

**64 ANNUAL
TRI-STATE GEOLOGICAL FIELD CONFERENCE**



GUIDEBOOK

*Pleistocene, Mississippian, & Devonian Stratigraphy
of the Burlington, Iowa, Area*



October 12-13, 2002

Iowa Geological Survey

Guidebook Series 23

Cover photograph: Exposures of Pleistocene Peoria Loess and Illinoian Till overlie Mississippian Keokuk Fm limestones at the Cessford Construction Co. Nelson Quarry; Field Trip Stop 4.

64th Annual Tri-State Geological Field Conference



Pleistocene, Mississippian, & Devonian Stratigraphy of the Burlington, Iowa, Area

Hosted by the Iowa Geological Survey

prepared and led by

Brian J. Witzke

Iowa Dept. Natural Resources
Geological Survey
Iowa City, IA 52242-1319

Stephanie A. Tassier-Surine

Iowa Dept. Natural Resources
Geological Survey
Iowa City, IA 52242-1319

Raymond R. Anderson

Iowa Dept. Natural Resources
Geological Survey
Iowa City, IA 52242-1319

Bill J. Bunker

Iowa Dept. Natural Resources
Geological Survey
Iowa City, IA 52242-1319

Joe Alan Artz

Office of the State Archaeologist
700 Clinton Street Building
Iowa City IA 52242-1030

October 12-13, 2002

**Iowa Geological Survey
Guidebook 23**

Additional Copies of this Guidebook May be Ordered from the
Iowa Geological Survey
109 Trowbridge Hall
Iowa City, IA 52242-1319
Phone: 319-335-1575

or order via e-mail at:

<http://www.igsb.uiowa.edu>

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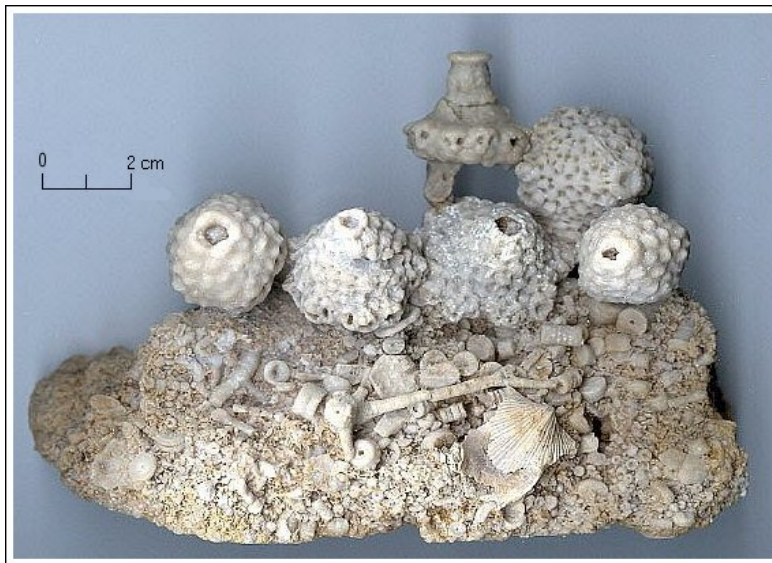
Sorora, and St. Louis formations, as well as underlying Upper Devonian English River Siltstone and Maple Mill Shale, and an overlying Pennsylvanian sandstone channel fill and Pleistocene strata.

The Pleistocene Illinoian ice advanced south across most of northern Illinois and westward into the southeastern-most portion of Iowa. The Illinoian ice overrode Paleozoic bedrock and earlier pre-Illinoian glacial deposits that were emplaced by a series of ice sheets that advanced into Iowa from the north and northwest between about 2,500,000 and 500,000 years ago. This field trip will visit exposures of Illinoian glacial till and a possible pre-Illinoian till. Additionally, we will see a lacustrine deposit that fills a bedrock channel (possibly an Illinoian ice-marginal lake), a well-developed Sangamon Geosol, and a thick, section-capping loess sequence.

The trip will also see examples of karst development in Mississippian carbonate rocks, the many faces of the Mississippi River floodplain, and geode development in the Warsaw Formation.

After the Tri-State banquet we will hear Forest Gahn (University of Michigan Museum of Paleontology and Burlington native) discuss the spectacular Burlington crinoids. These crinoids were popular even before the geology of the region was understood. In his 1895 publication on the Geology of Des Moines County, Charles Rollin Keyes commented that “*Burlington crinoids are known throughout the world as objects of surprising beauty. They are sought for and highly prized everywhere. In consequence, a great deal of attention has been directed to the consideration of the fossils in the rocks, rather than the rocks themselves.*”

The field trip organizers and other staff of the Iowa Geological Survey welcome all trip participants from Wisconsin, Illinois, Missouri, and elsewhere to Iowa. We hope that you and all of the Iowa participants will enjoy an informative, enjoyable, and safe 64th Annual Tri-State Geological Field Conference.



A cluster of Burlington Formation Crinoids found and prepared by Carl Cook. This picture appeared on the cover of the October 2000 MAPS publication and displays three *Uperocrinus pyriformis* (at each end and at top) and three *Phyetocrinus ventricosus* (identifications by Rick Poropat).

Photo and information from: <http://www.lakeneosho.org/>