which with his invariable sense of duty he demitted in 1922; but he did not cease to attend the meetings. He was present at Cambridge in 1925, when the University conferred an honorary degree upon him.

Baillaud's work was for the most part administrative and official, so there is comparatively little to signalise personally, and that is technical; but he was a good mathematician, and contributed many discussions upon the usual subjects. He retired in 1926, and lived until the present year in the south of France, chiefly about Toulouse, or the Pyrenees, to which he was much attached.

He was a man of many friends, and incapable of rancour. In his long retirement he became, as a relative writes, *toute bonté*. R. A. S.

WE regret to announce the following deaths:

Prof. B. J. Collingwood, O.B.E., professor of physiology in the University of London, on August 9.

Prof. G. Dreyer, C.B.E., F.R.S., professor of pathology in the University of Oxford, on August 17, aged sixty-one years.

Prof. W. M. Hicks, F.R.S., formerly professor of physics and also first Vice-Chancellor of the University of Sheffield, on August 17, aged eighty-three years.

Prof. W. McF. Orr, F.R.S., lately professor of pure and applied mathematics at University College, Dublin, on August 14.

News and Views

Sir Peter Chalmers Mitchell, C.B.E., F.R.S.

AT the August general meeting of the Zoological Society of London, it was announced that Sir Peter Chalmers Mitchell would retire from the secretaryship at the annual meeting next April, and the Council would nominate Prof. Julian S. Huxley for election as his successor. For the past thirty years, Sir Peter has done so much towards making the Zoological Gardens more attractive to the public, while adding to the opportunities which they afford for scientific research, that his retirement marks the end of a brilliant epoch in the history of the Society. Only those who have been closely associated with him can realise the indebtedness of the Council to his ever-ready initiative and inspiration in the undertakings which they have entrusted to his tactful direction. One of his earliest tasks was the removal of the offices, library, and meeting room from Hanover Square to a new building in the Gardens, where there was more ample and convenient accommodation. A small extension to the Gardens was then arranged, in return for the provision of some paddocks open to public view in Regent's Park. The Mappin Terraces soon followed as a generous gift, and eventually the Society was induced to risk great expenditure in placing under the Terraces the Aquarium, which was so well planned and arranged that public appreciation returned the outlay almost at once. The new buildings for apes and monkeys, reptiles, and insects, besides rearrangements for the parrots and smaller birds, and the provision of an adequate sanatorium, should also be mentioned; nor must the new and comparatively luxurious refreshment houses be forgotten. Sir Peter Chalmers Mitchell, however, will always be best remembered by the great share he took in the acquisition, planning, and organising of the Zoological Society's country park at Whipsnade, where wild animals live under almost natural conditions, and can be studied in ways for which there is no provision in an ordinary menagerie.

THROUGHOUT his administration, Sir Peter Chalmers Mitchell has always encouraged the use of the Society's collection for scientific research. His own work on the anatomy of vertebrates came nearly to an end with his great memoir on the intestinal tract in mammals in the Society's *Transactions* in 1905, but he continued to stimulate others in the prosectorium, and he organised new lines of investigation. He induced a succession of pathologists to join the staff, and they have now for many years published valuable results, besides helping to improve the health of the animals. Parasites have been systematically collected and studied; and for some time after its foundation the scientific problems of the Aquarium were examined by a special assistant. The scientific meetings of the Society have been arranged to make a wider appeal to the fellows, and most of the technical papers are now taken as read for publication in the *Proceedings*. Sir Peter, indeed, will hand on to his successor an admirable organisation for making the best use of the scientific resources of the Society. He retires with the best wishes of zoologists for the enjoyment of his well-earned leisure, which will enable him to return to the quiet contemplation of the subjects which he has made his own.

Centenary of Sprengel, 1834–1906

AMONG the many men of science of German birth who during last century made England their home was Herman Johann Philipp Sprengel, F.R.S., the centenary of whose birth occurs on August 29. Born at Schillerslage near Hanover, he studied physics and chemistry at Göttingen and Heidelberg, taking the degree of Ph.D. in 1858. In January 1859 he came to England and for three years was associated with Brodie at Oxford. He then settled in London and engaged in research work at the Royal College of Chemistry and in the laboratories at Guy's and St. Bartholomew's Hospitals. From 1865 until 1870 he was chemist at Farmer's chemical works in Kennington, after which he devoted himself mainly to his own inventions. He was elected F.R.S. in 1878 and in 1903 the title of professor was bestowed upon him by the German Emperor. He died suddenly on January 14, 1906. Sprengel will always be remembered for his invention in 1865 of the dynamic

mercury pump which made possible the evacuation of Swan's and Edison's electric glow lamps, Crookes's radiometer and Rontgen's apparatus, and for his improvements in explosives. In 1871 he took out patents for a class of explosives which were non-explosive during manufacture, storage and transport, but for want of encouragement he allowed the patents to lapse. His explosive 'rack-a-rock' was used in 1885 for removing the Flood Rock Reef which obstructed the entrance to New York Harbour at Hell Gate, some 300,000 lb. of the explosive being used. He also devised a U-tube for the determination of the density of liquids, introduced the use of a finely divided spray of water in the place of steam in sulphuric acid chambers and was the first to direct attention to the value of picric acid as an explosive.

New Belgian Ascent into the Stratosphere

DR. MAX COSYNS is to be warmly congratulated on his successful ascent into the stratosphere on August 18. The disaster of the two previous ascents had not deterred the chief actors in this from going forward with their preparations, for it will be remembered that the American ascent came to grief only so recently as July 28. Dr. Cosyns was accompanied on this ascent by M. van der Elst, and the project was under the auspices of the Belgian Fonds National de la Recherche Scientifique which gave the balloon its name *F.N.R.S.* It had a capacity of about 14,000 cu. metres and was provided with an aluminium gondola with special means of rapid exit. The motive of the flight was the investigation of the directive tendency of the cosmic radiation, and as a good landing has been made it is to be hoped that the records are safe. The ascent was made from Hour-Havenne in the valley of the Lesse in Belgian Luxembourg at 6.10 a.m. on Saturday in perfect weather conditions, and the descent at Zenavlje in Yugoslavia at 9.30 p.m. on the same day. The height reached, as reported in the daily newspapers, was about 10 miles. Though this does not constitute a record for height, the recent aeroplane work of Blackett and Gilbert in Great Britain at comparatively low altitudes shows the value of such data as may be obtained in this manner in resolving the problem of the directive tendency of the cosmic radiation. A further point of interest is the fact that the balloon covered a distance of about 1,000 miles in a general south-easterly direction during a period of 15 hours. This would indicate a very high wind velocity at high altitudes.

Cambridge Lake Rudolf Rift Valley Expedition

THIS expedition has now been in the field some eight months, and we regret to report that on August 14 two members—Dr. W. S. Dyson, naturalist, and Mr. W. H. D. Martin, surveyor—are reported missing on South Island. There are three uninhabited volcanic islands in the lake: Central Island, studied by the Cambridge Expedition of 1930–31, North Island, visited in 1932 and South (Hohnel) Island, which has remained unknown since it was roughly mapped from the mainland during the original exploratory journey by Teleki and von Höhnel in 1885. Its study was a particular object of this year's expedition, which has a folding boat and outboard motor for the purpose. The two men crossed the five miles of open water to the island about August 1, and after a fortnight in which prearranged signals were not received on the mainland, Mr. V. E. Fuchs, leader of the expedition, asked for Government assistance, if possible by aeroplane, to aid in the search. If the missing men are on the island they should have little difficulty in obtaining subsistence on fish; the water is potable though unpleasantly alkaline. Earlier in the year the expedition, which is mainly geological, proceeded up the west side of the lake with the view of going to the Omo River and excavating important bone beds *en route*. The Malembe triangle, where Kenya borders on the Sudan and Abyssinia, is somewhat unsettled and an armed guard had to be taken north from Lokitaung; this impeded the work, but valuable collections and surveys have been made. After returning south, the expedition moved to the south-east corner of the lake to study the eastern scarp of the rift valley, where high-level beaches were reported by the 1931 expedition. It was here that the unfortunate incident occurred.

Gift to the University of Birmingham

AT the meeting of the Court of Governors of the University of Birmingham in February, reference was made to the urgent need of further accommodation for the Department of Chemistry, but it was pointed out that the financial commitments incurred in the building of the new Medical School were such as to make the desired addition to the chemistry building impossible for the present. The difficulty has now been solved by the generous gift of £45,000 by Mr. A. E. Hills, a Birmingham tube manufacturer, for the specific purpose of erecting an additional block of buildings for the Department of Chemistry. In his letter to the Pro-Chancellor, Mr. Hills says: "For some time past I have had in my mind the desire to assist the higher education of those likely to be engaged in industry in Birmingham and the Midlands, with which I have been closely connected in my business life. I have come to the conclusion that I can best do so by helping the University in one of its scientific departments which is in need of extension. . . . It seems to me that the department most overcrowded and badly housed is that of Chemistry. Much of its work is being carried on in wooden huts which are inadequate and are becoming dangerous. The present Chemistry block is insufficient for the increasing number of students who come to it for the training in chemistry which forms a necessary part in practically all scientific careers, and also for those engaged in post-graduate research." It is understood that the new block will fill the gap between the existing chemistry and geological blocks, thus completing the western part of the architect's original scheme for the group of buildings.

Edinburgh Geological Society

BY the end of this year, the Edinburgh Geological Society will have been in existence for one hundred