HIGHLIGHTS OF BRITISH SCIENCE

‘Britain has a great tradition in natural science. From the time of the so-called scientific revolution of the mid-seventeenth century with the foundation of the Royal Society at the heart of it, British scientists have been in the forefront of advances not merely in fundamental science but also in its application to the practical problems of everyday life. Science, of course, knows no national boundaries and it owes much of its progress and vitality to the free exchange of information and ideas between scientists in all countries. It is nevertheless true that, for a variety of reasons, some countries, of which Britain is one, have made contributions out of all proportion to their physical size and population. Today we are in the midst of a worldwide economic recession which has indeed affected Britain more severely than some other highly industrialized nations. Since economic progress and with it our living standards depend nowadays almost entirely on advances in science and in technology based upon it, it is perhaps not surprising that some members of the public should wonder whether we have fallen behind other nations and whether our expenditure on science and scientific research is being misdirected. Nothing could be further from the truth. Our record during the past twenty-five years is an enviable one and our scientific research is vigorous as ever, flushed with success and full of promise. Britain has made and continues to make outstanding contributions in many and diverse fields of science. Some of these are set out in this book and it is my hope that its contents will not only stimulate appreciation of some highlights in British science but will indicate also its promise for the future.’

Extract from Lord Todd’s Preface

CONTENTS

Discoveries about the universe
Recent advances in weather forecasting
Research in seas and oceans
Contributions of scientific discoveries to increases in agricultural productivity
Science and the development of nuclear energy
The jubilant electron
Developments in electron microscopy and microanalysis
Chemistry in microtime
The intracellular electrode: 25 years of research in cellular electro-physiology
Molecules of life
High blood pressure: the evolution of drug treatment: British contribution

240 pages  44 plates

ISBN 0 85403 104 9

Price including packing and postage
£8.00 (U.K. addresses) £8.25 (overseas addresses)

The Royal Society
6 Carlton House Terrace, London SW1Y 5AG
CONTENTS

PEICHL, L. & WÄSSLLE, H.
Morphological identification of on- and off-centre brisk transient (Y) cells in the rat retina. [Plates 1–3] (With an appendix by B. B. Boycott & L. Peichl; Neurofibrillar staining of cat retinae.)

WÄSSLLE, H., PEICHL, L. & BOYCOTT, B. B.
Morphology and topography of on- and off-alpha cells in the cat retina. [Plates 1–3]

157–175

WÄSSLLE, H., BOYCOTT, B. B. & ILLING, R.-B.
Morphology and mosaic of on- and off-beta cells in the cat retina and some functional considerations. [Plates 1 and 2]

177–195

MILEDI, R. & PARKER, I.
Calcium transients recorded with arsenazo III in the presynaptic terminal of the squid giant synapse

197–211

MACMILLAN, D. L., SILVEY, G. & WILSON, I. S.
Coordination of the movements of the appendages in the Tasmanian mountain shrimp Anaspides tasmaniæ (Crustacea; Malacostraca; Syncarida)

213–231

WILLSHAW, D. J.
The establishment and the subsequent elimination of polyneuronal innervation of developing muscle: theoretical considerations

233–252

TORRE, V. & OWEN, W. G.
Ionic basis of high-pass filtering of small signals by the network of retinal rods in the toad

253–261

Published by the Royal Society, 6 Carlton House Terrace, London SW1 Y 5AG

Printed in Great Britain for the Royal Society at the University Press, Cambridge