committee, and issued by Mr. Arrowsmith, of Bristol. In it is traced the institution from its inception (as the Bristol Library Society) in 1772 to the present day. The pamphlet, which is well worth perusal, is illustrated by some excellent process engravings.

THE Journal of the Royal Sanitary Institute for August contains the inaugural address delivered by Sir Edward Fry, president of the congress held last month; it contains also the lecture by Prof. C. Lloyd Morgan on "The Relation of Heredity to Physical Deterioration," and that on "The Wastage of Human Life" by W. Fleming Anderson.

THE July issue of the *Museums Journal* contains, in addition to its General Notes, the address on "The Education of a Curator," delivered at the Bristol conference of the Museums Association by Dr. W. E. Hoyle, the president of the conference.

A NEW book on the microscope, by Sir A. E. Wright, F.R.S., is announced for early publication by Messrs. Archibald Constable and Co., Ltd. The work will contain a complete vocabulary of technical terms relating to the microscope.

OUR ASTRONOMICAL COLUMN.

FINLAY'S COMET (1906*d*).—The results of a number of observations of Finlay's comet (1906*d*) are published in No. 4108 of the *Astronomische Nachrichten*.

At the Utrecht Observatory the comet was seen on July 21, and recorded as very faint; the observation showed that corrections of −12m. 58s. and −1° 51′ were necessary to the ephemeris published by M. Fayet.

The magnitude of this object was found to be 9·0 when observed at Strassburg on July 17, its diameter being recorded as 12′.

In No. 4109 of the *Astronomische Nachrichten* M. L. Schulhof states that the ephemeris derived from his elements shows a greater error than he had foreseen, an error which a superficial revision of his calculations for the perturbations has failed to discover. The comet appears to have suffered a retardation which as yet is unexplained.

Applying, provisionally, the corrections shown to be necessary by the Strassburg observation, he has calculated another ephemeris, from which the following is taken:—

Ephemeris 12*h.* (*M.T. Paris*).

1906	α (app.) h. m. s.	δ (app.) ° ′	log Δ	r : r²Δ²
Aug. 8 ...	2 47 36 ...	+ 2 40 ...	9·40344 ...	13·72
10 ...	3 5 35 ...	+ 4 23 ...	9·40744 ...	13·78
12 ...	3 23 6 ...	+ 6 2 ...	9·41390 ...	13·67
14 ...	3 40 2 ...	+ 7 35 ...	9·42253 ...	13·41
16 ...	3 56 17 ...	+ 9 1 ...	9·43301 ...	13·03
18 ...	4 11 49 ...	+10 21 ...	9·44499 ...	12·56

OBSERVATION OF A BRIGHT METEOR.—A communication by Herr Ph. Fauth in No. 4109 of the *Astronomische Nachrichten* states that a bright meteor was observed at Landstuhl on July 16.

The time of observation was 11h. 39m. (local M.T.), and the object appeared in the N.N.W. Its brightness was greater than that of the full moon, and its path was between 12 Canum Venaticorum and γ Virginis. The duration of the light was about 1·5 seconds, and no detonation was noted.

DOUBLE-STAR MEASURES.—The results of the micrometer measures of double stars made with the 28-inch refractor at Greenwich during the year 1905 appear in No. 8, vol. lxvi., of the *Monthly Notices* (R.A.S.).

In addition to a large number of stars contained in the ordinary working list, and for which the name, position, position-angle, distance, magnitudes, and epoch of observation are given, a number of Struve stars which have been neglected, or for which periodical observations are required, were observed. Only the names of the latter are now published, the results of the measures being reserved for the *Greenwich observations* for 1905.

The measures now published are, in general, confined to stars of which the separation does not exceed 4″ or which show orbital movement.

In Nos. 4107–8 of the *Astronomische Nachrichten* Dr. G. van Biesbroeck publishes the results of the measures of 177 Struve stars made with the 12-inch refractor of the Heidelberg Astronomical Institute. The measures of twenty-nine comparison double stars are also given.

INTERNATIONAL CONFERENCE ON HYBRIDISATION AND PLANT-BREEDING.

THE Royal Horticultural Society held high festival in its new hall and elsewhere from July 30 to August 3. The occasion was the third conference on plant-breeding, previous gatherings having been held at Chiswick and in New York. Mr. William Bateson presided, and was so thoroughly imbued with his subject that the visitors found it difficult which to admire most, his grasp of difficult and complex problems, his able management, or his powers of endurance. The programme was a very long one, although some of the papers were, in the absence of their authors, taken as read. All the memoirs will be printed in full in the journal of the society. The speakers included, besides our own countrymen, Danes, Swedes, Germans, Austrians, French, and Americans.

"Mendelism" was naturally to the fore, and the numerous exhibits in illustration of the phenomena did more to secure general acceptance for the theory than did the elaborate disquisitions. Some of these, especially those of a mathematical character, evoked from the chairman the remark that we had reached the limits of our comprehension. In his introductory address Mr. Bateson gave a very interesting summary showing the advances that had been made since the first conference in 1898. The predominant note then was mystery—in 1906 we speak less of mystery and more of order.

Mr. Bateson suggests the adoption of the term "genetics" to indicate the nature of our researches into the phenomena of heredity and variation, in other words, the physiology of descent. He showed that we had already arrived at a clear conception of the true meaning of "pure-bred," pointing out that an individual is pure-bred when the two cells, male and female, from which it develops are alike in composition, containing identical elements or characters. Instead of regarding genetic purity as a vague state which may or may not be attainable by a long course of selection or fixation, we now know exactly what it is and how it is produced.

Similar explanations were given as to the significance of "reversion"; the reappearance of the ancient characters is brought about by the meeting together of distinct elements long parted, but how this is effected is still unexplained. Conversely, "variation" is often due to the separation or elimination of factors, and sometimes probably to the addition of new factors. Heredity is now known to be a regular phenomenon less or more amenable to experimental methods of research. When someone says, "But can't you breed a Derby winner or do something useful?" Mr. Bateson replies that "though in the attempt to discriminate among animals all good enough to win science may be as much at fault as common sense, yet it would not surprise me if science were to devise a way of breeding even racehorses which would not produce about a hundred 'wasters' for one fit to win—and yet I understand that common sense remains content with that rather modest attainment after two centuries and a half of steady trying." Mr. Bateson concluded by pointing out that the great advances in the application of science have generally become possible through discoveries made in the search for pure knowledge. In no other spirit can natural knowledge be more profitably pursued.

Other papers were contributed by Prof. Johannsen, of Copenhagen, whose views did not meet with universal acceptance, Messrs. Hurst, Darbishire, Yule, Dr. Wilson,