Exhibition of the Series of Foot Bones Illustrating the Evolution of the Camel, Recently Installed in the Hall of Vertebrate Paleontology of the American Museum of Natural History: W. D. MATHEW.

This series corresponds to that illustrating the evolution of the horse, and is almost equally complete.

It shows the derivation of the camel from small primitive four-toed ancestors which are exclusively North American in habitat. The earliest known ancestors are tiny animals no larger than a rabbit. The camels reached their maximum size and abundance in the Pliocene epoch, when they were much larger than the modern camels. Then they spread to the other continents, disappeared entirely from North America, and became smaller in size and far less numerous in species elsewhere.

Some Erosion Phenomena in St. Vincent and Martinique: EDMUND OTIS HOVEY.

In this paper the author showed lantern slides from some of the photographs taken by him in those islands in 1902 and 1903, for the American Museum of Natural History, which illustrated the development of new drainage systems and the reinstatement of old channels in regions which were most thickly covered with ejecta by the 1902 and 1903 eruptions of the Soufrière and Mont Pelé.

The principal paper of the evening was:

Some of the Localities in France and England where Monuments of the Late Stone and Bronze Ages have been Found: J. HOWARD WILSON.

In considering the subject of these stone monuments, the author confined himself to those found in northern France and southern England, and especially the great groups near Carnac in Morbihau, and the well-known temples of Stonehenge and Avebury, in Wiltshire.

The monuments were divided according to type into several classes, and a description of each of these given briefly with their comparative ages and the probable purposes for which they were constructed. Legends concerning these monuments were cited, and mention was made of the superstition and veneration with which they have been regarded by some of the more ignorant and conservative peasants, causing the worship of stone to be kept up to the present day in some remote districts.

Before closing the paper, attention was called to the engineering skill required in the placing and erection of some of the monuments and the early age at which it made its appearance.

The paper was followed by slides showing photographic views of some of the most famous monuments, maps and drawings of several of the curiously engraved stones.

EDMUND OTIS HOVEY,
Secretary.

DISCUSSION AND CORRESPONDENCE.

THE COMPLEX NATURE OF THORIUM.

TO THE EDITOR OF SCIENCE: The following appeared in *Nature,* April 28, p. 606:

THE COMPLEX NATURE OF THORIUM.

With regard to several letters on thorium and its complex nature that appeared in *Nature* of March 24 and 31, April 7 and 14, and in which my name is mentioned, I take the liberty of adding a few remarks, having had ten years' experience in working with thorium.

In 1897, at a meeting of the British Association in Toronto (Canada), I read a paper in which I pointed out that spectrum evidence proves the complex nature of thorium.

In 1898 (*Chem. Soc. Trans.*, p. 953) I isolated from some thorium fractions an earth with an atomic weight of 225.8 (tetrad). Knowing the difficulties of the separation of rare earths (I have been engaged in this kind of work since 1878), and not wishing to publish a premature conclusion, I did not declare this to be a novel constituent of thorium, but said that foreign earths were present, in spite of the fact that the reaction used ought to have separated them.

In 1901 I published another short paper (*Proc. Chem. Soc.*, March 21, 1901, pp. 67–68), in which I said that "my experiments may be regarded as proving the complex nature of thorium. Thorium was split up into the Th^{α} and Th^{β}. With Th^{β} I obtained so low an atomic weight as $R^{iv} = 220$. The fractions Th^{α} gave by the analysis of the oxalate, though it was prepared by pouring the thorium salt solution into an excess of oxalic acid, in order to avoid the formation of

a basic salt, the high atomic weight $R^{iv} = 236.3$. But I stated expressly, and I feel obliged to repeat it, that these fractions show a great tendency to form basic salts. Assuming these to be normal, a higher atomic weight than the true one is obtained. This is true especially in regard to the oxalate.

The splitting up of thorium into Th^{α} and Th^{β} was, of course, not so sensational an event as the announcement from America of the splitting up of thorium into 'carolinium' and 'berzelium.'

BOHUSLAV BRAUNER.

Bohemian University, Prague,
April 18.

Those who have read my work and heard my recent paper delivered before the Washington, New York and North Carolina sections of the American Chemical Society do not require further information regarding the above. In view of the fact that many British men of science are not familiar with the work and may be misled, it has been deemed wise to despatch the following to the editor of *Nature*.

Re Thorium.—The elementary nature of thorium has been questioned by several workers, namely, Chroustschoff in 1889 (*J. russ. phys. Chem. Ges.*, 29, 206), Rutherford in 1899 (*Phil. Mag.*, 49, 2, 1900), Crookes in 1900 (*Proc. Roy. Soc.*, 66, 406) and in 1901 Brauner (*Proc. Chem. Soc.*, 17, 67) and Baskerville working independently (*Journ. Am. Chem. Soc.*, 23, 761). The methods employed were different in each case.

The undersigned has made no claim of priority as to the idea of the complexity of thorium, but he distinctly claims to have applied novel methods and an old one, which demonstrate to the satisfaction of himself and others familiar with the work, not only the complexity of old thorium, but the existence of two new elements to which the names of carolinium and berzelium have properly been given. The old method was used by Berzelius, who died thirty years before the plaintiff, according to his own statement (April 28, p. 606), began his work on the separation of the rare earths.

Scientific men will await the appearance of the paper, which will be published shortly in the *Journal of the American Chemical Society*, and see that all workers have received full credit for their share in the solution of the question. In the meantime, the letter adverted to, carrying much that is true and a distortion, which any one may verify by reference to the literature, to say the least is in poor taste.

For fear lest the old proverb, '*qui tacet consentire videtur*,' carry too much influence, the above statement is reluctantly made.

CHAS. BASKERVILLE.

UNIVERSITY OF NORTH CAROLINA, U. S. A.,
May 17, 1904.

A REDDISH-BROWN SNOWFALL.

TO THE EDITOR OF SCIENCE: An incident which should, perhaps, be recorded is that of a reddish-brown snowfall which occurred at this place on February 2 last (1904). A light snow was falling on that day and about noon the character of the snow-fall changed to a reddish-brown or light chocolate color. This continued for half or three quarters of an hour, after which the snow-fall of ordinary appearance continued during the afternoon, the colored snow appearing as a well-defined layer between the white snow which fell before and after it. An examination under the microscope showed numerous irregular-shaped, semi-transparent particles with an appearance similar to feldspar. Nitric and muriatic acid applied to them gave no apparent result. Examined microscopically during the snow-fall it appeared that the particles were not carried on the snow, but were embedded in the snow crystals. Other ordinary contaminations were present, but were plainly distinguishable from the peculiar particles in the snow crystals. The phenomenon was observed in two or three near-by towns, but, so far as learned, not outside this immediate vicinity.

EDWARD LINDSEY.

WARREN, PA.,

SPECIAL ARTICLES.

MENTAL EFFICIENCY AND HEALTH.

IN the address as president of the American Society of Naturalists, read by Professor Cattell at the annual dinner, January 1, 1903, and printed in this journal, April 10, 1903, is inserted a table giving the grades for different