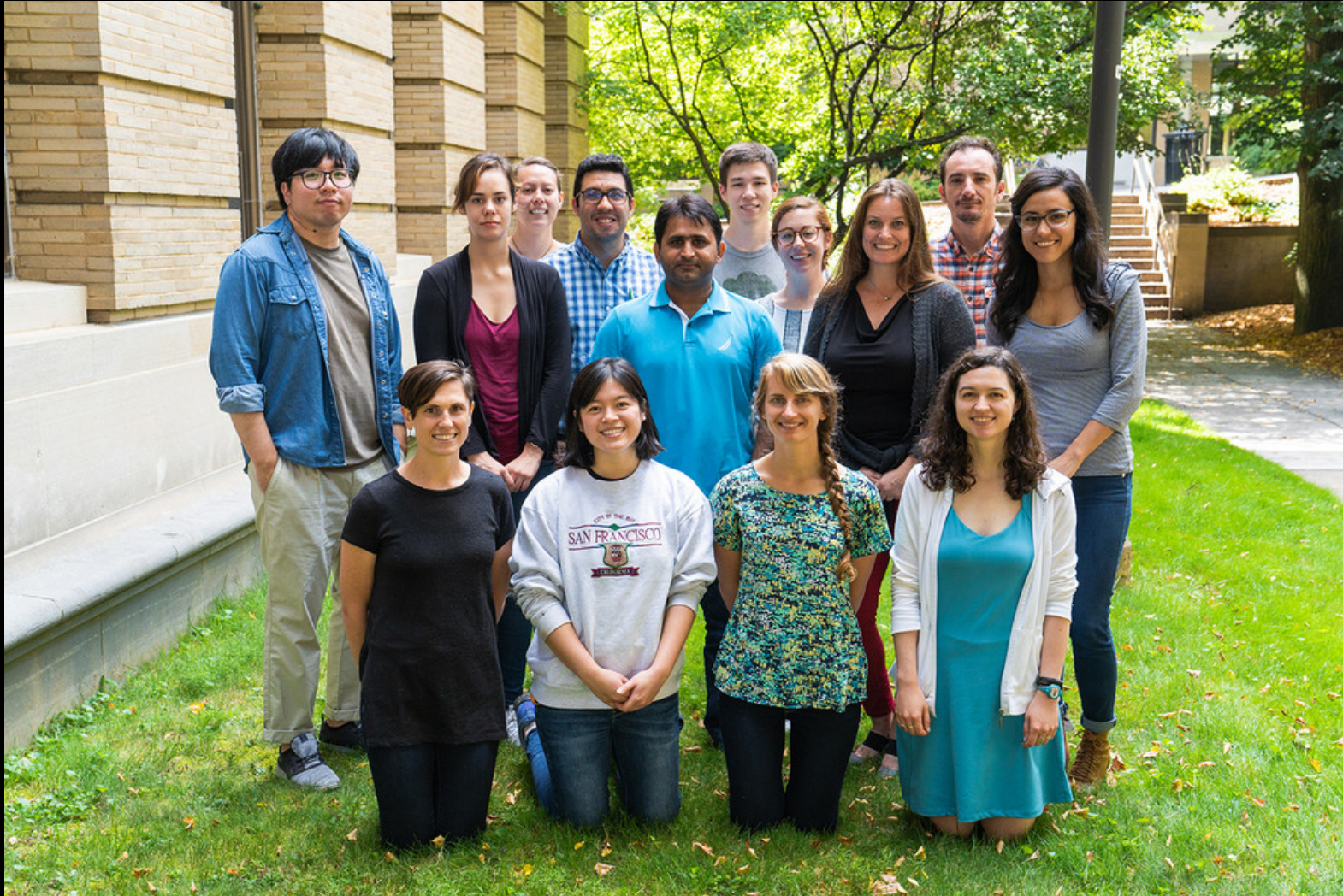


Microbiome Center's DAWG (data analysis working group)



Who is DAWG?!?!

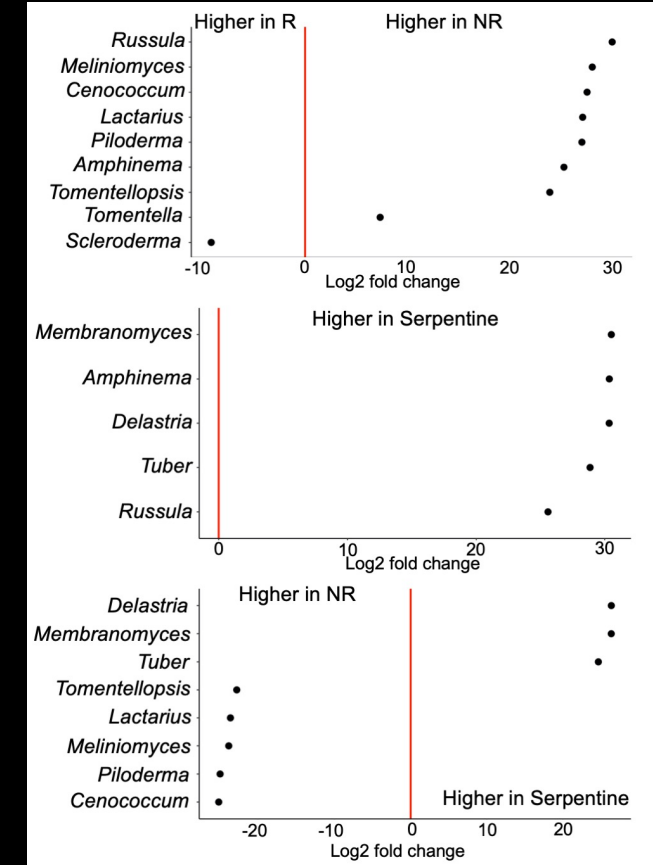
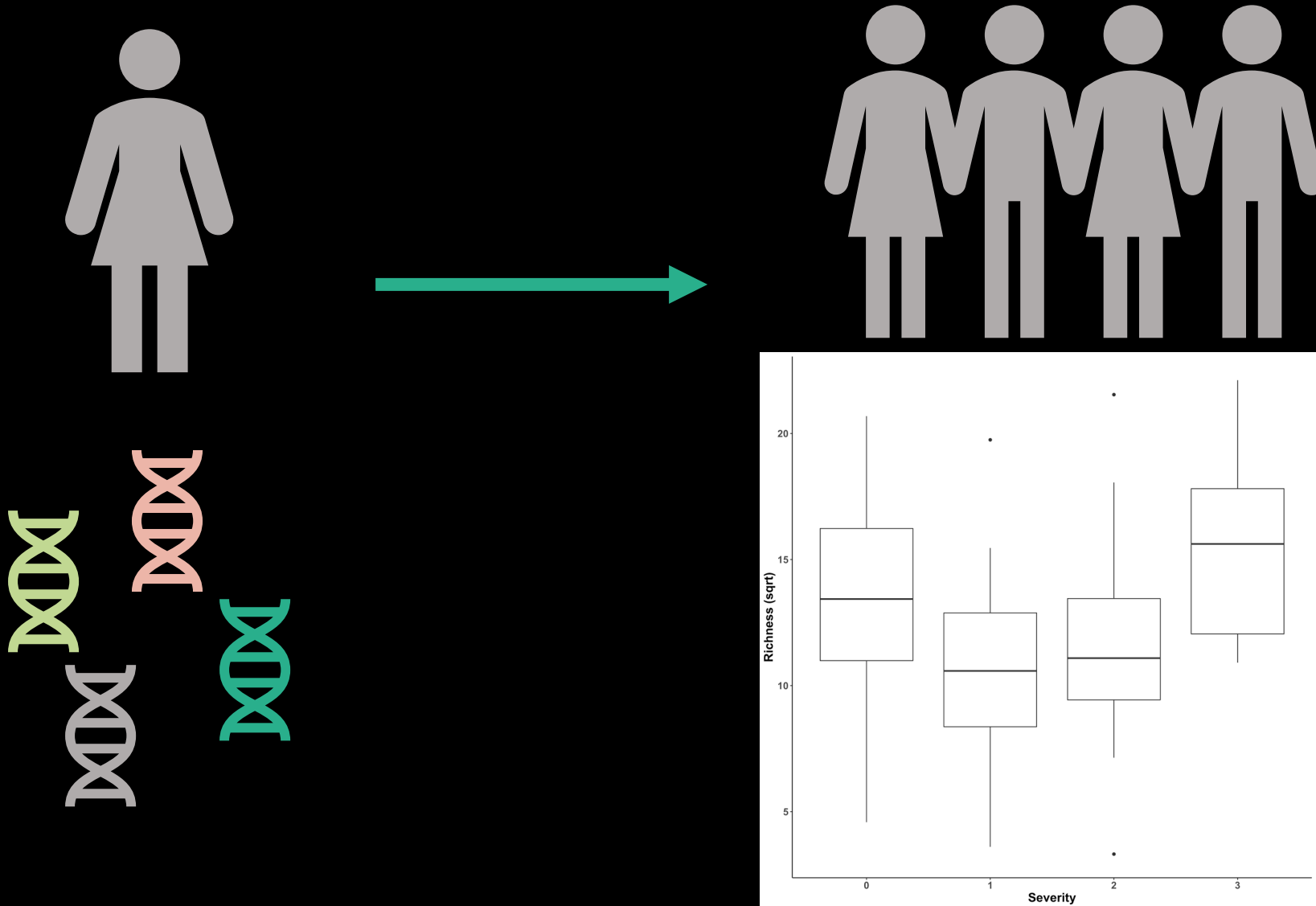


<https://news.psu.edu/story/588593/2019/09/17/academics/penn-state-microbiome-centers-dawg-chews-microbiome-data-sets>

DAWG Started Because...



What is DAWG Doing?



DAWGs Series of Workshops

- Cohort building
- Career development (publications/workshops)
- Training
- Stay up to date on latest packages/analyses



DAWGs Goals Are to:

- Use the skills of our Microbiome Center members to help a researcher at Penn State process data and analyze results, culminating in a publication or potentially being used as preliminary data for a grant application,
- Provide a unique opportunity for students/post-docs to further develop transferable skills as group leaders of DAWG,
- and help build collaborations between the members already associated with the Microbiome Center and Penn State researchers who are interested in microbiome research.
- But, the *main* goal of the workshops is to train graduate students and post-doctoral scholars how to process/analyze microbiome datasets

What has DAWG done so far?

- Started in Spring 2019
- Hosted 4 workshops on processing/analyzing a 454 pyrosequencing dataset for Dr. Bert Eardly from Penn State Berk's
- Ectomycorrhizal fungi from pitch pine roots along a metals gradient associated with a Zinc smelter
- DAWG leaders + Bert presented our findings to the Microbiome Center
- Bert presented our findings at the annual ASM meeting
- Average number of attendees per workshop was 14



What has DAWG done so far? (ctd)

- Fall 2019/Spring 2020
- Held 4 workshops each semester
- Working with Dr. Judie Howrylak on analyzing 16S amplicon sequences from patients that were admitted into the ICU at Penn State Hershey Medical Center
- Contains ~ 230 samples from ~100 patients
- Currently writing manuscript for stool samples
- Average number of attendees was 15 (until COVID)

Topics we have covered

- ASV versus OTU
- Rarefying data
- Which reference data base to use
- How to incorporate ancillary data with amplicon sequencing data
- PICRUSt analysis/interpretation
- Network analyses
- Machine learning

DAWGs Plan for Fall 2020

- METAGENOMICS!
- Have 5-6, 1 hour long presentations (including Kbase tutorial)
- MAGs (reconstruction and annotation of genomes)
- Marker Gene Analysis (Nitrogen, carbon, phosphorous cycling, antibiotic resistance genes, etc.)
- First session: Aug 28th at 1 pm – Dr. Steven Higgins, post-doctoral scholar for Dan Buckley and now works with Michelle Heck at Cornell
- 4 PSU students and Dr. Luis Orellana

DAWGs Helpline: Github.com/maracashay

The screenshot shows the GitHub repository page for **maracashay / DAWG-Helpline**. The browser's address bar shows [github.com](https://github.com/maracashay/DAWG-Helpline). The repository has 1 branch (master), 0 tags, and 6 commits. The main content area displays the **README.md** file, which contains the following text:

Hello Microbiome Enthusiasts!

DAWG members created this repository so that we can have discussions under "Issues" regarding any problems that you may have while you are working with amplicon sequence datasets.

Feel free to also post if you have general questions regarding certain steps or which parameters to pass and why. We are here to help and further facilitate the exceptional microbiome related research at Penn State.

To participate, you'll need to create a profile.

Once created, please see the "Issues" tab.

From there, you will want to click on "New Issue", give your post an informative name and then add your question/concern/or whatever else you want to talk about.

IF your question is related to an error, please add:

- 1) the code that you used

The right sidebar contains the **About** section with the text: "Need help deciding what step to do or what specific commands to pass when analyzing your amplicon data? Ask AWAY! DAWG is here to help :)" and a **Readme** link. Below this are the **Releases** and **Packages** sections, both indicating that no releases or packages have been published.

DAWGs Future

- We need you!!!!
 - Participants
 - Workshop leaders
 - Any level of expertise 😊
 - Data sets
-
- muc345@psu.edu

