adaptive management approach to managing for ecological integrity at St. Lawrence Islands National Park.

Multiple Scale Effects of Overgrazing by White-tailed Deer (*Odocoileus virginianus*) in Eastern Deciduous (Carolinian) Forests

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Large herbivores such as white-tailed deer can have a significant impact on vegetation across multiple biological scales. We examined the relationship between plant community dynamics in several overgrazed southern Ontario forest sites and ecosystem responses such as productivity, nitrogen dynamics, species diversity and ecosystem structure. Between 1992 and 1998, sites with a history of high deer densities (>50/km^2) were compared with deer exclosures and long-term ungrazed sites. Ordination analyses showed older exclosures were similar to ungrazed sites, with higher woody stem densities and dominated by plant functional types relatively high in nitrogen. Both differed from grazed sites, with lower stem densities and dominated by functional types lower in nitrogen. Reductions in deer did not result in the recovery of overgrazed sites because deer mediated changes at the ecosystem level and depletions of desirable native species from seedbanks were the major determinants of successional trajectories. These results present implications for plant species conservation and re-establishment.

Operationalizing Ecological Integrity within Ecosystem Management of Quetico Provincial Park Using Prescribed Forest Fires

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The role of fire in the ecosystem (both in protected areas and the production forest) is a subject of increasing interest to scientists and managers alike. The call to "Emulate Natural Disturbances" in the production forest and to "allow the forces of nature to function freely" in Wilderness Class Parks has lead to research and management action on both fronts.