Loosestrife on the Loose

Purple loosestrife, a weed from Europe, invades wetlands and overpowers native vegetation, ultimately forming dense stands in which little else grows.

During July and August the plant produces a profusion of attractive purple flowers, yet appearances can be deceiving. These flowers produce thousands of seeds that can remain viable for several years.

The sea of purple blossoms may be pretty, but the once productive wetland is now essentially a monoculture. Animals that depend on the native vegetation for food and shelter cannot find it in the loosestrife jungle. Gone are the waterfowl that used the area to nest; muskrats are missing—they do not use loosestrife for food.

A New Approach

Cultural (fire, mowing, water management) and chemical methods have all been used in the war against purple loosestrife. Unfortunately, these methods are very labor-intensive and costly and have not proven effective.

A viable option is using the plant's own natural enemies against it—biological control. Five species of beetles have been found in Europe that will damage purple loosestrife but do little or no harm to other plants. Three of these species (two leaf feeders and one root feeder) are being mass-reared at the Illinois Natural History Survey for release in Illinois.

In Illinois, biological control is being attempted in several northern counties that have the most extensive infestations of purple loosestrife. An initial release of 7,000 leaf-feeding beetles was made during 1994 at 7 sites in northern Illinois. Beetles successfully overwintered at these sites and reproduced the following spring. More beetles were released in June 1995, and additional releases are planned for subsequent years.
Just as it took some time for the plant to become established and overwhelm our wetlands, the establishment of these biological control organisms will also take time. Ultimately, the control of purple loosestrife may require a combination of management strategies with the leaf- and root-feeding beetles playing a major role. This project is being conducted in cooperation with the Illinois Department of Natural Resources (the parent agency of the Illinois Natural History Survey); the U.S. Army Corps of Engineers; the Forest Preserve Districts of Cook, DuPage, Kane, and Lake counties; and the McHenry County Conservation District.

Growing tip of purple loosestrife plant in flower. Courtesy of the Wisconsin Department of Natural Resources.

Who We Are

Nearly 140 years ago, Illinois recognized the need to understand its living natural resources. Today, the Illinois Natural History Survey stands as the oldest and largest organization of its kind in the nation. The Survey studies the animal and plant life of the state to determine the most effective means of protecting and intelligently using these resources for the maximum economic, educational, and recreational benefits of all Illinois citizens.

The Survey, now a division of the Illinois Department of Natural Resources, is headquartered on the campus of the University of Illinois at Urbana-Champaign. Field stations and study areas throughout the state add to the Survey's research capabilities. Organizationally, the Survey consists of a central administrative group plus four scientific units: the Center for Economic Entomology, the Center for Aquatic Ecology, the Center for Biodiversity, and the Center for Wildlife Ecology.

The role of insects and how they impact the state has been studied since the Survey's inception. The Center for Economic Entomology serves the citizens of Illinois by investigating and resolving entomologically related issues in four sectors: agriculture, medicine, the environment, and the urban setting. The Center is jointly funded through the Survey; the University of Illinois' College of Agriculture, Consumer, and Environmental Sciences; and the Office of Research/Agricultural Experiment Station. In addition to research, the Center for Economic Entomology provides educational outreach and other types of public service activities. These services and programs include insect identification, classroom presentations on insects, teaching curricula on entomology for K-12, and popular publications, such as the new How to Collect and Preserve Insects.

Stephen A. Forbes, first Chief of the Illinois Natural History Survey, wrote in 1889, "It will be our main final object to furnish the materials for a full and accurate picture of the native plant and animal life of Illinois as it actually exists in our fields, woods, and water." The Survey continues to fulfill that goal today.