at the foundation of modern civilization. We are glad to see the homes of men who are the munificent benefactors of our libraries and of our scientific institutions. We shall be interested in visiting the great shops where you convert the products of a generous nature into articles for our daily use.

Our Association was founded for the encouragement and diffusion of scientific learning. Its creed is very simple. It requires in the novice only will and devotion. It is our business to study the works of nature by observation and experiment, and it is our duty to conform our conduct to her laws. We invite all to join us in this work, for we believe that along this line of investigation lies the true road of progress for the human family. But we are free. We do not wish to impose our ideas on others, but prefer to leave them to the operations of reason and judgment. If a brother goes astray, and tries to square the circle, there is no trial for heresy. We let him alone, feeling sure that time, the implacable enemy of error, will lead him back to the truth. Cicero tells us that time overthrows the opinions of men, and confirms the decisions of nature. With full confidence in this sentiment we go on in our work, 'without haste, and without rest.'

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*REPORT OF THE PERMANENT SECRETARY.**

THE fifty-second annual meeting of the American Association for the Advancement of Science, now drawing to its close, will be known as the first Pittsburgh meeting. In many respects it has been one of the most successful meetings which the Association has ever held. The attendance, while not very large, has been composed of members of the active working class, many of them being fellows, and the meeting may be safely characterized as a working meeting. The registration has shown four hundred and thirty-five members in attendance. This ranks the Pittsburgh meeting as the twelfth in size of the fifty-two meetings which have been held. It is the fourth in size of the meetings held during the past ten years. The geographic distribution of members in attendance is especially interesting, and those who have had the interest or curiosity to follow this matter of geographic distribution during recent years will notice that this year there is a larger attendance from the South than in any previous year. The exact representation by States has been as follows: Pennsylvania naturally heads the list with 178; New York, 59; Ohio, 49; District of Columbia, 45; Massachusetts, 23; Illinois, 21; Michigan, 10; Indiana, 10; New Jersey and Maryland, 8 each; Missouri, Minnesota, Kansas, New Hampshire, North Carolina, and West Virginia, 6 each; Texas and Nebraska, 5 each; Arkansas and Connecticut, 4 each; Alabama, Delaware, Virginia, California, Kentucky, and Canada, 3 each; Montana, 2; South Carolina, Georgia, Louisiana, South Dakota, North Dakota, Mississippi, Iowa, Colorado, and Maine, 1 each.

It must be remembered as usual that the number registered, namely, 435, includes only the active members and associates of the Association, and that as a matter of fact there are always a few members in attendance who are so characteristically forgetful of all things except scientific matters that they entirely fail to register. The number registered is only an indication of the size of the meeting. For example, eleven affiliated societies of a national scope have met with us and have swelled the gathering of scientific men in Pittsburgh during the past week to approximately 750 individuals. The meeting has,

* Presented at the closing session.

therefore, been a scientific congress of great importance.

The papers which have been read before the Association proper and in joint session with the more closely affiliated societies have been numerous and of a high order. About three hundred and sixty papers have been thus presented, which is a great increase over the number read at the last meeting of the Association.

A number of important measures concerning the future of the Association have been considered and amendments to the constitution have been adopted rendering the council more permanent in its membership and thus probably more efficient in its work, and also making the sectional committees so constituted as to render their greater efficiency a matter of practical certainty.

About sixty new members have been elected during the meeting, and about eighty members have been made fellows.

Pittsburgh and its vicinity have provided visiting points of great scientific interest, and the fact just stated, together with the great courtesy and hospitality of the local committee and the citizens of Pittsburgh, have combined to make the meeting now coming to a close a memorable one in the annals of the Association.

SCIENTIFIC BOOKS.

Reports of the Princeton University Expeditions to Patagonia, 1896–1899. IV., *Paleontology;* Part II., Tertiary Invertebrates. By A. E. ORTMANN, Ph.D. Princeton, the University. 1902. 4to. Pp. 45–332; pl. XI.–XXXIX.

The reports of the important expeditions sent to Patagonia by Princeton University are being published at the expense of the J. Pierpont Morgan fund, and in the present stately volume we have the details of the stratigraphic paleontology for which those interested in the geology of South America have been eagerly waiting.

The volume is printed with elegance and taste and the plates, while a little formal in drawing, are a refreshing contrast to the wretched phototypes which disfigure so many recent European paleontological memoirs. While the photographic process is suited to the reproduction, from the specimens, of a limited class of objects, in a limited number of cases, it completely fails to give what is required in the case of fossil mollusks. When small, all important details are apt to be lost; and, when large, the presence, in spots, of bits of detail, only emphasizes the general failure of the process as a whole. For this reason we congratulate the author and editor of this volume that they resisted the possible temptation and have given us illustrations which really illustrate. But one criticism occurs to us in reviewing the make-up of the volume, and that is a regret that an index to the paper is not included in it.

The memoir begins with an enumeration and description of the material collected. A painstaking comparison is made with analogous species in the northern hemisphere and also with the species of the Tertiary of New Zealand and Australia. From the Magellanian beds 19 species are described, from the Patagonian 151, and from deposits at and analogous to those of Cape Fairweather, 15 species are made known.

It has been known for some years that the opinions of several South American workers as to the age and stratigraphy of the Patagonian and other horizons, which they knew only from fossils collected by others, were much in need of revision. Two years ago Mr. J. B. Hatcher, in charge of the expedition, after careful inspection of the type localities, and Dr. Ortmann on the testimony of the fossils collected, arrived at certain conclusions which were published with sections in the *American Journal of Science* for 1900. The paleontological evidence upon which those conclusions rest is now furnished in the fullest detail. If any one hitherto has suspended judgment, he may now yield to conviction in full confidence that the case is proved. No question can arise,