

## Obituary.

PROF. A. FRIEDMANN.

IT has been briefly announced that Prof. Alexander Friedmann, director of the Central Geophysical Observatory, Leningrad, died of typhus fever on September 16, 1925, at the early age of thirty-seven years.

It is remarkable that under the auspices of the Academy of Sciences of Leningrad, which has recently celebrated its two-hundredth anniversary, the keen interest of Russia in scientific activities has been maintained throughout the stress and strain of war and revolution. The chief centres of geophysical activity before the War were the Central Physical Observatory at Leningrad and the Aeronautical and Magnetic Observatory at Pavlovsk (now Slutsk). The latter found itself between two armies after the revolution; but, with considerable difficulty, the work was maintained. From these centres the vast meteorological organisation of the Russian Empire had been controlled. It was naturally hampered a good deal by war conditions, but is being rapidly reinaugurated. After the death of Prince Boris Galizin, provisional arrangements were made for the scientific direction of the organisation; Prof. Obolensky was director for some time, and up to February of this year Prof. Weinberg was in charge.

At the congress on Applied Mechanics at Delft in April 1924 Russian representatives were present, and the number of papers which were offered overflowed the meeting-room and were made available in manuscript in the reading-room of the congress. Many of the papers were presented by Prof. Friedmann. He had graduated in 1910 at St. Petersburg, studied aerodynamics under Prof. Bjerknes in Leipzig, joined the Observatory at Pavlovsk, volunteered for the War as observer in the flying corps, was promoted to take charge of the aerological service of the army, and in 1918 became professor in the University of Perm. But in 1920 he returned to Leningrad as senior physicist at the Central Observatory, re-named Geophysical, of which he became director early in 1925. "A man of extraordinary mathematical capacity, he deliberately forced himself to experimental work in order to verify his results. He was entirely devoted to science; he worked hard himself and claimed hard work from his colleagues." In 1924 he started at the Observatory a new periodical, *The Journal of Geophysics and Meteorology*, wherein geophysical papers are printed in Russian with a brief summary in one or other of the foreign languages. His principal contributions to science are on "The Vortical Motions of the Atmosphere" in a periodical which he started as professor at Perm; "On Vortices in Liquids with variable Temperature," which he presented to the Mathematical Society of Kharkov; "On Differential Equations for Turbulent Motion of a Compressible Fluid," at the Congress of Applied Mechanics at Delft. He also contributed to modern mathematical physics papers on the curvature of space.

During Friedmann's short tenure of the directorship of the Central Geophysical Observatory he reanimated the organisation in an extraordinary manner. He was to have come to London for the meeting of the Upper Air Commission in April last; but at the last moment

found himself unable to leave Leningrad. His activity was, however, effectively represented by Dr. Moltchanoff, the director of the Aerological Observatory at Slutsk. Almost every phase of the subject was covered by one or other of the series of papers presented in Friedmann's name or in those of his colleagues. Since that meeting many letters have been received from him about the establishment of geophysical observations in various parts of Russia; the last of them, dated July 25, announced the creation of a geophysical observatory at Jakutsk as a local branch of the Central Geophysical Observatory, meteorological and aerological at first, with the intention of its becoming astronomical, optical, and magnetic in time.

Friedmann's untimely death is a serious loss for Russian geophysical science; but regard for his memory will certainly impel his successors to carry on the work which excited his unbounded enthusiasm.

NAPIER SHAW.

MR. W. R. DYKES.

WE regret to record the untimely death of Mr. William Rickatson Dykes, secretary of the Royal Horticultural Society, at the early age of forty-eight years. Motoring with his wife near Woking, his car skidded, collided with a lorry, and he was thrown out, sustaining severe injuries to his ear and right arm. Attempts to save the latter failed, and he died of syncope, following the amputation of his arm at the shoulder, on Tuesday, December 1.

Mr. Dykes was born on November 4, 1877, the second son of Mr. Alfred Dykes, and educated at the City of London School, at Wadham College, Oxford, where he took classical honours, and the Sorbonne. He became an assistant master at Charterhouse in 1903, and remained there until the end of 1919, when he was elected to succeed the late Rev. W. Wilks as secretary of the Royal Horticultural Society. Under his secretaryship the Society has continued the growth started in 1888, and Mr. Dykes had recently taken a considerable part in furthering the plans (which are now well forward) for the building of a new and larger hall for the Society's meetings. His name, however, will be remembered, not so much for his work as a teacher, or as secretary of the Royal Horticultural Society, but chiefly for his devotion to the genus *Iris*.

Mr. Dykes had remarkable powers of concentration, an inquiring mind, a love of attempting to overcome difficulties in the cultivation of his plants, and facility in expressing himself in writing; and all of these he brought to the service of his favourite plant. While at Charterhouse he collected and grew all the species of *Iris* he could procure, and studied them minutely from both the cultural and the botanical sides. The mantle of Sir Michael Foster fell upon him, and one might almost say that Dykes had a double measure of the spirit that imbued that great iris lover. He was not content to follow authority, and took the utmost pains to investigate every small point that cropped up. He had correspondents wherever irises grew wild, and made himself acquainted with more than one foreign language in order to put himself in direct touch with first-hand information gathered by those