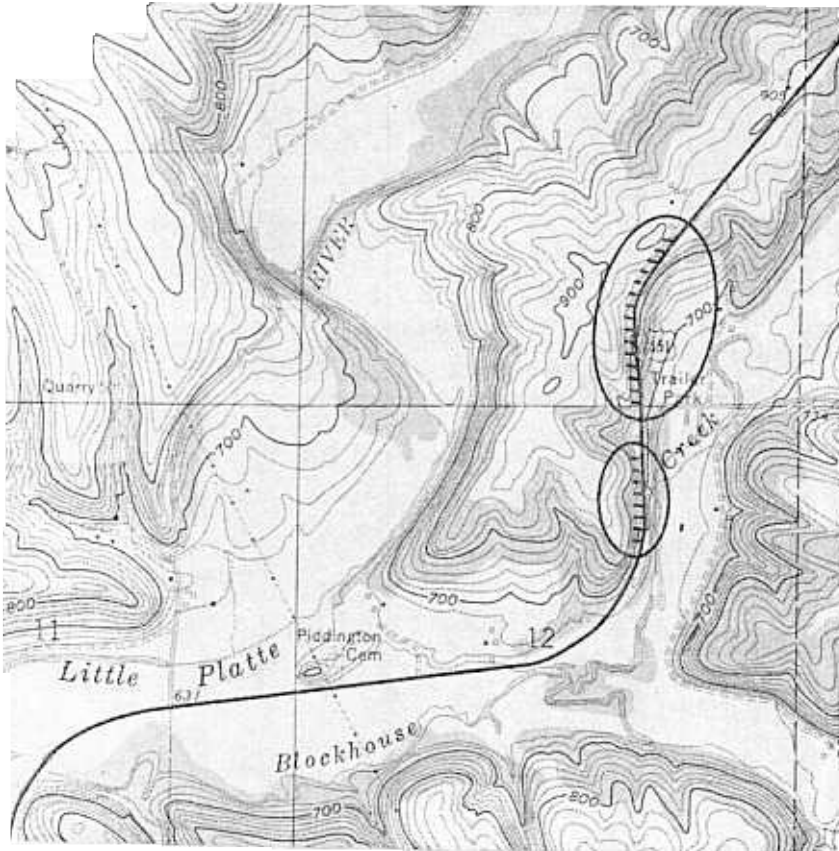


Title: Hoadley Hill

Location: Exposure in roadcut at north side of U. S. Highway 151 about 6.5 miles southwest of Platteville in the NW $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 12, T.2N., R.2W., Grant County (Dickeyville 7.5-minute topographic quadrangle, 1972).



Author: M. E. Ostrom (modified from Agnew et. al., 1956)

Description: This is the reference section for the Platteville Formation. The strata exposed here are the upper part of the St. Peter Sandstone, the Glenwood Formation, a complete section of the Platteville Formation, and the lower part of the Decorah Formation. Description from Agnew et. al., (1956) is:

#### ORDOVICIAN SYSTEM

##### Decorah Formation

##### Spechts Ferry Shale Member (+1.0 feet)

62.9' - 63.4'	0.5'+	Shale, bluish-green.
62.7' - 62.9'	0.2'	Bentonite, white; weathers orange brown.
62.5' - 62.7'	0.2'	Shale, yellowish-green above to bluish-green below.

62.4' - 62.5'      0.1'      Shale, brown and olive, soft.

Platteville Formation (54.3 feet)

Quimbys Mill Member (0.3 - 0.5 feet)

62.0' - 62.4'      0.4'<sub>+</sub>      Limestone, dark purple, fine-crystalline, dense, conchoidal fracture; very wavy upper surface; thin dark-brown to black, fossiliferous platy shale parting at base.

McGregor Limestone Member (30.9 feet)

61.1' - 62.0'      0.9'      Limestone, light-gray, very fine crystalline, very dense, conchoidal fracture like "glass rock" above, fairly massive, very fossiliferous; wavy upper surface.

60.4' - 61.1'      0.7'      Limestone as next above but less dense, medium-bedded above to thin-bedded below, fossiliferous wavy upper surface.

58.8' - 60.4'      1.6'      Dolomite, light olive drab, fine crystalline, "sugary", argillaceous, very thin-bedded; modular.

55.8' - 58.8'      3.0'      Dolomite as above but thick-bedded; calcite near middle.

55.2' - 55.8'      2.6'      Limestone, thin-bedded yet stands massively as one unit; light greenish gray brown; weathers brown, with a few argillaceous streaks; sparingly fossiliferous, but with fossils and fucoids on top surface.

51.8' - 55.2      3.4'      Limestone, thin-bedded as above but the beds are distinct; modular beds and shaly partings; argillaceous is upper 0.3 feet, which is very fossiliferous

48.2' - 51.8'      3.6'      Limestone, light buffish gray, in medium to thick beds; in places gradational into above unit.

44.3' - 48.2      3.9'      Limestone, light greenish to bluish gray, in massive beds but composed of thin beds which are not separated; ample shaly material in wavy bands; fairly fossiliferous, argillaceous; a peculiar mottled light gray and darker gray 0.1-foot zone, 1 foot below top.

40.3' - 44.3'      4.0'      Limestone, light gray, very fine crystalline, very dense, sublithographic, in extremely thin and modular beds with thin calcareous shaly partings which become thinner below; the shale beds are light grayish blue, mottled, very fossiliferous; weathers slightly recessed.

40.3'	3.6'	Limestone, as above, but beds are not quite as thin; fossiliferous; poor gastropod zone 1.7 feet above base; shaly zone at base.
36.7'	3.6'	Limestone, dolomite, light-gray, fine crystalline, very slightly argillaceous, very fossiliferous, medium-bedded; indistinct argillaceous partings, not wavy; calcite and limonite, especially in basal 0.6 feet.

Pecatonica Dolomite Member (21.5 feet)

28.3' - 33.1'	4.8'	Dolomite, light grayish brown, very coarse crystalline and vuggy, upper 2 feet a mixture of lithology and a somewhat argillaceous fine crystalline "sugary" laminated dolomite; a 1-foot bed of very vuggy dolomite from 1.8 to 2.8 feet above base; shaly in lower part; stylolitic partings 1 foot above base.
21.4' - 28.3'	6.9'	Dolomite, medium gray, laminated, somewhat argillaceous, fine-crystalline "sugary", fossiliferous, especially in lower 0.9 feet; medium- to thick-bedded; shaly at top; weathers brownish in lower 2.5 feet.
- 21.4'	3.6'	Dolomite, medium gray, laminated, argillaceous; very fossiliferous partings.
17.8'	1.4'	Dolomite, light grayish brown, very coarse crystalline and vuggy; thin brownish gritty dolomitic and platy shaly parting at top.
13.6' - 16.4'	2.8'	Dolomite, medium gray, laminated, somewhat argillaceous, fine crystalline.
13.6'	2.0'	Dolomite, medium gray, laminated, argillaceous, silty and sandy with fine to coarse quartz grains similar to those of the St. Peter Sandstone, phosphate nodules abundant (especially in two zones, one at base, the other 1 foot above base).

Glenwood Formation (1.5 feet)

- 11.6'	0.4'	Shale, sandy with rounded quartz grains, khaki to drab, soft; phosphate nodules.
11.0' - 11.2'	0.2'	Shale, sandy, olive to grayish brown; mottled yellowish brown, friable.
10.4 - 11.0'	0.6'	Shale, sandy, medium- to dark-gray, olive, blocky, very hard.

10.4'      0.3'      Shale, medium-gray, blocky, hard, sandy; streak of carbonaceous material at top.

St. Peter Sandstone Formation (+10.2 feet)

10.0' - 10.1'	0.1'	Sandstone, red and white; rounded; frosted, coarse to medium-grained.
10.0'	0.2'	Sandstone, gray, pinkish, very friable.
9.8'	0.1'	Sandstone, brown, iron-stained, hard
9.7'	1.3'	Sandstone, yellow to gray, very friable, with irregular lower surface.
8.3'    8.4'	0.1'	Sandstone, light-gray, very friable.
8.1'    8.3'	0.2'	Sandstone, yellow to dark-brown, laminated, hard.
7.0'    8.1'	1.1'	Sandstone, gray and yellow; hard irregular lower surface.
7.0'	7.0'+	Sandstone as above, but medium- to fine-grained; spoils.

BASE OF EXPOSURE

Significance: This is the reference section for the Platteville Formation. The contact relationships and lithologies of the St. Peter, Glenwood, Platteville, and Decorah Formations can be examined.

Note the lithology, mineralogy, and structure of the St. Peter Formation. What direction did it come from? Does it contain evidence of life? How do you account for its mineral homogeneity? What was the environment of deposition? Does it change toward the top? What is the significance of no change? of change? What is the relationship of the St. Peter to the Glenwood? Note the various beds of the Glenwood. What is their significance? If they could be traced for long distances of several hundred miles, what would be the significance? What is the nature and significance of the Glenwood/Platteville contact? Note the variable Platteville lithology, i.e. phosphate nodule beds, fossil beds, sandy beds, etc. What is their significance? What would be the significance if they could be traced several hundred miles?

References: Dapples, 1955; Agnew et. al., 1956; Templeton and Willman, 1963; Ostrom, 1964 and 1970.