

AMONG the meetings which have just been held in Philadelphia, was a friendly and informal gathering of some of the contributors to *Science*. About thirty persons came together, and listened to some statements which were made on the part of the managers, and expressed their views in respect to the position which this journal has taken and may take. The tone of the meeting was in all respects encouraging. A review which had been made of the subscription-list, by our publisher, shows that these pages now reach the chief scientific institutions and the chief scientific workers of the country. An effort will next be made to secure an extension of the circulation among other intelligent and educated classes.

Our contributors were invited at this meeting, and are always invited, to bear in mind that not only *Science* as a journal, but science in higher and broader aspects, will be best promoted by enlisting the attention of the general reader to the results which are attained in all departments of knowledge. This can only be done if our friends will write as persons who are specially informed, to persons who are not specially informed, on the subjects treated in our columns. One of our most valued contributors says that the man who is eminent in one department may have only an ordinary knowledge of other subjects: the greatest astronomer may be a tyro in entomology; the best of chemists may have no conception of elliptic functions. *Science* in its articles should be readable throughout; and, if our friends will continue to help us, we shall soon reach success.

LETTERS TO THE EDITOR.

*** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

Phosphorescence in the deep sea.

The following paragraph by Dr. Studer,¹ the naturalist of the *Gazette*, has probably escaped the notice of those who have lately written regarding the protective nature of the phosphorescence of pelagic animals. He closes a general description of phosphorescence in

¹ Ueber einige wissenschaftliche ergebnisse der gazellen-expedition . . . Verhandlungen des zweiten deutschen geographentages. Berlin, 1882.

marine animals, and the probable nature of it, as follows: 'Immer aber ist es ein von aussen kommender reiz, welcher das leuchten hervorbringt, so dass wir vielleicht die erscheinung als eine schutzvorrichtung für das tier betrachten dürfen.' He further says, on the same page, 'Wir dürfen vielleicht annehmen, dass es vorwiegend rote und orange strahlen sind, welche in diese tiefen gelangen (2-300 faden), dass die blauen und violetten schon vorher absorbiert und reflektirt werden. Daraus würde sich dann die vorwiegend rote färbung der Crustaceen als eine schutzfärbung erklären lassen, wie die vorwiegend blaue der am tage erscheinenden geschöpfe.'

ALEXANDER AGASSIZ.

Newport, Sept. 12, 1884.

Fish remains in North-American Silurian rocks.

The Rev. W. S. Symonds seems somewhat disturbed by my letter of July 11. He apparently fears lest the honor of yielding the earliest fish-remains should pass from England to North America.

My note to *Science* was purposely made very short, but I was quite aware of the fact that a *single* specimen of *Scaphaspis Ludensis* (not fish-remains) had been found in the *lower* Ludlow rocks. Mr. Symonds will excuse my reminding him that Sir C. Lyell mentions this discovery by Mr. Lee at Leentwardine in 1859. The statement may be found in his *Elements* for 1865: not having the book at hand, I cannot name the page. Professor Lankester also, in 1869, refers this species to the *lower* Ludlow. To have been unacquainted with the fact would therefore be inexcusable.

Mr. Symonds will probably be surprised to learn that I am a native of the county (Herefordshire) in which he has himself done so much excellent geological and archeological work. I have been familiar from boyhood with much of the country which forms the 'hunting-grounds' of the Woolhope club, and visited some of them as lately as 1879.

As an abstract of my paper will shortly appear, I refrain from giving details at present.

E. W. CLAYPOLE.

B. A. A. S., Montreal, Aug. 29.

Korean curios.

The article in *Science*, No. 82, entitled 'Korean curios,' contains some errors, excusable, however, when one considers the difficulty of speaking through two languages, and getting the information filtered back through the same channel. For these corrections, and the brief information embodied in them, I am indebted to one of the Korean embassy, Mr. Yu, who has been with me constantly for several months, and who now speaks very good English.

The ring worn upon the thumb of Min Yong Ik (who, by the way, is not a prince, but a noble) is the Chinese thumb-ring worn in archery, by means of which the bowstring is drawn back. These rings are often very expensive. I was shown one in Canton valued at one hundred and fifty dollars, and some are valued much higher. The Korean archery-ring for the thumb is nearly always of horn, and entirely different in shape.

The amber bead is not necessarily imported; as amber is found in Korea, and is recognized by the Koreans as being a kind of gum from pine. They regard the best and oldest, which is of light color, as being three thousand years old, the darkest and poorest as being one thousand years old.

The button represented in Fig. 4 can only be worn by high officials. Officers of the first rank wear

quartz ones, while officers of the second and third rank wear gold ones. These buttons are secured to the customary band made of hair and not of velvet.

The reason given for leaving the wife at home — namely, that her clothes would not have stood the wear of the journey — was a polite excuse only. Social custom would have rendered it impossible for any of them to bring their wives with them.

In regard to the extraordinary crystals, my informant's brother has seen the region where they occur, and says the wonders of it are beyond description. He describes it as bordering the shore for a distance, in one measurement, of fifteen miles.

Mr. Kunz is quite right in regarding them as crystals of quartz; for Mr. Yu says they are white, and also like glass, and assume branching forms like trees, columns, etc., and tower at greater heights even than the dimensions given by Mr. Kunz. This region is on the eastern coast of Korea, and has never been visited by foreigners. The Chinese have in vain tried to get permission to visit this place.

EDWARD S. MORSE.

A COMPARATIVE STUDY OF THE ASSOCIATIONS.

To us on this side of the Atlantic, the opportunity to profit by the contrast of the two association meetings just closed ought not to be lost; and the desire to take advantage of it may justify a somewhat extended comparison of the two associations.

Concerning what may be called the 'physical features' of the two meetings, their relation to each other may be readily seen by an inspection of the following statistics: At the Montreal meeting, the total registered attendance was 1,773, of which nearly half crossed the ocean, and about six hundred were classed as 'old' members. The total number registered was somewhat below the average of the past ten years, which was 1,889, not including last year's meeting. The largest meeting ever held by the British association was at Manchester, in 1861, when the registry was 3,944; the smallest, in recent years, at Swansea, in 1880, the number being 899. The number of registered members at Philadelphia was 1,261, the greatest number ever on the rolls of the American association at one meeting. It is not unlikely that the excess of more than five hundred in the membership of the British association over that of the American is to be partially attributed to the rule of the British association, which confines the privileges of attendance to members

of one class or another; while the policy of the American association has been to invite and to welcome all who are interested in the proceedings, regardless of membership.

At the Montreal meeting, the total number of papers read was 327. At Philadelphia, 304 papers were read. The number of papers on mathematical and physical science was ten greater in the American than in the British association. In the latter, however, the number of physical papers was greatly in excess, as those concerning pure mathematics were disposed of by a sub-section in a single day.

In addition to the regular papers, there were, in the various sections of the British association, more than fifty reports presented, coming from committees appointed at previous meetings for the consideration of special subjects. Of similar reports in the American association, it can hardly be said that there were any, such as were offered being mostly confined to a few words declaring 'progress,' asking for continuation, and promising something in the future; and even this much was only obtained after much labor on the part of the presiding officer.

As to the general character of the meetings, it may be said that both were above the average. Sir William Thomson declared, at the closing session of the British association, that it was one of the most satisfactory ever held; and both he and Lord Rayleigh declared that the meetings of section A were far above the average.

It can be affirmed without boasting, that Americans (citizens of the United States) contributed in no small degree to insure this success. At least forty, or about one-eighth, of the entire number of papers read, came from them. They joined in several of the important discussions, and generally with credit; and some of them — Newcomb, Rowland, and possibly others — presided over sections at various times. It is well worthy of note, that, of the five papers recommended to be published *in extenso*, one was from Professor Gray, and another from Professor Thurston.

The Philadelphia meeting of the American