

THE INTERNATIONAL METEOROLOGICAL CONFERENCE.

THIS meeting, which was more or less of a private character, as it was not organized in any way through diplomatic channels, took place at Munich from August 26 to September 2. It was held in the building of the Technical High School, and was attended by 32 members, representing most European and some extra-European countries. As to the latter, the United States contributed four members, while Brazil and Queensland sent one each. Roumania and Bulgaria for the first time took part in one of these meteorological gatherings. Dr. Lang, the head of the Bavarian meteorological system, was appointed President, and Prof. Mascart (Paris) with Prof. Harrington (Washington) Vice-Presidents. The Secretaries were Dr. Erk (Munich), Mr. Scott, and M. Teisserenc de Bort (Paris).

The following is a brief summary of the most important practical results and recommendations of the Conference.

All temperatures published after 1901 are to be referred to the readings of the air thermometer. Actinometrical observations are not held to be sufficiently certain to justify their general introduction. The application of a ventilating arrangement to wet-bulb thermometers was recommended. *Rain*.—It was decided to count as days of rain those on which 0.005 inch (0.1 mm.) of rain was measured, and to print monthly the number of days on which 0.05 inch (or 1 mm.) fell. *Snow*.—A note is to be made in monthly schedules of the number of days on which about half the country surrounding the station is under snow. *Clouds*.—A new classification of clouds to replace Howard's, proposed by Prof. Hildebrandsson and the Hon. R. Abercromby, was adopted by a large majority, England and the United States being dissentients. A committee was then appointed to consider the question of typical cloud pictures in general, taking the above classification more or less as a basis of arrangement. A report was also received and adopted on the observation of the motions, &c., of cirrus and other high-level clouds. *Wind*.—Robinson's anemometer was the only form of instrument discussed. It was decided that no instrumental results should be published unless the instrument had been previously compared with a standard, either directly or indirectly. *Time*.—A proposal to recommend the adoption of universal or zone time was emphatically rejected, on the ground that local time can alone be used for climatological inquiry. It was further decided in all publications to insist on commencing the day with midnight as 0 hours. *Gravity correction*.—It was decided to introduce the practice of correcting barometrical readings for the force of gravity at lat. 45° after the beginning of the year 1901.

Mr. Wragge, for Queensland, and Captain Pinheiro, for Brazil, gave interesting notices of what is being done for meteorology in their respective countries. It was resolved that an International Meteorological Committee should be constituted to prepare for a possible Congress in Paris in the year 1896. The Committee is to consist of 17 members, of whom 14 were elected, and it was decided to fill the 3 vacancies by the co-optation of extra-European meteorologists. The officers of the Committee—Messrs. Wild and Scott—were reappointed.

The questions relating to terrestrial magnetism were referred by the Conference to a special sub-committee, whose decisions will appear in the published report of the proceedings.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, October 19.—M. Duchartre in the chair.—Memoir on the underground temperatures observed at the Muséum d'Histoire Naturelle, during the winter 1890-91, by M. Henri Becquerel. A thermo-electric arrangement was used for the determination of the temperatures beneath two surfaces, one of which was covered with sand and devoid of vegetation, whilst the other had grass and some plants growing upon it. The two soils were similar, and in each case the temperatures were taken at five points, having depths ranging between 5 cm. and about 60 cm. The observations extend from November 1, 1890, to March 31, 1891, the temperatures being taken at 6 a.m. and 3 p.m. daily. These have been plotted, and the resulting curves strikingly show the variations which occurred in the interval, and the extinction of detail with increased depth. The diurnal variation at the greatest depth was a few tenths of a degree, whilst that of the air was about 14°. At a depth of 18 cm. beneath the sandy covering the

variation was the same as in air, but at all the other points the effect was reversed—that is, the temperature fell from 6 a.m. to 3 p.m., and rose during the night. It also appears from the observations that Fourier's theory of the differential relation existing between temperature, time, and depth of thermometer represents very well the propagation of heat in a superficial layer of soil, and that the coefficient of conductivity of this layer for determined conditions of humidity may be deduced from observations of underground temperatures. A certain thickness of earth protects the roots of plants from the effects of a sharp frost, but it may not be equally efficacious against a long one of less intensity, for the velocity of propagation of a variation of temperature, and the depth at which this variation is felt, depends upon the duration of its period. A layer of grass, covering soil, has the same protecting effect during the winter as that of about 50 cm. of mould.—Researches on the cause of rheumatic diathesis, by M. F. le Roux.—Observations of Wolf's periodic comet, made at Algiers Observatory with the telescope of 0.50 m. aperture, by MM. Rambaud and Sy. Observations for position were made on August 4, 5, 8, and 31, and on September 7.—On the reduction, to a canonical form, of equations from derived partials of the first order and the second degree, by Mr. Elliot.—On cyclic systems, and on the deformation of surfaces, by M. E. Cosserat.—Calculation of the magnetic rotation of the plane of polarization of light, by M. G. Hinrichs. The simple law connecting the rotation of the plane of polarization with the thickness of the medium traversed is shown to be applicable to the molecular rotation of a normal paraffin.—On a new method for estimating nitric acid and the total nitrogen, by M. E. Boyer. The method is founded upon the reduction of nitric acid to ammonia, by oxalates and sulphur, in the presence of soda-lime.—On the action of nitric acid on dimethyl ortho-anisidine, by M. P. van Romburgh.—On the globulicide power of blood serum, by M. G. Daremberg. The author terms "*pouvoir globulicide*" the power possessed by the serum of the blood of one animal to destroy the red corpuscles of the blood of another of a different species. And the destructive power of serum for microbes is called "*pouvoir microbicide*." The effects produced in each case have been studied.—On the nature of the movement of the chromatophores of Cephalopods, by M. C. Phisalix.

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