



# Forest Pest Update

## March 2016

Charlene Donahue

Department of Agriculture, Conservation & Forestry

Maine Forest Service

# Lots of Insects That Do No Harm



# >20,000 species in Maine





# A Few Insects Cause Problems

## The Browntail Moth is one



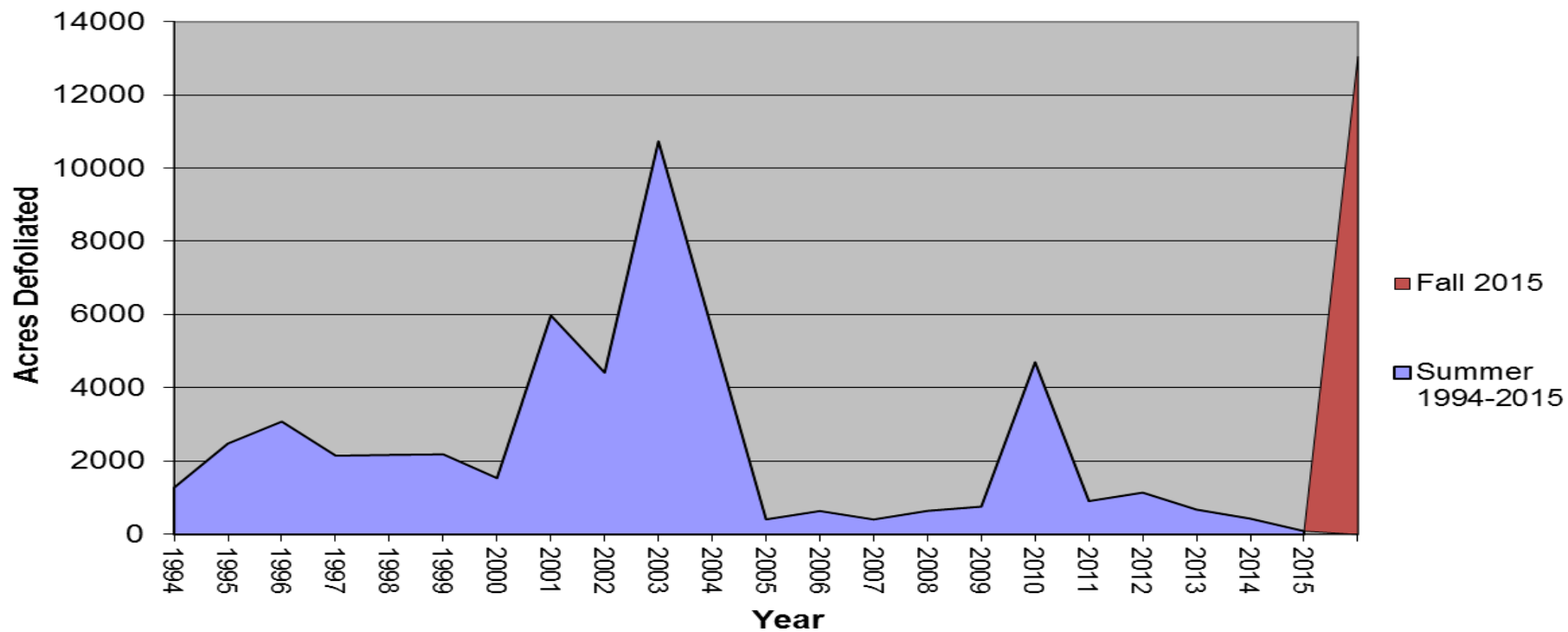
Browntail Moth Caterpillar

# Browntail Moth

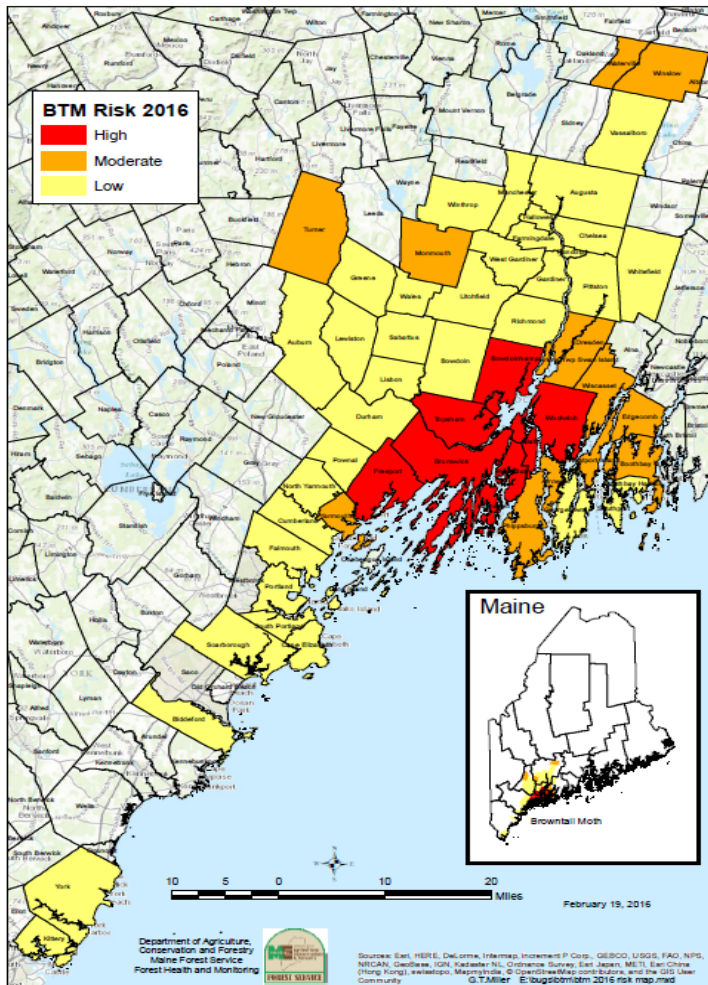
- Caterpillars have toxic hairs that cause:
  - Rash
  - Respiratory distress
- Caterpillar feeding causes
  - branch dieback
  - tree mortality



## Browntail Moth Defoliation in Maine



## Browntail Moth Risk - 2016



# Town-Wide Risk

(does not reflect individual property risk)

## Six Counties with Confirmed Active Infestations

- Androscoggin (**Low-Mod**)
- Cumberland (**Low-High**)
- Kennebec (**Low-Mod**)
- Lincoln (**Low-Mod**)
- Sagadahoc (**Low-High**)
- York (**Low**)

## Towns with Moderate Populations/Risk

Arrowsic	Phippsburg	Winslow
Edgecomb	Swan Island	Wiscasset
Boothbay	Turner	Yarmouth
Cumberland	Waterville	
Dresden	Westport	
Monmouth	Island	

## Towns with High Populations/Risk

Bath  
Bowdoinham  
Brunswick  
Freeport  
Harpwell  
Topsham  
West Bath  
Woolwich



# Browntail Moth

- Caterpillars emerge in late April and May
- Feed on foliage until late June
- Molt five times
- Cast skins have toxic hairs on them





# Browntail Moth

- July - Cocoons in leaves, on branches, on buildings, under eaves and boats
- Moths emerge from cocoons
- Lay eggs on leaves of host trees - oak, birch, apple other hardwoods & shrubs
- Eggs hatch in August



# Browntail Moth

- Late summer- fall:
  - Caterpillars skeletonize leaves
  - Spend winter in webs



# Winter Moth - *Operophtera brumata*

- Invasive insect from Europe
- Larvae are inchworms





# Winter Moth

- Defoliate hardwood trees and shrubs in early spring
- Favored hosts:
  - oak
  - apple
  - maple
  - birch
  - basswood
  - blueberry
  - And others

Photo: P. Johnson



Photo: Maine Forest Service



Photo: P. Johnson

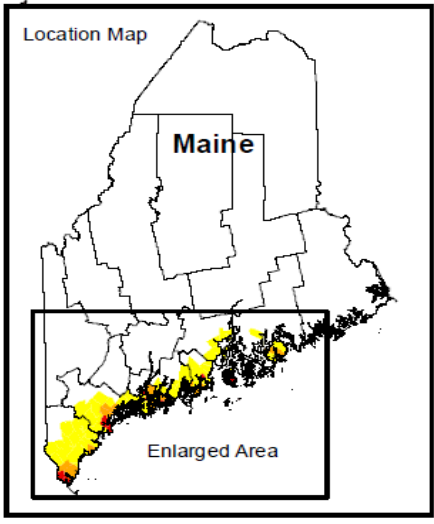
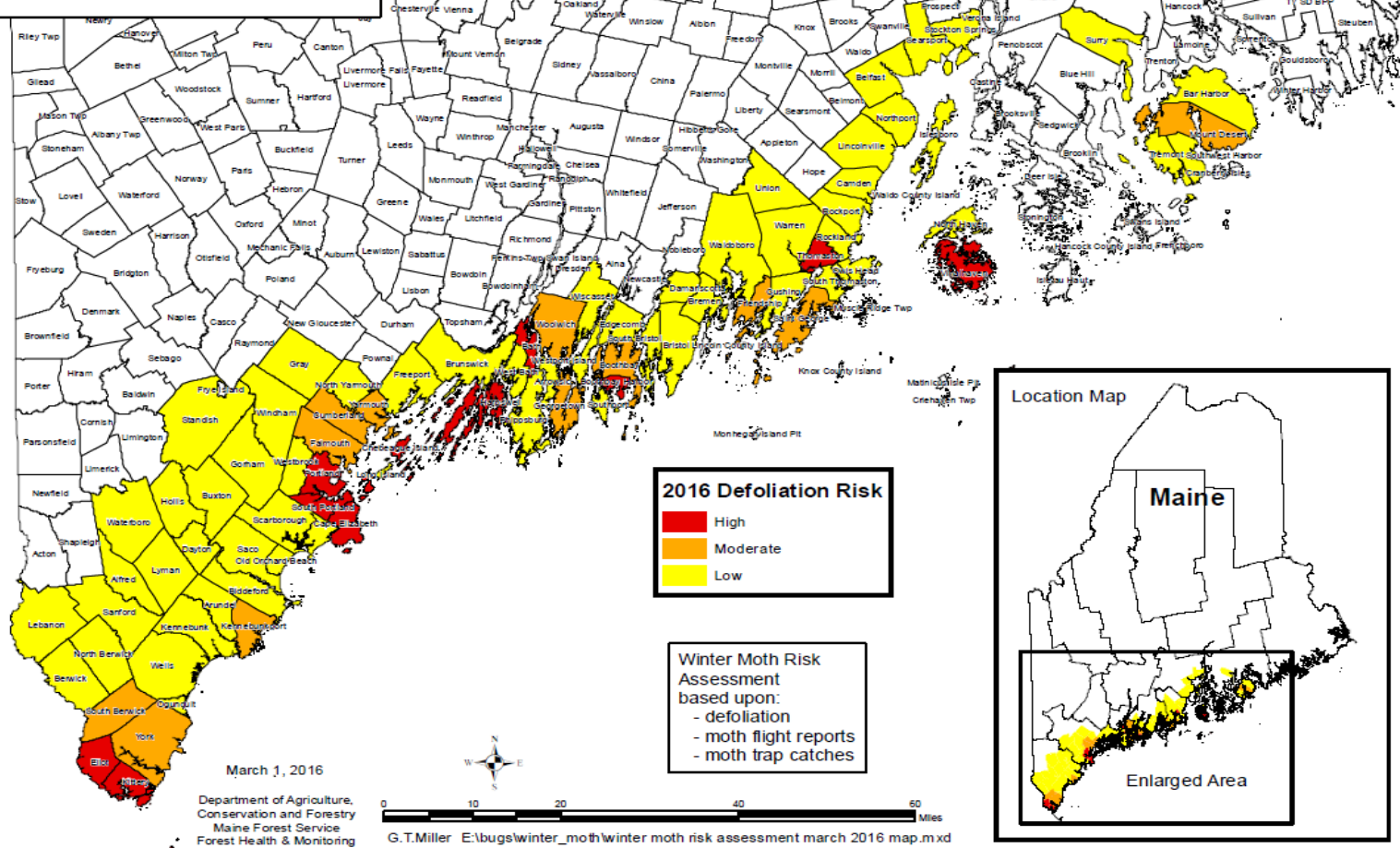


Photo: Maine Forest Service

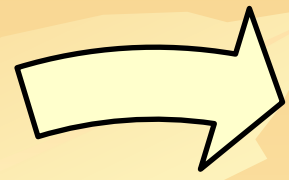




# Winter Moth (*Operophtera brumata*) Defoliation Risk Map



Eggs:  
November-  
April



Larvae: April -  
June



Photo: P. Johnson



Photo: P. Johnson



Pupae: June-  
November



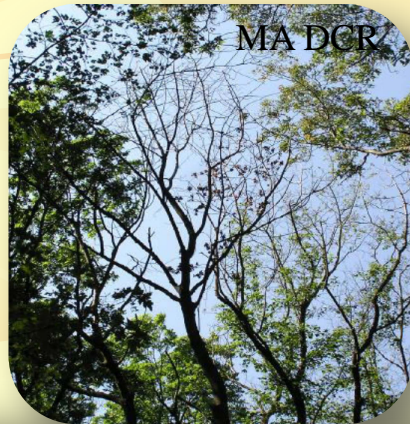
Adults:  
November-  
January



# Impacts

With several years of moderate to severe defoliation:

- Branch dieback
- Decline
- Mortality



# Outlook

2016:

- Expect increased defoliation
- Some dieback may be seen in harder-hit areas

Long Term:

Biological control is a potential solution—effective in Can. Maritimes

## ME Towns with *Cyzenis albicans* Releases

<u>Location</u>	<u>Year</u>
Harpswell	2013, 2014
Cape Elizabeth	2013, 2015
Kittery	2014
Vinalhaven	2014
Portland (Peaks Island)	2015



# Winter Moth

- Spend JUNE, JULY, AUGUST, SEPTEMBER, OCTOBER in soil
- The cocoons look dirt
- **DO NOT MOVE**  
**LANDSCAPE**  
**MATERIAL** from infested areas

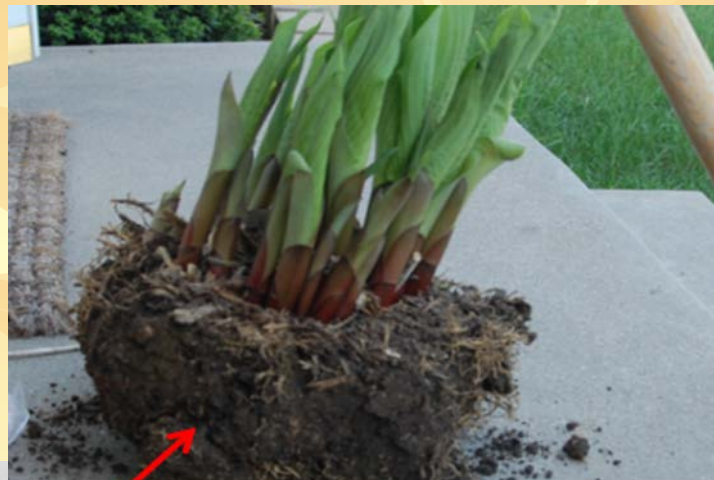


Photo: Maine Forest Service





# White Pine Needle Disease Complex

*Lecanosticta acicola*—brown spot  
needle-blight

(*Mycosphaerella dearnessii*)

*Lophophacidium dooksii*

(*Canavirgella banfieldii*)

*Bifusella linearis*

# White Pine Needle Diseases

- Year 9 (?) and counting
- Previous year needles turn yellow by mid-June
- Most drop by early July
- Infection of current-year needles occurs in late spring/early summer
  - Moisture important for dissemination/germination



*Lecanosticta acicola*– Brown spot



*Lophophacidium  
dooksii*

*Bifusella linearis*





**WPND – Trees of all sizes  
and crown class categories  
are affected**



# Hemlock Woolly Adelgid– *Adelges tsugae*



## **CAUTION**

You can carry this pest when  
it is an egg or crawler  
(~Mar through Early Aug)

### **Sometimes Hard to See!**

- crawlers are invisible, summer stage aestivates





# Elongate 'Hemlock' Scale – *Fiorinia Externa*

- Also look for this one on **fir**, spruce and other conifers.
  - Especially near residential areas
  - Especially where hemlock woolly adelgid is established



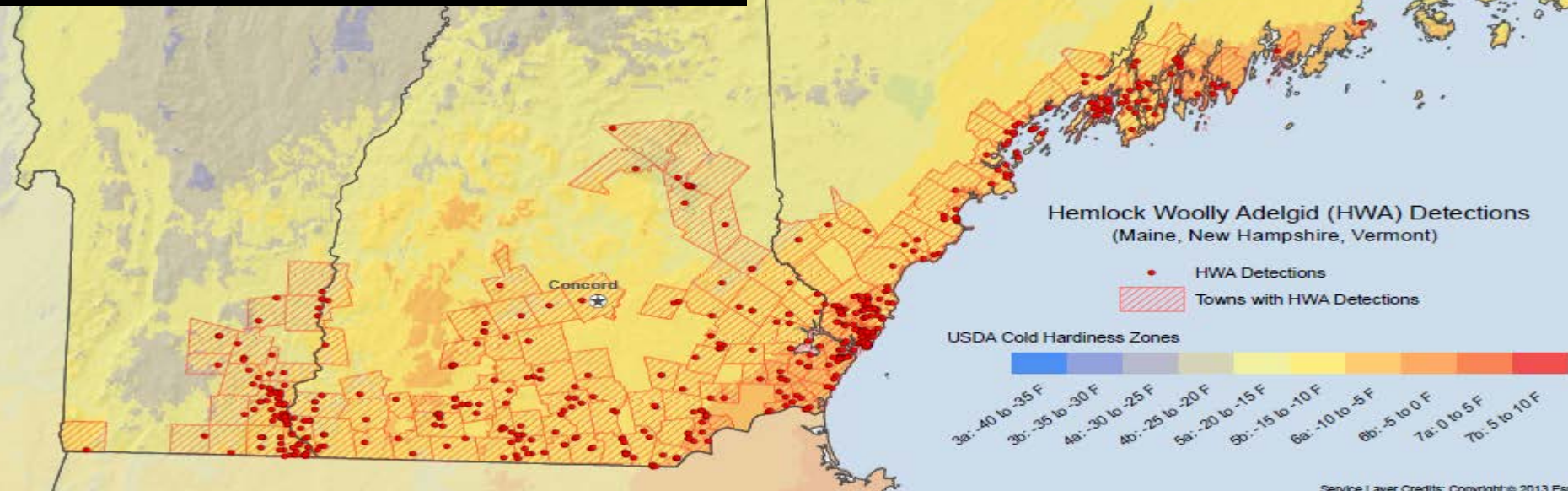
## Elongate Hemlock Scale

### Ornamental Plantings

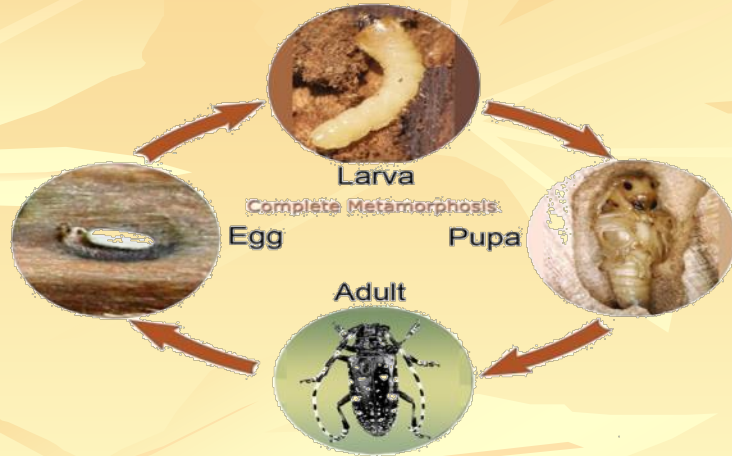
- Coastal Towns to MDI
- Spread to native fir in several locations

### Forested Areas

- Kittery
- York county towns surveyed in 2015;  
Cumberland Co. slated for 2016



# Asian Longhorned Beetle (ALB) Update



USDA Forest Service, UVM. 2012.

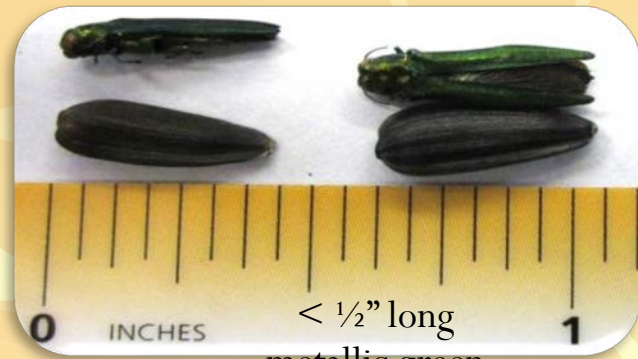
Asian longhorned beetle and its host trees.

- Not detected in Maine
- Risk is high
  - >20 years in Worcester, MA
  - Lots of opportunity for legal movement of infested wood (pre-regulation)
- Learn to recognize the beetle and its signs



# Emerald Ash Borer (EAB) Update

Not yet Detected in Maine!  
Likely to be found soon.



metallic green

**Volunteer for 2016 Trap Tree Network**

Contact Patti Roberts

[Patti.Roberts@maine.gov](mailto:Patti.Roberts@maine.gov)

(207) 287-2431





# Spread the Word: Leave Your Firewood at Home!



Kennebunk, ME

Photo: Dave Hobbins

# Steps to Prevent Tick Bites

- **Wear light-colored clothing**
- **Tuck pant legs into socks and shirt into pants**
- **Use caution in wooded/bushy areas w leaf litter**
- **Use a tick repellent** containing 20%-40% DEET or Picaradin on skin and clothing
- **OR pre-treat your clothing (not skin)** with a permethrin product such as Permanone® or Duranon®: both repel and kill ticks
  - remains effective through several wash cycles
  - Commercial pre-treated tick-repellent clothing remains effective through 70 wash
- **Do the Tick Check** whenever you've been outdoors!
- **Tumble clothes in a dryer on high heat for 10 minutes** to kill ticks.
- **Ticksinmaine.com**

# Tick Control – Landscape Management

**Put distance between tick habitat and people habitat**

**Create a tick-safe zone through landscaping**

Clear brush, leaf litter, and other debris from lawns and the sides of trails.

Completely eradicate invasive vegetation, particularly Japanese barberry, honeysuckle and bittersweet.

Mow the lawn frequently and keep leaves raked.

Keep children's outdoor play equipment away from yard edges and trees.

**Keep deer out of your yard**



# QUESTIONS?

**NEW WEBSITE:**

[http://www.maine.gov/dacf/mfs/forest\\_health/index.htm](http://www.maine.gov/dacf/mfs/forest_health/index.htm)

Maine Forest Service  
Insect & Disease Lab  
168 State House Station  
Augusta, ME 04333  
(50 Hospital Street)  
Tel 207 287-2431

Conditions Reports  
sign up today

## Entomologists



Insect & Disease Lab, Augusta:  
Charlene Donahue, Colleen Teerling



Old Town:  
Allison Kanoti