

areas still retaining the original soil, the effect of the typhoon has perhaps proved beneficial. In places, large quantities of organic debris were added to the soil and much of this has decomposed; also, since the typhoon, the people have shown very little tendency to resume the previous burning of vegetable trash but rather they now allow it to rot. Consequently, many of the soils of the non-wave-swept islets are, at present, in excellent condition as coral atoll soils go, and are loose, friable, dark and rich in organic matter even when gravelly. This state of affairs may well continue so long as burning is not resumed. On most of the wave-swept areas soil amelioration will be much slower, depending on the weathering of gravel, addition of organic matter from root growth and leaf fall, and carrying in by wind or waves of sand- and silt-sized materials.

*Cultural changes.* We also noted marked changes in the cultural scene. Dwellings and other structures in the villages had all been repaired or rebuilt. Village walks had been cleared, and several have been bordered with stones. Where before there were none, ornamental plants now grow in neatly arranged gardens in front of several dwellings; and in many places coral debris has been cleared from garden areas and stacked in mounds nearby. The debris from fallen trees has been cleared from large parts of the inhabited islets, but not from the uninhabited ones.

There are now many more outrigger canoes than there were in April 1958. No count was made of these, but several boats were seen in each of the five villages visited (Jabor, Majuriruk, Pinlep, Jaluit, Imroj). None of these canoes exceeds 15 ft. in length, but we were told that they meet the needs of the natives for transport and fishing in the lagoon and at distances up to a few miles out to sea.

Among the subsistence crops that are now thriving and are being used are breadfruit, pandanus, pumpkins, bananas and sweet potatoes. The last two are especially widely grown. Coconuts remain the chief subsistence crop despite the large number of trees destroyed in the typhoon. In contrast, taro, which was an important crop on Pinlep Islet prior to the typhoon, is now only just beginning to be raised again.

The administration has sponsored and assisted with a wide-spread programme for the re-planting of coconut palms to provide a cash crop in the years ahead. This programme has been completed on all but the eastern islets, where it has almost been completed. At present, however, there is little or no copra produced for export, and the principal exports are trochus shell and handicrafts, neither of which provides a substantial cash income.

<sup>1</sup> *Nature*, **182**, 1267 (1958).

<sup>2</sup> *J. Sediment. Petrology*, **29**, 354 (1959).

<sup>3</sup> *Atoll Research Bull.* No. 75 (1961).

## OBITUARIES

### Prof. D. Cordier

PHYSIOLOGISTS throughout Europe will have learnt with sorrow of the death in October of Prof. Daniel Cordier in his sixtieth year. From 1946 he had held the chair of general physiology in the University of Lyon, but during the war years he was a well-known figure in Cambridge, where he conducted researches on chemical warfare for the French Forces under General de Gaulle.

Before the Second World War he had been in charge of the research station at Le Bouchet as director of the Physiological Laboratory under the Ministère de l'Armement, and in June 1940 he was one of the party of French scientists brought to England by the Earl of Suffolk to carry on their war work for the Allies. He and Madame Cordier lived in Cambridge until 1945, accepting exile with an unshaken faith in the outcome and making many friends.

Trinity College was particularly fortunate in having Prof. Cordier as a genial member of its society. His sturdy figure became a symbol of the French resistance, the colleagues who came to consult him were welcome guests at the high table, and his regard for the College added to the pleasure of his company.

He had an extensive knowledge of pulmonary and renal physiology which was of great assistance to all who worked in the Physiological Laboratory, and his own work on traumatic shock and intoxication showed his experimental skill and made a valuable contribution to war-time research.

After his return to France he continued and extended his work on more general lines, studying the effects of different forms of shock in a wide range of animals and dealing particularly with the disturbance of glycogen metabolism in the heart and

liver. He became secretary-general of the Association des Physiologistes de Langue Française and the French representative in the International Union of Physiological Sciences. He will be greatly missed by the many colleagues who knew him in England and had the pleasure of seeing him again established in his own laboratory after the War. ADRIAN

### Mr. Henry Braid Irving, O.B.E.

HENRY BRAID IRVING died in hospital at Stoke Mandeville, Bucks., on January 12 at the age of seventy-one after a lifetime devoted mainly to aerodynamic research. He was educated at the King's School, Chester, and at the Manchester College of Technology, and this was followed by four and a half years of practical and design experience in marine and general engineering on the Clyde.

He commenced his aerodynamic researches at the National Physical Laboratory in 1914, and his great contribution to the advancement of aeronautical science is indicated by the publication of more than sixty papers in the next twenty-five years. They cover a wide field, including airships, seaplanes, kite balloons, radiators, stress calculations and buffeting in addition to aeroplane stability and control problems and the spinning of aeroplanes. He is best known for his work on these last subjects, being the first to suggest the use of the slot for the improvement of lateral control in August 1922, a subject on which he published several papers; this was later recognized by the award of the Charles Wakefield Gold Medal by the Royal Aeronautical Society in 1929. The aerodynamic balancing of controls was aided by his proposal for a shrouded nose balance in November 1939, and a practical method of balancing

split flaps published in May 1936 is known by his name.

In 1939 Irving was transferred to the Royal Aircraft Establishment and later became assistant director of scientific research (air) at the Ministry of Supply until his retirement in 1954. While at the Ministry he was responsible for initiating in 1950 researches on the reduction of the noise from jet engines. He wrote several papers on noise, was a consultant on this subject to the Ministry during 1954-57 and afterwards to the firms of Bristol-Siddeley and Westland Aircraft. He had also been chairman of the Noise Research Committee of the Aeronautical Research Council and a member of several of its other committees.

He was made a Fellow of the Royal Aeronautical Society in 1932, and was a founder member and chairman of the Man-powered Aircraft Committee of the Society, the committee which has fostered the growing interest in Britain in man-powered flight. Due to his personal efforts and his published articles, the prospects of man-powered flight in the near future has been enhanced.

Henry Irving was a man of great personal charm, kindness and sincerity, and he was an inspiration to all those who came in contact with him. He leaves a widow and two daughters. J. L. NAYLER

#### Mr. W. A. Kay

WILLIAM ALEXANDER KAY, who died in January, was a prince of laboratory stewards whose fame spread far beyond the Physics Laboratory at Man-

chester in which he spent the whole of his working life. He started there as a laboratory assistant in 1894, and became steward in 1908, serving successively under Sir Arthur Schuster, Lord Rutherford, myself and Prof. P. M. S. Blackett. He was Rutherford's chief helper in the great days of his Manchester researches. In recognition of his services to the University he was made an honorary M.Sc. in 1946, and the University staff service centre is named after him.

He was an excellent steward and brilliant at devising experiments and demonstrating them in class. When Rutherford left Manchester in 1919 he invited Kay to go to Cambridge with him, but Kay could not bring himself to leave his native heath. How fortunate this was for the very inexperienced young professor who succeeded Rutherford can only be realized fully by myself. A great change has come over laboratories since those days, with their large establishments of secretaries, accountants, research and lecture room assistants and mechanics. Kay combined all these roles, and those of guide, philosopher and friend as well.

But it is not for his skill and his unflagging zeal that he will be chiefly remembered. His integrity, discretion, wisdom, warmth, and combination of modesty with a sturdy independence made a deep impression on all who knew him. The comparison may seem fanciful, but it is one which I have often made in my own mind. His personal qualities endeared him to us in much the same way that Michael Faraday's personality endeared him to his contemporaries. W. L. BRAGG

## NEWS and VIEWS

### Dr. Jerome B. Wiesner

PRESIDENT KENNEDY has appointed Dr. Jerome B. Wiesner to succeed Dr. George B. Kistiakowsky as special adviser for science and technology to the President. Dr. Wiesner has been on the staff of the Massachusetts Institute of Technology since 1946, being appointed to the grade of professor in the Department of Electrical Engineering in 1950. During the same period he carried simultaneous responsibilities at the Institute for the research laboratory of electronics, of which he became director in 1952. Born in Detroit, Michigan, in 1915, he went to the nearby University of Michigan, earning the degrees of B.S., M.S., and Ph.D. in engineering. During his twenties, he sampled a variety of occupations, ranging from a broadcasting station to the Library of Congress (as chief engineer). Thereafter he spent three war years at the Radiation Laboratory, Massachusetts Institute of Technology, followed by a year at the Los Alamos Scientific Laboratory during 1945-46. In addition to his academic and research posts, he has acted as consultant to industrial firms. Dr. Wiesner's research and scientific interests have been principally in the fields of acoustics, electronics, radar and theory of communications. Among his achievements was the development of the 'scatter' communication system, making possible the extensive distant early warning line spanning the northern perimeter of the American continent. In recent years, his interests in the international political problems of science have widened, stimu-

lated in part by membership of President Eisenhower's scientific advisory committee, by his appointment in 1958 as staff director of the U.S. delegation to the Geneva Conference on means of reducing the dangers of surprise attack, and by his attendance at several Pugwash Conferences.

### Machine Tool Industry Research Association :

Mr. A. E. de Barr

MR. A. E. DE BARR, who has been appointed the first director of the Machine Tool Industry Research Association, has had a distinguished career in industrial research. Born in 1918, he graduated with first-class honours in physics from the University of Leeds in 1939 and, after a short period of postgraduate research, proceeded to the Mine Design Department of the Admiralty. He remained with the Admiralty until the end of the War and then joined the firm of Joseph Sankey and Sons, Ltd., as research superintendent (physics). He transferred to the Guest, Keen and Nettlefold group of companies when the Research Laboratories of Sankey's became the Central Research Laboratories of the group. In 1950 he accepted the position of leader of the Physics Division of the Research Laboratories of Elliott Bros. (London), Ltd., where he was responsible for the establishment and development of physics, chemistry and metallurgy laboratories. Mr. De Barr joined the staff of the Shirley Institute, Manchester, in November 1953 as head of the Spinning Department, where his main contribution has been in the application of physical