

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. How-

ever, 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
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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 pH. 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 Tromsø 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, auto-rotation, 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