

**Wildlife & Habitat Drawing**  
**Thacher Nature Center May 15, 2004**

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**Introduction**

**Schedule:** Saturday May 15, 2004 — 9:30 AM to 1:30 PM.

We'll be spending the morning session of the Workshop sketching in the field; after a break, we'll be spending the afternoon session examining and drawing some museum specimens in the Nature Center.

**• MORNING SESSION: FIELD SKETCHING**

**Introduction: Suggestions for field sketching**

The trouble with nature is that there is so much of it! When you are intrigued by a woodland scene, or go down to your favorite field or creek to try to capture your impressions in a sketchbook, you're sometimes overwhelmed by both the breadth and scope of the scene and by the sheer mass of fascinating detail.

Should you concentrate on creating a "quick landscape" with outlines of mountains and big rocks and trees? How do you capture the gloom of the forest, the dappled green sunlight, the hawk soaring above? ...And look at that interesting dead tree... Chances are you're going to try and do too much in one sketch, lose track of what you started to do, and wind up with an unsatisfactory mess on your page.

Some artists have mentioned something called "white fright". It's a state of complete paralysis induced by a blank white canvas or drawing surface, where you pause, charcoal in hand, and haven't the faintest notion where to start. The portrait artist has it easy, you might think. There's no question of what his subject is, obviously — just the model sitting in front of him. But what we like to call "green fright" occurs when you arrive at an enchanted natural setting, sit or lean comfortably, and discover you can't see the forest for the trees! We've found these suggestions to be helpful.

**1. Limit the subject:** At least for your first few sketches, decide on a particular item that strikes your fancy: it might be the branching pattern of a tree, the texture of bark, a study of shadows and surfaces of an old stone wall, a group of fungi on an old log.

**2. REALLY limit the subject:** Sometimes it's useful to use a small hand lens to get started. If you intend to draw plants or trees, for instance, and eventually want to depict that magnificent sycamore in your back yard, why not start with a single bud? Single buds are usually on the ends of branches or snuggled next to a leaf stem. What texture does the branch display? What is the shape of a single leaf? How are the leaves and buds arranged on the stem?

**3. Use your favorite "loose style" drawing instrument. Remember: a sketch should be "sketchy":** Some people feel more inhibited using a pen, since the lines are so permanent. Other people find a pencil more inhibiting, since the option of erasing means that you're obligated to erase "incorrect" lines. Pen, pencil or crayon, "stay loose" and record your impressions; don't try for perfect proportion or accuracy.

**4. Get comfortable and travel light:** Sketching from a standing position tires you quickly. Try to find a place to sit. A plastic bag is handy for damp places. Don't pack too much equipment, just the essentials you need to record your impressions in your sketchbook. Don't forget the essentials, though! There is nothing more frustrating than running out of ink or water in the middle of nowhere!

**5. Limit the time:** Decide to spend no more than, say, 20 minutes on each sketch. With a time limit in mind, you're forced to pick out specific things to depict. Sketch in the broad outlines of your subject, and fill in the details only within those outlines.

**6. Have a plan: Explorations vs. studies:** Think about your sketching trip in advance so that you have some idea of what you want to accomplish. You might decide to **explore** an area with which you are not that familiar, with the general purpose of looking at patterns of vegetation, wildlife habitats, or topography. In such a case, you would carry the minimum of equipment with you, and your sketchbook would be used to "take notes" of what you see. On the other hand, if you're going to **study** an area, it means that you intend to spend at least an hour or two on a previously **explored** site, with specific media in mind. For instance, "I'm going down to the beaver dam to do a detailed **pencil** drawing of the construction of the dam and the beaver lodge in order to develop a **watercolor** and **pastel** painting back in the studio". Or, "I'm going to do a **pencil** layout and on-site **watercolor** of that stand of hemlocks by the creek that has the hawk nest in the afternoon when the light is coming from behind."

**7. Be prepared to discard your plan:** You never know WHAT kind of wildlife you're going to run into!

This artist planned to go down to the creek to sketch some particular rocks and water creatures spotted on a previous exploration trip, but Trout Season had just started and there was a fisherman sloshing along the very spot dictated by the trip plan.



Unwilling to intrude upon the fisherman's obvious pleasurable solitude, the frustrated sketcher whiled away about 15 minutes elsewhere drawing a light-starved bottom branch of a white pine. Later, the artist sneaked back to the creek, figuring that the fisherman had moved on, but the good man was still hogging the vantage point. Bowing to the inevitable, there he is!

**8. Practice memory drawing:** After a sketching trip, put away your notes, take a blank piece of paper, and try to draw a particular scene or subject from memory. You will be amazed and delighted how this simple exercise improves your powers of observation on your next sketching trip!

**9. Take pictures:** Although drawing (or worse! tracing!) from photographs does absolutely nothing to improve your drawing skills, photographs are a valuable resource for your reference "morgue" of things you run into all the time. This is especially true of wildlife. One artist recently had a

commission to draw a wild turkey for a business card, and, deadline looming, no turkeys in sight, was able to complete the assignment from photos taken the previous winter. (The artist couldn't sketch them at the time, due to frozen fingers!)

## • AFTERNOON SESSION: Methods of Scientific Illustration

### Introduction: Scientific illustration techniques in the lab

Scenery and landscape drawing, the subject of our morning session, requires you to see the “big picture” all at once. You block in the larger masses, then gradually add details.

Scientific illustration, on the other hand, often benefits from the opposite approach. The scientific illustrator often studies and draws the tiniest details first. After understanding the details of a structure by accurately drawing them, he then studies the arrangement and relationships among the details in order to depict the complete specimen. This requires close observation using a hand lens or a relatively low power stereo microscope. In addition, he measures everything he sees.

Although a scientific illustration of a forest scene can tolerate some latitude in proportion and placement (we can effortlessly move a tree if we think it would look better elsewhere!), scientific illustration requires us to be absolutely accurate in our proportions. Any specialist in plants, animals, or minerals should be able to identify exactly what species and variety he’s looking at from your drawing alone. The scientific illustrator has latitude as to emphasis and detail — which is why drawings are sometimes much more useful than photographs for scientific purposes.

On the other hand, the scientific illustrator should also strive to capture the essence or character of his subject, and to create a pleasing composition. When you criticise your own illustrations, the first question you should ask yourself is: “Does this thing look...ah... DEAD ?”. Or, does it have something of the character of a living thing: purposeful, dynamic, accomplished in the business of life? Even a skull or a bone once had a vital function to perform; if you must draw a plant from an herbarium specimen, does your drawing look like a living sugar-producing, light-seeking and rather competitive creature? Try to capture the **gesture** of your subject. (See “Bibliography: ‘The Natural Way to Draw’.”)

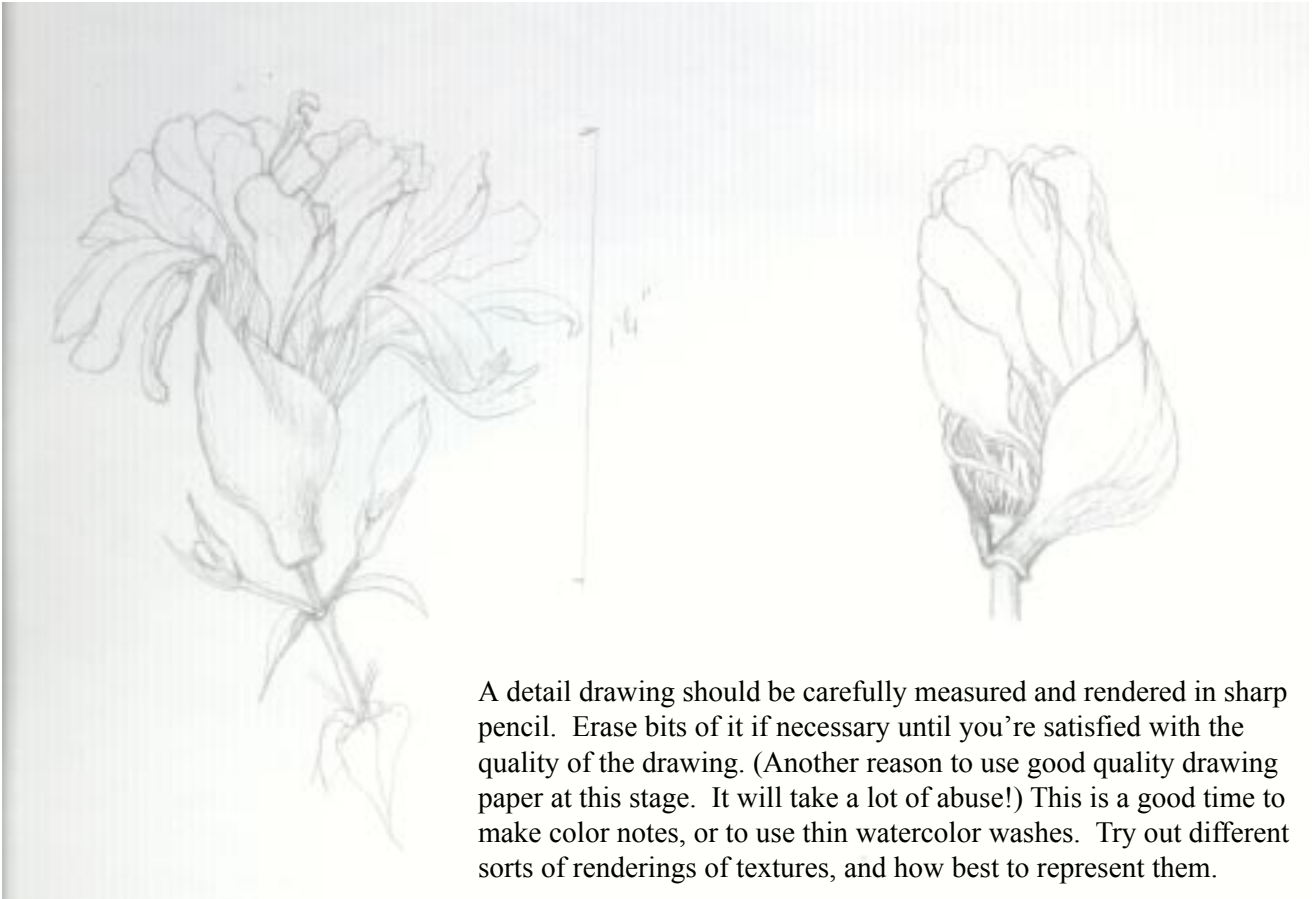
**1. LOOK!:** (And when you’re done, look again!) Put down that pencil and examine the specimen, and if it’s possible, heft it, turn it around, study it from all angles. Make a few gesture sketches; make notes of textures, colors, weight. Write these down in your notes.

**2. Measure:** Use a ruler for larger specimens, or use a “renaissance grid” for a hand specimen. Renaissance artists sometimes mounted a vertical grid in front of a subject, particularly when drawing the human figure in perspective. You can make such a grid from a sheet of acrylic. Score grid marks on clear acrylic, and rub indelible ink in the grooves. The one we’ll be demonstrating in the workshop is marked with a 1” grid. (By the way, this is particularly useful for resolving the leaves-in-perspective bugaboo for botanical artists). An alternative is a transparent “quilter’s ruler”, marked as a grid, which is usually about 8 inches wide and 18 inches tall.

When you’re examining a specimen under a hand lens or a stereo microscope, place a piece of graph paper under the specimen. We find 1/8 inch paper most useful. Although most scientific illustrations have measurements expressed in the metric system for publication, many artists find it easier to estimate and measure in inches and fractions of an inch. Other useful rulers for small specimens should be small, transparent, and preferably marked in a grid.

**3. Tools & Materials:** Dissecting tools will come in handy. A craft or utility knife, tweezers, straight pins. For arranging larger specimens, a florist’s block may be used to hold any sort of small specimen at any angle, and an “third hand” clamping device is invaluable. Preliminary drawings should be done in a pad of good quality drawing paper, at least 8.5 by 11 inches. We use Strathmore 300 Series, but any good quality paper, which can take a watercolor wash will do. Pencils should be sharp, and capable of capturing detail. We use 0.3mm technical pencils, with a white vinyl eraser, either block or pencil style. The pencil style eraser can be sharpened with a utility knife.

#### 4. Study and draw the details of the specimen:



A detail drawing should be carefully measured and rendered in sharp pencil. Erase bits of it if necessary until you're satisfied with the quality of the drawing. (Another reason to use good quality drawing paper at this stage. It will take a lot of abuse!) This is a good time to make color notes, or to use thin watercolor washes. Try out different sorts of renderings of textures, and how best to represent them.

Shown here is a detail study of Bouncing Bet, *Saponaria officinalis*, a member of the wild carnation family.

**5. Draw the entire specimen:** When you have learned, by drawing, the details of the specimen, it's time to put the details all together, concentrating on the specimen as a whole. In the picture below, we have used our experience in learning all about the specimen's various details in order to depict them properly, in perspective.



You might be chagrined to find that in your final drawing, there isn't enough room to put in all the details. Has all your effort in understanding these details been in vain? You will discover that even though, at this scale, the tiny details may not be susceptible to detailed rendering, you will be able to suggest them convincingly. And, by learning the details, you will find yourself able to draw them in any orientation.

Note the grid behind the final drawing. This is an aid to make sure that in this case, the arrangement and sizes of the buds, flowers, and leaves appear with the proper spacing. This is a good use of the "renaissance grid", which was placed vertically in front of the specimen. The specimen was fixed in position using the "third hand" clamping device. The grid projection was lightly indicated on this 11 x 14 inch drawing. Don't forget to take notes on things which you consider characteristic of the specimen. Leave these notes on your final drawing.

**6. Your final rendering:** The hard part's already done! When you're satisfied with the layout of the detailed drawing, think about your final rendering. Pen and ink? Watercolor? Oils? If you're doing a commission illustration, it's probably going to be specified beforehand. In most cases, technical pen with stipple shading is the preferred medium for reproduction in scientific journals. Less frequently requested are black-and-white tonal drawings, which can be made in pencil or graphite dust. Sometimes, a color drawing is requested, which is usually done

in watercolor or gouache.

In any case, you must transfer your drawing to the surface upon which your final illustration is to be rendered. Although we probably won't have time to do a transfer in this workshop, you might want to try this process on your own. Use good quality tracing paper, such as Albanene, and tape it over your drawing. Then, use one of two methods to transfer the drawing to its ultimate surface:

1. Use Saral tracing paper, or
  2. Go over the major lines of your object with a 3B or 4B pencil on the BACK of your tracing.
- Then, take the tracing paper to your chosen surface, and go over the lines **lightly** with a stylus or a ballpoint pen which has lost all its ink. (Some people use the wooden end of a watercolor paintbrush.) When you're done, go over the drawing on the new surface lightly with pencil, and you're ready to paint.

## **BIBLIOGRAPHY**

### **Some very useful books on nature drawing**

1. *The Natural Way to Draw* by Kimon Nicolaides; Houghton Mifflin: Nicolaides talks about **gesture** and says that “Everything has a gesture” — not only living things, but inanimate objects as well. If your drawings look lackluster, you probably have missed the gesture!
2. *How to Draw Plants* by Keith West; Watson-Guptill: The best how-to book on how to see and draw plants we’ve ever seen.
3. *Animal Drawing* by Charles R. Knight; Dover Publications: Advice from the Master

### **...and for really getting into it:**

1. *Mammal Evolution* by Savage & Long: Fascinating comparative anatomy and history of the mammals
2. *Bones* by Alexander; MacMillan: Gorgeous and illuminating photographic studies of bones
3. *Biology of Plants, Sixth Edition* by Raven, Evert & Eichhorn: College text, beautifully illustrated.

### **...and for sheer delight:**

Any of the Golden Nature and Field Guides by Zim et al. Those beautiful watercolor illustrations!

### **About the artist:**

Tressa Vellozzi has a B.S. in Physics and Mathematics from New York University, and has done graduate work in Geophysics and Geology at Columbia University and SUNY Albany. Member, GNSI (Guild of Natural Science Illustrators). While at Columbia, she worked for professor Ralph J. Holmes, producing scientific illustrations for publication in optical mineralogy and paleontology. At SUNY, she produced specimen illustrations for thin-section mineralogical analysis as well as site drawings and diagrams for geological structural analysis and mapping applications. Currently with Keyserkill Studios, Inc., a company specializing in software development of business database applications, technical training, and web design and development. Teaches Computer Science courses at the Utica School of Commerce.