

INVASIVE MANAGEMENT STRATEGIES AT PENINSULA STATE PARK. Kathleen A. Harris, Park Naturalist, Wisconsin Department of Natural Resources, Peninsula State Park, PO Box 218, Fish Creek, WI 54212.

Peninsula State Park, established in 1909, has managed vegetation since its beginning. In 1916 for instance, 95,000 trees arrived for planting, and in 1935 the Civilian Conservation Corps cleared over 200 acres of poison ivy near the beach. Emphasis on invasive species accelerated in the 1990s. In 2000, the park naturalist developed Peninsula's first Invasive Species Management Plan (IMP). It is reviewed biannually. Specific objectives are listed and prioritized each year.

Peninsula's IMP includes goals that articulate ideal conditions at specific geographic sites. For example, "The Peninsula shoreline is free of purple loosersife (*Lythrum salicaria*) and non-native phragmites (*Phragmites communis*)." However, given current staffing and a limited pool of able-bodied, trained volunteers, achieving ideal conditions in this 3,700-acre park is an enormous undertaking. Conservation targets act as a reality check.

Conservation targets identify Peninsula's most ecologically unique areas. Since many invasive species thrive at Peninsula State Park, the IMP identifies species that can most damage the ecological integrity of conservation targets. Conservation targets are crucial to defining management objectives (tasks). Peninsula's conservation targets include the Niagara Escarpment, Weborg Sedge Meadow and ancient shorelines that harbor colonies of federally threatened Dwarf Lake Iris (*Iris lacustris*).

Management objectives specify location and are measurable, such as "Pull all second year garlic mustard below Sven's Bluff by June 1." The park naturalist, consulting with the superintendent, prioritizes objectives each year. Educational objectives, listed separately, may or may not address conservation targets. They do, however, consider stewardship and fostering understanding of invasive species ecology fundamental. For example "The park naturalist or intern will conduct weekly Weed Warrior programs in May and June." Weed Warrior programs, geared towards children, take place at sites devoid of rare species. Another objective that emphasizes education but has resulted in limited containment of garlic mustard involves asking every May/June camper to pull garlic mustard at his or her campsite. This effort is beginning to show results at specific sites.

Peninsula staff review objectives each year and record what was – or wasn't – accomplished. Most often, objectives are not accomplished because of a shortage of staff and funds. Occasionally, sudden Department initiatives supersede objectives. In 2006, for example, the Department implemented management efforts related to the emerald ash borer (*Agrilus planipennis*). In any case, after the review a record of management efforts exists, enabling the park naturalist to negotiate staffing and/or management needs based on numbers.

Peninsula State Park offers 479 campsites and welcomes over one million visitors each year. Containing invasive threats is an overwhelming and relentless task. Peninsula's IMP makes the challenge more manageable.