

"Linking Iowa's Geological Past to the Present"

Summer 2002 Project

Developed by Margaret A. Hogan

Description of project:

My project will use specimens collected during the week to encourage my eighth grade earth science students to appreciate Iowa's diverse geological past and the importance of geology in their present day lives.

Objectives/goals of project:

Students will be able to identify eolian sand, limestone, and Hexagonaria colonial coral (or possibly other sediments, rocks, and fossils found in Iowa).

Students will be able to describe how the above specimens were deposited in Iowa and where the specimens may be found in Iowa today.

Students will be able to explain the present day importance of the specimens to Iowans.

Implementation statement:

The project will be used to relate the Geological Time Table to Iowa's geological history and to relate different types of geological specimens to rocks and sediments found in Iowa today.

(Students will have previously studied the Geological Time Table and will have learned the three basic types of rocks along with examples of each type.)

Evaluation component:

The effectiveness of the project will be measured by an evaluation process that will include students orally identifying the above specimens; students locating on a map where the specimens may be found in Iowa; and students describing why the specimen was found in a particular area of Iowa and what the economic importance of the particular specimen is in Iowa.

Lesson plan:

Day One: Maps of landform regions, materials, and terrain characteristics of Iowa will be given to students to record information about glaciers of Iowa. Time frame and location of glacial movement across Iowa will be discussed and recorded on the map, as well as, locations (if any) of findings in Iowa of the three types of rocks. Also, Devonian age fossils and their habitats will be examined for their connection to Iowa's geological past.

Day Two: Students will take a field trip to the Coralville Lake Devonian Fossil Gorge where specimens of rocks and fossils that are found in Iowa will be examined by students and the specimen's place of collection will be discussed. Also, the present day use of each specimen will be talked about. Students will be given the assignment to collect samples of rocks, fossils, and sands from the area where they live.

Day Three: Students' collected specimens will be examined and compared to previously identified specimens. Students will name and describe in writing their specimen, its means of deposition and/or formation, and its economic importance in Iowa.

Day Four: Presentation about Landforms in Iowa from Iowa DNR, Geological Survey Bureau website (www.igsb.uiowa.edu) will be shown (available in Fall of 2002). Students will orally identify the samples of eolian sand, limestone, and Hexagonaria colonial coral (or possibly other fossils, rocks, and sediments found in Iowa) for the teacher.

Materials Needed: Copies of attached handouts; samples of eolian sand, limestone, and Hexagonaria colonial coral (or possibly other fossils, rocks, and sediments found in Iowa); and reference book: Iowa's Geological Past, Three Billion Years of Change by Wayne I. Anderson.

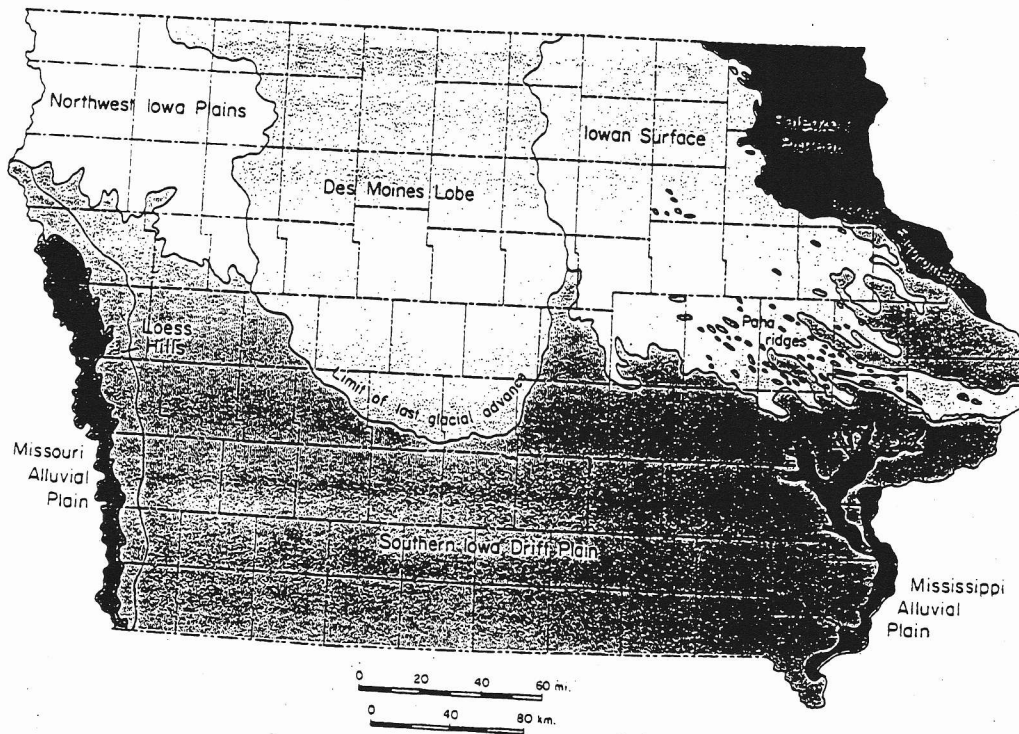


Figure 1. Landform regions of Iowa (from Prior, 1991, p. 31)

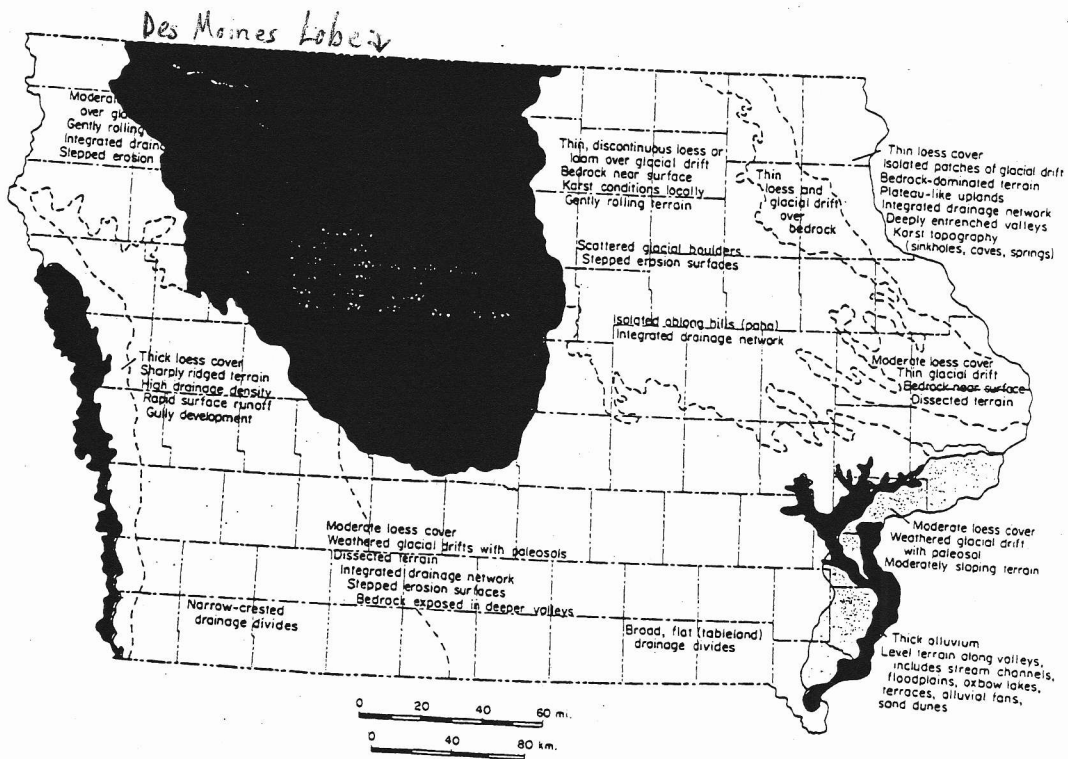


Figure 2. Landform materials and terrain characteristics of Iowa (from Prior, 1991, p. 34).