

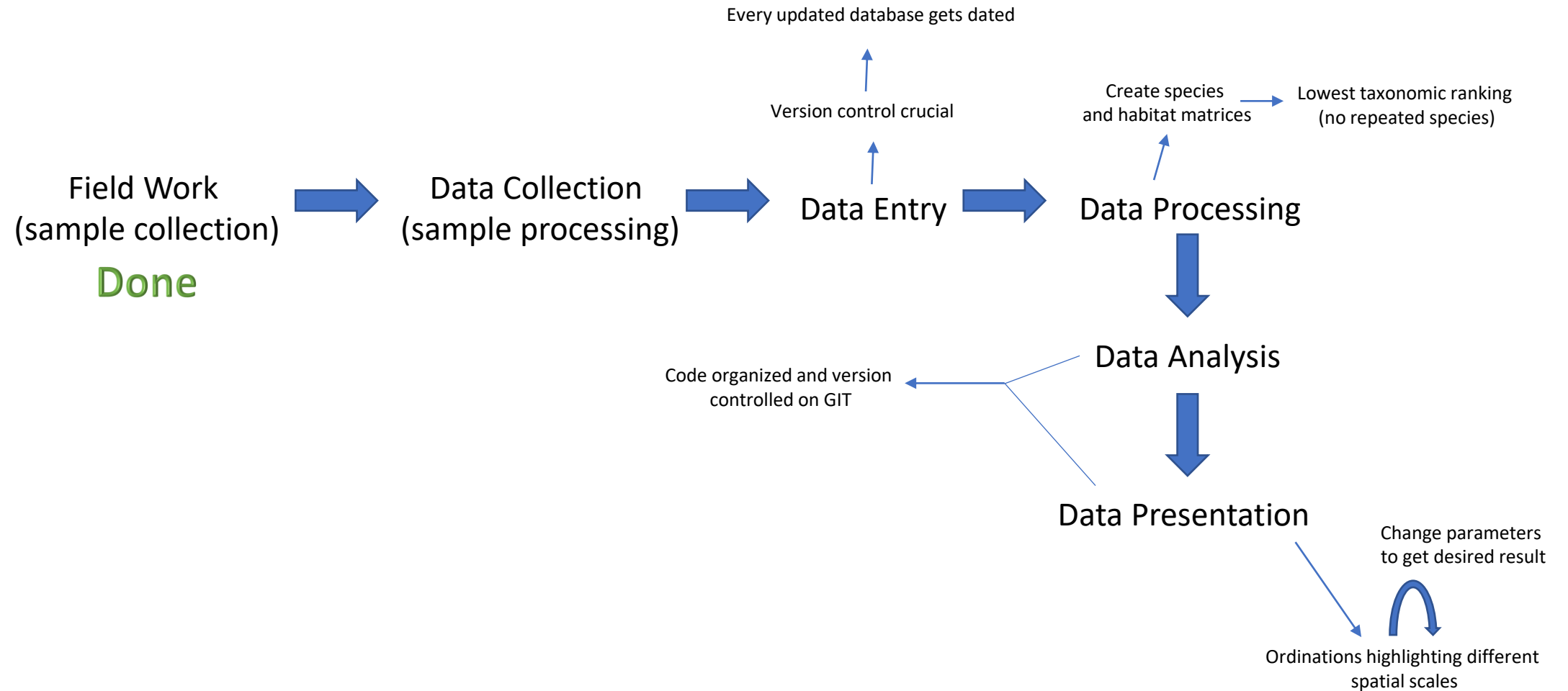
# Week 6 Progress Report

Main scientific question being addressed:

**How are aquatic invertebrate communities of the Verde River shaped by their environment at different spatial scales?**

- Between microhabitats (flowing water vs pools)
- Between sites (reaches)
- Between tributaries

# Proposed Workflow



# Goals

- Get organized, learn how GIT works:
  - File naming and folder structure
  - Cleaning up old code and implementing clear and consistent coding practices
- Do some analyses and make them reproducible and easily altered
  - Ordinations showing community structure at different spatial scales
  - Measures of diversity at different spatial scales
- Learn how to use R markdown and how it could benefit my project

# Achieved success

- File organization and renaming

Habitat\_Matrix2.csv  Verde\_HabMatrix\_F17\_S19.csv

- Cleaning up old code with the goal of clarity and reproducibility
  - Making sure my comments are thorough enough that I could send this code to someone and they could understand what's happening
  - Defining parameters that can be changed to alter outputs for easier alterations down the line (like text size, shape, color or even how data is being grouped)

# Sticking points, failures, and challenges

- Sticking points
  - GIT Hub file management, version control
  - Cleaning up code
- Failures
  - R Markdown- Still haven't used it (had to sift through errors, redownload R)
  - Coding best practices- The code I've revised has been easier to follow but there's still work to be done- like following an established style, writing clear and concise messaging in R
- Challenges: Time, not knowing little tricks to make things better or faster