Ashby (1906), and Henry (1920)), and by two authors (Cobbett (1900) and Minnett (1920)) in horses. No proved diphtheria bacilli have ever been found occurring spontaneously in cats, dogs, or fowls. In 1920 Simmons obtained, from two cats, bacilli resembling diphtheria bacilli in man, but differing in the fundamental respect that they fermented cane sugar, which human diphtheria bacilli do not.

The belief that cats are frequently capable of transmitting diphtheria arose in Great Britain largely out of work done by E. Klein for the Local Government Board in 1889 and 1890. He based his opinion on the existence of spontaneous diphtheria in cats on the fact that a very fatty condition was found in the kidneys, a lesion which he regarded as pathognomonic of the disease in this animal. Before Klein published this statement it was already well known (Gluge (1850), Handfield Jones (1853), and Beale (1869)) that all normal cats show this lesion—a fact confirmed by modern writers like Hansemann (1897), Fibiger (1901), and Mottram (1915–16). In an extensive inquiry in 1919–20, Savage was unable to find, nor could any one produce, a cat infected with diphtheria bacilli.

The doctrine of milk-borne diphtheria was also largely based on Klein's work (1890). He alleged that when cows are injected with cultures of diphtheria bacilli in the shoulder, these diphtheria bacilli appear in the milk and the animals suffer from an eruptive disease of the udders and teats. Dean and Todd (1902) traced a milk-borne epidemic of diphtheria to cows with scabs on the udders. They showed that the eruption was not due to diphtheria, and they regarded the diphtheria bacilli found in the udder as a superposed infection from the saliva of an infected milker. In 1920 Henry studied an epidemic of thirty-two cases. The disease was traced to milk. The dairy-maid was found to be suffering from cutaneous diphtheria, and from her the udder became affected, this in turn transferring the disease to the hands of the maid's father.

So far as is known, these are all the positive facts of the animal transmission of diphtheria to man. We may therefore assume that it is an event of exceeding rarity. With regard to birds there is no proved instance that these animals have ever transmitted the disease. So-called croup and diphtheritis in birds have nothing to do etiologically with human diphtheria. It is not necessary to assume an animal origin of an outbreak of diphtheria until all possible human sources in the immediate neighbourhood have been excluded. This can be done only by cultivations, and not by the pious opinions of mothers and medical men without experience in bacteriology. W. B.

Obituary.

PROF. E. MAJEWSKI.

THE late Prof. Erazm Majewski, the Polish naturalist, who died on November 15 last in Warsaw, was a scholar and pioneer worker of a type characteristic of the difficult and discouraging conditions in pre-War Poland—a country divided by three alien states, two of which forbade the use of the native language, even in the primary schools, excluded native teachers, and suppressed native culture.

Born in 1858, in the provincial town of Lublin, Prof. Majewski studied science at the University of Warsaw. In order to devote himself to research, to which he had felt attracted from earliest youth, he had first to gain a financial independence, for at that time there were no endowments, no academic positions, no possibilities of scientific publication for a Pole who wanted to work in his own language and for his own country. Prof. Majewski took up and developed an important branch of chemical industry and thus obtained a living at first, and afterwards what, for Polish conditions, might be considered a small fortune. With this he could not only find leisure for his own research, which soon became very strenuous and extensive, but he also was able to finance research and help a number of younger students.

Prof. Majewski's own activities were astoundingly multifarious: translations into Polish, popular expositions, manuals, monographs, scientific novels, treatises, and last, not least, solid original contributions, partly based on research in the laboratory and in the field. The subjects of his work were commensurately extensive: chemistry, botany and geology; later on, ethnography, prehistory and archæology; finally, in the last ten years of his life, economics, sociology, and history of civilisation. Perhaps the most lasting value will be retained by his archæological and prehistoric studies, through the impetus which he gave to excavation and collecting, through the foundation of an excellent periodical (*Swiatowit*), which he financed and edited himself, and through the formation of a large and valuable collection of Slavonic archæology, presented in 1921 to the Scientific Society of Warsaw.

All Prof. Majewski's work reveals a man of genius in the marvellous grasp of each problem touched upon, in the original and independent point of view, in the amazing power of study and assimilation. It shows, of course, also the defects of its qualities: such enormous output over a wide range is bound to entail a certain degree of dilettantism, many hasty generalisations, and a tendency to avoid all negative evidence. All the defects of the late Prof. Majewski's work, however, are due mainly to the unfavourable conditions under which he worked: absence of scientific organisation, of co-operation and of division of work, all of which leads to the unlimited pegging out of claims over the vast territory of science by an enterprising and independent mind, to lack of self-criticism, to an easy lapsing into over-ambitious schemes. The qualities which he possessed, on the other hand, are native and intrinsic to his own mind, and entitle us to hope that his country, which can produce such people as he under the most discouraging conditions, will, when its political and economic foundations are once more secure and its scientific work organised, be able to contribute its due share to the progress of science.

B. M.

DR. HARTWIG FRANZEN.

ON February 14 the death occurred at Karlsruhe, Baden, of Dr. Hartwig Franzen, extraordinary professor of organic chemistry at the Technical High School.

Hartwig Franzen was born on March 21, 1878, at Nortorf, Holstein; he studied at Heidelberg, Berlin, and Copenhagen, graduating in 1901 at Heidelberg and becoming a private lecturer in chemistry at that university. His first work was published in collaboration with Th. Curtius, the discoverer of hydrazine and hydrazoic acid (azoimid), whose favourite pupil he was. In 1910 he became extraordinary professor and was called in 1912 to the Technical High School at Karlsruhe as subdirector of the organic chemistry institute. Franzen worked on gas analysis and embodied his results in his "Practicum," which was published in 1907. He also investigated the hydrazine compounds and problems in the chemistry of fermentation and the physiology of plants. Many of his publications deal with the constituents of green plants. Franzen was a well-known investigator and an efficient teacher. His early death leaves a great gap in the ranks of the younger German chemists, and his numerous friends and pupils will faithfully preserve his memory.

WE regret to announce the following deaths:

Mr. F. W. Harmer, for more than fifty years a fellow of the Geological Society and well-known for his studies of Pliocene mollusca, on April 24, aged eighty-seven.

Prof. G. D. Hinrichs, formerly professor of physical science in the University of Iowa and of chemistry at the St. Louis College of Pharmacy, aged eighty-six.

Sir Albert J. Hobson, pro-chancellor of the University of Sheffield and for twenty years a member of the council of the University, on April 20, aged sixty-one.

Prof. V. Th. Homén, Pippingsköldsche professor of applied physics in the University of Helsingfors, aged seventy-five.

Dr. A. Latham, physician and lecturer in medicine at St. George's Hospital, who was known for his work on pulmonary consumption, on April 13, aged fifty-six.

Prof. E. W. Morley, professor of chemistry at Western Reserve University from 1869 until 1906 and known for his part in the Michelson-Morley experiment to detect motion of bodies through the æther, aged eighty-five.

Sir John Watney, chairman of the Council of the City and Guilds of London Institute, on March 25, aged eighty-nine.

Mr. J. Wright, well-known for his work on Irish foraminifera and carboniferous fossils, on April 7, aged eighty-nine.

Current Topics and Events.

THE "Zoological Record," which for nearly sixty years has annually supplied zoologists with bibliographical references to the literature of their subject, and in particular has performed the task of recording the names of new genera and species introduced each year, is threatened with extinction. Although the responsibility for producing the Record was temporarily shared with the International Catalogue, which has ceased to exist, the credit for its publication, during recent years, has otherwise belonged exclusively to the Zoological Society, which has thus earned the gratitude of workers in all parts of the world. The decision of the council of the Society to cease publication, except on certain terms which are explained in another part of this issue, will be received with regret and consternation by a large number of investigators. It is urgently necessary that a combined effort should be made to save this invaluable serial, and those interested are invited to communicate with Sir Sidney Harmer, at the British Museum (Natural History). Suggestions will be welcomed, but it is hoped that many will be able to express their sympathy in a practical form, by undertaking to subscribe for the annual volumes or for the separate parts in which they are individually interested, or by giving assistance of an even more direct nature.

THE treatment of diabetes by the use of the extract of the pancreas known as "insulin" is now made more widely possible by the fact that it has been put upon the market by the British Drug Houses in conjunction with Messrs. Allen and Hanburys, Burroughs, Wellcome and Co., and Eli Lilly and Co. On account of the limited supply as yet available, the Medical Research Council has made certain recommendations to the Ministry of Health with regard to its economical use. The Minister has appointed the following committee to advise him on the subject: Sir George Newman, Dr. R. A. Bolam, Sir Walter Fletcher, Sir Humphry Rolleston, Dr. Alfred Salter, and Dr. McCleary. This committee, which can be addressed at the Ministry of Health, Whitehall, has recommended that insulin should be supplied only to hospitals and medical practitioners who have at their disposal means of determining the sugar content of the blood. Those to whom the preparation is supplied shall undertake to make observations of the changes in the amount of sugar in the blood in correlation with the dose of insulin given. It shall not be given where the symptoms can be controlled by moderate restriction of diet. It may, however, be given in coma, as an emergency treatment, or in preparation for a surgical operation. Detailed instructions for its use and for obviating the results of too large a dose are supplied by the makers with each sample.

A MEMBER of an Indian Provincial Legislative Council was reported recently to have demanded that the budget allotment for combating hookworm disease should be cut out because, as ninety per cent. of the people suffered from this serious disability, "it was a normal state of health and there was no meaning in spending money on investigation and prevention of the disease." The demand revealed a dangerous depth of ignorance, or, what is worse, a perversion of knowledge—for the speaker was an Indian doctor—which is only equalled by that of another member asking not long ago what steps a Provincial Government proposed to take to diminish the deaths due to lightning! Unfortunately, the Retrenchment Com-