

## THE NEBRASKA STATE MUSEUM

ERWIN H. BARBOUR, *Director*

## MANGANESE FULGURITES

BY HAROLD J. COOK

During August, 1924, while doing reconnaissance work near the head of Chugwater Creek, Wyoming, on the ranch of Mr. J. L. Jordon, the writer's attention was called to some unusual and interesting specimens found in a limited area, perhaps an acre or so, on the slope of the small butte flanking the Chugwater Valley. The hills of the region are of Tertiary age, the particular spot under consideration being Oligocene, the Brule stage, or Oreodon beds.

Fossils at this spot are few and fragmentary, although a few characteristic teeth and foot bones were found. The manganese fulgurites in question were dead black with oxide of manganese, and simulated fulgurites so closely that we are calling them *manganese fulgurites*. The surface was strewn with their sections which had plainly weathered out of the matrix. Those in position were vertical and extended into the formation a number of feet. These appear to be fillings of fulgurite tubes, rather than concretionary forms. Some are solid, others show a small central tube, often filled with calcite. Examinations and comparisons made their relation to fulgurites seem reasonably certain. In the field their dead-black color suggested manganese oxide, and the following analysis by Dr. C. J. Frankforter, Department of Chemistry, The University of Nebraska gives the amount:

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Editorial Note.—The Nebraska State Museum has just placed on exhibition, a suite of Manganese Fulgarites such as are herein described. There are some twenty examples in all, representing various sizes and shapes. They closely simulate fulgurites in all outward appearances. This collection was made and donated by Mr. Harold J. Cook, Agate, Nebraska, and is accessioned number 27-7-24.