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**GEOLOGICAL SURVEY OF CANADA  
OPEN FILE 8785**

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Dominion Observatory 1906-1953**

**M. Lamontagne and M. Szadurski**

**2021**

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# Newspaper reports of earthquakes collected by staff of the Dominion Observatory 1906-1953

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# Newspaper reports of earthquakes collected by staff of the Dominion Observatory 1906-1953

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## Abstract

During the first half of the 20<sup>th</sup> century, seismologists of the Dominion Observatory in Ottawa collected earthquake reports mainly from English-language Ottawa newspapers but also from other printed sources. Over the years, these news reports were used to define the felt effects and damage impacts of many moderate to strong eastern Canadian earthquakes including the 1925 **M** 6.2 Charlevoix; the 1929 **M** 7.2 Grand Banks; the 1935 **M** 6.1 Temiscaming and the 1944 **M** 5.6 Cornwall-Massena. In addition, Smith (1962; 1966) used these reports to help define the Canadian earthquake catalogue for pre-1960 events. In addition to descriptions of Canadian events, many newspaper clippings describe some significant global earthquakes and report on seismological research and operations and on other earthquake-related topics such as the elusive methods of earthquake prediction. Originally, these clippings were kept in four large scrapbooks. Over the years, the state of these scrapbooks deteriorated and the authors decided to scan their contents to preserve them for posterity. This Open File Report includes image scans of these scrapbooks.

## Résumé

Au cours de la première moitié du XX<sup>e</sup> siècle, les sismologues de l'Observatoire du Dominion à Ottawa ont recueilli des rapports sur les tremblements de terre principalement dans les journaux anglophones d'Ottawa, mais aussi dans d'autres sources imprimées. Au fil des ans, ces rapports ont été utilisés pour définir les effets ressentis et les dommages causés par plusieurs tremblements de terre modérés à forts dans l'est du Canada, notamment le tremblement de terre **M** 6.2 Charlevoix en 1925, le tremblement de terre **M** 7.2 Grand Banc en 1929, le tremblement de terre **M** 6.1 Témiscaming en 1935 et le tremblement de terre **M** 5.6 Cornwall-Massena en 1944. En outre, Smith (1962; 1966) a utilisé ces rapports pour créer le catalogue des tremblements de terre canadiens pour les événements antérieurs à

1960. En plus des descriptions des événements canadiens, de nombreuses coupures de presse décrivent certains séismes mondiaux importants et font état de la recherche et des opérations sismologiques ainsi que d'autres sujets liés aux séismes tels que les méthodes controversées de prévision des tremblements de terre. À l'origine, ces coupures de presse étaient conservées dans quatre grands albums. Au fil des ans, l'état de ces albums s'est détérioré et les auteurs ont décidé de scanner leur contenu pour le conserver pour la postérité. Ce rapport sur les dossiers publics comprend des scans d'images de ces albums.

### **Plain language summary**

This Open File provides scans of the scrapbooks of newspaper clippings regarding earthquakes, compiled by of the seismologists of the Dominion Observatory in Ottawa. They include a collection of earthquake reports of the period 1906-1953 mainly from English-language Ottawa newspapers but also from other printed sources.

### **Résumé en langage simple**

Ce dossier public fournit des images des découpures de journaux contenus dans les albums des sismologues de l'Observatoire fédéral d'Ottawa. Ils comprennent une collection de rapports sur les tremblements de terre de la période 1906-1953 provenant principalement des journaux anglophones d'Ottawa, mais aussi d'autres sources imprimées.

### **Dedication**

This Open File report is dedicated to the work of the seismologists of the Dominion Observatory in Ottawa who documented the impacts of many Canadian earthquakes of the first half of the 20<sup>th</sup> century. It appears that Dr. Otto J. Klotz (Figure 1) started collecting the newspaper clippings. Later on, Dr E.A. Hodgson (Figure 2) continued the effort. Dr Hodgson did the field work following the earthquakes of 1925 (M 6.2 Charlevoix), 1935 (M 6.1 Temiscaming) and 1944 (M 5.6 Cornwall-Massena) and found much interesting descriptive information on the impact of these moderate to large earthquakes. These scientists had the commitment to collect the newspaper clippings and meticulously glue them in scrapbooks that are of interest several decades later.

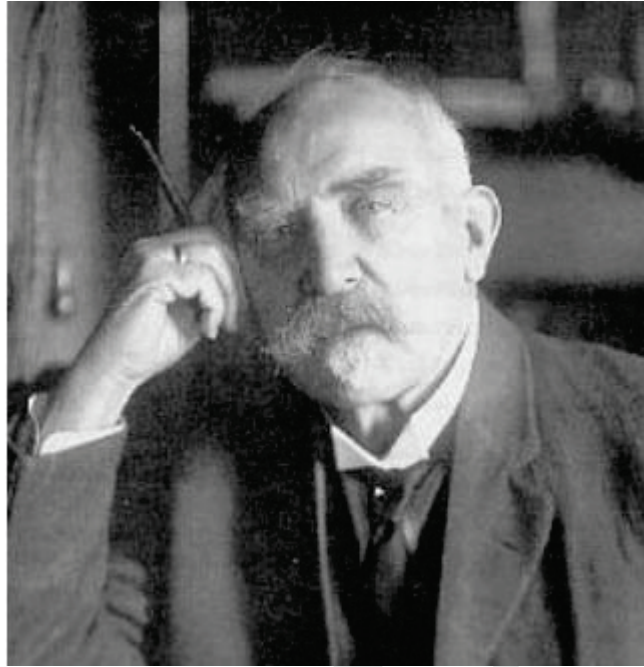


Figure 1. Dr. Otto J. Klotz (1852-1923), Dominion Observatory Astronomer. Photo courtesy of National Research Council Canada Archives.



Figure 2. Dr E.A. Hodgson (1886-1975), Chief Seismologist of the Dominion Observatory from 1920 to 1951. Photo by G.F. Berton, NRCan Photo Number 1995155.

## Introduction

During the first half of the 20<sup>th</sup> century, the seismologists of the Dominion Observatory in Ottawa collected earthquake reports from newspapers, mainly from the Ottawa-based, English-language media. Most clippings are in English but some are in French for the larger events felt in Quebec. According to Smith (1962), Dr. O. J. Klotz collected the newspaper clippings between 1905 and 1917 and Dr. E. A. Hodgson 1918 through 1927. It is not known who made additions to the scrapbooks after 1927. Interestingly, one of the newspaper clippings includes a notice of the funerals of Dr Klotz (Dec. 28<sup>th</sup>, 1923). There is a note in the Ottawa Citizen of Feb 15, 1924, that his diaries be given to the public archives of Canada and a reference to these diaries is listed in Smith (1962).

Over the years, these newspaper reports have been used to define the felt effects and damage impacts of many moderate to strong eastern Canadian earthquakes of 1925 (M 6.2 Charlevoix), 1935 (M 6.1 Temiscaming) and 1944 (M 5.6 Cornwall-Massena) (see Lamontagne et al. (2017) for a list and descriptions of significant Canadian earthquakes). Although macroseismic questionnaires had been sent to postmasters shortly after these earthquakes, newspaper accounts were important to complement the completed questionnaires. All this evidence was used to draw the isoseismal maps for these important earthquakes. From the scientific accounts of E.A. Hodgson, it is also known that he collected and used these reports to guide his post-earthquake field surveys. These newspaper accounts were also used by Smith (1962; 1966) to create the catalogue of eastern Canadian earthquakes. Often, Smith would encircle the clippings of Canadian earthquakes of interest. In addition, many newspaper clippings describe some significant global earthquakes, the elusive methods of earthquake predictions and developments in earthquake monitoring and research. These clippings were kept in four large scrapbooks (Figure 3). Deterioration of these manuals happened with time and it was decided to scan their contents to preserve them. In addition to a brief description of the contents of these scrapbooks, this Open File Report includes image scans of their pages.

References to these scrapbooks exist and it is important to make their contents available to researchers. Smith (1962) refers to these scrapbooks as:

“SEISMOLOGICAL SERVICE OF CANADA. *Scrapbooks: v. 1, 1-276. These books contain many newspaper clippings from Canada and some from U.S.A. The portion cited above was prepared by, or under the supervision of, Seismologist Dr. O.J. Klotz 1905-1917 and Seismologist Dr. E.A. Hodgson 1918 through 1927. References may be located chronologically and the source of many can be identified.*”

Whereas Smith (1966) refers to these scrapbooks as: “*SEISMOLOGICAL SERVICE OF CANADA. Scrapbooks: v. 1, 277-347; v. 2; v. 3. These books contain newspaper clippings. References may be located chronologically, and the sources of many can be identified.*”



Figure 3: Picture of the four scrapbooks that illustrates their state of deterioration. NRCan Photo Number 2021-003.

### **Scanning the scrapbooks**

The clippings were all digitized using an Epson XL 12000 scanner. For some of the more faded pages, a simple contrast levels filter was applied in Adobe Photoshop in order to make them more legible. As it was necessary to compress the collection into a reasonable size, some of the finer details are not as visible as they were in the originals. The original, unedited, high-resolution scans are being kept in the NRCan’s digital archive.

As large as the scrapbooks were, the size of the typical newspaper often made it necessary to fold the clippings for preservation as they were inserted. Many of them had crumbled along their edges and creases, causing them to separate, so were reconstructed to best reflect their original layout. Due to

this, the delicate nature of retrieving the clippings, and the need to cut the pages away from the spine, the time to digitize an entire scrapbook varied from 1 to 3 full weeks of scanning and processing.

## **Discussion and Conclusions**

The four scrapbooks were scanned and converted to pdf files. Appendix 1 is a list the content by year of publication. This list is difficult to define chronologically as there are some overlaps in years and the clippings of some larger eastern Canadian earthquakes, such as the 1925 Charlevoix earthquake, were grouped separately. The pdf can be scanned by keywords but there is a warning: the conversion program did not always recognize all words due to the poor quality of the originals. To obtain complete information, a visual examination of the newspapers is sometimes needed.

The scrapbooks of the Observatory include mostly clippings from the English-language newspapers of Ottawa. For large global earthquakes, mostly damaging or catastrophic ones, they were most-often reported by newswire services, sometimes with additional comments from the local seismologists. For Canadian earthquakes, the value of the newspaper reports is much greater. The clippings include many reports of earthquakes felt in Ontario and Quebec. They also include a wider coverage of newspapers for the moderate earthquakes of eastern Canada, such as 1925 **M** 6.2 Charlevoix; 1929 **M** 7.2 Grand Banks; 1935 **M** 6.1 Temiscaming and 1944 **M** 5.6 Cornwall-Massena.

We live in an era when more and more newspaper archives are becoming accessible electronically. Currently however, this important access to newspapers is rarely complete, often decentralized and, at times, difficult to access without a subscription. This Open File, although incomplete in its coverage, centralizes the information on a large number of newspaper clippings for many Canadian and global earthquakes. We hope that the information that it contains will be useful for research on earthquakes. It has certainly proven its value for the first author's research on historical earthquakes (see for example, Lamontagne et al., 2018; 2021).

## **Acknowledgments**



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## References

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Smith, W.E.T., 1962. Earthquakes of eastern Canada and Adjacent areas 1534-1927; Publications of the Dominion Observatory, Vol. 26, no. 5, 32 pages (1 sheet) (<https://doi.org/10.4095/8704>)

Smith, W.E.T., 1966. Earthquakes of eastern Canada and adjacent areas, 1928-1959. Publications of the Dominion Observatory, Ottawa. Department of Mines and Technical Surveys. 32, no. 3. 121 p. (\*\*\*)

**Appendix 1: Files with the contents of the scrapbooks (with a few eastern Canadian earthquakes of interest)**

**Pt-1**

1906 (start April 1906) p. 1-7 (mixed with 1907) Incl. 1906 San Francisco earthquake  
1907- p4-18  
1908- p 18-38  
1909- p. 39-48 + p. 49 Incl. BC 39; Montreal 40. ; Ste-Agathe 44;  
1909- p. 1 – 7 + p. 49 articles\_8.pdf  
1910 p. 8-21 Ottawa p.6 ;  
1911 p. 22-30  
1912- p. 30-33. Incl. Hamilton p.31;  
1913-  
1914 p. 7-16 Incl. Ottawa p.10  
1915  
1916  
1917  
1918  
1919  
1920  
1921  
1922  
1923  
1924  
1925 19250228 Charlevoix : only a few clippings P. 6-8 (see Pt2 for full coverage)  
1926  
1927  
1928  
1929 (not entire year) Attica Aug. 12, 1929. P. 12-18

**Pt2:**

Feb. 28, 1925 Charlevoix earthquake

**Pt3-1:**

1-56: 1929 Grand Banks earthquake  
Dec 1929: P. 56  
1930: P. 57-89  
1931: P. 89-97

**Pt3-2**

1925 p. 1; p. 8- (19250228: CHX eq p. 8-17)  
1933: p. 2-7: 1933 Santa Barbara eq  
1929 eq p. 17-

**Pt3-3:**

1930- p. 1; p.32-34;  
1931 .2-13 (1931-01-08; Charlevoix)

1932 p. 14; p. 20-24

1933. Nothing.

1934 p. 19; p. 25-26

1935: p. 27-42;

1936: p. 91-106

1937: p. 107-115

1938: p. 116-118

1939: p. 119-121

1940 p. 121-125

(p. 43-89 Nov. 1<sup>st</sup>, Temicaming eq)

(includes report on Nov. 1935 Temiscaming earthquake)

**Pt3-4:**

1939: P1-9

1940: p. 10-20

1941: p. 20-28; p 50; p. 52-

1942-

1943: p. 28-32

1944: p. 32-48

1945: p 49

1946: p. 53-66

1947: p. 66-69

1948: p. 69-72; p. 74-82

1949: p. 72-73; p. 85

1950: p. 92

1951: p. 93-97

1952: p. 98-99

1953: p. 100-106

1956- p. 107

M 5.6 Cornwall eq.

Vancouver Is eq

1944 M 5.6 Cornwall-Massena

**ObservatoryScrapbook-Sept1944-1.pdf**

**ObservatoryScrapbook-Sept1944-2.pdf**