

**Hypothermia and the Effects of Cold.** Edited by S. PARKES. British Medical Bulletin. Vol. 17, No. 1. January, 1961, 20s.

THE ability of the hibernating animal to withstand low body temperatures has been of academic interest for many years. It was believed that these animals were the only mammals who could tolerate wide changes in body temperature. However, it has now been shown that when they are not hibernating, these animals tolerate changes no better than the non-hibernators. At the same time, as advances in the knowledge of the causes and effects of hibernation have been made, the needs of surgery have stimulated research in temperature control and variation in homeothermic animals and man. Studies in the acclimatization of animals and man to continued cold exposure were also stimulated by the needs of war and post-war exploration. The findings of all these fields of research have probably much to offer each other. This British Medical Bulletin publication affords a comprehensive introduction of one field to the other.

The papers cover a wide range of interests from the resistance of poikilotherms to cold and a general review of hibernation in birds and mammals to particular aspects of body systems and functions during hypothermia and the sensitivity of hypothermic animals to radiation. The papers are in general eminently readable and notably well documented. The papers on the hypothermic techniques used in medicines are very detailed, but it would have been useful to have had a fuller discussion of the variations used in different centres and of the merits of one technique compared with another. Also, perhaps, an article on very deep hypothermia when body temperatures are reduced to approximately 0 °C would have completed the picture.

For surgeons and anaesthetists who are concerned with the use of hypothermia in clinical work and in improved cardiac surgery, this Bulletin provides a comprehensive and up to date introduction to the work of academic biologists and physiologists in the general fields of hibernation and cold acclimatization. At the same time, it provides for these latter, an introduction to the latest developments in the beautiful and refined techniques of the surgeon in using rapidly induced local or general hypothermia. In short, it maintains the usual high standard of British Medical Bulletins.

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**Steric Aspects of the Chemistry and Biochemistry of Natural Products.** (Biochemical Society Symposium No. 19). Edited by J. K. GRANT and W. KLYNE. Cambridge University Press, 1960. 137 pp. Paper edition 20s; cloth edition 30s.

THE papers collected in this publication were read at a Symposium held in London in June 1960. The first contribution by Klyne discusses recent techniques in the study of relative and absolute configurations of asymmetric compounds including the use of asymmetric synthesis, X-ray crystallographic, and rotary dispersion techniques. In his account of the steric aspects of the biosynthesis of terpenes and steroids Arigoni deals with the configurational consequences of the synchronized cyclization processes which lead to the formation of complex alicyclic systems from aliphatic precursors. Barlow's account of the steric aspects of drug action deals mainly with developments among substances which mimic or antagonise the action of acetylcholine. The fascinating story of the importance of the cis-trans isomerisation of retinene in the visual process is very fully recounted by Pitt and Martin. The simple concluding statement that "it is because retinene is isomerised by light that we can see" emphasises the fundamental nature of this study. The last three chapters deal with steric factors in enzyme action. Webb, discussing hydrolytic enzymes, emphasises the importance of considering the bonding and catalytic processes as separate phases of enzyme action. Slater presents an interesting account of the stereo-specificity of hydrogen transfer in reactions of pyridine nucleotide dehydrogenases. Finally Barker reviews the stereochemical specificity of certain enzymes involved in nucleotide metabolism.

The afternoon chairman's remarks about the astonishing prodigality of Nature in providing so many highly specific biocatalysts raises a point which has troubled others too. His hint that the enzymic properties may be more concerned with the configuration of a protein than with its absolute chemical composition may help to reconcile those who find it difficult to believe that Nature could be so uneconomic.

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