

precipice at Wintergreen Flats (where a small branch of the river seems once to have made a cascade like the present American Fall) and recognized in the gorge the alternation between the broad and deep stretches of quiet water, corresponding to the high-water epochs during the erosion of the gorge, and the narrow and shallow stretches with swift and tumultuous current, corresponding to the low-water epochs. On Tuesday the route led over the supposed buried channel to St. David's; and the party proceeded thence along the edge of the escarpment to Queenstown, returning, at the close of the day, from Lewiston to Niagara Falls by the railway in the gorge.

WILLIAM NORTH RICE,
WESLEYAN UNIVERSITY. *Secretary.*

SECTION H.—ANTHROPOLOGY.

THE Section of Anthropology at the Buffalo meeting, American Association for the Advancement of Science, August 23d–28th, met on Monday morning for the transaction of the usual business, in addition to which it was this year necessary to elect a Secretary, because of the death of Capt. J. G. Bourke, who was chosen at the Springfield meeting. The place was filled by the election of G. H. Perkins, of the University of Vermont. In the afternoon the address of Miss A. C. Fletcher, Vice-President of the Section, was read, a most interesting, suggestive and valuable contribution to our knowledge of the religious ideas of the Dakotan peoples. Its subject was 'The Emblematic Use of the Tree in the Dakotan Group.' This address will be published in full in SCIENCE.

On Tuesday morning Section H, as was the case with all the Sections, settled down to the regular reading of papers. The programme of this and the following days was made far more orderly and helpful than it has been heretofore by reason of certain preliminary arrangements. A provisional pro-

gramme had been arranged before the opening of the session, which was possible because, through the energy of the Vice-President, notice of the meeting and request for early sending of abstracts of papers which members intended to present had been sent to all those especially connected with the Section. The response to this request had been so hearty that the provisional programme required very little change as it was used from day to day. Another and convenient change was the arrangement of all papers, the titles of which had been received, under various headings, as Archæology, Ethnology, Somatology, and assigning one or more sessions to each heading. In this way, although absolute order could not be brought about because of the late arrival of authors and for other reasons, a reasonable degree of unity in the papers presented at each session was secured, very greatly to the advantage of both hearers and readers.

A large number of papers were offered to the Section, most of which were read, occupying all the time up to the last day of meeting. The quality of the papers was fully equal to that at previous meetings, and at adjournment the members of Section H agreed that a very profitable and enjoyable session had been held. The courtesy and good humor which prevailed during all the numerous discussions was noticeable. Many of the papers presented opinions with which all could not agree, but differences of opinion were always expressed in a most kindly manner. It is to be remembered that space allows no account of these discussions and that the papers are reported simply as presented by the authors and give only their views of the question treated.

It is also to the credit of the Section of Anthropology that it is the only Section which has recognized the justice of giving equal honor for equal work to woman as to man, and that a woman who has done good work in the department which the Section

represents is as fully entitled to recognition as a man. Years ago it elected a woman as its Secretary, and this year it honored itself in honoring Miss Fletcher by conferring upon her the position of presiding officer. And surely well deserved recognition of long and most important service in behalf of anthropology was never more satisfactorily bestowed than in this case. It is not flattery to say that no one could have presided over the meetings or attended to all the various duties which come to such a position with greater grace, fidelity or dignity, and it was well fitting that at the closing session a very hearty expression of appreciation of the delightful and efficient manner in which Miss Fletcher had filled her office should have been given by a rising vote.

Before the regular reading of papers a time had been set apart for the presentation of a resolution and a memorial concerning the late Capt. J. G. Bourke. On behalf of the Sectional Committee, W J McGee offered the following:

WHEREAS, This Section, the Association, the Nation and the scientific world have sustained an immeasurable loss in the death of John G. Bourke, scientist and soldier, and,

WHEREAS, The loss is peculiarly painful in the Section of Anthropology, to which he brought honor, long as a working member and later as Secretary; therefore,

Resolved, That this Section here assembled join in an expression of grief for the death, and of reverence for the memory of our associate and friend.

After the above had been read, Dr. D. G. Brinton read, in the absence of the author, a very appreciative and sympathetic memorial of Capt. Bourke, by his friend and fellow-laborer, Dr. Washington Matthews. Remarks expressing esteem for the work and character of our associate were made by Prof. Putnam, Prof. Perkins and Miss Fletcher, and the resolution was adopted by a rising vote.

The first paper on the programme was then

read by Dr. H. C. Hovey, on 'Symbolic Rocks of Byfield and Newbury, Mass.' The author called attention to certain old monuments in colonial graveyards, and also to some milestones and stones in the foundations of some old houses which were carved in a manner wholly unlike that of Puritan monuments. The symbols upon these stones are pagan rather than Christian, being sun-disks, whorls, fleur-de-lis and rarely phallic signs. The masterpiece shows the sun god's bride, surrounded by symbolic invocations, and over all is delineated a rude sun-burst. Photographs were shown and reference was made to similar rocks in Ireland, Denmark and elsewhere.

The Secretary read for the author a brief paper by Mr. J. R. Chandler describing certain important ruins of Tzac Pokoma, Guatemala. These little known ruins are of very considerable importance and extent. "Numberless ruined temples, palaces, houses and walls are now visible." The ruins seem to be very ancient, and no sculptures or hieroglyphics have been found and very few implements.

Prof. Putnam read for Mr. C. C. Willoughby a very interesting 'Analysis of Decoration upon Pottery from the Mississippi Valley,' illustrated by numerous beautifully executed drawings. The author sought to show that much of the decoration was symbolic, the ornaments being religious in their nature.

Prof. G. F. Wright read a brief paper, in which he described a visit to the Lalor farm, near Trenton, N. J., where careful investigation revealed 'Fresh Geological Evidence of Glacial Man,' which was the title of his paper.

Prof. Putnam followed this paper with verbal statements as to the locality, methods of investigation and specimens found, many of which were exhibited, all going to corroborate the testimony given by Prof. Wright.

Prof. E. W. Claypole brought forward similar evidence from Ohio, with the exhibition of specimens, found in one case at a depth of 22 feet in gravel that apparently could not have been disturbed since glacial times.

With this closed the day assigned to Archæology, though other papers properly set for this time came later, through unavoidable conditions. On Wednesday, by recommendation of the Sectional Committee, a committee was appointed "For the purpose of advancing an acquaintance with the objects of Section H among both members and non-members." This committee consists of J. McK. Cattell, D. G. Brinton, Franz Boas.

Dr. D. G. Brinton presented the following :

WHEREAS, The influence which the environment of the New World has exerted upon the physical and mental development of the White Race is a question of the utmost scientific and practical importance, and,

WHEREAS, There appears to be no governmental or scientific bureau which is giving the subject attention at the present time ; therefore,

Resolved, That the American Association for the Advancement of Science appoint a committee to organize an Ethnological Investigation of the White Race in the United States, with special reference to the influence exerted upon it in its new surroundings, said Committee to report annually.

According to rule this was, after adoption by the Section, referred to the Council by whom it was passed and the Section requested to nominate said committee. The Section did so, and by vote of the Council the following were appointed as such committee : D. G. Brinton, J. McK. Cattell, W. W. Newell, W J McGee, Franz Boas.

The programme of this day was especially given to Ethnology. Dr. McGee gave a very interesting account of a tribe of Indians, the Seri, living on Tiburon Island, in the Gulf of California, and exhibited specimens of their stone implements. He showed how very rude these people are in all their

arts and conditions. His title was 'Seri Stone Art.'

This was followed by a carefully prepared paper by Horatio Hale on 'Indian Wampum Records.' The author referred to the use of wampum as money and as a method of recording events or transcribing messages. Wampum was used in very early times and by many peoples. This was an interesting and valuable paper.

Dr. Brinton read a paper on 'The Psychic Source of Myths,' which would have come on the following day, but the author being obliged to leave town it was read at this time. The author called attention to a common idea that by comparing numerous elements in different myths, and thus discovering that many are identical, a common origin is proved. But this method does not take into account the essential unity of the human mind, wherever it may be, and the laws which govern its activity. Because of the tendency of mind everywhere and in all conditions to act in the same manner we find myths of very similar sort in all parts of the world. Numerous examples illustrating this were given. Myths may, therefore, be very similar and yet very diverse in origin.

Dr. Boas then read a paper on 'The Limitations of the Comparative Method in Anthropology,' which will appear in full in SCIENCE.

Judge G. P. Thurston followed with a paper on 'Ceremonial Flint Implements and Shell Gorgets from Tennessee.' Most superb specimens of both classes of the objects named in the title were exhibited. No finer examples of aboriginal work have ever been found than these, both as to size and elegance of workmanship. On one of the circular gorgets was engraved a human figure, holding in one hand a head and in the other as a scepter or emblem a stone object, the duplicate of one exhibited.

Dr. W. M. Beauchamp gave a very care-

ful account of 'Aboriginal Occupation of New York,' illustrated by a finely drawn map.

On Thursday the subject was Somatology and Psychology, but other papers were also read. Mr. Harlan I. Smith, in a paper on 'The Preservation of Local Archæological Evidence,' gave some very sensible and practical suggestions as to this subject. He also, in a following paper, gave a very interesting account of 'Ojibway Shamanistic Ceremonies' in treating sickness, and exhibited a bone tube used by the Shaman in sucking the diseased part in order to draw out the evil spirit.

Dr. J. McK. Cattell read a most suggestive paper on 'Physical and Mental Measurements of Students of Columbia University.' In this paper the importance of such investigation was shown, the methods employed and the results obtained.

Dr. Boas, in a paper on 'Anthropometry of the Shoshone Indians,' gave some interesting results from numerous physical measurements made among these people.

Mr. Haliburton gave an account of his studies upon dwarfs in a paper entitled 'Recent Discoveries as to Pygmy Races.' Pygmies as found in Guiana, Mexico, Honduras, Algeria, Spain and elsewhere were discussed and some interesting conclusions given.

'Onondaga Games' was the subject of a very interesting paper by Dr. Beauchamp, in which sundry games of ball, bone buttons, bow and arrow, etc., were briefly described.

Very peculiar ideas regarding time were described in a paper on 'Papago Time Concepts' by Mr. McGee.

A paper by Mrs. F. D. Bergen on 'The Theological Development of one Child' consisted of a curious account of the ideas of a child who was carefully guarded against receiving any teachings concerning spiritual matters until ten or twelve years old.

Miss Fletcher's valuable paper on 'Certain Beliefs Concerning the Will Power Among the Siouan Tribes' will be given to the readers of SCIENCE in full.

Mr. McGee's paper on the 'Beginnings of Zooculture' proposed an original and plausible theory to account for the domestication of animals.

Mr. W. W. Tooker presented a full discussion of the 'Meaning of the Name Manhattan,' to be published in the Brooklyn Almanac. He concluded that there was the best of evidence for believing Manhattan to mean 'The Island of Hills.'

At the close of Thursday's session, Mr. McGee, for the Sectional Committee, presented the following resolution:

WHEREAS, Horatio Hale, long an active member and at one time a Vice-President of this Association, has made contributions to Ethnology and Philology, entitling him to a place in the front ranks of American Anthropologists, and,

WHEREAS, It seems fitting that Mr. Hale's long and arduous labors in behalf of science should be recognized by the American Association for the Advancement of Science; therefore,

Resolved, That Section H recommend to the Council that Mr. Hale be made a Life Fellow of this Association.

This was adopted, and the Council received the recommendation and elected Mr. Hale a Life Fellow.

Friday was assigned to papers in General Anthropology. A paper from Mr. H. Saville on 'The Ruins of the Temple of Teopoztlan,' was read. These ruins, important for many reasons, are especially so as they are the only American ruins to which a definite date can be set. On one of two slabs in one of the walls is engraved the sign of Ahuizotl, the immediate predecessor of Montezuma, and on the other the date, ten Tochtli, which corresponds to 1502.

Other papers, of which no account can be given for lack of space, are: a long and most interesting account of 'Explorations in Honduras' by the Peabody Museum, given by

Prof. Putnam; 'Results of Recent Cave Exploration in the United States,' by H. C. Mercer; 'Kootenay Indian Place Names and Names of Implements,' by Prof. A. F. Chamberlain; 'Clan System of the Pueblos,' by F. W. Hodge. A very suggestive paper by Rev. Dr. Richert on 'Character and Food.' An account of 'Finland Vapor Baths,' by Mr. H. W. Smith, and an account of certain uses in religious ceremonies of the 'Mescal Plant,' by James Mooney.

The officers elected for next year for this Section are: *Vice President*, W. J. McGee, Washington, D. C.; *Secretary*, H. I. Smith, New York.

G. H. PERKINS,
Secretary.

UNIVERSITY OF VERMONT.

THE SOCIETY FOR THE PROMOTION OF AGRICULTURAL SCIENCE.

THE seventeenth annual meeting of the Society for the Promotion of Agricultural Science was held at Buffalo, N. Y., in the Public Library Building, on August 21st and 22d. The meeting was the most successful one of recent years. Fifteen papers, on the following subjects, were read, most of the authors being present in person:

W. R. LAZENBY. *Presidential address. The Relation of Science to Agriculture.*

A. D. HOPKINS: On varieties of timothy and red clover.

Pollen-distributing insects observed on flowers of timothy and red clover.

V. A. MOORE: The influence of animal experimentation upon agriculture.

C. C. GEORGESON: Steer feeding experiments at the Kansas Experiment Station.

L. O. HOWARD: A biographical sketch of Dr. C. V. Riley.

B. M. DUGGAR (By invitation): *Sporotrichum globuliferum*: White muscardine of the chinch bug economically considered.

E. A. DE SCHWEINITZ: An anti-toxic serum for hog cholera and swine plague. The production of immunity to hog cholera by means of the blood serum of immune animals.

H. L. BOLLEY: The relation of the time of feeding and the period of development, to the develop-

ment of rusts and smuts in oats. Also some further experiments on potato scab.

F. D. CHESTER: Protective inoculation against anthrax.

H. C. IRISH (By invitation): Forcing cauliflower with lettuce and cucumbers.

W. A. KELLERMAN (By invitation): New experiments with fungicides for smuts of wheat and oats.

C. E. BESSEY: A biographical sketch of Prof. C. L. Ingersoll.

F. WM. RANE: Electro-Horticulture: range of incandescent lamps.

L. H. PAMMEL and F. L. SCRIBNER: Notes on grasses collected between Jefferson, Iowa, and Denver, Colorado.

The old board of officers, composing the following persons, was reelected for the ensuing year: President, W. R. Lazenby, Ohio State University, Columbus, O.; Secretary and Treasurer, C. S. Plumb, Purdue University, LaFayette, Ind.; third member Executive Committee, L. O. Howard, Department of Agriculture, Washington.

C. S. PLUMB,
Secretary.

BRITISH ASSOCIATION FOR THE ADVANCE- MENT OF SCIENCE.*

ADDRESS BY THE PRESIDENT TO THE MATHEMATICAL AND PHYSICAL SECTION.

THERE is a melancholy reminiscence connected with this meeting of our Section, for when the British Association last met in Liverpool the chair in Section A was occupied by Clerk-Maxwell. In the quarter of a century which has elapsed since that meeting, one of the most important advances made in our science has been the researches which, inspired by Maxwell's view of electrical action, confirmed that view, and revolutionized our conception of the processes occurring in the Electro-magnetic field. When the Association last met in Liverpool Maxwell's view was almost without supporters, to-day its opponents are fewer than its supporters then. Maxwell's theory, which is the development and extension of

*Liverpool meeting, beginning September 16, 1896.