Biotic feedbacks in Lake phosphorus cycles

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Available online 13 November 2003.

Abstract

Limnologists are now reconsidering the role of the biota in the phosphorus (P) cycles of lakes. Changes in lake communities can have significant consequences for ecosystem P cycles. At seasonal timescales, the relative importance of nitrogen (N) and P as limiting factors for primary production depends in part on zooplankton species composition. Phosphorus storage and recycling by fish and zooplankton can be large components of P budgets, and mobile consumers can be important vectors in P transport. Stability, resilience and resistance of lake P cycles may depend heavily on fluxes to and from upper trophic levels.