

overcome all these possible dangers. The two machines are completely bonded together throughout the whole process by means of the spiral steel wire armouring on the outside of the hose pipe. The whole system is flushed through with nitrogen from the tanker both before and after the passing of the petrol. At the moment of break-away, the contents of a bottle of methyl bromide are automatically sprayed into the receiver coupling, and the final contact is eventually broken in mid-air by snapping a weak link in the hauling line as the aircraft part company.

It is difficult to foresee all of the ramifications of the post-War developments of civil aviation,

but the establishing of rapid transport of mails and passengers over the long ocean routes between the continents is one of the most obvious. This will scarcely be possible as a self-supporting economic proposition with present-day aircraft, unless in the meantime some revolutionary discoveries are made either in the aerodynamic design of aircraft, or in the design of power units. It is possible to visualize at least an approach to this ideal by making use of refuelling in flight, using the most up-to-date design of aircraft as now accepted. During the War its development is going on, but little may be said about its possibilities for military purposes.

OBITUARIES

Dr. R. T. Gunther

WE regret to record the death on March 9 of Dr. Robert William Theodore Gunther, a great student of science and the founder in the Old Ashmolean Building of the Oxford Museum for the History of Science. With him there passes the last of the Oxford science tutors appointed in the early and middle 'nineties and a learned, aloof, enigmatic, single-minded and essentially good man.

Gunther was born in 1869, the eldest son of Dr. Albert Günther, the zoologist, and educated at University College School, London, and Magdalen College, Oxford. He had wide scientific interests as a boy—in geography, chemistry, practical mechanics and biology. The combined influences of his father and of Ray Lankester, whom Gunther greatly admired, led him to take his B.A. degree in biology. He obtained, as one could in those days, a first class in morphology in 1892, and shortly afterwards was appointed tutor in science at Magdalen. A few years later he became a fellow. Few men read science at Magdalen in the 'nineties, and Gunther, unlike the busy tutor of to-day who divides his time between work and research in the laboratory and tutorial hours in college, was a free man. He went with an endowment to Naples to work in the Marine Laboratory there, and between 1897 and 1914 travelled widely, studying the natural history of lakes in Persia and the geology of extinct volcanoes and surveying the entire coast-line of Italy. His first publications were on subjects in biology and geology, but his intense devotion to the memory of Prof. Charles Daubeny of Magdalen College helped to deflect his interests from the present to the past, from Nature to documents and instruments, from research in laboratories to pieces in museums. His history of the Daubeny Laboratory of Magdalen College came out in 1904, and annotated registers of those who had worked in it were published in 1916 and 1924. His love of collecting material relating to the past and arranging it for publication was shown in his

monographs on his own family, on his wife's family, on the monuments in Magdalen Chapel, and similar subjects, brought out in the period 1910–14.

After the War of 1914–18, Gunther devoted himself to collecting for exhibition scientific and mathematical instruments of the past, especially of Oxford's past, and to editing the little-known or forgotten works of Oxford's early scientific men, of whom Robert Hooke was first favourite. In the period 1920–37 he brought out no fewer than eleven volumes on these men and their works, in addition to works on astrolabes, early libraries, and other subjects. Anything 'early' and 'scientific', even in Cambridge, whatever its present relevance or value, interested him greatly and, he believed, would interest others too. One old instrument, blunt and rusty, one old book, with a few good scientific ideas in it, gave him joy when ninety-nine particle-counters or up-to-date text-books left him lukewarm. It was unfortunate that some of the publications received adverse and even trenchant criticism. It was not that Gunther was constitutionally inaccurate or that he would not take sufficient trouble with his material; it was that he would do everything himself. He never collaborated or took advice. He went his own way. He did his best. When up against a difficulty he preferred to surmise rather than to seek someone who knew the answer. This temperamental weakness was best revealed in his large work on early astrolabes where criticism which he could have got in Oxford, indeed, in his own College, was delivered more vigorously than helpfully after, instead of before publication.

During the War of 1914–18 Gunther became curator of the Botanic Garden in Oxford, and from 1920 until 1923 the librarian of Magdalen. In the 'twenties the rooms in Daubeny's buildings, where he was amassing his instruments and books, with Daubeny's eighteenth century chemical-ware as its nucleus, were needed as lecture rooms and laboratories. Gunther took it ill when his College asked him to leave and take the material elsewhere. There was,

in consequence, a breach, inevitable between a College alive to the needs of the twentieth century and one who was essentially a seventeenth century antiquarian. The breach, however, brought out the best in Gunther's fighting qualities. He determined that Oxford should have a museum for the history of science that would be unique. Almost no one in Oxford but himself was interested in that kind of museum. He set out, decisively and even gallantly, to achieve his purpose. He had a talent for relating means to ends, for making just so much impression on individuals and colleges as would extract from them what he wanted, for doing just so much canvassing as was needed to gain his particular point in the courts of the University. At times he did not invite, he commanded; city magnates came to Oxford to unveil memorial windows; presidents of the Royal Society came at his bidding to commemorative luncheons; chancellors and heads of colleges signed his appeals in *The Times*. In 1924 he became the curator of the Lewis Evans collection of scientific instruments, and this nucleus became the museum for the history of science in the Old Ashmolean building in Broad Street, Oxford, in 1935. To-day the collection is unique and, but for the War, would be in a lovely setting. Gunther's single-handed fight to collect this material and to get it into the building, where it now is, will not have been in vain if someone can now be found to succeed him as curator and in the University readership in the history of science. The museum is his fine achievement, a witness to what one man by himself can do.

Gunther married Amy Neville-Rolfe, daughter of a former consul-general at Naples. He had two sons, the elder of whom was zoologist to the recent *Discovery* expeditions. A. S. RUSSELL.

Prof. D. S. Margoliouth, F.B.A.

WE regret to record the death of Prof. D. S. Margoliouth, for many years a foremost authority in Oriental studies and formerly Laudian professor of Arabic in the University of Oxford, which took place on March 22 in the Middlesex Hospital, London, at the age of eighty-one.

David Samuel Margoliouth was born in 1858 of Hebrew Polish stock. The son of an Anglican missionary to the Jews, he was educated at Winchester and New College, Oxford. Both at school and at the university he was of outstanding ability, and showed a remarkable and unusually early maturity in classical studies, being awarded both the Hertford and the Ireland Scholarships in his first year as an undergraduate. Later he turned to Oriental studies, winning all the University prizes open to him in this field. In 1881 he was appointed fellow and lecturer in classics; and eight years later he entered upon his occupancy of the Laudian professorship, which he held until his retirement only three years ago.

Margoliouth's knowledge of the Arabic language and literature was universally recognized as unrivalled in either Europe or the East. His unremitting activity in this branch of Oriental studies was devoted

to the editing and elucidation of the more difficult and obscure of classical Arabic texts. Here his greatest achievement was his monumental edition of Yakut's "Dictionary of Learned Men". Next to this must be ranked his work in collaboration with H. F. Amedroz on the Abbasid chronicles of Miskawaihi. Commentators on Aristotle and the Old Testament also engaged his attention—he produced an edition of the *Poetics*—and he collaborated with Dean Payne Smith in the "Thesaurus Syriacus".

Those who are acquainted with Margoliouth only through his more highly specialized literary and linguistic studies may possibly fail to realize how deep and wide were his interest in and knowledge of the content of the texts he studied and, in short, of the whole range of the thought, culture and beliefs of the peoples of the Arabic tongue. His profound knowledge of the early development of Islamic belief is to be observed in some degree in his Hibbert Lectures delivered in 1913 and in the two books which appeal to a wider audience, "Mohammed and the Rise of Islam" and "Mahammedanism", the latter a volume in the Home University Library. His erudition was ever freely at the service of those whose studies lay in any cultural sphere impinging in any way upon his own, and appeal for enlightenment was never made in vain.

The Polish Government Information Department has issued a communiqué stating that up till February 1 the following professors, among others, of Polish universities have died in the concentration camp Sachsenhausen-Oranienburg, or have died since their release from camp:

Tadeusz Grabowski (philosophy);
 Antoni Hoborski (mathematics);
 Kazimierz Kostanecki (comparative anatomy);
 Jan Nowak (geology);
 Feliks Rogoziński (physiology);
 Adam Róžański (agricultural mechanics);
 Michał Siedlecki (biology) [see NATURE, March 30, p. 492];
 Jerzy Smoleński (geography);
 Władysław Takliński (technology);
 Antoni Wilk (astronomy);
 Jan Włodek (agriculture).

We regret to announce the following deaths:

Prof. J. W. Beede, formerly professor of geology in Indiana University, an authority on the geology of Texas, on February 27, aged sixty-eight years.

Prof. Alexandre Besredka, chief of the section of microbiology of the Paris Pasteur Institute, aged seventy years.

Prof. S. M. Dixon, O.B.E., formerly professor of civil engineering in and dean of the City and Guilds College, London, on March 25, aged seventy-two years.

Mr. J. A. Hobson, the well-known economist, on April 1, aged eighty-one years.

Prof. A. E. Norton, since 1935 Gordon McKay professor of applied mechanics in Harvard University, on February 24, aged sixty-two years.