



PHOTO GALLERY

A TEST OF THE SUBSIDY–STABILITY HYPOTHESIS: THE EFFECTS OF TERRESTRIAL CARBON ON AQUATIC ECOSYSTEMS

Ecosystems are connected to each other through the cross-boundary movement of materials and energy. Theory suggests that resource subsidies should affect the stability of recipient ecosystems, but empirical tests are generally lacking. One well-recognized class of subsidies is the transport of organic matter from terrestrial to aquatic ecosystems. A gradient of terrestrial-derived dissolved organic matter (DOM) was established in a set of experimental ponds (Photo 1). Terrestrial carbon inputs destabilized experimental ponds, suggesting that global change-mediated alterations in the movement of material and energy between habitats can have unpredictable and dramatic impacts on the reliability of ecosystem services.



Photo 1. Aerial photograph of the Experimental Pond Facility at the Michigan State University W.K. Kellogg Biological Station. Each pond is 30 m in diameter and approximately 2 m deep.

Photo Credit: J. T. Lennon

This photograph illustrate the article “A test of the subsidy–stability hypothesis: the effects of terrestrial carbon on aquatic ecosystems” by Jones, S. E., and J. T. Lennon, published in *Ecology* 96:1550–1560. <http://dx.doi.org/10.1890/14-1783.1>