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Trenton Limestone in Iowa

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University of Michigan. Here pebble bands are now being made by wind action in marginal areas adjacent to existing glaciers.

STATE UNIVERSITY OF IOWA,

IOWA CITY, IOWA.

THE IOWAN GRAVELS IN NORTHEASTERN IOWA

PAUL T. MILLER

(*Abstract*)

The gravels related to the Iowan glaciation of northeastern Iowa have been studied in the field and laboratory. Three factors were significant in the field correlation, (a) stratigraphic relations; (b) topographic position; and (c) amount of weathering. In the laboratory the size, range, shapes, and lithology of the gravels were studied but little of value for correlation purposes was obtained.

The Iowan glacier advanced over an irregular erosion surface, depositing a sheet of till with an average thickness of less than ten feet. Due to the thinness of the Iowan till, it did not obliterate the pre-existing topography and form a plain as had the preceding Nebraskan and Kansan till sheets, but spread over the surface as a blanket, only modifying the over-ridden topography. As the ice melted, gravels were deposited at three general locations, (1) within the till; (2) at the surface of the till; and (3) in the valleys beyond the melting ice front.

STATE UNIVERSITY OF IOWA,

IOWA CITY, IOWA.

TRENTON LIMESTONE IN IOWA

CHARLES KEYES

(*Abstract*)

Of late, stratigraphic taxonomy and correlation take on new trend from that to which the last generation is accustomed. They neither go to the paleontological extreme in which the life-zones are regarded as passing around the globe like the successive skins of an onion, nor do they severely restrict themselves to the lithologic, or "mapping unit" extreme, in which faunas are largely, if not entirely, ignored. As in so many cases in science generally the truth really lies somewhere midway between the extremes. But the new trend has altogether different basis from that presumed for

the old. It is diastatic in character. So that some of our long recognized geological formations manifestly have much wider expanse, and others very much more restricted distribution than latterly it is the disposition to assign to them.

Recent plotting of the diastatic movements through the ages for the eastern half of the North American continent gives some quite unexpected results in respect to our state of Iowa. The diastatic scheme indicates that the early entrants into the Iowa geological field are not far from right in referring, for instance, our Dubuque section to the New York Trenton, despite the circumstance that their faunal concepts are quite erroneous and that the fauna is really altogether different, a fact which leads the paleontologists to interpret the Iowa section as entirely distinct from that of New York. Although the paleontologists are far from leaving us with that impression, the Trenton limestone appears to have been laid down during one of the greatest transgressions of the sea over the continent that the latter has ever experienced. So that Trenton limestone is a proper title for one of our Iowa formations.

DES MOINES, IOWA.

LARGER PROSPECT OF OUR LÆSS MANTLE

CHARLES KEYES

(*Abstract*)

It is exceedingly unfortunate and disturbing that the læss deposits of our state should ever have been mixed up with the glacial tills, when, indeed, they have no more to do with glaciation than the bed-rock itself. Læss, being mainly wind-borne dust derived from Southwestern deserts, and a deposit being continuously laid down far and wide, inside and outside of the glaciated areas, throughout glacial, as well as interglacial, times, is doubtless being deposited over our state as rapidly and as extensively as læss ever accumulates. It should not, therefore be associated, genetically or otherwise, with our glacial deposits; but be considered wholly apart.

DES MOINES, IOWA.

GEOSYNCLINAL CONCEPT

CHARLES KEYES

(*Abstract*)

Repeated reference of late to the presence of geosynclines in Iowa directs attention to the fact that there appear to be really no

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