

# Seminar in Ecology

## (BSC 420.03 – Fall 2020)

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**CONTENT.** I have appended a list of recent papers that I have encountered that may be of some interest. Any conceptually oriented topic of ecology is suitable for this seminar. I ask that you **do not** pick papers you have already read for your research or for other courses.

**SEMINAR STRUCTURE.** Seminar will consist of readings from the primary literature, each led by one student. Each discussion leader will be responsible for giving a short (10-15 minute) introduction to the discussion, and providing a short (1 p.) critique of the paper that will provide direction of discussion. **Leaders should lead the discussion not lecture.** Other participants should come prepared to discuss the paper.

Leaders will provide the group with an electronic copy of the paper(s) for discussion **one week in advance of our meeting.** **You must have my approval for the paper you have chosen,** so see me early on if you have a paper in mind. I can make suggestions of good recent papers. If you cannot come up with an electronic copy see me. If all else fails, get me a hard copy and I will have it scanned to a pdf and distributed. Leaders will e-mail the 1 p. critique (MS Word or pdf) to me and to all participants (Via ReggieNet, or I will provide all of you with email addresses) **on the Tuesday before our meeting.**

**Your grade** will be determined by both your success in leading the discussion (80%), including preparation, clarity, evidence of understanding, quality of questions posed, and quality of your written critique, and by your participation in discussion and attendance when you do not lead (20%). Note that this arrangement means you **cannot** manage an A in this seminar if you do not participate in discussions. I will provide feedback to discussion leaders following their presentations.

## Some suggestions

### Competition and Predation

- Aguilera, MA, N Valdivia, BR Broitman, SR Jenkins, SA Navarrete. 2020. Novel co-occurrence of functionally redundant consumers induced by range expansion alters community structure. *Ecology* **In press**. <https://doi.org/10.1002/ecy.3150>
- Ellner, SP, RE Snyder, PB Adler, G Hooker. 2019. An expanded modern coexistence theory for empirical applications. *Ecology Letters* 22: 3–18 doi: 10.1111/ele.13159
- Soudijn, FH, AM de Roos. 2017. Predator Persistence through Variability of Resource Productivity in Tritrophic Systems. *The American Naturalist*. 190:844–853
- Paton RS, Bonsall MB. 2019. The ecological and epidemiological consequences of reproductive interference between the vectors *Aedes aegypti* and *Aedes albopictus*. *Journal of the Royal Society Interface* 16: 20190270. <http://dx.doi.org/10.1098/rsif.2019.0270>
- Toscano, BJ, V Hin, VHW Rudolf. 2017. Cannibalism and Intraguild Predation Community Dynamics: Coexistence, Competitive Exclusion, and the Loss of Alternative Stable States. *The American Naturalist* 190:617–630

### Conservation

- Saunders ME. 2020. Conceptual ambiguity hinders measurement and management of ecosystem disservices. *Journal of Applied Ecology*. <https://doi.org/10.1111/1365-2664.13665>
- Smith, KG, RJ Almeida. 2020. When are extinctions simply bad luck? Rarefaction as a framework for disentangling selective and stochastic extinction. *Journal of Applied Ecology*. 57:101–110.

### Ecosystems

- Suraj, S, R Steuer. 2019. Modelling microbial communities using biochemical resource allocation analysis. *J. Royal Society Interface* 16 <http://doi.org/10.1098/rsif.2019.0474>

### Disease/Parasite dynamics

- Searle, CL, MH Cortez, KK Hunsberger, DC Grippi, IA Oleksy, CL Shaw, SB de la Serna, CL Lash, KL Dhir, MA Duffy. 2016. Population Density, Not Host Competence, Drives Patterns of Disease in an Invaded Community. *The American Naturalist* 188:554–566.
- Tierney, PA, JM Caffrey. S Vogel. SM Matthews. E Costantini. CV Holland. 2020. Invasive freshwater fish (*Leuciscus leuciscus*) acts as a sink for a parasite of native brown trout *Salmo trutta*. *Biological Invasions*. 22:2235–2250. <https://doi.org/10.1007/s10530-020-02253-1>

### Climate change

- Urrutia-Cordero, P, H Zhang, F Chaguaceda, H Geng, LA Hansson 2020. Climate warming and heat waves alter harmful cyanobacterial blooms along the benthic–pelagic interface. *Ecology* 101: e03025 <https://doi.org/10.1002/ecy.3025>

### Invasive species

- LaForgia, ML, SP Harrison, AM Latimer. 2020. Invasive species interact with climatic variability to reduce success of natives. *Ecology* 101:e03022 <https://doi.org/10.1002/ecy.3022>

## The schedule

Meeting date:	DISCUSSION LEADER
21 August	Scheduling
28 August	
4 September	
11 September	
18 September	
25 September	
2 October	
9 October	
16 October	
23 October	
30 October	
6 November	
13 November	
20 November	
27 November	<i>Thanksgiving break – no meeting</i>
4 December	