Alternatives to invasive landscape and garden plants

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The big picture on invasive landscaping and garden plants

- Invasive plants are for sale
- Little or no regulation exists to address the problem
- Horticulture industry opposes regulation
- Consumer and industry awareness is still low
On sale now at a nursery near you

- Cortaderia selloana
- Cotoneaster laetum
- Hedera helix
- Genista monspessulana
- Leucanthemum vulgare
- Vinca major
- Centaurea cyanus
60% of “worst weeds” for sale in Andersen’s Horticultural Library (1999)

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity in Library</th>
<th>Quantity Sold</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbs</td>
<td>177</td>
<td>87</td>
<td>49%</td>
</tr>
<tr>
<td>Grasses</td>
<td>74</td>
<td>46</td>
<td>62%</td>
</tr>
<tr>
<td>Aquatic</td>
<td>14</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td>Vines</td>
<td>38</td>
<td>23</td>
<td>60%</td>
</tr>
<tr>
<td>Shrubs</td>
<td>70</td>
<td>51</td>
<td>73%</td>
</tr>
<tr>
<td>Trees</td>
<td>71</td>
<td>60</td>
<td>85%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>452</strong></td>
<td><strong>271</strong></td>
<td><strong>60%</strong></td>
</tr>
</tbody>
</table>
Many invasive plants have a horticultural origin

- 235 introduced woody plants naturalized in U.S.
- 85% (201) introduced for landscaping purposes
- 53% of CalEPPC’s most invasive pest plants
- 69% of FL-EPPC’s list
- 65% of naturalized plants in Australia
First introduction of some big baddies

- Gorse 1823 PA
- Salt cedar 1823 NY
- Purple loosestrife 1829 NY
- Scotch broom 1844 NY
- Tree of heaven 1874 CA
- Pampasgrass 1872 CA
Why did we plant THAT?

- Landscaping
- Erosion control
- Windbreak/screen
- Fire resistant
- Wildlife attractant
Why are some ornamental plants so invasive?
Ornamental characters

- easy to propagate
- establish rapidly
- grow fast
- mature early
- abundant flowers
- environmentally fit and free from major pests

Weedy characters

- broad germination
- establish rapidly
- grow fast
- mature early
- prolific seeder
- environmentally fit
- *successful dispersal
- *strong veg growth
Breeding practices that may facilitate weediness

- sale of seeds
- repeated introductions
- hybridization
- local propagation
- selection for weedy characters
The horticulture industry up close

- Environmental horticulture and floriculture is the fastest growing sector of U.S. agriculture.
- 2001 grower cash receipts of $13.3 billion
- 1998 retail sales of $38.8 billion for EH crops and products
California’s horticulture industry

- 20% of U.S nursery crop production (FL 11%, NC and TX 8%)
- Cash receipts of $2.4 billion
- Each year CDFA licenses 3,500 grower nurseries, 3,000 retail nurseries, and 3,500 “incidental dealers”
Horticulture industry perspectives

- Lack of consensus on definition of invasive
- Economics are a “trade secret”
- Oppose bans on particular taxa
- Oppose restricting importation
- Favor self regulation and voluntary, regional guidelines for control
Federal nursery regulations

- Only designated “noxious “ weeds are regulated
- Plant Protection Act 2000 supercedes FNWA 1974  96 taxa listed
- Only 1 plant from CalEPPC’s list is regulated (Ageratina adenophora)
- Enforcement through USDA APHIS
- Estimated 750 species unlisted
State nursery regulations

- CA Dept. of Food and Agriculture (CDFA) noxious weed list 128 taxa (+11 in review)
- Plants are rated A,B,C,Q based on distribution and feasibility for eradication
- 15 of 78 CalEPPC taxa appear on list
- Any person can petition to list a plant
County Agricultural Commissioners inspect nurseries

- All nurseries must be free of A and B-rated pests
- Eradication of B-rated pests in non-nursery occurrences at discretion of local Commissioner
- C-rated plants are not subject to state action, may be tolerated in nurseries
Education not regulation: non-invasive landscaping alternatives
How do people choose plants?

- Flowering
- Foliage
- Growth habit
- Care instructions
- Plant benefits
- What’s on sale!
- Companion plants
- Design ideas
Why did we plant That? Tips from Monrovia.com

Cortaderia selloana
- Border plant
- Clump forming
- Summer flowering
- Flowers for cutting
- Drought tolerant
- Easy care
- Showy flowers
- Windbreak

Spartium junceum
- Border plant
- Clump forming
- Fall/summer flowering
- Fragrant
- Fruit bearing
- Showy flowers
- Tolerates poor soil
- Disease resistant
Developing a target list of invaders

- Availability in nurseries
- Regions or habitats invaded
- Realized or potential impacts in natural areas
- Plant uses
- Horticultural requirements
Criteria for matching alternatives

- Cultivation requirements - sun, water, soil
- Hardiness – CA has 24 zones
- Plant attributes
  - Color
  - Growth habit – size
  - Flowering time
A good alternative

Purple loosestrife No!  Cardinal flower Yes!
What’s so great about non-invasive alternatives?

- Promotes a positive solution
- Educate growers, retailers, gardening public about responsible plant use
- Influence nursery supply and consumer demand
- Can have a regional emphasis
Get involved!

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