

Sampling and data analyses

The group analysis and write up of these data will make up 1/4 of your grade.

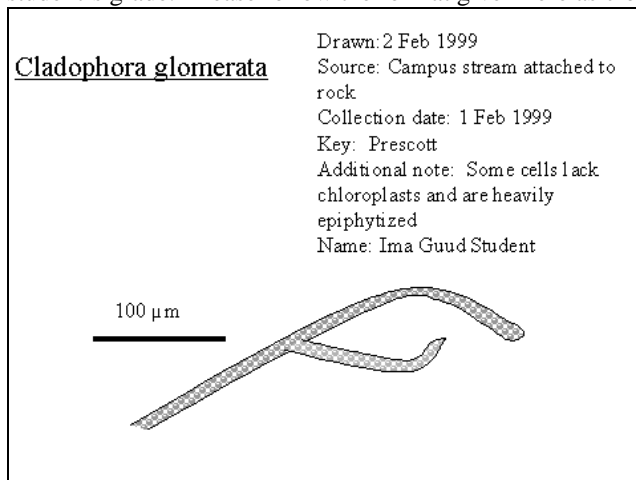
Readings

Wetzel's Limnology: Lake and River Ecosystems. All students will write a 1-2-paragraph review of each chapter. The first points will be things you like, particularly noting things that will be useful to you. The second points will be ideas of how he could have done better. I encourage you to purchase Wetzel for your desk. Alternative, proof read Freshwater Ecology text ed 3 chapters. I will start a dropbox for these chapters. Please add your initials to the file when you are done and use track changes and comments to make suggestions. This assignment will be 1/4 of your grade.

I will also expect students to attend aquatic journal club on Fridays. We will do a mix between papers related to the project and classic papers. For "classic papers", the lead 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 will be to check the science citation index (probably good to look at both Web of Science and Google Scholar) to find out which papers are citing the old paper. 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 class 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. This is a shared group project. The idea here is for each student to create a group of cards that will help them identify algae in the future or at least understand what the literature is talking about. Students will be required to make 50 (e.g. 50 unique algae) 3x5 or the larger size index 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. You need to buy index cards and a set of colored pencils. An order can be placed for those who want to buy keys. The cards will be worth 1/4 of the student's grade. Please follow the format given here as closely as possible.



Advanced Aquatic Ecology schedule fall 2017

Note: this is an approximate in-class schedule. It will be necessary to spend a considerable amount of time on outside work in addition to scheduled lecture hours (3 credits for 3 h meeting time a week presumes lecture and no lab). Tuesdays, 1:30-4:20 AK 228 or alternatively with no lab work in Bushnell conf room 2nd floor

Date	Task	Person responsible
25-Aug	Brooks, J. L., and S. I. Dodson. 1965. Predation body size and composition of plankton. <i>Science</i> 150:28	L. Bruckerhoff
28-Aug	Algal ID intro lecture, firm up group project	
1-Sep	Craig, H. 1961. Isotopic variations in meteoric waters. <i>Science</i> 133:1702-	Casey Pennock
5-Sep	Algal ID group project	
8-Sep	open paper (LTER workshop)	
12-Sep	Algal ID, group project	
15-Sep	Gorham, E. 1991. Northern peatlands - role in the carbon-cycle and probable responses to climatic warming. <i>Ecological Applications</i> 1:182-195.	Sammi Grieger
19-Sep	Algal ID, Group project	
22-Sep	Hakanson, L. 1980. An ecological risk index for aquatic pollution-control - a sedimentological approach. <i>Water Research</i> 14:975-1001.	Kari Bigham
26-Sep	Walter out, group project meeting	
30-Sep	Parmesan, C. 2006. Ecological and evolutionary responses to recent climate change. <i>Annual Review of Ecology Evolution and Systematics</i> 37:637-669.	Henry Camarillo
3-Oct	Algal ID, Group project	
6-Oct	Open paper (Dodds gone)	
10-Oct	1st Half Wetzel or Freshwater Ecology Due	
13-Oct	Open paper, Great Plains Limno Meeting	
17-Oct	Group project	
20-Oct	Poff, N. L., J. D. Allan, M. B. Bain, J. R. Karr, K. L. Prestegard, B. D. Richter, R. E. Sparks, and J. C. Stromberg. 1997. The natural flow regime. <i>BioScience</i> 47:769-784.	Anne Schechner
24-Oct	Group project	
27-Oct	Schlosser, I. J. 1991. Stream fish ecology: a landscape perspective. <i>BioScience</i> 41:704-712.	L. Bruckerhoff + Casey Pennock
31-Oct	Final algal id push, group project	
3-Nov	Stuart, S. N., J. S. Chanson, N. A. Cox, B. E. Young, A. S. L. Rodrigues, D. L. Fischman, and R. W. Waller. 2004. Status and trends of amphibian declines and extinctions worldwide. <i>Science</i> 306:1783-1786.	Liz + Sammi Grieger
7-Nov	Algal Identification Due	
10-Nov	Vannote, R. L., C. W. Minshall, K. W. Cummins, J. R. Sedell and C. E. Cushing. 1980. The river continuum concept. <i>Can. J. Fish. Aquat. Sci.</i> 37:130-137.	Kari Bigham + Anne Schechner
14-Nov	Finish group project	
17-Nov	Hutchinson, G. 1961. Paradox of plankton. <i>American Naturalist</i> 95:137	Liz Renner
20-Nov	Thanksgiving	

24-Nov	Thanksgiving	
28-Nov	Final Reading Due	
1-Dec	Hutchinson, G. E. 1959. Homage to santa-rosalia or why are there so many kinds of animals. American Naturalist 93:145-159.	Henry Camarillo + Priscilla
5-Dec	Present group project and submit draft of project	
8-Dec	Kolpin, D. W., E. T. Furlong, M. T. Meyer, E. M. Thurman, S. D. Zaugg, L. B. Barber, and H. T. Buxton. 2002. Pharmaceuticals, hormones, and other organic wastewater contaminants in US streams, 1999-2000: A national reconnaissance. Environmental Science & Technology 36:1202-1211.	Priscilla
	Final Project due with response to review	

