

features of the invention. In 1889 Chardonnet had a working exhibit of his process in the Exhibition of that year, sufficiently advanced to be a realisation. Following this, industrial capitalists of Besançon, the town where he was born on May 1, 1839, invited him to localise the industrial development of the matter, and on his consent found the necessary capital of three million francs for an industrial unit. The progress of the industry was chequered by reason of difficulties which chemists know only too well to be associated with the properties of the cellulose derivative involved, but the manufacturing company worked its way to a very considerable financial success towards the year 1900. At this time French and German competitors had been attracted to the subject, and, adopting the alternative cuprammonium solution, developed an industry by way of this rival process. Also at this period the now well-known viscose process had made its mark by a modest exhibit of products in the 1900 Paris Exhibition. The subsequent history of the competition between these three rival processes is common knowledge. Artificial silk at the present time is produced in excess of the world production of silkworm silk.

The career of Chardonnet does not appear to have been influenced by the success of rivals. He maintained his working connexion and his interest to the end, and within a few weeks of his death he filed a patent of improvement which involved the preparation of drawings by his own hand. The distinction of his work and personal elevation of character were duly recognised by his election to the Paris Academy of Sciences in 1918. In Great Britain recognition was marked by the award of the Perkin medal by the Society of Dyers and Colorists (1914). His work is another illuminating example of the French pioneer spirit: but its development, as in other cases, to its ultimate magnitude has been realised in other countries. This in no sense lessens the claims of the genial pioneer to recognition as such.

MR. A. H. JONES.

ALBERT HUGH JONES, for many years one of the best-known and most highly esteemed of British entomologists, was born on November 24, 1840, his father being the vicar of Brecknock. He was educated, first at Croydon, and afterwards in France, where he acquired that intimate knowledge of the French language which served him so well on his many European tours. For fifty years he was on the staff of Drummond's well-known London bank, in which he held a very high position on his retirement in 1909.

Throughout his long life Mr. Jones was devoted to the study of the Order Lepidoptera, and from 1858 onwards he was a frequent attendant at the weekly "At Homes" of Mr. H. T. Stainton at Lewisham, then the great rendezvous of London entomologists, where he made the acquaintance of H. W. Bates and other prominent workers of that period. A few years afterwards we find him supplying his not very distant neighbour, Charles Darwin, with details of the comparative numbers of the sexes in bred families of moths, to be utilised in "The Descent of Man and Selection in Relation to Sex." Living as he did at Eltham, in one of the richest parts of the London

district in Micro-Lepidoptera, he devoted many years of close attention to the British Tortrices, and contributed largely to our knowledge of this very interesting group of small moths.

It is, however, with the butterflies of Europe that the name of Albert Jones has been most closely associated in recent years. His chief interest from 1886 onwards was centred in these insects, and scarcely a year from that date passed without his making a trip to some productive Continental locality, the results of these expeditions appearing in the contemporary entomological magazines. He was the first English entomologist to visit more than one of these localities, and his last, and perhaps most successful and interesting, collecting expedition was undertaken in his seventy-fourth year, in company with his life-long friend Mr. W. G. Sheldon. These entomologists, after a flying visit to the Crimea and the Black Sea ports, spent a month in the early summer of 1914 at the Sarepta on the Volga, well known as the headquarters of Russian butterflies, with great results, both travellers fortunately reaching home only a few days before the outbreak of war.

Mr. Jones's genial presence will be greatly missed at the Entomological Society of London, at which he was a constant attendant from his election as a fellow in 1888. From 1904 to 1918 he held the onerous and responsible post of treasurer of the Society, and in the latter year, as well as in 1912, he was one of the vice-presidents. It is understood that his fine and almost complete collection of European butterflies, numbering more than 7000 specimens, will find a permanent home in the Oxford University Museum.

J. J. W.

WE regret to record the death at the age of forty, on March 2, of Dr. Guy Alfred Wyon, lecturer in pathology in the University of Leeds. "M. J. S." has contributed an appreciation of life and work to the issue for March 15 of the *British Medical Journal*. Dr. Wyon graduated at the University of Edinburgh, and after some years in general practice and on service with the Royal Army Medical Corps during the War, he joined the staff of the Department of Applied Physiology and Hygiene of the Medical Research Council, and was engaged with the late Prof. Benjamin Moore in the study of trinitrotoluene poisoning. By a series of experiments, many on their own persons, they were able to show the mode of entrance to the body of the poison and to devise practical means of protection. Later Dr. Wyon rejoined the Army, being finally in charge of a mobile bacteriological laboratory. In 1920 he joined the staff of the Department of Pathology and Bacteriology of the University of Leeds, and while there interested himself in the chemistry of bacterial growth and in the application of chemical methods to the investigation of disease.

WE regret to announce the following deaths:

Prof. H. Carmichael, formerly professor of chemistry at Bowdoin College, Montana, on January 29, aged seventy-seven.

Dr. U. Grubenmann, honorary professor of mineralogy and petrography in the University of Zurich, aged seventy-four.