

is flooded with stoneless marine clay, its surface standing at a slightly higher level than the clay plain in the Bonnechere valley into which it merges. The length of the combined clay plains from Renfrew to the furthest point in Bromley is 20 miles and its widest extent is 6 miles. The greater part of this land was sown with spring wheat in 1918 with excellent results.

Douglas is a small trading and social centre for the neighboring farming community. Its situation on the southern slope of a low ridge overlooking the valley makes it a desirable site for residential purposes, but it is doubtful if it will expand industrially owing to its proximity to Renfrew.

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The lower limestone beds in the cliff are shaly in characted and consequently very friable and easily worn by the action of running water. The upper beds are less easily disintegrated being massive and more compact in texture, and these form the roofs of the caverns.

Masses from the upper beds, however, are continually falling, according as the lower shaly beds

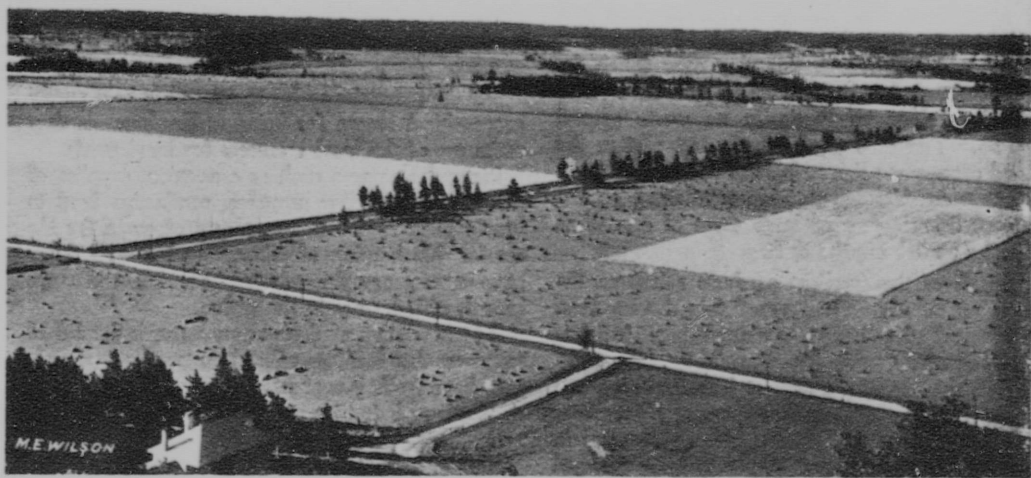


Fig. 3. The highly cultivated clay plain west of Renfrew, looking toward the southern upland border.

The clay land extends a few miles west of Douglas, but only in a very narrow strip along the river banks and ceases entirely near the fourth chute.

There is an extensive sheet of glacial outwash gravels at Caldwell station on the Grand Trunk railway four miles west of Douglas. The railway company has worked out a large excavation in using these gravels for ballast, so that good sections showing their character and structure can be observed.

FOURTH CHUTE.

At the fourth chute the Bonnechere river makes an abrupt descent of about 38 feet over ledges of flat lying limestone. A portion of the water above the falls finds its way down through lines of weakness in the limestone formation. By the processes of erosion and solution the running water has en-

larged its passages until a considerable volume now issues from a cave on the north side of the river a short distance below the foot of the falls. There are a series of lofty caves in the cliffs below the falls, in addition to the one through which the stream discharges and probably formed in the same manner.

These caves are an impressive example of the rapid erosion of comparatively soft rocks by running water, and the process is here revealed by which the removal of the greater part of the vast layer of paleozoic limestones and shales which formerly existed in the Bonnechere valley was effected.

EGANVILLE.

Eganville the ultimate village in the valley is situated on the fourth water power of the Bonnechere river, 23 miles west of Renfrew.

Mr. Alexander Murray, of the Geological Survey, when making the survey of the Bonnechere