

Community Ecology — Fall 2021

Time & place: Tue. 15:10-18:00; LSB Room 89111

Instructor: Ya-Fu Lee Office. LSB 89204; Tel. ext. 58115; e-mail. yafulee@mail.ncku.edu.tw

Office hours: After classes or by appointments

Text: Mittelbach, G. G. & B. McGill. 2019. Community Ecology. Oxford.

Selected reference readings:

Carson, W. and S. Schnitzer (eds.). 2008. Tropical Forest Community Ecology. Wiley-Blackwell.

Gardener, M. 2014. Community ecology: analytical methods using R and Excel. Pelagic Pub.

Morin, P. J. 2011. Community Ecology. Blackwell.

Evaluation: * Presentation (selected literatures) and leading discussion: 55%; * Participation in discussion: 20% (Every attendant is expected to read “all” materials, and participate in **All DISCUSSIONS**); *** Attendance (indoor and/or field trip assignment): 25%**

Schedule:

Week	Date	Major contents
1	09/16	Introduction; community ecology's roots (Ch 1)
2	09/23	Patterns, Causes, and Consequences of Biodiversity Patterns of biological diversity (Ch 2)
3	09/30	Biodiversity and ecosystem functioning (Ch 3)
4	10/07	Species Interactions in Simple Modules Population growth and density dependence (Ch 4)
5	10/14	The fundamentals of competitive interactions (Ch 7)
6	10/21	Species coexistence and niche theory (Ch 8)
7	10/28	The fundamentals of predator–prey interactions (Ch 5)
8	11/04	Selective predators and responsive prey (Ch 6)
9	11/11	University Holiday (no class)
10	11/18	Beneficial interactions in communities: mutualism and facilitation (Ch 9)
11	11/25	Food Webs, Ecological Networks, and community assembly
12	12/02	Species interactions in ecological networks (Ch 10)
13	12/09	Food chains and food webs: controlling factors and cascading effects (Ch 11)
14	12/16	Community assembly and species traits (Ch 12)
15	12/23	Spatial Ecology Patchy Environments, metapopulations, and fugitive Species (Ch 13)
16	12/30	Metacommunities (Ch 14)
16	12/30	Species in Changing Environments Species in variable environments (Ch 15)
17	01/06	Evolutionary community ecology (Ch 16)
18	01/13	Final week (no class)