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Translocation of Iowa's Siouan Mountains

Charles Keyes
exemplified. Disruption of the basaltic rocks, transportation of the resulting debris, accumulation, and induration are in progress through the work of the atmosphere, ground water, running water, waves and currents, and organisms. The youth of most of the resulting sediments, the close areal relations between the sources of debris and sites of deposition, and the present day exemplification of most of the sediment-forming processes which have operated in the past combine to make an inspiring and instructive object lesson in sedimentation. Here are dominant many of the processes which are less well-known and less usual in continental situations. Marine abrasion is the most striking single process. Chemical weathering is the dominant type of disruption. Quartz is absent from the sediments and is practically unknown in the islands. Most of the sand is of organic origin and consists largely of the shells of molluscs, fragments of corals and the tests of foraminifera. The commonest igneous mineral in the fluvial and marine sands is olivine which locally forms the bulk of the deposits. Trade wind directions are so constant that upland flats of wind-swept laterite soil are pronouncedly striated.

STATE UNIVERSITY OF IOWA.

TRANSLOCATION OF IOWA'S SIOUAN MOUNTAINS

CHARLES KEYES

(ABSTRACT)

The lofty Siouan Mountain range, which in Triassic times was upraised across northwestern part of our State, and which was comparable in every way to the present Appalachians of eastern United States, the Juras of France, or the Colorado Rockies of today, were quickly and completely razed to the level of the sea in Jurassic and Early Cretacic days. The disposal of this huge mass attracted little interest. It was naturally assumed that it was swept into the Mexican Gulf.

It now transpires that this was only partially true; only the debris from the near side of the range was thus carried southward. The rock-waste from the north flank found lodgement in large part in the Black Hills region, being represented there by no less than four very considerable formations of strictly epirotic character.

So, another long and curiously missing chapter in Iowa's geological history is recovered and satisfactorily interpreted.

DES MOINES.