The Five Stages of Grief: Invasive Plants and the Horticulture Industry

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Reasons for the Introduction of Invasive Woody Plants in North America

- **LANDSCAPE**: 82%
  - Aesthetics, wildlife habitat
- **AGRICULTURE**: 14%
  - Food, fiber, fuel
- **ACCIDENTAL**: 1%
  - Contamination
- **EROSION CONTROL**: 3%

\[ n=235 \]
Since 1922, SPU has ended each school year with an ivy ceremony. Seniors circle a rope of ivy while president Philip Eaton and other university leaders snip a sprig for each student to take home and plant as a reminder of the school.
“The greatest service which can be rendered any country is to add a useful plant to its culture”

…Secretary of State, Thomas Jefferson 1790
US should facilitate the entry of “plants of whatever nature whether useful as food for man or the domestic animals, or for purposes connected with the manufactures or any of the useful arts”

…President John Quincy Adams 1827
Five Stages of Grief
E. Kübler-Ross (1969)

• Denial
  “You don’t know what you are talking about – I can hardly get the plant to grow in my garden. And it never seeds there”

  “Biodiversity is higher in invaded areas”
Five Stages of Grief

• Denial
• Anger

“You are all a bunch of xenophobic Nazis. You only want us to grow native plants.”
Ecologists vs. Horticulturists
Five Stages of Grief

- Denial
- Anger
- Bargaining

“I can just cut the seed heads off before they disperse”

“Alright, pampas grass/butterfly bush/ivy is invasive, but these new cultivars won’t invade”
Five Stages of Grief

- Denial
- Anger
- Bargaining
- Depression
- Resignation/Acceptance
Codes of Conduct
The St. Louis Declaration
Nov. 2001

- Nursery professionals
- Botanical gardens and arboreta
- Gardening public
- Landscape architects
- Government – state and federal

http://www.centerforplantconservation.org/invasives/
Findings

• People are the major dispersers of plants and the current magnitude of dispersal is unprecedented.
• Plant introduction and improvement brings diversity to food, landscapes, and medicine.
• A small proportion of introduced species become invasive and have unwanted impacts.
• Species invasions can be regional in nature, but the impacts may be far removed from the site of introduction.
Guiding Principles

- Plant introduction should be done in a way that minimizes harm
- Efforts must be national in scope, but with a regional perspective
- Prevention and early detection are important
- Professional training and education are essential
- Solutions must include broad-based teams
- All tools, esp. codes of conduct are important
Codes of Conduct
Nurseries

1. Ensure that invasive potential of new introductions is assessed
2. Identify suitable alternatives to invasives
3. Develop and promote alternatives
4. Phase out existing stock of agreed-upon invasive species
5. Follow all laws across political boundaries
6. Encourage customers to use and garden writers to promote non-invasive plants
California Horticultural Invasives Prevention

PLVNT RiGHT
KEEP INVASIVE PLANTS IN CHECK
INVASIVE PLANTS OF THE SIERRA & COASTAL MOUNTAINS

Sunset Zones 1-3

The following plants are invasive in your region of California. We encourage you to not buy, sell, plant, or promote the following species. Click on the plant name for more details, including links to photos of that plant and their invasion of natural areas. Use the "recommended alternatives" link to learn about the beautiful, non-invasive plants that we suggest for your gardening and landscaping needs that will not endanger California's wildlands.

**THese plants are invasive in your area**

- **Aruno, giant reed**
  - Arundo donax
  - [Recommended alternatives](#)

- **Brooms: Scotch broom, striated broom, French broom, bridal veil broom, Spanish broom**
  - Cytisus scoparius, Cytisus striatus, Genista monspessulana, Retama monosperma, Spartium junceum
  - [Recommended alternatives](#)

- **Green fountain grass**
  - Pennisetum setaceum
  - [Recommended alternatives](#)

- **Periwinkle**
  - Vinca major
  - [Recommended alternatives](#)

- **Saltcedar**
  - Tamarix ramosissoma
  - [Recommended alternatives](#)
**Forsythia x intermedia**

**Common name:** Forsythia

Sun needs: ☀️ Water needs: 🌧️

This plant grows well in the following regions:
- North and Central Coast
- Desert
- Central Valley
- Sierra and Coastal Mountains

Forsythia is a beautiful, deciduous, fountain-shaped shrub with bright yellow blooms in winter and early spring. There may be some autumn yellowing of the green foliage but the principal appeal of the plant is the profuse seasonal blooms of yellow flowers develop all along the branches. Most varieties are less than ten feet tall and wide. Plants can be pruned and trained for a variety of applications, including garden borders or screens. Forsythia will tolerate most soil conditions. The range of Forsythia is for the most part limited by temperature - it grows best in areas without extreme winters or climates with little seasonal difference. (SWGB, 2001)

**Potentilla fruticosa**

**Common name:** Shrubby Cinquefoil

Sun needs: ☀️☀️ Water needs: 🌧️💧💧
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>Summer 2003</td>
<td>Grad student intern</td>
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<td>June 2005</td>
<td>Hired full-time manager</td>
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<td>$160,000 – includes manager, intern, web page, brochures, meetings, and other materials</td>
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Cal-HIP Steering Committee

Industry
(growers like Monrovia, sellers like Lowe’s, trade groups like CANGC, CA Farm Bureau)

Environmental Groups
(The Nature Conservancy, California Invasive Plant Council)

Academic and Scientific Community
(University of Washington, University of California Cooperative Extension, University of California – Davis)

Government Agencies
(CA Department of Food and Agriculture, CACASA)
PlantRight Logistics

**Summer 2003**
Grad student intern

**Summer 2004**
Grad student intern

**June 2005**
Hired full-time manager

**Annual budget, 2006-07**
$160,000 – includes manager, intern, web page, brochures, meetings, and other materials

Current phase of work scheduled to finish end of 2009
Washington Horticultural Invasives Prevention (WA-HIP)

• Washington State Nursery and Landscape Assc.

• University of Washington

• The Nature Conservancy
WA-HIP Process

- Started in 2004 with a 9 month project
  - Assess 10 currently invasive species
  - Chose 5 and ask key nurseries not to sell, promote safe alternatives
  - Assess economic and social impacts
  - initial budget of $30,000
Results - Economic

*Buddleja davidii*

<table>
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<tr>
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<th>’04 Sales</th>
<th>’05 Sales*</th>
<th>’04 Alternatives</th>
<th>’05 Alternatives</th>
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<tr>
<td>2004</td>
<td>245</td>
<td>68</td>
<td>1108</td>
<td>1252</td>
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*2005 sales figures are adjusted based on overall nursery sales*
Results – Social

- 82% of people requesting 1 of the species appreciated hearing about alternatives
- 62% purchased the alternative
- 23% purchased the invasive
- 7% didn’t buy anything
• Feb. 2006, 32 page booklet of invasives
• Now in 3rd printing – more than 40,000
• Distributed to numerous nurseries and to thousands of gardeners
• Now being duplicated for other regions
• WA-HIP continues to meet annually
Overcoming “Lost Species Grief”

• Provide good science to justify your requests
  - 27 page document for WA-HIP species review
  - vetted by a sub-committee of WA-HIP for approval before use
Overcoming “Lost Species Grief”

- Give enough time to accept that they may not be able to grow/sell all species
Overcoming “Lost Species Grief”

• Create opportunities to get to know each other

Photos by Angel Guerzon
Benefits of Voluntary Approaches

- Positive educational tool
- Creates a sense of empowerment and ownership
- Opens dialogue between horticulturists and ecologists, creates trust
- May reduce sales of invasive species
Working with Industry

• Take the time to understand the values and concerns
• Provide the tools to help them accomplish your objective
• Look for sympathetic ears BUT include others
• Develop good answers for common arguments
Be Patient!