

## GUIDELINES FOR GENERAL ECOLOGY LAB REPORTS

### OVERALL APPROACH

1. Before writing your report you may want to jot down your thoughts on each question. Organize these thoughts into an outline and then use this **rough draft** to construct a well-organized essay for each question. We encourage you to discuss your data with your colleagues. However, we expect the interpretation of the data and final product to be your own.
2. **Make sure you understand each question including the hints.** How does the question relate to the work you have done? Also, pay close attention to the explanations given in lab. Ask for help if something is unclear!
3. **Use your data** to support your answers. The quality of your response is dependent on your interpretation of your data. Use the lab manual, including the appendix, for help in understanding your data. Support all statements with relevant statistics (e.g., means, variances, etc.), graphs or tables. For example:
  - a. “Snail length and weight are positively correlated (Figure 1,  $R^2=0.87$ ,  $P<0.05$ ).”
  - b. “The logistic model (Figure 1,  $R^2=0.78$ ,  $P<0.05$ ) describes *Daphnia* sp. population growth better than the exponential model (Figure 2,  $R^2=0.04$ ,  $P>0.05$ ).”

### REPORT ORGANIZATION & HELPFUL SUGGESTIONS

- Reports must be typewritten.
- List lab partners and section underneath your name.
- Make sure all parts of the question, including the hints, are answered.
- Your answers should be numbered, written in paragraph form, and grammatically correct.
- All graphs & tables should be mentioned in the text.
- Number all of your figures and tables in the order in which they are referred to in your report. In addition, all figures and tables should be appropriately labeled and titled (refer to lab manual).
- Always proofread what you have written.
- Differentiate between the meaning of effect and affect. Affect is usually a verb meaning to influence and effect is usually a noun meaning result. For example, “the drug affected the test subjects as demonstrated by the serious side effects”.
- The first time you mention an organism, you must use the full scientific name (genus and species, e.g., *Littorina littorea*). Afterwards, use the first initial of the genus name and the species epithet (e.g., *L. littorea*). Always underline or *italicize* the scientific name.
- Do not use terms like “obviously” or phrases like “of course” in scientific writing. Rarely is anything obvious in science. Nor should you state that you've “proved” your argument. Use terms like the data “supported the argument” or “suggested”.

## ALLELOPATHY REFERENCES

*Copies of the following papers are available in the Ecology Laboratory (G47 Rudman) and at the circulation desk in the Biology Library (Kendall Hall).*

Bartholomew, B. 1970. Bare zone between California shrub and grassland communities: the role of animals. *Science* 170:1210-1212.

Harbourne, J. 8. 1982. Plant toxins and their effects on animals. Chapter 3 in: *Introduction to ecological biochemistry*. Academic Press, NY

Harbourne, J. 8. 1982. Biochemical interactions between higher plants. Chapters in *Introduction to ecological biochemistry*. Academic Press, NY

Harper, J. L. 1977. *The population biology of plants*. Academic Press, NY (see pages 369-381)

Stowe, L. O. 1979. Allelopathy and its influence in the distribution of plants in an Illinois old-field. *Journal of Ecology* 67:1065-1085.

Williamson, G. 8. 1990. Allelopathy, Koch's postulates, and the neck riddle. Chapters in *B. Grace and D. Tilman. Perspectives on Plant Competition*. Academic Press, NY