🌐 Setting up Zotero and Google Drive for syncing reference libraries (PC)

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Protocol status: Working
We use this protocol and it's working

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ABSTRACT

This protocol is useful if you wish to sync a LARGE reference library across multiple computers. It uses Zotero, which has built-in free syncing for up to 300 MB of files (roughly 50-100 papers). For larger libraries, it can make sense to use other cloud storage services to store and sync files. This protocol uses Google Drive, Windows PC, and Google Chrome.

Zotero is free, open-source, powerful, and has an active user forum.

I made this protocol for internal lab use (and my own reference), but welcome feedback if it's used by others!

Set up Google Drive syncing

1   Install Drive for desktop on both computers   `5m`

2   Create a Google Drive folder that will store your synced library files, e.g., *Google Drive G:/My Drive/papers_synced*   `1m`

This folder will be referred to as your **Google Drive synced library file folder** for the remainder of the protocol.

3   On both computers, set your **Google Drive synced library file folder** to Offline Access: Right click on the folder, select *Offline access > Available Offline*   `1m`

This will store the paper files locally on each computer so that you can access them when you are offline.

Install and set up Zotero on Computer 1   `20m`

4   Install [Zotero](#) desktop   `5m`

Default installation settings are fine.

5   Configure Zotero to link saved citations to the files in your **Google Drive synced library file folder**

5.1   In Zotero, go to *Edit > Preferences*

5.2   Under *General > File Handling*, deselect *Automatically rename attachment files using parent metadata*

Later, you will use Zotfile to handle attachment (pdf and other files) naming instead of using Zotero.
All other default settings under General are fine.

5.3   Under *Sync > Data Syncing*, deselect *Sync full-text content*

- Don't log in to Zotero yet, you'll do this later.
- This will prevent Zotero from uploading pdf and other file attachments to its cloud, which will quickly fill up.
- Keep *Sync automatically* selected. This will use Zotero to sync metadata for your citations in its cloud and prevent corrupting those references. Because the metadata files are tiny, the 300 MB Zotero free storage limit essentially means you can sync as many metadata

references as you want.

5.4   Under *Sync* > *File Syncing*, deselect *Sync attachment files in My Library using...*

- This, again, will ensure that Zotero doesn't try to upload your pdf and other file attachments to its cloud.
- You may want to keep *Sync attachment files in group libraries using Zotero storage* selected if you ever plan to collaborate with others on Zotero libraries. This *will* use up your Zotero cloud space, but if your collaborating groups don't plan on having dozens of shared files, that should be okay. Otherwise, you won't be able to share files across your groups.

5.5   Under *Advanced* > *Files and Folders* > *Linked Attachment Base Directory*, set *Base Directory* to the location of your **Google Drive synced library file folder**

This will tell Zotero to look for the pdf and other attachment files in the synced Google Drive folder

5.6   Under *Advanced* > *Files and Folders* > *Data Directory Location*, set the Data Directory Location to wherever you want Zotero to save the reference metadata, which it will sync in Zotero's cloud. The Default option is fine.

6   Import an old library from the bibliography management program you used to use

- Skip this if you have never used Mendeley or a prior reference management program before and are starting with Zotero.
- If you are moving your library to Zotero from an old reference management program, e.g., Mendeley, select *File* > *Import* and use the import wizard to import your old files.
- This can take a *long* time if you have a big library. Wait for it to finish before continuing with any additional installations or settings changes.

7   Install and configure the ZotFile plugin

ZotFile will ensure that the references you add will be stored where they belong, and will give them names that allow you to look for the files easily.

7.1   Download ZotFile as a *.xpi file

7.2   In Zotero, go to *Tools* > *Add-ons* > *Settings* (the gear icon) > *Install Add-on From File* and select the ZotFile *.xpi file you just downloaded

This will install the ZotFile plugin
When it is installed, you can close the *Add-ons* window

7.3   Restart Zotero

7.4   In Zotero, go to *Tools > ZotFile Preferences > General Settings* and set *Location of Files* to *Custom Location*, setting your file location to your **Google Drive synced library file folder**

- Zotfile will now manage all added attachments (pdfs and other files) by storing them in your synced Drive folder.
- You can also modify the Source Folder for Attaching New Files, which just tells ZotFile where to look if you're trying to add new files, I think, though I'm not totally sure.

7.5   In the ZotFile Preferences window, go to *Renaming Rules* and set your file naming rules to whatever makes sense to you

I use *{%a - }{%y - }{%t}* with *Truncate title after . or : or ?*, *Maximum length of title* = 30, *Maximum number of authors* = 2, and *Add suffix when authors are omitted* = et al, which, for example, saved the pdf associated with the reference below as *Frantz et al - 2015 - Grain trapping by filamentous.pdf*

Frantz, C. M., Petryshyn, V. A., & Corsetti, F. A. (2015). Grain trapping by filamentous cyanobacterial and algal mats: Implications for stromatolite microfabrics through time. *Geobiology*, *13*(5), 409–423. https://doi.org/10.1111/gbi.12145

8   In Zotero, rename and move your files into the synced folder

If you imported files from a prior library, you will need to do this step. Otherwise, this should happen automatically as you add new files in the future.

8.1   Sort your files by attachment

8.2   Select all the files that have an attachment

8.3   Right click your selected files, then select *Manage Attachments > Rename and Move*
If you get a warning message telling you that there are a lot of files and it will take a while, select okay
This will go through and rename all of the files associated with bibliographic entries using the renaming rules you set up through ZotFile, and then will move them into your **Google Drive synced library file folder**, where they will then be synced to the cloud.

Install and set up Zotero on Computer 2

9   Repeat the steps above for your second computer

If you do not have a prior (e.g., Mendeley) library saved, OR if your library was previously synced between the two computers, you can skip steps 6 and 8.

Congratulations — your libraries should now be synced across computers!

Using Zotero

10   Install [Zotero Chrome Connector](#) to easily import and download new files

- This is the best way to add new references: just navigate to the paper's webpage, wait for the Zotero icon in Chrome to turn blue (indicating that it has access to the paper's metadata), then click it to automatically add the citation to Zotero and, if possible, download the pdf.
- If you can't automatically download the pdf (e.g., the library doesn't have access and you need to do to ILL request to get it), you can later download the file manually and drag and drop it into the Zotero reference entry.
- The Zotero Chrome Connector also interfaces directly with Google Docs, allowing you to add and automatically update citations in your Google Docs papers.

11   When you installed Zotero, it should have automatically installed the plugin for Microsoft Word, allowing you to add and automatically update citations and bibliography lists when writing in Word.