national convention, March 3–6, Hotel Commodore, New York, New York.

University of Pittsburgh Department of Psychology conference, "Current Trends in Psychology," March 5–6, Pittsburgh, Pennsylvania.

Western Metal Congress and Exposition, fifth, March 22–27, Civic Auditoriums, Oakland, California.

American Association of Anatomists, annual meeting, April 3–5, Mount Royal Hotel, Montreal, Canada.

American Geophysical Union, 28th annual meeting, April 28–30, National Museum, Washington, D. C.

Southwestern Division, AAAS, 23rd annual meeting, with Colorado-Wyoming Academy of Science, May 1–3, Colorado College, Colorado Springs.

Society of American Bacteriologists, annual meeting, May 12–16, Bellevue-Stratford Hotel, Philadelphia, Pennsylvania.

American Association of Cereal Chemists, 32nd annual meeting, May 19–23, Hotel President, Kansas City, Missouri.

American Oil Chemists' Society, 38th annual meeting, May 20–22, New Orleans, Louisiana.

American Society of Mechanical Engineers, oil and gas power 19th national conference, May 21–24, Cleveland, Ohio.

American Society of Mechanical Engineers, aviation meeting, May 26–29, Los Angeles, California.

American Society of Mechanical Engineers, wood industries national conference, June 12–13, Madison, Wisconsin.

American Society of Mechanical Engineers, semiannual meeting, June 16–19, Chicago, Illinois.

American Society for Engineering Education, 55th annual meeting, June 18–21, University of Minnesota, Minneapolis.

Chemical Society, London, centenary meeting, July 15–17, London, England.

International Congress of Pure and Applied Chemistry, 11th annual, July 17–24, London, England.

International Physiological Congress, 17th annual, July 21–25, Oxford, England.

COMMENTS *by Readers*

In the *Mathematical Cuneiform Texts*, edited by O. Neugebauer and A. Sachs, page 35 (1945), the authors note that "we now have an Old-Babylonian tablet which answers the question to what power must a certain number a be raised to yield a given number? This problem is identical with finding the ***logarithm*** to the base a of a given number." This remark is followed in the noted volume by some problems which are identical with those appearing in some of our modern textbooks on elementary algebra intended for students who are beginning the study of logarithms. For instance, the problems prove that $\frac{1}{4}$ is the logarithm of 2 to the base 16 and that $\frac{3}{4}$ is the logarithm of 8 to the base 16. This involves the use of fractional exponents.

Another extreme view relating to the same subject is quoted approvingly in volume 2 of the widely consulted textbook on the history of elementary mathematics by the late D. E. Smith of Columbia University, page 512 (1925), as follows: "The invention of logarithms came on the world as a bolt from the blue. No previous work had led up to it, foreshadowed it or heralded its arrival. It stands isolated, breaking in upon human thought abruptly without borrowing from the work of other intellects or following known lines of mathematical thought." It should be emphasized that this statement was made in 1914 in Edinburgh at the Tercentenary of the publication of a volume on logarithms by John Napier (1550–1617).

It might have been thought that 300 years would be sufficient time to establish the merits of an individual as regards his contribution towards the development of such an important subject of elementary mathematics, but from the above it is clear that widely different views relating thereto may be held by those supposed to be in good positions to judge even after this long period of time. A striking feature of the difference of these views is that they exhibit some of the difficulties involved in the study of the history of science, which has been too much neglected during recent years.

It should, however, be emphasized that the view noted in the second paragraph of this letter is in complete disaccord with that usually held by mathematical historians notwithstanding its appearance in a widely consulted book in our schools. Few subjects involve so many clear steps toward their modern status in the school curriculum as that of logarithms. Hence, the given quotation from the report of an international meeting may also serve as an instance of a historical statement which would naturally arouse much disagreement after the facts relating thereto have been carefully considered by the students of a class in the history of mathematics. Such disagreement may tend to fix these facts more clearly in the minds of the student, provided they are freely expressed. (G. A. Miller, University of Illinois.)

It is believed that the darkening of fruits and vegetables, upon being cut and exposed to the air, is in part similar to that age-old process in the soil whereby the ferruginous silicates, sulfides, and anhydrous oxides are oxidized to the ferric compounds to form brown and red soils, according to Jackson B. Hester, Riverton, New Jersey. The iron in the fruits and vegetables is originally in the form of ferrous compounds which do not impart a brown color, but upon exposure to air are oxidized to ferric compounds which are brown. The change of ferrous iron to ferric iron has been verified by the author by extracting apples, horse radish, potatoes, etc., with strong acetic acid and making the test for ferrous and ferric iron. At the outset the iron occurs largely in the ferrous state, but after exposure to the air or upon long storage it appears in the ferric state, thus imparting a brown discoloration.