

DISSOLVED ORGANIC CARBON



Photo 1. Water samples taken from a field study that manipulated terrestrial DOC (increasing DOC concentrations from left to right).

Aquatic ecosystems are intimately linked to their surrounding landscape through the flux of materials and energy. In particular, terrestrial ecosystems export large quantities of dissolved organic carbon (DOC) to lakes. This DOC serves as a resource subsidy for aquatic bacteria and ultimately can determine whether lakes function as sources or sinks of atmospheric CO₂.

Using field mesocosm experiments and simulation models (Photo 1), the authors addressed how the temporal variability and quality of DOC inputs affect aquatic microbial metabolism. Results from this study will help us understand the dynamics and energetics of microorganisms in spatially subsidized food webs.

This photograph illustrates the article, “Microbial productivity in variable resource environments,” by Jay T. Lennon and Kathryn L. Cottingham, tentatively scheduled to appear in *Ecology* 89(4), April 2008.