

FIELD NOTEBOOKS AND RECOMMENDATIONS FOR TAKING FIELD NOTES

LABORATORY RULES TO LEARN AND LIVE BY:

(3) Never leave things to memory.

The following material consists of recommended ways to enter and document field notes.

Field Notebooks

Good characteristics include:

- 1) Size should be small enough to fit into a large pocket, but large enough to write upon.
- 2) Sewn binding (glued bindings sometimes come apart).
- 3) Hard cover protects notes and provides backing while writing.
- 4) Paper with high rag content will prevent loss of data if dropped into water.
- 5) Numbered pages.

Writing Utensils

Pencils - Pencils are useful because you know how much is left (no hidden reservoir). Pencils can be sharpened with a knife or by rubbing them on a rock. Pencil graphite is waterproof, but will smudge. Use a hard lead 2½ - 3. The only disadvantage to pencil is that it can be erased. **NEVER** erase anything in a field note--draw a single line through it if it may be incorrect. That observation may be the most important thing ever entered in your notebook. Erase it and it is gone.

Rapidograph pens - Use with good quality, waterproof ink. Small points may clog, so use #2 size point. Make sure you have a pencil backup. Pigma Micron pens with **archival ink** are also excellent and can be purchased at most art supply stores.

Ballpoint pens - Ballpoint pens are a poor third choice. Many have waterproof ink, but some of them are soluble in alcohol. That means they are **NO GOOD** for making specimen tags.

All other writing implements should **NOT** be used. Felt-tipped pens are usually water soluble, with blunt points that do not allow good sketching. Fountain pens usually do not allow use of thicker, waterproof inks.

Organization

First write your name, address, and phone number on inside cover so that it can be returned if lost and found. Leave the first (or last) few pages of your notebook blank for an index that you can write in as you go. Take notes serially through the notebook. Be sure to start each new day or location on a new page. This makes things easier to find. Use the last pages of the notebook (from last working forward) to enter reference material you may want in the field: calibration values for instruments, serial numbers of equipment, records of names, addresses or numbers of people. Notebooks should be labeled by year using some classification system if more than one notebook is used in a year, e.g. 89.1, 89.2, etc.

Entries - Begin the observation period by entering the date, locality, time, general weather conditions, and anything else that may be important.

Dates - Should always be written in unambiguous manner. A good method is to always use 3-letter designation for month and always put the time units from smallest to largest: day month year (e.g. 10 JAN 89).

Times - Always use the 24-hour clock. i.e. 0530 rather than 5:30 since the latter is ambiguous if AM or PM does not follow. Remember the time zones and daylight savings times—**Animals do not have daylight savings.** It is a good idea to make your last entry 'Observations ended at (and insert time)'.

Notes - Notes should be descriptive and tell what you did not see as well as what you did. You may have been watching a particular action and did not notice something about the animal. Note what you did not notice. **Be objective, precise and accurate.** Write down what you saw and not an interpretation of it. Avoid general descriptions: 'the cats fought' should be 'cat A (black with yellow patch around neck) struck at cat B (yellow with black patch on tip of tail) with left forepaw.' Take quantitative notes when possible. It is better to write 'the animals were 1 m apart' than to write nothing about distance between them. It is even better to write 'the animals were between 0.75 and 1.25m apart' this provides some reliability to the estimates. Do not guess about anything: sexes, species names, etc. If you are not positive write a description, you may be able to identify the animal from the description.

Other Methods for Field Notes

Sketches - Sketching is useful in conjunction with field notes. Even if you cannot draw, a sketch will often help you remember things about the observation. Use stick figures if you have to.

Field recorder – An advantage of a field recorder over note taking is that the recorder can be used while keeping an eye on animals you are observing. If the recorder has been 'calibrated' you may be able to keep it running and have a time sequence throughout the taping session. The disadvantages are that hours are needed to transcribe the tapes to notebook. Invariably they break down, batteries run down, or tape runs out at a crucial time. Carrying spares can be costly. Newer digital recorders have several advantages over older tape recorders. (1) No moving parts or tapes. (2) Data include time and date stamp. (3) Data can be downloaded to computer (and with speech recognition notes can be generated).

Photographs - Photography is very useful. A picture says a thousand words. Digital cameras are becoming very popular. With proper calibration the photos can be downloaded to a computer and then used to make measurements of objects in the picture.

Video - Behavior is often an action packed activity. Video cameras have become an inexpensive way to record animal behavior and keep a running account of an animal's activity. Newer digital

video should become less expensive and increase the possibilities for making behavioral measurements as long as the motion of the animal is relatively slow. High speed video that can capture movements occurring at rates faster than 30/sec are still very expensive.

Data recorders - Many different types of electronic data recorders are available. They usually have a small keyboard, internal clock, and internal memory. Information can be transferred directly from recorders to other computer systems for analysis. Data loggers that keep track of environmental conditions at a site can be very useful. The sensors measure temperature, humidity etc. at set intervals and the data are stored in memory. The data can be offloaded from memory every week or month, thus keeping a 'continuous' running log of the environmental variables in the field or lab.

Miscellaneous

In time, you will develop your own techniques for keeping track of data and making observations. Some other tips: Include a small ruler taped to the inside of your notebook. Carry field equipment in a small pack. I use a hunting vest because it has a large number of pockets and allows my hands to be free. At night I use a headlamp to keep hands free. Wear dull clothing EXCEPT during hunting season--wear bright colors. Carry a spare pencil. Use a large coat or cloth to keep your bottom from getting wet when you sit on the ground. Finally, if your fieldwork takes you into the wilds carry the following 10 essentials: **compass, map, flashlight, fire starter, matches, knife, signaling mirror, firstaid kit, rope, and spare clothing (for rain & snow)**. Your life may depend on them.