HISTORY OF STATISTICS IN ECOLOGY:

**SEARCH ENGINE PROTOCOL**

1. Go to [Web of Science](https://www.lib.uchicago.edu/about/news/database-spotlight-web-of-science/) via the University of Chicago Library.
2. Click on **Products** > **Web of Science (Classic)**
3. Click on **Advanced Search** > Copy and Paste the following Search Criteria in the search box:

((TS=("ecolog\*") AND SU=Environmental Sciences & Ecology AND WC=Ecology))

1. Under “Restrict results by languages and document types:” select **English** and **Article**.
2. Under “Timespan” select **Custom year range** from years **1900** to **1999**.
3. Under “Web of Science Core Collection: Citation Indexes” **keep all indexes selected** (SCI-EXPANDED, SSCI, A$HCI, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC.)
4. Press **Search**. You will see 13,613 results. Click on that number and, on the next browser, scroll down to “**Source Titles**” at the bottom of the left hand side handle. Click on the drop down and select **ECOLOGY**. Click **Refine**. You will see 1,100 results. Here is a [link](http://apps.webofknowledge.com.proxy.uchicago.edu/Search.do?product=WOS&SID=5C1gNouD5pzsDOQyCCj&search_mode=AdvancedSearch&prID=1a3aa23f-7cb0-48ae-87b0-1e5cb374434e) to the final result.
5. Here is a summary of your **search criteria that you can** **copy** in the top right corner of the page under the “Results” number. Be sure to copy this each time you search in a **new way**.

**You searched for:** (((TS=("ecolog\*")  AND SU=Environmental Sciences & Ecology  AND WC=Ecology))) *AND***LANGUAGE:**(English) *AND* **DOCUMENT TYPES:**(Article)

**Refined by:**  **SOURCE TITLES:** ( ECOLOGY )

**Timespan:** 1900-1999. **Indexes:** SCI-EXPANDED, SSCI, A&HCI, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC.

1. Scroll to the very bottom of the first page. Set “**Show**” to **50 per page**, which means 22 pages to flip through.
2. At the top of each page, click on **Export** > **Excel** > select “**All records on page**” (e.g. 1-50 or, for faster results, up to 500 articles at a time) > under “Record Content” click on “**Full Record**” > **Export**
3. Now extract the number of citations per year for each journal. Click on **Create Citation Report** in the upper right hand corner of the webpage.
4. Scroll down to the bottom and click on the dropdown button that says “**Save to Excel File**”. Click on it and extract all records (i.e. 1-500 then 501-1000 and finally 1001-1100). Rename the exports to “**yr\_citations-n.xls**” where “n” can be 1,2,3…etc.
5. Now apply Manual Filtering Criteria.

FILTERING CRITERIA

1. Remove articles that are *not* studies. An article needs to contain a topic on natural research in the title. Ask yourself, *is it a direct study rather than a scientific review, meta-analysis, or opinion?*
   1. What is ‘research’? Research is observations, conclusions, experiments, and/or methods.
   2. What is ‘natural’? Natural is biotic and abiotic factors decentralized from humans. For example, we are not interested in ‘human ecology’, but the ecology of non-human life forms.
2. Remove studies that are duplicated in the search.
   1. In the exported Excel sheet(s), select the “**Article Title**” column > **Home** tab > **Conditional Formatting** > **Highlight** **Cell Rules** > **Duplicate Values…** > **OK**
3. Remove papers with citation counts of <= 0.
   1. Compute a new columncalled **CiteX. CiteX = “Times Cited, All Databases” – “Since 2013 Usage Count”**
   2. Sort the data based on citation count. Press **Ctr + a** to select the data then > **Data** tab > **Sort** **> Sort by CiteX** > **Order Largest to Smallest** > **OK**