Bedrock Geology of the Cedar Falls (Iowa) 7.5' Quadrangle

In the mapping area, Middle Devonian rocks, from the base bedrock surface, are most widely distributed in the Cedar Valley and Gizzard Creek Members. Development of a narrow limestone unconformity at the base of the Devonian units, in the Upper Cedar Valley Group, is well documented. The map unit is typically thin from Cedar Falls to Waterloo, and thickens to the southeast. The Scott Creek Member is the upper part of the Lower Devonian Coralville Formation. This unit is broken into two members based on the presence of a thin limestone unit. The lower Gizzard Creek Member is fossiliferous and less dolomitic, while the upper Quarry Creek Member is the most dolomitic unit of the Coralville Formation.

The map and cross section are based on interpretations of the best available information at the time of the mapping project. The project was supported by the Iowa Geological Survey (IGS), Iowa Department of Natural Resources, State Field Conference, September 29-30, 2006. The stratigraphic section includes a map of the surface geology and a bedrock geology cross-section. Field data was generated by University of Iowa student Michael Bounk and others. The data was compiled and integrated by Deb Quade and others. The project was completed under the direction of Casey Kohrt.

BIOGEOCHEMICAL OCCURRENCE

The Cedar Falls 7.5' Quadrangle is underlain by Middle Devonian rocks, from the base bedrock surface, which are most widely distributed in the Cedar Valley and Gizzard Creek Members. Development of a narrow limestone unconformity at the base of the Devonian units, in the Upper Cedar Valley Group, is well documented. The map unit is typically thin from Cedar Falls to Waterloo, and thickens to the southeast.

The Scott Creek Member is the upper part of the Lower Devonian Coralville Formation. This unit is broken into two members based on the presence of a thin limestone unit. The lower Gizzard Creek Member is fossiliferous and less dolomitic, while the upper Quarry Creek Member is the most dolomitic unit of the Coralville Formation.

ACKNOWLEDGEMENTS

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Correlation of Map Units

The Cedar Falls 7.5' Quadrangle is underlain by Middle Devonian rocks, from the base bedrock surface, which are most widely distributed in the Cedar Valley and Gizzard Creek Members. Development of a narrow limestone unconformity at the base of the Devonian units, in the Upper Cedar Valley Group, is well documented. The map unit is typically thin from Cedar Falls to Waterloo, and thickens to the southeast. The Scott Creek Member is the upper part of the Lower Devonian Coralville Formation. This unit is broken into two members based on the presence of a thin limestone unit. The lower Gizzard Creek Member is fossiliferous and less dolomitic, while the upper Quarry Creek Member is the most dolomitic unit of the Coralville Formation.