

Zotero Best Practices for LTER Sites

2018-11-04

by Tim Whiteaker, John Porter, Stace Beaulieu, Elizabeth Dobbins

Introduction

[Zotero](#) is a free reference manager that can help you organize a listing of conference presentations, journal articles, dissertations, and other works produced by your LTER site. These works are described in a database that is synced between your desktop and Zotero's servers in the cloud. The server supports an API enabling searching of the database, which means LTER websites can include an interactive bibliography search. Zotero can also export to BibTeX format, which is convenient since Research.gov accepts BibTeX for describing products produced by your award.

This document describes best practices for using Zotero for LTER sites, with a focus on supporting a searchable bibliography on an LTER website and reporting to Research.gov.

Getting Started

- Create a Zotero account just for your LTER site.

This maximizes your free storage (so you're not sharing LTER stuff with other items in your personal account) and facilitates handling the account over to the next publication manager when you leave the project.

Be sure to download both the desktop client and the Zotero Connector for your Web browser. The desktop client syncs your local copy of your database to the cloud and lets you easily manage your database. The Connector can automatically harvest metadata for a given publication that you're looking at in your browser and add it to your database.

- When using Zotero Connector, you'll typically get the most metadata harvested if you go to the journal through which the article is published rather than sites like Google Scholar.

With a free account you get limited storage, so sharing PDF attachments of journal articles could become costly over time, requiring a paid storage plan; plus there are copyright considerations. However, you can tell Zotero not to sync attachments, enabling you to maintain a local copy of PDFs of articles while just supplying bibliographical information to the cloud.

- In the desktop client, set preferences to that attachments are not synced to the cloud.

- If a snapshot attachment was created automatically (e.g., when you read metadata from a website, it includes a snapshot of the page as an attachment), delete the attachment.

Consider creating a Zotero group. One advantage of using a cloud-based solution like Zotero is that multiple users can have access to your group and contribute their publications. In practice, this increases the likelihood of inconsistent item descriptions. Unless you've set up protocols on how to manage your site's Zotero group and trained your personnel accordingly, you may find it easier just to enter all items yourself. Note that some edits can only be performed with the desktop client, so if it doesn't work in your browser, try using the desktop application. Also, some edits like changing Item Type can only be performed by the Member who originally added the item Collection.

If you create a Zotero group for an LTER site, consider naming the group LTER-ABC, where ABC is the three-letter acronym for your. Currently, when users search for groups in Zotero, the search term is matched from the start of the group name, so a search for "LTER" would not show a result for a group named "ABC-LTER." Naming your group LTER-ABC enables users to discover your group if they are just looking for LTER sites in general. You can add a link to your website pointing to your Zotero LTER group for users who are familiar with your site and are trying to browse to your library directly. Don't forget to add a description for the group and also a website address pointing back to your LTER website.

- If you create a Zotero group for your LTER site, name it LTER-ABC, where ABC is your three letter acronym for your site, e.g., LTER-BLE.

If your team is using another reference manager and they need to send you items for Zotero, you can ask them to export a BibTeX file or use another supported format, and then you can import that file using the Zotero desktop application.

- Always include a DOI when available. This can help identify duplicates.
- Organize your items (or not) into collections that support your end goal. See suggestion in the Research.gov section.

Reporting publications to Research.gov

You can export your Zotero library from your Desktop client to a BibTeX file, which can then be uploaded to Research.gov when it's time for annual reports or reviews. Follow these tips to make sure the data entered in Zotero makes it into a BibTeX field that Research.gov supports.

- For items awaiting publication, leave the year blank.

The table below shows the mapping from Zotero to BibTeX to Research.gov. Bold fields are required; "year" is optional if not yet published. It's okay to have information in other Zotero fields but it won't be used by Research.gov.

Zot Type	Zot Field	Bib Type	Bib Field	Gov Type	Gov Field
*Journal Article	Author Date Title Publication Volume Issue Pages DOI ISSN	article	author year title journal volume number pages doi issn	Journal or Juried Conference Paper	authors year title journal volume issue pages doi issn (if no DOI)
Book	Author Title Date Edition Volume Editor Place Publisher ISBN	book	author title year edition volume editor address publisher isbn	Book	author title year edition volume editor place publisher ISBN
Book Section	Title Author Book Title Date Edition Volume Editor Place Publisher Pages ISBN	incollection	title author booktitle year edition volume editor address publisher pages isbn	Book Chapters	chapter title author book title year edition volume editor place publisher pages ISBN
Thesis	Author Date Title University	phdthesis	author year title school	Thesis / Dissertation	author year title institution
Conference Paper	Author Title Proceedings Title Place Date DOI	inproceedings	author title booktitle address year doi	Other Conference Presentation / Paper	author paper title conference name conference location year doi

- *For proposals submitted after 2016-01-25, you upload peer-reviewed items along with attachments separately in a manual process. If this is you, then do not include peer-reviewed items in your BibTeX export. Although the information is read correctly by Research.gov, a red X will appear next to the item and it will not be accepted.

Note for non-peer-reviewed presentations:

- The Zotero item type is **Conference Paper**.
- Enter the conference name as the **Proceedings Title**. Do not enter the conference name as the Conference Name, as that field does not make it into Research.gov.

Save the exported BibTeX file with extension .bib.

A note on BibTeX and curly braces:

A given data attribute, such as an article title, is {wrapped in curly braces} in BibTeX files. BibTeX files typically have only the first word of titles capitalized. To preserve capitalization, words in the title can be placed in brackets, which results in something like:

```
title = {Watersheds in the {Arctic}},
```

If the braces cause problems for you, you will need to open the .bib file in a text editor and remove them. The presence of braces does not appear to break the Research.gov import.

After the upload, you can indicate whether each item was peer-reviewed and had Federal support. To that end, you may want to create Zotero Collections for each category. You can then export a BibTeX file for each collection and click the boxes in Research.gov efficiently.

- Organize items into Zotero collections by Research.gov category, e.g., peer-reviewed, non-peer-reviewed, awaiting publication.

Supporting an Online Searchable Bibliography

Free tools for integrating your website with the [Zotero API](#):

- A. [ZotPress](#) - WordPress plugin for Zotero, in use at VCR and NGA. [See the Appendix for procedures used to go from EndNote to Zotero to ZotPress](#).
- B. [JavaScript Search Client](#) - Designed for static websites, but hypothetically could be used anywhere. Used by BLE. Tim Whiteaker (BLE information manager) developed it and is likely willing to help you set it up for your site.
- C. [pyzotero](#) - Python wrapper for the API; may be useful for sites built with Django

What Others are Doing

Stace Beaulieu (NES) - Shares Zotero group with her team

Elizabeth Dobbins (NGA) - ZotPress user. PIs use EndNote separately. Interested in how to divvy up existing items in personal Zotero account for LTER use.

Marty Downs (NCO) - Has LTER Network Zotero group with ~20,000 items.

John Porter (VCR) - EndNote on backend, with periodic updates to Zotero. ZotPress user.
Exports from EndNote to Research.gov.

Jonathan Walsh (BES) - Interested in API and JavaScript. Wants to return individual elements for each reference rather than a nicely formatted bibliographical item.

Tim Whiteaker (BLE) - Using JavaScript search client.

Mary Martin (HBR) - Publications managed in Zotero. RIS output from Zotero is imported to Drupal Biblio (with a script to re-code some fields). Biblio author IDs are used to display pubs on people pages.

Appendix A: From EndNote to ZotPress via Zotero

Procedure used at VCR to go from EndNote to ZotPress via Zotero:

1. Update the master SITE.enl library with any changes. Note any manually entered data requires accession numbers e.g. VCR_2006123100_50.
 1. If any reference changes (e.g. from in press to published) be sure to use the OLD accession number....., not a new one!
 2. Avoid paragraph markers in imported abstracts. They should all be one long string rather than multiple paragraphs.
2. Write an Endnote Export file by selecting the RIS filter, then exporting to a XML file.
 1. https://www.zotero.org/support/kb/importing_records_from_endnote has some additional settings if the RIS filter was previously unmodified.
3. Upload that file into Zotero -
 1. Open Zotero, logging in using the LTER account
 2. Use the tool to select all the references in the overall Library and move them to the trash
 3. Upload RIS file using the IMPORT in the File menu
 4. Delete the OLD VCRLTERv2ris1 collection along with the items in it
 5. Rename your NEW collection to VCRLTERv2ris1
4. Read the new data into the web site
 1. Login to web site as administrator
 2. Use the Zotpress link in the dashboard to clear the cache
 3. Accounts tab, hit the GREEN clear cache button on the right – do NOT delete the account
 1. Browse to start repopulating the cache from the uploaded Zotero file

2. Go to the main web site and click on bibliography “by author” to start generating the display version. It can take a while!

Appendix B: Batch Editing Zotero Content

For batch operations, like deleting all tags that begin with the letter Q, you may need to employ a [local JavaScript solution](#) or [cloud-based JavaScript solution using the API](#), or a [Python solution with pyzotero](#). Tim found pyzotero to be easier to use, but he’s also more of a Python guy than a JavaScript ninja.

Note that some batch tag management tasks can be performed using the Tag Selector pane in the bottom left corner of the Zotero desktop application. You can remove all automatically generated tags, delete a specific tag from all items by right-clicking it, or merge tags by renaming one tag to have the same tag as another (if both tags were used for an item, they are merged so you won’t get duplicate tags for that item).

```
"""Sample Python code to update a Zotero library using pyzotero.

This example removes the 'Simmr' tag from all items, if it was
automatically
added by Zotero.
Requires pyzotero (pip install pyzotero).
For more info, see https://pyzotero.readthedocs.io/en/latest/

"""

from pyzotero import zotero

# Find user Id and keys at https://www.zotero.org/settings/keys
# Group Id is the integer in the URL for your group page
library_id = 5056957 # library or group Id
library_type = 'user' # user or group
api_key = 'pasteYourApiKeyHere' # https://www.zotero.org/settings/keys/new

zot = zotero.Zotero(library_id, library_type, api_key)
try:
    items = zot.items(limit=50)
    while True:
        for item in items:
            data = item['data']
            print(data['title'])
```

```
tags_to_keep = []
for tag in data['tags']:
    if 'type' in tag and tag['type'] == 1: # auto tags
        if tag['tag'] != 'Simmr':
            tags_to_keep.append(tag)
    else:
        tags_to_keep.append(tag)
if tags_to_keep != data['tags']:
    item['data']['tags'] = tags_to_keep
    zot.update_item(item)
    print('    Updated this item')
    items = zot.follow() # next set of items using same limit as above
except StopIteration:
    print('\nAll items processed')
except Exception as ex:
    print(ex)
```