A

(4) & (5) not plotted otherwise Ont plotted

TORNADO PROJECT SUMMARY SHEET

MORE INFO ~~RQRD~~

F=2 ONT-QUE-US.

1. DATE AND TIME 11.7.1888 APPROX 1850 LOCAL

2. LOCATION OR PATH (attach map)
(1) BOMBAY N.Y — SOUTH OF ROCKBURN, QUE.
(2) MORRISBURG, ONT — VICINITY CAZAVILLE, QUE.
(3) TOUCHDOWN NEAR LANCASTER (ONT)
(4) TOWNSEND TWP HAGERSVILLE
(5) AYLMER-OTTAWA
(6) ST ESPRIT (QUE)

3. PATH LENGTH [✓] NOT KNOWN [ ] <1mi; [ ] 1-4mi; [ ] 5-10mi; [ ] 11-50mi; [ ] LENGTH IF>50mi
(4) 1/2 mile

4. PATH WIDTH [2 RODS] 5. TORNADO PART OF SQUALL LINE? [ ] YES; [ ] NO; [✓] UNKNOWN:

6. ANY UNUSUAL COLORATION? [ ] YES; [ ] NO; [✓] UNKNOWN

7. ANY UNUSUAL SOUND? [ ] YES; [ ] NO; [✓] UNKNOWN

8. IF ANSWER TO 6 OR 7 YES, ELABORATE;

9. LIST ANY ASSOCIATED PHENOMENA
(Such as hail, vivid lightning heavy rain, no rain, etc.) HAIL

10. TOTAL DAMAGE ESTIMATE $ UNKNOWN 11. TOTAL DEATHS 1 IN ONT (LANCASTER) 4 IN U.S.

12. TOTAL INJURED (4) 1 13. TOTAL HOMELESS UNKNOWN

14. LIST ALL REFERENCES

THE HUNTINGDON GLEANOR, JULY 19 1888.
BARRIE NORTHERN ADVANCE, JULY 19 1888
WATERFORD STAR, JULY 19, 1888.
BRITISH CANADIAN, SIMCOE, JULY 18, 1888

15. SUMMARIZE REMARKS PERTAINING TO (a) FUNNEL; (b) INTERESTING OR CAPRICIOUS EVENTS.

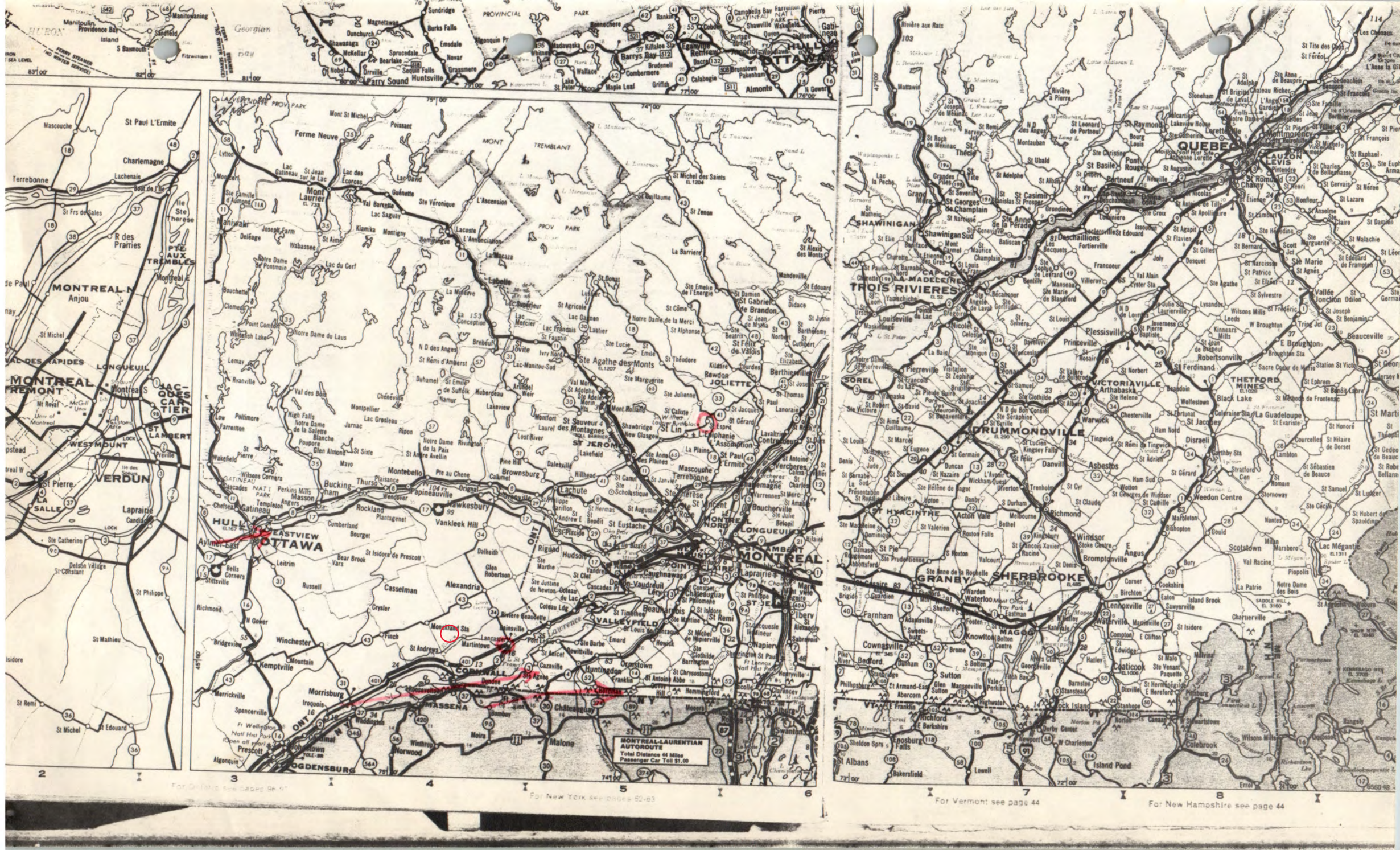
(a) ONLOOKERS DESCRIBED THE CYCLONE AS FUNNEL SHAPED AND BEING INSTANTANEOUS IN ITS DESTRUCTIVE EFFECT.

(b) BARNS DEMOLISHED, TREES UPROOTED OR BROKEN OFF HALFWAY. IN NEWFOUNDOUT, QUE 3 BARNS OWNED BY JOHN K HIGGINS KNOCKED DOWN. STANDING ON THE FLOOR OF ONE OF THEM WAS A HORSE WHICH WAS PITCHED OVER INTO AN EXCAVATION THAT WAS BEING MADE FOR AN UNDERGROUND STABLE, AND, ON REMOVING THE DEBRIS, WAS FOUND TO BE UNINJURED.

IN AYLMER (PQ) Howe's circus was performing to 1000 people when the storm struck the tent snapping the centre pole and burying the spectators, a scene of the wildest description ensued, but all were got out without serious injury. In the Ottawa Valley, various barns erected since the last cyclone there were again blown down.

IN ST ESPRIT (PQ) 82 barns blown down.

4(b) uprooted apple trees, more than a dozen barns and houses unroofed, and a number of them "riddled to pieces". One brick dwelling had its gable ends blown in. An occupant, Mrs Robinson, had an arm broken.


MONTREAL-LAURENTIAN AUTOROUTE
Total Distance 44 Miles
Passenger Car Toll $1.00
For Ontario see pages 96-97
For New York see pages 82-83
For Vermont see page 44
For New Hampshire see page 44


GEORGIAN BAY ISLANDS NATIONAL PARK
GIANTS TOMB
BEAUSOLEIL I
CHRISTIAN I
TOLL FERRY
GRIFFITH I
CAPE RICH
NOTTAWASAGA BAY
OWEN SOUND
Meaford
Thornbury
Collingwood
Wasaga Beach
Chatsworth
Stayner
Creemore
Markdale
Flesherton
Durham
Dundalk
Shelburne
Mount Forest
Harriston
Grand Valley
Orangeville
Arthur
Drayton
Fergus
Elora
Erin
Caledon
Tottenham
Beeton
Alliston
Bradford
Cookstown
Barrie
Penetanguishene
Midland
Coldwater
Orillia
Gravenhurst
Bracebridge
Muskoka Beach
Uffington
Vankoughnet
Fraserburg
Milford Bay
Port Carling
Port Sandfield
Port Sydney
Bent River
Minett
Windermere
Baysville
Moon River
Footes Bay
MacTier
Beaumaris
Walkers Point
Bala
Torrance
Port Severn
Port Stanton
Severn Bridge
Washago
Kahshe Lake
Houseys Rapids
Barkway
Kilworthy
Sparrow Lake
Swift Rapids
Severn Falls
Big Chute
SIX MILE LAKE
Christian Island
Cedar Point
Thunder Beach
Toanche
Highland P.
Elmvale
Paradise Pt.
Waubaushene
Port Severn
Wymbolwood Beach
Nottawaga Beach
Cawaja Beach
Ossossane Beach
Wahnekewaning Beach
Bluewater Beach
Deanlea Beach
Wendake Beach
Woodland Beach
Allenwood Beach
New Wasaga Beach
Sunnyside Beach
Leith
Annan
Woodford
Bognor
Rockford
Walters Falls
Heathcote
Roclyn
Ravenna
Nottawa
Gibraltar
Clarksburg
Craigleith
Wasaga Beach (NC)
Oakview Beach
Springhurst Beach
Sunnidale Corners
Edenvale
Minesing
Hillsdale
Allenwood
Phelpston
Anten Mills
Midhurst
Barrie
Craighurst
Edgar
Dalston
Guthrie
Hawkestone
Simcoeside
Gamebridge
Thorah
Simcoe
Georgina
Beaverton
Sibbald Pt.
Sturgeon
Argyle
Cameron
Lorneville
Grasshill
Gambray
Woodville
Cannington
Taylor Corners
Sagina
Oakwood
Manilla
Little Britain
Sonya
Sunderland
Blackwater
Virginia
Petersham
Baldwin
Udora
Queensville
Holt
Mount Albert
Sandford
Uxbridge
Greenbank
Port Perry
Scugog
Seagrave
Leaskdale
Zephyr
Brown Hill
Ravenshoe
Gilford
Keswick
Churchill
Bond Head
Newton Robinson
Holland Landing
Sharon
Newmarket
Aurora
Richmond Hill
Markham
Pickering
Whitby
Ajax
Oshawa
Toronto
Mississauga
Brampton
Georgetown
Acton
Guelph
Kitchener
Waterloo
Cambridge
Milton
Oakville
Burlington
Bronte Creek (NC)
Port Credit
Lorne Park
Clarkson
Hamilton
Stoney Creek
Dundas
Ancaster
Brantford
Paris
St. Catharines
Port Dalhousie
Grimsby
Beamsville
Jordan
Vineland
Thorold
Niagara Falls
Niagara-on-the-Lake
Youngstown
Lewiston
Welland
Port Colborne
Dunnville
Port Maitland
Ridgeway
Fort Erie
Crystal Beach
Thunder Bay
Point Abino
Athol Springs
Rock Point
Selkirk
Simcoe
Tillsonburg
Port Dover
Port Ryerse
Fishers Glen
Normandale
Turkey Point
Vaughan
Steeles Ave
Pioneer
Hagersville
Waterford
Cayuga
Caledonia
Oneida
Six Nations
Tuscarora
Lake Ontario
Lake Erie
Georgian Bay
Lake Simcoe
Lake Couchiching
Lake Muskoka
Twelve Mile Lake
Rob Lake
Big Trout Lake
Moore Falls
Uphill
Norland
Balsam Lake
Dalrymple
Victoria Rd.
Rosedale
Kirkfield
Bolsover
Brechin
McRae Point
Mara
Orillia
Udney
Udora
Prices Corners
Jarratt
Coulson
Waverley
Moonstone
Wyevale
Vasey
Bass Lake
Happyland
Geneva Park
Longford
Floral Park
Sebright
Cumberland Beach
Ardtrea
Buena Vista Park
Waubaushene
Fesserton
Sturgeon Bay
Victoria Harbour
Port Elmsley
Paradise Pt.
Elmvale
Highland P.
Toanche
Thunder Beach
Cedar Point
Christian Island
Sawing Bay
Honey Harbour
South Bay
Big Chute
Severn Falls
Swift Rapids
Kilworthy
Sparrow Lake
Port Stanton
Kahshe Lake
Houseys Rapids
Barkway
Kilworthy
Gravenhurst
West Gravenhurst
Muskoka Beach
Uffington
Vankoughnet
Fraserburg
Milford Bay
Port Carling
Port Sandfield
Port Sydney
Bent River
Minett
Windermere
Baysville
Moon River
Footes Bay
MacTier
Beaumaris
Walkers Point
Bala
Torrance
Bracebridge

THE GLOBE TORONTO JULY 12 1888, p1.

THE WEATHER.

July 11- A small depression which was to the north of Lake Superior last night has since moved southeastwards and developed into an important storm which is now central in the St Lawrence Valley. In Ontario and Quebec, thundershowers habe been prevalent and in the lower Lake regions fresh southwest winds have been followed by westerly gales.

Maximum temperatures today, Swift Current 84°
Winnipeg 78°
Toronto 84°

On July 15 1888 a Globe article spoke about the period of drought in Eastern Ontario which was adversely affecting crops.

THE GLOBE TORONTO JULY 13 1888, p3.
STORM DATE: JULY *11 1888.

KINGSTON SWEPT BY A STORM.
Kingston July 12. A terrible gale swept over the city and country last night about 6 o'clock. It did considerable damage especially to the telegraph and telephone companies whose lines were everywhere thrown down. A house half built in the city was demolished.

THE HUNTINGDON GLEANER JULY 19 1888.

THE GREAT STORM.

FOR the second time this summer, this district has been visited by a destructive storm That of last month crossed the St Lawrence a the Coteau and exhausted its fury upon Valley field, doing comparatively little damage elsewhere. That of last week seems to have originated in county Dundas, to have crossed the St Lawrence near Morrisburg and to have swept eastward, inclining as it progressed to the south. The day was sultry and the clouds gave indication of a thunderstorm, but no one, who did not look at the barometer, supposed a tornado was imminent. Towards 4 o'clock, Dr Shirriff reports that the mercury began to fall rapidly and went down half an inch, touching 29. At 6 the clouds massed in the north-west but were in no way of a threatening appearance, and when they burst neither the thunder nor the rain were heavy. After the first dash of rain, however, and when the indications were the storm had passed, a terrific gust burst, accompanied by rain and some hail. It only lasted a few minutes when the sky cleared and a steady gale set in, which, during the night increased to a hurricane and was accompanied, at intervals, by showers. Such was the storm as experienced over the greater part of the district, but in a few localities it developed whirlwinds, while to the south of us, on the American side, from St Regis to Clinton county, it was a veritable cyclone. In Newfoundout one of the local whirlwinds knocked over 3 barns belonging to John K. Higgins and 2 belonging to Thos. R. Higgins were struck by lightning and racked by the wind. Standing on the floor of one of the barns of the first-named was a horse, which was pitched over into an excavation that was being made for an underground stable, and, on removing the debris, was found to be uninjured. In New Ireland another whirlwind wrecked 2 barns on the farm of Thomas Donahoe, and but for a tree falling upon it and pinning it down would had his house wrecked. The buildings of his neighbor, Robt. Douglass, were badly wrecked, and so were those of John and Chas. Furey. Farther east, on the Ormstown concession, on the old McGerrigle place 2 barns were slattered; in one of them was the valuable Clydesdale MacInnes, which, however, was unhurt, the part where he was being untouched. On the opposite side of the road, Mr Carruthers had an outbuilding destroyed, and Messrs Cook and Finlayson much valuable timber levelled. On Trout river, Joseph Lunan had two outbuildings unroofed and Alex. Caldwell his outside kitchen lifted several feet and badly wrenched. These and other smaller losses which might be mentioned are as nothing compared with the devastation on the American side of the line. The only place where the cyclone touched Canada was south of Rockburn, where it made a slight detour and did some damage, as related by our correspondent as follows:

The effects are observable upon crossing the Province Line into the States at Mr Geo. McCoy's. Looking at a grove on the east side of the road you observe many uprooted trees and many broken off midway from the top along the roadside, shingles, splintered boards and other debris. About ten acres farther on, you come to Henry Sweet's, which must have been in about the centre of the track laid waste by the devastating fiend. Mr Sweet's loss is woodshed, kitchen, stable and sheds, completely demolished. One barn was left standing, and even that was partly unroofed. To the south of Mr Sweet's a barn and shed of Archd. McCoy's was shattered. Just across the road from Mr Sweet's lives Mr Whipple, whose orchard is lying down in winrows. The shingles were stripped from the roof of his dwelling-house. The outbuildings about the house were blown down, as also a large barn and shed and other buildings unroofed. He estimates his loss at a thousand dollars. The schoolhouse, a good frame building, which is but a short distance from Mr Whipple's, was lifted bodily from its foundation and carried off some fifteen or twenty feet and skewed around so that the west end of the building rests on the north-east corner of its foundation. Leaving Whipple's the storm continued its eastward course, filling the meadows and fields with the debris of ruined buildings, ploughing up hop fields and tearing up the old denizens of the forest, till it reached Wm. Cowan's. Here it swept away all his outbuildings, crossed the road and carried off the body of the dwelling-house, leaving the kitchen standing, but badly jarred and a couple of holes stove through it, probably by timbers from the barn. A thousand dollars will not replace Mr Cowan's damages. Mr Cowan saw the storm coming, and with his family took shelter in the cellar, otherwise there might have been some fatality to report. Still eastward, and a barn of Mr Sam. Lavery's went down. His dwelling house was badly shaken, but fortunately left standing. James Huston's is now reached, and a barn also goes down there. And now, in spite of all international treaties, it crosses the line into Canada, and, in defiance of all Conservative and Republican platforms, it roars out "no protection," and yells for free trade. A barn of Thos. Oliver's is partially unroofed. A barn of W. H. Trainer's, on the Leary farm, is blown down. A carriage-house of Mrs Blackwood's, and a fine large new barn of Mr Tremblay's shared the same fate. These two last parties were sufferers by a similar storm a few years ago. At this point the storm left Canada and recrossed the line. I might add, that not an animal was injured, and that the only personal injury was a bruised hand, probably a couple of small bones broken, to a young man named Vinecore, working at Sweet's. Of course, there were miraculous escapes and some peculiar incidents and many exaggerations.

he

THE HUNTINGDON GLEANER
JULY 19 1888 CONT'D

The following account of the course of the cyclone on the American side repeats part of the foregoing notes. It is from the Chateaugay (N.Y.) Record:

The most terrible wind storm in its effects since the great storm of 32 years ago was experienced in this vicinity Wednesday afternoon. It was first observed about 6 o'clock and then but little attention was paid to it, as the people living in the vicinity of its track little thought that it was to be of such a devastating nature. The first account that we have of its destructive effects was on the Mastin road, leading from the main road to the Frontier, where Isaac Mastin's house and barn were unroofed, also Chalmer Mastin's barns. Sweeping east about two rods in width, it swept everything before it. Great stretches of timber land were completely stripped and the crops destroyed until it reached the residence of Benjamin Scott, on the road leading from Thayers Corners to the Lines. Three persons were within the house at the time. The house was completely destroyed. Mrs Scott was pulled out of the ruins through the timbers. Crossing the road the Tyron church was destroyed, falling on the house of Uriah Mandigo, crushing the roof. The barns of Mandigo were also destroyed. A school house near Mandigo's was moved off its foundation and badly damaged.

Seventy-five acres of land in this neighborhood were completely stripped of timber, and all the crops destroyed. Joseph Dechambo's house was entirely destroyed, and the beds, bedding and furniture blown in all directions. At the time of our visit to this section (6 o'clock Thursday morning) no trace could be found. A barn of Thomas Cnawford's was unroofed, and all fences in this vicinity were scattered in all directions.

Passing from this locality we find 50 acres of heavily timbered land destroyed, great trees twisted off like pipe stems; great trees that have stood the blasts and storms of years uprooted and blown in all directions. A barn of John Danskin's was unroofed. Passing to the property of James Hill, several buildings were unroofed; an orchard near the house was entirely destroyed, every tree being torn up by the roots. A field of seven acres of corn was destroyed. Calvin Hill who stood near the house when the storm struck, grabbed with both arms a tree standing near, which was torn up, throwing him some distance where he lay until the storm was over. The dwelling house of Lyman Allen was unroofed and a barn blown down. A barn of Widow Ives was blown down. All through this section a scene of devastation and destruction meets the eye. Passing east the three barns of James Adams were entirely destroyed. The fine farm buildings of Edwin Smith were destroyed, the dwelling house badly wrecked, and the barns all destroyed. Mr Smith estimates his loss at $3000. Great numbers of trees were torn up by the roots.

Passing east, the dwelling house of Thomas Foran was unroofed, his barns blown down, fences blown in all directions and crops destroyed. The barns of William Burns were unroofed. Passing directly east, it swept all timber lands it struck. It struck the shed of Archie McCoy destroying it. Mr McCoy was standing inside and was struck by falling timbers, and thrown 50 feet and badly injured. Crossing the road it struck a school house, moving it from its foundation quite a distance and crushing the building, striking John Whipple's dwelling house, making it a complete wreck, destroying three barns so that it will be impossible to rebuild without building anew. Several barns belonging to Henry Sweet were blown down, and his orchard and crops destroyed, and a great amount of damage done to crops and standing timber. James Cowan's new dwelling house and barns were entirely destroyed. At this point we stopped in our investigations of the progress of the storm.

Onlookers describe the cyclone, for such it was, as funnel shaped, moving with tremendous velocity, some estimating it at 150 miles an hour, and being instantaneous in its destructive effects. The loss in buildings destroyed, crops injured and valuable timber destroyed is incalculable. We have been unable to obtain even an approximate estimate of damage, but in looking over the territory in the early morning of Thursday we are satisfied that $50,000 would be a low estimate.

DUNDEE. JULY

The storm on Wednesday evening, the 11th instant, was most disastrous a little south of this. In Bombay, buildings were blown down and others damaged. A Mr Rolfe had put up a new barn, which was all finished with the exception of putting on the doors. I understand that it was completely demolished. At the Forge, Westville, a number of buildings were badly wrecked, one being thrown into the river. An Indian on the American reserve had a bee, shingling a barn, at which a dozen were engaged. The structure stood upon posts. The coming storm did not seem near enough for them to quit work, but all at once a whirlwind swooped down and threw the building off the posts, some seven or eight feet, the roof collapsing and pitching the men down. The proprietor, John Cook, fell on a flat stone and was almost instantly killed, while eight of the others were more or less injured, one or two seriously so. This happened nearly half an hour before the main storm came on. A girl of six at Deer River was killed, and I have heard of a man dying since from injuries received. We here at Dundee missed any serious consequences. A few panes of glass were broken by the hailstones, which, in some places, were unusually large and abundant. The storm on the 6th of June, which did so much damage in certain localities, also came on a Wednesday.

On Saturday a man from Montreal had another from the same place arrested in the Fort for stealing $300. A couple of lawyers were brought from Malone. After their arrival and the matter was sifted it was seen there was no theft about it, as the complainant had lent him the money to go into business with another person who, backed out, when he spent part of the money and being unable to return it all, left Montreal to try and do something else. $127 of the money was returned, and a note given for the balance.

In my fourth of July remarks I am almost certain I said, "the scenes *here* during the day, &c," but it appeared in print "the scenes at the Fort during the day," leaving a wrong impression and one I did not wish to convey.

Good weather for hay-making which is in progress at present. The crop is not as large as was expected in the early part of the season, from the start it got, but is a fair crop.

LAGUERRE. JULY

The storm we had on the 11th was the most destructive since that of about 1846, at which time quite a number of buildings were unroofed both on this and on the other side of the lake. This storm does not seem to have been as severe about Cazaville as farther west and south, or east of this and about here. Beyond injuring the hop-yard, little damage was suffered at Cazaville. On this side of that place, Jos. Bonneville had a barn and stable blown down. On the St Charles road, Alexis Caza had a barn and stable unroofed. At LaGuerre an empty building, formerly owned by the late Widow Caza, had the roof blown off and part carried about 200 feet into the river. John K. Higgins had three barns blown down, blockading the road, and his house somewhat injured by a piece of a barn falling on it. His neighbor, Widow L. Sullivan, had the roof and east end of a building blown off. James Quinn had a granary moved off its foundation and a carriage-shed blown down, smashing a cutter. Mr Thos. R. Higgins had his barns badly injured, but they did not fall, and are being repaired. A good many fruit and other trees were blown down, or had large branches broken off. The east end of Newfoundout did not feel the storm much. A great many fences were blown down, and many had to keep their cattle in stables or yards the night after the storm. On the other side of the lake, Hugh Munroe, formerly a merchant at Lancaster village, was killed by a barn that fell. He was a very fine man.

People are busy haying. The crop is good, except where the land was soured by the wet last year. I hear that it is rather light along the lakeshore below St Anicet.

PREVIOUS STORM ABOUT 1846

BARRIE NORTHERN ADVANCE. JULY 19TH. 1888.

STORM DATE. July 11 1888

THE GREAT STORM.

The great storm of Wednesday has been more destructive than any storm for many years. In the West, in the TOWNSHIP of TOWNSEND, NORFOLK COUNTY, and at HAGERSVILLE, in HALDIMAND, it was particularly destructive. Telegraph wires were blown down, and dwelling houses, barns and outbuildings unroofed and in some instances were totally demolished, one brick building being razed to the ground. Large trees were uprooted and orchards destroyed. At TILBURY CENTRE, the lightning struck a new brick school house and damaged the roof. In EASTERN CANADA the storm was still more destructive. Two men, who were fishing above VICTORIA BRIDGE, MONTREAL, were drowned. In the OTTAWA REGION the storm was very destructive In the city of OTTAWA two men were blown from a building on which they were working, and received severe if not fatal injuries. In the OTTAWA VALLEY various barns erected since the last cyclone there are again blown down. HOWE'S CIRCUS was performing at AYLMER, P.Q., to 1,000 people, when the storm struck the tent snapping the centre pole and burying the spectators. A scene of the wildest description ensued, but all were got out without serious injury. In GLENGARRY the crops have been destroyed. A farmer named MUNROE living at NORTH BRANCH was killed by his barn falling on him.The rain came down in torrents, and the hailstones were as large as goose eggs. The roads in many places are utterly impassable, and houses everywhere are seen standing roofless. The people were terribly frightened, some believing the world was coming to an end. The damage done is tremendous.

BARRIE NORTHERN ADVANCE. THURSDAY JULY 26TH. 1888.

STORM DATE. JULY 11 1888?

Some idea of the destructiveness of the storm which passed over a portion of ONTARIO and QUEBEC last week may be had from the fact that no less than 82 barns were blown down in the PARISH of ST. ESPRIT, COUNTY of MONTCALM, QUEBEC, the losses on which amount to $22,000.

ONT

BRITISH CANADIAN, SIMCOE, ONT. WED. JULY 18TH. 1888.

STORM DATE, AFTERNOON, WED. JULY 11TH. 1888.

Last Wednesday afternoon a heavy thunderstorm accompanied with a violent wind passed over a portion of the TOWNSHIP of TOWNSEND. In the vicinity of VILLA NOVA the storm was very severe, and we learned that several buildings were unroofed or blown down. The roof of MR. ROBINSON'S brick dwelling was torn off and one of the gable ends blown in; and MRS. ROBINSON who was in the dwelling had an arm broken; near by a barn belonging to MR. WOODLEY was completely demolished. Fences were blown down and trees uprooted in all directions. In SIMCOE the wind blew a gale but only a few drops of rain fell.

WATERFORD STAR.THURSDAY JULY 19TH.1888.MICRO-FILM,NORFOLK Co.

STORM DATE.ABOUT 5 P.M.WED.JULY 18TH. MUSEUM,SIMCOE.ONT.

One of the most disastrous storms that has occurred in this section for many a day passed over a portion of the TOWNSHIP pf TOWNSEND on wednesday afternoon about 5 o'clock,in the form of a tornado,and commenced operations south of BOSTON,where a large number of apple and other trees were torn out by the roots like so many weeds.The tornado took a southeasterly route across the township,and in its course demolished a large quantity of standing timber,one man it is stated having enough down to turn out between 300 and 400 cords of wood.The buildings,fences, timber,orchards,and ornamental trees along the road a short distance east of VILLA NOVA,show the storm to have been terrific at that point, and although the gale covered but about a half a mile in width,some 12 or 14 barns and houses are unroofed,and a number of them riddled all to pieces,in a distance of not much more than a mile on this road,and the fields and road were strewn with pieces of boards,shingles,fence rails etc.It is reported to have done great damage in the TOWNSHIP of WALPOLE as well.The farmers who had their buildings unroofed and shattered are hard at work repairing them in order to have them ready for the storage of their grain crops.Large numbers of people have visited the locality at VILLA NOVA and are astonished at the great damage done in so small a space.

STORM DATE 6:00 pm JULY 11, 1888 ONT

RECORD OF RAIN AND SNOWFALL

Belleville Ontario, Month of July 1888

AUG 6 1888

	RAINFALL. Began. (1)	Ended. (2)	Depth in Gauge. (3)	SNOWFALL. Began. (4)	Ended. (5)	Depth in Inches. (6)	REMARKS ON WEATHER, SEASONS, &c. (7)
1							hot and dry
2							" "
3							" "
4							Strong S.W. wind
5							hot
6							cooler
7	~~A.M. 12.00~~	~~P.M. 4.50~~	~~.02~~				
8	AM 12.00	P.M. 4.50	Thunder Storm 0 2				At 11.30 P.M. there was a distinct shock of earthquake, which seemed to pass from N. or N.E. to S. or S.W. and accompanied with a heavy rumbling sound as if a heavily laden waggon was driven over a road. It was felt slightly at Kingston, heavily at Napanee and in Prince Edward Co. and in Belleville. As near as I can find find out the heaviest part seemed be near Napanee. The sound was long and continuous
9							
10							
11	3.30	3.35	.02				Forenoon hot clouded strong S.W. wind about 6 P.M. the wind shifted to west and blew a gale then suddenly shifted to north and increased in force with a rapid lowering of temperature blew down several barns and a number of trees, said to be the heaviest gale here in 29 years. The wind for several days blew from the North with lower temperature
12							cooler
13							cooler
14							N.W. winds warmer
15							
16							
17							
18	AM 2.30	PM 2.00	.91				South to South winds Thunder
19							warm
20							very hot
21							" "
22	PM 11.35	during night	.22				A total eclipse of moon not seen here as it became cloudy about 9 o'clock We had a thunder storm during night
23	PM 10 40	PM 11.50	.05				clearing very warm
24							
25							The country around is very
26							dry and crops are light espe-
27							ally in the Northern part of
28							Prince Edward Co and
29							Southern part of Hastings
30							hot and dry
31							Cloudy, a slight sprinkle of rain
Summary.			1.22				

Certified correct,

S. A. Gardner Observer.

Belleville Post Office.

ONT

STORM DATE WED 11 JULY 1888
6.10 pm

Form 1.

DOMINION

REPORT OF METEOROLOGICAL OBSERVATIONS *taken at* Alexandria

Day of Week	Day of Month	Local Time.	Barometer. Observed	Att'd Ther.	Corrected for index error, &c.	Reduced to Tem. 32.	Reduced to sea level.	Temp. of the Air. Observ'd	Corr'd	Wet Bulb. Observ'd	Corr'd	Diff.	Pressure of Vapour.	Relative Humidity.
Sunday.	8	7	29.430	66		.331		60.0	60.0	54.3	54.1	5.9	.341	64.8
		1	.436	67		.334		70.8	70.8	61.0	60.8	10.0	.400	53.4
		9	.500	68		.396		63.0	63.0	58.0	57.8	5.2	.410	71.2
Monday.	9	7	.460	64		.364		60.5	60.5	57.0	56.8	3.7	.414	78.2
		1	.390	67		.289		76.8	76.8	62.3	62.2	14.6	.365	39.6
		9	.480	69		.373		63.0	63.0	60.0	59.8	3.2	.471	81.9
Tuesday.	10	7	.460	64		.366		59.5	59.5	57.0	56.8	2.7	.433	83.9
		1	.280	68		.176		80.0	80.0	66.8	66.7	13.3	.476	46.5
		9	.200	72		.086		70.5	70.5	61.0	60.8	9.7	.413	54.1
Wednesday.	11	7	.170	69		.065		70.0	70.0	63.5	63.4	6.6	.516	68.1
		1	.010	72		28.897		79.7	79.7	69.0	68.9	10.8	.562	56.8
		9	28.870	72		.757		50.7	50.6	48.0	47.8	2.8	.296	80.1
Thursday.	12	7	.800	62		.715		55.3	55.2	52.3	52.1	3.1	.349	79.9
		1	.915	62		.830		58.3	58.2	53.4	53.2	5.0	.319	69.3
		9	29.000	65		.804		55.2	55.1	53.0	52.8	2.3	.369	85.0
Friday.	13	7	.090	62		29.003		59.0	58.9	55.0	54.8	4.1	.376	75.6
		1	.160	62		.073		71.0	71.0	59.0	58.8	12.2	.334	44.0
		9	.336	66		.237		61.0	61.0	54.0	53.8	7.2	.318	59.6
Saturday.	14	7	.415	63		.324		57.6	57.5	57.0	50.8	6.7	.283	60.3
		1	.430	63		.340		72.5	72.5	59.7	59.5	13.0	.336	42.1
		9	.495	68		.381		59.5	59.4	57.0	56.8	2.6	.420	84.4

OF CANADA.

for Week ending Saturday night 14th July 1888.

Weather.	Wind.			Clouds.					Rain.				Snow.				Rain and Melted Snow.
	Direction.	Velocity.	Sty or Var.	Upper	Direction from.	Lower	Direction from.	To Tenths	Began	Ended.	Duration in Hours	Depth in inches.	Began	Ended.	Duration in Hours.	Depth in inches.	
c	fr	I	s			k		7									
c	Wfr	II	s			k		6									
b	fr	I	s					0									
b	fr	I	G					0									
b	Str	II	G					0									
b	ba							0									
b	fr	I	s					0									
b	Wfr	II	G					0									
⊕	Wfr	III	G				s	10									
b	Str	II	s	ci	3			3									
c	Str	III	G			k		6									
b	Wfr	III	G					0									
⊕	Wfr	IV	G			s		10	p 6·10	p 6·20	0·10	·49					·49
c	Wfr	IV	G			s		10									
⊕	Wfr	II	s			ni		10									
b	Wfr	II	G			s		1	p 8·0	a 3·00	7·0	·27					·27
r	Wfr	III	G			s		s									
b	fr	I	s			s		1									
b	fr	I	s					0									
b	fr	II	G			ds		1									
b	fr	I	s	ci	7			7									

Form 1.

DOMINION

REPORT OF METEOROLOGICAL OBSERVATIONS *taken at*

Day of Week.	Day of Month.	Local Time.	Anemometer. Reading of Dial.	Anemometer. Miles since last observ'n.	Anemometer. Miles in 24 Hours.	Maximum Ther. Observ'd	Maximum Ther. Corr'd.	Minimum Ther. Observ'd	Minimum Ther. Corr'd.	Phenomena at Observation.	Aurora. Class and Time of Occurrence.	Sleigh'g. 0—none. 1—bad. 2—good
SUNDAY.	8					86·3	86·4	56·0	56·0		0	
MONDAY.	9					86·0	86·1	52·0	52·0		2m	
TUESDAY.	10					86·5	86·6	47·0	47·0		0	
WEDNESDAY.	11					82·5	82·6	50·5	50·5		0	
THURSDAY.	12					76·0	76·1	48·0	48·0		0	
FRIDAY.	13					74·0	74·1	50·0	50·0		0	
SATURDAY.	14					73·0	73·1	47·0	51·0		0	

OF CANADA.

for Week ending Saturday night 14th July 1888

Total Snow on Ground.	Weather and Phenomena since last Observation.		REMARKS.	Initials of Observer.
			6.10–6.20 p.m. Violent gale: many houses, trees overturned	

HAIL, JULY 11, 1888 ONT

RECORD OF RAIN AND SNOWFALL.

Mountsberg. Province of Ontario July 1888

	RAINFALL.			SNOWFALL.			REMARKS ON WEATHER, SEASONS, &c.
	Began.	Ended.	Depth in Gauge.	Began.	Ended.	Depth in Inches	
	(1)	(2)	(3) Cubes.	(4)	(5)	(6)	(7)
1	"	"	"				
2	"	"	"				
3	"	"	"				
4	"	"	"				Very sudden fall of the mercury
5	"	"	"				
6	"	"	"				
7	"	"	"				
8	"	"	"				
9	"	"	"				Very high Wind from West
10	"	"	"				Wind very high. Heaviest hail
11	"	"	"				storm that was ever known
12	4.15	4.30	2.5				in this section before.
13	"	"	"				also very sudden fall in
14	"	"	"				mercury from 83, 0, to
15	"	"	"				43 0.
16	"	"	"				
17	"	"	"				
18	[illegible]		1.0				
19	P.M	1.35	2.4				
20	"	"	"				
21	"	"	"				Eclipse was visible
22	"	"	"				
23	A.M 11.30	P.M 12.15	1.4				
24	[illegible]		1.1				
25	"	"	"				
26	"	"	"				
27	"	"	"				
28	"	"	"				
29	"	"	"				
30	"	"	"				
31	"	"	"				A good deal of Lightning
Summary			9.0				

Certified correct,

Mountsberg Post Office.

W. J. McNiven Observer.

Some High Wind Velocities Recorded at Toronto, Ont. (or vicinity)

From "Wind Abstract", an old ledger held by Ont Climat Centre.

March 2., 1914.	Some gusts blew at 80 and 96 miles per hou
November 29, 1919	do 78 miles per hour
January 14, 1918	Gales 60 miles per hour, very heavy squalls.
March 7, 1913	do. 70 do
November 9. 1913	Great loss of life and Shipping on Great La Wind 65 miles per hour, Some very heavy squa
October 13, 1893.	Maximum velocities registered from 52-57 miles per hour, some gusts blew at from 70 to 80 miles
July 11, 1888	violent gales levelling trees and telegraph poles, reported all around Toronto.
November 11, 1883	Heavy squalls blew at rate of 75 miles per hou
April 18. 1880	Gales in the Lake Region blowing 65 miles per hou
December 4. 1873.	Wind shifted from South to West and blew a perfect hurricane.
August 21. 1918.	Very high wind, much damage reported.
August 2 1902	A severe cyclone passed over Lake Ontario doing considerable damage at St Catharines; Hous and farm property destroyed.
October 1st 1920.	Gusts blew at 48 miles per hour (1 to 2 am)
" 27th 1920	do 55 " " " Hour ending 10 p
" 27th 1920 (5 min)	do 48 " " " do Midny
November 22nd 1920	do 60 " " " do noon & ot
December 15th 1920	do 48 " " " do 5 am
December 18th 1921	" 72 " " " (5 min 7-7.5 p.m.) " 8 am
January 22nd 1922	
June 16 1922	gusts 60 mph.
Feb 14th 1923	" 60 " " (5 min.)
March 16th 1923	
June 25th 1923	" 60 " " (5 min.)
Feb 19th 1924	" 52 " in 1 hour 10 to 11 pm
Jan 28th 1926	3 cup now in use " 43 " " 7 to 8 am
Mar 31st 1926	39 " " 4-6 am
Aug 21st 1926	39 " in one hour 2-3 am
Dec 5th 1926	47 " " 8-9 am.
Jan 30th 1927	36 " in two hour 2-3, 3-4 pm
Feb 3rd 1927	40 " " 7-8-9, pm.
Dec 15th 1927	43 " " one hour 5-6 pm.

May 19, 1940 YTZ, 1722 DST, 2 minute gust of 94 mph
July 26, 1940 YTZ, 0105 DST, gust to 71 mph

ONT

JULY 11, 1888

...y Observers in correspondence with the Meteorological Office.

DOMINION OF CANADA.

Register of Rain, Snow, Weather, Miscellaneous Phenomena, and Extremes of Temperature,

For the Month of July 1888

Station Renfrew County Renfrew Province Ontario Observer W. E. Smallfield

DAY OF MONTH.	MAXIMUM THERMOMETER. Observed.	MAXIMUM THERMOMETER. Corrected.	MINIMUM THERMOMETER. Observed.	MINIMUM THERMOMETER. Corrected.	RANGE.	GENERAL STATE OF WEATHER. Midnight to Noon.	GENERAL STATE OF WEATHER. Noon to Midnight.	Miscellaneous Phenomena and Time of Occurrence.	REMARKS.
1	78 0.0	78	51.5 0.1	51.6	26.4	b	b		
2	86.5 0.0	86.5	43 0.2	43.2	43.3	b	b		
3	91.5 0.0	91.5	54 0.1	54.1	37.4	b	b		
4	93 0.0	93	61 0.1	61.1	31.9	b	b bc		
5	86 0.0	86	56 0.1	56.1	29.9	b	b bc		Thunderstorm threatened in afternoon; but did not come.
6	89.8 0.0	89.8	45.5 0.2	45.7	44.1	b	bc b		
7	82 0.0	82	61.8 0.1	61.9	20.1	b	b		Smoky, from forest fires.
8	72.5 0.0	72.5	47.8 0.1	47.9	24.6	b	b		" " "
9	84.5 0.0	84.5	46 0.2	46.2	38.3	b	b		" " "
10	86.2 0.0	86.2	42.5 0.2	42.7	43.6	b	b bc c		Threatening rain
11	88 0.0	88	47 0.1	47.1	40.9	b	b c ⊠		A tornado, commencing at 4 p.m. with a little rain following, swept this section of country, uprooting trees and unroofing ~~barns~~ and destroying barns. The thermometer (temperature) fell 40° inside of an hour.
12	65 0.0	65	46.5 0.2	46.7	19.3	b	bc c		
13	76.5 0.0	76.5	52.3 0.1	52.4	24.1	b	b		
14	78 0.0	78	41.5 0.2	41.7	36.3	b	b		
15	79.8 0.0	79.8	39.5 0.2	39.7	40.1	b	b		
16	88 0.0	88	39.5 0.2	39.7	48.3	b	b		
17	88.8 0.0	88.8	46 0.1	46.1	42.7	b	b		Smoky all day
18	71.5 0.0	71.5	61.5 0.1	61.6	9.9	⊕ r	⊕ r		
19	82.5 0.0	82.5	57.5 0.1	57.6	24.9	bc	bc p b		
20	70 0.0	70	47.8 0.1	47.9	22.1	⊕ r	c bc b		
21	87 0.0	87	49.8 0.1	49.9	37.1	b	b bc c		
22	84 0.0	84	59.8 0.1	59.9	24.1	bc	⊕ p bc		
23	86.5 0.0	86.5	59 0.1	59.1	27.4	bc	bc c p ⊠		
24	79.5 0.0	79.5	52 0.1	52.1	27.4	b bc ⊠	bc ⊠		
25	80 0.0	80	44.5 0.2	44.7	35.3	b	b bc		
26	78.8 0.0	78.8	53.5 0.1	53.6	25.2	c p	c p		
27	82.5 0.0	82.5	55 0.1	55.1	27.4	b	b		
28	87 0.1	87	43 0.2	43.2	43.8	b bc	bc b		
29	89.8 0.0	89.8	52.3 0.1	52.4	37.4	b	bc c		
30	92.4 0.0	92.4	53 0.1	53.1	39.3	b	b bc		
31	89.5 0.0	89.5	64 0.1	64.1	25.4	bc	bc c		
Sums.		~~2575.1~~ 2581		1578.2	996.9				
Means.		83.06		50.91	32.1				

(133.97
66.98

FORM 27.—*Used by Observers in correspondence with the Meteorological Office.*

DOMINION OF CANADA.

Register of Rain, Snow, Weather, Miscellaneous Phenomena, and Extremes of Temperature,

For the Month of July *1888*

Station Renfrew *County* Renfrew *Province* Ontario *Observer* W. E. Smallfield

DAY.	RAIN. Time of beginning.	RAIN. Time of ending.	RAIN. Duration in hours.	SNOW. Time of beginning.	SNOW. Time of ending.	SNOW. Duration in hours.	DEPTH AT MORNING OBSERVATION. Rain.	DEPTH AT MORNING OBSERVATION. Snow.	DEPTH AT MORNING OBSERVATION. Melted Snow.	DEPTH AT MORNING OBSERVATION. Total Precipitation.	DEPTH AT EVENING OBSERVATION. Rain.	DEPTH AT EVENING OBSERVATION. Snow.	DEPTH AT EVENING OBSERVATION. Melted Snow.	DEPTH AT EVENING OBSERVATION. Total Precipitation.	Sleighing.	Total depth of Snow on ground.
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11	4p	5.30p	1½								0.12					
12																
13																
14																
15																
16																
17																
18	7a	6p									0.19					
19											R					
20																
21																
22	1p	6p									0.05					
23	2p	9p									0.06					
24																
25																
26																
27																
28																
29																
30																
31																
1																
SUMS.											0.42					