**Slide 2:**

* Our dataset was created based on information regarding Bowdoin's collection of Kate Furbish's botanical drawings
* Who was Kate Furbish?
  + Kate Furbish was an extremely prolific botanist from Brunswick, Maine.
  + She lived from 1834 to 1931, where she traveled around Maine collecting samples and cataloging hundreds of the flora in Maine.
  + Her dilligent, prolific cataloging of the flora of Maine while defying gender norms of her time marks Furbish as one of the unsung heros of botany.
  + Her work is now largely curated at Bowdoin College, and can be seen on dipslay in Hawthorne-Longfellow Library.
* Our project uses a dataset that holds information on each sample in her catalogues, such as:
  + Location of where the sample was found
  + Year that the sample was found
  + Common and scientific labels (current and at time of discovery)
  + Where in her books each flora sample can be found

**Slide 3:**

* This is an example of what a line in our dataset would look like
* Our dataset was given to us with some, though not significant, amount of formatting necessary, as some lines would hold multiple samples and there was some inconsistency in formatting (such as hidden characters in town names)
* As you can see, there is a guide to where in the collection the flora is represented, along with the various scientific names the flora has held over time, its current common name, the size of the drawing in the collection, and the year and location the sample was taken

**Slide 4:**

* These were the primary questions we set out to answer, which we will discuss the success of later on in our presentation
* They are:
  + Determining where Kate Furbish went and when
    - We discovered early on this would be limited by the fact that she mainly recorded the year in which she took a sample, so we could not determine her general travel pattern
  + Identifying where certain flora are located in Maine
  + Identifying where in her collections each of the flora are documented
  + Determining where she found the most flora
  + Determining which were her most active years

**Slide 5:**

* We employed an integrated set of tools to make one super visualization that we will demo at the end of this presentation. We used a variety of interactions and visual effects these would cause
* Interactive scaled dots:
  + The dots appeared on the map and changed in size based on where the current user selection of flora were taken
  + When clicked, relevant information is shown in the town inspector, which will be discussed momentarily
  + In the next week, we hope to implement a zoom feature triggered by clicking on the dots, which will show more detail
* Search box:
  + Allows searching by current scientific name and common name
  + Clicking on specific flora adds to the current selection displayed on map. The user can do this by individual flora, or select all at once. The same process is available for removing flora from the current selection.

**Slide 6:**

* Towns:
  + On our map, we broke up the state of Maine by town
  + Towns have similar capabilities as dots, where moussing over shows a tooltip that displays the town name and a click leads to relevant information being shown in the town inspector
* Town Inspector:
  + The town inspector shows information about the currently selected town that is relevant to the current selection of flora
  + It is a modified version of our initial spread sheet, showing information we deemed most relevant to answering the questions we decided to answer
  + You can see on the example in this slide that we show each sample individually, instead of breaking up rows by flora, so that the user can see samples of the same species that were taken in separate years

**Slide 7:**

* This slide is our ideas for future work, along with work we plan on implementing in the next week
* Year Slider:
  + Enables user to determine time range of samples they view
  + This will alter the display on the map and the town inspector, as samples of flora that are selected but are not within the range will not be included
  + While we do not believe that we can do this in the next week, we believe it would helpful to user to implement an animated time lapse so that they can watch how sampling changed annually without having to manually alter the settings each time they want to increase the year
* Sample distribution doughnut char:
  + When zoomed in due to a click on a dot, the dots will disappear and the selected town will show a doughnut chart showing the relative number of samples taken within the town
  + We hope each section of the chart will prompt a tool tip showing relevant information about each flora, rather than labelling each section 100% of the time, as this will make a difficult visualization to read
* Debugging
  + Of course, our code is not perfect and we still have to work out some bugs

**Slide 8:**

* This is what we hope to make our zoomed in view look like in the next week

**Slide 9:**

* We believe that we answered each of these primary questions with our visualization
  + Determining where Kate Furbish went and when
    - By selecting all flora and changing the selected year, users can see where samples were collected, how many were taken, and when they were collected, and compare these over time
  + Identifying where certain flora are located in Maine
    - We believe this is afforded by allowing the user to select any flora, which will automatically be visualized on the map in the location where samples were taken
  + Identifying where in her collections each of the flora are documented
    - By selecting flora then examining the results in the town inspector, the user can see where to look up a species in the collections
  + Determining where she found the most flora
    - This can again be addressed by selecting all flora then examining the map
  + Determining which were her most active years
    - By altering the time slider, the user will be able to see how many samples were taken year by year and compare relative amounts

**Slide 10:**

* Searching/ filtering
  + Go Tucker go
* GeoJSON
  + We spent a lot of time learning how to take shape files provided by state governments, converting them appropriately, and then using these to visually represent the state of Maine by town
  + We are also in the process of learning how to take this data and increase the image accurately and consistently
* GitHub
  + Before this project, Sophie and Tucker were very unfamiliar with the use of GitHub, especially through the terminal, for version control and collaboration
* Message Passing
  + Go Tucker Go
* Range Slider
  + Go Marcus Go