

## NEWS AND VIEWS

**André-Jean Marie Brochant de Villiers (1772-1840)**

ON May 16 occurs the centenary of the death of the French geologist and mineralogist Brochant de Villiers, through whose initiative the construction of a complete geological chart of France was undertaken. Born at the Château de Villiers, near Mantes, on August 6, 1772, he was educated under the Oratorians and acquired a taste for natural history. When nineteen, he went to Freiburg, in Germany, to study under Werner, by whom he was much influenced. In 1793, when the Revolutionary movement in France was at its height, he entered the *École des Ponts et Chaussées* and afterwards the *École des Mines*. In 1804, when the *École des Mines* had been removed to Pezay, in Savoy, Brochant de Villiers was made professor of geology and mineralogy, and he held this post for some years after the return of the school to Paris in 1815. He also became an inspector-general of mines and a member of the Paris Academy of Sciences.

So early as 1811, Brochant de Villiers had submitted a plan for a chart of France, but it was not until 1822, when a copy of Greenough's geological map of England was received in Paris, that any definite steps were taken to further his plan. That year, however, he was entrusted with the construction of geological charts for the whole of France, and with his two assistants, Elie de Beaumont and Dufrenoy, he visited England to become acquainted with British methods of geological surveying. With the help of the engineers of the Corps of Mines, steady progress was made, and by 1835, fifty-nine charts of various districts had been prepared, but Brochant did not live to see the first complete map, which was published in 1842. This map was on a scale of 1 in 500,000, but the geological chart of France undertaken later, and completed only a short time since, is on a scale of 1 in 80,000.

**Leopoldo Maggi (1840-1906)**

LEOPOLDO MAGGI, an eminent Italian protozoologist and craniologist, was born at Varese, on May 15, 1840. He was educated at Pavia, where he was assistant first to Paolo Panceri and then to Balsamo Crivelli, and in 1864 was appointed lecturer in mineralogy and geology. In 1874 he was appointed professor of zoology and comparative anatomy and physiology at Pavia, and afterwards, when zoology became a separate subject, he occupied the chair of comparative anatomy and physiology from 1875 until his death. He carried out studies in palaeontology as well as various zoological and anatomical researches, but his principal work was concerned with protistology and craniology. He was the first Italian to direct attention to Protozoa, to the knowledge of which he made important contributions. His chief publications were as follows: "Nuovi orizzonti della protistologia

medica" (1884), "A proposito dei protisti cholerigeni" (1885), "I piccoli benefattori dell'umanità" (1886), "Intorno alla determinazione della specie batteriche secondo Pflügge" and "I microbi vantaggiosi all'uomo" (1888). He died on March 7, 1905.

**International Spirit in Science**

THE award to Sir Harold Carpenter of the Honda Prize was announced in *NATURE* of March 30. It is of interest to know that this is the second occasion only when the prize has been awarded. The first award was to Prof. K. Honda himself, in whose honour the Japanese Institute of Metals established the prize a short time ago. Prof. Honda's work on the magnetic and other properties of metals is well known to scientific men in many countries outside Japan. It is a striking tribute to the international feeling among men of science that the Japanese Institute of Metals should have chosen, at the present time, a British scientific man as the recipient of what may be regarded as the first 'open' award of its highest honour. During the Napoleonic Wars a century ago, it was possible for scientific men, even those in belligerent countries, to maintain fairly free intercourse and to obtain safe conducts for visits. To-day, the difficulties of the international situation have made such relations most difficult, and the recent recognition by the Japanese of Sir Harold Carpenter's achievements is thus doubly precious.

**The Pharmaceutical Society: Honorary Members**

IT will be gratifying to medical circles in India to learn that Colonel Ram Nath Chopra, head of the Faculty of Pharmacology in the School of Tropical Medicine, Calcutta, has been elected an honorary member of the Pharmaceutical Society of Great Britain. This distinction is conferred upon a very limited number of scientific workers, the list of honorary members being not more than twenty-five at the present time. Colonel Chopra has been, and still is, an earnest worker in the cause of reform of the drug trade in India; it was upon the recommendations of the Drugs Enquiry Committee, of which he was chairman, that the Indian Drug Bill, the provisions of which measure were commented upon in a recent issue of *NATURE* (May 4, p. 716), were based. At the May meeting of the Council of the Pharmaceutical Society at which the election took place, two other names were also added to the list of honorary members: Sir Ernley Blackwell, who was chairman of the Society's Statutory Committee during 1934-1939, and Sir William Willcox, the Visitor for the Privy Council to the Society's Examinations.

**Nuclear Fission of Separated Uranium Isotopes**

SOME recent accounts in the daily Press referring to the separation of uranium (235) would suggest developments arising from a letter in the *Physical*

*Review* (57, 546), by Dr. A. O. Nier. Nier there describes fission experiments conducted with small quantities of  $^{235}\text{U}$  and  $^{238}\text{U}$  separated by deposition in a mass-spectrograph. The masses of  $^{238}\text{U}$  samples were of the order of  $10^{-7}$  gm. and those of the  $^{235}\text{U}$  samples about  $10^{-9}$  gm. The samples were bombarded with slow neutrons obtained originally from a cyclotron. Fission products were observed in an ionization chamber when the  $^{235}\text{U}$  isotope was used, but not with the more abundant  $^{238}\text{U}$ . The  $^{234}\text{U}$  isotope was not separated from  $^{235}\text{U}$ , but its abundance is very small. It seems almost certain that  $^{235}\text{U}$  is responsible for the slow neutron fission, as predicted theoretically by Bohr and Wheeler.

### Shining in Human Eyes

FROM time to time, reports have appeared of the occurrence in human eyes of the phenomenon of "night-shining", which as was indicated in a recent paragraph (*NATURE*, March 30, p. 506) has been observed in many animals by Ernest P. Walker, assistant director of the National Park of the Smithsonian Institution. It was there stated that Mr. Walker had no definite proof of such cases, although he had encountered reports of them. That statement has led Denis G. A. Dyson, King Edward VI School, Stratford-on-Avon, to write saying that for many years he has known of an "undoubted case" of shining eyes in a shop assistant in Birmingham. Although, not being aware of the rarity of such an occurrence he made no particular observations, his impression is that the glow was of a "dark red colour". In view of the apparent lack of information about such a condition in human beings, it would be of interest if some scientific worker could follow up Mr. Dyson's clue.

### War-time Ventilation Problems

THE question of ventilation is demanding special attention as the warm weather approaches. Mr. A. Peel's article on "War-Time Ventilation", published in the *Electrical Times* of April 18, is therefore a timely one. Special attention has to be paid to factories, mills, offices, etc., where a large number of people occupy one enclosure. It is an annual problem the solution of which in peace time is not always adopted as soon as it should be. Now certain factors due entirely to the War have greatly aggravated the working conditions in many factories and sometimes added very definite causes of bad ventilation. So far as 'black-out' is concerned, the Government insists that the obscuration must be complete. Whatever form this takes, the blacking-out process is responsible for a marked deterioration compared with the natural ventilation existing before the black-out. Many firms who were obliged hurriedly to arrange their black-out schemes and did so by painting windows or sealing them up by fitting wooden or metal shutters, or in other semi-permanent ways, have already had to strip this material away from windows. This has been necessary in order to get back to something like normal operating conditions as an alternative to serious labour trouble on account of high sickness

rates, due to continuous working in artificial light and with poor ventilation.

The proper solution of some of these war-time ventilation problems may involve only the fitting of a small propeller fan or even the opening of all the windows. In other cases it will be essential to use a complete air-conditioning plant whereby a factory or section of a works may operate for twenty-four hours a day all the year round under constant conditions of temperature and humidity, and with an ample supply of clean fresh air to meet all the requirements of the personnel and of the process carried on. Between these two extremes there will be numerous combinations and modifications of method, and every case has to be studied on its own merits. Complete air-conditioning plant is already in operation in Great Britain in certain sections of the following industries: textiles, printing, biscuit and chocolate manufacture, pharmaceutical chemicals, food manufacture and packing, optical and other fine instrument making, and grinding wheel manufacture. In addition, complete air conditioning is also successfully and economically used for offices and other important rooms. By means of a well-designed plant it is possible to provide in a given space almost any combination of dry bulb temperature and relative humidity. Many different combinations of temperature and humidity are used in practice. Anything which can be done to reduce the variation of heat and moisture load and so cut down the total amount of heat to be dissipated will result in smaller and less costly equipment.

### Criminal Anthropology in the U.S.A.

THE crime wave of appalling dimensions, accompanied by a vast increase in organized crime, which appeared in the United States of America in the years following on the War of 1914-18, continues to constitute one of the gravest of the social problems of State and Federal administration, notwithstanding the repeal of prohibition, which offered an almost unlimited field for illicit gain. In consequence, attention has been directed once more to the possibility of segregating the potential as well as the actual criminal through a method of detection depending upon an anthropometric examination which would weed out or mark down individuals who in their physical characters showed traits characteristic of a criminal type. When crudely stated, this suggests a reversion to the ideas in criminology held by C. Lombroso in the later years of the last century, which anthropologists believed had been laid to rest when it was shown to general satisfaction that no distinctive criminal type could be said to exist. Nevertheless, a vast survey of criminal anthropology in the United States has been instituted under the aegis of the Division for the Examination of Prisons of the Massachusetts Department of Mental Diseases. It has been carried out by Prof. Earnest A. Hooton of Harvard University, with the assistance of a body of field-workers and statisticians.

The dimensions of the investigation may be gauged from the fact that the case material for native white