

Museum of Natural History (Museum Bocage). His Excellency the President of the Portuguese Republic has consented to become Patron of the Congress, and the Portuguese Government has invited foreign countries to be represented by official delegates. It has been provisionally arranged that the work of the Congress will be carried on in twelve sections, dealing respectively with (1) general zoology (including cytology and genetics), (2) embryology and the mechanics of development, (3) comparative anatomy, (4) physiology, (5) zoogeography and palæozoology (including ecology), (6) protozoology, (7) entomology, (8) invertebrates, (9) vertebrates, (10) parasitology, (11) applied zoology, (12) nomenclature. Some of these sections may be subdivided if the need arises. Among social events proposed are receptions by the President of the Republic, by other Ministers, by the Rector of the University, and by the municipality of Lisbon; and various excursions, including one to Madeira and the Azores to take place after the Congress, are contemplated. Special facilities as regards railway fares and hotel rates are being arranged for by the organising committee. Zoologists desiring to take part in the Congress are requested to communicate with the president, Prof. Arthur Ricardo Jorge, Director, Zoological and Anthropological Department, National Museum of Natural History, Lisbon, Portugal, from whom particulars can be obtained.

The Strangeways Laboratory

THE Strangeways Research Laboratory was founded by the late Dr. Strangeways in Cambridge twenty-one years ago. A recent report by the trustees and director takes the opportunity of recalling the history of its foundation and development during this period, in addition to giving the usual account of the past year's work. The building now used as the laboratory was originally equipped as a small hospital for the treatment and study of chronic arthritis, but Dr. Strangeways soon became convinced that a more complete and fundamental knowledge of the processes of normal growth was an essential condition for real progress in the investigation of this and other diseased conditions. The hospital therefore became a group of experimental laboratories devoted to the study of growth problems by the methods of artificial culture of tissues. Dr. Strangeways died in 1926: his principal collaborator, Dr. Honor Fell, has acted as director since 1928. Since 1931, the Royal Society has made itself responsible for the director's stipend, by a fellowship from its Messel Research Fund. The Medical Research Council has made grants providing for the support of certain members of the staff and for general expenses of the work. Grants have been made by the British Empire Cancer Campaign, by the Fitton Trust and by the Sir Halley Stewart Trust; and the laboratory has received voluntary subscriptions and donations, though both of these sources of income have varied widely from year to year. To enable the work of the laboratory to continue and to expand, an increase in the annual income is, however, required. During the past

twenty-one years, 84 persons have worked in the laboratory and 81 papers have been published. The research work of the laboratory is devoted to fundamental problems of normal and abnormal growth and the effects of different forms of radiation upon living cells, problems of immense importance to the successful treatment of tumours in human beings by X-ray and radium.

A New Rotating Radio Beacon

A ROTATING loop type of radio beacon was developed in Great Britain several years ago, and two stations employing this arrangement are still in use in connexion with aerial and marine navigation. The advantage of the system is that wireless bearings may be obtained at any receiving station merely with the aid of a stop watch or chronometer. The use of such a chronometer is rendered unnecessary in a new type of rotating beacon, which is described in a paper by U. Okada, published in the report of Radio Research in Japan of October 1934, vol. 4, p. 185. In this new system, a vertical loop transmitting aerial is used as previously, to give the usual 'figure-of-eight' radiation characteristic. Instead of rotating this loop continuously, however, it is swung backwards and forwards about a vertical axis through an arc of 180°. During its movement the speed of rotation is uniform and equal to one revolution per minute. The movement in each direction starts from a north and south position alternately, at each of which a characteristic morse signal is emitted. This signal is then followed during the rotation of the loop by a succession of 90 dots, at the rate of 1 dot for every 2°. By counting the number of dots from the starting point to the signal minimum, the bearing of the receiver from the transmitter may be calculated. The additional observation taken with the loop moving in the reverse direction enables the midpoint of a broad minimum to be accurately determined. Tests carried out in Japan on land and at sea have shown that an accuracy of observation of $\pm 6^\circ$ was obtained at distances up to 46 km. with an experimental beacon operating on a wave-length of 950 m. It is considered that by attention to details of the apparatus the maximum error could be reduced to 2°, which it is suggested is sufficient for most practical purposes.

The 100-in. Mirror Aluminised

ACCORDING to Science Service, of Washington, D.C., the 100-in. mirror of the great telescope at Mount Wilson Observatory, Pasadena, California, has been aluminised. It will be remembered that a new process has been developed within the past two or three years, by which coats of aluminium are placed upon glass mirrors by distillation *in vacuo* (NATURE, 134, 522; 1934). The aluminium coat presents several advantages over the usual silver coat, chemically deposited. The aluminium coat is far more durable and resistant to tarnish, and possesses a superior reflectivity in the ultra-violet. Many small mirrors have been successfully coated with aluminium in Great Britain. It is expected that the new 200-in. mirror will also receive an aluminium coat. The