



UNIVERSITY OF TORONTO MAP & DATA LIBRARY

The University of Toronto Map and Data Library: An Introduction

The University of Toronto **Map Library** is now the **Map and Data Library** of the University of Toronto Libraries' Reference and Research Services Department. The map collection is one of four map collections at the University of Toronto. The University of Toronto at Mississauga and Scarborough campus libraries both have smaller map collections available for use by the University of Toronto community and the public. The Thomas Fisher Rare Book Library Map Collection holds most rare map material. A membership form must be filled to gain access to this last collection.

Who can use the Map Library?

All University of Toronto faculty, students, staff and members of the public are welcome to use the facilities and paper collection of maps and atlases. Faculty, students, and staff only are eligible to use our Geographic Information Systems data collection.

Address

130 St. George
5th floor, Robarts Library
Toronto, ON M5S 1A5
Email: gjs.maps@utoronto.ca
Phone: 416-978-3931
Web: <http://www.library.utoronto.ca/maplib>

Hours

Regular Robarts open hours or <http://link.library.utoronto.ca/library/hours/list.cfm>

Collection Size

- 236,000 maps
- Hundreds of thousands of air photos (paper and digital)
- 16,000 atlases and books
- Hundreds of Geographic Information Systems datasets

Paper Map & Atlas Collection Overview

- Canadian maps from post-confederation era (1867) to the present – Older maps tend to be held at the Fisher Rare Book Library - <http://www.library.utoronto.ca/fisher/>
- Maps of the world in both topographic and thematic form
- Maps of countries and cities of the world
- Topographic maps of world countries at varying scales
- Air Photos of Toronto from the 1950's to present (note that most newer sets are now in digital format)
- Fire Insurance Plans from the 1800's to 1970's in paper, microfiche, and digital format for Toronto. The Fisher Rare book library holds a large number of original paper versions of these for much of Canada. A full listing is available at: <http://www.library.utoronto.ca/maplib/fips.html>
- Atlases covering the entire world on a varying array of subjects
- Modest but important collection of rare maps of Toronto, Canada, and Ontario
- Excellent collection of books on cartography, history of cartography, GIS, gazetteers, etc. but not books on geography
-



Micro-reproduction Map Collection

Collection of about 22,000 maps on microfiche and microfilm including the following major collections

- Fire Insurance plans of Canadian cities
- Ontario Base Maps (topographic)
- Foreign Topographic Maps
- Library and Archives Canada Map collection reproductions

Borrowing Maps or Atlases

Maps and Atlases do not circulate

Map Reserves

Books, Atlases, and Maps can be set aside for classes. Maps set aside for classes or individuals are located in the first set of map cabinets behind the reference desk. Books and Atlases on reserve are held on shelf 3b behind the reference desk.

Scanning, Photocopying, and Printing Maps

One 36" X ~ map scanner, photocopier, printer, one 8.5" X 11" regular photocopier and several flat bed scanners, one of which is 11" X 17". Remember that Canadian copyright laws prohibit the copy of more than 10% of any map that is not 50 or more years old

An Introduction to Maps and Cartography

What is a map?

The Idea of the Map

The map probably came to human beings as naturally as any other visualizing tool. They are now, of course, just as ubiquitous as books, pie charts, the alphabet, or any other human visual tool. In other words, maps are part of a core group of basic tools for human communication.

A map, in many ways, is also like any other facet of scholarly work. Like a book, an article, or an essay, the map is an interpretation of information. Some maps, like other scholarly material, are closer to the truth than others. Some cartographers are more honest than others, and some are better interpreters of information than others. Just as there are better writers of history (or any other discipline), there are also better cartographers.

The map, some have explained wisely, is a deconstruction and reconstruction of our world. With a map, we take out the unimportant details and draw only that which concerns our attention.



Broad Stages of the History of Mapping

Ancient Civilization

- Ancient Chinese maps – the first lost scientific maps
- Ptolemy, Alexandria, and the beginning of coordinate systems
- Ancient Roman Road Maps

Middle Ages

- Hereford and other Mappemunde Map (World Maps)
- Portolan Maps in the 15th Century

Enlightenment

- Mercator and the birth of the science/mathematics of map-making
- Age of Discovery Mapping

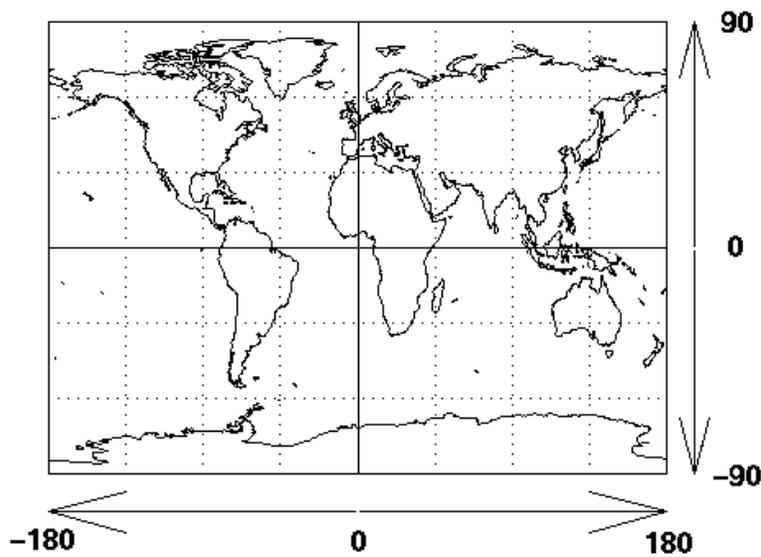
Modern

- Aerial Photography / Satellite Imagery
- Photogrammetry
- Global Positioning Systems
- Geographic Information Systems (GIS)

Map Coordinates

The idea of coordinate or grid systems for the earth was around in ancient times at both Alexandria and ancient China. Ptolemy was not the first to develop a coordinate system of longitude and latitude or of a grid of the world, but his is the only system of ancient time that remains.

Latitude is measured from the equator, with positive values going north and negative values going south. Longitude is measured from the Prime Meridian (which is the longitude that runs through Greenwich, England), with positive values going east and negative values going west. So, for example Toronto is at -79 degrees west longitude, $+43$ degrees north latitude or more specifically $43^{\circ} 42' 00'' \text{ N} - 79^{\circ} 25' 00'' \text{ W}$ below: adapted from: <http://iwockv.asfc.nasa.gov/teacher/latlon.html>





Map Projections

Maps also vary in terms of their **projection**. A projection is the mathematical method used to display spherical earth (globe) in a two dimensional piece of paper or computer screen.

As you can imagine, flattening out a globe is not an easy or accurate method of depicting the world. Mathematicians have been struggling since the beginning of modern cartography with the most accurate method of **projecting** the earth. Gerard **Mercator** produced the most famous projection in the 17th Century as a method for sailing by fixed rules and measurements.

Map Scale

Maps vary in size, shape, but most importantly they vary in **scale**. Scale is one of the most important aspects of cartography. A **large scale** map is one that offers the most detail. For instance, a map at **1:500** scale is much more detailed than a map at **1:1,000,000**. While “500” sounds “smaller” than “1,000,000” the real comparison should be the fraction “1/500” with “1/1,000,000”. In which case, “1/500” is much “bigger” than “1/1,000,000”

Types of Maps

- **Topographic Maps**
Issued in series for countries at different set scales e.g. 1:50,000 1:25,000 etc.
Show general physical and cultural information following standard symbols and styles
- **Special Purpose Maps**
Maps where no one theme is emphasized.
Includes town plans, general reference map of a province, country, road maps, etc.
- **Thematic Maps** (divided into two main types)
Qualitative maps which show WHERE a phenomenon is found but not the quantity of it.
Examples of these are geology maps, soil maps, road maps, etc.
Quantitative maps which show HOW MUCH of a phenomenon is found for an area.
Examples of these include Economic maps, or census maps
- **Photomaps**
Air photographs, usually as part of a set of a large geographic area

Types of Atlases

- **General Reference Atlases** e.g. world atlases (many found on atlas stand near reference desk)
- **National Atlases** Most countries in the world issue one (found in a specific call number range)
- **Urban Thematic** e.g. Census atlases
- **Historical Atlases** Again, most countries in the world produce one
- **Special Topic** Women, disease, etc.

Digital Maps

The Map Library is slowly digitizing/scanning and making available scanned historic maps. These are available to view and download from: <http://www.library.utoronto.ca/maplib/digital> Other great collections of historical reproductions of maps can be found at the following web pages:

Library and Archives of Canada http://www.collectionscanada.ca/02/02015402_e.html

The Library of Congress in the United States <http://memory.loc.gov/>

A very good private collection of historical reproductions of maps is also available at <http://www.davidrumsey.com>

Geographic Information Systems (GIS)

Most cartography is now done electronically using GIS. GIS is a computer application with the capacity to assemble, store, manipulate, analyze, and display geographically referenced information from digital data.

For an introduction to GIS, please see: <http://www.library.utoronto.ca/maplib/gis.htm>

As a result of this important cartographic development, the map library is now the repository for many datasets and databases. The map library holds approximately 200 GIS datasets which comprise in the hundreds of thousands of GIS files.

GIS and Disciplines other than Geography

The library also helps with the instruction of GIS on campus. Academics in many disciplines are now using GIS in their research and teaching. For an example of non-geographers using GIS, see <http://hds.essex.ac.uk/g2gp/gis/index.asp> or the book :

Knowles, Anne Kelly. **Past time, past place : GIS for history**. ESRI Press, c2002. G70.212 .P38 2002 and Hanna, Karen C. **GIS for landscape architects**. ESRI Press, c1999. SB 475.9 D37 1999

GIS Workshops

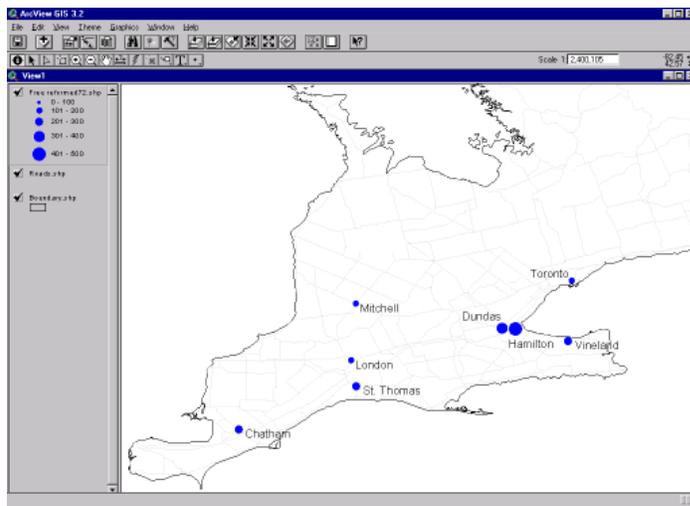
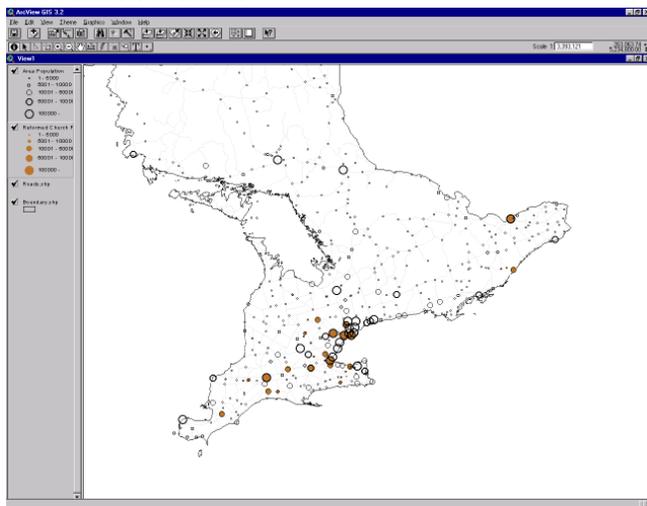
The Map and Data Library now has a 20 seat GIS instruction and public use lab. Workshops can be arranged for specific courses. Different workshops will also be organized throughout the year depending on demand and requirements. For more information or to book a workshop, please contact gis.maps@utoronto.ca. When the lab is not being used for instruction, students will be allowed to use the public computers for their own work.

GIS Workstations

Eight top of the line GIS workstations with dual monitors will be available for use during the Map and Data Library Service hours. These workstations will have GIS, CAD, and Adobe suites installed.

GIS Examples

The examples below are from a student's assignment mapping out the various Reformed church populations in Southern Ontario.





Finding Maps

- All Canadian maps are indexed in the University of Toronto library's online catalogue. <http://www.library.utoronto.ca>
- All maps acquired after the year 1980 can be located using the library's online catalogue. <http://www.library.utoronto.ca>
- All maps acquired before 1980 can be located using the map library's card catalogue

Online Library Catalogue

To locate maps in the library's online catalogue, use the "advanced search" option from <http://www.library.utoronto.ca>. In the first box, as in the image below, enter the subject "maps" and select as subject, the geographic area for which you want to find maps. In the example, "Istanbul" was typed. You can also specify the library you want to search and the location within this library. In the example below, the library selected is the "Data, Map, & GIS (soon to change to Map and Data Library)", and the format: **-Maps**. You could also use **-Books** or **-Atlases** if you wanted to search for Books or Atlases with maps of Istanbul.

Advanced search option from the online library catalogue

This is an example of item found using search criteria above. Notice the Call Number : **G7434 .I8 11 2001 (All maps start with the letter "G" and all G's are omitted from the call numbers on the maps. When looking for the above item, look for "7434 .I8 11 2001".)**



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If you click on Details, you will see the following information:

◀ Previous
Details: Record 5 of 5
✕

[Map](#)

Title Istanbul, scale 1:11,000 [cartographic material] / [prepared for] ITM, a division of ITMB Publishing Ltd. ; cartography by Andrew Duggan.

Imprint Vancouver, B.C. : International Travel Maps, c2001.
1 map : col. ; 68 x 88 cm., folded to 25 x 10 cm.

Language English
Legend in English and Turkish.

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[mylibrary](#)
[refworks](#)

[Permanent Link](#)



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Author [Duggan, Andrew, 1968-](#)

Added author [ITMB Publishing Ltd.](#)

Added author [International Travel Maps \(Firm\)](#)

Title [Istanbul, scale 1:11,000 \[cartographic material\] / \[prepared for\] ITM, a division of ITMB Publishing Ltd. ; cartography by Andrew Duggan.](#)

Imprint Vancouver, B.C. : International Travel Maps, c2001.

ISBN 1553416481

General note At head of panel title: International Travel Maps.

General note Includes notes, indexes, diagrammatic "Istanbul rail transit system" inset, "Istanbul regional map" inset, location map, publisher's map list, and col. ill.

General note Panel title.

General note Street map with tourist features.

Catalogue key 5136981

Subject Railroads Turkey Istanbul Metropolitan Area Commuting traffic Maps.

Subject Subways Turkey Istanbul Maps.

Geographic Term Istanbul (Turkey) Maps, Tourist.

Geographic Term Istanbul (Turkey) Maps.

Geographic Term Turkey Istanbul Metropolitan Area Road maps



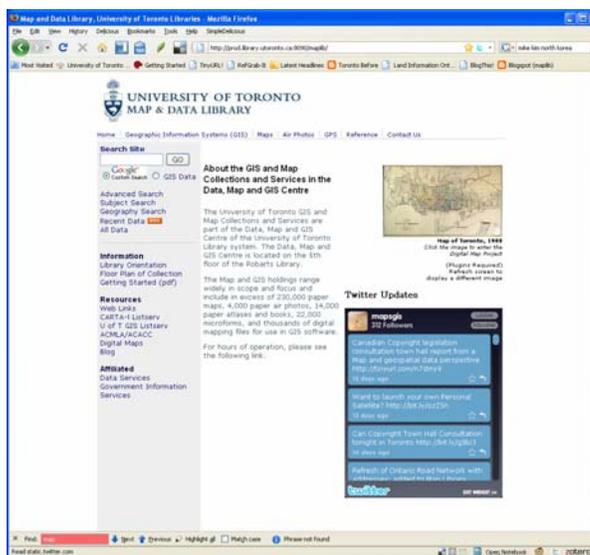
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Guide to Call Numbers for Maps and Atlases

Area	Maps	Atlases			
Africa	8200-8202	G2445-2447	New Zealand	9080-9084	G2795-G2799
Alberta	3560-	G1165-	Newfoundland	3460-	G1187-
Antarctica	9800-9804	G3100-G3102	North Africa	8220-8314	G2455-G2499
Arabian Peninsula	7520-7604	G2245-G2249.94	North America	3300-3302	G1105-G1107
Arctic Ocean	9780-9794	G3050-G3064	Northeast Africa	8320-8364	G2500-G2524
Asia	7400-7402	G2202-G2202	Northeastern States	3710-3784	G1205-G1243
Atlantic Ocean	9100-9174	G2805-G2839	Northern and Southern Hemispheres	3271-	---
Atlantic Provinces	3420-3419	---	Northern Ontario	3510-3514	---
Australasia	8950-8952	G2740-G2742	Northwest Territories	3600-	---
Australia	8960-8964	G2750-G2793	Norway	6940-6944	G2065-G2069
Austria	6490-6494	G1935-G1939	Nova Scotia	3430-	G1126-
Baltic States	7020-7054	G2120-G2139	Nunavut	3535-3539	G1184.3-.34
British Columbia	3570-	G1170-	Oceans	9095-9096	G2800-G2802
Canada	3400-3402	G1115-G1117	Ontario	3500-3530	G1145-
Canada Eastern	3410-3419	G1120-	Ontario Districts	3510-	---
Canada Northern	3580-	---	Ontario Regions	3522-	---
Canada Southern	3405-3406	---	Ontario Towns	3520-	---
Canada Western	3530-3532	---	Pacific & Mountain States	4210-4384	G1460-G1534.24
Canadian Topographic	3400s	---	Pacific Ocean	9230-9762	G2860-G3012
Central Africa	8630-8734	G2590-G2639	Prairie Provinces	3535-3537	---
Central America	4800-4874	G1550-G1594	Prince Edward Island	3450-	---
Central States	4040-4204	G1385-G1459	Quebec/Québec	3470-3500	G1140-
China	7820-7824	G2305-G2326	Russia	7060-7064	G2140-G2144
Eastern Hemisphere	5670-5672	G1780-G1787	Saskatchewan	3550-	G1160-
Europe	5700-5702	G1791-G1799	Singapore	8040-8044	G2384.3-G2384.34
France	5830-5834	G1837-G1844.24	South America	5200-5668	G1700-G1779
Germany	6080-6429	G1907-G1924	Southeast Africa	8400-8464	G2529.3-G2559
Great Britain	5740-5814	G1807-G1829.24	Southern Africa	8480-8624	G2560-G2584
Greece	6810-6814	G2005-G2009	Southern Ontario	3405-3406	---
Greenland	3380-	---	Southern States	3860-4033	G1280-G1377
India	7650-7654	G2280-G2284	Spain	6560-6564	G1965-G1969
Indian Ocean	9180-9219	G2850-G2857	Sweden	6950-6954	G2075-G2079
Indonesia	8070-8074	G2400-G2439	Thailand	8025-8029	G2375-G2379
Italy	6710-6794	G1983-1989.53	Toronto	3524 T6-	G1149-
Japan	7960-7964	G2355-G2259	Turkey	7430-7434	G2210-G2214
Korea	7900-7909	G2330-G2334.34	United States	3700-3702	G1200-G1202
Latin America	3292-	---	Vietnam	8020-8024	G2370-G2374
Manitoba	3540-	G1156-	West Africa	8734-8904	G2640-G2739
Maritime Provinces	3420-3429	---	West Indies	4900-5184	G1600-G1694
Mexico	4410-4763	G1545-G1549	Western Hemisphere	3290-3292	G1100-G1102
Middle Atlantic States	3790-3852	G1245-G1279	World	3200-3210	G1001-G1046
Minnesota	4140-4144	G1425-G1429	Yukon	3590-	G1179-
New Brunswick	3440-	G1130-			

Finding GIS Map Data

<http://www.library.utoronto.ca/maplib>



Map Collection Layout (5th floor Robarts Library) ... coming soon!

Last Updated: Friday September 10, 2009

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<http://www.library.utoronto.ca/maplib/docs/mapintro.pdf>