channel of the Mississippi from Cairo to its mouth may be relieved of this destroying agency; and the flood-plain valley of the Mississippi itself can be protected from the destroyer; and the channel of the river may be made far more stable, and its cross-section far more uniform, and sufficiently ample to carry the waters of the greatest floods, — all by spreading the rivers of the West over the upper valleys of the Rocky Mountains and over the arid plains. It is thus, and thus only, that the lower Mississippi can be protected; and it is thus, and only thus, that the arid lands can be redeemed. The two problems are inseparably joined. Irrigate the deserts and make them gardens and wheat-fields, and by the same process you protect the flood-plain of the Mississippi and make corn-fields and cotton-fields.

THE THIRTY-SEVENTH MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE thirty-seventh meeting of the American Association for the Advancement of Science, which was held the past week at Cleveland, O., was not as well attended as the meetings of this great association usually are; but it was nevertheless as successful, and as useful for science, as those of the preceding years. The meeting opened on Wednesday, Aug. 15, with 81 members in attendance. Before the close of the day the number swelled to 258, on Thursday to 303, and on the following day many citizens of Cleveland joined it. A very remarkable feature of this meeting was that only a few citizens of Cleveland numbered on the lists of the first three days, although they showed their interest in the proceedings of the association in other ways, — first of all, by their hospitality, which was very much appreciated by their guests; by attending the evening sessions; and by very full and well-edited reports in the local newspapers. The meeting of the association this year, though not showing as great a number of members attending as last year, and consequently a smaller increase in membership, is remarkable for the great number of eminent scientists taking part in it. The scientific departments of Washington were well represented; and the New England States, as well as all the States from New York to Arkansas and Minnesota, sent most of their prominent scientists.

The meetings were held in the Central High School. In order to bring about closer social meetings between members of the association, brief general sessions were held every morning, and the members met in the hall where these sessions were held. Social intercourse was also promoted by a very enjoyable arrangement of the local committee, who served every day a lunch to the members of the association in the High School, thus inducing them to spend the interval between the morning and afternoon sessions at the school. As the promotion of social intercourse during these meetings is of equal importance with the papers read and the discussions in the various sections, these arrangements are well worth being recorded, and greatly contributed to the success of the meeting.

The programme was similar in character to those of former meetings of the association. The meeting was called to order on Wednesday, Aug. 15, by the retiring president, Prof. S. P. Langley, who resigned the chair to the new president, Major J. W. Powell. A hearty welcome was extended to the members of the association by representatives of the city of Cleveland and of the local committee, to which the president replied, and the sections were organized in their respective halls. At the general meeting the permanent secretary reported on the financial state of the association, from which we were glad to learn that the property of the association has increased materially, and that the research fund, which consists of the contributions of life-members, amounts to more than $4,400.

In the afternoon the vice-presidents of the sections delivered their addresses. In the evening the retiring president, Professor Langley, addressed the association on the subject of the history of the theory of radiant heat, in which address he forcibly brought home the truth that the progress of science is not always on the right line, but that it is only found after many futile attempts, and frequently after long following the wrong track. Thus he proved the importance of the study of the history of science. The address was printed in the last number of *Science*.

On Tuesday a number of geologists had held a meeting, and appointed a committee to bring in a constitution and by-laws for an American geological society. The committee consisted of Prof. A. Winchell of Ann Arbor, John S. Stevenson of New York, C. H. Hitchcock of New Hampshire, Edward Orton of Ohio, and John R. Proctor of Kentucky. On Wednesday, after the organization of the section, a meeting was held, which was well attended, and it was resolved that the society should be formed on the basis proposed by the committee.

On Thursday the sections began their regular sessions, of which a report will be given next week. The important feature of this day was a lecture delivered by President G. Stanley Hall of Clark University of Worcester, Mass. It was the first time that the new psychology had been given a place on the programme of the association; and nobody was better qualified to introduce this important subject in the association than Professor Hall, who was the first to cultivate this branch of science in America. It is to be hoped that this study, now that attention has been called to it, will continue to form part of the proceedings of the association.

Professor Hall gave a brief review of the scope of experimental psychology. He dwelt on the researches made in the study of psychologic physiology, and on the functions of brain and nerves; he mentioned the methods of psychophysic inquiries, and the important bearing of ethnological studies upon psychologic questions. He concluded his sketch, which was listened to with the greatest attention, with a reference to the study of hypnotism, which is one of the most promising fields of psychic research.

On Friday evening Major J. W. Powell delivered a lecture on 'Competition as a Factor in Human Progress.' In his forcible and graphic way, the lecturer gave the results of his study of the history of civilization and of human progress, which is based on his views as an ethnologist. He compared the evolution of society to that of animals and plants, and showed that the term 'survival of the fittest' does not apply in the same way in sociology and in biology.

Saturday was devoted to an excursion to Put-in-Bay, one of the islands in the western extremity of Lake Erie. The day was very pleasantly spent, the weather being fine. The remarkable glacial striæ of Kelley's Island were visited on this trip.

SCIENTIFIC NEWS IN WASHINGTON.

The Latest Public-School Statistics: Some Interesting Figures and Comparisons of School Population, Enrolment, and Attendance. — Plastering Wines in France: a Searching Investigation by the French Academy of Medicine: Adverse Report.

School Attendance in the United States.

THE annual report of the United States commissioner of education for 1886–87 is now going through the press at the Government Printing-Office, but copies of the volume will not probably be ready for distribution until next winter. The report of Commissioner Dawson, besides giving the usual statements of the organization and administration of his office, is supplemented with an explanation of his plan to publish in a series of monographs a history of education in the United States, and an account of his visit to Alaska, with suggestions as to the education of the people of that far-off Territory.

The commissioner's statement is followed by twenty-two chapters, which, in addition to presenting the usual statistics, digests of State school reports, etc., treat of the training of teachers, kindergartens, secondary instruction, superior instruction, professional instruction, manual and industrial training, education of special classes, libraries in the United States, and many other important educational subjects, and a chapter of papers on important educational topics by men of recognized authority on the subjects upon which they write.

In addition to the usual statistical tables accompanying the report, Commissioner Dawson has directed the preparation of several new and quite important ones, and the addition of new columns to some of the old ones. This work has been done by Mr. F. E.