

**USING NON-NATIVE,
NON-INVASIVE PLANT
SPECIES IN LANDSCAPE
PLANTINGS**



Today's Objectives

- Definitions for today
- Why some plants work well in tough landscapes
- Soil and species selection
- Why nonnatives?
 - Why not?
- Some options
- Wrap up



Definitions:





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**"Thank you for calling Customer Service.
If you're calm and rational, press 1.
If you're a whiner, press 2.
If you're a hot head, press 3...."**

- **Invasive**
 - Introduction does or is likely to cause economic, environmental harm, or harm to human health
 - Non-native (or alien) to the ecosystem
- **Pest**
 - Person, plant or thing that annoys
 - Organism that damages crop or fertility of land
 - Invasive or native species that adversely affects habitat functions, and directly compete with natives

Why Use Non-natives?

- **Provide:**
 - Food/medicine/shelter
 - Ecosystem services
 - Aesthetic value/landscape interest
 - Wildlife food and habitat
- **May be best suited for difficult urban site**
 - Add genetic diversity
 - Economic viability
 - May require lower maintenance/H₂O
- **MOST ARE NOT INVASIVE!**





Chinese pistache, *Pistacia chinensis*



They can be totally cool...

Datura metal,
downy thorn-apple



Ginkgo biloba, ginkgo and *Tricyrtis spp.*, toad lily

Variety



Are cultivars or varieties native?

- According to Allan Armitage:
 - Cultivars often occur naturally
 - It is often very difficult to find straight species of many plants, particularly perennials
 - And finally
 - Is rap a type of music?



Ilex vomitoria 'Yawkey'

Biological- Why Do Some plants become Invasive?



- **Characteristics of invasives**
 - **Adaptable-** can grow anywhere
 - **High reproductive potential**
 - **Some shade tolerant**
 - **Wide geographical native range**
- **Characteristics of site**
 - **Disturbance often facilitates invasion**
 - **AWFUL SOIL!**
Increase light and nutrient availability
 - **Overuse in landscape**



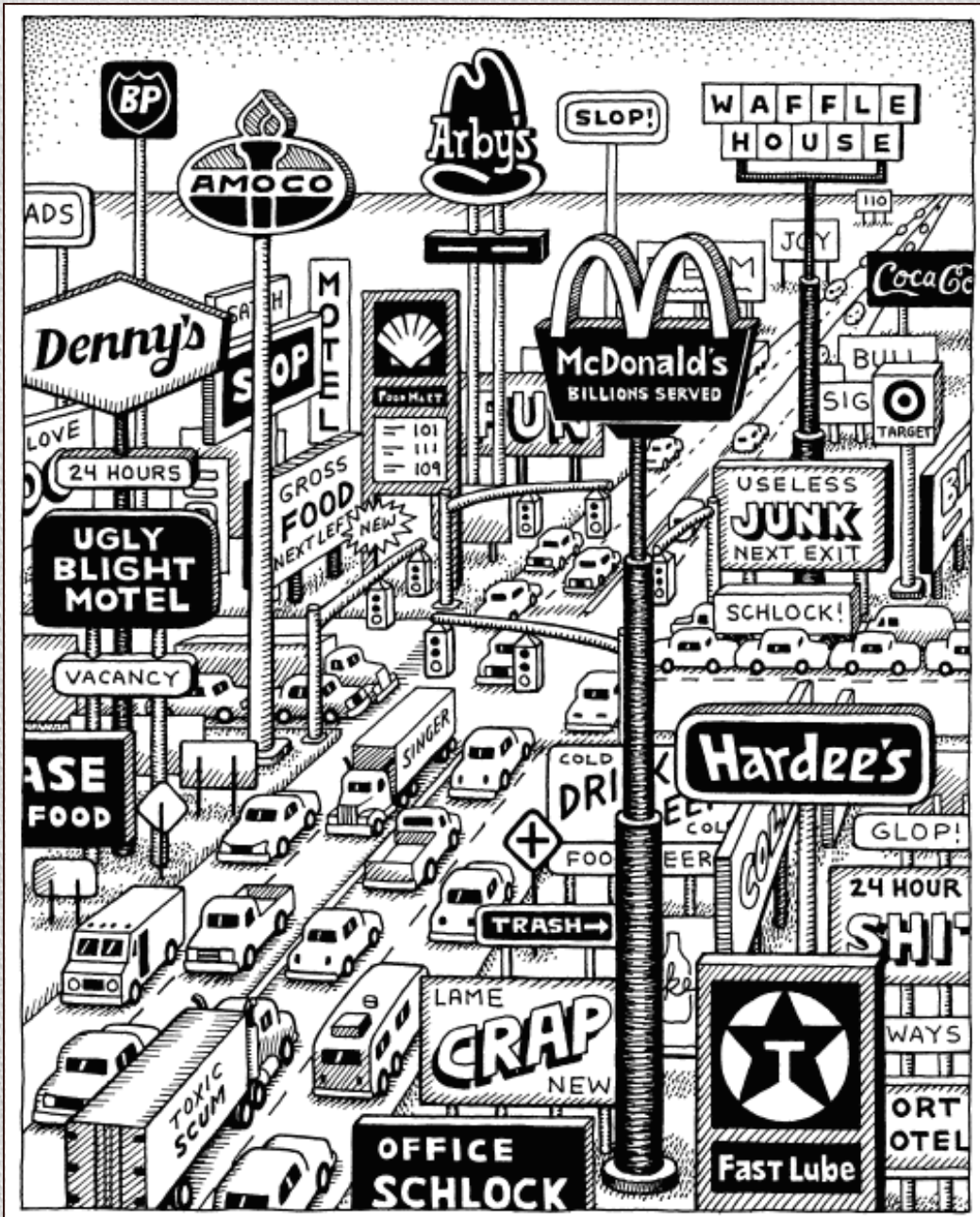


1971



1997





It is TOUGH out there!







**Red maple
under water stress**



properly irrigated



So why shouldn't we use non-natives?



- **Non-natives may be highly invasive**
- **When they escape:**
 - **Threaten: biodiversity in natural areas, habitat quality, ecosystem function**
 - **Economically devastating**
 - **Costly eradication**
 - **Loss of revenue from forest and farm**
- **Non-natives may not be best suited for site**
 - **Will not create same “sense of place”**
 - **May require more maintenance/H₂O**

Natives MAY be best adapted and low maintenance...



Bank stabilization...



Naturalization...



Create sense of place...



Seaside Golf Resort



Desert golf courses





Criteria for Plant Selection

1. Cultural requirements
2. Soil and Site conditions
3. Intended plant use
4. Maintenance requirements
5. The “Species” factor



What does the particular species need?



Evaluate and Prepare Site



- **Soil test:**
 - pH
 - Organic matter
 - texture
 - drainage
- **Assess slope**
- **Landscape cover**
 - Key plants
 - Overall health assessment
- **Potential irrigation needs and source**



- **Prepare planting area**
 - **Tilling**
 - **Add good quality soil**
 - **Add organic matter on LARGE scale**
 - **Move away from single hole planting to area planting where possible**
 - **Sound weed management program**
- **Minimize soil compaction**



Some Non-native options



Chamaecyparis spp., false cypress



Chionanthus retusus, Chinese fringetree



Cornus kousa, Kousa dogwood





Juniperus chinensis 'Torulosa', Hollywood juniper



- **Fast growing to about 15'**
- **Drought and salt tolerant**
- **Full sun**
- **Deer resistant**
- **Use as screen, in masses, topiary**

- Excellent exfoliating bark and shiny, dark green leaves best features
- 20'-40'
- Full sun to light shade; low pH for best growth
- Very pest resistant

Parrotia persica, Persian parrotia



Pieris japonica, Japanese pieris



Stewartia pseudocamellia, Japanese stewartia



Styrax japonicus, Japanese snowbell



Lacebark elm, *Ulmus parvifolia*



- **Tough urban tree, easy to maintain**
- **Not too big, not too small**
- **Great fall color and bark!**
- **Check out this awesome, constructed site!**

Viburnum carlesii, Koreanspice viburnum

- 4-5' (8') x 4' -8'; rounded dense shrub, upright branches
- White flowers in April, semi-snowball, very fragrant; black drupe late summer
- Foundation or shrub border plantings





***Viburnum x pragense*, Prague viburnum**

- Hybrid of *V. rhytidophyllum* and *V. utile*; evergreen; 8-10' and wide; upright oval to rounded habit
- White flowers, slightly fragrant in April; fruit black drupe
- Extremely hardy; use as shrub border or hedge, screen



Where do we go from here?

Green Industry Concerns

- **Broad-brush approach**
 - Fear a national mandate
 - Prefer regional solutions
 - Not all species are invasive everywhere
- **Exclusion of industry in developing of policies**
 - Policy directly affects them
 - Prefer educational efforts vs. requirements
- **“Natives” only alternative**
 - Keep native and invasive issues separate
 - Again, most non-natives grown are not invasive



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MAP & DIRECTIONS

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QUESTIONS & ANSWERS

Our experts answer questions from first-time planters to experienced landscape artists.

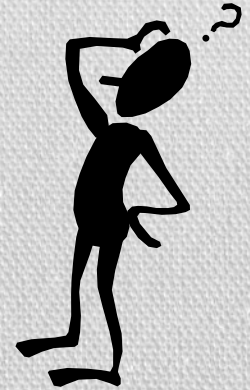
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What is the Common Ground?



- **Based on current evidence- some plants should be banned**
 - Some should be used only in urban sites
- **Identify potential for invasiveness of newly introduced species**
- **Industry must be proactive**
- **Education is key!**

Native vs. Exotic—the bottom line



- **What is the environmentally sound choice to make?**
 - Depends on where you are planting
 - Find solid criteria to assess invasive potential of introductions
- **What will thrive?**
 - Picking the best plant for site is sustainable (if not an invasive species)
- **Can you amend the site to suit native plants?**
 - If too costly, choose good non-natives that are not invasive



**Thank You!
Questions?**



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