

THE LAWS GUIDE TO NATURE DRAWING AND JOURNALING

Written and Illustrated by John Muir Laws

in joyful, inspired collaboration with Emilie Lygren



Heyday, Berkeley, California

FOCUSED AWARENESS

There is so much you could do in your journal that it is hard to know where to start. Giving yourself a finite project will help you concentrate and discover. Each project is a frame through which you can observe and discover new worlds.

The foundation of natural history is careful and specific observation with rigorous and exacting note-taking. Much of what we know about the natural world today comes directly from the journal entries of naturalists and scientists. When you record information in your journal, you are adding to that body of knowledge and building your understanding of the natural world.

Yet when you go outside to journal, especially in a new place, the vastness of possibility can feel overwhelming. It is hard to know where to begin, and it is easy to feel pressured to capture every aspect of an experience or landscape.

Writing and drawing in your journal improve your ability to observe, process, and remember your thoughts and experiences. In time we all forget what we have seen or modify our memories. Anything observed but not put down on paper is lost to science, posterity, and in time to you as well. If you record them in a journal, your ideas and discoveries will stay with you both physically and mentally.

When I was young I took a nature journaling workshop with Clare Walker Leslie and Hannah Hinchman in Grand Teton National Park. These masters of nature journaling gave each of us a piece of string and instructed us to go outside, put the string on the ground in a circle, and record everything within the circle. In the vastness of Grand Teton National Park, that small frame gave me the focus to make discoveries. Within a huge and spectacular landscape, I found an equally beautiful and rich world inside the confines of that one piece of string. After exploring that world for hours I felt connected to and intimate with the place as a whole.

If you limit your focus when you journal, you will not feel overwhelmed by how or where to begin. Asking and following questions is one place to begin your experience of journaling, and this section contains other projects that focus awareness. Each of them will give you a point of departure and an immediate invitation to interact with some aspect of the natural world. Use them to guide your journal entries or to jump-start your observations. Even though they are not physical pieces of string, these projects will help you to look at nature differently and will lead you to discover the million tiny worlds that exist in any given place.

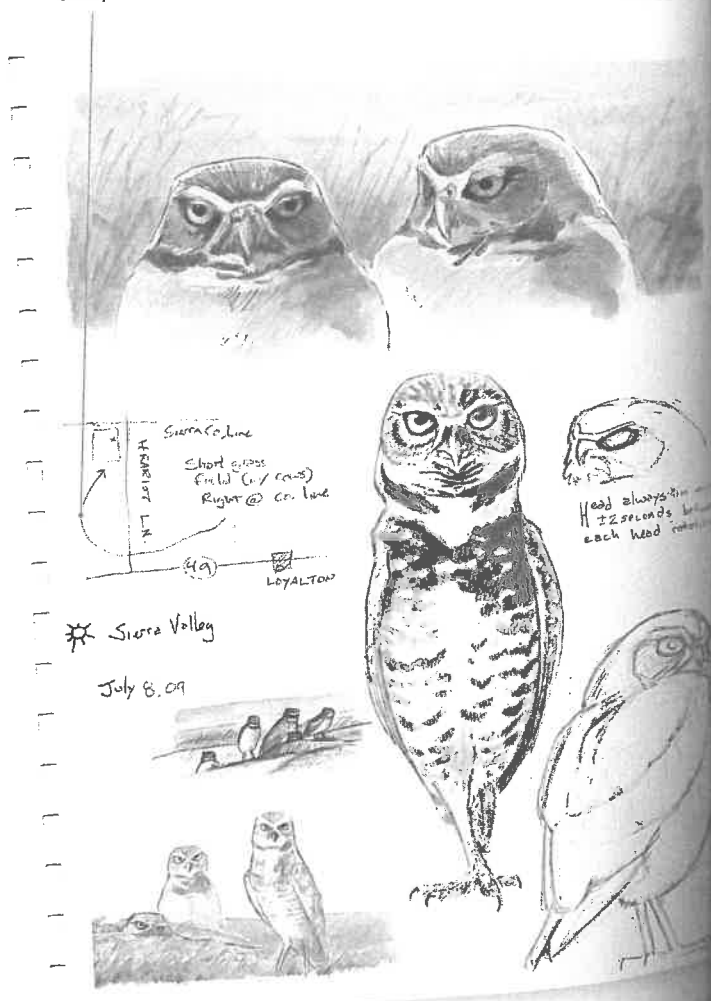
DETAILS FOR EVERY ENTRY

To make your observations valuable to science and help you keep track of your experiences, include where-and-when data on every page. It only takes a few seconds to do and converts any journal page from an anecdote to a scientific record. A pretty picture of a bird is just a pretty picture of a bird. However, if that same picture is connected with information about where and

when the bird was seen, it becomes a rich scientific record. Details from plumage to behavior will change over the year and between locations. By connecting observations with "when" and "where," you will be able to answer many questions from your notes. The fact that you saw a Painted Redstart is nice. A sketch or note that describes its behavior or plumage is better. Those same notes connected with date and location information are personally more interesting and scientifically more useful.

When you write your notes, you have no way of knowing what questions you will ask of your data in the future. Date, location, time, and weather will give you the context in which an observation was made. This metadata (the data about the data) should be appended to every observation or journal page. Make it a habit to include the location and "date stamp" on every page (ideal) or at the start of each day's notes if you use a bound journal. Including metadata in your notes reinforces the relationship between what you are seeing and when in the year and where on the earth you are.

Include locator maps, location information, the date, and a weather icon with your notes.



METHODS OF EXPANDING OBSERVATION

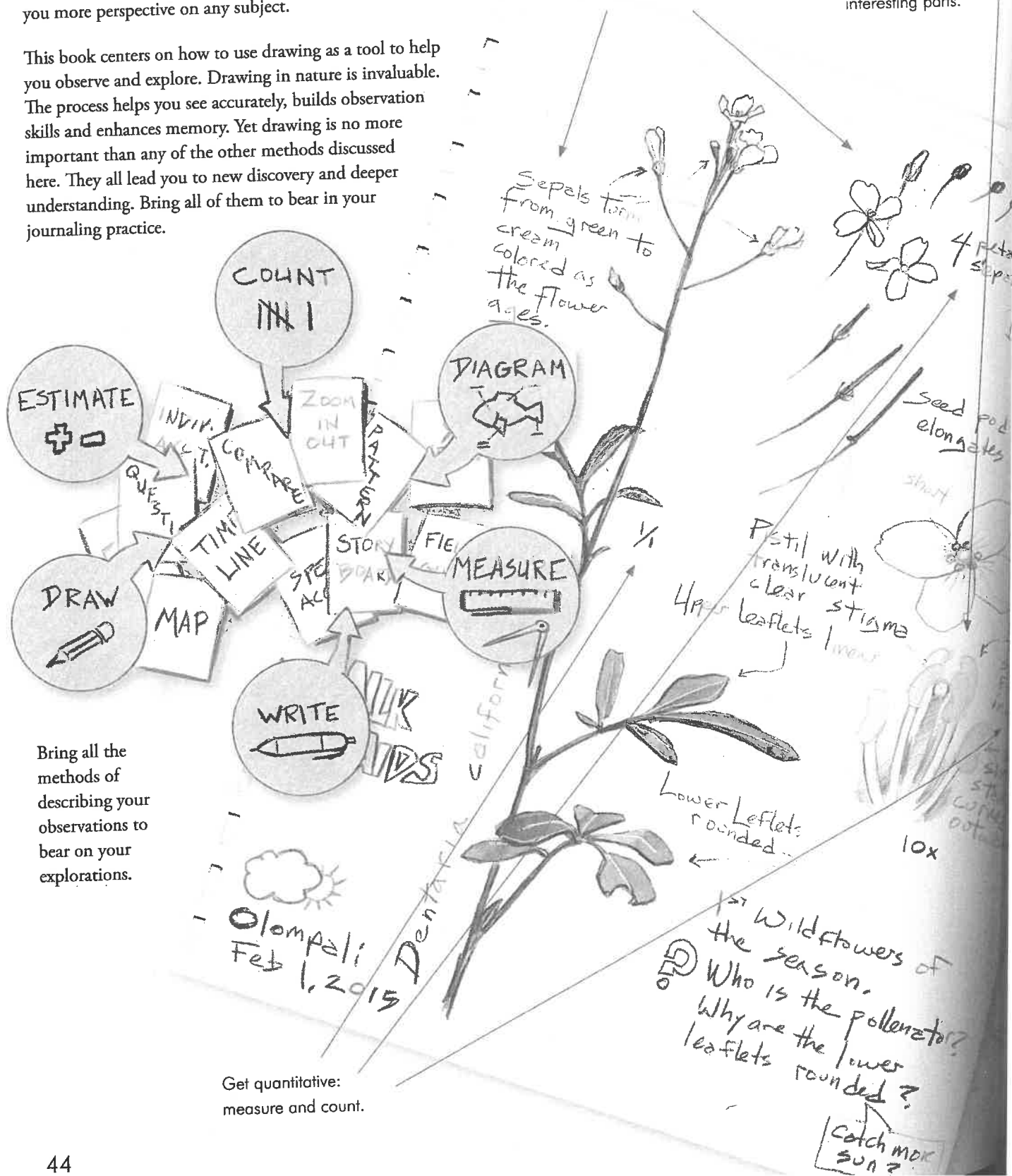
Writing, drawing, diagramming, and quantification (counting, measuring, and estimating) help you explore any subject from different perspectives.

Writing, drawing, diagramming, and quantification, all different ways of recording information, require you to observe and think differently also. Using all these tools together will give you more perspective on any subject.

This book centers on how to use drawing as a tool to help you observe and explore. Drawing in nature is invaluable. The process helps you see accurately, builds observation skills and enhances memory. Yet drawing is no more important than any of the other methods discussed here. They all lead you to new discovery and deeper understanding. Bring all of them to bear in your journaling practice.

Some observations are best shown with a sketch, some with writing.

Make diagrams to show the relationships between interesting parts.



Get quantitative: measure and count.

WRITE

Some of your observations and thoughts are more easily recorded in a drawing. Others are more effectively communicated through writing. Both are essential journaling tools.

WRITING AND ATTENTION

As you explore with your journal, use short notes, sentences, and descriptive paragraphs to record your observations, questions, and explanations. Doing so will help you to reach new understanding, articulate your thoughts more clearly, and heighten your memory.¹

Make space in your journal for writing about other aspects of your experience, not just your relevant scientific observations. Short notes like "I have never seen this before," "I am waiting for the bus," or a list of your companions are not scientific in nature. Yet this information is not trivial. Including notes like this in your journal furthers your capacity to remember your experiences. These notes will drop you more fully back into the moment should you pick up your journal and read it again in the future.

To tap even more deeply into the experience of being alive, include personal insights in your writing. We are sentient beings. We feel, grow, and change as we move through the world. Barry Lopez writes, "The shape and character of...a person's thinking, I believe, are deeply influenced by where on this earth one goes, what one touches, the patterns one observes in nature."² As you make a regular practice of journaling, pay attention not only to the happenings in the natural world, but also the happenings within yourself. Doing so will increase your emotional intelligence through reflection and deeper awareness.

The path to personal insight and self-awareness is, like nature observation, based in attention. To begin to seek personal insights, turn the process of observation inward. Take a moment to quiet your mind and breathe deeply. What do you notice about yourself? What questions are present for you? What are you reminded of in

this moment? Pay attention to the thoughts that arise. The quiet and stillness of slowing down in nature may lead to unexpected wisdom or new awareness.

MAKING A PLACE FOR POETRY

One way to explore personal insight is through writing poems about your experiences in nature. Do you know that you can write poetry? If you are recording your observations, questions, and connections (I notice, I wonder, it reminds me of) in your journal, you are working with the building blocks of poetry. Towards the end of your day of journaling, take a moment to look at some of the observations and questions you have recorded—about the

natural world, and about yourself. Take a step back and a few deep breaths. Write a few observations and questions in a column. Focus on the landscape, yourself, or one subject in particular. The result will be a short poem that is a rich, accurate record of a moment in your life.

Pay particular attention to metaphor and "it reminds me of" in this process. Are you drawn to some aspect of the natural world? Perhaps there is some wisdom there for you. If you notice the way grass yields in the wind, let it remind you of your own resilience. Think: what do you have in common with a bird or a tree? Write down your answers. Don't worry about spelling or grammar, rhyme or

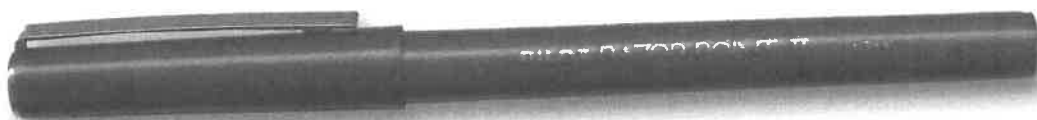
form, or trying to be "good." Think of these short poems as you would your drawings: that they are successful if they lead you to see something new. Write with the goal of knowing yourself and the world better.

This will leave you with a more complete record of experience in your journal, one you can return to years later to remember not only your experiences in a place, but also how they affected you. Connect your heart and mind with nature as you examine the world.

WORD PLAY

Use words in creative and novel ways to help you think differently.

- Make bulleted lists of ideas or observations. This is a fast way to initially get a lot on paper.
- Link notes and sketches with pointer lines so that the drawing starts to "speak."
- Create a mind map, linking related ideas, as you explore a mystery (see page 25).
- Create headings or emphasis with bold type, all caps, bubble letters, block letters, or colored pencil.
- Write vertically, diagonally, or in an arc, or let your text wrap around the edge of an object. Think of the shape of the block of text as a compositional element on the page. If you write more densely, your text will make a more unified block.



JOURNALING STIMULATES CREATIVITY

The way you choose to explore a subject will change the way you see and think about it. Intentionally combine different modes of observation and recording to open your brain to discovery.

VARY YOUR STRUCTURE, VARY YOUR THINKING

Your journaling practice will be richest when you intentionally vary the type of information you seek in the places you visit. The focused projects and methods for deepening inquiry discussed in previous sections will deepen your interaction with the landscape. Your learning and journaling experience is also affected by how you choose to record information on the page.

It is easy to treat a journal as a collection of nature portraits, placing a careful drawing of one individual at the center of each page. Though you may learn about that individual, this static approach actually discourages curiosity and discovery. There are no cues to pull your brain to explore and wonder in new ways. When you look at this type of journal entry, there is nowhere for the eye to go but to the middle of the page or a block of text.

In contrast, journal pages that are full of notes, sketches, diagrams, maps, lists, questions, carefully written descriptions, detailed



close-ups, landscape views, and poems are dynamic—and so is your experience in creating them. Seek variation in how you document your experience. Try using different “invitations to inquiry” from the previous chapter on one journal page. This kind of variety will allow you to make open-ended observations and expansive illustrations. It will also lead you to explore and think in different

Title: added at the end after I looked it up on the Internet → **HAMMERHEAD WORM**
Bipallum sp. thin near head

Life-size sketch → **Life-size!**

Measurements → **~14cm outstretched**

Enlargement of the head showing the plasticity of the sensory lobes → **Thicker section**

Cross section → **wide at tail**

Coloration diagram showing both the top and the bottom → **pharynx in here?**

Tail detail, behavior sketches → **sticky mucus**

More information I learned online → **Predatory planarian - feeds on earthworms!**

Metadata: the when and the where → **June 2 2014**
at edge of lawn @ Home in San Mateo

Fully expanded

pale on underside of head

touch sensitive

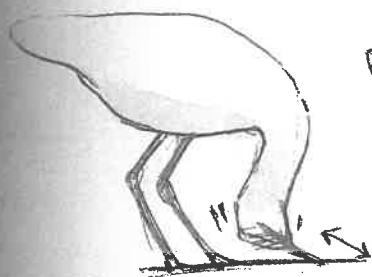
head can shrink + deform

Head held off ground like a cobra

have never seen one of these B4!

dor ventr

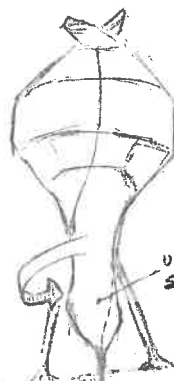
x sect



Feeding LBCu
turns head
upside down and
sideways while
probing mud.

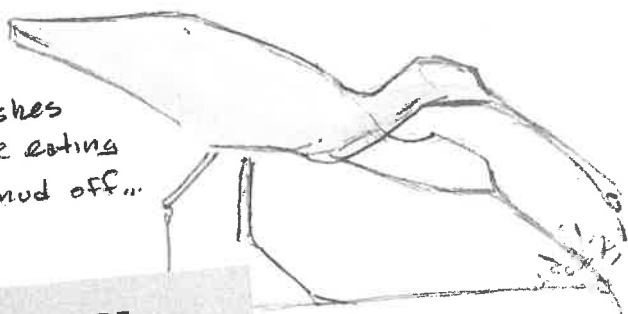


Washes
food items
before
eating them.



underside
seen from
front!

LBCu Washes
food before eating
- get the mud off...



LBCu
turns head
sideways +
upside down
as it probes

Q Following tunnels
in mud?

ELEMENTS ON A PAGE

Here is a partial list of elements you can include on a single sketchbook page. Mix and match and see how your curiosity responds. Copy this list and glue it into the back page of your journal to remind you of different exploration modalities.

- Date, time, location, weather
- Questions
- Collections, field guides
- Individual or species-level studies
- Zoom in, zoom out
- Patterns, comparisons, change over time
- Event storyboards
- Maps, cross sections, block diagrams. You can also paste in and annotate a printed park map.
- Written descriptions of what you observe, think, and feel
- Funny or thoughtful quotes and comments you overhear
- Drawings, diagrams, close-ups, details, landscape views, sections, and projections
- Count, measure, quantify, and graph
- Species lists, which may include counts of how many individuals you see
- Title, arrows, icons, bullets, boxes

ways, making your journal not simply a place to record your observations, but a tool to expand your perception.

Intentionally vary how you record information in your journal. Juxtapose carefully written descriptions, detailed close-ups, landscape views, and writing. Try using different "invitations to inquiry" from the previous chapter on one journal page. Copy this list of "Elements on a Page" and glue it into the back page of your journal to remind you of different exploration modalities. The different modes of recording information interact with each other, leading you to explore and think in new ways.

Even if you regularly combine journaling elements on your pages, it is still possible to get in a rut. You might develop a regular way of drawing or exploring a given subject. A habit like this can get locked in. Look back through old journal entries. Do you regularly draw birds at a certain size and level of detail? Are your plants all to the same scale? See if you can recognize habits in your work. Then try something different.

Another great way to open up your journaling practice is to study the published journals of other naturalists or artists, or to look at the work of any nature journaling peers you have. In *Field Notes on Science and Nature*, Michael R. Canfield writes that "viewing the actual field notes of another scientist gave me new ideas about how I would construct my own." As you examine journal entries, pay attention to what the author has focused on and how they chose to record that information. Sketchnotes are another area where this form of visual thinking plays out. Study the work of Mike Rohde (author of *The Sketchnote Handbook*) for inspiration. Use techniques and ideas from others to deepen your own practice. Copying the journaling approaches of others will not reduce your own creativity or make you a clone of another person. You will incorporate what you find useful into your own style and discard what does not work for you.

The following pages include other ideas and techniques for representing your thoughts visually. Use them to expand how you think, wonder, and communicate your ideas.