



SEVENTEEN YEARS  
OF PLANT  
BLINDNESS:

IS OUR VISION  
IMPROVING?

*Elisabeth Schussler*  
*Ecology & Evolutionary Biology*  
*University of Tennessee, Knoxville*

# Acknowledgement

Jim Wandersee (1946 - 2014)

*Teacher*

*Scholar*

*Plant enthusiast*



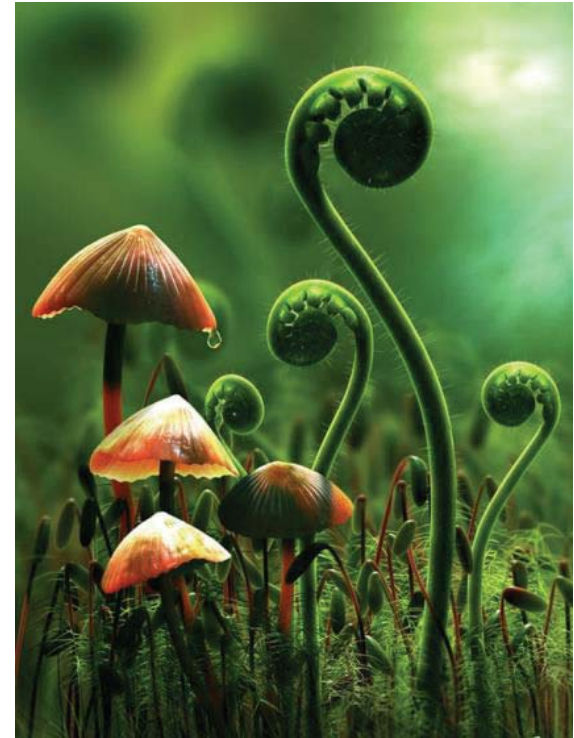
- What is plant blindness?
- Why are people plant blind?
- What are the impacts of plant blindness?
- Can plant blindness be cured?



# What is Plant Blindness?

The inability to see or notice the plants in one's own environment – leading to inability to:

- Recognize their importance
- Appreciate them
- Rank as equal to animals



Wandersee and Schussler, 1999; 2001

# Why are People Plant Blind?

## *Lack Visual Attention Cues*

For Individuality

- Blend together in number and color
- Have a less definable shape
- Have no face



# Why are People Plant Blind?

## *Lack Visual Attention Cues*

For “Threat”

- Don't move; lack behavior
- Typically not dangerous



## *In head to head comparisons*



Students *recall* more animal than plant images (Schussler and Olzak, 2008)

Students correctly *perceive* animal images more often than plant images; and animal images hold student *attention* longer (Balas and Momsen, 2014)

*Implicit, not explicit, bias*

## Plants noticed when they break attention rules...

- Lone trees
- Showy flowers
- Colorful fruits
- Fall color
- Plants with "faces"
- Movement
- Threat





# What are the Impacts of Plant Blindness?

Without visual attention...

Individual plant information is filtered from conscious attention

Therefore...

# Plants seen as growth forms

- Trees
- Bushes
- Vines
- Flowers
- Herbs



# Cultural Bias



# Less interest and knowledge

- **Naming** (Tunncliffe & Reiss, 2000; Bebbington, 2005; Gatt et al., 2007; Patrick & Tunncliffe, 2011)
- **Plant functions / adaptations** (Anderson et al., 2014; Schussler et al., 2010)



# Bias in Plant Conservation

- Finding and protecting plants
- Funding
- Understanding role in ecosystem

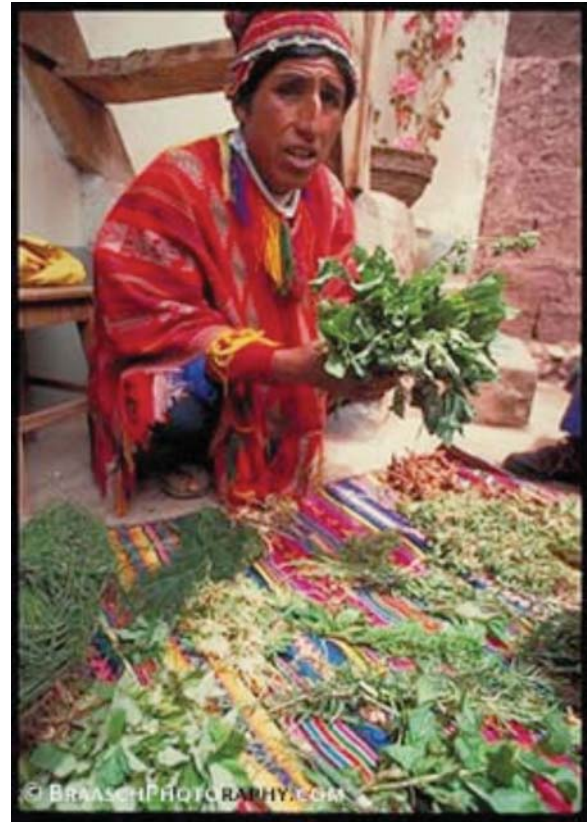


Kramer et al., 2013;  
Havens et al., 2014

# Can Plant Blindness Be Cured?

Some societies overcome lack of visual attention and revere plants

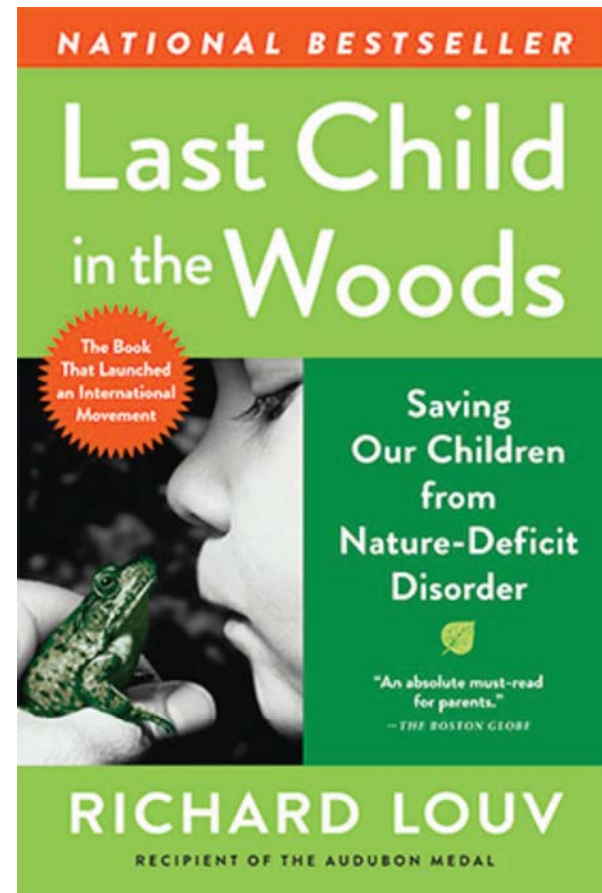
Balding and Williams, 2016



# Can Plant Blindness Be Cured?

But modern society often suffers from Nature Deficit Disorder

Louv, 2008



# Plants need more exposure!

*What principles might guide these endeavors?*





# Make Plant Blindness Explicit

- Cultural examples (sports teams, children's books, stuffed animals)
- Comparative listing
- Charades!



# Use (Salient) Plant Examples

- Teaching about plants increases student appreciation (Strgar, 2007) and ability to name (Cooper, 2008)
- Students more interested in medicinal plants than edible or ornamental plants (Pany, 2014)



# Make Plants Accessible



Stamp and Armstrong, 2005;  
Balas and Momsen, 2014



Video  
Less Jargon  
Story

# Create Personal Connections

- Gardening
- Anthropomorphism?



Tam, 2014  
Kellert, 2002

# Is Our Vision Improving?

Maybe...?

## Can Plant Blindness Be Cured?

Absolutely.



# Questions?

eschussl@utk.edu

