

Sampling and data analyses

The group analysis and write up of these data will make up 1/4 of your grade. The project will be on N dynamics in the Kansas River.

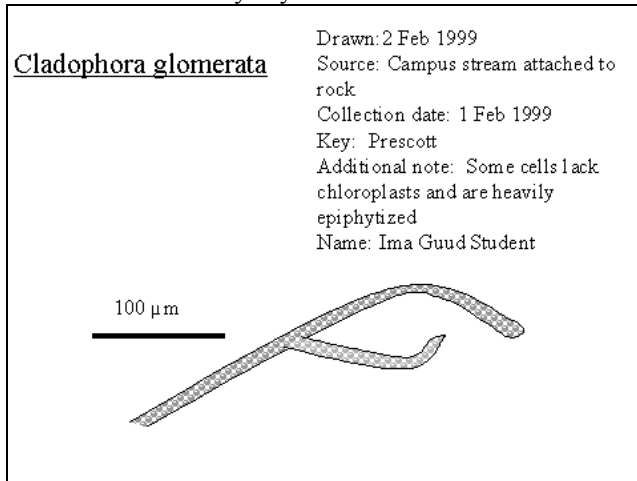
Readings

We will read Weztel's Limnology: Lake and River Ecosystems. All students will write a 2-paragraph review of each chapter. One paragraph will be things you like, particularly noting things that will be useful to you. The second paragraph will be ideas of how he could have done better. I know that the writing style is dry, so that is not a valid criticism for improvement. This assignment will be ¼ of your grade.

I will also expect students to attend Friday afternoon journal clubs every week. Every other week I will choose a paper. I will ask each student to comment on the readings individually before the rest of the group (i.e. talkative faculty) take over the conversation, and then one person will be assigned to take over discussion of the paper. This student will be required to do additional reading to assess how the concepts presented in the paper are put into action today. A starting point for this may be to check the science citation index to find out which papers are citing the old paper (this is easy to do through the web of science on the library databases). The presentation and comments on the rest of the papers will be worth 1/4 of your grade. Students are required to read all papers. If students miss journal club times, they need to give the instructor a good indication of their comprehension of the materials (e.g. a paragraph of critique).

Workshop

I will teach algal identification. Students will be required to make 50 (e.g. 50 unique algae) 3x5 cards and collect materials for identification. They will be required to i.d. at least 10 diatoms to species. I will provide keys, or current students can borrow them from those who have taken the course previously. An order can be placed for those who want to buy keys. The cards will be worth 1/4 of the student's grade.



Advanced Aquatic Ecology schedule fall 2005

Note: this is an approximate in-class schedule. It will be necessary to spend a considerable amount of time on lab work in addition to scheduled lecture hours (3 credits for 3 h meeting time a week presumes lecture and no lab).

Week	Date	Task
1	23 Aug	Discuss semester's work, N cycle lecture
	26 Aug	J club open paper
2	30 Aug	Nutrient cycle lecture continues. Discuss plans for research, Discuss Bernot and Dodds and Alexander et al papers
	2 Sept	Journal Club- Hutchinson, GE. 1959. Homage to Santa Rosalia or why are there so many kinds of animals? <i>Am. Nat.</i> 145-159. Hutchinson, GE. 1961. The Paradox of the plankton. <i>Am. Nat.</i> 25:137-145.
3	6 Sept	First field trip
	9 Sept	Journal Club- Schindler, DW. 1974. Eutrophication and recovery in experimental lakes: implications for lake management. <i>Science</i> 184:897-899.
4	13 Sept	Sample analysis
	16 Sept	Journal Club, open paper
5	20 Sept	How to identify diatoms, more analysis updates
	23 Sept	Journal Club, open paper
6	27 Sept	Algal id and data analysis
	30 Sept	Journal Club- Lindeman. 1942. The trophic-dynamic aspect of ecology. <i>Ecology</i> 23: 399-418.
7	4 Oct	Algal id and data analysis
	7 Oct	Journal Club- Vannote et al. 1980. The river continuum concept. <i>Can. J. Fish. Aquat. Sci.</i> 37:130-137.
8	11 Oct	Algal id and data analysis
	14 Oct	Journal Club, open paper
9	18 Oct	Algal id and data analysis
	21 Oct	Student Holiday
10	25 Oct	Algal id and data analysis
	28 Oct	Journal Club- Pomeroy, LR. 1974. The ocean's food web, a changing paradigm. <i>BioSci.</i> 24:499-504.
11	1 Nov	Algal identifications due
	4 Nov	Journal Club, open paper
12	8 Nov	Lab practicum (it will be easy, don't worry) Dodds lecture (note, we can go over any lab or sampling methods that students want in these last few lectures)
	11 Nov	Journal Club- Poff, NL and JV Ward. 1989. Implications of streamflow variability and predictability for lotic community structure: a regional analysis of streamflow patterns. <i>Can. J. Fish. Aquat. Sci.</i> 46:1805-1818.
13	15 Nov	Dodds lecture, data analysis paper
	18 Nov	Journal Club, open paper
14	22 Nov	Dodds lecture, data analysis paper
	25 Nov	Thanksgiving
15	29 Nov	
	2 Dec	Journal Club- Fisher, et al. 1982. Temporal succession in a desert stream ecosystem following flash flooding. <i>Ecol. Mono.</i> 52:93-110.
16	6 Dec	Course wrap-up, data analysis and paper due
	9 Dec	Journal Club, open paper
17	13 Dec,?	Final course meeting, actual date and time tba