

Invasive Species and Their Management in Pennsylvania

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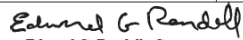


Authority

Executive Order 2004-1

- Recognized the Commonwealth would benefit from the advice and counsel of an official body of natural resource managers, policy makers, and researchers engaged in invasive species work.
- Created the Governor's Invasive Species Council of Pennsylvania.

COMMONWEALTH OF PENNSYLVANIA
GOVERNOR'S OFFICE
EXECUTIVE ORDER

Subject:	Governor's Invasive Species Council	Number:	2004-1 As Amended
Date:	September 18, 2006	By Direction of:	 Edward G. Rendell, Governor



pennsylvania

GOVERNOR'S INVASIVE SPECIES COUNCIL

Membership



Pennsylvania State University

University of Pennsylvania

Pennsylvania Sea Grant

Western Pennsylvania
Conservancy

The Nature Conservancy

PennAg Industries

Pennsylvania Landscape and
Nursery Association

Pennsylvania Forest Products
Association

Pennsylvania Farm Bureau

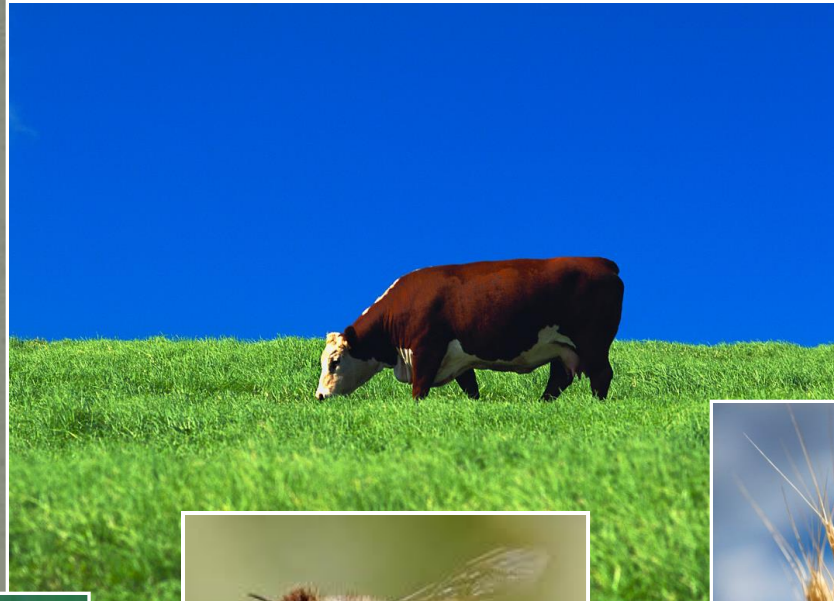
Pennsylvania Lake Management
Society

Mission Statement

Prevent the introduction and spread of nonnative invasive species into and throughout Pennsylvania.



Not All Nonnative Species Become Invasive



What is an Invasive Species?

Federal Definition:

“...a nonnative species whose introduction does or is likely to cause economic or environmental harm or harm to human health”



Examples of Invasive Species



Garlic Mustard



European Starling



Giant African Land Snail



Zebra Mussels



Japanese Beetle



Sudden Oak Death

How Do Invasive Species Get Here?



Charge

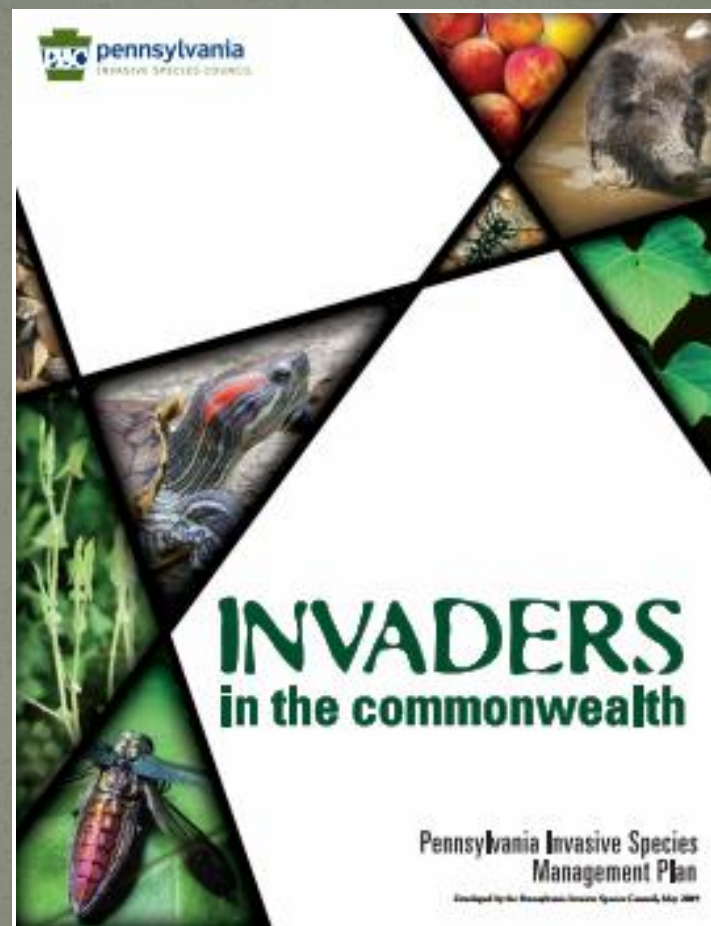
What We Do:

- Advise the Governor on and direct the development and implementation of a statewide nonnative invasive species management plan.
- Provide guidance on prevention and control of nonnative invasive species and rapid response to new infestations.
- Facilitate coordination among federal, regional, state, and local initiatives and organizations engaged in the management of nonnative invasive species.



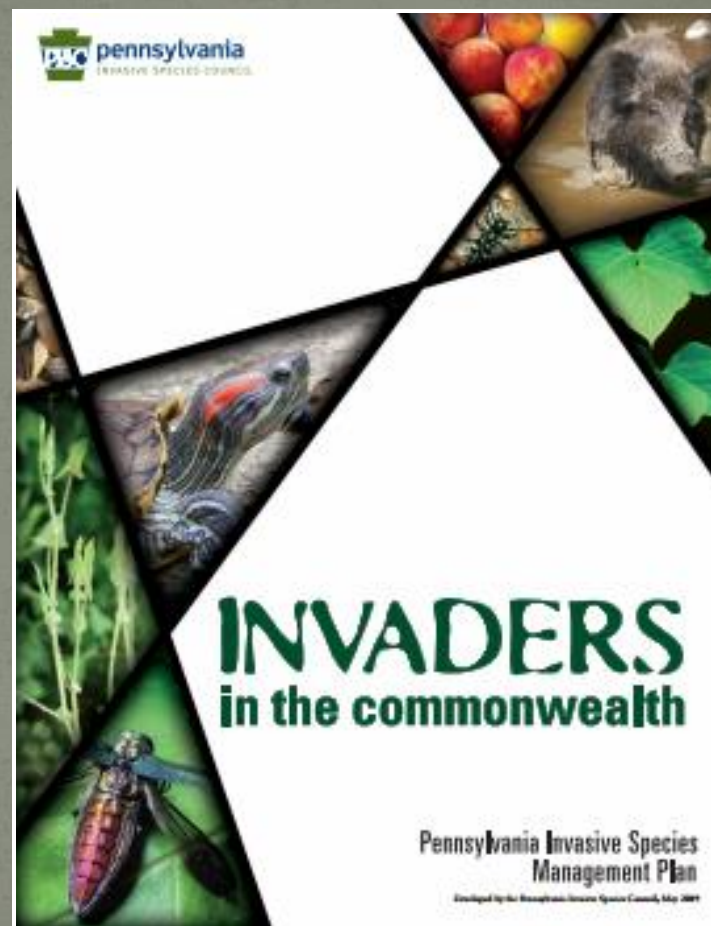
Comprehensive Management Plan

“The purpose of the Pennsylvania Invasive Species Management Plan is to provide a framework to guide efforts to minimize the harmful ecological, economic and human health impacts of nonnative invasive species through the prevention and management of their introduction, expansion and dispersal into, within and from Pennsylvania.”



Comprehensive Management Plan

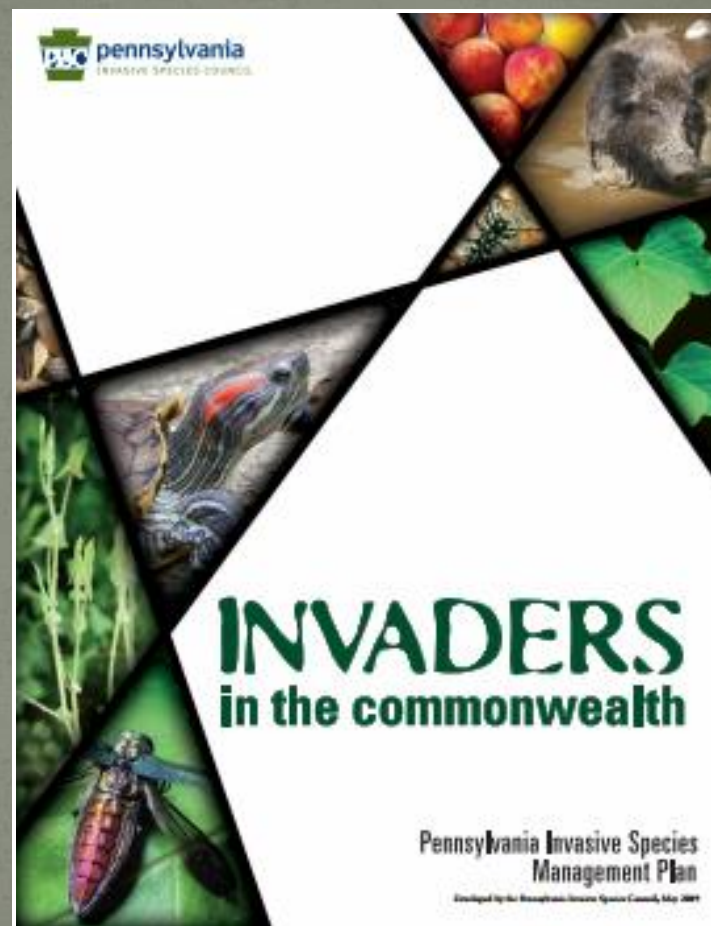
- Review past and current invasive species responses.
- Assess the status of invasive species preparedness in Pennsylvania.
- Provide a framework to aide in the development of targeted invasive species response plans in the Commonwealth.



Comprehensive Management Plan

Plan Components:

- Risk Assessment
- Prevention
- Early Detection
- Rapid Response
- Control
- Restoration
- Data Management
- Education and Outreach
- Funding
- Key Personnel
- Communication and Coordination



Comprehensive Management Plan

2015 Review of the Plan

- Assess progress since the implementation of the PA-ISMP
- Identify successes and ongoing efforts
- Identify gaps in response and areas for improvement

Pennsylvania Invasive Species
Management Plan
2016-2020



Terrestrial I.S. Rapid Response: Spotted Lanternfly



First Report

- On September 22, 2014, Dan Lynch, a Pennsylvania Game Commission Wildlife Conservation Officer, reported a “moth” he had never seen before on his Paradise Tree (Tree-of-Heaven, *Ailanthus altissima*)
- **Background:** Participated in previous insect pest training done by PA Department of Agriculture staff



Initial Response to Report

- Immediate response by PDA entomology staff to investigate
- Many individuals observed and collected on property
- A brief interview revealed that a company on a neighboring property imported stone from Asia
- A brief inspection of a few *Ailanthus* trees at the Stone Company revealed a large population of the same insect



Spotted Lanternfly

Lycorma delicatula (White)

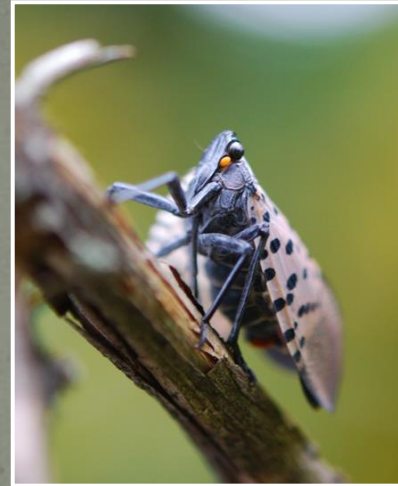
- Native Range: China, India, Vietnam
- Introduced Range: South Korea and Japan
- Hosts: *Ailanthus altissima* (Primary), and more than 65 other woody species including hardwoods, ornamental trees, fruit trees, vines
 - In Pennsylvania feeding has been recorded on: *Ailanthus*, *Salix*, *Vitis*, *Acer*, *Phellodendron*, *Styrax*, *Populus*, and *Prunus*



Spotted Lanternfly

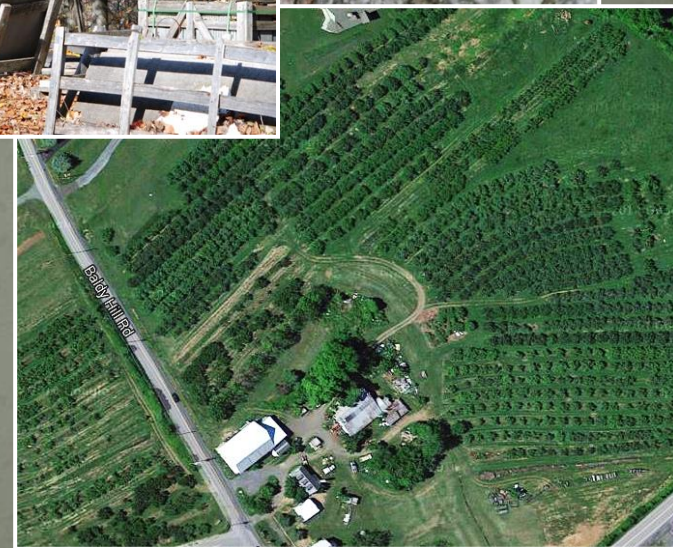
Lycorma delicatula (White)

- Life Cycle:
 - Eggs – 30 to 50 per ootheca (egg mass); Ootheca covered in muddy substance; laid Oct-Nov
 - Nymphs – 4 instars; emerge in May (possibly), synchronized; wingless, black with white spots, red patches increasing through nymphal instars; migrate to *Ailanthus*
 - Adults – Appear mid- to late July; prefer *Ailanthus* as primary feeding, mating and egg-laying host



Survey

- Initial Roadside Survey: 1km x 1km grids
 - 40 grids with positive locations
 - Heaviest infestations around original detection site
- Have inspected vineyards and orchards in and near the quarantined area
 - No producers are heavily infested yet
 - Most grape producers are extremely concerned and wish to assist in any way

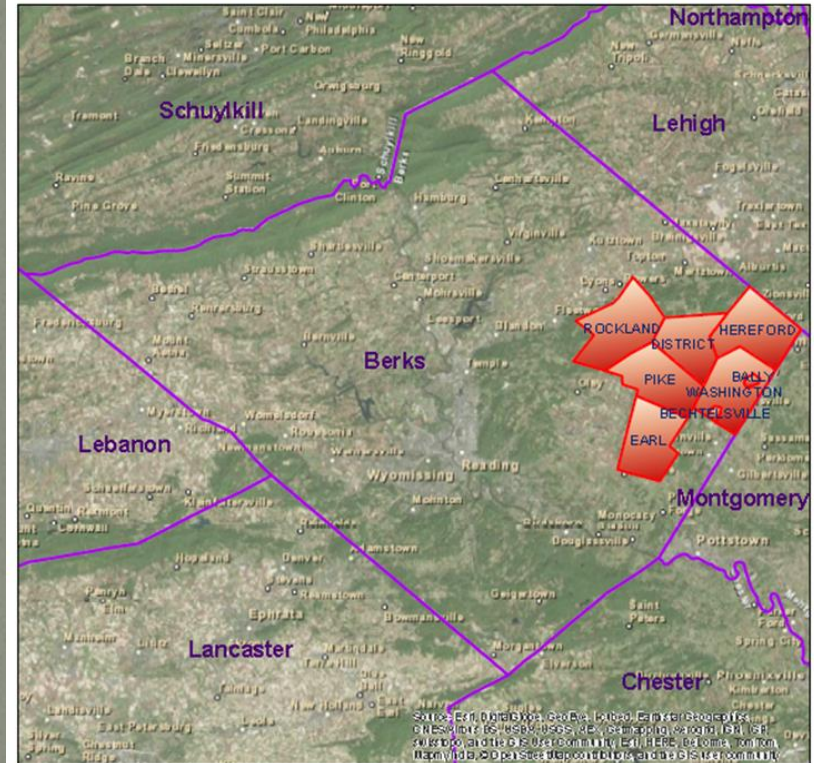


Quarantine



- Covers six townships in Eastern Berks County
- Restricts the movement of the pest and products that might have egg masses
- Similar to gypsy moth quarantine

Spotted Lanternfly Quarantine Map

Townships Under Quarantine As of December 13, 2014



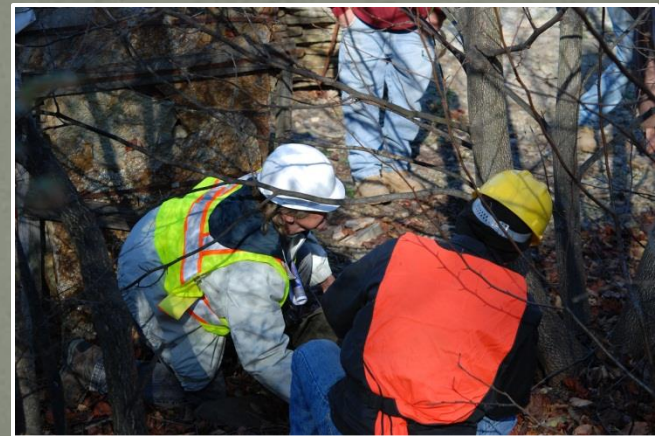
Legend

-  Township Under PDA Quarantine
-  Pennsylvania County Border



Education

- Produced pest alerts, inspection tips, scraper cards
- Public and industry presentations and town hall meetings
- Provided reference specimens to many States and Museums
- On-site training to other agencies and private industry



Outreach

- PA Farm Show Booth
 - Stop on the Farm Show Detectives discovery tour – “find the egg masses”
- PA Woodmobile – student education and public events
- Developing new outreach materials with local artists



Where We Stand

- This is an early, relatively contained detection
- The community and industry have been extremely cooperative
- The Federal response has been great
- Plans are in place to attempt eradication
- The approach is multifaceted including quarantine, chemical control, mechanical control, education, community involvement



2015 Survey and Management Plans

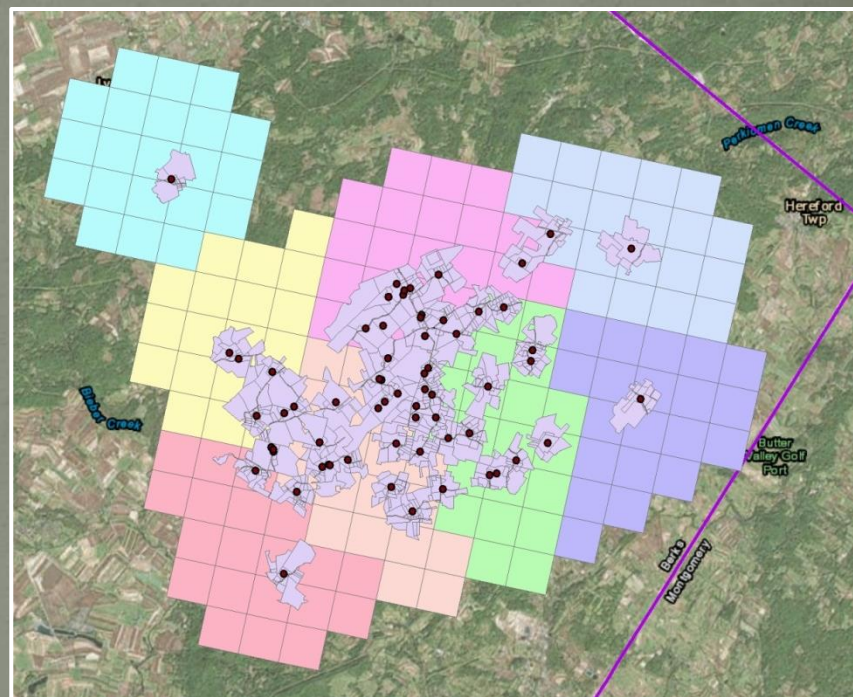
- Mapping *Ailanthus* stands in Berks County
- Continue detection and delimitation survey
- Public egg mass scraping campaign
- Tree banding effort
 - “Banding Together to Stop Spotted Lanternfly”



2015 Survey and Management Plans

Eradication

- About 800 properties require banding
- Areas not covered by volunteers will be covered by 10 PDA crews
- The satellite sites will be aggressively treated



Many More Questions

- North American Host Range
- Cold tolerance
- Pesticide efficacy
- Commercial crop control measures
- Seasonal occurrence
- Native parasitoid potential
- Environmental impact
- Development of monitoring tools
- Egg mass mitigation methods



www.pda.state.pa.us/spottedlanternfly

Reporting:

www.pda.state.pa.us/spottedlanternfly

If you see something suspicious,
please contact us:

badbug@pa.gov

PDA Invasive Species Hotline
1-866-253-7189

**You could stop the next invasive
species!**

