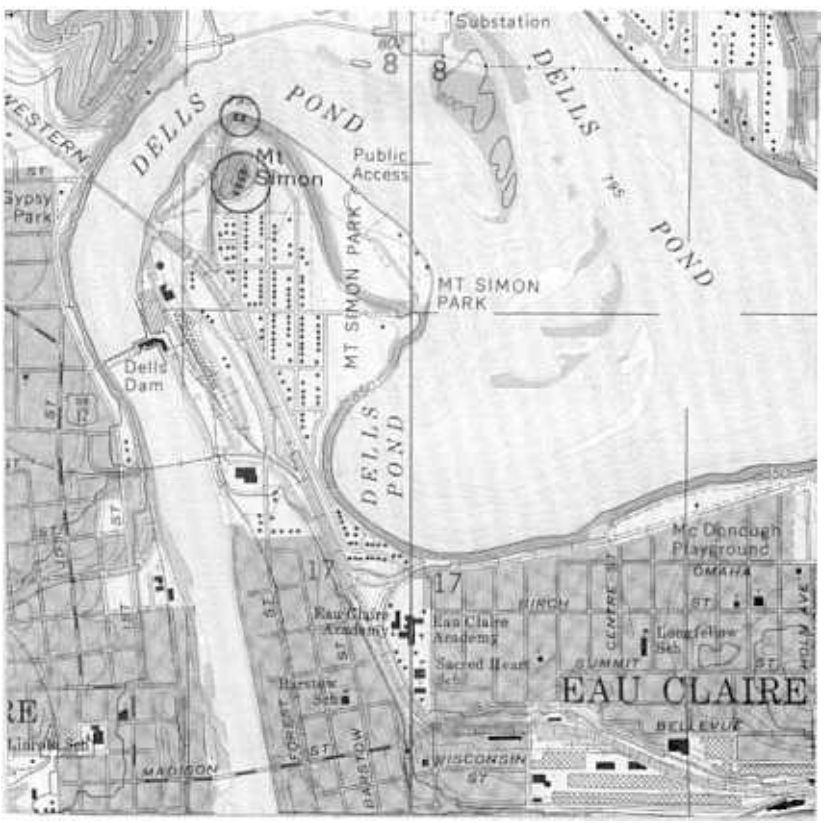
Title: Mt. Simon

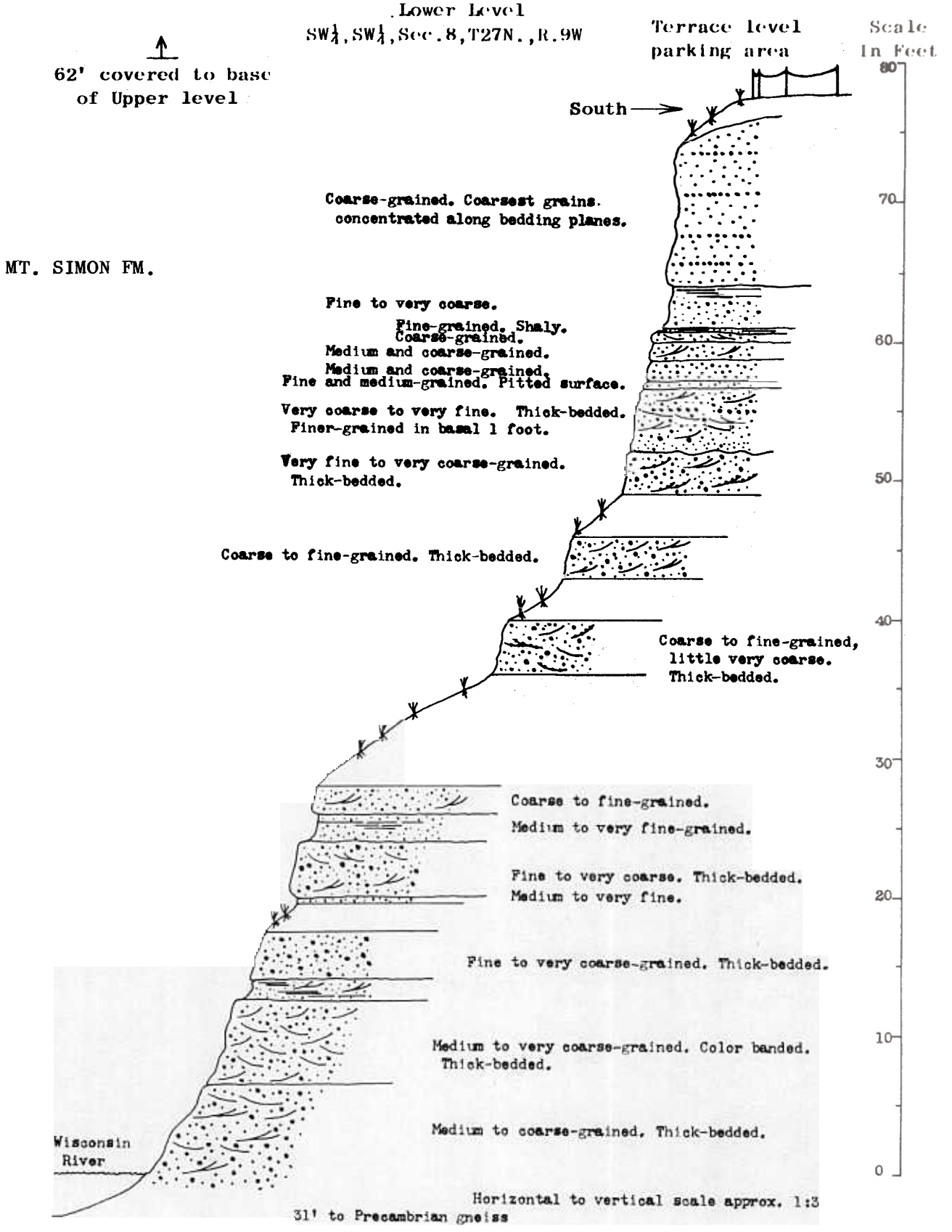
Location: Type section of Mt. Simon Sandstone Formation. Exposure in bluff of Chippewa River and in hill called Mt. Simon in City of Eau Claire in the SW$\frac{1}{4}$, SW$\frac{1}{4}$, Sec. 8, T.27N., R.9W., Eau Claire County (Elk Mound 7.5-minute topographic quadrangle, 1972). Section includes all rock exposed from top of hill called Mt. Simon northwest to base of river bluff.




Author: M. E. Ostrom (modified from Ostrom, 1970)

Description: The Mt. Simon Sandstone at this, its type exposure, grades upward from well-sorted, thick-bedded, coarse-grained, sandstone in the lower part to finer-grained, thinner-bedded, transitional beds at the top. Although the formation contains brachiopod shells in its upper few feet it is assigned to the Mt. Simon rather than the Eau Claire on the basis of lithologic similarity. The Mt. Simon is assigned a Dresbachian age because it is transitional with the overlying Eau Claire Formation which has a Dresbachian fauna (the tribolites Crepicephalus and Cedaria).

Previous mineralogical analyses of the Mt. Simon at this site indicate a range in feldspar content of from 2.06% to 5.0% (Stauffer & Thiel, 1941; Crowley & Thiel, 1940; Potter & Pryor, 1961). However, a study by Asthana (1968) sponsored by the Wisconsin Geological Survey shows that the range in feldspar content of samples collected at regular 5-foot intervals from this exposure is from 1.4%

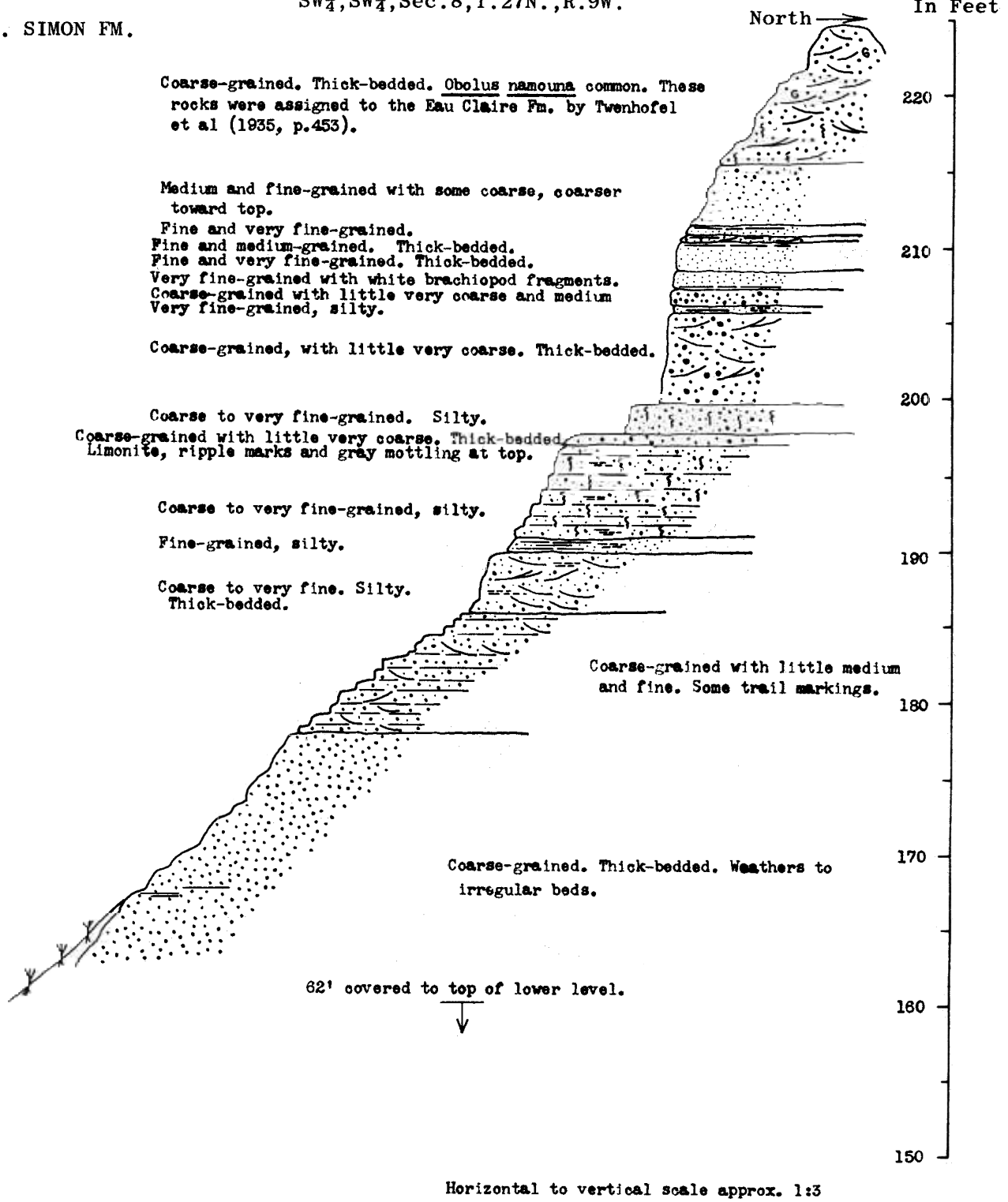

MT. SIMON OUTCROP
Lower Level
SW¼, SW¼, Sec. 8, T27N., R.9W
Terrace level
parking area
Scale
In Feet
62' covered to base
of Upper level
South
MT. SIMON FM.
Coarse-grained. Coarsest grains
concentrated along bedding planes.
Fine to very coarse.
Fine-grained. Shaly.
Coarse-grained.
Medium and coarse-grained.
Medium and coarse-grained.
Fine and medium-grained. Pitted surface.
Very coarse to very fine. Thick-bedded.
Finer-grained in basal 1 foot.
Very fine to very coarse-grained.
Thick-bedded.
Coarse to fine-grained. Thick-bedded.
Coarse to fine-grained,
little very coarse.
Thick-bedded.
Coarse to fine-grained.
Medium to very fine-grained.
Fine to very coarse. Thick-bedded.
Medium to very fine.
Fine to very coarse-grained. Thick-bedded.
Medium to very coarse-grained. Color banded.
Thick-bedded.
Medium to coarse-grained. Thick-bedded.
Wisconsin
River
Horizontal to vertical scale approx. 1:3
31' to Precambrian gneiss
80
70
60
50
40
30
20
10
0

MT. SIMON OUTCROP

Upper Level

SW¼, SW¼, Sec. 8, T. 27N., R. 9W.

MT. SIMON FM.




Horizontal to vertical scale approx. 1:3

to 40.0% with an average of 17.5%. Combined plagioclase-microcline percentages range from 0.64% to 12.7%.

Predominant heavy minerals in the Mt. Simon Sandstone are ilmenite, leucoxene, zircon, tourmaline, and garnet (Tyler, 1936).

The overlying Eau Claire Formation where samples near its base at Mt. Washington (type section of the Eau Claire Formation) has a minimum feldspar content of 42% and a combined plagioclase/microcline content of 12%.

The only other mineralogical information available on the Eau Claire Formation is an analysis by Potter & Pryor (1961) which indicates 12.5% feldspar in outcrops near Merrillan in northwestern Jackson County. Other analyses from scattered outcrops of the Eau Claire show variable amounts of tourmaline and zircon, ilmenite, magnetite, and garnet, but all are present.

Of particular interest at this exposure are the transitional beds which are also well-exposed at the Rest Haven Gardens Town Road exposure south of the Eau Claire city limits. These have been recognized at many outcrops in this vicinity but have not been traced to other areas due to lack of outcrops revealing this part of the section.

The transition beds are believed to have formed in a nearshore marine environment located seaward of the beach. The transition beds are characterized by wide range in grain size from clay to very coarse sand and granules, well-defined bedding, different lithology from bed to bed, uniform lithology of individual beds, and by vertical burrows which are confined to certain beds.

Significance: The lithologic character of the Mt. Simon Formation and its stratigraphic boundaries are illustrated by this stop. Note compositional and textural characteristics, especially those from the lower 170 feet of exposure to the upper 50 feet.

What differences do you observe in terms of mineralogy, texture, sedimentary structures, and evidence of life? What is the significance of these differences? Have you seen sandstones with these characteristics at previous stops?

References: Tyler, 1936; Crowley & Thiel, 1940; Stauffer & Thiel, 1941; Potter & Pryor, 1961; Ostrom, 1966 & 1970; Asthana, 1968.