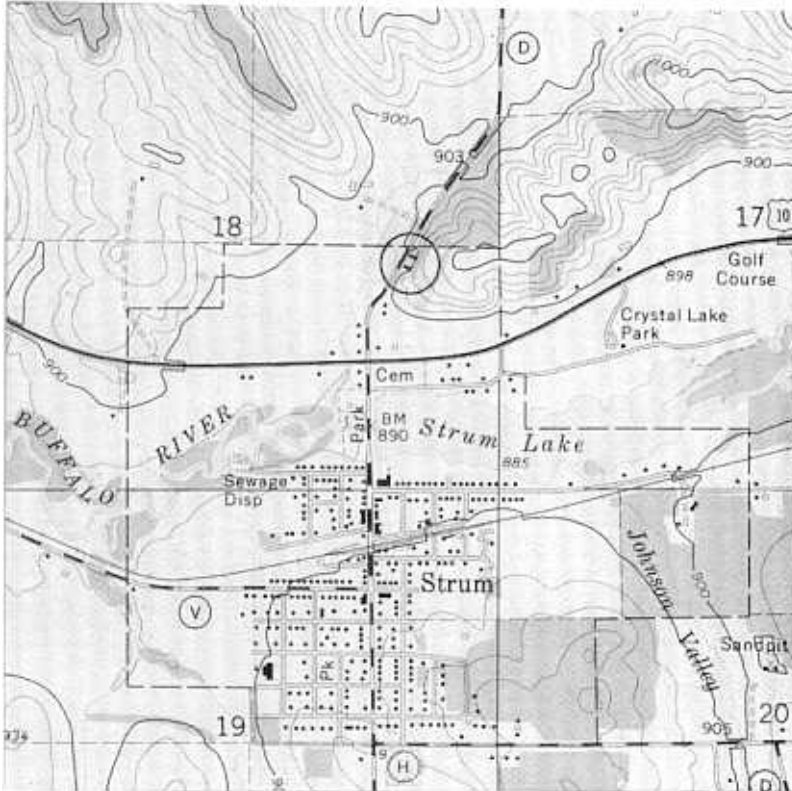


Title: Strum North

Location: Abandoned quarry at east side of County Trunk Highway "D" 0.2 miles north of its junction with Highway 10 at the north edge of the Village of Strum in the NE $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 18, T.24N., R.8W., Trempeleau County (Strum 7.5-minute topographic quadrangle, 1973).



Author: M. E. Ostrom (modified from Ostrom, 1966 and 1969, and Morrison, 1968).

Description: This stop is one of the better exposures of the Eau Claire Formation in Wisconsin and is intended to show characteristics of lithology and paleontology. As one proceeds eastward across Wisconsin this lithology is lost. It is believed that the Eau Claire lithology is at least in part laterally transitional with that of the Galesville and Mt. Simon as was described by Twenhofel, Raasch, and Thwaites (1935). It is also believed that its disappearance eastward is in part due to pre-Galesville erosion as is discussed under the Bruce Valley Quarry Stop. In support of this latter contention it must be stated that Twenhofel, Raasch, and Thwaites (op. cit) indicated the Eau Claire can be subdivided into two faunal zones in this area and that traced eastward these disappear, first the upper and then the lower, suggesting a cut-off at the top of the Eau Claire. If the Eau Claire was deposited during transgression as is now believed, then it is difficult to explain an apparent off-lap of beds except by post-Eau Claire erosion.

CAMBRIAN SYSTEM
(ST. CROIXAN SERIES - DRESBACHIAN STAGE)
EIK MOUND GROUP
EAU CLAIRE FORMATION (57.5')

- | | | | |
|-----|-------------|------|---|
| 13. | 49.5-57.5' | 8.0' | Sandstone, light yellowish-gray, fine and very fine-grained, very glauconitic, weathers as thick-bedded unit but is thin- to medium-bedded. Contains fossil fragments, especially oboloid brachiopods. |
| 12. | 43.0-49.5' | 6.5' | Sandstone, light yellow-brown, fine and very fine-grained, little glauconite, thin- to thick-bedded, few green shale partings. Abundant <u>Crepicephalus</u> and other darker fossils materials including brachiopods. Grades down to |
| 11. | 37.5-43.0' | 5.5' | Sandstone, yellow-brown, fine and very fine-grained, trace of glauconite, mostly thick-bedded. Contains <u>Crepicephalus</u> in upper thin-bedded portion - <u>Cedaria</u> in lower part. |
| 10. | 36.5-37.5' | 1.0' | Siltstone, clayey, gray-green interbedded with fine-grained sandstone. |
| 9. | 35.0'-36.5' | 1.5' | Sandstone, light yellow-gray, fine- and very fine-grained, glauconitic, appears thick-bedded but weathers thin-bedded near top. Contains trilobite fragments.' |
| 8. | 33.0-35.0' | 2.0' | Sandstone, similar to above but thinner bedded and more irregularly bedded with clay partings. Abundant trilobite fragments. |
| 7 | 29.0-33.0' | 4.0' | Sandstone, bright yellowish-gray, fine and very fine-grained, glauconitic, thick-bedded but weathers thin-bedded near top. Contains trilobite fragments. |
| 6 | 25.5-29.0' | 3.5' | Sandstone, clayey, yellowish-brown, mottled gray, thin and irregular bedding, soft, with thin clay seam at bottom. |
| 5. | 22.5-25.5' | 3.0' | Sandstone, yellowish-gray, fine and very fine-grained, glauconitic, thick-bedded, hard, may thin to less than 2 feet. |
| 4. | 17.5-22.5' | 5.0' | Sandstone, light gray-brown, fine to very fine-grained, slightly glauconitic, micaceous, thin-bedded, irregular bedding in upper 1 foot. |
| 3. | 13.5-17.5' | 4.0' | Claystone, very silty, dark gray, micaceous, bedded, interbedded with few very fine-grained sandstone layers. Very soft. |
| 2. | 6.0-13.5' | 7.5' | Sandstone, light gray-brown, fine to very fine-grained, thin-bedded with thicker beds in top, slightly glauconitic, micaceous, abundant animal trails. |
| 1. | 0.0- 6.0' | 6.0' | Sandstone, light gray-brown, fine to very fine-grained, thin-bedded, slightly glauconitic, micaceous, numerous trails markings. Trace of <u>Cedaria</u> throughout. |

Quarry floor.

Significance: The Eau Claire Formation is the oldest major fossil-bearing formation in Wisconsin. Rocks of Precambrian age were first studied in the Upper Mississippi Valley area from where all of the formation names were taken. Although early subdivisions were based on lithology, later study produced a classification based on paleontology and especially on zonation using trilobite. Thus, the Eau Claire was subdivided in ascending order into the Cedaria, Crepicephalus, and Aphelaspis zones. The youngest, or Aphelaspis zone, is not present in this area. Sketches of Cedaria and Crepicephalus are shown below. What is the significance of focal zones? Find the contact of the two zones at this stop. How do you interpret such contacts? Supposedly, the zones do not overlap. Why is there no overlap? Or can you demonstrate overlap? What is the environmental, geological and ecological significance of such a contact?

References: Twenhofel, Raasch, and Thwaites, 1935; Thwaites, 1935; Ostrom 1964, 1966, and 1970; Morrison, 1968.