

## News and Views

### John Maurice, Count of Brühl (1736-1809)

THE bicentenary of the birth of John Maurice, Count of Brühl, recalls an interesting figure in the history of science in Great Britain in the eighteenth century. Born at Wiederau in Saxony on December 20, 1736, he studied at Leipzig, and at the age of nineteen years entered the Saxon diplomatic service and was sent to Paris. In 1759 he was transferred to Warsaw, and five years later, when but twenty-eight years of age, was appointed ambassador extraordinary to the Court of St. James. From the time of taking up his appointment in 1764, save for one journey abroad in 1785, he continued to live in England for the remainder of his life, and died at his house in Old Burlington Street, W.1, on June 9, 1809. He was devoted to astronomy, and effectively promoted its interests. Through his influence, von Zach, who was a tutor in his family in 1783, became an astronomer and assisted Brühl in determining the latitude and longitude of Brussels, Frankfort, Dresden and Paris. He patronized the chronometer makers Mudge and Emery, wrote on time-keepers, was intimate with Herschel and delighted in transmitting abroad the discoveries made by him and others through the medium of Bode's "Jahrbuch". At his villa at Harefield about 1787, he built a small observatory, and a few years later equipped it with one of the first astronomical circles constructed by Ramsden.

### Mr. A. B. MacDowall

A FREQUENT correspondent to NATURE about a generation ago was Mr. Alexander Baird MacDowall, who completed his ninety-third year on December 18. Mr. MacDowall was particularly interested in terrestrial and solar meteorology and the relationships between them, and most of his communications to these columns and to the Royal Meteorological Society dealt with this subject. The methods used by him, and some of the results, are typically illustrated in a small book published in 1895 with the title "Weather and Disease: a Curve History of their Variations". In this volume Mr. MacDowall showed, by means of graphs, the variations which certain elements of the weather and the mortality from certain diseases had undergone in the course of years. The mode of representation adopted by him was that commonly used at the time to illustrate the relation between two variables, the curves being subjected to a process of smoothing so as to record the averages of five or ten consecutive values.

In a paper to the Royal Meteorological Society on April 21, 1897, Mr. MacDowall used this method of smoothed curves to make a comparison of weather statistics with the sunspot cycle, and was led to conclude that "In the climate of Western Europe

there is apparently a tendency to greater heat in the summer half and to greater cold in the winter half near the phases of minimum sunspots than near the phases of maximum." Though the curve correspondences used by Mr. MacDowall and others to reveal periodicities have since been superseded by the periodogram and the statistical method of correlation, they were suggestive and represented a helpful stage in the understanding of meteorological relationships. Mr. MacDowall was a student at the Old College in High Street, Glasgow, under Prof. Thomson (afterwards Lord Kelvin), who influenced his whole subsequent career. After leaving Glasgow, he went to Berlin for a time and then voyaged to Australia and back in a sailing ship. He next settled in London and embarked upon a career of general journalism, working at the British Museum and the Patent Office. At that time he met Thomas Carlyle and became acquainted with D. E. Hughes, inventor of the microphone. In later years he has lived more or less in retirement and at present resides at Rothesay, Isle of Bute, where, in spite of his advanced age, he still retains active interest in scientific subjects.

### Cultural Origins in Central America

NOTWITHSTANDING numerous attempts continued over a long period of years to trace the prehistoric civilization of Central America to its origins, the ancestral forms, especially of the culture of the Maya, remain obscure. It is now reported that a substantial advance towards a solution of this problem has been made by a joint archaeological expedition to Yucatan of the Peabody Museum and the Smithsonian Institution of Washington, which has excavated a stratified site on the Uluu River, known locally as the "Beaches of the Dead". This site, the second only of the recorded stratified sites in this part of the world, lies on the fringe of the Mayan area. It has been known since 1929, when Mrs. Dorothy M. Popenoe was lowered by ropes into the channel which has been cut by the river through the deposits to collect skeletal material which had been washed out with potsherds and other debris from the culture-bearing strata. Dr. W. D. Strong, who is in charge of the expedition, now reports to the Smithsonian Institution the discovery at a depth of twenty feet of house-floors, refuse heaps and pottery fragments incised or painted in monochrome with designs which, though less elaborate, suggest an early Mayan type. Overlying this culture is a deposit of sterile clay, six and a half feet thick, and above this again is a deposit of burials and potsherds typically Mayan in character. The intervening cultural and chronological gap is partially filled by a culture from a site on the tributary Comayagua River, where an apparently transitional stage affords pottery of Mayan type that seems to shade into the "Beaches of the

Dead" style. On the evidence of its precedence in time and its similar but simpler character, it is suggested that the "Beaches of the Dead" type may be ancestral to the Maya style. Posthumous distortion has destroyed the evidential value of the skeletal material, beyond an indication of a general physical resemblance to the type of the Maya people.

#### Mosquito Control and Local Authorities

REFERENCE has been made in these columns on a number of occasions to the valuable work on mosquitoes and their control carried on by Mr. J. F. Marshall at the British Mosquito Control Institute, Hayling Island, Hampshire. The Institute was built and equipped by Mr. Marshall in 1925, and has become an important advisory and educational centre, which has been maintained almost entirely by him. Before he began his work, Hayling Island was infested with the salt-marsh mosquito and other species, but by dealing systematically with the breeding-places these pests have almost disappeared from the island. Experience has shown, however, that inspection and other control measures cannot be allowed to lapse if they are to be of practical value. This is evidently realized by the Havant and Waterloo District Council, which, in a Bill being presented to Parliament, includes a clause giving powers to the Council to "subscribe or contribute such sums as they may think fit to the British Mosquito Control Institute so long as that Institute shall remain established at Hayling Island and the Council shall consider its work contributory to the freeing of the district from mosquitoes".

HITHERTO, consent of the owners of property has had to be obtained to examine an area suspected to contain breeding places of mosquitoes or to deal with it suitably. The Bill mentioned above empowers the local council to take whatever action it may consider necessary for health's sake to inspect such areas or carry out measures of mosquito control. The clause relating to these powers reads as follows: "The Council may take all reasonable measures to make and keep the district free from mosquitos and with this object they may in particular (apart from any other measures)—(a) enter by their officers upon any premises which they have reasonable grounds for suspecting to be a breeding place for mosquitos and apply thereon any tests or examination for the purpose of discovering whether and to what extent mosquitos or their larvæ are there; (b) require the owner of any premises upon which there is stagnant water or marshy ground which is a haunt or breeding place for mosquitos or contains the larvæ of mosquitos to drain the site of such water or such marshy ground to the reasonable satisfaction of the Council and to apply thereto such other treatment (if any) as the Council may reasonably prescribe." The inclusion of this clause in the Bill shows that the Council not only realizes the existence of mosquito pests but also the practicability of dealing with them by measures which have been successfully adopted during the past eleven years or so by Mr. Marshall as director of the British Mosquito Control Institute.

#### Exhibition of Electric Illumination

THE Science Museum is holding a Special Exhibition of Electric Illumination, which will remain open until April 25, 1937. Push-button demonstrations illustrate the principles involved in illuminating engineering practice, such as various types of reflection and transmission of light, reflection factors, effects of contrast, etc. Two full-sized rooms are devoted to decorative lighting and standard lighting system definitions. The great advances made in tungsten filament lamps are illustrated by exhibits showing the control now exercised during manufacture. The electric discharge lamp is dealt with in detail. Apart from examples of discharge lamps and their application to street lighting, industrial lighting and floodlighting, there are exhibits illustrating the cyclical form of the discharge and stroboscopic applications. All types from low-pressure tubes to water-cooled quartz tubes operating at 8,000° C. are shown. The phenomenon of luminescence, discovered by Crookes in 1879 and now applied to discharge lamps, is shown in considerable detail. By way of contrast, a concise historical exhibit illustrates the state of illumination technique through the ages. The exhibition has been arranged by Mr. W. T. O'Dea, of the Science Museum, with the assistance of the E.L.M.A. Lighting Service Bureau and an advisory committee under the chairmanship of Mr. C. Rodgers.

THE opening ceremony was performed on December 15 by Lord Rutherford, with Sir Henry Lyons, the chairman of the Science Museum Advisory Council and a past director of the Museum, in the chair. Lord Rutherford remarked that the subject is one which has interested him all his life. During the past ten years, there have been remarkable advances in illumination which, emanating as they have from pure science research undertaken in industrial laboratories, illustrate admirably the close relationship between science and industry. 80 candle-hours ten years ago cost the same as 300 candle-hours to-day, and this improvement happily comes at a time when it is really wanted in the cause of road safety. Some 25,000 hot cathode discharge lamps now illuminate 1,000 miles of road in Great Britain alone. With regard to modern developments in the application of the phenomenon of luminescence, Lord Rutherford said he hopes to live to see the time when we shall obtain light without filaments or electrodes simply by the conversion of invisible radiation. Mr. H. T. Young, president of the Institution of Electrical Engineers, in proposing a vote of thanks, mentioned the valuable educational work which can be done by such an exhibition; it is expected that the exhibition will attract a quarter of a million visitors.

#### Modern Views on Infection and Disinfection

THIS was the subject of a Chadwick lecture delivered by Sir Weldon Dalrymple Champneys at Manson House, London, on December 9. Microbial diseases, he said, can be defined as a disturbance of health in man or other living things due to