## Proceedings of the Iowa Academy of Science

Volume 1 | Part 2, 1890-1891; (1887) -

Article 19

1890

## On a Quaternary Section Eight Miles South-East of Des Moines, lowa

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## **Recommended Citation**

Keyes, Charles R. and Call, R. Ellsworth (1890) "On a Quaternary Section Eight Miles South-East of Des Moines, Iowa," *Proceedings of the Iowa Academy of Science, 1(Pt. 2),* 30-30.

Available at: https://scholarworks.uni.edu/pias/vol1/iss2/19

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## IOWA ACADEMY OF SCIENCES.

it is about 50 cents. And improved methods have just been announced by which it may be extracted at a cost of less than 20 cents per pound.

A few months ago a plant was established at Hampton, Iowa, which is working a clay yielding three ounces more of aluminum to the bushel than in any other known locality in the west, and, perhaps, in the United States. The suggestion is important. Iowa has within her borders inexhaustible supplies of good clays admirably adapted for this purpose. But they require careful investigation that they may not be worked indiscriminately and thereby lead to complete failure in many cases. When the industry shall have become thoroughly established the gold fields of California, of Australia, of indeed the whole world will sink into insignificance as compared with the wealth coming from this source.

ON A QUATERNARY SECTION EIGHT MILES SOUTH-EAST OF DES MOINES, IOWA.

BY CHARLES R. KEYES AND R. ELLSWORTH CALL.

The section is located on the line of the Wabash railway about two miles below the little station of Hastie. It forms a continuous exposure of nearly three-fourths of a mile in length; and in some places has almost a vertical face of from 125 to 150 feet. It is capped by twenty feet of loess, carrying characteristic fossils such as Succinea avara Say; Succinea obliqua Say; Helicina occulta Say; Pupa muscorum Linne; Vallonia pulchella Muller; Zonites arboreus, Say; Patula strigosa, Gould; and a large Helix, probably Mesodon thyroides, Say. Below the loess to the track level the section is made up of blue clays and straticulate sands and gravels with occasional large boulders. In the gravel several large fragments of carboniferous limestone with fossils were found. The lower sands rest directly upon the coal measure shales probably since these are well shown in the river bed 10 feet below the track.

The section is of special interest, inasmuch as it is near the terminal moraine of the Des Moines lobe of the great glacier usually referred to the second epoch of the North American Ice Age.

NOTE ON THE DIFFERENCES BETWEEN ACERVULARIA PROFUNDA HALL, AND ACERVULARIA DAVIDSONI EDWARDS AND HAINE.

BY S. CALVIN.

The original description of *Acervularia profunda* Hall, is found in Hall's Report on the Geological Survey of Iowa, published in 1858. The specimens on which the species was founded came from near Independence, in Buchanan county,

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