

Academy of Science of the U.S.S.R. This Laboratory is under the direction of Dr. Papalexi, a member of the Academy, and the results have been communicated by Mr. J. N. Alpert, who made the measurements in co-operation with Mr. N. Gorzhankin.

The radio observations were carried out in the vicinity of Moscow, where the optical eclipse in the ionosphere was total; and the results confirmed the hypothesis that the ionization in the *E* region is mainly caused by ultra-violet radiation from the sun, and thus supported previous conclusions that in medium latitudes, the emission of particles from the sun is not the chief cause of ionization in the ionosphere. The communication from Moscow states, however, that some characteristic variations in ionization occurred several hours before the optical eclipse, and at about the time that a particle eclipse would take place if the particles from the sun were travelling with speeds of 450–600 km. per sec. These variations were not observed on the days before and after July 9, the day of the solar eclipse.

OBITUARIES

Dr. J. F. Tocher

JAMES FOWLER TOCHER, born in 1864 at Fyvie in Aberdeenshire, was a man of many interests: by profession a pharmaceutical and analytical chemist, he found time in a busy life to make numerous contributions to the history, antiquities and anthropology of his native country, and he was most successful in stimulating popular regard for all branches of local knowledge.

His story indicates something of the drive and resolution that lay behind his genial presence. He left school early and, having served an apprenticeship in a country chemist and druggist's shop, he set up on his own account a similar business in Peterhead. But his energies were bent on finding a scientific outlet beyond the dispensing room, and in 1887 he founded the Buchan Field Club, which became a focus for local lore, and the *Transactions* of which, with two elaborate volumes "The Book of Buchan" (1910 and 1943) both of which Tocher edited, form an invaluable compendium of the history and natural history of the north-east of Scotland.

Later Tocher's interest in statistical analysis, encouraged by Karl Pearson, led him to plan and carry out with Dr. John Gray an extensive survey of the physical characteristics of Scottish school children and adults. More than half a million individuals were examined, and the results, published in the *Journal of the Anthropological Institute* and *Biometrika* from 1908 onwards, brought out many new facts about the distribution of ethnological groups. Thus the north-east of Scotland was found to be the home of a population characterized by a higher proportion of red-haired and a lower proportion of dark-eyed individuals than any other part of the country; and the centres of population were shown to have relatively more dark-eyed and dark-haired people than the country districts.

While the survey was in progress, Tocher determined to study for a B.Sc. degree at the University of Aberdeen, and this enthusiast of forty years, under great handicaps, completed the course and graduated in 1908. A few years later his investigations won him the degree of D.Sc.

In 1911 he was appointed lecturer in statistics in the University of Aberdeen, and thereupon transferred his home to that city and took up appointments as agricultural analyst for Aberdeenshire and other counties in the north of Scotland, and consulting chemist to the Highland and Agricultural Society. He served on the governing bodies of most of the teaching and research institutes in Aberdeen, and in 1909 was president of the British Pharmaceutical Conference. Recently he received from his University its LL.D.

Dr. Tocher had a great gift of friendship, and his overflowing spirits expressed themselves in goodwill and effervescent humour, whether on the more formal occasions of a Burns' Club address, or in the anecdotes of a casual gathering. He died in Aberdeen on November 8, aged eighty-one. JAMES RITCHIE.

Mr. B. B. Bancroft

B. B. BANCROFT, who was killed while serving as a 'seaborne aircraft identifier' during the invasion of Normandy on June 24, 1944, will long be remembered for his work on the trinucleids and brachiopods of the Shropshire Ordovician, upon which four of his papers appeared in the *Memoirs* of the Manchester Literary and Philosophical Society for the years 1928 and 1929. He was the first geologist to recognize the unconformity at the base of the Ashgillian near Bala, and made many advances in the stratigraphical correlation of English and Welsh Ordovician sections. One of his greatest successes lay in his discrimination between *Heterorthis retrorsistria* and *H. alternata* and his assignment of them to their correct stratigraphical horizons. Some of his best work was privately printed in "Correlation Tables of the Stages Costonian-Onnian in England and Wales" (1933), and his "Brachiopod Zonal Indices of the Stages Costonian to Onnian in Britain" has recently appeared posthumously in the *Journal of Paleontology* in the United States. It is hoped other papers will follow.

Bancroft served also in the War of 1914–18, in the Royal Garrison Artillery, and was recommended for the Croix de Guerre. It was typical of his fearless spirit that in the recent War, though well advanced into middle age and a member of a reserved profession, he should again be a volunteer. One who was with him in the attack on the "West Wall" writes:

"It was a very great experience and lesson to me to live for a time with a man of such age and experience as he, to whom anything but complete truth was abhorrent. He had the mind and outlook of a true scientist."

ARCHIE LAMONT.

WE regret to announce the following deaths:

Mr. R. H. Briggs, M.B.E., editor of the *Overseas Engineer* and recently assistant director of the Technical Press Censorship, Ministry of Information, on January 3, aged fifty-eight.

Prof. Charles Fabry, For.Mem.R.S., until recently president of the International Council of Scientific Unions, on December 11, aged seventy-eight.

Prof. E. S. Goodrich, emeritus professor of zoology and comparative anatomy in the University of Oxford, on January 6, aged seventy-seven.

Prof. T. H. Morgan, For.Mem.R.S., professor of biology and director of the Wm. G. Kerckhoff Laboratories, California Institute of Technology, since 1928, on December 4, aged seventy-nine.