

slope had been explored several times, the highest summits having been climbed for the first time in 1906 by the Duke of Abruzzi. But the western slope had remained unexplored. This part of the mountain lies within the boundary of the Belgian Congo, and the Belgian mission undertook to study methodically its geology, flora and fauna. Thanks to their skill and endurance, the expedition gathered much information, and hoisted the Belgian flag at an altitude of 15,000 ft.

About the same time other men tackled, with great devotion, a problem which combined scientific and humanitarian interests. For a long time, Belgian missionaries had pursued their work in certain parts of China. One of them, the Rev. Father Rutten, returned to that country accompanied by two medical men, and undertook long journeys to vaccinate missionaries. Their aim was first to check, in endemic conditions, the preventive methods advocated by Dr. Weigl, the Polish man of science, and secondly to test the curative value of a serum in cases of exanthematic typhus. The results obtained are well known: whereas in former years the Belgian community of Scheut lost a number of missionaries, no case of disease was recorded after vaccination, but the same mortality prevailed in the missions where vaccination had not taken place. These results were published by the French bacteriologist, Charles Nicolle, and by Prof. Bruynoghe, of the University of Louvain.

Belgium also took part in the organization of the International Polar Year (1932-33). Ever since 1882-83 the idea had been mooted of active co-operation of scientific workers belonging to various countries in order to bring more unity and co-ordination into the work of polar expeditions. The programme of the second Polar Year, prepared a long time ahead in the course of international conferences, included a great number of subjects: the meteorology and explorations of the atmosphere; the dynamics of cyclones and anti-cyclones; weather forecasts; terrestrial magnetism and atmospheric electricity; earth currents and the aurora polaris.

Under the auspices of the Government and of the National Fund, Belgium undertook to establish a new magnetic station in the province of Liège and another in the Belgian Congo. These stations carried on observations, following the plans elaborated by the Polar Year Commission. The president, Prof. La Cour, director of the Copenhagen Observatory, paid tribute on several occasions to the part played by Belgian scientific workers in the common effort.

A few other examples of the activities of the National Fund can only be mentioned: participation in the new scientific station established on the Jungfrauoch; in the work of the Commission of New Analytical Reactions and Reactives, created by the International Union of Chemistry; in the works of the International Office for the Protection of Nature.

Then came the War and the German occupation. The country was separated from the civilized world and endured with great courage and devotion the oppression and sufferings of this cruel ordeal. Her men of science and research workers resisted to the end. When one university was closed by the occupying Power, other universities and institutions received its professors and students. When one institution lacked some product or apparatus, other institutions gave them or lent them. When some professors or academic authorities were arrested or dismissed, their

colleagues filled the gap. Without publicity, the National Fund applied itself to the task of helping promising young men of science and research workers, and of solving questions arising from war conditions, such as the scarcity of food, and the protection of the unique stained glass windows of the Church of St. Gudule in Brussels. It has also prepared the ground for attacking post-war problems, within the framework of its traditions. All this necessitated inroads on available resources, and great tenacity in spite of unfavourable and often hostile surroundings.

To-day Belgian scientific workers are once more free to speak and act according to their scientific conscience. Contacts have already been established with their foreign colleagues, publications have been exchanged, and visits abroad are being planned. The joy derived from this release can only be appreciated by those who have for years been 'in prison' in an occupied country. We are beginning to hear of the eminent part played by men of science during the War. They will work to-morrow with the same zeal to further the material and moral reconstruction of the world. The National Fund for Scientific Research will continue to support Belgium in the part she is going to play in this great work.

OBITUARIES

The Right Hon. the Earl of Onslow, P.C., G.B.E.

LORD ONSLOW died, after a long illness, on June 9 last. He was a man of many parts, many corresponding activities and many friends, who were attracted to him by his own native friendliness and the affectionate simplicity and sincerity of his disposition. His many public services, in the course of which he left his mark especially on the day-to-day administration of local government, are a matter of record. He rendered other services which are, perhaps, less widely recognized, though, regarded in their true perspective and in the light of the fruit they may be expected to bear hereafter, they may prove to be the most important of them all.

A sportsman, and, like most of that fraternity, a field-naturalist, Lord Onslow became, as a matter of course, a fellow of the Zoological Society, and, after many years of useful service on the Council, was elected president in 1936 as the obvious successor to the late Duke of Bedford. To this new task he brought the high sense of duty and the unflinching industry which characterized all his undertakings. He had, already, in 1926, been chosen as president of the Society for the Preservation of the Fauna of the Empire. In this post he was in his element, and it was here that he did what may well prove to have been the most enduring and most valuable work of all. To him the preservation of wild life meant the preservation of the beautiful and interesting things the contemplation of which above all makes human life worth living. He recognized as few others did that man, "a little lower than the angels", was also only a little higher than the rest of the world ecology of which he is a part, and incomplete if divorced from that ecology. Further, he recognized that, though man could destroy, and was, on balance, a destructive rather than a productive animal, he could not create. If man destroyed a species, it was lost for ever, and man might discover too late that he had done himself irremediable harm; and whether

the damage done by the destruction of a species could be measured economically or not, at least, through his agency, life on this planet had been made less beautiful and less interesting, if not for everybody, at least for many of its human inhabitants.

It may well be that the first seeds of this conviction were sown in Lord Onslow during a period of his early life spent in New Zealand, where his father was Governor, and was one of the first to initiate practical measures to avert the destruction of New Zealand's unique avi-fauna. The indifference of New Zealanders to the marvellous ecology of which they became the trustees by right of settlement always distressed him. Having, as president of the Fauna Society, taken the leading part in securing the adoption of the convention for the Preservation of Wild Life in Africa, he turned eagerly to preparations for a new conference through which he hoped to extend the application of the principles embodied in it to south-east Asia and Australasia. That Conference was to have been held under his presidency in 1939, but the threat of a world war led to its postponement.

Throughout the War, he never lost hope of an active renewal of the campaign for wild-life preservation, which he hoped to see extended ultimately to the whole world. He watched with critical interest the negotiations of the Pan-American Conference in 1940 which led up to the convention for "Nature Protection and Wild Life Preservation in the Western Hemisphere" between the United States and the South American republics. He used unavailingly all the influence he possessed to induce the American States to invite representatives of Canada and other British and European-owned territories in the American Continent to the Conference, and was not a little exasperated by the illogical insularity which led the United States and the rest to exclude them. Nevertheless, he had the satisfaction of observing that the Convention agreed to follow in essentials the model of the African Convention of which he was the legitimate parent, and he was determined that American observers should be invited, for their better education, to the postponed Conference for south-east Asia and Australasia when summoned after the War. He was keenly interested, also, as was to be expected, in the movement for the establishment of national parks and nature reserves in Britain, and was a most active president of the Society for the Promotion of Nature Reserves.

It may be said of Lord Onslow that he saw the light and, very clearly, the vision which the light revealed. In failing health he never lost interest in the work of the Society for the Preservation of Fauna of the Empire, and probably few events gave him greater pleasure than the presentation to him in November last of the first gold medal of the Society in recognition of his outstanding services to the cause of fauna conservation. It will not be easy to find a torch-bearer to succeed him, one who will feed the flame as he fed it, and bear it blazing bright with the same resolute and lofty inspiration.

HENRY G. MAURICE.

Dr. Hans Przibram

THE obituary column of *The Times* records the death "some time in 1944, at Terezin (Theresienstadt), Czechoslovakia, of Hans Przibram, formerly Professor in the University of Vienna, and his wife Elizabeth Margarethe (née Ruhmann)". Behind these

words lies untold tragedy; for Theresienstadt was one of the worst of the concentration camps, and many thousands of Jews were slaughtered there. The War had not long begun when we heard of the death at Dachau of Prof. M. Siedlecki of Cracow, an old and famous and much-loved naturalist; it is scarcely ended when we hear that Hans Przibram has been done to death, who once was rich, enthusiastic, hospitable, and whose Laboratory, or "Vivarium", was known to every naturalist who came to Vienna. We know of many another, and dread to hear of more, who have suffered from the same ferocious inhumanity.

Hans Przibram began his work about forty years ago, under the influence of Wilhelm Roux, Jacques Loeb and Hans Driesch; in other words, he became a student of experimental zoology. He planned an ambitious work under that title, and brought it out between 1907 and 1914, in five parts, on "Embryogenese", "Regeneration", "Phylogenese", "Vitalität" and "Function". An early paper of his, on the "Anwendung elementärer Mathematik auf biologische Probleme", appeared in *Roux's Vorträge* in 1908; and fifteen years later he published an "Aufbau mathematischer Biologie", in *Shaxel's Abhandlungen*. Another book of his, published in 1922 after he had become *ausserordentlich* professor of experimental zoology, was entitled "Form und Formel im Tierreiche", or "Beiträge zu einer quantitativen Biologie". It contains many useful numerical data, physiological and morphological, or "biological constants" as he chose to call them. The new science of biometry was after his own heart, and he published various "Messungen und Wachstumsmessungen", chiefly among insects. These measurements, especially those on one of the praying mantids, led him to believe (as Brooks and others had suggested before) that the spurts of growth and successive moults of an insect tended to coincide with a doubling of its weight and (presumably) with a histological duplication of every cell in its body; and further, that the doubling of its weight implied a linear increase from one stage to another in the ratio of $1 : \sqrt[3]{2}$, or $1 : 1.26$. The sizes of the successive chambers in a spiral foraminifer should, and do (he said), follow the same law; but the study of the cast skins, or successive moults, of a serpent led to no such result, for no general histological duplication was involved. There was a good deal of truth in all this; but Przibram was apt to go too far, and let his theories outstrip his facts. It is at least clear that he was a keen and early student of that experimental side of zoology which has proved engrossing ever since to many.

Hans had a brother Karl, a distinguished physicist; we have no news of him. He wrote, among other papers, some on the Brownian movement, which I remember attracting Sir J. J. Thomson's attention to when they appeared. One was on the Brownian movement of non-spherical bodies, and another (in *Pflügers Archiv*) on the Brownian movement as indicated in the movements of minute organisms. He also wrote a curious paper on "Form und Geschwindigkeit: ein Beitrag zur allgemeine Biologie".

D'ARCY W. THOMPSON.

WE regret to announce the death of Lord Exmouth, who during 1897-1911 was a member of the chemical staff at Columbia University, on June 7, aged eighty-two.