Earth and Space Sciences 203: Glaciers and Global Change
Monday, February 10, 2020

LIBRARY TUTORIAL

Matthew Parsons, the Librarian for Earth Sciences, will show us how to search the library databases for books and articles on specified topics, or by specified authors, and how to find those books and articles on-line, or in the library stacks (depending on the Library's holdings). He will also show how to follow a scientific thread forward in time through the peer-reviewed literature.

Library Assignment: Due Friday February 14

To get started:

1) **Find a partner** to work with on this assignment.
2) Get a **Group Number** from Ed (e.g. **3-b**. There will be more than one Group 3).

Now go find stuff:

3) **Find and check out** the items under **your group number** (e.g. **3** in this example) in **each** of the 5 categories (A), (B), (C), (D) and (E) below. Please read the instructions for each section carefully before you start.

Here's how you will do it:

4) Just like any web search, a literature search can turn up ***false positives***, i.e. titles that may match your search words, but are not relevant to your question. So document your search by recording
   a) the **Database** you used (*GeoRef*, or *Web of Science*)
   b) the **search Fields** that you used (e.g. Topic, Author, Title, Serial Title, etc)
   c) the **search words** that you entered in each Field in b).
5) **Summarize** the content of the article in a short paragraph, indicating why you think that it relates to your search. This will require you to read the abstract (of an article) or the preface and Table of Contents (of a book), and check through the article or book for relevance.
6) Be sure that **all Group Members inspect each item**, to see that the reference found in the database by the search engine is really **about the topic that you want.**
7) **All Group Members initial each selection to indicate your concurrence with the selection.** If your group is not convinced, then search again for a better item.
8) On **the day of the tutorial**, the **designated Reporter** in your group will turn in the Group membership form, with your **Group number** and your **Group membership list.**
9) You will turn in **1 collaborative report** for your group on **Friday February 12**.
10) (The reason that you have those extra 2 days for this assignment is to allow you to compare notes with your partner. Don't leave your searches until Thursday night. ☺)

Please don't just try to use Google. There is a good reason to learn and use these tools that Matt has introduced to you. Unlike Google, which will give you many false positives that are not even peer-reviewed literature, these search engines have been built specifically to do this type of literature search.

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PART (A) Find a *BOOK* in the library on a particular topic.

- Find a book satisfying the description below ***under your Group number.***
- Get a **photocopy** or **legible photograph** of the title page
- Write on the picture the UW Library **Call Number** for the book.
- **All members sign** to indicate that **they have examined the book, and they agree that the item satisfies the search description.**
- **Summarize the content and scope of the book** in a short paragraph, indicating why you think it relates to your search.
- Please **return books promptly** – other groups may be searching for books on the same topic.

Group 1. A book about global warming and public policy.
Group 2. A book about ice-core drilling technology.
Group 3. A book about Louis Agassiz.
Group 4. A book about glacier physics.
Group 5. A book about periglacial environments.
Group 6. A book about the Earth System.
Group 7. A book about volcanoes and glaciers
Group 8. A book about arctic sea ice.
Group 9. A book about remote sensing of glaciers.
Group 10. A book (not a government report) about avalanches.

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PART (B) Find a *Peer-reviewed Research Article* on a particular Topic.

- Find a **research article in a peer-reviewed journal** satisfying the description below under your Group number. (Do **not** get a book, or a chapter in a book, or an Abstract, or an encyclopedia article, or a commentary or news story about a peer-reviewed paper – **get the real thing** ☺).
- Document your search by recording
  a) the **Database** you used (*Georef*, or *Web of Science*)
  b) the **search Fields** that you used (e.g. Topic, Author, Title, Serial Title, etc)
  c) the **search words** that you entered in each Field in b).
- If you find the article in a print journal, get a **photocopy** or **legible photograph** of the first page of the article, and write on it the UW Library **Call Number** for the journal in which you found the paper.
- If you find a relevant article in an **on-line journal**, download **the pdf version** and print the first page **with title, abstract, and authors**, and write on it the **URL** for the journal web site (not the address with a gazillion characters, just the first few parts, e.g. **http://www.sciencedirect.com**/, or **http://www.sciencemag.org**).
- **All members sign** to indicate that they have **inspected the item and agree that it satisfies the search description**.
- **Summarize the content of the article** in a short paragraph, indicating why you think it meets your search criterion, i.e. is not a false positive.

Group 1. A paper in 2014 about warming of Greenland ice by refreezing meltwater
Group 2. A paper about changes in the thickness of sea ice in the Arctic Ocean.
Group 3. A paper in 2008 about geodynamical response of Mars North Polar Deposits.
Group 4. A paper in 2010 about lead isotopic compositions in the Dome C ice core, Antarctica.
Group 5. A paper by J. Mouginot (first author) about fast glacier retreat in northeast Greenland.
Group 6. A paper about Holocene accumulation in West Antarctica.
Group 7. A paper about sliding of Ice Stream B in West Antarctica.
Group 8. A paper about astronomy at the South Pole.
Group 9. A paper about nanodiamonds in ice sheets.
Group 10. A paper in 2012 about twenty-first century warming of the Filchner Ice Shelf cavity.

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PART (C) Find a *Peer-reviewed Research Article* by a particular Author in print form (hard copy) in the library stacks.

Some of these articles may also be available on-line, because every year more back issues of journals are scanned and put on-line. However, you may still occasionally need to go into the library stacks to find a paper, so this can be a useful challenge.

- Find a research article (**not** a book, or a chapter in a book, or an Abstract) in **print** form (**not** on-line) satisfying the description below under your Group number.
- Document your search by recording
    a) the **Database** you used (Georef, or Web of Science)
    b) the **search Fields** you used (e.g. Author, Title, Serial Title, etc)
    c) the **search words** that you entered in each Field in b).
- Get a **photocopy** or **legible photograph** of the first page of the article, and **write** on it the UW Library **Call Number** for the journal in which you found the paper.
- **All members sign** to indicate that they have **inspected the item and agree that it satisfies the search description**.
- **Summarize the content of the article** in a short paragraph, explaining why you think that it relates to your search.

Group 1. A paper in *Science* by C. Buizert (first author) about Greenland temperature during the last deglaciation.
Group 2. A paper by D.J. Wingham (first author) in 2006 in *Nature* about Antarctic subglacial lakes.
Group 3. A paper by G.H. Roe in 2011 about glaciers and climate variability.
Group 4. A paper by Bryn Hubbard in 2008 about optical televiewing of ice boreholes.
Group 5. A paper by Jinho Ahn in 2009 about measuring CO_2 in polar ice samples.
Group 6. A paper by Robert Kopp in 2009 about sea level during the last interglacial stage.
Group 7. A paper by B.J. Davies in 2012 about shrinkage of Patagonian glaciers.
Group 8. A paper by L.C. Sime in 2009 on interglacials and East Antarctic ice cores.
Group 9. A paper by Andreas Kaab in 2012 on glacier mass change in the Himalayas.
Group 10. A paper by C.F. Dow (first author) in 2011 about hydrology of a cirque glacier.

PART (D) Find a *Research paper* in an on-line *peer-reviewed scientific journal*.

- Find a research article (**not** a book, or a chapter in a book, or an Abstract) in an on-line journal satisfying the description below under your Group number.
- Document your search by recording
    a) the **Database** you used (Georef, or Web of Science)
    b) the **search Fields** you used (e.g. Author, Title, Serial Title, etc)
    c) the **search words** that you entered in each Field in b).
- **Download** the pdf version of the article, article, **print the first page** of the **pdf** article containing the title, abstract, and authors list, and **write the url** of the web site where you downloaded the article.
- **All members sign** to indicate that **they have reviewed the selection and agree that the item satisfies the search description**.
- **Summarize the content of the article** in a short paragraph, indicating why you think that it relates to your search.

Group 1. A paper about deglacial warming in West Antarctica, by T.J. Fudge (first author) in *Nature* in 2013.
Group 2. A paper about warm ocean water in an ice-shelf cavity beneath Totten Glacier in *Nature Geoscience* in 2015.
Group 3. A paper in 2013 by Tong Zhang (first author) about temperature and velocity on East Rongbuk Glacier.
Group 4. A paper about glacier runoff in China in *Journal of Glaciology*.
Group 5. A peer-reviewed paper (***not*** a commentary) in *Nature Geoscience* in 2008 about calibration of tree rings and ice cores.
Group 6. A paper by T. Moon in 2012 about Greenland outlet-glacier velocities.
Group 7. A paper in 2015 about Projected deglaciation of Western Canada.
Group 8. A paper in 2013 in *Nature* about Eemian Interglacial from a Greenland ice core.
Group 9. A paper in 2009 about martian polar layered deposits and surface mass balance.
Group 10. A paper by Shang-Ping Xie (first author) in *Nature Geoscience* about energy budgets and the "global warming hiatus".

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PART (E) Find an on-line *Research paper* that cited an article that you have already found (above). (Tracking a research thread forward in time)

- Use the ***ISI Web of Science*** database to identify a more-recent research article (**not** a book, or a chapter in a book, or an Abstract) in an on-line journal that cited an article that your group has previously located, following the description below under your Group number.
- **Locate and Download** the article **in pdf format**,
- **Print the first page** of the article containing the title, abstract, and authors list, and **write the url** of the web site where you downloaded the article.
- **Print the page** in the article where the **authors cite your previously located article** and **highlight** or underline **the sentence in which the authors cite that previous paper.**
- **Print the References** page and **show that your previous article is included** in the **References** list**.**
- **All members sign** to indicate that **they have inspected the paper and agree that the item satisfies your search criterion.**
- **Summarize the content of the article** in a short paragraph, indicating why these authors cited the paper that your group had previously found.

Group 1. A paper about the EPICA Dome C CO_2 record that cited your paper by Buizert (first author) in Part C.
Group 2. A paper in *Annals of Glaciology* in 2011 that cited your 2006 paper by Wingham in Part (C).
Group 3. A paper about buried glaciers on Mars that cited your paper about North Polar Deposits in Part B.
Group 4. A paper by J. Chewings (first author) in *Sedimentology* that cited your Dome C paper in Part B.
Group 5. A paper by Paula Reimer (first author) that cited your tree-rings paper in part D.
Group 6. A paper about Glacier de Tête Rousse that cited your Gornergletscher paper in D.
Group 7. A paper about glaciers in the Altai Mountains that cited your Deglaciation of Western Canada paper in Part D.
Group 8. A paper by Jeremy Shakun that cited your Eemian Interglacial paper in Part D.
Group 9. A paper that cited your Himalayan Glaciers paper in Part C.
Group 10. A paper by K. Matsuoka (first author) that cited your ice-shelf cavity paper in Part B.