

# Preprint template

M.D. Catchen<sup>1,2</sup>

<sup>1</sup> McGill University; <sup>2</sup> Québec Centre for Biodiversity Sciences

Correspondance to:

**Abstract:** This template is used by the Poisot lab at Université de Montréal to write manuscripts using github. It uses github actions as a way to generate a website that can be annotated using hypothes.is, a PDF document for copy-editing and submission to journals, and a PDF document for submission to preprint servers. At every push on the master branch, the whole series of documents will be updated automatically.

**Keywords:**  
pandoc  
pandoc-crossref  
github actions

This template uses recent versions of pandoc and pandoc-crossref to facilitate the referencing of equations, figures, and tables within the text. For example, the following equation

$$J'(p) = \frac{1}{\log(S)} \times \left( - \sum p \times \log(p) \right) \quad (1)$$

is produced using

```
$$J'(p) = \frac{1}{\text{log}(S)} \times \left( - \sum p \times \text{log}(p) \right)$$ {#eq:eq1}
```

and can be referenced using @eq: eq1, which will result in eq. 1.

All documents will be deployed to gh-pages *only* on push events from the master branch. All of the artifacts will be built when doing pull requests, so you can check that merging a branch is *not* going to cause the compilation of the documents to fail; indeed, you can download the artifacts produced during the run, to check the PDF and html files.

1 \_\_\_\_\_

## Using references

The references are managed by pandoc. Note that we *do not* use pandoc-citeproc, which was an external module for older pandoc versions. References *must* be stored in a references.bib file. We use Zotero for references management, and for the lab's manuscripts, we work from folders in a shared library (with a folder for every manuscript).

We use the Better BibTeX plugin for citation key generations, and auto-export of the shared library to the references.bib file. We use a citation key format meant to convey information on the author, date, year, and title. It must be set in the Better BibTeX preferences as

[auth:fold][year][title:fold:nopunctordash:skipwords:lower:select=1,1:substring=1,3:capitalize][title:fold:nopunctordash:skipwords:lower:select=1,1:substring=1,3:capitalize]

It is a good idea to configure Better BibTeX to auto-export on change, and to remove a lot of fields that are not strictly speaking required for references. The list of fields we usually ignore is:

abstract,copyright,annotation,file,pmid,month,shorttitle,keywords

The citations are done using the normal markdown syntax, where @Elton1927AniEco produces Elton (1927), and @Camerano1880EquViv produces (Camerano 1880).

## 2

### Tables

Table legends go on the line after the table itself. To generate a reference to the table, use {#tbl:id} – then, in the text, you can use {@tbl:id} to refer to the table. For example, the table below is tbl. 1. You can remove the *table* in front by using !@tbl:id, or force it to be capitalized with \\*tbl:id.

**Table 1** This is a table, and its identifier is id – we can refer to it using {@tbl:id}. Note that even if the table legend is written below the table itself, it will appear on top in the PDF document.

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
5.0	3.6	1.4	0.2	setosa
5.4	3.9	1.7	0.4	setosa

## 3

### Figures

Figures can have a legend – all figures *must* be in the figures/ folder of the project, as it is also used for the website. We recommend to use good resolution images, rather than PDFs, or at least to have multiple versions available.

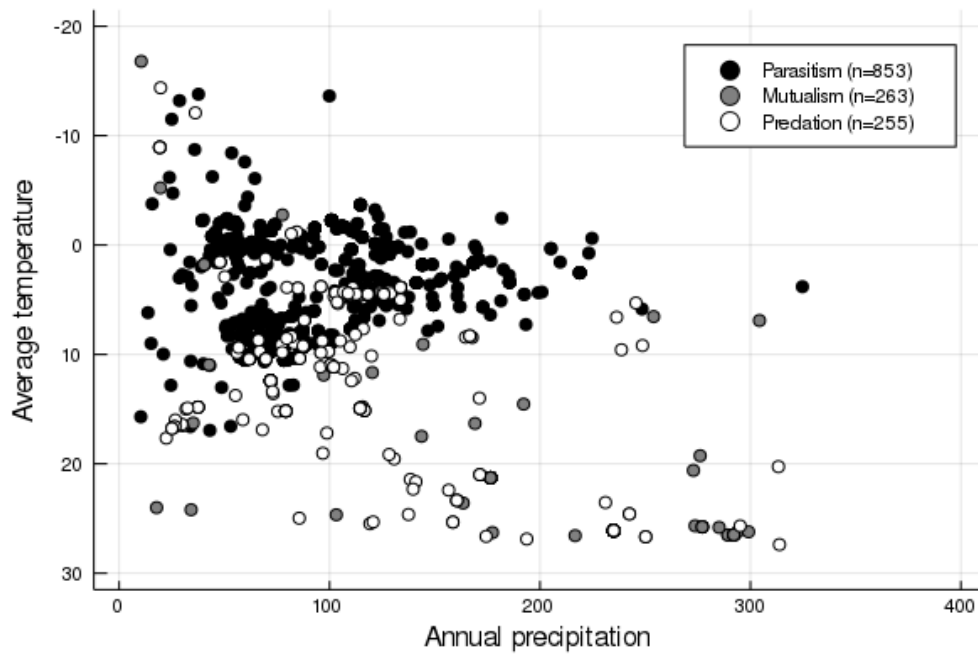
![This is the legend of the figure](figures/biomes.png){#fig:biomes}

We can now use @fig:biomes to refer to fig. 1.

## 4

### Example text

Connectance, defined as the ratio of realized interactions on the total number of potential interactions, is one of the most common descriptor of network structure. In a bipartite network with  $T$  species at the top, and  $B$  at the bottom, having a total of  $L$  interactions, it is defined as  $Co = L/(T \times B)$ . Connectance has a lower bound, as the network cannot have fewer interactions than the number of species in its more speciose level – the minimal connectance is therefore



**Figure 1** This is the legend of the figure

$c_m = \max(T, B)$ . This makes the connectance of networks of different sizes difficult to compare, especially since bipartite networks tends to have a low connectance. For this reason, we used a corrected version of connectance, defined as

$$Co^* = \frac{L - c_m}{T \times B - c_m}. \quad (2)$$

**4.1. This is a subsection** This takes values between 0 (the network has the minimal number of interactions) and 1 (all species are connected), but is robust to variations in species richness.

**4.2. This is another subsection** This takes values between 0 (the network has the minimal number of interactions) and 1 (all species are connected), but is robust to variations in species richness.

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## References

- Camerano, Lorenzo. 1880. "Dell'equilibrio Dei Viventi Merce La Reciproca Distruzione." *Atti Della R. Accad. Delle Sci. Torino* 15: 393–414.
- Elton, Charles S. 1927. *Animal Ecology*. University of Chicago Press.