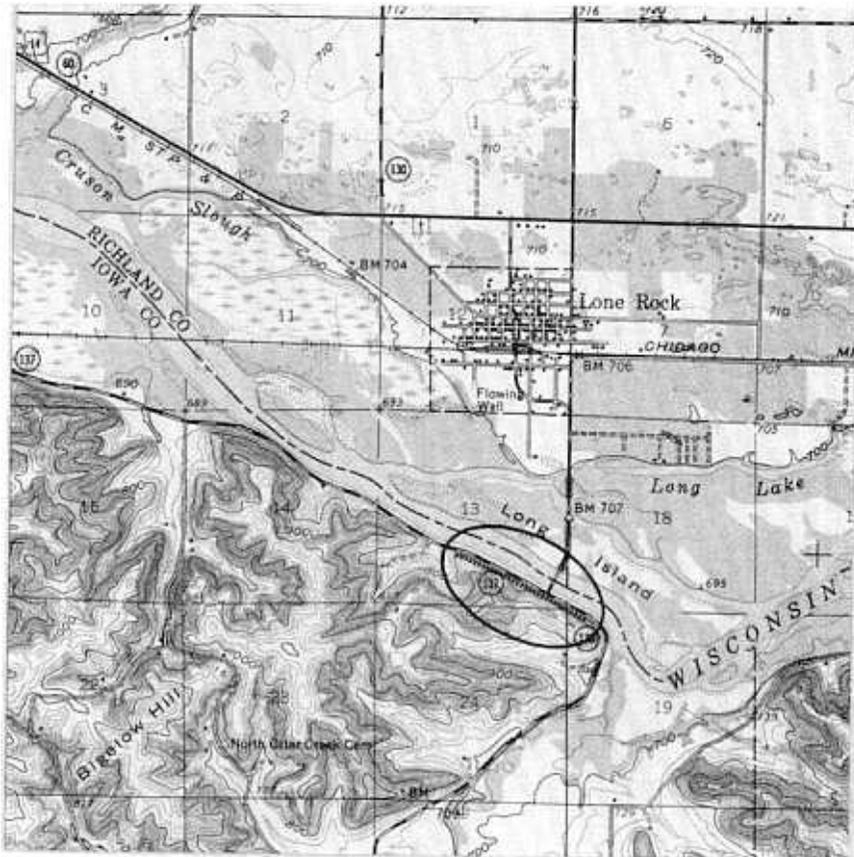


Title: Lone Rock South

Location: Exposure in roadcut at south end of Highway 130 bridge over Wisconsin River in south bluff of Wisconsin River in the SE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 13, T.8N., R.2E., Iowa County (Spring Green 15-minute topographic quadrangle, 1960).



Author: M. E. Ostrom

Description: Exposure of Wonewoc and Tunnel City Formations. Here the Iron-ton Member of the Wonewoc is absent, the Birknose Member of the Lone Rock is thinned, the interbedding of the Mazomanie and Reno Members is shown, and abundant sedimentary structures can be examined.

A description is:

CAMBRIAN SYSTEM  
Tunnel City Group

Lone Rock Formation

Reno Member (+60.0')

85.0' - 145.0'

60.0'

Sandstone, light yellow brown, fine-grained, thin to medium bedded, cross-bedded, and dolomitic with a moderate amount of glauconite.

Mazomanie Member (10.0')

70.5' - 85.0'      10.0'      Sandstone, light gray, fine-grained, medium-bedded, cross-bedded, with some burrows.

Reno Member (4.5')

70.5' - 75.0'      4.5'      Sandstone, light yellow brown, fine-grained, thin-bedded, abundant cross-bedding, very glauconitic, with some thin beds of intraformational conglomerate. Some beds burrowed. Conglomerate at base.

Mazomanie Member (6.0')

64.5' - 70.5'      6.0'      Sandstone, light brown mottled brown, fine-grained, very silty, dolomitic, with few thin clean sand layers. Has reworked appearance.

Reno Member (7.0')

57.5' - 64.5'      7.0'      Sandstone, light yellow brown, fine and very fine-grained, cross-bedded, dolomitic and very glauconitic. Few thin beds of conglomerate and 1" beds of slightly sandy and glauconitic, dolomitic siltstone interbedded with green shale and sand and glauconite.

Mazomanie Member (5.0')

52.5' - 57.5'      5.0'      Sandstone, light yellow gray, fine-grained, thin and medium bedded, cross-bedded.

Reno Member (23.0')

29.5' - 52.5'      23.0'      Sandstone, light yellow green, fine and very fine-grained, thin and medium bedded, cross-bedded, glauconitic, dolomitic. Many thin beds of intraformational conglomerate and 1-foot conglomerates bed at base.

Tomah Member (7.0')

22.5' - 29.5'      7.0'      Sandstone, very light yellow brown, very fine-grained, shaly and dolomitic with mica flakes on bedding planes, slightly glauconitic, thin and irregular bedding, blocky fracture. More shaly and micaceous toward base.

Birkamose Member (2.5')

2.15' - 22.5'      1.0'      Sandstone, brown and light yellowish brown, fine and very fine-grained, dolomitic, very glauconitic, with abundant sandstone pebbles.

20.0' - 21.5'            1.5'    Dolomite, reddish brown, fine crystalline, very sandy, glauconitic, with abundant sandstone pebbles in lower 1.0'. Slightly uneven base.

Elk Mound Group

Wonewoc Formation

Galesville Member (+20.0')

0.0' - 20.0'            +20.0'    Sandstone, very light yellowish gray, fine and medium-grained, thick-bedded, cross-bedded. Some beds have thin discontinuous green shale partings that follow cross beds.

BASE OF EXPOSURE

Significance: At this exposure the major items of interest are the relationship of the Galesville to Lone Rock, absence of the Iron-ton, interbedding of the Mazomanie and Reno members, and presence of abundant intraformational conglomerates. What is the contact relationship of the Wonewoc Formation with the Lone Rock Formation? What happened to the Iron-ton Member? How does this relate to other members such as the                      and Sunset Point? What is the significance of the Birkmose Member and especially its conglomerative character? Examine the sedimentary structures in the Lone Rock Member. What do they signify? What is the significance of cross-bedding? Ripple marks? Do they differ from the Mazomanie to the Reno to the Galesville? How do you explain the intrafractional conglomerates? Why is glauconite concentrated in some beds and not others? What fossil evidence can you find? What is your interpretation of the environment and depositional history of the Wonewoc/Tunnel City?

References: Ostrom, 1964, 1967, and 1970.