SCIENCE

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THE BOSTON MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE Fiftieth Anniversary of the American Association might well have been celebrated a year ago and, most fittingly, in Boston, for it was there, in 1847, that the Association of American Geologists determined to abandon the name and organization of a society which had enjoyed a prosperous existence for seven or eight years and by enlarging its scope and membership create the American Association for the Advancement of Science. In reference to this act, *Silliman's Journal*, in its first issue after the meeting, says: "The most important step taken at this meeting was the enlargement of the sphere of operations in this Association and a corresponding change of name, 'The American Association for the Promotion of Science,' is hereafter to be its designation, and it is designed to embrace all laborers in Physical Science and Natural History. Hitherto but few papers have been read on Chemistry, Natural Philosophy and General Zoology, the title of the Association appearing to many to exclude these topics. A corresponding increase of valuable papers

and collaborators it is anticipated will follow this desirable change."

The first meeting of the Association was held in Philadelphia, beginning September 20, 1848. The meeting was called to order by Professor W. B. Rogers, who was the last President of the 'Association of American Geologists and Naturalists.' A Committee had been appointed at the Boston meeting to draft a Constitution and Rules for the new body, and the report of this Committee was the first business considered. It was unanimously adopted and at 4 p. m. the American Association for the Advancement of Science was formally in session, under the Presidency of Wm. C. Redfield, who had been elected at the Boston meeting in accordance with the excellent practice of the earlier Association.

Some features of the first Constitution are worthy of notice. The rules relating to membership were a little peculiar. Certain persons were allowed to become members on their own volition, by signing the Constitution. They were members of other scientific or learned bodies publishing transactions, 'Collegiate Professors of Natural History, Physics, Chemistry, Mathematics and Political Economy, and of the Theoretical and Applied Sciences generally;' also civil engineers, architects and others who have been employed on public works. Persons not included in these classes might become members on nomination by the Standing Committee and election by a vote of the majority of the members present.

The honor of reading the first paper before the Association belongs to Peter A. Browne, LL.D., of Philadelphia, President of the Society for the Development of the Mineral Resources of the United States. The title of this paper was 'Some Notice of the Fossil Cephalopodes Belemnosepia, long known by the name of Belemnite, and of the Diphosphate of Iron, called 'Mullicite,' found together at Mullica Hill,' from which it will appear that the programs of the early days 'bristled' in much the same way as at present. On Friday evening, September 22, 1848, the Association held its first public, general session, a meeting that the modern program-maker would have set down as 'complimentary to the city of Philadelphia,' and complimentary to their intelligence it was, for its program included, in addition to the address of the retiring President (which was characterized as an 'extremely interesting and spirited discourse'), a paper on 'The General Principles of Analytical Mechanics' by Benjamin Peirce, and one on 'The Classification of the Animal Kingdom' by Louis Agassiz.

The Association adjourned on Monday, September 25th, with an enrolled membership of 461. The list begins with the name of Professor Stephen Alexander, of Princeton, and ends with that of Professor Ira Young, of Hanover, father of the distinguished astronomer, Professor C. A. Young, of Princeton. Active in the business of the meeting was Professor James Hall, of Albany, whom all members of the Association still delight to honor at its annual sessions. Of the total four hundred and sixty-one, besides Professor Hall, only six survive—Samuel L. Abbott, Martin H.

Boyé, Epes S. Dixwell, Wolcott Gibbs, Oliver P. Hubbard, Charles E. West.

It is not intended at this time and place to write a history of the Association, but only to suggest such comparison between its spirit and work in the earlier stages of its existence and in later years as may, possibly, indicate ways of bettering present conditions.

That the Association has been of incalculable value to American science no one can deny. The first Constitution declares its objects to be, "by periodical and migratory meetings, to promote intercourse between those who are cultivating science in different parts of the United States; to give a stronger and more general impulse and a more systematic direction to scientific research in our country, and to procure for the labors of scientific men increased facilities and a wider usefulness." This declaration is still retained in the organic law of the Society, except that its jurisdiction has been enlarged by substituting the word 'America' for 'United States' and omitting 'our country.' It is principally by 'promoting intercourse between those who are cultivating science' that the Association has been beneficial. The enormous extent of territory over which its membership is scattered has been at once a decided obstacle to that intercourse and the strongest reason for it. Hardly anywhere else in the world has the man of science been so isolated as in this country. The early and wide diffusion of public education resulted in the establishment of a large number of institutions for advanced instruction widely distributed over the States and Territories. However imperfect they may have been in many respects, nearly every one became a nucleus of scientific activity and from them have come some of the finest contributions to science of which America can boast.

The inspiration which came to hundreds of young men through personal intercourse at the annual meetings of the Association—intercourse not only with the recognized leaders in science, but with each other—was worth many times what these meetings cost, directly or indirectly. During perhaps the first thirty years of its history the American Association was the one and only great scientific body of this Continent. Its meetings were attended by all men of distinction in all departments of science, and its influence in all matters relating to science was great. Although a popular body, admission to which was easy, its affairs were in the main directed and controlled by the 'select' in science, and the standard of its work was well maintained. The presence at its meetings of the highest authorities in special departments of learning unquestionably, although perhaps unconsciously, served as a check upon communications of a vague and uncertain character. The charlatan was not much in evidence in those days and generally had little mercy accorded him. The 'migratory meetings' of the Association were blessings to the communities in which they were held, often stirring the people to an interest in science and an appreciation of the importance of scientific men that lasted for years and resulted in largely increased facilities for scientific work. The people everywhere knew something of the very

first men of science and gladly paid the cost of publishing the Annual Proceedings and of the entertainment of the Association for the privilege of seeing and hearing them, and many an endowment for science had its origin in the enthusiasm created by the presence and speech of these men.

But those who have attended the meetings of the Association pretty steadily during the past quarter of a century know, and many regret, that during the past fifteen or twenty years there has been a very considerable change in its relation to the science of the country and in the influence which it is able to exert in all matters relating thereto. There is no doubt that much of this is the legitimate outcome of an evolution which has been almost a revolution, and which has affected many other institutions even in a more marked degree. The tremendous movement towards specialization which has taken place during the past one or two decades has not been entirely beneficial to the interests of science and scientific men. The American Association has been most seriously affected by it, through the organization of numerous societies of and for specialists, which have materially diminished interest in the general organization. To this must be added the influence of the organization in 1864 of the National Academy of Sciences and especially its practical reorganization ten years later. As the only scientific body to which admission is to be gained only by character and importance of scientific work, the Acadamy is naturally and properly the aspiration of young men of science. It has indirectly worked an injury, however, to the American Association by the fact that many men of first rank find it difficult to attend meetings of both societies, and it is a notable fact that many later meetings of the Association have been conspicuous by the absence of a large majority of the leaders of American science. This absence, which is, perhaps, oftener to be attributed to lack of disposition than anything else, is doubly unfortunate because it removes one of the most important attractions to younger men of science.

The creation of special organizations, such as the Geological Society of America, the American Chemical Society, the American Society of Naturalists, and others, has been one of the most serious blows to the American Association. In 1881 it sought to meet the growing demand for specialization by breaking up into sections, but for some reason this has not satisfied the desire of the specialists. It is gratifying to record the fact that among some of the more recent organizations a better spirit towards the older society has prevailed during the past two or three years, and there is an evident disposition toward cooperation which the latter ought quickly to take advantage of. Indeed, it is to be hoped that a way may yet and soon be found for further cooperation between these societies and the Association, it being evident that all may be greatly benefited thereby.

Many men, eminent in science to-day, owe much of their prominence to opportunites which came to them through the meetings of the American Association a score or more years ago. With them and all, indeed, the obligation to sustain and

foster the interests of the Association ought to be imperative. Through its semi-popular character and close touch with the people, many things have been 'set going' to the great advantage of the members of the National Academy and of other more or less exclusive bodies, but they will not, of themselves, keep going forever. It will be a sorry day for science when the general public is compelled to depend upon the columns of such a press as at the present time enlightens and instructs its readers in matters scientific. If for no other reason, the best men in science might well afford to join the Association in its migratory meetings, that the people might have a chance to know real science in contrast with the quackery and humbug which is now daily served out to them. This is preeminently a function of this organization and one which cannot be assumed by the National Academy of Sciences, or any of the specialized groups. The same may be said of the importance of the Association in exercising a wise influence over public sentiment in reference to all questions of general interest in which science is in any way involved. From the beginning this has been one of its most valued and valuable features. Allied to no other organization or State or National Government, it has always dared to speak its mind and in no uncertain way. The National Academy, although the scientific adviser of the government, is almost useless in this respect, because it waits until its advice is sought. There is, and always will be, great need for a strong representative scientific body, unrelated to political parties or government bureaus, through which the consensus of opinion of scientific men of the country may find free expression, especially in regard to the scientific work and interests of the government. In view of the rapidly increasing tendency towards centralization of scientific work in the government, and the constant dangers by which such work is threatened when under government control (a danger quite as likely to grow up within as to come from without), it will be well worth while to maintain the Association for this purpose, if for no other.

The meeting in Boston must necessarily be one of great moment. As the fiftieth anniversary meeting it will attract many of the older members who have not generally attended recent meetings, and many young lovers of science who may with great profit to themselves join its ranks. The place and the time are both encouraging, and SCIENCE hopes that the interest and enthusiasm that is sure to be awakened may be such as to lead to a better appreciation of the dignity and importance of the organization on the part of the leaders of American science, and to such a readjustment of its internal policy and external relations as will best fit it for the great work which it will be called upon to do during the next half century.

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*THE JURASSIC FORMATION ON THE ATLANTIC COAST—SUPPLEMENT.**

AT the autumn meeting of the National Academy last year, in New York, I made a communication entitled 'The Jurassic For-

* Abstract of a communication made to the National Academy of Sciences, Boston meeting, November 18, 1897.