

EMB Presentation - June 2024 HerbVar Meeting

Materials for Review

Hello all, I wish i could be joining you but my kid is graduating from high school this weekend, so insted I get to zoom in from sunny (and very muggy) Florida.

Below are some suggested items to review before we discuss the proposed workflow and tools for HerbVar (1) data management and (2) data analysis for/and manuscripts. If you have any questions, please feel free to reach out vial slack or email.

Articles

BRAGA, P. H. P., K. HÉBERT, E. J. HUDGINS, E. R. SCOTT, B. P. M. EDWARDS, L. L. SÁNCHEZ REYES, M. J. GRAINGER, V. FOROUGHIRAD, F. HILLEMANN, A. D. BINLEY, C. B. BROOKSON, K. M. GAYNOR, S. SHAFIEI SABET, A. GÜNCAN, H. WEIERBACH, D. G. E. GOMES, and R. CRYSTAL-ORNELAS. 2023. Not just for programmers: How GitHub can accelerate collaborative and reproducible research in ecology and evolution. *Methods in Ecology and Evolution* 14: 1364–1380. Available at: <https://onlinelibrary.wiley.com/doi/abs/10.1111/2041-210X.14108> [Accessed May 24, 2024].

KIM, A. Y., V. HERRMANN, R. BARRETO, B. CALKINS, E. GONZALEZ-AKRE, D. J. JOHNSON, J. A. JORDAN, L. MAGEE, I. R. MCGREGOR, N. MONTERO, K. NOVAK, T. ROGERS, J. SHUE, and K. J. ANDERSON-TEIXEIRA. 2022. Implementing GitHub Actions continuous integration to reduce error rates in ecological data collection. *Methods in Ecology and Evolution* 13: 2572–2585. Available at: <https://onlinelibrary.wiley.com/doi/abs/10.1111/2041-210X.13982> [Accessed May 24, 2024].

YENNI, G. M., E. M. CHRISTENSEN, E. K. BLEDSON, S. R. SUPP, R. M. DIAZ, E. P. WHITE, and S. K. M. ERNEST. 2019. Developing a modern data workflow for regularly updated data. *PLOS Biology* 17: e3000125. Available at: <https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000125> [Accessed May 24, 2024].

An example Data Cleanup & Management Repo with Automated Data Validation

1. [Heliconia Surveys Data Management Repo](#)
2. Automated data validation using the pointblabnk package: [Results and visualization](#)

An example Analysis and Manuscript Repo using data pulled in programatically

1. [The Analysis & Manuscript repository](#) for a Data Paper in *Ecology*.

HerbVar is now a GitHub ‘Organization’

HerbVar’s Github Organization can be found at <https://github.com/HerbVar-Network>. This site includes:

1. A link to the [HerbVar Zotero library](#) (for keeping a record of papers and presentations). You can request to join the group by emailing embruna@ufl.edu or via the Zotero site.
2. Rstudio Project Templates for data cleanup and data analysis (more on that in a bit).
3. v2.0 of the Herbvar Manual and Protocols. It’s still being edited, but you can see the latest version here:
 - nice looking [HTML version](#)
 - the book’s [repository](#)
 - a [pdf version](#)
 - the [repository](#) for the manual

If you would help edit the manual or learn how to contribute new entries, you can begin by:

- [Installing Quarto](#)
- reviewing the [Introduction & Tutorial](#), and
- Creating a new Rstudio Project on your computer with [this url](#)

Presentation

And finally, here is a (brief) outline of my (brief) presentation and tutorial:

1. Motivation
2. The HerbVar Organization on Github
3. Git/Github for HerbVar Projects
 - a. Correcting & organizing data for HerbVar (e.g., prior to uploading)
 - b. Analysis of HerbVar data for publications (and manuscript preparation)
4. HerbVar Manual 2.0 (& how to edit it)
5. Next Steps? Ideas? Suggestions?