

Proceedings of the Iowa Academy of Science

Volume 43 | Annual Issue

Article 66

1936

The Bearing of Cambrian Re-Definition upon Iowa

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Recommended Citation

Keyes, Charles (1936) "The Bearing of Cambrian Re-Definition upon Iowa," *Proceedings of the Iowa Academy of Science*, 43(1), 249-250.

Available at: <https://scholarworks.uni.edu/pias/vol43/iss1/66>

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DECIPHERING AN EARTHQUAKE MESSAGE

M. M. SEEBURGER

An explanation of methods used to determine instrumentally the exact epicentre of an earthquake, also the depth of focus and the acceleration. The use of seismograms to determine (1) typical period of earthquakes in seismic areas, (2) discontinuities in the earth's interior. Strong motion seismograms as an aid to engineers in designing earthquake-proof buildings, bridges and dams.

DES MOINES, IOWA.

INVESTIGATION OF UNDERGROUND WATER
RESOURCES OF TEXAS

JOHN T. LONSDALE

A report of an investigation of underground water resources of several areas in Texas. Describes modern methods of investigation and shows evolution methods of investigation.

DEPARTMENT OF GEOLOGY,
IOWA STATE COLLEGE,
AMES, IOWA.

THE BEARING OF CAMBRIC RE-DEFINITION
UPON IOWA

CHARLES KEYES

Recent necessary restriction of the stratigraphic span of the Cambric period to its original signification that is, with the trilobitic Paradoxides zone as base, does not, fortunately, greatly disturb Iowa's Cambric classification, for the profound erosional conformity at the bottom may well be regarded, or not, as representing Early Cambric time. The Olenellus zone, or Early Cambric of Walcott, therefore, belongs not to the Paleozoic at all, but to the pre-Cambric, or rather Taconic period of the Proterozoic. Of course, Sedgwick's lowest Cambric strata, the Paradoxides-yielding horizon, rests upon old basement gneisses in the Wales region, with one of the most remarkable erosional breaks between nevertheless, the Paradoxides zone is Sedgwick's lower Cambric, the

Olenus or Dicoeloccephalus zone, his middle Cambric, and Lapworth's Ordovician his Upper Cambric. Compromise with overlapping Siluric of Murchison removes from the Sedgwick Cambric his Upper Cambric, leaving his Middle Cambric the Upper, or Late Cambric of our day, and his Lower Cambric our Middle Cambric, while we add a new Early Cambric.

Either one of two courses seems open to us in Iowa (1) Recognition of a three-fold division, the present Late Cambric and Mid Cambric as they are, and imply beneath a hypothetical Early Cambric, represented in Iowa by a great stratal hiatus, with expectation that an equivalent sedimental column will be, sooner or later, found somewhere in nearby territory; or (2) assumption that the entire Cambric is two-fold in character, as is now Sedgwick's original section, calling the present Mid Cambric Early Cambric. In either case Walcott's "Lower" Cambric is definitely Taconic and pre-Paleozoic.

DES MOINES, IOWA.

CURRENT EARLY PALEOZOIC CLASSIFICATION IN IOWA

A. C. TROWBRIDGE

Presentation and discussion of a classification of Cambrian, Ordovician, and Silurian strata recently adopted by the Iowa Geological Survey for use in this state.

STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

ONEOTA CONODONTS

W. M. FURNISH

Recently discovered Conodonts in the Oneota formation of Iowa are illustrated and their stratigraphic significance is discussed.

STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.