

Resolving our Neighborhood Tree Problem

These guys are trouble waiting to happen!



History

- *Pyrus calleryana* (Callery Pear) is a native tree to China
- Dr. Frank Reimer of the United States Department of Agriculture (USDA) recognized the adaptable qualities of the of *P. calleryana* root stock
- Introduced to U.S. in 1909-1916 to develop fire blight resistant commercial pear trees

History

- In 1952 a vigorous, thornless ornamental tree was found in the testing fields and grafted to a *P. calleryana* rootstock for nursery sale
- Resulting tree: *Pyrus calleryana* 'Bradford', named for Fredrick Charles Bradford
- USDA promoted tree for use in subdivisions across America



Home and Garden Bulletin 154, USDA, 1968

Tree Bio

- *Pyrus calleryana* 'Bradford'
- Bradford Pear

- Hardiness Zones: 5a-9a

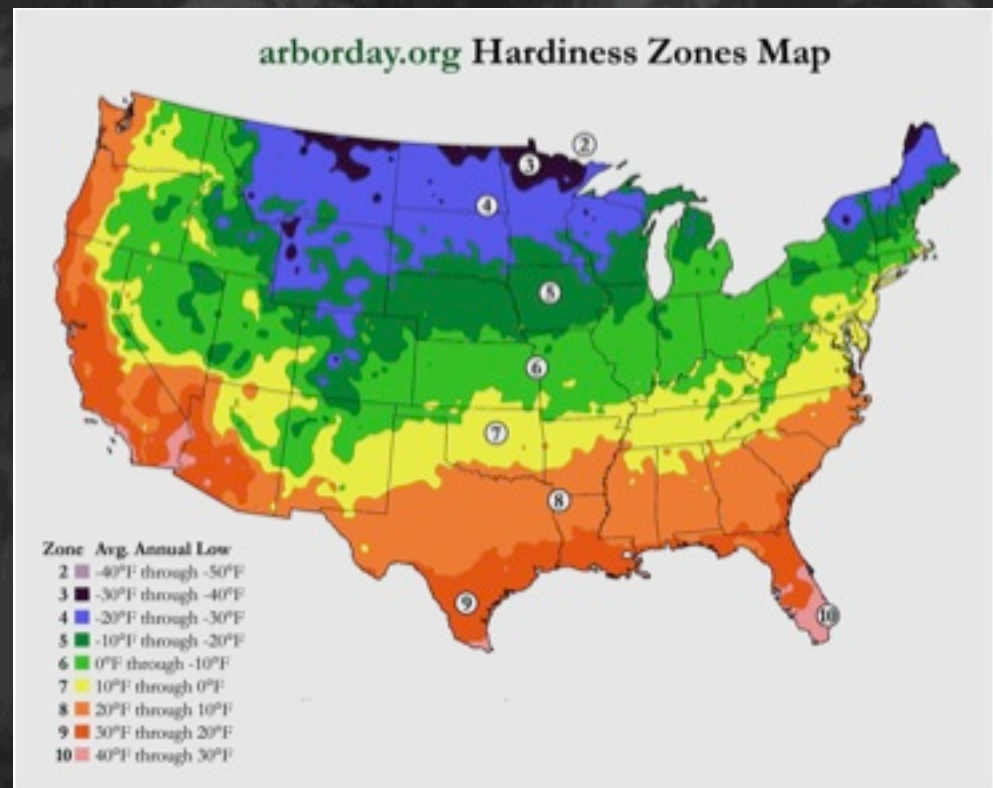
- Origin: China

- Height: 30-40'

- Spread: 30-40'

- Deciduous

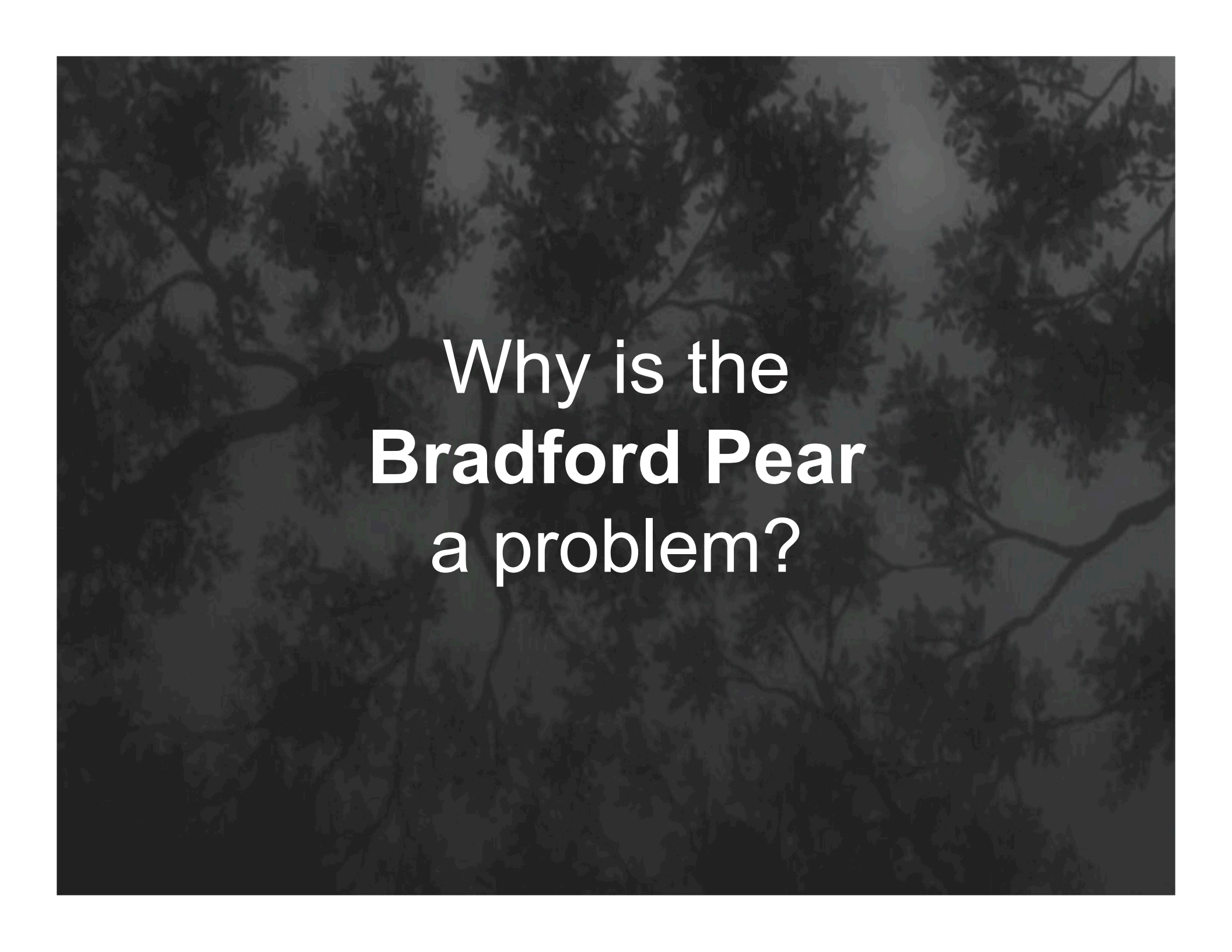
- Tolerances: salt, drought, clay soil



Tree Bio

- Flowers: white, creamy
- Fall Color: red, yellow orange, purple
- Fast growth rate
- Used as street trees & in residential settings
- HIGHLY INVASIVE!
- Life span: 20-30yrs



The background of the slide is a dark, monochromatic image showing the intricate silhouettes of tree branches and leaves against a slightly lighter, hazy sky. The branches are dense and crisscross the frame, creating a complex, organic pattern.

Why is the
Bradford Pear
a problem?

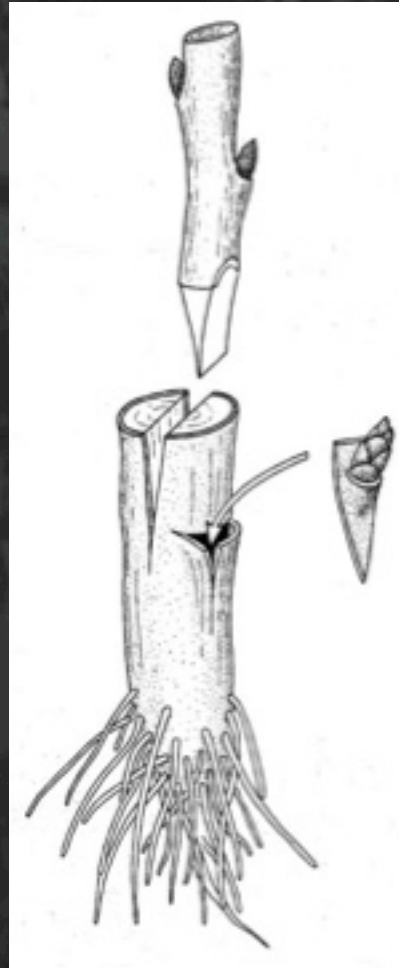
Inferior Branching

- Included Bark makes branch & trunk union weak
- Narrow branch angle indicates a high potential for failure



Grafting & Budding Issues

- Grafting Failures
- Budding Failures



Shallow Roots

- Lifting Sidewalks
- Tripping Hazard
- Pipe Penetration



Lack of Diversity

- Overplanting a single species can lead to catastrophic losses (ex. Dutch elm disease)
- Bradford Pear trees provide little wildlife value



<http://huntsville.about.com/library/graphics/bradford16.jpg>

Invasive Qualities

- Allowed cross breeding between Bradford and other *P. calleryana* varieties, which created a SUPER INVASIVE species of pear tree
- Spread of this INVASIVE species can be seen along major highways and open areas
- Now considered INVASIVE by Maryland Native Plant Society



Safety

- Inferior branching susceptible to **breakage** in storms
- **Injury & damage** to people, sidewalks, roads, property, electric power, phones, internet & television



Damage Costs

- Cost to the County
- Cost in terms of electricity to cover repair
- Cost & aggravation of damage to property



Proposed:

- Allow our homeowners to address the dead, dying & high risk **Bradford Pear** trees throughout Knolls 12 by replacing them with a pre-approved, appropriately sized species
- The aim is to address: SAFETY, IMPROVE PROPERTY VALUE & INCREASE BIO-DIVERSITY

Preferred Replacement Species:



Crape Myrtle

- Readily Available
- Reasonably Priced
- Many Varieties to Choose From
- Gorgeous Blooms
- Manageable Sizes
- Easily Pruned Back
- Lesser Droppings, Especially vs. Pears!

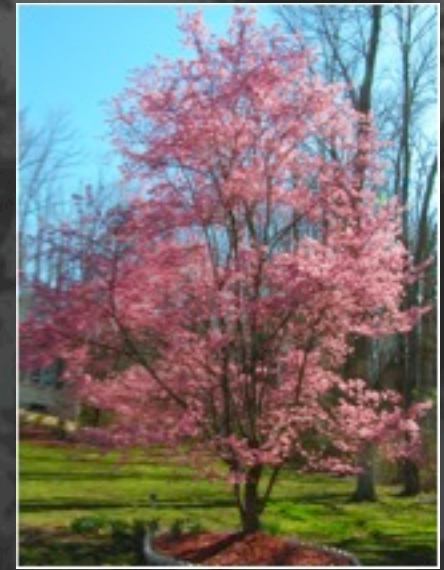
Other Suggested Replacement Species:



Lilac Tree



Yoshino Cherry



Okame Cherry



Chinese Elm



Kousa Dogwood

Resources

- National Agriculture Library (NAL)

Davis II, Ben. "Grafting of *Pyrus Calleryana* Cultivars." *Combined Proceedings- International Plant Propagators' Society* 32 (1983): 509-12.

Culley, Theresa. "Scientists Look for Clues Into How Tree Populations Become Invasive." *BioScience* 57.11 (2007).

Gilman, E.F. and D.G. Watson. '*Pyrus calleryana* 'Bradford': 'Bradford' Callery Pear' *Gainesville Environment Horticulture Department, Florida Cooperative Extensive Service, Institute of Food and Agricultural Sciences, University of Florida*. (1994) Fact Sheet ST-537.

Fulcher, B. Trouble on Main Street. *Tennessee Conservationist* 68 (2002): 12-15.

Culley, Theresa M., and Nicole A. Hardiman. "The Beginning of a New Invasive Plant: A History of the Ornamental Callery Pear in the United States." *BioScience* 57.11 (2007): 956-64.

- Internet

"Growing the Bradford Ornamental Pear 1968 -- Crops Research Division Agricultural Research Service..." *AgNIC at Michigan State University, Home Page*. Web. 04 Mar. 2011. <<http://agnic.msu.edu/cgi-bin/library?e=d-000-00---0usda--00-0-0--0prompt-10---4-----0-1l--1-en-50---20-help---00031-001-1-0utfZz-8-00&cl=CL2.1&d=HASH330470ee8993f548e7255a&x=1>>.

"Plant Invaders of Mid-Atlantic Natural Areas." *U.S. National Park Service - Experience Your America*. Web. 04 Mar. 2011. <<http://www.nps.gov/plants/alien/pubs/midatlantic/>>.

- Images

<http://huntsville.about.com/library/graphics/bradford16.jpg>

<http://www.ecosystemgardening.com/wp-content/uploads/2010/11/Invasive-Bradford-Pear-490x366.jpg>

http://csv-excel.com/images/arborday_full.jpg

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