The theory explains also why the leakage of helium through a narrow opening produces a temperature difference. Helium in the super-fluid state passes through the opening more easily than helium in the normal state. Thus there occurs a peculiar type of filtration. In the liquid which has passed through there is a greater concentration of super-fluid helium, and this corresponds with such a concentration as would presume the attainment of a certain lower temperature.

In many ways experimental work, quantitative as well as qualitative, is in agreement with the theory. Some phenomena are unexplained as yet. The theory indicates that there should be simultaneously two different speeds of sound in liquid helium. There is at present no proof of this experimentally, and, moreover, the theory does not account for the critical speed which is actually observed. Further work on the elucidation of the strange phenomena of helium II is likely to prove of considerable interest.

G. STANLEY SMITH.

[1] Kapitza, P., *Nauka i Zhizn (Science and Life)*, No. 3, 13 (1944).
[2] Kapitza, P., *Nature*, **141**, 74 (1938).
[3] Tisza, L., *Nature*, **141**, 913 (1938).
[4] Landau, L., *Zhur. Eksper. Teoret. Fiziki*, **11**, No. 1 (1941); *Phys. Rev.*, **60**, 356 (1941).

OBITUARIES

Prof. Hans Sachs

PROF. HANS SACHS died in Dublin on March 23; with him ends the direct line of great serologists which arose under P. Ehrlich. Sachs was born in Kattowitz, Upper Silesia, in 1877. After completing his medical training he went in 1900 to the Institut für Experimentelle Therapie at Frankfort-on-Main, where he soon proved to be a most able worker on problems of serum-hæmolysis and allied studies.

When Ehrlich's chief interest shifted to cancer research and chemotherapy Sachs continued in his original field of investigation, of which he soon was the acknowledged authority. He became professor and head of the Department of Experimental Biology at the Frankfort Institute, of which, after Ehrlich's death, he was for a time deputy director. In 1920 he went to the University of Heidelberg as professor of immunology and serology and director of the scientific department of the Institute for Experimental Cancer Research. The wide esteem in which he was held was manifested in the work entrusted to him on the serodiagnosis of syphilis for the League of Nations' Commission.

In 1908 Sachs was one of four who founded and edited the *Zeitschrift für Immunitätsforschung*. His association with this journal, now in its eighty-sixth volume, was terminated by State policy in 1935, and he also ceased to hold his post at Heidelberg. Then the Irish Medical Research Council and the hospitality of Trinity College, Dublin, enabled him to continue his work in the School of Pathology there. In addition to valuable contributions of a practical nature—the Sachs-Georgi reaction is known throughout the world as one of the first simple and reliable flocculation tests for the diagnosis of syphilis—he and his fellow-workers carried out a long series of important investigations on the antigenic properties and specificity of tissue constituents, especially those which can be extracted by alcohol (lipoids). The work appeared mainly in the *Zeitschrift für Immunitätsforschung*. The antigenic specificity of different structural components of organs was proved, for example, in the case of the central nervous system. Also, it was demonstrated that the serum of rabbits may be caused to yield a positive Wassermann reaction by injecting the animals with a mixture of alcoholic extract of rabbit's tissue along with a foreign protein such as pig's serum, the latter being necessary to act as a 'carrier' on the analogy of Lansteiner's observations. Further researches illustrated strikingly how an antigen might be 'masked' in tissues or might fail to develop antibodies owing to the 'competition' of another antigen present along with it. *Inter alia* it was shown that an animal might come to produce antibodies to tissue constituents of its own species. The implications of those attractive observations in connexion with pathology have not yet been fully explored.

The distribution and properties of the antigens associated with the human blood groups were also extensively examined by Sachs; and his communication to the Royal Academy of Medicine in Ireland in 1939 (*Irish J. Med. Sci.*, April 1940) is a most comprehensive and readable account of knowledge on the subject up to that date.

Sachs was a man of genial outlook whose appreciation of the work of others was exercised without respect of academic or racial distinction.

C. H. BROWNING.

Miss Phyllis Kelway

THE death of Phyllis Kelway on April 14 at the comparatively early age of thirty-nine comes as a shock to those who knew her as one of the small band of naturalists interested in British mammals, in particular the smaller species, such as the mice, voles and shrews. It was her probably unique distinction to have bred that smallest of living mammals, the lesser or pigmy shrew, *Sorex minutus*, in confinement; also that tiny mammal, the harvest mouse, *Micromys minutus*. She kept and studied most of the British mammals, having marked success with that delightful but difficult species, the red squirrel, *Sciurus vulgaris leucourus*, her pets "Jennifer" and "John" mating and bringing up a litter of young ones. It is noteworthy that Miss Kelway failed to get the red squirrel and the grey squirrel to take any interest in one another, her experiments supporting the view that they never fraternize, still less hybridize.

Miss Kelway wrote several books setting forth her observations and experiences, "Swift Movement in the Trees" telling of squirrels, shrews and many other creatures; while in her last book, "The Ark", she dealt with another theme, the difficulties of a smallholder in war-time. She illustrated her writings both in the Press and in book form with photographs from her own camera, for she was a skilled and charming photographer. She was born in Somerset, but lived in Yorkshire, at Almondbury near Huddersfield.

FRANCES PITT.

WE regret to announce the following deaths:

Dr. K. J. W. Craik, director of the Applied Psychology Unit of the Medical Research Council, on May 7, aged thirty-one.

Prof. Thomas J. Nolan, professor of chemistry since 1932 at University College, Dublin, on March 12, aged fifty-six.