EVERYBODY LOVES CHESTNUTS!

PROTECTING YOUR TREES FROM PREDATORS GREAT AND SMALL

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Chestnuts are delicious.

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Types of predation and damage:

- Leaves
- Shoots
- Roots
- Nuts
- Random acts of destruction

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General Recommendations

Options for protection include:

- Exclusion
- Repellents
- Cultural methods
- Trapping
- Poison

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General Recommendations

- Know your site - what predators do you expect?
- Shelters – 18-24” shelter around each tree
  - Plastic tubes or vented plastic tubes
  - Hardware cloth or garden wire
  - Aluminum sheeting
- Fence – around individuals or whole planting
  - Deer fence – 8’ woven wire, plastic/nylon mesh, electric
  - Cages – 4-5’ garden wire
- Seed vs. seedlings
  - Direct-seeding is most common for large plantings
  - May plant seedlings if nut predation is an issue

The Usual Suspects

DAMAGE CAUSED BY THE MOST COMMON CHESTNUT PREDATORS

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Vegetation

- One of the biggest threats to young chestnut trees is…
- **GRASS**
- Vegetation control is just as important as predation protection
- Requires diligence to keep up on

Deer

- Browse is the main concern with deer
  - Shoots and leaves most susceptible
- Buck rub can also cause damage
- Best protection is exclusion fencing
  - 8’ tall woven wire, plastic/nylon mesh, or electric
  - Individual cages
- Repellents may work or be used in addition
  - Commercial products – smell bad or taste bad
  - Garlic pens
  - Perfume-y soap
  - Human hair, or other human scents

Deer Fencing

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Non-Electric

- 8’ tall is the general recommendation
- Woven wire is the best, but most expensive
  - Effective
  - Low-maintenance
  - Long-lasting
- Plastic or nylon mesh
  - Cheaper
  - Can be installed without special equipment/training
  - Required more maintenance
  - Shorter life-spac

Electric

- 8’ multi-strand or “3-D” (2 sets of shorter fencing, but adds depth component)
  - Run off solar collector and marine battery
  - Can be cheap and easy to set-up
  - 3-D in particular a nice option for low deer pressure
  - Not great for sites on public lands

Voles

- Voles are vegetarians – they eat chestnut roots and bark
- Meadow voles create surface runways 1-2” deep, pine voles tunnel ~4-6” (or more)
- Protections:
  - Sink shelters 2-4” into the soil to provide a barrier (even 6” if you have pine voles)
  - Keep surrounding vegetation short to remove protective cover
  - Use herbicide instead of landscape fabric for vegetation control
  - Install raptor perches
  - Use poison (zinc phosphide is most common)
  - Invite falconers on site?
  - Adopt some cats?

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Raccoons

- Nut bandits!!
  - Raccoons can decimate thousands of nuts in a night or two
- Very effective at moving shelters to get at nuts
  - These critters are smart, and dexterous
- Don't know you have a raccoon problem until you have a raccoon problem
- If you do have a raccoon problem…
  - Plant seedlings, preferably "de-nutted" seedlings
  - Could try very sturdy cages/shelters, repellents, trapping

Squirrels and Chipmunks

- Smaller nut bandits!
- May go after recently planted nuts, nuts on the base of seedlings, or nuts on the tree at harvest time
  - Sink shelters well
  - "De-nut" potted seedlings
  - Harvest early
  - Protective mesh bag over pollination bags

Turkeys

- Feathered nut bandits!
- Long necks – can reach into short shelters
- Dust baths can also cause damage in orchards
- Don't know you have a turkey problem until you have a turkey problem
- If you do have a turkey problem…
  - Plant seedlings, preferably "de-nutted" seedlings
  - Could try taller shelters
  - Pre-chestnut-stuffed turkey dinner?

Blue Jays

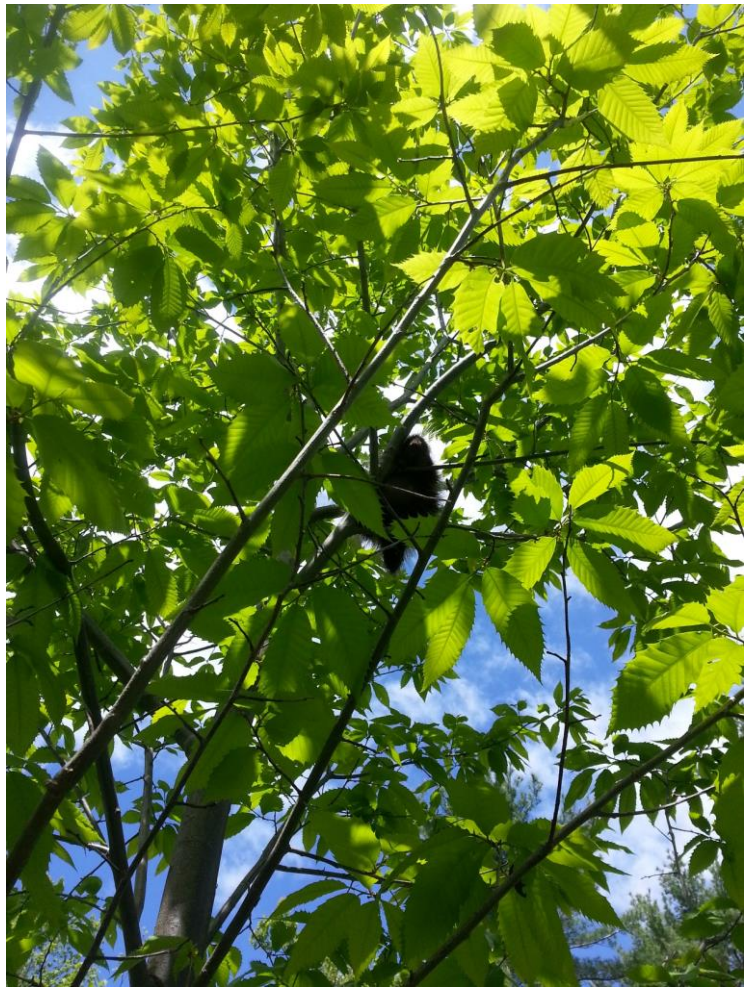
- Smaller, feathered nut bandits!
- Only really an issue at harvest time
  - Harvest early
  - Protective mesh bag over pollination bags

Bears

- Natural curiosity + size = damage
  - May go after shelters
  - Can cause general destruction
- Omnivore + size = damage
  - Will eat nuts and climb trees to get to them
  - Small chestnut + big bear does not always end well

Porcupines

- Not a common problem
- Strip bark from trees
- Removal is the best option



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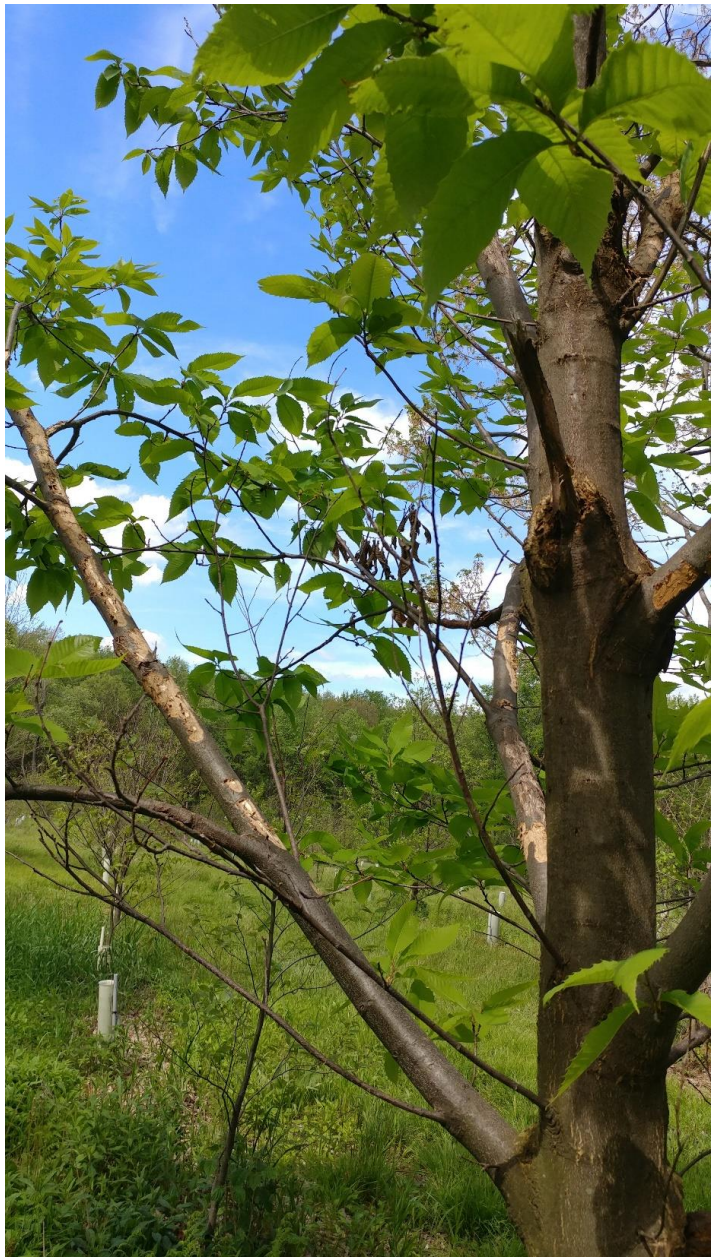

Woodchucks

- Somewhat common in orchards but not usually a problem
  - Don't often go after chestnut stems
- Burrowing can be an issue, especially at the base of trees
  - Damage to the root system and tree
  - Hazard for orchard workers
- If they become an issue removal is best option

Humans

- Well-meaning humans…
  - Mower or weed whacker blight
  - Chainsaw blight
  - Herbicide blight
  - Aggressive weeding
- Questionably-intentioned humans…
  - ATV damage
  - Breaking branches
  - Ripping up trees
  - "Borrowing" shelters, stakes, cages, fence doors…

When in Doubt…

Reach out for help!

Contact:

- TACF Regional Science Coordinator
- Chestnut Growers Listserve
- Local orchard managers
- Cooperative Extension Agent

Questions?