

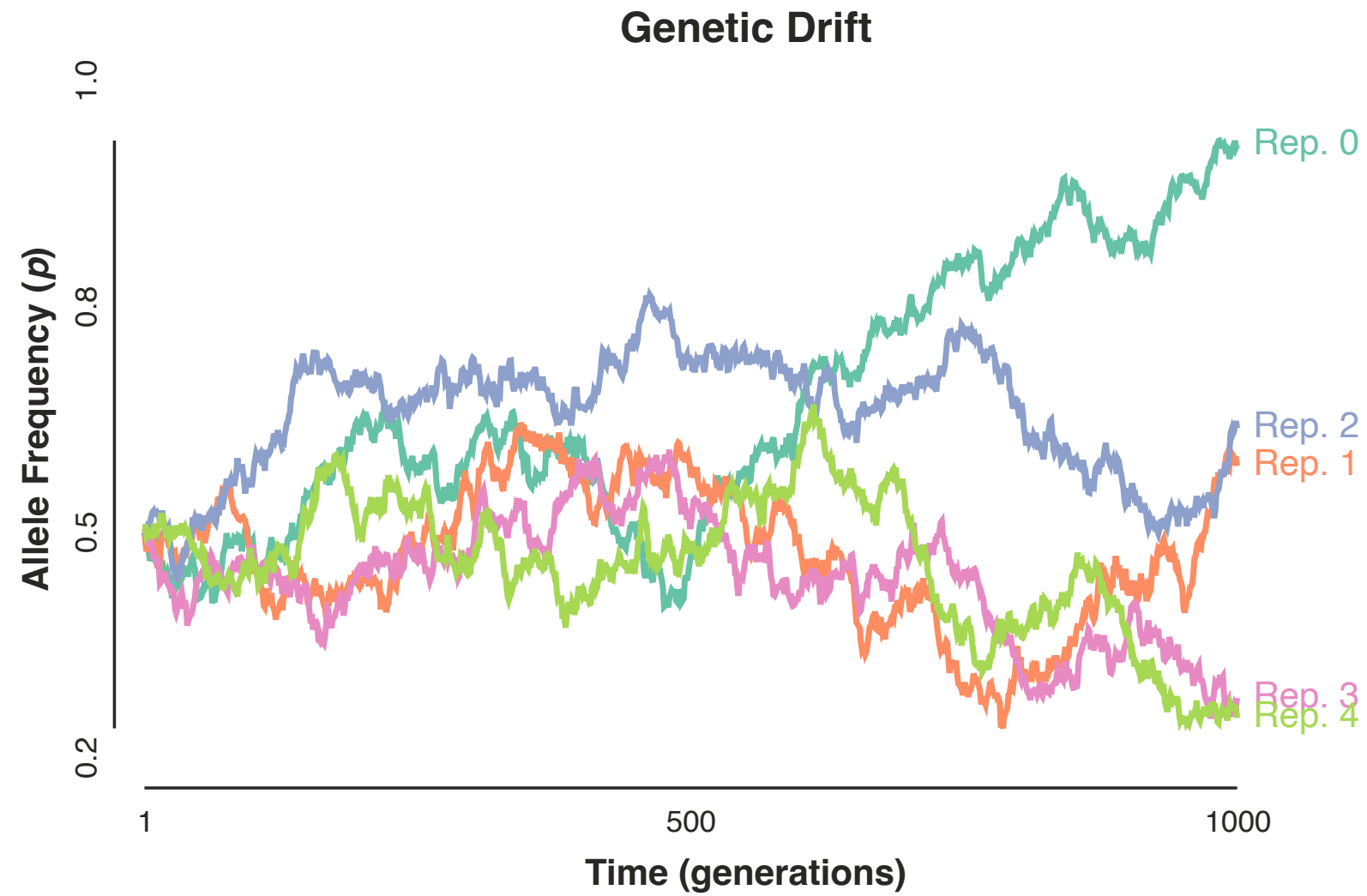
BIOL 1435

Course Instructor: Dave Peede
(he/him/his)

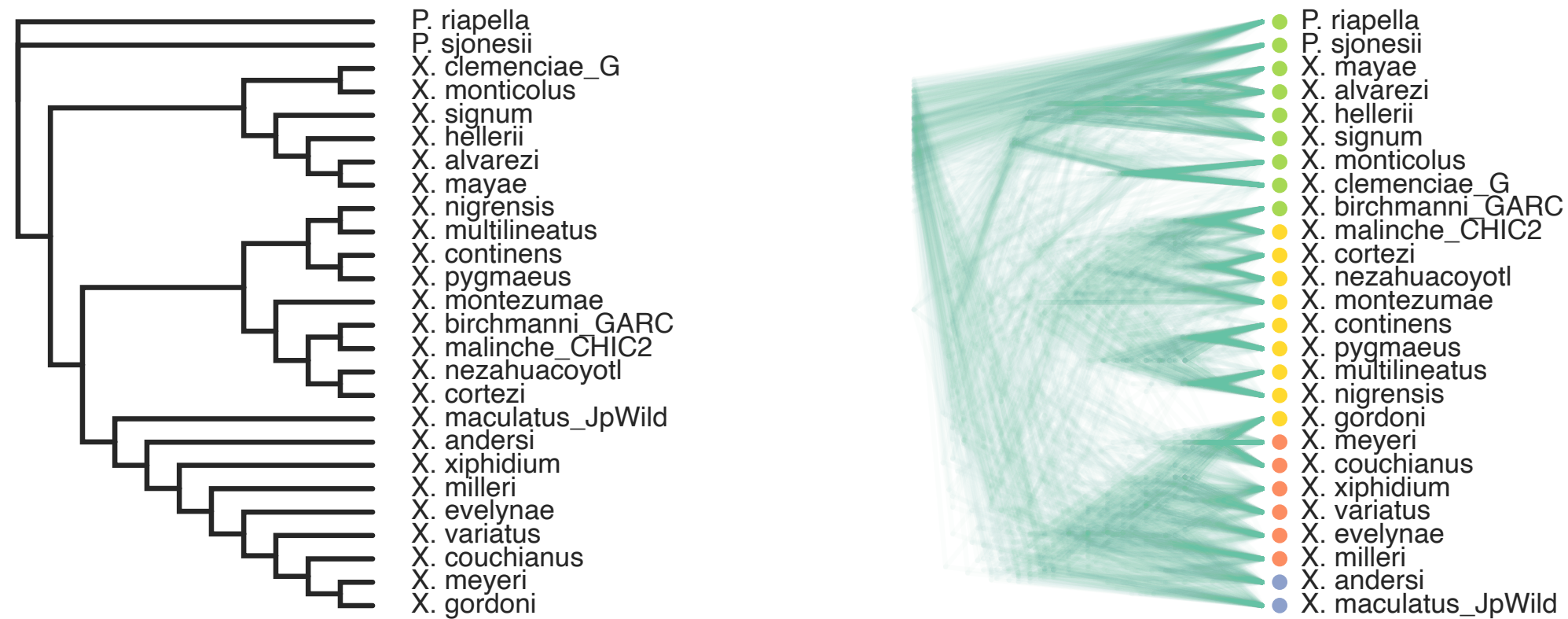
Meeting Times: Tu/Thu 2:30 pm – 3:50
pm

**This semester we
will learn about...**

Evolutionary Genetics

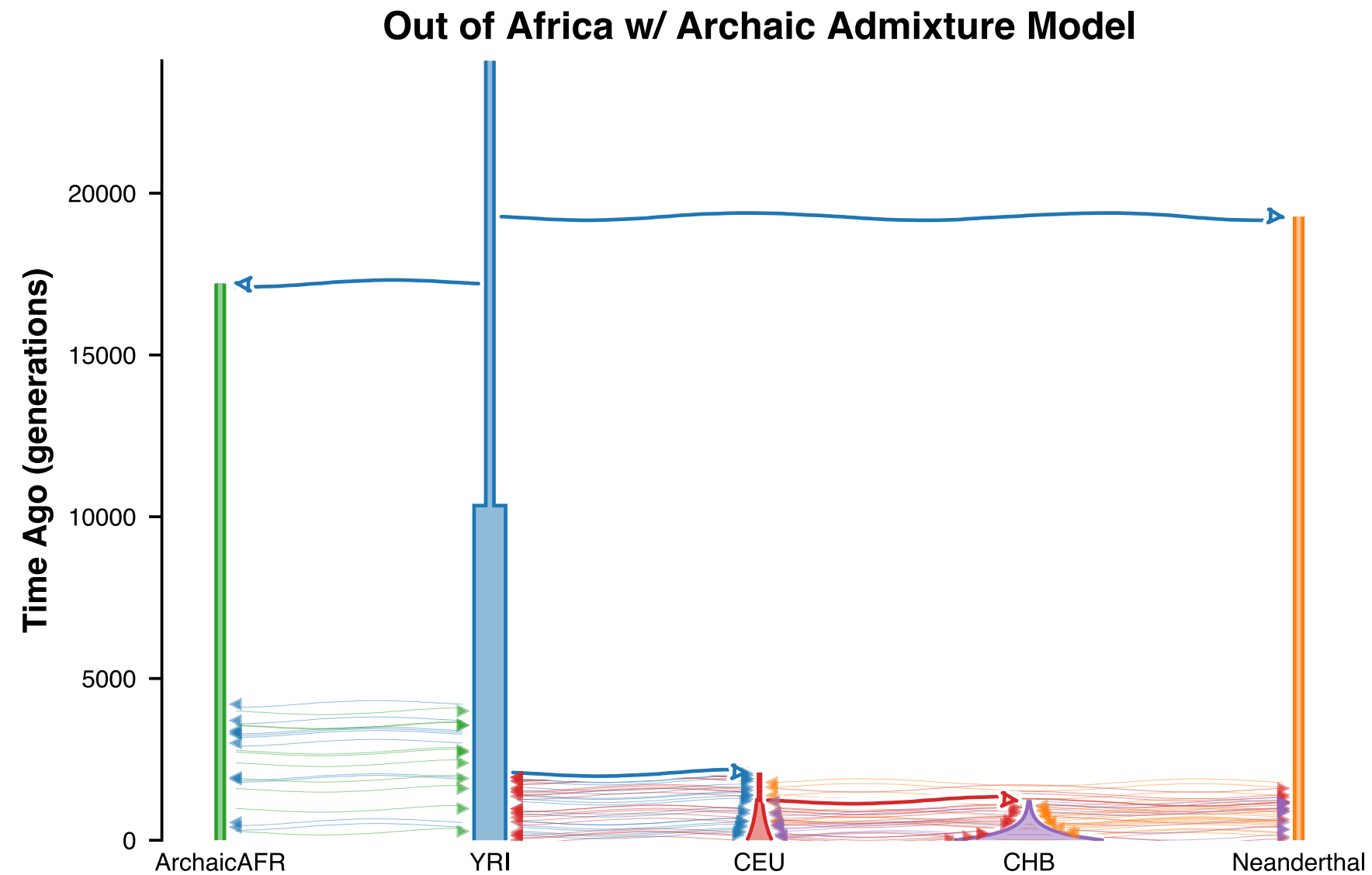


Coalescent Theory & Tree-Thinking¹



1. Data from: Cui et al., 2013

Population Differentiation & Demography¹



1. Demographic model from: Ragsdale & Gravel, 2019

Recombination & Selection



Icebreaker



Syllabus



JupyterHub Etiquette



<https://biol1435.jupyter.brown.edu>

Do not load
anything to
JupyterHub unless
instructed 🙅🙅

Save your work
early and often 🥰💧

For assignments you
may want to
download your
work 🥲

Always shut down your sever

Shutting Down Server

Shutting Down Your Server

Once you are done working, we recommend you manually close down your JupyterHub server by using the JupyterHub Control Panel. This will ensure your session is safely shutdown and the resources you were using are released back to the hub.

1. File > Hub Control Panel
2. Click **Stop My Server**.



Stop My Server will halt any kernels and logout.

This method is highly recommended as it stores the state of the machine prior to booting down. This means that the next time you connect to your server, any notebooks running will be automatically resumed.

Alternatively, if your server is timed out due to inactivity (ie: simply walking away from your live server), we cannot guarantee automatic notebook booting upon your next login.

- ✓ Manually shutting down your sever is the recommended best practice procedure for when you are done working on your server.

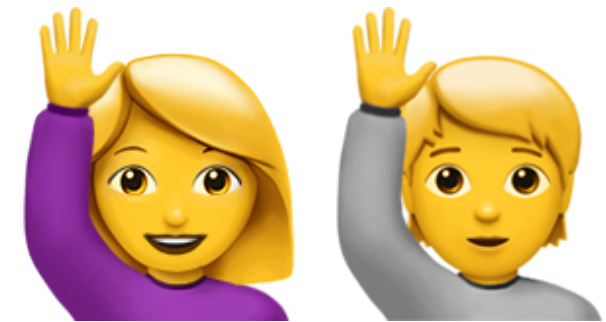
How to be successful in BIOL

1435 

Do the readings



Ask questions



Follow the rubrics



Look at Dave's coding resources

The screenshot displays a GitHub repository for 'David-Peede / BIOL1435'. The repository is public and has 1 star, 0 forks, and 1 unwatch. The main branch is 'main' with 1 branch and 0 tags. The repository contains several files and folders: 'lectures', 'student_resources', '.DS_Store', '.gitattributes', and 'README.md'. The README file is open, showing a welcome message and a list of coding resources. The resources include links to Brown's Center for Computation and Visualization, Jupyter Hub Documentation, OSCAR Documentation, and Python Tutorials. The right sidebar shows the repository's statistics and a list of releases, packages, and languages.

David-Peede / BIOL1435 Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags Go to file Add file Code

David-Peede re-plotted species tree and gene trees 0ce5584 4 minutes ago 16 commits

lectures	re-plotted species tree and gene trees	4 minutes ago
student_resources	re-plotted species tree and gene trees	4 minutes ago
.DS_Store	added rubrics	3 days ago
.gitattributes	Initial commit	2 years ago
README.md	added everything necessary for student view	yesterday

README.md

Welcome to BIOL 1435

All PDFs of the readings can be found on the course canvas page.

Coding Resources

- Brown's Center for Computation and Visualization
 - [Jupyter Hub Documentation](#)
 - [OSCAR Documentation](#)
 - If all else fails and you can't find a solution after looking through the documentation or Google email support@ccv.brown.edu
- Python Tutorials
 - [Jerry Pussinen's Python3 Course](#)
 - [UNC's Training in Biomedical & Biological Sciences Python3 Course](#)
 - [Jam3's Math as Code Examples](#)

About

Resources for the Spring 2023 BIOL 1435 course.

Readme 1 star 1 watching 0 forks

Releases

No releases published [Create a new release](#)

Packages

No packages published [Publish your first package](#)

Languages

Jupyter Notebook 100.0%

main BIOL1435 / lectures / notebooks / 26jan23_nb.ipynb

Go to file

...

David-Peede re-plotted species tree and gene trees

Latest commit 0ce5584 5 minutes ago History

1 contributor

1.43 MB

Download



26JAN23 Lecture Code

Module: Introduction to BIOL 1435 & Evolutionary Genetics
Topic: Course overview and evolution refresher.

In [1]:

```
# Import modules.
import demes
import demesdraw
import matplotlib
from matplotlib import pyplot as plt
import msprime
import numpy as np
import toyplot
import toyplot.svg
import toytree
# Print versions.
print('demes', demes.__version__)
print('demesdraw', demesdraw.__version__)
print('matplotlib', matplotlib.__version__)
print('msprime', msprime.__version__)
print('numpy', np.__version__)
print('toyplot', toyplot.__version__)
print('toytree', toyplot.__version__)
```

demes 0.2.2
demesdraw 0.3.1
matplotlib 3.6.3
msprime 1.2.0

Exit Ticket ⚠️:

<https://forms.gle/anDi6iTCxMnNzQFs7>

JupyterHub Etiquette

1. When you get into class please log on
2. Do not upload anything to JupyterHub
3. Save early and often
4. For assignments you *may* want to download your work
5. Always shut down your server

How to be successful in this course

1. Do the readings
2. Ask questions
3. Start assignments early
4. Follow the rubrics
5. Look at Dave's code