

BIOL 4100-029

Undergraduate Research
Spring 2025

1 List of Readings

Week of January 22, 2025

- No reading, first meeting

Week of January 29, 2025

- Chapin III, FS. 2003. Effects of plant traits on ecosystem and regional processes: a conceptual framework for predicting the consequences of global change. *Annals of Botany* 91: 455-463. [Link to paper here.](#)

Week of February 05, 2025

- Long SP, Bernacchi CJ. 2003. Gas exchange measurements: what can they tell us about the underlying limitations to photosynthesis? Procedures and sources of error. *Journal of Experimental Botany* 54: 2393-2401. [Link to paper here.](#)
- Busch FA, Ainsworth EA, Amtmann A, Cavanagh AP, Driever SM, Ferguson JN, Kromdijk J, Lawson T, Leahey ADB, Matthews JSA, Meacham-Hensold K, Vath RL, Vialet-Chabrand S, Walker BJ, Papanatsiou M. 2024. A guide to photosynthetic gas exchange measurements: fundamental principles, best practice, and potential pitfalls. *Plant, Cell and Environment* 47: 3344-3364. [Link to paper here.](#)

Week of February 12, 2025

- Ainsworth EA, Long SP. 2005. What have we learned from 15 years of free-air CO₂ enrichment (FACE)? A meta-analytic review of the responses of photosynthesis, canopy properties and plant production to rising CO₂. *New Phytologist* 165: 351–372. [Link to paper here.](#)

Week of February 19, 2025

- Yamori W, Hikosaka K, Way DA. 2014. Temperature response of photosynthesis in C₃, C₄, and CAM plants: temperature acclimation and temperature adaptation. *Photosynthesis Research* 119: 101–117. [Link to paper here.](#)

Week of February 26, 2025

- Liang X, Zhang T, Lu X, Ellsworth DS, BassiriRad H, You C, Wang D, He P, Deng Q, Liu H, et al. 2020. Global response patterns of plant photosynthesis to nitrogen addition: A meta-analysis. *Global Change Biology* 26: 3585–3600. [Link to paper here.](#)

Week of March 05, 2025

- Yue K, Fornara DA, Yang W, Peng Y, Peng C, Liu Z, Wu F. 2017. Influence of multiple global change drivers on terrestrial carbon storage: additive effects are common. *Ecology Letters* 20: 663-672. [Link to paper here.](#)

Week of March 12, 2025

- Phillips RP, Brzostek ER, Midgley MG. 2013. The mycorrhizal-associated nutrient economy: a new framework for predicting carbon-nutrient couplings in temperate forests. *New Phytologist* 199: 41–51. [Link to paper here.](#)

Week of March 19, 2025

- No reading, Spring Break

Week of March 26, 2025

- Terrer C, Vicca S, Stocker BD, Hungate BA, Phillips RP, Reich PB, Finzi AC, Prentice IC. 2018. Ecosystem responses to elevated CO₂ governed by plant–soil interactions and the cost of nitrogen acquisition. *New Phytologist* 217: 507–522. [Link to paper here.](#)

Weeks of April 02, April 09, and April 16, 2025

- No reading, work on proposal

Weeks of April 23 and April 30, 2025

- No reading, proposal presentations