the people of the areas through which the party travelled in three continents; and the accounts of the social contacts of the several lengthy enforced halts might have been considerably shortened.

But any blemishes of content, like those of style, are insignificant alongside the many traces of the perseverance and determination of these five young men who overcame so many difficulties, actual and political. They fully deserve the kind words of Sir Brian Robertson who, having met them in Cairo, contributes a foreword. "To travel is always good," he writes, "but to travel hard and far on little money and in limited time is first-class education."

R. W. STEEL

Some Fundamentals of Petroleum Geology

By Dr. G. D. Hobson. Pp. x+139. (London: Oxford University Press, 1954.) 18s. net.

THIS book descends to basic principles of petroleum in no uncertain manner. It is not, however, a recapitulation of time-honoured theories of origin, migration and accumulation, for this, as the author observes, "has already been written many times in the voluminous literature on this subject". Dating the industry from Drake (1859), if we consider all happenings since then—the enormous, world-wide, technical evolution, with its vast ramifications and impacts on the progress of mankind—then it is incongruous that to questions of oil-genesis, mechanism of mobility and factors governing its selection of resting places, answers are still tentative, especially concerning beginnings.

In my experience, most authors of 'petroleum geologies', while proclaiming their own fancies, sooner or later return to conventional treatments of prevalent theories, discarding some from now accepted weaknesses, and then forsaking the reader to sort it all

out for himself. This tendency to leave things 'in the air' is the reason why, to-day, there is no scientific unanimity on vital issues. Dr. G. D. Hobson here steps in with a new broom, skilfully manipulated, to sweep away dead wood of unprofitable theory within a compass of five original and stimulating essays.

The first essay, "Nature of an Oil Accumulation", deals with reservoir rock, fluid distribution and final retention. "Reservoir Fluids: their Composition and Properties" follows, and next is "Origin of Petroleum", embracing conditions of formation; source-material; amount, distribution of organic matter; agents; and thermal, radioactive and biochemical transformations. "Migration and Accumulation", comprising buoyancy, interfacial tension, compaction and general mechanics of fluid movement and other conceptions, leads to a final dissertation on "Reservoir Pressure". This book is not only a critical survey of past controversial thoughts, but also an incitement to clearer thinking on this complex substance—petroleum—from which every oil technologist will benefit. H. B. MILNER

Ier Symposium International de Bactériologie Alimentaire

Organisé par la Section de Microbiologie des Produits Alimentaires de l'Association Internationale des Sociétés de Microbiologie, Institut Pasteur de Lille, 10-14 Octobre 1954. Bactériologie des Semi-Conserves de Viandes—Rapports, Communications et Discussions. (Annales de l'Institut Pasteur de Lille—Vol. 7, 1955.) Pp. 266. (Paris: Éditions Médicales Flammarion, 1955.) n.p.

THIS symposium dealt with the bacteriology of non-sterile processed meats, participation being limited to specialists, invited from sixteen different countries. The volume gives a complete account of their scientific proceedings: sixteen substantial papers (reports), and nineteen shorter communications, with discussions. Seventeen of the papers are in English and fourteen in French; four in German are provided with English and French summaries. Major papers have reference lists.

The topics range over the whole subject. After definitions, and an exposition of characters desired by the user, several papers deal with the processes to which these products are subjected. Two papers surveying the whole bacterial flora are followed by several on the occurrence and significance of the important types of bacteria: *Cl. botulinum*, other clostridia, staphylococci, members of the Enterobacteriaceae, streptococci, lactobacilli, corynebacteria, micrococci, and the *Achromobacter-Pseudomonas* group. Next the bacteriological condition of ancillary ingredients like gelatin and spices is considered. Techniques used in different countries for the bacteriological examination of these foods are then compared, and the problems of representative sampling described. Finally, after discussion of the translation of such observations into bacteriological standards, there is a description of the bacteriological conditions generally agreed as desirable in canned ham.

Much of this information, especially that from overseas, is not readily available elsewhere. Because it is uniquely comprehensive, up to date and authoritative, the volume might be regarded as indispensable to all—from the manufacturer to the analyst and inspector—who are concerned with the bacteriology of such foodstuffs. M. INGRAM