## **Seeing the World Anew**

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Wow! How did you spot that? How can you tell this species from that one? How are you able to determine a forest's age? How can you know that this trash was deposited here by a fox and not a sloppy person? These questions and more have answers rooted in heightened observation—a skill useful in many aspects of life, for example rearing children or diagnosing illnesses and car problems. For simplicity, this article only looks at biological applications in local parks or the backyard. Observation may involve multiple senses, such as confirming a spicebush (*Lindera benzoin*) by crushing its leaf, thereby releasing the zesty odors. However, never run around the woods rubbing every leaf or else risk getting a rude surprise from plants that are poisonous, thorny, or both!

Our ancestors needed heightened awareness for survival and our brains are still hardwired to see snakes and spiders, two potentially venomous animal groups, more readily than other creatures. Skills to detect additional things in daily life can be awakened with tools and exercises. Many paths lead to enhanced observations and this article provides some starting points.

In this age of ubiquitous cameras, anyone can take pictures and be a "photographer." However, taking that snapshot often reduces attention to the moment and the image loses some of the subtleties that the eye perceives in life, with the latter being the reason many identification field guides have illustrations instead of photographs. Drawing and painting, especially from life, helps the viewer see details while gaining a better appreciation for the subject as a whole (Figure 1). An easy way to get started is with a pen (preferably India ink) or pencil set and a sketchbook (recommending 11x14 inches). At first, draw natural, stationary objects, such as wood, shells, foliage, and flowers. Start with line drawings and pay attention to the edges, noting variations like degrees of smoothness and irregularities. Line drawings are simple yet effective studies. As experience builds, return to this subject and experiment with values and colors. Try different angles, lighting, media, and techniques. Bonus: study sketches will improve and a novice may start producing nice artwork after only a year or two of diligent practice! There are many art books to help with this journey.

Creating a phenology wheel is another terrific exercise. Find an outdoor subject that is easily seen and immutable, such as a backyard object (e.g., large piece of deadwood, boulder, or shed), and make it the drawing's central focus. Decide on how many sections this picture has and divide the remaining empty parts of the page by that number. For example, divide by 12 to have one installment per month over a year or divide by 13 for a weekly chapter over a season—a wonderful way to document spring wildflower bloom periods. At set times over an established period, return to the picture and draw a segment as it is seen or choose subjects around that focal point. More information is at <a href="https://earthzine.org/phenology-wheels-earth-observation-where-you-live/">https://earthzine.org/phenology-wheels-earth-observation-where-you-live/</a>.

Explore the natural world with others by joining a nature journal club. It is an excellent way to share ideas and works while making friends with kindred spirits. In a sketchbook, notes and drawings on the same page document what is seen. Some of the results are true works of art! Clubs may offer workshops and classes, both outdoor and inside. Online forums and postings are ways to get feedback on existing pieces and ideas for new ones and approaches. The NOVA Nature Journal Club has a publicly open Facebook site at https://www.facebook.com/groups/544583139673338.

Improve awareness through solo observation drills, such as the following:

Exercise 1: Find a secluded natural area, maybe a forest or meadow. Bring a mat, notebook, and pen or pencil and sit for 15 minutes. Do nothing but observe everything from soil to sky. Is there a breeze? How is the humidity and temperature? What types of flora and fauna are around you? What smells are in the air? What do you hear—leaves rustling, streams gurgling, animal calls? Even if the session is drowned out by yet *another* loud leaf blower (note how far sound travels), rain starts falling, or some other unfortunate occurrence, it is all part of the objective observation. When the time is up, spend the next 15 minutes writing down everything viewed or sensed.

Exercise 2: Look up the animals found at the National Zoo, Frying Pan Park, or other accredited public place that houses animals. Before the visit, select three animals, preferably ones that you know little about and make it a learning experience. When you visit the first animal on this list, simply observe it for 15 minutes if it is on display (if the animal is not out, go to the next listed critter). What is the animal doing? How does it interact with other things in its area? Even if it is sleeping the whole time, what is it doing while it sleeps? Are its ears or tail twitching? How fast is it breathing? When the time is up, devote the next 15 minutes to documenting the observations.

The first exercise broadens awareness and the second helps improve focus. In daily life, maintain that awareness while using focus as needed. As these studies proceed, you might wonder what a certain species is. Smartphone apps have limitations, but with your new skill sets, take notes and sketches so the species' name can be looked up later. Your attentiveness will be better in all walks of life. Isaac Asimov said, "The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka!' (I found it!) but 'That's funny'." Welcome to an enriched perspective of the world filled with new discoveries, great and small!

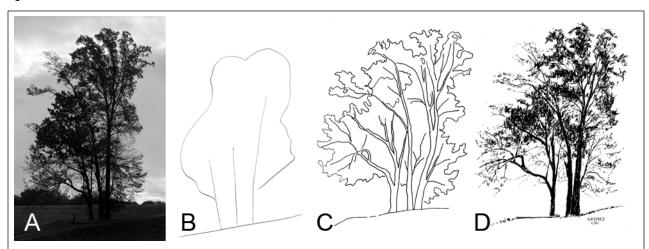


Figure 1. The subject of this study is the mixed species grove by the dam at Royal Lake Park, starting with a monochrome photograph (A). A quick sketch in ballpoint pen (B) is devoid of detail and uninformative; this image is only helpful in design composition. The line drawing (C) is a type of contour drawing, where edges are followed with a consistent line—in this case, using a Rapidograph pen and India ink. As this image has multiple pen lifts from paper, contour drawings often consist of a single line and minimal glances at the paper while the eye and hand coordinate in following the object. This technique can produce good art, but more often it is a tool to improve the way the viewer sees. In this example and without knowing the subject, the audience might guess it is trees or maybe a sea fan or kale leaves. The final sketch (D) used multiple Rapidograph pens and has a mix of lines, textures, and values. It has sufficient detail indicating trees. Omitting the background captured in the snapshot gives the sketch better clarity of the grove. The thinly clumping leaf coverage signifies autumn (spring has more even leaf distribution with smaller foliage—best captured using extensive stippling) and various forms suggest multiple species though the exact ones will require separate sketches of the specimens—subjects for new sketches!

When drawing from life, realize there will be changes in light, wind, and other external influences that alter what is seen. Some artists start sketches (visual notes) in the field, make written notes, and, yes, take snapshots, then complete the piece in the studio. Combining these tools is a great means of improving visual observations.

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