

A field study was undertaken by the Observatory. It was convenient to use an automobile for this work as the territory is well serviced by good roads and the weather was fine. The itinerary was as follows: On reaching Morrisburg, the field study began, working toward Cornwall. This town was well covered and the examination continued eastward for about five miles, at which point the damage had noticeably fallen off. On the south side of the river, a close study was made westward as far as Massena. To the east, the damage fell off rapidly but the examination was continued as far as Ft. Covington. On the return trip to Ottawa, the route chosen was the south shore to Ogdensburg, a close check being kept as far west as Waddington, which is directly across the river from Morrisburg.

The damage distribution was found to be decidedly spotty. In every case, in the vicinity of Cornwall and Massena and for some miles to the west of these places, where the damage was marked, it was found that the soil was deep, usually with some sand at no great depth. There was very little damage at Morrisburg, decidedly more at Farran Point, definitely less at Moulinette, with increasing amounts as one continued to approach Cornwall. In Cornwall itself, the damage varied considerably from point to point. On the eastern outskirts, near the river, it was quite marked and then fell off rapidly going east. On the south side of the river, the damage was very marked at Massena Center, about four miles east of Massena, and at Massena itself. Westward, the damage dropped off gradually, becoming almost negligible at Waddington. Except in or close to Cornwall and Massena, it was confined to broken chimneys, smashed china and glassware, cracked plaster, and damaged tombstones in cemeteries. In all, fourteen cemeteries were carefully examined during the field trip.

The tombstones in these cemeteries were damaged mostly by being rotated on their bases. At least 70 p.c. of those on the north shore which were so affected were turned in a counter-clockwise direction. In some places, notably at Farran Point, 20 to 30 stones were rotated, every one in a counter-clockwise sense. On the south shore a still higher percentage of the rotated stones were turned clockwise. The direction of fall for the stones which were overturned was too indiscriminate to be of much significance, but the violence with which small urns and crosses were thrown from the stones was higher at Cornwall than at Farran Point and greatest of all at Massena Center.

One of the most definite signs that a locality is close to the epicentre is the prevalence of chimneys which are not overthrown but which have been struck by blows so nearly vertical that the bricks, though separated from one another, are left lying on the chimney. A few such chimneys were noticed in the eastern side of Cornwall near the river. They were general in Massena Center and there were some in Massena.

Along the south shore of the St. Lawrence, not far from Massena Center, there were cracks in deep alluvium from which water welled to the surface, bearing fine silt. Some wells in the epicentral area which had been yielding went dry, and some which had been dry began to yield water.

The damage in Cornwall was marked. About 2,000 chimneys were damaged, the cornice walls at the high and public schools were thrown down damaging roofs and rooms, and stone and brick churches were badly cracked. The wall of at least one house caved. Several smoke stacks of mills were damaged, one quite noticeably;