

Haldane of Cloan

His Life and Times, 1856-1928. By Dudley Somner. Pp. 448+12 plates. (London: George Allen and Unwin, Ltd., 1960.) 42s. net.

IN writing this new life of Lord Haldane, Mr. Somner had access to much material not available to Sir Frederick Maurice; but though his book gives a vivid and well-balanced picture of Haldane it does no more than General Maurice's book to solve the enigma of Haldane, and throws scarcely any fresh light on his achievements, particularly in those fields of most interest to the scientist. Of Haldane as an administrator, an educationist or a philosopher we are shown, in fact, less rather than more: the *Machinery of Government* report is dismissed all too briefly, and the reader of Mr. Somner's book is given no indication of the extent to which Haldane's thought has influenced subsequent investigations into the organization of government. The new material has gone rather to expand the political picture of the times in which Haldane moved, and of his later years particularly we are told singularly little.

Mr. Somner frankly acknowledges his debt to General Maurice, but the whole structure of his book is on different lines, without, however, contributing anything fresh, except perhaps new light on particular episodes or the general political background. Much of Haldane's thought, not only in administration but also in education, and more especially university education, and on the organization of research, for example, is, however, remarkably relevant to the issues of to-day, and what one would have looked for in any new life of Haldane on this scale is some reassessment of the significance of his thought and work in such fields. No hint is given, however, of Haldane's part in stimulating the institution of the University Grants Committee, or of the research grants of the Department of Scientific and Industrial Research, although his work for adult education is recognized. To the scientist who has any knowledge of Haldane's work or thought in such fields it may well seem that an invaluable opportunity has been missed of re-examining critically Haldane's work and thought as a strategist, as an educationist, as an administrator or as a philosopher in a context which is as relevant to the issues of to-day as a generation ago. It is in such a context, moreover, that the stature and achievements of such a man as Haldane are most apparent. R. BRIGHTMAN

Trans-Antarctic Expedition, 1955-1958

Scientific Reports. No. 4: Tides at Shackleton, Weddell Sea. By J. G. D. Pratt. Pp. 21+2 plates. (London: Trans-Antarctic Expedition Committee, 22, Gayfere Street, S.W.1, 1960.) 12s. 6d.

A BRITISH contribution to tidal knowledge in the Antarctic is always an event, and *Tides at Shackleton* is no exception. Piquancy is added to the article not only by the comparatively unusual method of observation—by Worden gravimeter on a freely floating ice shelf—but also by the refreshing and often humorous method of presentation. The ingenuity required to improvise and maintain such a sensitive instrument under the physical conditions encountered, so as to obtain a sufficiently long series of observations for analysis, is greatly to be admired, as also is the painstakingly careful treatment of the data. After having analysed these data by standard methods of tidal analysis, and obtained results of

which any tidologist would be proud, the author then proceeds to devise what he calls a 'least squares' method of analysis (all standard methods of tidal analysis are fundamentally based on least squares theory) and produce harmonic tidal constants seriously in discord with the 'standard' results. Pratt gives his reasons for this as being the existence of spurious oscillation with periods near 24 hr. and 40 hr. But while a spurious diurnal oscillation can seriously affect the diurnal constants in a tidal analysis, neither this nor the 40-hr. oscillation could affect the phase-lag of M_2 by 75°. Rather than force what are believed to be transient oscillations into the mould of harmonic constituents by a least-squares method, it would be better to examine the residuals obtained after subtracting a predicted tide (from the results of tidal analysis) from observations. There must be an error in the 'least squares' analysis for M_2 (and probably also for O_1), and, in view of the paucity of tidal data in the Weddell Sea and Mr. Pratt's own sterling efforts, this should be exposed.

J. R. ROSSITER

Industrial Fatty Acids and Their Applications

Edited by E. Scott Pattison. Pp. vi+230. (New York: Reinhold Publishing Corporation; London: Chapman and Hall, Ltd., 1959.) 56s. net.

THIS book is edited by Mr. E. Scott Pattison, manager of the Fatty Acids Producers' Council, New York, and consists of a series of contributions by senior consultants of a number of major chemical firms in the United States on the industrial production and main usages of the varied chemical derivatives of fatty acids.

Some of these products have an annual commercial utilization of many millions of pounds; their value as detergents, plasticizers, food additives, cosmetics, etc., are clearly and concisely described. Special mention is made of the recent increased commercial interest in 'tall oil', a rosin/fatty-acid by-product of the paper-making industries. The purification, chemical nature and usages of derived fatty acids are given extensive treatment in the text, as also are the industrial processes involved.

The interactions of fatty acids with varied chemical reagents are given detailed treatment and chemical equations are employed extensively to illustrate the fundamental reactions occurring.

This book will prove of great interest to the chemists and chemical engineers who wish to keep abreast of modern development in the industrial field of fatty-acid technology. It should also prove of absorbing interest to the academic organic chemist.

D. T. LEWIS

Space Research

Proceedings of the First International Space Science Symposium, Nice, January 11-16, 1960. Edited by Dr. Hilde Kallmann Bijl. Pp. xvi+1195. (Amsterdam: North-Holland Publishing Company; New York: Interscience Publishers, Inc., 1960.) 170s.

THE First International Space Science Symposium was held at Nice in January 1960, under the auspices of the Committee on Space Research. The volume under review thus has a historic character as well as being an exceptionally well-edited proceedings of the symposium printed and bound to the same high standard.

An account of the symposium was given in *Nature* on June 4, 1960, so no more than the section headings