

Prof. Jacques Bourcart

THE death of Jacques Bourcart on June 24 at the age of seventy-three removed from the scene of marine science in France a man whose richly varied life embraced very much more than great and successful activity applied in his own field of marine geology.

Bourcart was a patriot of patriots and it was doubtless the extraordinarily robust life which he led in both World Wars, inclusive of remarkable service in the Resistance, that made of him the man who became established as 'Patron' in the affections of his numerous students at the Sorbonne. It was in the field that Bourcart particularly excelled, and his detailed acquaintance with the geology of Morocco and Albania gave him that wide sweep of knowledge which drew so many admirable young people into his line of work. It was as an 'animator' of students that Jacques Bourcart won special fame. Conversation with him was not only rewarding and enjoyable; it was exhilarating—so buoyant and enthusiastic was he when engaged on some topic such as his well-known theory of continental flexure! This theory, which held that shorewards of a certain submerged zone elevation had taken place whereas seawards subsidence had occurred, was first announced in 1926 as a result of his detailed studies of the Moroccan littoral regions. It was indeed a good thing that Joubin did when he drew Bourcart into oceanography. The theory of continental flexure was applied to elucidate many puzzling changes of sea-level in the geological past.

Bourcart's thesis for his doctorate in science (1922) dealt mainly with the geology and geography of Albania, but it was in character that it strayed a good deal into discussions of the Albanian people and their language. In 1925 he was director of research in dynamical geology at the Sorbonne, and, with the passage of the years, he turned increasingly to littoral and submarine geology with particular attention to deep-sea sedimentation and bottom topography. His knowledge of Arabic led to service in Lebanon and Syria in the early days of the Second World War, but a later stage in that conflict saw him applying his vast knowledge of coastal bathymetry and morphology to the benefit of the allied forces. After remarkable military services which gained him great honour, Bourcart was appointed full professor at the Sorbonne in 1950. Five years later came the crowning of his university career when he became professor of physical geography and dynamical geology in succession to Prof. Lutaud. In this post he remained until he reached the age limit in 1961.

Bourcart was the first in France to have recognized the scientific importance of, and to have foreseen a great future for studies of, sea-bed geology and especially of abyssal sediments. He was a prolific writer and to him is due a fine set of bathymetric charts of the Mediterranean

which delineate those remarkable canyons which he had studied in detail, but the nature of which had been kept veiled in secrecy during the Second World War.

It was typical of Bourcart that, when a fund was raised to present him with the usual sword on his election to the Academy, he chose that the subscriptions should endow an academic prize able to pay the travelling expenses of a meritorious student wishing to pursue some study in physical oceanography.

In his later years Bourcart found it possible to extend the range of his busy life enough to include bathyscape descents and trips in the 'Diving Saucer'. The death of such a man will be felt far beyond the confines of his own country which he served so devotedly alike in the field of science and on the field of battle. J. N. CARRUTHERS

B. M. Kupletsky

BORIS MIKHAILOVICH KUPLETSKY, a prominent Soviet petrologist, died on January 14 at the age of seventy-one. Kupletsky is best known as the pioneer investigator of the Kola Peninsula igneous alkaline complexes. He began his strenuous field work as a member of A. E. Fersman's 'heroic team' in 1920. From 1920 until 1930 he was an assistant of F. Y. Loewinson-Lessing in the Leningrad Polytechnical Institute. His most important works on the rocks of the Kola Peninsula are: "Petrography of the Khibina Tundra" (1926) and "Petrography of the Kola Peninsula" (1932). Besides descriptive petrology, Kupletsky published very important works dealing with the classification and genesis of various igneous rocks. These are: "Nepheline Rocks" (with T. M. Oknova, 1934); "Genesis of Alkaline Rocks" (1936); "Nepheline Syenites in the U.S.S.R." (1937); "Classification of Granitoids" (1939); "Classification of Lamprophyres" (1944).

S. I. TOMKEIEFF

A. A. Saukov

ALEXANDER ALEXANDROVICH SAUKOV, a prominent Soviet geochemist, died in Moscow on October 23, 1964. He was born on August 15, 1902, and studied under F. Y. Loewinson-Lessing and D. S. Belyankin in the Leningrad Polytechnical Institute, from which he graduated in 1929. He began his research on the geochemistry of mercury under the guidance of A. E. Fersman. Besides numerous papers on various geochemical topics, Saukov published an excellent text-book entitled *Geochemistry* (first edition, 1950; second edition, 1952), which gained a German translation (*Geochimie*, 1953). His second book bore the title *Geochemical Methods of Prospecting for Mineral Deposits* (1963). In 1961 Saukov came to Britain at the invitation of the Royal Society of London and lectured at a number of universities.

S. I. TOMKEIEFF

NEWS and VIEWS

C.S.I.R.O. Division of Biochemistry and General Nutrition: Dr. A. T. Dick, O.B.E.

DR. A. T. DICK has been appointed chief of the Division of Biochemistry and General Nutrition of the Commonwealth Scientific and Industrial Research Organization of Australia. Dr. Dick succeeds Dr. H. R. Marston, who relinquishes his post at the end of August (*Nature*, 207, 465; 1965). He joined the Division of Animal Health as a research officer in 1933 and took up duties with Dr. A. W. Turner at Townsville, Queensland. There he applied his knowledge of chemistry and microbiology to some of the animal health problems of the region. In 1936 he joined Dr. Turner at the Parkville regional laboratory of the Division of Animal Health and Nutrition,

where he continued his microbiological studies of the causal organism of bovine contagious pleuropneumonia. Later in 1936 he took up work on chronic copper poisoning in sheep and in 1938 this was extended in a co-operative investigation of so-called toxæmic jaundice of sheep, which proved to be a pyrrolizidine alkaloidosis due to the consumption of *Heliotropium europæum*. The disease frequently became manifest as a hepatogenous chronic copper poisoning. This led to studies of copper metabolism in the sheep, and he demonstrated for the first time the interactions between molybdenum, inorganic sulphate and copper. He has continued experimental work on the toxic action of the pyrrolizidine alkaloids and on copper metabolism. He graduated B.Sc. with honours in 1932, M.Sc. in 1938, and D.Sc. in 1954 from