

in the customary fine-print, which usually leads the student to ignore them. There are more than thirty tables scattered through the text and an additional three-page "Table of Reference" at the close of the book.

Altogether, the authors have produced a text-book of a high grade of excellence which, while it is on the

whole conservative in the arrangement and treatment of the material, never loses sight of the aliveness of the subject and gives the student a glimpse of what lies beyond the elementary groundwork. It should prove in all respects a most teachable text.

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REPORTS

THE THIRD ANNUAL TRI-STATES (ILLINOIS, WISCONSIN, IOWA) GEOLOGICAL FIELD CONFERENCE

THE geologists and students of geology in the three states mentioned in the title were invited to the annual Tri-States Field Conference on November 16 and 17, 1935. The conference was held this year in Clinton, Jackson and Dubuque counties in eastern Iowa. It was conducted by A. C. Trowbridge, assisted by A. C. Tester and M. L. Thompson.

There were in attendance 124 persons, who traveled in 34 cars. Eleven colleges and universities, two state geological surveys and one oil company were represented.

The geology of routes and stops was described in a nine-page mimeographed log and a blue-print map, handed to each participant at the beginning of the conference.

Leaving Clinton, Iowa, at 9:00 A.M. on Saturday, the cavalcade arrived at Dubuque, Iowa, at 5:30 P.M., having traveled 123 miles and made 11 stops for the study of geologic features. On this day's trip all stratigraphic horizons from the top of the Ordovician Dubuque dolomite to the top of the Silurian Hopkinton dolomite were seen. The section at Bellevue in Jackson County was of special interest, because of the difficulty of classifying it. The uppermost beds of the Dubuque dolomite are exposed at the base of this section, and beds of Kankakee or Hopkinton age at the top.

Also, Kansan till, the basal portion of almost completely eroded Yarmouth gumbotil, an Illinoian channel of Mississippi River connecting Maquoketa and Wapsipinicon rivers, Peorian loess, and a hill at Fulton, Illinois, cut off from the Iowa bluff by Mississippi River in Wisconsin time, were observed and discussed.

In addition, caves, sinks and natural bridges in Hopkinton dolomite were visited near Maquoketa, Iowa, and the party inspected Crystal Lake Cave that was also once a lead mine, near Dubuque.

The Saturday route crossed an inlier of Maquoketa shale in the Preston anticline in southern Jackson County.

A general meeting was held in Dubuque on Satur-

day night. No scientific papers were presented, but the geologic problems of the area were freely discussed. By separate vote of members of the three state groups, A. H. Sutton was elected to succeed M. M. Leighton as member of the executive committee for Illinois, F. T. Thwaites to succeed W. H. Twenhofel for Wisconsin, and A. C. Tester to succeed A. C. Trowbridge for Iowa. As the conference will be held in Illinois in 1936, Dr. Sutton is chairman of the executive committee for one year.

On Sunday, November 17, the Ordovician Saint Peter, Platteville, Decorah and Galena formations and their subdivisions were studied at Dubuque, and in a famous section at Spechts Ferry. The party also drove through Couler Valley and visited a good exposure of Nebraskan drift capping a high Mississippi River bluff, at Dubuque.

There is evidence that in pre-Nebraskan time the Mississippi River drained a peneplane and flowed in a wide, shallow valley about 75 miles west of its present course; that it was forced to take its present position along the east border of the Nebraskan glacier; that it was intrenched in this course following regional uplift; that Little Maquoketa River, a tributary to the Mississippi, developed Couler Valley; that in about Kansan time Couler Valley was abandoned by diversion through piracy of Little Maquoketa River to the Mississippi above Dubuque; that by Wisconsin time Mississippi and Little Maquoketa rivers had so deepened their valleys as to leave Couler Valley hanging about 250 feet above the master stream at both ends; that Couler Valley was again occupied by Little Maquoketa River and by a part of the Mississippi River when it carried Wisconsin glacial water and deposited glacio-fluvial material in its own valley and in Couler Valley; that water continued to flow through Couler Valley for a time after the retreat of the Wisconsin glacier while part of the fill was being removed; and that still later the Little Maquoketa was again diverted directly to the Mississippi, and Couler Valley was again left without a stream as it is to-day.

The conference closed at Dubuque at noon on Sunday.

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