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*"Evolution of Electron and Nutrient Flows and
the Organization of Ecosystems"*

Metabolism mediates Earth's global biogeochemical cycles. To examine how metabolic evolution shapes ecosystems I reconstructed the evolution of highly abundant microbes in the tropical surface oceans. This analysis suggests that all major divergences in these lineages increased cellular electron flux, allowing newly emerging populations to draw down limiting nutrients near the surface. Excretion of excess electrons as organic matter further appears to drive co-evolution among species. This work highlights how metabolism provides a lens for studying the co-evolution of Earth and the biosphere.

Monday, February 8, 2016

Noon - 1:00 pm

*Room 612/614, Carl R. Woese Institute for Genomic Biology
1206 West Gregory Drive, Urbana, IL 61801*

Directions: <http://www.igb.illinois.edu/about/directions>