

book entitled "Brain Mechanisms and Intelligence", which has had a profound effect upon technique and interpretation in this field. In the rat, Lashley showed that quite large areas of cortical activity have to be regarded as equivalent and equipotential for all processes of simple learning, and that for more complex learning the same kind of equivalence may be demonstrated in less extended areas. His recent work has been concerned with primate behaviour, in particular with recognition and recall in the chimpanzee. Here, too, he finds a type of areal, or regional cortical localization for functions of great complexity, but with equivalence within the fairly large areas concerned. Lashley is an experimental psychologist who has never become wedded to a particular theoretical approach, and his critical attitude to his own and to other people's views has had a most salutary influence on the development both of brain physiology and of animal behaviour studies.

Prof. Carl Størmer

PROF. CARL STØRMER long held the chair of pure mathematics at the University of Oslo. His mathematical work deals mainly with the motion of electrically charged particles projected (singly) into the field of a magnetic dipole. These researches were originally undertaken to develop and check Birke-land's theory of the aurora and magnetic storms. The results show many important resemblances to auroral phenomena, and seem likely to find a permanent place in the true auroral theory which is yet to come. These researches also found another important field of application to cosmic rays as influenced by the earth's magnetic field. Størmer has also for several decades been a pioneer, leader and organizer of auroral observation. By simultaneous photography from two or more places he has observed and measured hundreds of auroras against the stellar background, determining the form and location (height and geographical situation) of the auroral luminosity. He has discussed statistically and otherwise a vast body of such data. One of his outstanding discoveries is that exceptionally high auroras, sometimes reaching up to 700 km. or even more, lie in regions traversed by sunlight, though seen from the ground at night. He has also made important contributions to our knowledge of the auroral spectrum. Størmer has seized every opportunity afforded by Nature for the observation of other atmospheric phenomena, such as long-enduring meteor trails and the mysterious mother-of-pearl clouds. Thus he combines in an exceptional way the abilities of a mathematician and an observer of Nature. He has exploited to the full, with great skill, energy and success, the opportunities for auroral observation afforded by the geographical situation of Norway.

Dr. R. W. G. Wyckoff

R. W. G. WYCKOFF began his scientific work as a physicist, applying the theory of space groups to the determination of the structure of crystals. Later he turned his attention to different applications of physics to biological problems. His first biophysical work, carried out at the Rockefeller Institute, provided quantitative studies of the effects of radiation (X-rays, electrons, ultra-violet light) on micro-organisms, interpreting the results in terms of 'the sensitive volume' theory. Wyckoff's attention was next turned to the possibilities of the air-driven ultra-centrifuge for molecular sedimentation. Still at

the Rockefeller Institute, in conjunction with Bauer and Pickels he developed this instrument and made the first air-driven analytical ultra-centrifuge. As a result of his experiments on the sedimentation of substances of high molecular weight, Wyckoff's interest in viruses was aroused, a subject to which he has made great contributions. Using his air-driven ultra-centrifuge and working in conjunction with Stanley and others, he succeeded in isolating several viruses. Arising out of these investigations was the important work of making antiviral vaccines, and he produced (with J. W. Beard) the embryo-propagated encephalomyelitis vaccine. This was especially important at the time because it was the first successful heterologous 'killed' antiviral vaccine. These methods were then developed and applied successfully to making this vaccine in the first large-scale production of an embryo-grown vaccine. More recently, as a consequence of his development (with R. C. Williams) of the metal-shadowing technique, Wyckoff has been applying electron microscopy to the study of macromolecules of biological importance, especially viruses. It is in his handling of the electron microscope that Wyckoff has shown himself a master. His main lines of work with the electron microscope have been the study of the molecular arrangements in solids: in this respect may be recalled the demonstration of the particles of tobacco necrosis virus and their arrangement on the crystal faces (first published in *Nature*); the recognition of viruses within infected cells and the application of this recognition to the continuing study of how viruses, including bacteriophages, multiply. His latest work is the examination by electron microscopy of sections of virus-infected insects; this is the first time such a technique has been used, and it has already yielded some interesting and important results.

Royal Society of Arts Prize of £500

IN July 1950, the Royal Society of Arts, as part of its celebrations of the centenary of the Great Exhibition of 1851, which it originated, and as a constructive effort to assist the nation in its present difficulties, offered a prize of £500 and a gold medal for "a means of promoting the production or the economic utilization of food in Britain". This prize has been awarded to Dr. R. E. Slade, farmer, of Bishop's Stortford, Herts, during 1935-45 controller of research, Imperial Chemical Industries, Ltd., who submitted a scheme for two systems of farming, one for grassland and the other for arable land. A silver medal was also awarded to the runner-up, Mr. R. M. Paterson, of Basingstoke, Hants, for his simple system of grassland recording. There were a hundred and fifteen entries for the competition.

Exhibition of Exhibitions

AN "Exhibition of Exhibitions", covering nearly two hundred years of British initiative in the art of display, has been organized by the Royal Society of Arts at its headquarters, John Adam Street, Adelphi, London, W.C.2, and was opened on May 1 by H.R.H. Princess Elizabeth. Besides its greatest triumph, namely, the initiating of the Great Exhibition of 1851, the Royal Society of Arts has been responsible for many other pioneer efforts in a similar vein: in 1760 it sponsored an exhibition of contemporary art, and in the following year it held an industrial exhibition, probably the first one of its kind in the world. Two other historic exhibitions which are recorded are the series on industrial design, which