

SPRING/SUMMER CHALLENGE

The goal of the Spring/Summer Challenge is to practice botanical elements at many scales; from landscapes in the distance to magnified details. It is important to understand how to convey scale variation in your drawings. Most of the time, the botanical artist draws life-size, but practicing scale variation leads to an understanding of the size and proportion of a plant, as well as its environment. Illustrations with scale variation can add interest to a botanical composition and present the opportunity to convey additional information about a plant. This can result in interesting juxtapositions that become a powerful part of a composition.

In this lesson, we will draw the same plant at several scales:

1. Landscape/Habitat
2. Habit reduced in scale
3. Life-Size Habit
4. Magnified

Landscape refers to the general environment or habitat.

Habit refers to the plant's particular characteristics of growth, the overall shape of a plant, and it describes a number of components such as stem length and development, branching pattern, leaf arrangement, whether it is a vine, a shrub, a tree, etc.

Life-size shows the complete plant or a part of the plant life-size as it grows.

Magnified details and dissections are mathematical enlargements of plant parts describing structure in detail and are often drawn under magnification so details and structure are visible. Dissections of the ovary--vertical and/or horizontal--can be included.

You may decide to combine these drawings into one finished composition, or just enjoy the process in your sketchbook.

Be sure to label each drawing to show the scale!

SCALE NOTATION

A botanically accurate plant drawing is assumed to be life-size unless noted with labeling. There are a few ways to label scale, but it is important to do so when either enlarging or reducing the scale of the plant. *Refer to Lesson 7: Plant Exploration for instructions on measuring accurately.* To enlarge scale, measure the size accurately and then use multiplication to calculate enlargements. If you want to enlarge twice the size, multiply all measurements by 2, and so on. Show that you have made an enlargement with a notation such as "x 2" next to the drawing. When you reduce the size for a landscape or habit, use a notation such as: 1" = 12".



Forsythia: Landscape/Habitat



Forsythia: Habit



Forsythia: Life-Size



Forsythia: Magnified Details

LANDSCAPE SKETCH/HABITAT

First, practice a sketch of the plant in its environment. This view is from very far away, so that we see elements of the plant's surrounding landscape. Drawings like this can give information about conditions where the plant grows and show its relationship to the environment and nearby objects. This sketch can also show broader habitat characteristics like sun, shade, wet, dry, nearby plants, etc. Look at your plant from 25 - 50 feet away; far enough that you can see the entire plant as well as the landscape around it. Consider taking a reference photograph to capture the perspective you want to draw. Use this photograph to measure and create vanishing points used in perspective drawing. Below are the steps I used to create my landscape. Try following my steps, or use your own technique for painting distance landscapes.

DRAWING YOUR PLANT FROM A DISTANCE



STEP 1: Begin with a watercolor wash to show landscape. Map out a horizontal landscape, wet the paper and add a watercolor wash.



STEP 2: Map in a light drawing to scale (if a tulip is 12" tall, I drew the ones closest to the picture plane 1") in dark sepia. Notice spacing, patterns, objects get smaller and closer together as they get farther away.



STEP 3: Wet the paper to keep drawing light and loose (wet on wet) Add more light watercolor to show variation (ground, soil).



STEP 4: Brighter watercolor to match flower color. Darken, add cast shadows



STEP 5: Add pencil on top to show finer detail. Define shadows, flowers, colors. Be sure to label the scale.

NOTICING PATTERNS AND DRAWING IN PERSPECTIVE

While you work on landscape and habit drawings, notice patterns presented by the plant. Simple repeated shapes and patterns will help you arrange elements and guide you as you draw the plant characteristics from a distance. For example, notice if flowers all point toward the sun (sunflowers are a good example of this). Observe the rules of perspective (especially in the landscape drawing) and notice how the distances between objects get closer as they recede in space and create patterns. Observe other broad patterns in colors and detail as you draw in many scales. Experiment with these three ways to show perspective in your landscape:

1. Linear or spatial perspective (measuring vanishing points; objects get smaller as they recede from the eye).
2. Atmospheric perspective (colors get paler and duller as they recede).
3. Details (objects in the foreground have more detail than those in the background).

LANDSCAPE SKETCH: ADDING BACKGROUND ELEMENTS



Adding landscape detail elements in the background can showcase your plant's surroundings. This is an easy way to quickly place your plant in different environments. If the environment is swampy, or wooded, or sunny and open, how would you show it? I decided I wanted to see what my field of tulips would look like if it was drawn in Holland with windmills in the background, or in a cityscape like Manhattan's Park Avenue in the spring. I really enjoy the way these backgrounds tell a story and help me see my plant in different places. (Note that these places I chose to show my tulips match the growing environment of my plant; these are actual places that tulips are known to grow; I did not randomly choose any location.) Use your imagination and experiment with a few backgrounds to decide which one showcases your plant and its surrounding environment.

Tulip landscape with alternative elements in the background (field, windmills, cityscape).

HABIT SKETCH

A habit sketch shows the plant a bit closer than the landscape sketch, but not quite life-size. A habit sketch will not have background elements like the landscape; it will focus only on the plant and how it grows. Study your plant from 5 -10 feet away. Take photos to help guide your perspective and framing. This is still a sketch and can be a loose drawing. Be sure to show where the plant connects to the ground at the soil level. If your plant is a shrub, draw the entire shrub, for example. Focus on plant structure, branching patterns, and clusters of blooms.

DRAWING A HABIT SKETCH



STEP 1: Plan your habit sketch at a larger scale than the landscape drawing. I am showing 3-4 tulips and how they grow next to each other (if you are drawing a shrub, show the entire shrub).

STEP 2: Calculate the scale. I decided to show the tulips at about 1/3 of their actual size.

STEP 3: Draw a light outline with graphite pencil.

STEP 4: Create a grisaille drawing using Dark Sepia. Include leaves, overlaps, and toning.



STEP 5: Add watercolor washes to show color. Keep your drawing loose, but continue to build detail and dimension.

STEP 6: Add colored pencil on top for finer detail, and use Verithin pencils or graphite for fine lines.

STEP 7: Label your drawing to show the scale. I chose the scale notation 1"=4.8."

LIFE-SIZE DRAWING

For this drawing, show the entire plant life-size. This is generally what we draw in botanical illustration: a life-size portrait that shows accurate details and information about the plant. Since mine is a bulb, I chose to show the entire plant as well as soil and roots. Because my plant was quite large, I chose to use a large-format sheet of paper (15" x 22") so that I could show the entire plant life-size. It also left lots of room on the paper so that I could add elements to my composition later. If you do not have large paper, you can cut the plant and show it in two parts (see below). *See Part 1 of the video that accompanies this lesson for more about drawing life-size.*



Tulip drawing life-size, elongated layout



ELONGATED
LAYOUT



RECTANGULAR
LAYOUT

If your plant doesn't fit well on your paper, or you want to fit something on traditional-sized paper, you can also show a plant in two sections.



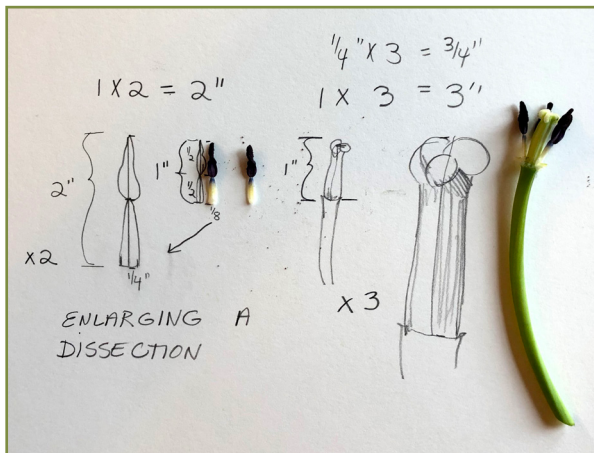
Tulip drawing life-size, split layout

CLOSE-UP/MAGNIFIED VIEWS

Magnified views and dissections in your illustrations can show more details about small plant parts like stamens, ovaries, pods, and seeds. Enlarging these small elements and studying them under magnification can help you understand more about how the plant reproduces and grows, and it is much easier to draw these precise details enlarged. For accurate enlargements, be sure to take precise measurements and be consistent about how you mathematically increase them. Take apart a flower and study its parts under magnification. Experiment with dissecting different parts. Measure and draw the small parts and then enlarge them by 2, 3, or 10 times to focus on the minute details. Use a dissecting microscope or magnifiers up to 10x or 40x. Take notes if you discover something new as you examine your plant at this scale!



PRACTICE DRAWING MAGNIFIED REPRODUCTIVE PARTS



STEP 1: Pull apart reproductive parts to see clearly, removing petals as needed.

STEP 2: Measure the plant parts accurately.

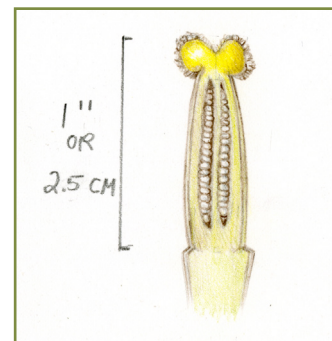
STEP 3: Enlarge your drawings using multiplication to keep all sizes in proportion.

STEP 4: Draw the enlarged part.

STEP 5: Note the scale size on drawing and, if desired, use a scale bar, so that no matter what size the drawing is when reproduced, the scale bar will reference the actual size.

USING SCALE BARS

Traditionally in botanical illustration, measurement information was often indicated with a multiplication sign for the number of times the part was enlarged, for example 'x3.' However, for images that have been printed or reproduced and resized digitally, scale bars will allow you to accurately represent the size, no matter the final format. All parts and dissections can be shown to scale with a scale bar. To use a scale bar, draw a line or bracket next to the drawing and write the actual, life-size measurement of the plant part.



*Scale bar for accurate
notation at any size.*

CREATING A FINISHED ILLUSTRATION WITH SCALE ELEMENTS



Finished tulip composition with scale elements

ADDING A LANDSCAPE IN THE BACKGROUND

Adding a landscape in the background is another way to combine scale elements in a finished drawing and show information about a plant's habitat. This adds an additional challenge for the botanical artist, but it is worth trying once you have mastered the basics of a complete botanical art composition. My advice is that a landscape background should not be an afterthought, but planned and mapped into a painting at the same time as you work on the main plant drawing. Otherwise it is hard to make clean edges between the foreground and the background and your composition won't look quite right.

Use the guidelines for creating a composition (see *Lesson 10*) and build a composition using some of your scale drawings. I created this composition of a tulip plant by combining some of my drawings of scale that I created with a yellow tulip. In this version, I changed my yellow simple tulip into a more complex parrot tulip with variegated color. Though a parrot tulip has complex petals, with many serrated and folding edges, its basic structure is still a six-petal (tepals) flower. Once I had my basic habit life-size drawing of the tulip with bulb on the paper, I added in a small habit sketch, and then I scattered petals, cascading them down the page. I added in enlarged dissections of the reproductive parts and I will add in a dried seed capsule when it develops on the tulips later this spring and summer.



African Tulip Tree with its landscape habitat in the background and dissected parts at the bottom.