

Nowhere do we regard the fork as made up of two bars attached to a solid base. Since the question of how we may best regard a vibrating tuning fork has been raised, we have turned once more to Rayleigh.³ After a mathematical discussion he writes:

... These laws find an important application in the case of tuning forks, whose prongs vibrate as rods, fixed at the ends where they join the stalk, and free at the other ends.

Also Edwin H. Barton,⁴ a pupil of Lord Rayleigh, writes:

The behavior of the U-shaped bars just dealt with approximates to that of tuning forks. But the vibration of tuning forks is usually further complicated by the presence of an additional block at the center of the bend and the stem attached thereto. Indeed, it may be a nearer approximation to regard each prong as a straight bar fixed at the end near the stem and free at the other end.

It appears, then, that this "crude" manner of considering a tuning fork, which has been wrongly attributed to us, is actually accepted by no less an authority than Rayleigh and his pupil, Barton.

Professor Wead's interpretation of our view is probably based upon our statement that the fork has a single node at the base. This, of course, is only an approximation.

An alternative explanation, according to Professor F. R. Watson, of this university, is to consider the fork as a single vibrating system in which the center of mass tends to remain fixed in position. As the tines of the fork are bending outward, the center of mass tends to lower, so that the stem and block of the fork rise a bit so as to keep the position of the center of mass unchanged. As the tines return inward, the center of mass tends to rise, so that the stem of the fork lowers. The stem of the fork thus executes minute up and down movements.

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AN ANECDOTE CONCERNING DR. FIELD

I HAVE read with great interest Dr. Ward's sketch of the life and work of the late Herb-

³ "Theory of Sound," 1894, Vol. I., 274.

⁴ "A Text-Book on Sound," 1908, 298.

ert Haviland Field. It, however, omits any mention of his appreciation of humor, and perhaps I may be allowed to tell of one of his practical jokes which, to me at least, was most amusing.

The late Henry B. Pollard had just completed his work on the anatomy of *Polypterus* and had gone from Wiedersheim's laboratory for lunch. I came in a little later, started my studies, and then Pollard came in, and in a moment I realized what "Uncle Toby" meant when he referred to the profanity of "our army in Flanders." Pollard turned to me, holding up a drawing of the cranial nerves of that fish which was almost completely covered with hæmatoxylin, and demanded who did it. I knew nothing of it and so replied. Pollard said he would call the attention of the professor (Wiedersheim) to it and at once left the room. As he went out of one door of the laboratory, the door from the anatomical museum opened and in came Field, who removed the damaged drawing from Pollard's table, opened a drawer and took out another drawing, and again left the room. Pollard almost immediately returned, bringing the professor with him. "Look at that!" said Pollard. "Was ist los?" asked Wiedersheim, and then Pollard looked and saw his drawing in perfect condition. I never saw such an expression of complete inability to comprehend as that on Pollard's face. He was utterly without words. The explanation of the whole was that Field had found the tracing paper which Pollard had used, had rapidly redrawn on another sheet the nerves and skull of *Polypterus*, had deluged it with staining fluid and left it for Pollard to find, waiting in the museum to hear what the English youth would and could say.

S.

TWO RETROSPECTIVE FEATURES OF THE TORONTO MEETING

THE membership list in the last volume of the Summarized Proceedings, recently published, shows that the Association has a considerable number of members living in coun-

tries outside of the United States. Naturally, from the contiguity of Canada, the largest number of those foreign members reside there, the list showing 230 names of residents of Canada. This number is larger than the total membership of the Royal Society of Canada, which, however, limits its membership. But it is small in comparison with the total membership of the Association, although not insignificant in view of the fact that no meetings have been held in Canada since the last Toronto meeting thirty-two years ago. After the meeting of 1889, the next following list contained 85 names of members and fellows resident in Canada. While only seven of these 85 persons now survive as members, the present Canadian membership of 230 indicates that accessions have been increasing, and doubtless there will be further increases as a result of the meeting about to be held.

The place of the meeting is also a reminder that the Geological Society, at the time of the last meeting in Toronto, took a step toward organization as an independent body, which was the beginning of a movement that has eventually contributed to the remarkable growth of the Association. The recently issued volume shows that in addition to the large membership of nearly 12,000, there are now 93 affiliated and associated societies, most of which have been organized since 1889.

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NORMAL SCHOOL BUILDING,
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SCIENTIFIC BOOKS

The Life of the Pleistocene or Glacial Period.

By FRANK COLLINS BAKER. University of Illinois Bulletin, vol. XVII., No. 41; June 7, 1920, iii, 476 pp. 8, pl. 1-57. Urbana, Illinois.

This portly volume is divided into two parts, the first including beside a historical summary of preceding researches an account of the postglacial geology and life of the Chicago area, followed by a résumé of our present knowledge of the postglacial life of the entire glaciated region of the United

States and Canada. Each locality investigated is taken up separately, its stratigraphy and fossil content described and listed, and at the end of each chapter the collected data are summarized.

In the second part the life of the interglacial intervals is discussed and the species of plants and animals listed from data furnished by an indefatigable search of all available literature.

The difficulties attending the reduction to a common nomenclature of the records extending over many years, can easily be understood and the author frankly acknowledges that in some cases his judgment may have been at fault, but such instances do not materially affect the general conclusions and are inevitable in any such bringing together of scattered data of varying degrees of authenticity. The volume concludes with a bibliography of forty-five pages, covering the literature from 1846 to the date of publication and an ample index. Among the plates are interesting maps showing the fluctuations of the geographical features of the Chicago area and the region about Toronto, as well as the extensions at numerous periods of the continental ice sheet. It would have added to the convenience of those who use the volume if legends had been added to the plates, obviating the necessity of turning back in each instance to the printed explanation.

Much of the work, and presumably of the most carefully observed and valuable part of it, is the result of field work prosecuted by the author. The labor involved in the search for and correlation of the data in the literature was evidently prodigious, and reflects credit on the industry and patience of the author. His work in bringing together in orderly shape the data bearing on his subject will be a boon to all later students of the American Pleistocene. We may be permitted to regret the intrusion in a scientific work of a few of the "simplified spelling" futilities; we really *ot* not to imply that *thot* renders either the sound or the meaning of the word *thought*.

WM. H. DALL