LETTERS TO THE EDITOR

Dear Editor

A rather lamentable state of affairs exists in Canada's handling and recording of tornado statistics. In spite of the fact that the tornado is the most destructive form of localized energy release in the atmosphere (Davies-Jones, Kessler, 1974); in spite of the fact that hundreds are known to have occurred from coast to coast across the nation; in spite of the fact that over the years at least 150 people have died as a direct result of tornado activity, many more injured or made homeless, and multi-millions of dollars worth of property damaged; in spite of all this, Canada does not have a national policy of recording them, studying them, or maintaining a tornado inventory. Frankly, I am surprised that the meteorological community has not been called to account long ago. This lack of interest in tornadoes is all the more bewildering in view of the time which has been spent in gathering such unproductive statistics as phenological information and noctilucent cloud data.

This is not to say that tornado information in Canada is completely lacking. A significant effort has been made by interested individuals and groups to discover something about tornado climatology and behaviour. Most notable is the work of A.B. Lowe and G.A. McKay. During the 1950's and early 1960's they compiled data for western Canada dating back to the 1800's. Their work, now available in the form of a booklet and three published papers, still stands as the most comprehensive listing of the phenomena. To some extent, their efforts have been updated by others, but as far as eastern Canada is concerned we are abyssmally ignorant. Furthermore, Canadian studies of tornado dynamics and thermodynamics can be counted on the fingers of one hand.

To some degree this neglect of the tornado has been due to the misguided belief that they seldom occur in this country. The following headline, published in a Canadian newspaper of 1890 will serve to illustrate;

CYCLONELESS CANADA

A TERROR INDIGENOUS TO THE UNITED STATES

Why Canada escapes while the United States is scourged by tornadoes year after year.

At about the same time, the newspapers reported a dialogue between General Greely (head of the U.S. Signal Service) and his Canadian counterpart, Prof. Carpmael, in which they discussed the (apparent) lack of tornadoes in Canada. If they had only read the newspapers of the time they would have discovered how very wrong they were. For example, the Niagara Mail reported a storm on the 18th of April 1855 which "came from the north, or NNE, apparently leaping in its course, and striking the ground at intervals with redoubled force. The rush of wind lasted about five minutes and was at its height not more than one minute. But the damage it did was tremendous. It struck the Niagara Car works, and in an instant levelled two large finishing shops, each 175 feet by 50, and two stories high containing a number of new cars .... a passenger car was lifted bodily off the track near the station house and thrown to some distance from where it stood ... etc.

The Montreal Witness and the Huntingdon Gleanor reported a horrific tornado which tracked from St. Zotique to Valleyfield, Quebec on the 16th of August 1888. This storm left a death toll of 9 (one man, Giuseppe Sauve, was found impaled to the mud by a

piece of picket fence which had pierced his neck and protruded from his left temple), an injured list of 14, and numbers homeless. The lighthouse keeper at Grosse Point, where the storm crossed the St. Lawrence River, described the situation as follows:

"the cloud passed not over 100 feet west of the lighthouse. It was like a great wall of green smoke, accompanied with hay, straw, pieces of board and all sorts of debris. The cloud was funnel-shaped and seemed to work like a cork-screw. Wherever it struck, the water rose high in the air . . . striking land close to the feeder, the house of Francois Daoust was laid low. He was thrown up into the air and his wife with her young baby was thrown in a ditch some distance off."

As long as 18 years ago, Lowe and McKay alluded to the prevalent belief that tornadoes seldom happen in Canada, and pointed out just how erroneous it is. As recently as 1973, in a submission to the Solandt Commission, McKay found it necessary to make the same point over again.

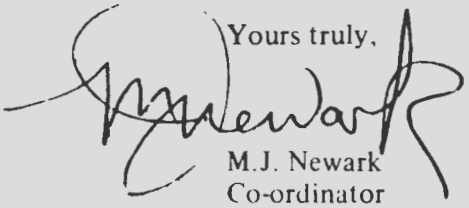
In an effort to discover more about the climatology of tornadoes in eastern Canada, I have started a private project to gather information from newspaper sources. Besides myself there are two other project team members from the Ontario Weather Centre, namely Arlene Yakely-Pender and Peter Elms. Locally available clipping files have been reviewed and nearly 70 dailies in eastern Canada will be approached with a request for information from their library files. In Ontario, where we have the backing of the regional director of the A.E.S., the letters have already been mailed and a response is now being received. The second phase of the project will be to update the information for western Canada and amalgamate it with that for the east into a national summary of tornado activity.

Besides the newspapers, another important source of tornado information is the meteorological community itself. Since the CMS Newsletter, The Forecaster and Zephyr are avenues of communication with this group, may I ask you as editor, to publish an appeal for tornado information. Details concerning location, date and time, deaths, damage, peculiarities, meteorological circumstances, etc., for any tornado event within Canada would be most happily received at the above address. Even if detail is lacking, and only an approximate time or location may be available, this information would still be useful. I should perhaps point out that for purposes of the project, a tornado event is defined as follows;

either (a) a funnel cloud has been sighted, touching the ground,

and/or (b) a storm report (by whatever source) indicates the typical characteristics of a tornado, i.e., a narrow swath of damage, capricious and unusual consequences, large and heavy objects thrown through the air, unusual atmospheric sounds and colouration, death and/or destruction.

Yours truly,



M.J. Newark
Co-ordinator
Tornado Project.