



# What Is A Healthy Woodland?

## What is a Healthy Person?

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# Is this a Healthier Forest?



# Different Opinions

- **Forester** – meeting mgt goals and insect & disease were at low levels
- **Wildlifer** – mosaic of trees & opening providing variety of habitat for diverse wildlife
- **Hydrologist** – good groundcover acting like a sponge
- **Fire Ecologist** – disturbed by fire at severity & frequency the mimicked what once occurred
- **Wilderness** – natural processes allowed to play out without human interference

# Three R's of Forest Health

- **Resistance** – actions that influence existing forest structure & composition against possible disturbances (helping trees defend against change.)
  - Ensure regeneration, reduce competition between trees, remove damaged & infected trees
- **Resilience** – actions accommodate some degree of change, but encourage a return to prior conditions after a disturbance
  - Life-threatening insects, thinning, diversity
- **Response** – monitor and understand how decisions impact long term conditions

# Key Action for Forest Health

- Manage for a healthy density. Keep trees vigorous for resilience (Thinning or TSI).
- Diversify species. If planting, consider species under future conditions.
- Choose drought-resistant species when planting in areas prone to summer drought
- Diversify stand ages and structure using TSI, thinning, harvesting, and planting.
- Build connectivity among woodland parcels.
- Learn how to control invasive species (vines, etc).
- Manage deer.

# Gypsy Moth



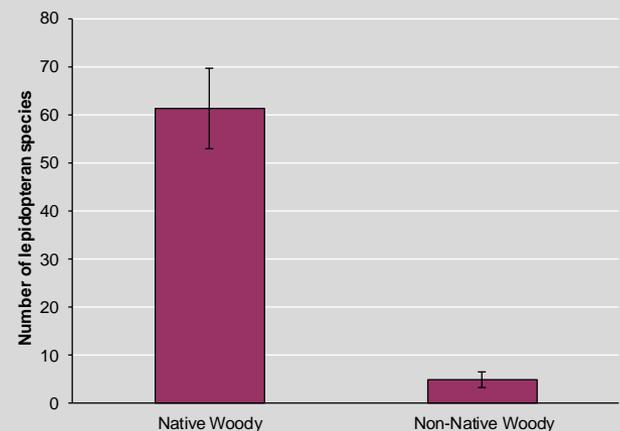
# Thinning Essential In Pine Plantations

High stocking levels results in stress.  
Open to insects & disease.



# Important Role of Native Species

- Native plants and insects have developed evolutionary relationships. Caterpillars & insects provide protein sources for birds and mammals.
- Native plants & insects help sustain healthy forests



From Doug Tallamy, *Woods in Your Backyard*, 2016

# Key Actions (Cont'd)

- Design for wind.
- Plan fuel breaks for wildfire control
- Act wisely after storm damage.
- Monitor for disease and insects. Control when there is a small problem.
- Consider future flooding & storm surges when investing in management or land purchases
- Plan for species with higher flooding and salt tolerances in flood-prone
- Ask your forester about programs to help pay for needed management

# Tree Health Checklist

## What you see

- Ragged leaves with holes
- Black or brown leaves
- Spots or bumps on the leaves
- Twisted or malformed leaves
- Leaves are changing color before fall
- Branch decay
- Peeling or broken bark, or holes in the bark
- Dying branches on one side of the crown
- Canker (a dead section of trunk or branch)
- Splits in the tree
- Hollows in the tree
- Fungi or mushrooms growing on the tree
- Green or brown spots on needles
- Red needles

## What it means

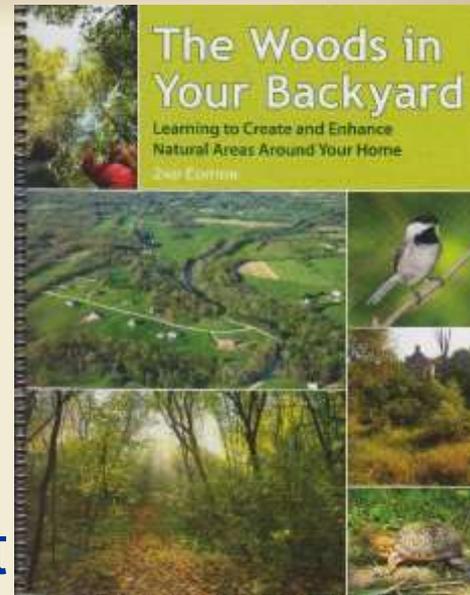
- Insects are feeding on the leaves
- Stem or leaf disease; could also be sign of frost or salt damage
- Insects and mites could be damaging the tree
- Herbicides, insects or disease are damaging the tree
- Trunk or root damage; drought or pollution could also be the cause
- The tree may have unhealed wounds
- Trunk wound, canker disease, or damage caused by humans or animals
- Root decay, root injury or internal stem disease, insect attack
- Fungal infection
- Broken branches, wind damage or exposure to severe or dry conditions
- Water entering the tree through old wounds and fueling fungal wood decay
- Internal decomposition of the wood by fungi
- Air pollution
- Possible insect infestation

# Key to Forest Health?

- Applying sustainable forest management practices. Practice of silviculture.
  - Cut something
  - Plant something
  - Do nothing
- Do not assume letting nature take its course is best.

# What To Do?

- Listen and learn this morning
- Contact a professional forester to get a forest stewardship plan.
- Take *Woods in Your Backyard* course
- Implement good silvicultural practices to make your woods as resistant and resilient.
  - Thinning, tree planting
  - Control vines
  - Control invasive plant species

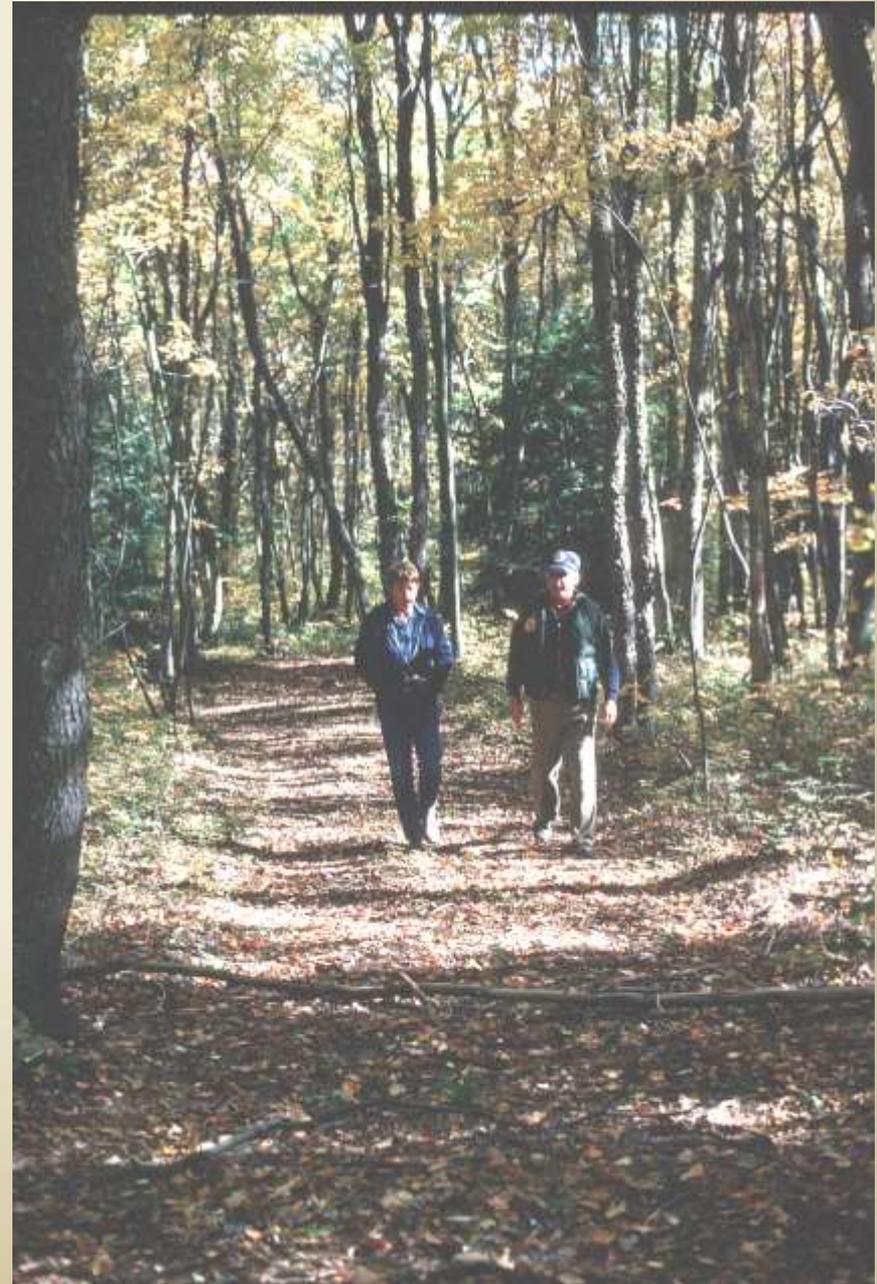


# A Forest Steward...

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- *Feels a sense of responsibility.*
- *Knows the opportunities.*
- *Is aware of the consequences of actions*

 **Is Guided By Objectives and a Plan**



**What history  
are you  
writing for the  
woods under  
your control?**

