The Grinnell Method of Field Journaling

Adapted from an article by Donna L. Long (donnallong.com)

"Our field-records will be perhaps the most valuable of all our results. … any and all (as many as you have time to record) items are liable to be just what will provide the information wanted. You can't tell in advance which observations will prove valuable. Do record them all!"
~ Joseph Grinnell, 1907

Knowledge of the living world begins with careful observations. Detailed field notes are an extremely valuable part of natural history study. They have been used extensively for museum research, conservation, and management. For example, the distribution and abundance of organisms changes over time, due to natural causes as well as human impacts on the environment. By looking back at field notes from 100 years ago, we can accurately document the changing status of biodiversity in a given area.

The Grinnell Method was developed by Joseph Grinnell (1877-1939), a field naturalist, teacher and the first director of the University of California's Berkeley Museum of Vertebrate Zoology. It was designed to aid scientific investigation and is a popular method used by professional biologists and field naturalists. His philosophy was that field notes were mainly for the use of other researchers, and so a standard format is necessary to help find information quickly and easily.

Grinnell's system consists of four parts: a **field notebook**; a **journal**, which consists of diary-like entries about field work and observations; a series of **species accounts**, with detailed information about the species encountered, and a **catalog**, which lists all the specimens collected in the field.

Use a pocket-sized **field notebook**, such as a Rite in the Rain notebook, to directly record observations as they are happening. Your notes should include:

- Date (on every page)
- Both arrival and departure times
- Locality (place, latitude, longitude, GPS readings, sketched maps, description, e.g. distance from "the pond," etc.)
- Companions, if any
- Route (directions to the site, or notes about the route traveled)
- Weather (temperature, cloud types, wind, rain, etc.)
- General impressions, changes from last visit
- Habitat (backyard, forest, wetland, etc.)
- A list of species seen, with any relevant notes, particularly, things that might help you identify a species, or justify your identification after the fact.

Notes about species observations may include:

- Physical (color, weight, size, growth stage) and behavioral observations (including a transcription of any songs or vocalizations you might have heard)
- For vegetation, growth stage or status (e.g. is it in flower? Insect visitors present?)
- Sketches of organisms or their tracks
- Data collected, if applicable
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Some other tips:

- Use fade-proof ink, and acid-free or waterproof paper if possible
- Use digits ("1") instead of written out numbers ("one")
- Use as few abbreviations as possible –if people read your journals years from now, it might not be clear what you were trying to communicate (and even you might not remember after a bit of time has passed)
- Put your name and the year at the upper left corner or each page.
- Number each page in the upper right corner

The rest of your system – the **field journal** – will be kept in a separate binder (physical, or digital). The first binder section is the **narrative,** with chronological written entries that contain a detailed account of your field experience for each day. These entries are written in a diary-like format, using the notes you jotted down in your field notebook. Make sure you transcribe these scribbled field notes into complete sentences as soon as possible after the field time. The "tradition" is to sit down every evening and write up an account from your notes of that day. Your narrative entries should contain:

- All the general/identifying information collected in the field notebook
- A clear narrative of the day's events (reconstructed from field notes)
- Explanations of your observations when necessary (how you located tracks and signs, where you looked for plants and animals, any specific field techniques you used)
- Data collected
- A complete list of species observed
- Questions to further investigate

After the narrative section, you will include a **species account** for every organism you encountered. In this section, you will include all sightings for a given species together, chronologically, before beginning the section for the next species (on a new page). This format allows you to quickly locate all information on any particular species you've studied, without having to search through the individual daily entries.

The suggested format for the species account is:

- List the scientific and common names
- Include a description of the key features that allowed you to make the identification
- Provide (dated) notes about location, phenology, and behavior observed
- If this species is observed again during a subsequent field experience, just add each new account in chronological order.

Memories fade quickly, so don't let too much time pass before transcribing your field notes (no more than 24 hours).

Field notes can serve as formal scientific documentation. As such, some additional things to consider:

- You may want to write on only one side of each page and use the other side for maps, photos, and sketches.
- Describe your day's experience in complete sentences
- Put your name and the year at the upper left corner or each page and number each page in the upper right corner
- A journal will typically cover a single calendar year
- Regularly scan or photograph your notebook and journal pages, in case something happens to the originals
- Use metric when possible
- Include the number of individuals of each type you observe
- Include information you receive from other professionals/experts