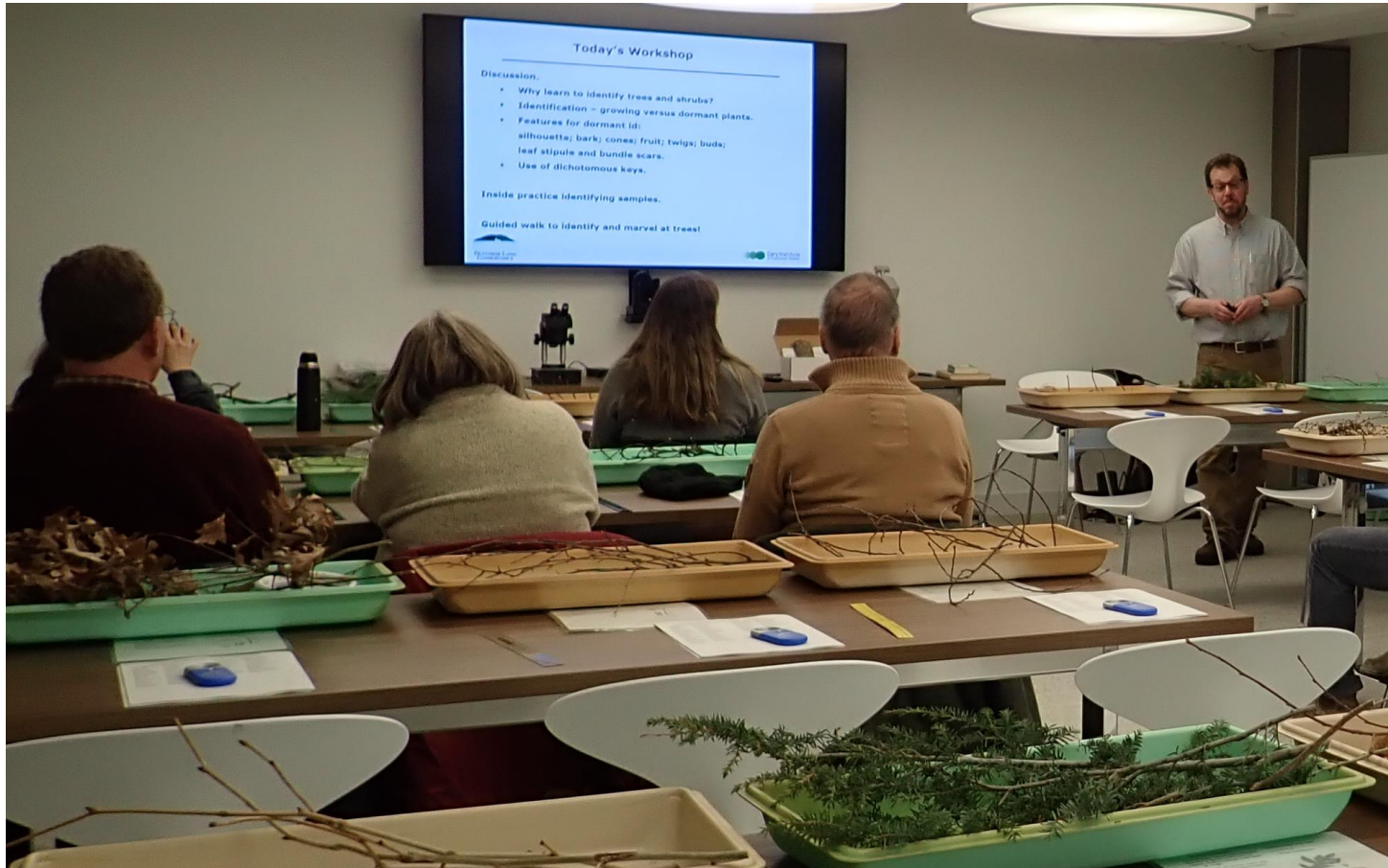
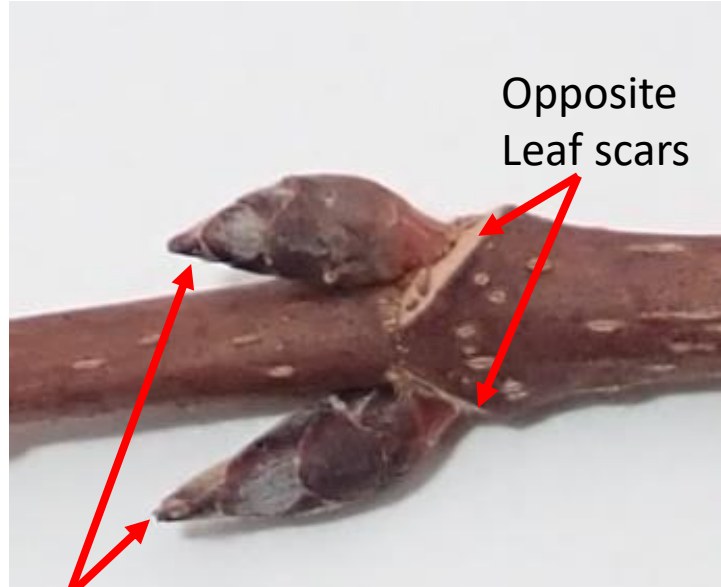


Tree Id for Beginners: Part II



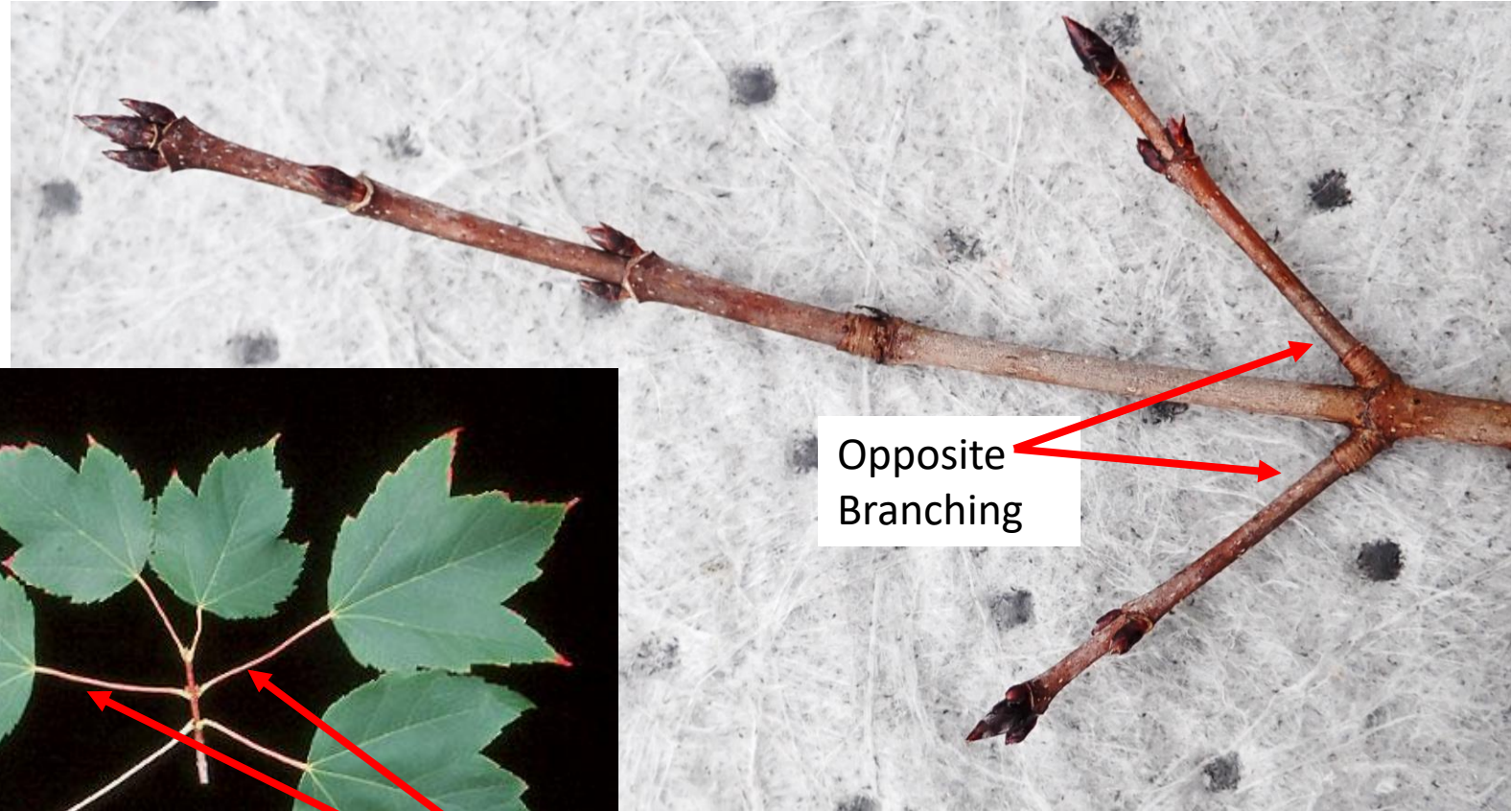
Mike Fargione
Wildlife Biologist - Mgr. Field
Research & Outdoor Programs

Tree Id for Beginners: Deciduous, Opposite Bud

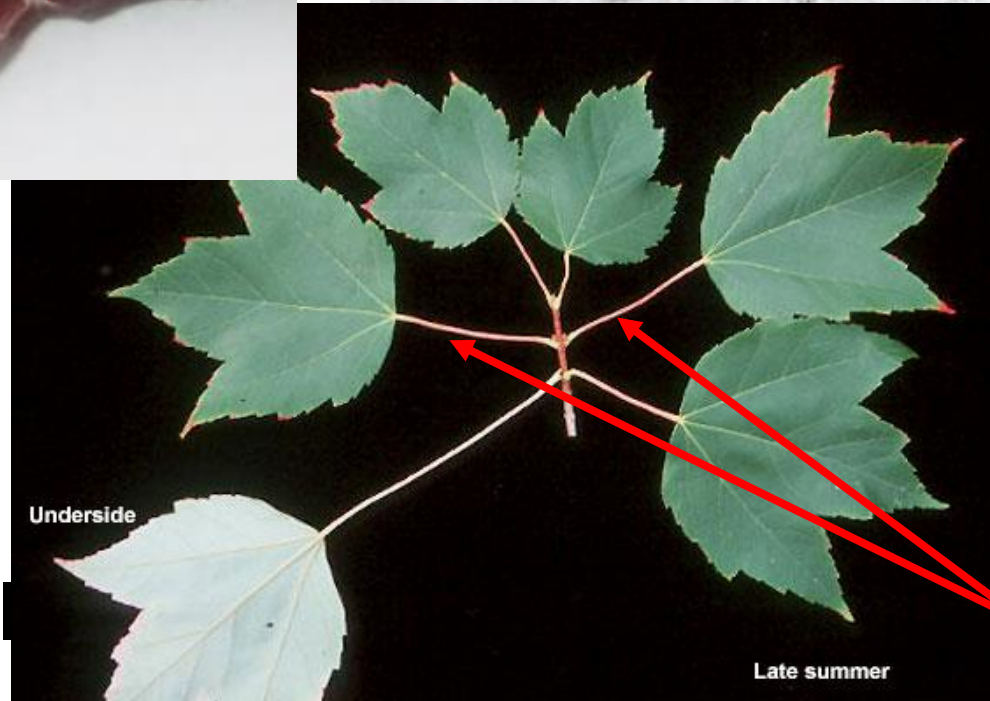


Opposite
Leaf scars

Opposite
Buds



Opposite
Branching



Underside

Late summer

Opposite leaf
arrangement

Tree Id for Beginners: Deciduous, Opposite Bud

Acronym = **M A D Cap Horse**

Maple

Ash

Dogwood

Caprifoliaceae (shrubs like honeysuckle, elderberry, blueberry)

Horsechestnut (other areas may substitute “Buck” for Buckeyes)

Tree Id for Beginners: Deciduous, Opposite Bud

1. Trees with stout twigs:

White Ash, Black Ash, Green Ash, Horsechestnut, Buckeyes.

2. Trees with slender twigs:

Sugar Maple, Red Maple, Norway Maple, Boxelder, Flowering Dogwood.

Tree Id for Beginners: Deciduous, Opposite Bud

White Ash

(*Fraxinus americana*)

- Large tree up to 100' tall.
- Prefers deep, rich, well-drained soils.
- Important for timber, wildlife.
- Often a minor species in other tree associations. Replaced elm.
- Emerald Ash Borer likely eliminates all ash unless resistant individuals are found.



<https://northernforestatlas.org/atlas-images/nfa-bryos-fraxinus-americana-00711/>



Tree Id for Beginners: Deciduous, Opposite Bud

White Ash

(*Fraxinus americana*)

- ★ Stout twigs.
- ★ Dark brown buds, end buds not gummy.
- Leaf scars notched around bud.
- Narrow seeds in clusters, often persistent.



Tree Id for Beginners: Deciduous, Opposite Bud

White Ash (*Fraxinus americana*)

- Young bark grayish, may develop tight square scales to shallow furrows and ridges broken into small blocks.
- ★ Mature bark gray to brownish gray, broken into intersecting ridges with v-shaped furrows.
- Old trees develop flat-topped ridges.



Intersecting ridges with
v-shaped furrows



Tree Id for Beginners: Deciduous, Opposite Bud

Sugar Maple

(*Acer saccharum*)

- Large tree 60' to 80' tall.
- Prefers deep, rich, well-drained soils, but grows elsewhere.
- Important for timber, wildlife, ornamental, syrup.
- Shade-tolerant, it replaces other species like oaks in climax forest stages.

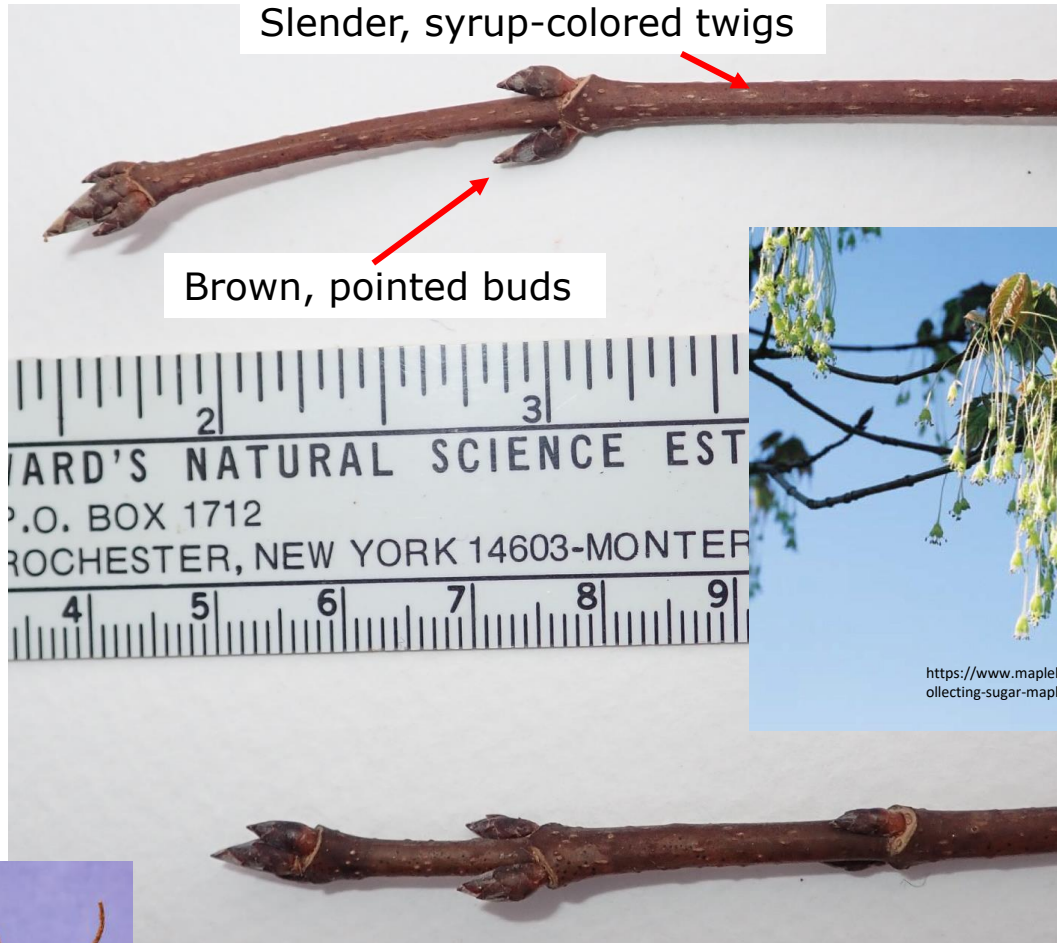


Tree Id for Beginners: Deciduous, Opposite Bud

Sugar Maple

(*Acer saccharum*)

- ★ Slender twigs, smooth, syrup colored.
- ★ Buds brown, narrow, sharp-pointed.
- Terminal bud 1/4"; lateral buds smaller and pressed to twig.
- Leaves and flowers from same bud; flowers appear after leaf-out.
- Fruit 2-winged (keys or double samara)



Tree Id for Beginners: Deciduous, Opposite Bud

Sugar Maple

(*Acer saccharum*)

- Young bark gray or gray/brown becoming finely cracked like old paint.
- ★ Mature bark forms vertical strips that separate from trunk on one side only.
- Old trees – bark falls away leaving random cracked bark strips.



Vertical strips separated 1-side only



Tree Id for Beginners: Deciduous, Opposite Bud

Red Maple

(*Acer rubrum*)

- Medium tree 40' to 70' tall.
- Grows in a variety of habitats but outcompetes other species in wet areas.
- Primary uses for low-value wood products and as highly-valued ornamental.
- Shade-tolerant, it replaces other species like oaks in climax forest stages.

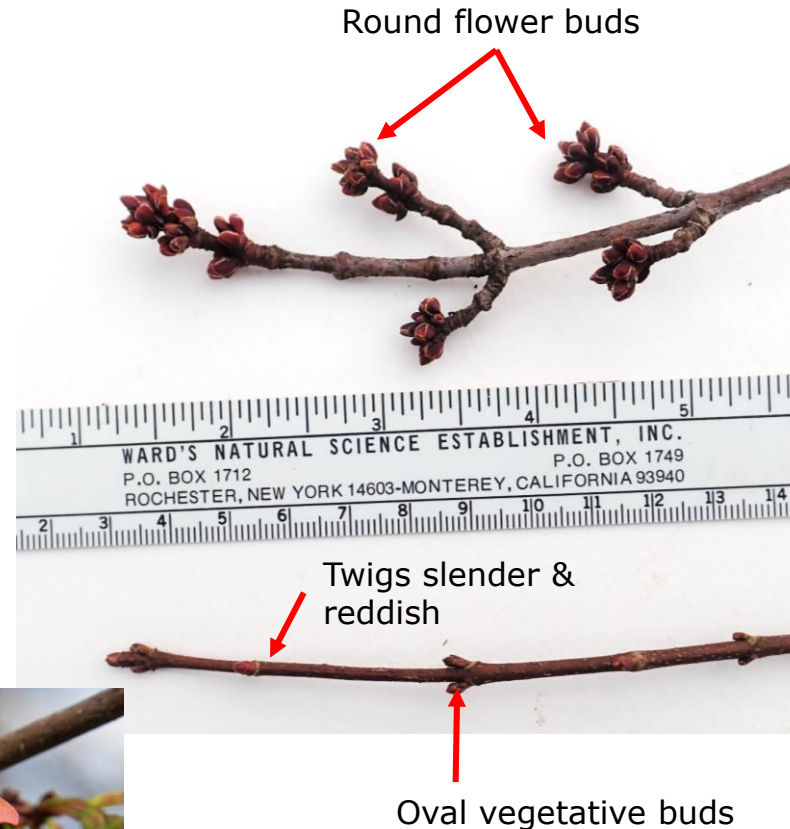


Tree Id for Beginners: Deciduous, Opposite Bud

Red Maple

(*Acer rubrum*)

- ★ Twigs slender and reddish at tips.
- ★ 2 types of reddish buds: oval (leaf) or rounded (flower).
- Flowers open before leaves.
- Fruit 2-winged ('keys' or 'double samara')



Tree Id for Beginners: Deciduous, Opposite Bud

Red Maple

(*Acer rubrum*)

- Young trees with smooth, gray bark.
- ★ Mature trees with darker gray, shallowly fissured bark.
- ★ Old trees with long, scaly or shaggy ridges that scrape off easily, revealing more reddish bark underneath.



Tree Id for Beginners: Deciduous, Opposite Bud

White Ash (*Fraxinus americana*)

- Twigs:** • Stout, not sticky
- Bark:** • V-shaped, intersecting ridges.



Sugar Maple (*Acer saccharum*)

- Slender, syrup-colored with pointy buds.
- Vertical strips that separate on one side.



Red Maple (*Acer rubrum*)

- Slender with reddish oval and/or round buds.
- Gray to reddish, fissured, becoming shaggy with age.



Tree Id for Beginners: Common NE Evergreens



Tree Id for Beginners: Common NE Evergreens

1: Leaves needle-like and grouped together in bundles.



2: Leaves needle-like and attached individually to twigs.



3: Leaves scale-like.



Tree Id for Beginners: Common NE Evergreens

Group 1: Needle-like leaves in bundles (pines).

NE Native Species Examples:

Eastern White Pine, Red Pine, Pitch Pine, Jack Pine.

Non-native Species Examples:

Scots Pine, Austrian Pine, Loblolly Pine, Ponderosa Pine

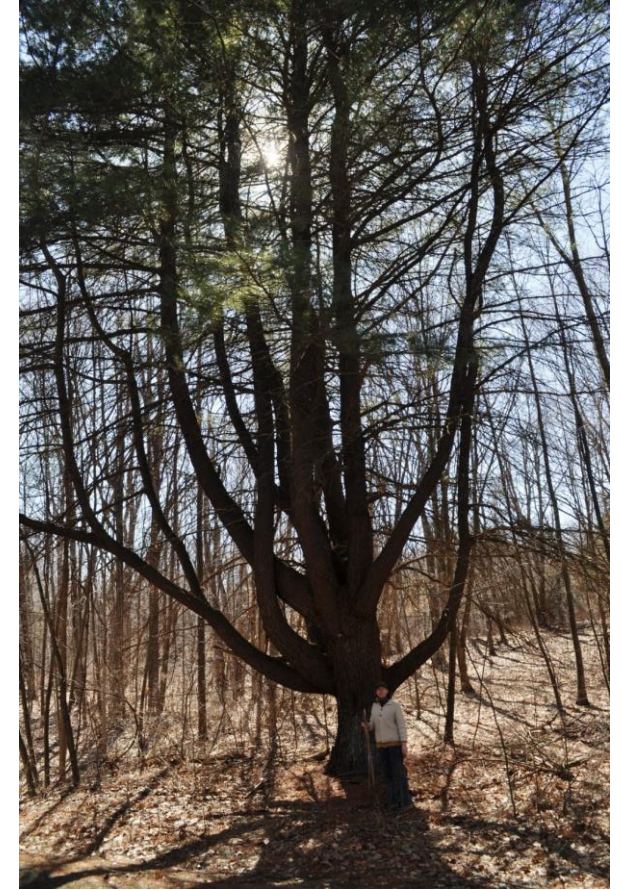


Tree Id for Beginners: Common NE Evergreens

Eastern White Pine

(*Pinus strobus*)

- Tall and majestic.
- Important for timber and wildlife.



Tree Id for Beginners: Common NE Evergreens

Eastern White Pine

(*Pinus strobus*)

- ★ Bundles of 5 thin, flexible needles 4"-5" long
- Mature cones 4"-8" and slightly curved

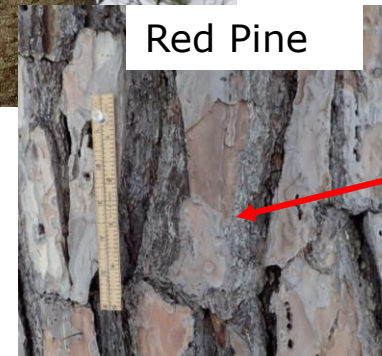


Tree Id for Beginners: Common NE Evergreens

Eastern White Pine

(*Pinus strobus*)

- Young bark grey to grey-green and smooth; becomes cracked with age.
- ★ Older tree has irregular and furrowed bark (not scales or plates like on many other pines).



Tree Id for Beginners: Common NE Evergreens

2: Needle-like leaves individually attached to twigs.

Hemlock:

Eastern Hemlock, Carolina Hemlock

Spruce:

Norway Spruce, White Spruce, Red Spruce

Firs:

Balsam Fir, Fraser Fir, Grand Fir, Noble Fir



Tree Id for Beginners: Common NE Evergreens

Eastern Hemlock

(Tsuga canadensis)

- A most beautiful native tree.
- Mixes with hardwoods and may be most abundant species on north and east slopes.
- Provides shade and moderates temperatures for terrestrial and aquatic organisms.
- Threatened by invasive Hemlock wooly adelgid.



Tree Id for Beginners: Common NE Evergreens

Eastern Hemlock

(*Tsuga canadensis*)

- ★ needles 5/16" to 9/16", flat, attached by short slender stalks, arranged on one plane on both sides of the twig.
- ★ White stripes on needle bottoms on either side of the main rib.
- Cones 5/8" - 1", hanging down below branches.

Needles flat,
on one plane

Dark above,
2 white stripes
underneath

Stalked
needles

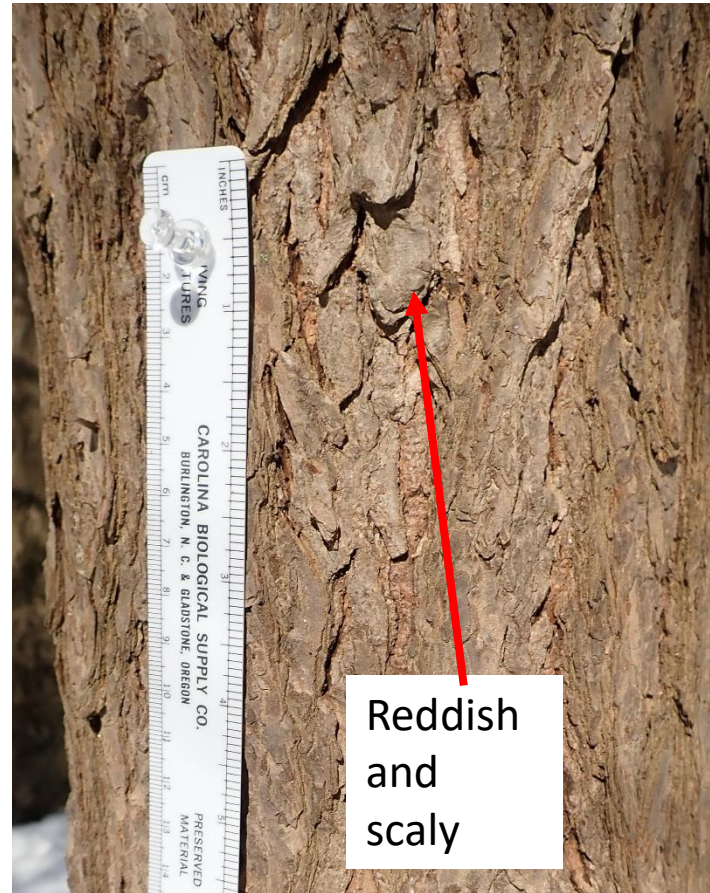


Tree Id for Beginners: Common NE Evergreens

Eastern Hemlock

(*Tsuga canadensis*)

- ★ Younger bark reddish brown to reddish grey and broken into thin irregular scales.
- ★ Bark of older tree becomes dark, ridged and furrowed.



Tree Id for Beginners: Common NE Evergreens

Norway Spruce

(*Picea abies*)

- Originally from Europe.
- Widely planted spruce for Christmas trees, reforestation and timber production (deer resistant and fast growing).
- ★ Branches of mature trees may droop down and back up; Small branches pendulous.



Pendulous
branches



Tree ID for Beginners: Common NE Evergreens

Norway Spruce

(*Picea abies*)

- ★ Needles sharp and stiff, ½"-1" long and attached around the twig (whorled).
- ★ Needles grow from tiny peg that remains on twig when the needle falls.
- Mature cones are 4-7" long, cylindrical and hang down below the branches.



Persistent
peg



Tree Id for Beginners: Common NE Evergreens

Norway Spruce

(*Picea abies*)

- Young bark reddish brown, finely shredded or flaked.
- ★ Bark of older tree reddish or purplish and flaked.



Tree Id for Beginners: Common NE Evergreens

Balsam Fir

(*Abies balsamea*)

- Very abundant at elevations of NY's Catskill and Adirondack mountains; Uncommon in SENY except where planted.
- Important food and cover for birds and mammals in winter.
- Fragrant foliage associated with Christmas decorations and time spent in northern forests.

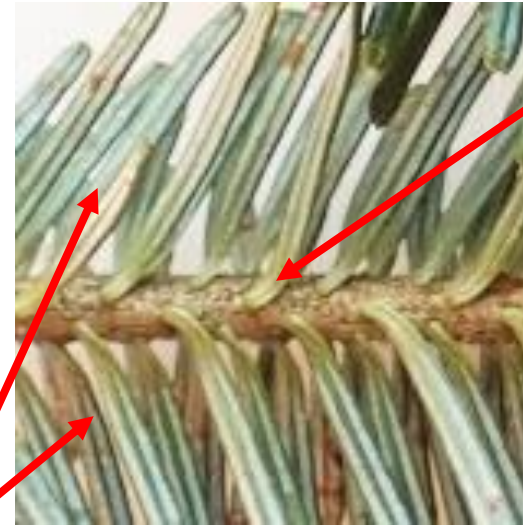


www.shutterstock.com · 581652550

Tree Id for Beginners: Common NE Evergreens

Balsam Fir (*Abies balsamea*)

- ★ Needles soft, $\frac{3}{4}$ " long and flat, attached directly to the branch without stalk or peg.
- ★ Attached around twigs, but bend upward on older branches, giving appearance of being on the upper side.
- Tops dark green while bottom have white stripes on sides of the main rib.
- ★ Mature cones are 2"-3" pointing upward. Older cones lose their scales leaving candle-like central stalk on the branch.



Soft, attached without stem or peg

Parallel needles;
Bend up on older
branches



Upright cones

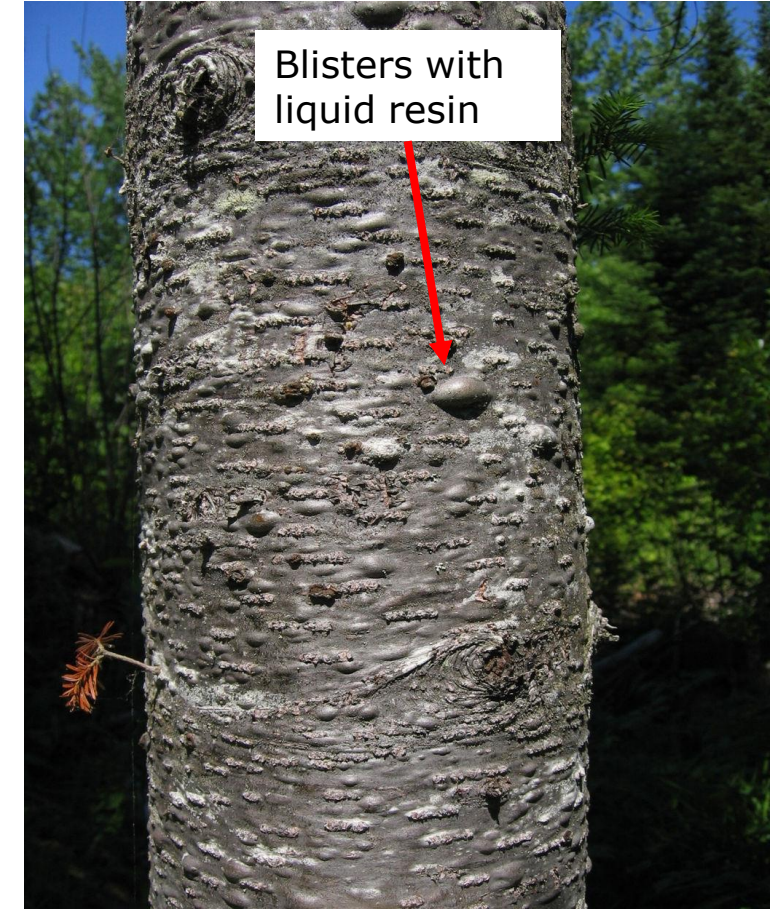


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Tree Id for Beginners: Common NE Evergreens

Balsam Fir (*Abies balsamea*)

- Young bark is grey-brown and smooth.
- ★ Older bark shows raised blisters which contain sticky, fragrant liquid resin.



By Keith Kanoti, Maine Forest Service, United States - This image is Image Number 5349060 at Forestry Images, a source for forest health, natural resources and silviculture images operated by The Bugwood Network at the University of Georgia and the USDA Forest Service, CC BY 3.0 us, <https://commons.wikimedia.org/w/index.php?curid=8373260>

Tree Id for Beginners: Common NE Evergreens

Eastern Hemlock (*Tsuga canadensis*)

- Needles short, soft, flat, attached by stalks; arranged on single plane on both sides of the twig.
- Tops dark green while bottom have white stripes.



Norway Spruce (*Picea abies*)

- Needles sharp and stiff, attached around the twig.
- Grow from tiny peg that remains on twig when the needle falls.



Balsam Fir (*Abies balsamea*)

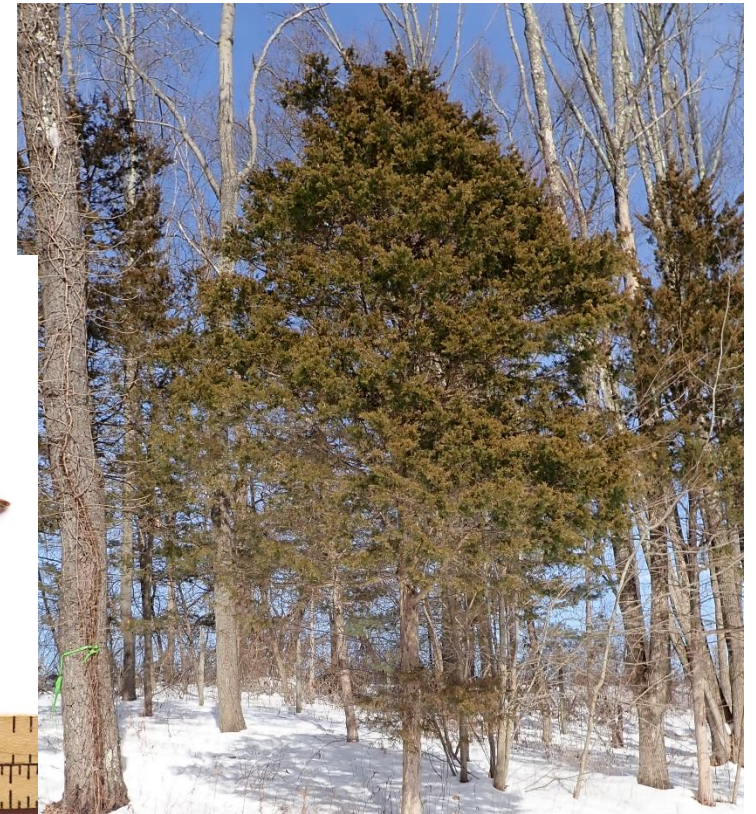
- Needles soft and flat, attached without stalk or peg.
- Attached around twigs, but bend upward on older twigs.
- Tops dark green while bottom have white stripes.



Tree Id for Beginners: Common NE Evergreens

3: Species with scale-like leaves.

Eastern Red Cedar, Atlantic White Cedar,
Northern White Cedar, Common Juniper



Tree Id for Beginners: Common NE Evergreens

Eastern Red Cedar

(Juniperus virginiana)

- Small to medium-sized tree (to 40').
- Common in rocky abandoned fields and old pastures (eroded sites), particularly on limestone-derived soils.
- Important as food and cover for wildlife. Seeds widely-used by birds in winter.

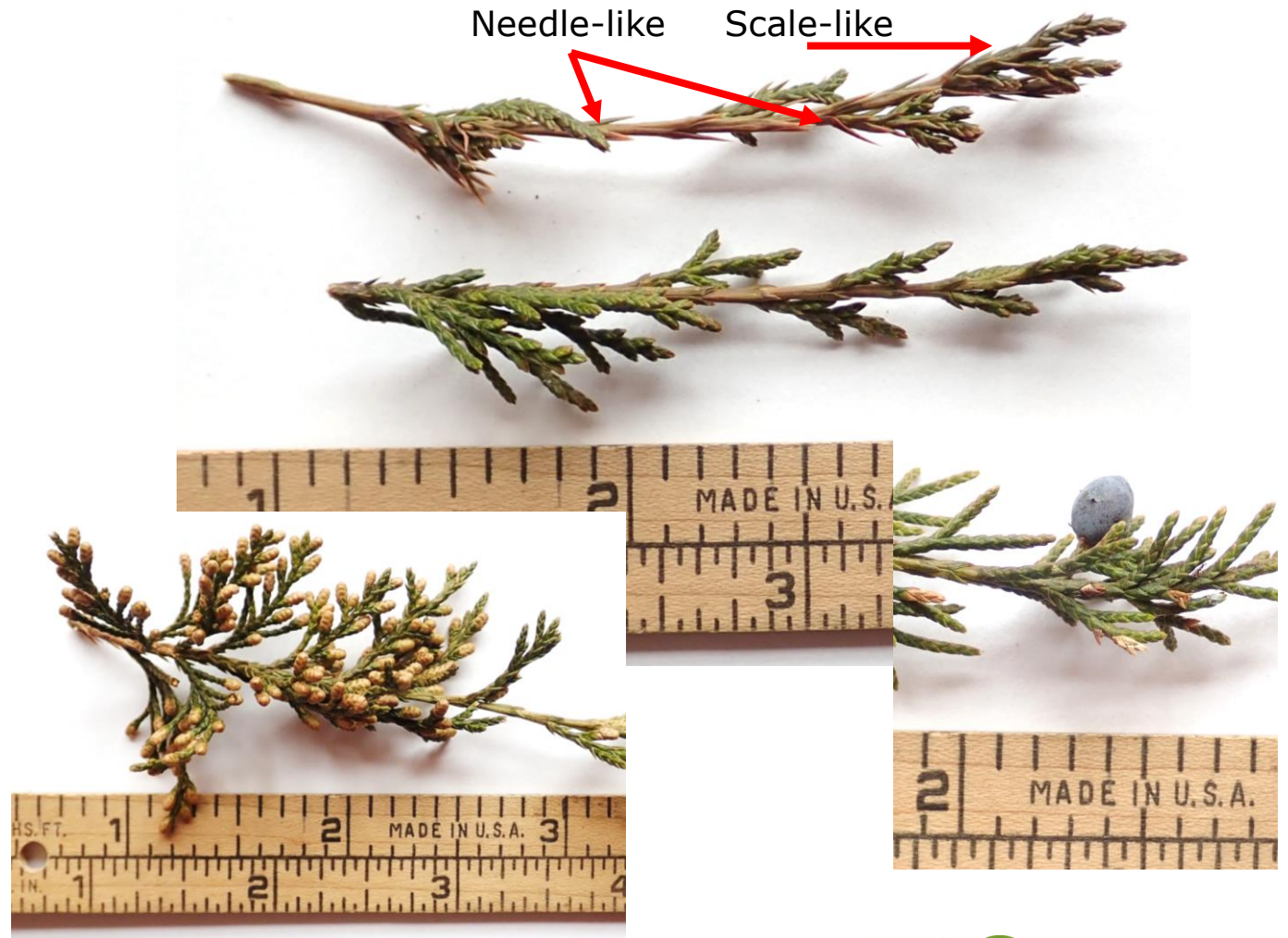


Tree Id for Beginners: Common NE Evergreens

Eastern Red Cedar

(Juniperus virginiana)

- ★ Has both scale like and needle-like leaves.
- Leaves 1/16" to 1/2" long and paired around 4-sided twigs.
- Fruits 1/4", oval, whitish to bluish "berry" (cone).



Tree Identification for Beginners: Common NE Evergreens

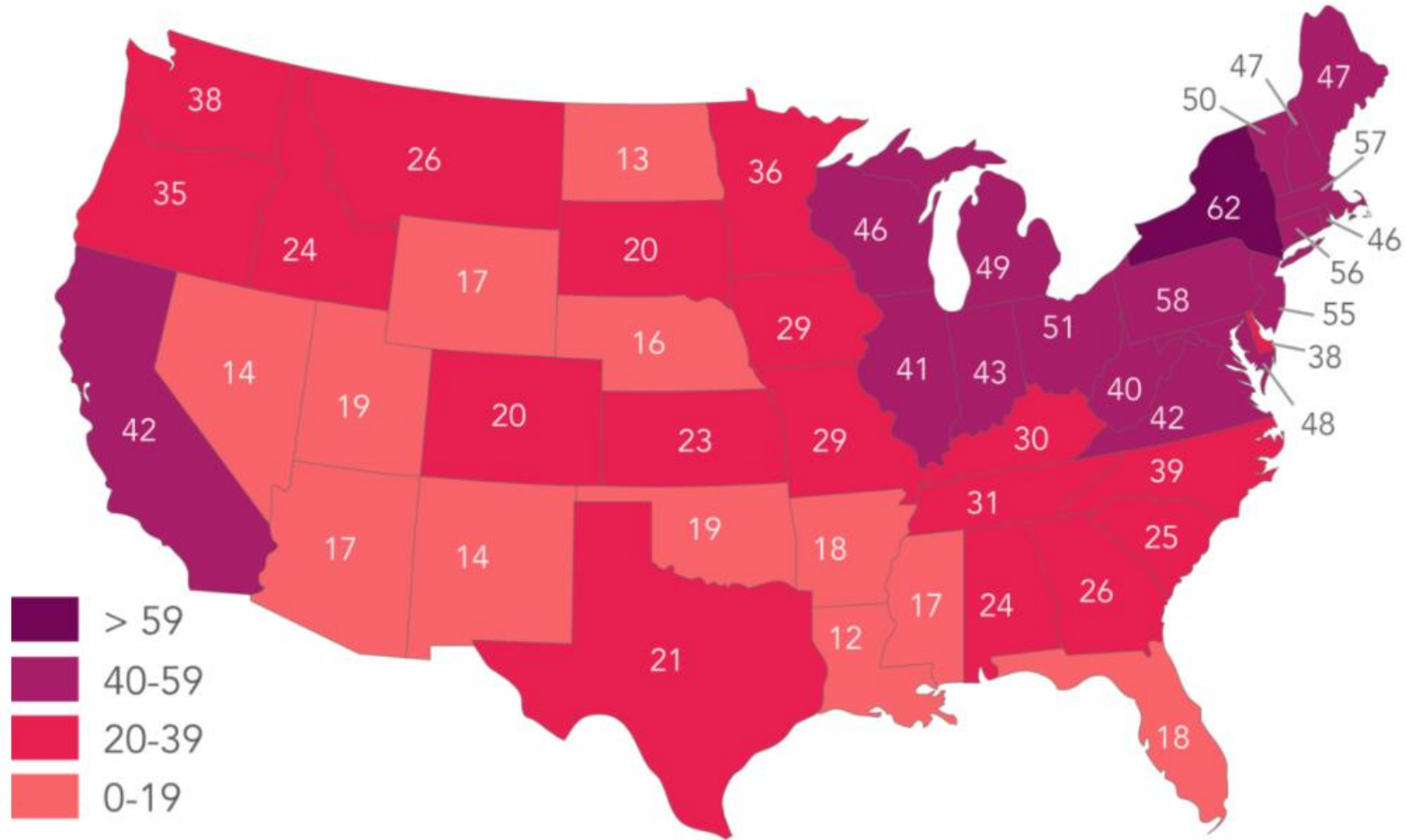
Eastern Red Cedar (*Juniperus virginiana*)

- ★ Bark reddish brown to gray with narrow, vertical strips that peel away from trunk.
- Trunk is often not round and may be fluted.
- Heartwood reddish and aromatic (cedar closet).



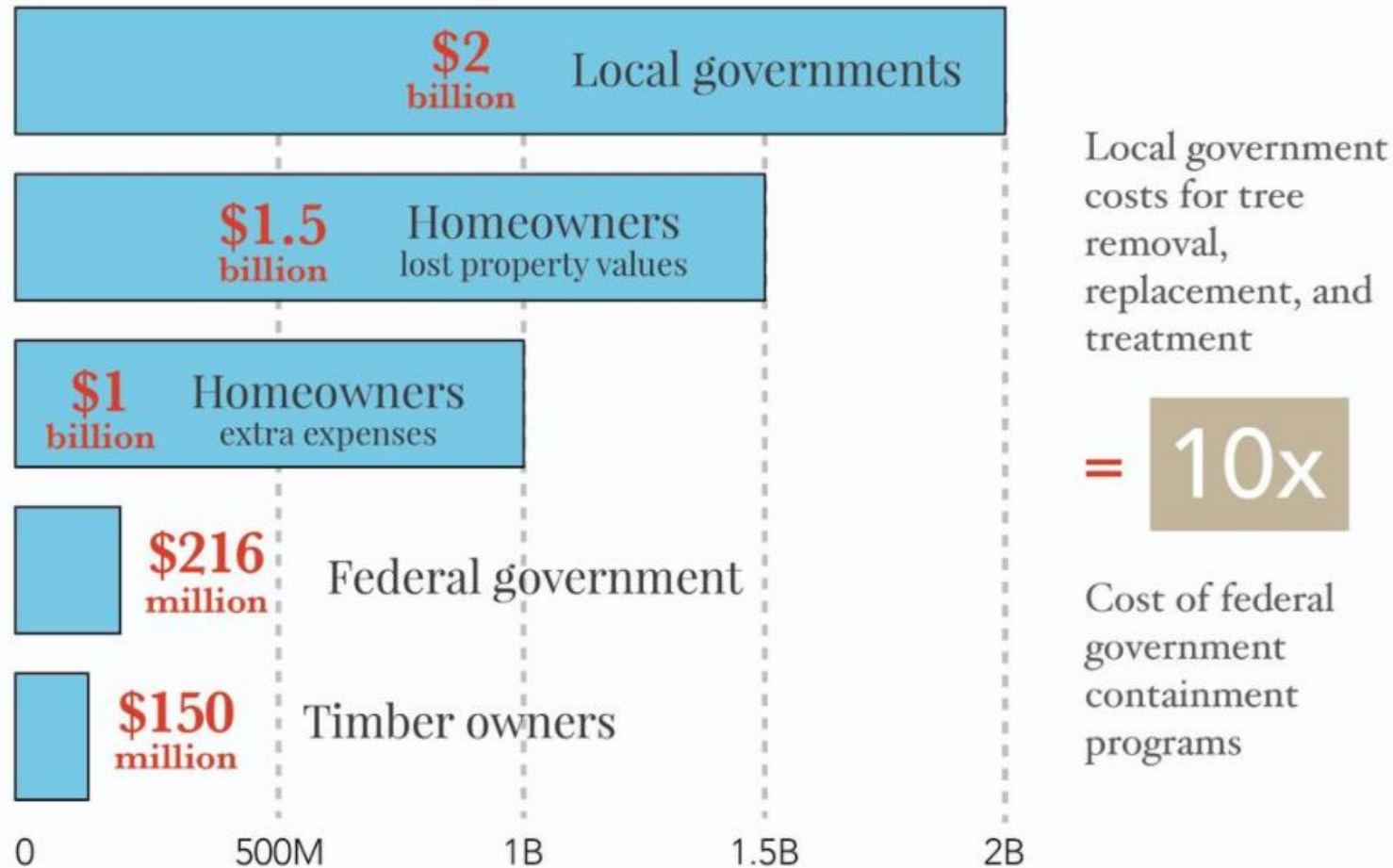
Peeling
vertical
strips

IMPORTED FOREST PESTS OCCUR IN EVERY STATE IN THE US



Map of the number of forest pests by state as of 2015. Credit: Leslie Tumblety/Cary Institute

ANNUAL COST OF IMPORTED INSECT PESTS



Cary Institute
of Ecosystem Studies

Tree-SMART Trade

www.caryinstitute.org/science/tree-smart-trade

5 actions to reduce the accidental importation of insects and diseases from international trade.

Switch to pest-free packaging materials for international shipments to the US.

Minimize new pest outbreaks by expanding early and rapid response programs.

Augment international pest prevention programs with key trade partners.

Restrict the importation of live plants in the same genera as native woody plants in the US.

Tighten enforcement of penalties for non-compliant shipments.

Tree Identification for Beginners: Common NE Evergreens

Questions?

