

Comment by the Editor

AS A GEOLOGICAL LABORATORY

Once upon a time, eternities ago, Iowa was under the sea. Slowly, ever so slowly, sediment was deposited on the floor of the ocean until, after incomprehensible eons of time, the mighty forces of the earth pushed back the water and the land emerged. But the wind and rain and other agents of destruction played havoc with the barren region. Gradually the surface of Iowa was reduced to the sea level and again submerged.

And so the rock-forming process was repeated, age after age, while the numerous strata, each distinctive in composition, were superimposed one upon another. No great diastrophic movement intervened to disturb the normal order of the layers, though the whole rock structure tilted toward the southwest. The edge of each broad stratum is thus exposed in proper sequence to the view of any one who travels from Red Oak to McGregor. Of course the solid rock, except in river valleys and artificial excavations, is obscured by the mantle of soil that was left by the glaciers.

To the geologist, Iowa is a paradise. It is as though all nature had conspired throughout the ages to build a gigantic laboratory wherein the history

of the earth would be revealed to men who could decipher the pages of that rocky palimpsest. The eternal conflict between the sea and the land is fully recorded in the stratified form of the bedrock; the amazing transition from a tropical climate to ages of ice is portrayed in measures of coal and in granite boulders; the story of life is written clear and deep in the limestone cliffs.

Into this geological garden of Eden came Thomas Nuttall in the memorable summer of 1809. It was he who observed that the rocks of Iowa contained the same kinds of fossils as the limestone hills of Derbyshire, England, and thus supplied the key for the correlation of time and place. Since then other scientists — Nicollet, Owen, Agassiz, Wachsmuth, Calvin, Shimek, and Kay — have followed the trail he blazed, reading the signs of the past and reconstructing in vivid detail from the evidence displayed many of the world-wide episodes in the evolution of the earth. The story of Iowa as a geological laboratory is filled with famous names and most significant discoveries.

J. E. B.