

Sirex noctilio: Exotic European Woodwasp

USDA Forest Service

Northeastern Area

State and Private Forestry

A Major Threat to North American Conifers



Description: In the fall of 2004, a solitary female woodwasp was discovered in a New York survey trap, identified in February 2005 as *Sirex noctilio*. Native to Europe, Asia, and northern Africa, the insect has been accidentally introduced into a number of southern hemisphere countries, including New Zealand, Australia, Uruguay, Argentina, Brazil, Chile, and South Africa. Considered a secondary pest in its native range, it primarily attacks pines, e.g., Scots (*Pinus sylvestris*), Austrian (*P. nigra*), and maritime (*P. pinaster*). Away from its natural environment, the insect has caused upwards of 80 percent mortality in North American pine plantations, especially Monterey pine (*P. radiata*) and loblolly pine (*P. taeda*). Thus far, red, Scots, and white pine in New York have been found infested with *S. noctilio*.

Surveys were initiated in 2005 and continued in 2006 and 2007 to determine the extent of the insect in the Northeastern, MidAtlantic and Lake States. To date *Sirex noctilio* has been detected in New York (28 counties); Pennsylvania (6 counties); Michigan (1 county); and Vermont (1 county).

Key Issues

- *Sirex noctilio* has caused considerable economic damage to pine plantations in places where it has been introduced and has successfully established itself.
- All North American pines are at risk, posing threats to U.S. timber and wood industries.
- Losses of pine from forest ecosystems could harm wildlife and other forest values.
- The full extent of the U.S. infestation is as yet known.
- *Sirex* is usually spread via solid wood packing material.
- Widespread awareness of the symptoms and signs of an infestation offers the best chance for early detection and rapid response to contain and manage this destructive pest.

Accomplishments

- Cooperatively implemented surveys in 15 states to examine high-risk sites for *S. noctilio*. This included an expanded focus in the Northeastern, MidAtlantic, Midwestern and Lake States in cooperation with the USDA Animal and Plant Health Inspection Service (APHIS) and the Canadian Forest Service to develop a better understanding of *S. noctilio* in North America.
- Participated in the multi-agency Sirex Science Advisory Panel and the Sirex Management Team.
- Cooperated with APHIS on a preliminary release of the biological control nematode, and drafting a biocontrol plan.
- Conducted evaluations to determine the optimal timing for Sirex trap trees and methods for protecting these trees from bark beetles.
- Organized field tour of Sirex-infested areas for internal and external partners including Southern Research Station, Forest Health Protection (Southern Region and Washington office), Forest Health Technology Enterprise team, Canadian Forest Service, Michigan Technological University, University of Toronto, and Minnesota Department of Agriculture.
- Continued evaluations to assess the impact of *S. noctilio* on New York pine stands.
- Initiated evaluations with the Carnegie Museum in Pennsylvania to develop molecular techniques for *S. noctilio* larval identification.
- Determined the presence of *S. noctilio* on the Finger Lakes National Forest and provided management options.
- Presented papers at an international symposium in South Africa on the status of *S. noctilio* in the US.
- Published *Northern Journal of Applied Forestry* paper detailing potential *S. noctilio* management strategies.

- Implemented a demonstration project at Fort Drum, NY, to determine if thinning forest stands can reduce susceptibility to *S. noctilio*.

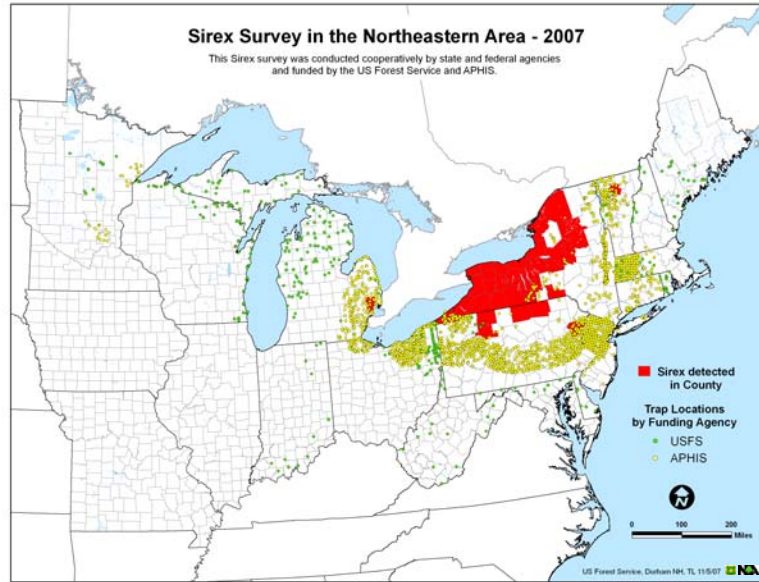


Figure 1. 2007 survey locations and positive counties for *Sirex noctilio*.

Budget History

FY 2006 is the first year of project funding. FY 2005 funds represent expenditures from the Forest Health Protection operating budget.

Response to <i>Sirex noctilio</i> Introduction (\$ Thousands)				
	FY 2005	FY 2006	FY 2007	FY 2008
Totals	\$20	\$533	\$350	

Future Actions

- Continue risk-based detection surveys across the Northeastern Area.
- Evaluate and improve methods for the use of trap trees, lures, and traps.
- Continue to assess the impacts of *S. noctilio* on North American forests.
- Continue assessment of silvicultural tools to reduce stand susceptibility.
- Coordinate information and outreach with APHIS, states, Canadian Forest Service, and others.
- Continue development of biocontrol agents.

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