

five minutes after the meteor disappeared. According to the news from Fresno, the meteor left a track of great beauty, consisting of an irregular spiral curve, the lower end of which was little more than a tangle of threads. The upper part of this track was pale red, and farther down blue. The lower part was almost yellow, and still farther down were two detached bright red spots, like the sun breaking through clouds.—ED. NATURE.]

Height of Barometer.

MR. PEARSON will find much information as to extreme readings of the barometer in two papers published in the *Quarterly Journal* of the Royal Meteorological Society; one by Mr. H. Sowerby Wallis, in vol. viii. p. 147, and the other by Mr. C. Harding, in vol. xiii. p. 201. The lowest known reading is stated, on the authority of Mr. Blanford (*NATURE*, vol. xxxv. p. 344), to be 27.135 ins. observed on September 22, 1885, at False Point, on the coast of Orissa; this requires a subtractive correction of .011 to bring it to English standards, reducing it to 27.124 ins. The highest known reading is given, on the authority of Prof. Loomis, as 31.72 ins. at Semipatalinsk, on December 16, 1877, giving an extreme range of 4.6 ins.

The lowest reading recorded in these Islands is 27.332 ins. at Ochtertyre, near Crieff, on January 26, 1884, while at Belfast the barometer fell to 27.38 ins. on December 8, 1886, and on the same day at Newton Reigny to 27.566 ins., which seems to be the lowest recorded in England. The highest pressures recorded in this country during recent years were on January 18, 1882, when 30.990 ins. was registered at St. Leonards, but on January 9, 1820, 31.056 was recorded at Kinfauns, Perth, and appears to be confirmed by other readings in Scotland.

HENRY MELLISH.

THE BRITISH ASSOCIATION.

BY the kindness of the Secretary of the British Association we were able to give in our last issue a list of the grants awarded by the General Committee just as we were going to press. Upon referring to this, it will be seen that the grants amount to very nearly £1100, that is £400 more than those awarded at the previous meeting. The increase of funds available for research is due to the large number who attended the Oxford meeting, the receipts being as much as £2175. In this matter, and indeed from every point of view, the meeting was a most successful one. The membership reached a total of 2321—a number greatly in excess of the average. In moving a vote of thanks to the authorities of the city for the hospitable reception accorded to the Association, Sir John Evans remarked that the meeting had been notable both for the large attendance of members and associates, and for the great scientific interest and importance of the papers read. In fact, it was the opinion of all that rarely, if ever, has a more brilliant meeting of the Association been held. No less than seventy-seven foreign members, eminent in many branches of scientific knowledge, honoured it with their presence. The exchange of ideas, which results from the meeting of investigators from all parts of the world, must lead to real progress. "Science," as someone has said, "is cosmopolitan." She recognises no differences of nationality between workers devoted to extending her domains. Therefore men who live "for the promotion of natural knowledge" meet on common ground at the British Association, for they know that anything that will help on this object will be appreciated.

Several changes in the constitution of the sections were adopted by the General Committee. Section D will in future be called Zoology instead of Biology, and there will be a separate section for Botany. Section I, which met this year for the first time, is to consist of Physiology, with Experimental Pathology and Experimental Psychology. As pointed out by Prof. Bayley Balfour in his address, Section D has had its constitution changed oftener than any other section of the

Association. Experience will show whether the new arrangement is the one best calculated to bring together investigators with similar scientific interests.

The continual division of this section suggests that Astronomy should be removed from Section A (Mathematical and Physical Science), and have a section of its own. It may also be well to point out that there should be a sub-section of Section H (Anthropology) dealing with large questions of Archæology—that is to say, with Assyrian and Egyptian Archæology—and with the various points which, from an archæological point of view, are common to the earlier races.

Another matter worth the attention of the General Committee is the introduction of evening reunions of physicists and biologists, such as are provided in German meetings. Under the present conditions it is very difficult to meet and talk with fellow-workers, especially with foreign members, at each meeting.

The meeting will be held next year at Ipswich, under the presidency of Sir Douglas Galton, K.C.B., F.R.S. Liverpool will be the place of meeting in 1896. The Association was invited to meet in Toronto in 1897, but as arrangements are never made more than two years in advance, nothing definitely could be settled in the matter. There was a strong feeling, however, in favour of accepting the invitation when the proper time arrives for doing so.

The University testified to its interest in the welfare of science by conferring the degree of D.C.L. *honoris causâ* on the following eminent foreign investigators present at the meeting:—Prof. Edouard Van Beneden, Prof. Ludwig Boltzmann, Dr. E. Chauveau, Prof. Cornu, Prof. Theodor W. Engelmann, Prof. Wilhelm Förster, Prof. C. Friedel, Prof. L. Hermann, Prof. Gosta Mittag-Leffler, Prof. S. P. Langley, Prof. G. Quincke, Prof. E. Strasburger. The degrees were conferred by the Vice-Chancellor, and the Latin oration was delivered by Prof. Goudy. The following brief notes show the character of the recipients' chief researches:—

Edouard Van Beneden, Professor of Zoology and Comparative Anatomy, has not only contributed a long series of memoirs on the structure of various Invertebrata to the literature of zoological science, but has especially gained the highest recognition and esteem for his work on the microscopic details of the process of fertilisation in relation to karyokinesis and cell-structure. His investigations on this process in *Ascaris megalocephala* form the starting-point of recent theories and researches on the subject of the partition of the nuclear matter by the splitting of the chromosomes in spermatozoon and ovum and in the fertilised egg. In addition to these investigations, Prof. Van Beneden's researches on the formation of the blastoderm in the rabbit and the bat have been of the greatest importance, and are cited in all modern treatises as classical. Recently, Prof. Van Beneden has occupied himself largely with the study of Anthozoa (especially *Cerianthus* and its larva *Arachnactis*), and has arrived at most important conclusions as to the relationship of these forms to the Vertebrata.

Ludwig Boltzmann was born in Vienna in 1844, and is now Professor of Theoretical Physics in the University there. His first paper was on the distribution of electricity on a sphere and cylinder, and his second one on the mechanical significance of the second law of Thermodynamics. His subsequent papers are too numerous to mention in detail, and have been published principally by the Academy of Science at Vienna, and recently at Munich. The most important of these treat of the steady state of kinetic energy in gas molecules and its connection with the second law of Thermodynamics, of the specific inductive capacity of solids and gases, and other thermodynamic and electromagnetic subjects. Along with Clausius and Maxwell, he is a founder of the kinetic theory of gases, especially in its more com-