

The Invisible Government

By David Wise and Thomas B. Ross. Pp. 375. (London: Jonathan Cape, 1965.) 30s. net.

THIS book might well have been entitled, perhaps more appropriately, *Invisible Power*. This suggestion is not made to emphasize any features the book has in common with Mr. Cater's *Power in Washington* or Prof. R. E. Newstadt's earlier *Presidential Power*, but because it is concerned essentially with the theme of power and influence within the working of a reputedly democratic system of government and not directly with the Government itself. It is concerned, as are both those books, with the situation in the United States and with what can happen under the cloak of secrecy or security, especially if these two terms are not clearly distinguished, when institutions created for valid purposes become their own custodians or judges. The book describes in some detail the organization and functioning of the intelligence service of the United States, including Army Intelligence, the oldest service, the Office of Naval Intelligence, the smallest, Air Force Intelligence, mechanically the most sophisticated, the Atomic Energy Commission, the Federal Bureau of Investigation, the Bureau of Intelligence and Research, and finally the major institutions—the National Security Agency, the Defence Intelligence Agency and the Central Intelligence Agency.

For the British reader, the real interest of the book does not lie in these descriptions, nor in the account of various episodes of the past fifteen years which indicate their weakness and the acute difficulties of control which have resulted in them appearing on occasion to determine policy rather than to be ruled by it. It lies in the way the book raises the real questions and problems of control which confront a democracy in this age of rapid technological development. There is displayed, for example, even more insistently than in the recent report from the Estimates Committee on Electrical and Electronics Equipment for the Services, the problem which secrecy presents and the way in which it can react to endanger the security which secrecy itself purports to serve. There is the issue of advice, and insistently, naggingly, all the time the question of who shall control the controller. Nor are the issues confined to defence. The implications for the Fulton Commission are plain, and if the authors offer little in the way of constructive suggestions, their warnings are unmistakable. This sombre book should not be overlooked by anyone seriously concerned with the relations of Government and science, though it will challenge his thought rather than contribute to his peace of mind.

R. BRIGHTMAN

Fluorine Chemistry

Vol. 4. By Harold C. Hodge and Frank A. Smith. Edited by J. H. Simons. Pp. xviii + 786. (New York: Academic Press, Inc.; London: Academic Press, Inc. (London), Ltd., 1965.) 224s.

VOLUME 4 of *Fluorine Chemistry* is not a book which will be of primary interest to chemists who are engaged in the very broad field known as fluorine chemistry in the same sense that the first three volumes in this series were. It is a condensation of some 3,500 references on clinical information pertinent to the physiological effects of fluoride ion.

The first chapter deals with the biological properties of inorganic fluorine compounds which provide fluoride ion in solution, and *in vivo* may cause acute or chronic poisoning. The mechanism of fluoride poisoning, its treatment, and the nature of fluoride toxicity in organs, glands, blood and other parts of the animal and human anatomy are considered in detail. The purpose of the book "has been to collect information about the biological effects of fluorides in compact form . . . has not attempted to formulate and state critical opinion of the knowledge about every biological effect of fluorides".

The second chapter is concerned with the effect of fluorides on the bones and the teeth. The various factors affecting fluorosis, osteosclerosis and osteofluorosis are critically correlated. The relationship between fluoride ion intake, mottled tooth enamel and dental caries is covered extensively. In view of the many debates which have arisen in many communities concerning the topic of fluoridation of drinking waters, part of this chapter is most helpful in providing scientific evidence which can be used to point out the benefits and possible damage to tooth structure which may be associated with the adjustment and control of fluoride ion concentration in drinking water. The authors do not take a position on this controversial subject. The terminal portion of the book concerns itself with hard tissue metabolism of fluoride ion in bony structures and teeth.

This volume of *Fluorine Chemistry* is directed not to chemists but to medical and dental scientists. It contains a vast quantity of information on the causes of, possible preventive procedures against and possible cures for disabling physiological effects caused by various fluorochemicals as well as the harmful effects of fluoride ion deficiency. Nevertheless, it will be of more than passing interest to the fluorine chemist and of special interest to those concerned with water treatment and to practitioners of industrial medicine and dentistry.

It is most fitting that the authors and the editor of Volume 4 of *Fluorine Chemistry* have seen fit to dedicate their efforts to Prof. Kaj Roholm of Copenhagen.

RICHARD DRESDNER

Fair Isle and Its Birds

By Kenneth Williamson. With a List of the Birds of Fair Isle by Peter Davis. Pp. xvi + 311 + 27 photographs. (Edinburgh and London: Oliver and Boyd, Ltd., 1965.) 30s. net.

FAIR Isle and Its Birds is a book for the general reader whose interests include remote places, wild birds and the scientific riddles of migration; it brings together, in a pleasant form, material that has appeared before in scattered articles and papers. The first part deals with the island, its people, its history, its general natural history, and the habits of some of its breeding seabirds—skuas of two species and the fulmar. The second part gives an account of the tremendous phenomena of bird migration that can be observed from this remarkable vantage point. In the third part Peter Davis provides an annotated systematic list of the birds of Fair Isle. John Peterson contributes excellent photographs of scenery, human activities and birds.

Fair Isle was made ornithologically famous by the visits of Eagle Clarke in the period 1905–11 to observe the spring and autumn passages. It provided part of the material on which his pioneer studies of migration were based, but there remained much more to be extracted from this rich source. In 1948 a regular observatory, manned except in mid-winter, was established by the efforts of George Waterston and others. Kenneth Williamson was appointed as the first warden, serving for eight years, and Peter Davis was his immediate successor.

In the middle part of the book the author describes the observatory and its work and gives an account of movements to be observed in spring and in autumn. He lays emphasis on the influence of weather on both the actual and the observable performance of the migrants. He attaches special importance to the effect of wind direction in causing lateral displacement of lines of flight; some of his views, he says, are personal. This theme is notably exemplified in a chapter called "Wheat-eaters and Redwings", illustrated with weather maps relating to certain strongly marked autumn movements in which the origin of the birds was indicated by recognizable subspecific characters. A final chapter deals with some of the astonishing number of rarities that have been recorded from Fair Isle.

LANDBOROUGH THOMSON