

Plate 1



THE SOCIETY'S MEDALLISTS, 1974

This group portrait shows (*standing, left to right*): Dr S. Brenner, Professor P. M. Sheppard, Professor P. H. Fowler, Mr K. A. Bray;
(*seated*) Mr F. B. Mercer, Sir George Edwards, Sir William Hodge, Sir Alan Cottrell, Professor J. Baddiley.

THE SOCIETY'S NOTES

[Plate 1]

OBITUARY (continued from Vol. 29, p. 277)

1975

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| 18 January | WILLIAM BROWN |
| 8 February | ROBERT ROBINSON |
| 14 February | JULIAN SORELL HUXLEY |
| 6 March | RODERICK OLIVER REDMAN |

AWARD OF MEDALS 1974

The COPLEY Medal to Sir William Vallance Douglas Hodge in recognition of his pioneering work in algebraic geometry, notably in his theory of harmonic integrals.

The RUMFORD Medal to Sir Alan Howard Cottrell in recognition of his contributions to physical metallurgy and particularly in extending knowledge of the role of dislocation in the fracture of metals.

A ROYAL Medal to Sir Fred Hoyle in recognition of his distinguished contributions to theoretical physics and cosmology.

A ROYAL Medal to Dr Sydney Brenner in recognition of his distinguished contributions to molecular biology concerning the nature of the genetic code and its expression during development.

A ROYAL Medal to Sir George Robert Edwards in recognition of his many contributions to aeronautical engineering, particularly in the realization of supersonic aircraft.

The DAVY Medal to Professor James Baddiley in recognition of his distinguished researches on coenzyme A and studies of the constituents of bacterial cell walls.

The DARWIN Medal to Professor Philip MacDonald Sheppard in recognition of his outstanding work on natural populations of butterflies, describing and explaining the operation of natural selection and demonstrating the genetic basis upon which selection operates.

The HUGHES Medal to Professor Peter Howard Fowler in recognition of his outstanding contributions to cosmic ray and elementary particle physics.

The MULLARD Medal to Mr Frank Brian Mercer in recognition of his invention of the 'Netlon' net process.

The ESSO Medal to Mr Kelvin Arthur Bray in recognition of his achievement as leader of a team in the conservation of energy by the use of gas turbines to provide total energy requirements for industrial plants.

ELECTION OF FELLOWS 1975

RAYMOND JOHN HEAPHY BEVERTON, C.B.E., Secretary of the Natural Environment Research Council, London. Distinguished for his studies on ecological problems involving prey and predator interactions, notably the dynamics of fish populations exploited by man.

GEOFFREY MORSE BINNIE, Consultant to Binnie and Partners, Chartered Civil Engineers, London. Distinguished for his work on the design, and supervision of the construction, of large dams and water-supply systems.

EDWARD GEORGE BOWEN, C.B.E. Counsellor (Scientific) at the Embassy of Australia in Washington, D.C., U.S.A. Distinguished for his contributions to the development and use of radar and to the development of radio astronomy.

STANLEY HAY UMPHREY BOWIE, Assistant Director and Chief Geochemist of the Institute of Geological Sciences, London. Distinguished for his applications of geochemical and instrumental techniques to the search for resources of fissionable materials and base-metal ores.

GEORGE MALCOLM BROWN, Professor of Geology in the University of Durham. Distinguished for his researches on layered intrusions, the melting relations of igneous rocks and the petrology of lunar basalts.

AMYAND DAVID BUCKINGHAM, Professor of Chemistry in the University of Cambridge. Distinguished as a theoretical chemist, and especially for his work on the effects of strong electric and magnetic fields on optical and spectroscopic properties of molecules.

PETER CHRISTOPHER CALDWELL, Reader at the Department of Zoology in the University of Bristol. Distinguished for his work on ionic transport and on the activation of muscle by calcium ions.

JOHN CHARNLEY, C.B.E., Consultant Orthopaedic Surgeon and Director of the Centre for Hip Surgery, Wrightington Hospital, Lancashire. Professor of Orthopaedic Surgery in the University of Manchester. Distinguished for his development of an operation for hip replacement which is now widely used.

JOHN WYRILL CHRISTIAN, Professor of Physical Metallurgy in the University of Oxford. Distinguished for his contributions to the theory of transformations in metals and alloys, and to our knowledge of plasticity at low temperatures.

BARRY ALBERT CROSS, Director of the Agricultural Research Council's Institute of Animal Physiology at Babraham, Cambridge. Distinguished for his

studies of the neural regulation of hormone release, in particular the reflex control of the pituitary gland.

KEITH DALZIEL, Lecturer in Biochemistry in the University of Oxford. Distinguished for his experimental and theoretical contributions to our understanding of the kinetics and mechanisms of enzyme action.

PAUL DE MAYO, Director of the Photochemistry Unit and Professor of Chemistry in the University of Western Ontario, Canada. Distinguished for his researches on natural products and reactive intermediates and for his work on photochemistry including its application to synthesis.

JAMES MUNRO DODD, Lloyd Roberts Professor of Zoology and Head of the Department of Zoology in the University College of North Wales, Bangor. Distinguished for his contributions to comparative endocrinology, notably concerning the thyroid and pituitary complex.

ARTHUR ERDÉLYI, Professor of Mathematics in the University of Edinburgh. Distinguished for his contributions to the theory of asymptotic expansions, and to the determination of the properties of special functions.

DENIS ARTHUR HAYDON, Reader in Surface and Membrane Biophysics at the Physiological Laboratory in the University of Cambridge. Distinguished for his studies of the electrical and ionic properties of very thin lipid membranes.

GODFREY NEWBOLD HOUNSFIELD, Head of the Medical Systems Section of EMI's Central Research Laboratories, Middlesex. Distinguished for his development of the EMI-Scanner for diagnosis of brain lesions.

ANTHONY MILNER LANE, Theoretical Physicist at the Atomic Energy Research Establishment, Harwell. Distinguished for his contributions to the theory of nuclear reactions, especially the role of giant resonance states and of isospin dependent potentials.

ANDREW RICHARD LANG, Reader in Physics in the University of Bristol. Distinguished for making many improvements to the techniques of X-ray crystallography, particularly in the development of methods of observing crystal defects.

ANNE LAURA McLAREN, Director of the Medical Research Council's Mammalian Development Unit at University College in the University of London. Distinguished for her studies of mammalian reproductive physiology, embryology and genetics.

RONALD MASON, Professor of Chemistry in the University of Sussex. Distinguished for contributions to crystallography, especially to knowledge of the lattice energies of organic crystals, and to the chemistry of organo-metallic compounds.

CÉSAR MILSTEIN, Joint Head of the Protein Chemistry Subdivision of the Medical Research Council's Laboratory of Molecular Biology in the University of Cambridge. Distinguished for his contributions to immunochemistry, particularly to knowledge of the structure, evolution and genetic origin of immunoglobulins.

PATRICK ALFRED PIERCE MORAN, Professor of Statistics and Head of the Department of Statistics in the Australian National University, Canberra. Distinguished for his many original contributions to statistical theory and inference, particularly to mathematical genetics, the theory of storage and geometrical probability.

REGINALD CHARLES RAINEY, Senior Principal Scientific Officer at the Centre for Overseas Pest Research of the Ministry of Overseas Development, London. Distinguished for his studies of the relationships between weather patterns, migrations and breeding of the desert locust and the application of these studies to the control of this pest.

EDWARD CHARLES SLATER, Professor of Physiological Chemistry in the University of Amsterdam, The Netherlands. Distinguished for his contributions to our knowledge and understanding of the components of the respiratory chain in mitochondria.

RALPH OWEN SLATYER, Professor of Environmental Biology at the Research School of Biological Sciences in the Australian National University, Canberra. Distinguished for his experimental and theoretical work on the physiology and ecology of water relations of plants.

DAVID CECIL SMITH, Melville Wills Professor of Botany in the University of Bristol. Distinguished for his work on the physiology of symbiotic systems especially in lichens and in invertebrates.

BORIS PETER STOICHEFF, Professor of Physics and Chairman of the Division of Engineering Science in the University of Toronto, Canada. Distinguished for his contributions to Raman spectroscopy and for the discovery and exploitation of novel effects in the scattering of light by matter.

GEORGE PATRICK LEONARD WALKER, Reader in Geology at the Imperial College of Science and Technology in the University of London. Distinguished for his studies of vulcanicity in and around the Atlantic with special reference to crustal dilation and productivity.

RICHARD WECK, C.B.E., Director-General of the Welding Institute, Cambridge. Distinguished for his work in developing the techniques of welding and for his studies of the behaviour of welds.

FREDERICK ROBERT WHATLEY, Sherardian Professor of Botany in the University of Oxford. Distinguished for his work on photosynthesis in plants

especially in the discovery of photophosphorylation and the part played by ferredoxin.

ROBERT WILSON, Perren Professor of Astronomy and Director of the Observatories at University College in the University of London. Distinguished for his contributions to solar and general astronomy in the ultraviolet through the use of space vehicles.

ERIK CHRISTOPHER ZEEMAN, Professor of Mathematics and Director of the Mathematics Research Centre in the University of Warwick. Distinguished for his contributions to topology, particularly the theory of higher-dimensional knots.