An introduction to knitcitations

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knitcitations

- **Author**: Carl Boettiger
- **License**: MIT
- Package source code on Github
- **Submit Bugs and feature requests**

`knitcitations` is an R package designed to add dynamic citations to dynamic documents created with Yihui's knitr package.

Installation

Install the development version directly from Github

```r
library(devtools)
install_github("cboettig/knitcitations")
```

Or install the current release from your CRAN mirror with `install.packages("knitcitations")`.

Quick start: rmarkdown (pandoc) mode

Start by loading the library. It is usually good to also clear the bibliographic environment after loading the library, in case any citations are already stored there:

```r
library("knitcitations")
cleanbib()
```

Set pandoc as the default format:

```r
options("citation_format" = "pandoc")
```

(Note: The old method will eventually be depricated. For documents using `knitcitations <= 0.5` it will become necessary to set this as `"compatibility"`).

Cite by DOI

Cite an article by DOI and the full citation information is gathered automatically. By default this now generates a citation in pandoc-flavored-markdown format. We use the inline command `citep("10.1890/11-0011.1")` to create this citation (Abrams et al. 2012).

An in-text citation is generated with `citet`, such as `citet("10.1098/rspb.2013.1372")` creating the citation to Boettiger and Hastings (2013).

Cite by URL

Not all the literature we may wish to cite includes DOIs, such as arXiv preprints, Wikipedia pages, or other academic blogs. Even when a DOI is present it is not always trivial to locate. With version 0.4-0, `knitcitations` can produce citations given any URL using the Greycite API. For instance, we can use the call `citep("http://knowledgeblog.org/greycite")` to generate the citation to the Greycite tool (Lord 2012).

Cite bibtex and bibentry objects directly

We can also use `bibentry` objects such as R provides for citing packages (using R's `citation()` function): `citep(citation("knitr"))` produces (Xie 2015; Xie 2013; Xie 2014). Note that this package includes citations to three objects, and pandoc correctly avoids duplicating the author names. In pandoc mode, we can still use traditional pandoc-markdown citations like `@Boettiger_2013` which will render as Boettiger and Hastings (2013) without any R code, provided the citation is already in the `.bib` file we name (see below).

Re-using Keys

When the citation is called, a key in the format `FirstAuthorsLastName_Year` is automatically created for this citation, so we can now continue to cite this article without remembering the DOI, using the command `citep("Abrams_2012")` creates the citation (Abrams et al. 2012) without mistaking it for a new article.

Displaying the final bibliography

At the end of the document, include a chunk containing the command:

```
write.bibtex(file="references.bib")
```

Use the chunk options `echo=FALSE` and `message=FALSE` to hide the chunk command and output.

This creates a Bibtex file with the name given. Pandoc can then be used to compile the markdown into HTML, MS Word, LaTeX, PDF, or many other formats, each with the desired journal styling. Pandoc is now integrated with RStudio through the rmarkdown package. Pandoc appends these references to the end of the markdown document automatically. In this example, we have added a yaml header to our Rmd file which indicates the name of the bib file being used, and the optional link to a CSL stylesheet which formats the output for the ESA journals:

```
---
bibliography: "references.bib"
csl: "ecology.csl"
output:
  html_document
---
```

Example file for RStudio / rmarkdown

This vignette itself is written as an `.Rmd` file with the `yaml` header discussed above for working with RStudio's `knit` buttons or the rmarkdown R package. You can see the tutorial source file here. Calling `rmarkdown::render("tutorial.Rmd")` from R on the tutorial compiles the output markdown, with references in the format of the ESA journals.

References

Abrams, Peter A., Lasse Ruokolainen, Brian J. Shuter, and Kevin S. McCann. 2012. "Harvesting Creates Ecological Traps: Consequences of Invisible Mortality Risks in Predatorprey Metacommunities." *Ecology* 93 (2). Ecological Society of America: 281–93. doi:10.1890/11-0011.1.

Boettiger, C., and A. Hastings. 2013. "No Early Warning Signals for Stochastic Transitions: Insights from Large Deviation Theory." *Proceedings of the Royal Society B: Biological Sciences* 280 (1766). The Royal Society: 20131372–72. doi:10.1098/rspb.2013.1372.

Lord, Phillip. 2012. "Greycite." *Knowledge Blog.* http://knowledgeblog.org/greycite. http://knowledgeblog.org/greycite.

Xie, Yihui. 2013. *Dynamic Documents with R and Knitr.* Boca Raton, Florida: Chapman; Hall/CRC. http://yihui.name/knitr/.

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