

EEB 3898 – Field Methods in Fish Biology – Summer 2014
Field Notebook Guidelines – based on Zale et al. 2012, *Fisheries Techniques*

Background: A portable field notebook is an essential tool for any field biologist. Since you will be a fish biologist in this course, your notebook must be water resistant (e.g., write-in-the-rain). Your field notebook is where you record your field data **legibly and systematically**. You should take your field notebook with you on **every single field trip**. I will collect field notebooks on exam days and grade you on legibility and completeness.

Tips:

- Always use pencil
- Write down more information than you think you need – your field notebook can never have too much information
- Make comments in the margins or at the end of your notes
- Draw yourself pictures– sketches of fish, sketches of the habitat, sketches of the equipment can all be helpful

We will accession fish captured on our trips into our biodiversity of Connecticut fishes collection. It is therefore imperative that you *record all* of the below information. Accessioned fish without these data are effectively useless.

- *Your name (collector) and the names of any partner(s) with you*
- *Date and time*
- *Weather*
 - Sunny, cloudy, rainy, windy, approximate air temperature, etc.
- *Field number*
 - A different number should be assigned for each collection trip. You and your partner should come up with a unique field number. For example, I would use *JPV-13-01* to indicate that I am the collector, the year is 2013 and this is my first collection trip.
- *State and locality data of the site*
 - This is where you record the name of pond/lake, stream, river, estuary we are collecting from, and/or its relative location. I will provide you with detailed information when necessary.
- *Latitude and longitude*
 - I will provide you with this information
- *Water type*
 - Did we collect from a pond, lake, river, stream or estuary? What are the macrohabitat, mesohabitat and microhabitat characteristics?
- *Vegetation*
 - Is there vegetation present and if so, what kind?
- *Bottom*
 - Record the substrate (e.g., cobble, mud, or sand) at the collection site.
- *Water chemistry*
 - Record the salinity, conductivity, temperature and dissolved oxygen content. I will use a special instrument to measure these data during each trip.

- *Record the number of individuals captured for **each species** of fish*
 - Record common and scientific name
 - This requires being able to identify fish in the field, a skill we will learn in this course.
- *Individual fish data*
 - Length in mm or cm of each fish: **fork length and total length**
 - Weight in grams of each fish
 - Deposition – was the fish euthanized or returned unharmed? What agent was used to euthanize and what was the concentration?
- *Detailed description of the capture method used*
 - For example: “we conducted 3 beach seine hauls using a 35ft beach seine with 3/8 inch mesh. We dragged the seine 10 meters perpendicular to shore for each haul.”

Here is an example field notebook entry (Zale et al., 2012, Fisheries Techniques)

Field No. GS-02-018 (Sample No. _____)
 State or Country: New Mexico Locality: Mimbres River at lower end of Mimbres Nature Conservancy preserve
 T _____ R _____ S _____ Lat.: 32.89386 Long.: 107.99350
 County: Grant Drainage: Mimbres basin
 Water: clear; turbidity = 1.1 NTU
 Vegetation: some attached algae
 Temp: 16.8°C Air: 17°C
 Bottom: gravel/cobble dominated
 Shore: cottonwood/willow; good riparian Current: _____
 Dist. offshore: _____ Width: 4.4m (avg) Tide: _____
 Depth of capture: _____ Depth of water: 0.15 m (avg)
 Method of capture: backpack electroshocker (Smith-Root 12-B Pow)
 Seine: _____ No. Hauls: _____ Area: _____ sq. m.
 D.O.: 8.13 mg/l Conductivity: 218 μ mhos/cm. Salinity: _____ ‰
 Shocking seconds: 1370 Voltage: 300 Amps: _____
 Collected by: G. Schiffmiller Date: 28 Oct 2002
 Orig. preserv.: 10% formalin Time: 1500
 pH = 8.13 Shocker setting: J10, K10, M11
 Single pass; block net used at upstream end
 Reach length: 175 m
 Habitat type estimate: 50% riffle, 5% pool, 40% run.
 This reach had much more pool habitat in July 2002.
 A flood event deposited a lot of sand, filling pools.
 Total capture:
156 *Agosia chrysogaster*
5 *Rhinichthys osculus*
271C (*Pantosteus*) *plebeius*
11 *Oncorhynchus mykiss* 100-202 mm TL
1 *Gila nigrescens* 155 mm TL
↳ returned to water unharmed

Figure 5.15 Example of a page from a field notebook. Data recorded include various environmental metrics such as temperature and current velocity as well as general observations about the study site.