Tumour Panel are a case in point. Since the Panel was formed four years ago, 770 specimens have been registered, follow up information is available in the majority, and results of analysis of 457 patients with malignant tumours are presented. The two main types of testicular tumour, seminoma, arising from the tubular epithelium, and teratoma, a mixed tumour of uncertain histogenesis, each accounted for 40 per cent incidence, the former with an 8·6 per cent mortality, the latter with 41·7 per cent. However, in the teratoma groups there is a gradient of malignancy approximately related to the degree of differentiation of the tumour. Sufficient lymphomas have been examined for a gross and histological pattern to be readily recognizable. A report from such a panel is of outstanding assistance to the theory and practice of human medicine.

P. Alexander
I. Hieger
A. L. Levene

OBITUARIES

Dr. A. P. Orr

Andrew Picken Orr was born in Ayrshire on August 6, 1898, and educated at Kilmarnock Academy. He later proceeded to the University of Glasgow and then passed into the army, being wounded and taken prisoner in France in 1918. Returning to the University, he graduated in chemistry and geology and then worked for a time under Prof. Noel Paton in the Department of Physiology. In 1923 he joined, as chemist, the staff of the Millport Laboratory of the Scottish Marine Biological Association. He remained in the service of that Association, which can never have a more devoted and unselfish member of staff, for the rest of his life. He became deputy director and at the time of his death was acting director.

Trained on the broad lines of the old Scottish university curriculum, he found the diversity of disciplines necessary in marine work immediately congenial. Although starting as a chemist, he became gradually more and more preoccupied with biological problems. With his colleague and close collaborator, Sheina Marshall, there soon began that long series of papers first on marine productivity, based on investigations in Loch Striven, and then on the biology of the ubiquitous copepod, *Calanus finmarchicus*, the main food of herring.

These investigations were to make the names of Marshall and Orr familiar to every fishery worker and marine biologist in the world and bring international distinction to the small laboratory at Millport. They are contributions of the highest importance to biological oceanography. The work on *Calanus*—at least until that time, it continued just as vigorously afterwards—was summarized in their joint *Biology of a Marine Copepod* published in 1955.

He was a member of the Great Barrier Reef Expedition during 1928–29. There he was responsible for the hydrographic work, both in the sea within and outside the Barrier, and also in the more intimate conditions on and around reefs where he found a striking diurnal range, especially in oxygen content and in *p*H. His geological interests were responsible for some unusually interesting observations and experiments, carried out again in collaboration with Sheina Marshall, on sedimentation and its effects on corals. For the first time a coral, *Fungia*, was shown to be capable of actively uncovering itself when buried under sediment.

During the Second World War he was engaged on research into the preparation of agar from the red intertidal weed, *Gigartina stellata*. Later, there were visits to Tromsö in Norway and to Woods Hole and elsewhere in the United States; but on both visits work continued to be centred on *Calanus*. He received the degree of D.Sc. from the University of Glasgow in 1934 and was elected a Fellow of the Royal Society of Edinburgh in 1948.

No one who has ever worked at the Millport Laboratory over the past forty years can fail to have known "A. P.". Increasingly, the laboratory came to be associated with his name and personality. He was possessed of an engaging combination of shrewdness and naïveté which can never be forgotten by all who were so fortunate as to become his friends. He was a distinguished man of science whose work will endure, and so, for the life of all of us who knew him, will his endearing personality.

He died on September 19, 1962, leaving his wife, Rachel Orr, a son and a daughter. C. M. Yonge

Prof. D. P. Riabouchinsky

Prof. Dimitri Pavlovich Riabouchinsky died in Paris on August 27, after nearly sixty years of active research in fluid mechanics, both in his native Russia and in France. For his many original contributions to the science, dealing with a great variety of fundamental problems, he may be rated one of the most outstanding scientists Russia ever produced.

Being of a family of considerable wealth, he was enabled to found his own research establishment on the family estate near Moscow: this became the famous Aerodynamic Institute of Kuchino, for some years probably the only large laboratory specially equipped for fundamental research into aeronautics. In his work there he secured the participation of Profs. N. E. Zhukovsky (Joukowski) and V. V. Kuznetsoff, and the *Kuchino Bulletins* included papers contributed by them.

Prof. Riabouchinsky retained personal direction of the Kuchino Institute until 1918 when, to ensure its continuance, he co-operated in its nationalization. Then he left Russia and, after a brief stay in Denmark, settled in Paris. He continued his theoretical and experimental research as associate director of the Fluid Mechanics Institute in the University of Paris and as professor of theoretical mechanics in the Russian Superior Technical School in France. When the Germans overran France in 1940, his laboratories were destroyed, but he was later allowed to resume his research work in a limited way.

The range of his work was unusually wide. He is probably best known for his publications on aerofoils and airscrews, rotating plates and cylinders, autorotation, boundary layers, vorticity, compressible fluid flow, shock waves and laws of dynamic similitude, and for his original designs of wind tunnels, aerodynamic balances flow visualization methods

and aerodynamic–hydrodynamic analogies. He was also keenly interested in recoilless guns and rockets, upper atmosphere research, sun-spot periodicity and astronomy: as early as 1914 he proposed that researches in the direction of interplanetary flight should be included in the programme for the Kuchino Institute.

Riabouchinsky remained active to the end, his most recent paper, reviewing many important results of his researches, appearing in the *Journal of the Royal Aeronautical Society* in August 1962. In 1961, at the invitation of Dr. G. A. Tokaty, head of the Department of Aeronautics and Space Technology in the Northampton College, London, another scientist who found it preferable to come to the West, he visited Great Britain and was welcomed by many distinguished British scientists. Although he made his home for so long in Paris, he never took French nationality and he never lost his pride in the Russian academic and scientific traditions from which he drew inspiration and to which he added so much.

S. Buchanan

Prof. A. R. Khan

By the death on June 13 of Prof. Abdur Rahman Khan, the American Meteor Society lost one of its most eminent and oldest active members. In 1937 he began a correspondence with me and to send copies of his numerous and carefully made observations. His reports continued to arrive up to and including 1954, after which advancing years forced him to stop this exacting type of night work. In our files are found about 11,540 observations of meteors made by him. Most of them were plotted and full details also recorded on the data sheets. His work had special value due to distance of his station from those of other meteor observers. Indeed, during the whole interval mentioned we had only one other active observer in the Indian Peninsula, and him for only about two years. Hence, Prof. Khan's work had exceptional value.

So far, his work has been used here in studies of meteor magnitudes, long-enduring trains, fireball-rates and colours, and especially in *K*3, the *Hourly Rate Catalogue* covering nearly every hour of every night in the year published by the Smithsonian Astrophysical Observatory. They are at present being used in an investigation of fireball radiants, and other uses for his data undoubtedly will be found.

Few people in a great country have the distinction of being the only important contributor to a unique branch of an ancient science such as astronomy, but to my knowledge Prof. Khan attained this in India. In addition to all his valuable work which appeared in the American Meteor Society publications, he contributed many articles on meteors and the history of Indian astronomy to English and local scientific journals. It is not my purpose to review his important work and contributions to education at Osmania University College and elsewhere, as this can more properly be done by those more familiar with this type of his activities. However, one more thing will be mentioned to show the esteem with which he was held in the United States: he was research associate in the Institute of Meteoritics, University of New Mexico. I feel that I personally have sustained a great loss in the death of this able colleague and friend of such long standing. C. P. Olivier

NEWS and VIEWS

Royal Society Awards: Royal Medals

H.M. The Queen has approved recommendations made by the Council of the Royal Society for the award of the two Royal Medals for 1962 as follows: to Prof. S. Chandrasekhar, Morton D. Hull distinguished service professor in the University of Chicago, for his distinguished researches in mathematical physics, particularly those related to the stability of convective motions in fluids with and without magnetic fields; to Sir John Eccles, professor of physiology in the Australian National University, Canberra, for his distinguished investigations of the function of the spinal cord, particularly of the mechanisms of excitation and inhibition.

Experimental Physics at Nottingham: Prof. E. R. Andrew

Prof. E. R. Andrew, professor of physics in the University College of North Wales, Bangor, has been elected to the chair of experimental physics as from September 1, 1963. In 1964 he will become the Lancashire-Spencer professor and head of the Department of Physics, following the retirement that year of Prof. L. F. Bates. Prof. Andrew was educated at Wellingborough School and Christ's College, Cambridge, where he held an Open Scholarship. After gaining first-class honours in both parts of the Natural Sciences Tripos, he joined the staff of the Radar Research and Development Establishment for three years, but left in 1945 to resume his studies at Cambridge. For his research work he was awarded the degree of Ph.D. in 1948; he was immediately elected to a Commonwealth Fund fellowship, which he held at Harvard for the session 1948–49. On his return he was appointed as lecturer in the Department of Physics at the University of St. Andrews and in 1954 was elected to the chair of physics at the University College of North Wales, Bangor. In addition to a large number of papers in scientific journals he has published an important book on *Nuclear Magnet Resonance*, which is his special field of study.

Zoology at Hong Kong: Prof. J. G. Phillips

Dr. Phillips has been appointed, at the age of twenty-nine, to the chair of zoology, University of Hong Kong, and takes up his duties in the New Year. He graduated at the University of Liverpool in 1954 and remained there to join the research group in comparative endocrinology established by Prof. I. Chester Jones. After gaining the degree of Ph.D. he was awarded a Harkness fellowship, which he held at Yale for nearly two years. Since that time he has held a lectureship in zoology in the University of Sheffield. In addition, Dr. Phillips has had the experience of short working visits to research centres in Paris, Basel, Vancouver and Florida. Dr. Phillips has already achieved an international reputation for his work on the nature of adrenocortical secretion in lower vertebrates. He has demonstrated the types of corticosteroids produced by representatives of all the vertebrate classes and has shown the presence of