PBIO 108 Lab 0: Botanical Illustration Workshop

January 24, 2023

The purpose of this first lab is to help you get a feel for the different kinds of drawing you'll be doing throughout the course of this semester. The process of drawing translates what your eyes can observe into two dimensions on paper; this process encourages you to let go of your preconceptions about what you *think* something looks like, allowing you to perceive it as it actually is! When understood this way, drawing becomes more about observation than the final product. No matter your skill level, the process and effort that you put in is what's important here - by drawing you will be engaging another level of your brain in understanding plant form, and this will help you make connections and remember things in a different way. The point of today is to try new techniques and have fun, without any expectation of what your sketches will look like at the end.

Drawing Tips & Tricks

- Have fun, and let go of expectations about the final product.
- Draw big! Use up the whole page, so that you have more space to illustrate the finer details.
- Start by outlining/boxing in the overall form of what you're drawing - i.e., the space that you're going to fill up.
- Work from the biggest parts of plant structure down to the smallest (e.g., start with overall branching pattern, not the shape of individual leaves).
- Reference how the different parts of the plant relate to one another in space, and check to see how your sketch compares.
- Focus on the negative space (the space in between the different parts of the plant) just as much as the positive space taken up by the plant body.
- For a botanical illustration style, add sketches of specific parts of the plant - these can be zoomed in from your main drawing, capture with a finer level of detail, or show a part of the plant not visible in the main drawing. Add frames to your main drawing and/or the side drawings, and connect them with lines, to enhance this effect.

Exercise 1: Blind contour drawing

Choose one of the simpler objects for this first exercise. Place it on the desk in a way that has some nice depth and perspective. Without looking at your paper or taking your pen/pencil off the page, draw the object! For this exercise, it's especially important to let go of any hope that the end product will look like what you're drawing (it will look silly, and that's part of it!). Instead, just let your pen or pencil follow your eyes and translate what you're seeing into two dimensions on paper. Part of this is to understand the connections among the different parts of the object - how do the different lines of form connect to one another? Repeat this exercise at least twice, changing the orientation of the object each time. There is no need to use a new sheet each time unless you want to - blind contour drawings can actually look nice when overlapping each other.

Exercise 2: Contour drawing

Choose a different simple object, and position in a way that's interesting to your eye. Do another contour drawing in the same way, but this time you can look at your paper! Use this ability to try to more accurately capture the form of what you're drawing, but still focus more on the connections between the different parts of the object, as represented by the lines you're drawing on the page, than how the final product looks. Repeat at least twice.

Exercise 3: Overall plant form

Choose one of the living plants to draw. Using either pen or pencil, complete the following series.

- **3.1** In five minutes or less, complete a "first draft" sketch of the overall plant form. Don't worry about capturing any fine details (e.g. venation); instead, focus on getting the overall shape of the plant body represented. You can take your pencil or pen off the page, but still try to make nice long clean lines rather than many short ones.

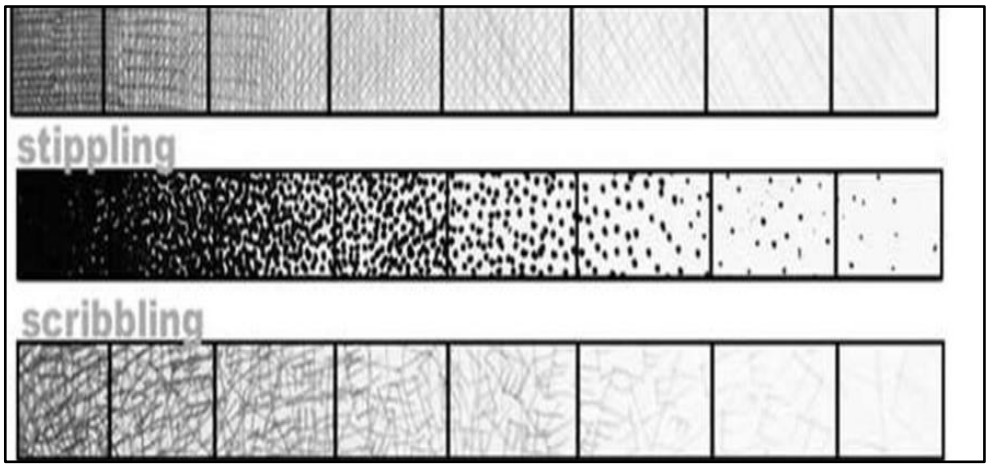
- **3.2** Take as long as you want to complete a "final draft" sketch of the plant. Start with boxing in, then capture overall plant form (branching is a good place to start!), and then move to finer details. You don't have to draw every part of the plant, but make sure that at least one portion of each part of the plant body is fully illustrated (branch, leaf, bud, etc.)

Exercise 4: Plant cellular anatomy

Looking at the slide image of a fern (*Cheilanthes lanosa*, Pteridaceae) petiole in cross-section, do your best to capture its structure on paper. First focus on drawing the overall shape (boxing-in!) and then shift to the boundaries between the different cell types. Finally, illustrate a bit of each cell type as an example of what they look like.

Homework - Exercise 5: Shading techniques

No matter how good you are at capturing plant form, it won't look three-dimensional unless you learn how to create the illusion of depth with shading. Two simple ways to do this are dots (stippling) and lines (hatching or crosshatching). There's also an example of the "scribbling" technique below.



- **3.1** Choose one of the above techniques and apply it using a pen or pencil (though stippling can really only be done with a pen). First, draw a long rectangular box, and divide it up into 8 or so smaller boxes as shown above. Using your chosen technique, move from left to right, filling in each box with a thin layer of lines, dots, or scribbles. Repeat this process, this time stopping with the second-to-last box. Repeat pattern until your final layer is applied only on top of the left-most box. Once finished, try again with a different shading technique.

- **3.2** Choose a simple object you have available - something like a book, or ball, or rock - and illuminate it from one side with a bright light so that there is a wide spectrum of shading present. Draw the form of the object and then use your favorite shading technique to give the illusion of depth. Try to make a wide range of shades present, from almost completely darkened paper at the point of most shade to paper not shaded at all, representing the position of the highlight/reflection thrown by the light. Draw the shadow thrown by the object in addition to the object itself.

