

Creating Biodiverse Landscape for MS Wildlife



Mississippi Smart Landscapes

Biodiversity & IPM



Mississippi State University Extension Service



What is a Biodiverse Landscape?



Native Habitat



Backyard Habitat



Sustainable Biodiverse Landscape Benefits



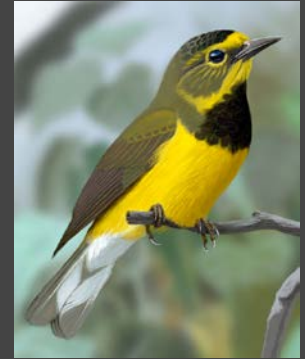
Sustainable Biodiverse Landscape Benefits



Monarch butterfly



Gray bat



Bachman's Warbler



Mississippi Gopher Frog



Red-cockaded Woodpecker

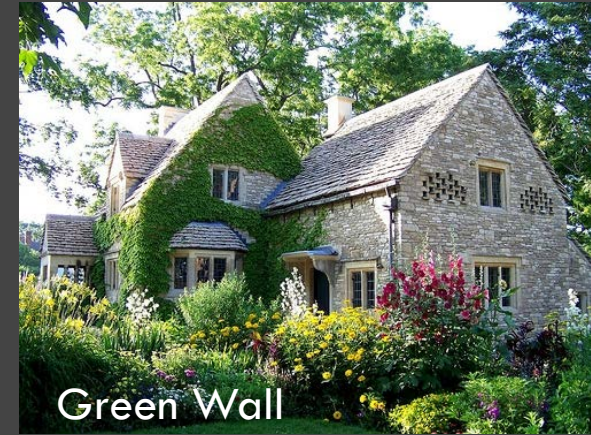


Southern Hognose Snake



Indiana Bat

Sustainable Biodiverse Landscape Benefits





Getting Started

- 1) Set your goals and priorities. What wildlife species do you want to attract?
- 2) Inventory your landscape. What habitat features already exist? What plants and animals already reside? What is lacking?
- 3) Envision how to attract wildlife that will complement your existing activities without negative impacts (for instance, garden, trail, landscape).
- 4) List and rank the objectives that will meet your wildlife goals.
- 5) Implement the plan based on your needs and the needs of the wildlife you want to attract.



Food Sources

Artificial



Natural



FOOD PLANTS

LARGE TREES

American beech
American elm
Black gum
Cow oak
Green ash
Hackberry
Live oak
Longleaf pine
Nuttall oak
Slash pine
Southern magnolia

Southern red oak
Spruce pine
Sweet gum
Tulip tree
White oak
Willow oak



SMALL AND MEDIUM-SIZED TREES

Black cherry
Box elder
Cherry laurel
Chickasaw plum
Crab apple
Dogwood
Eastern red cedar
Fringe tree
Hawthorns Hollies

FOOD PLANTS

SMALL AND MEDIUM-SIZED TREES

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Box elder

Cherry laurel

Chickasaw plum

Crab apple

Dogwood

Eastern red cedar

Fringe tree

Hawthorns

Hollies



Ironwood

Persimmon

Sassafras

Serviceberry

Silverbell

Sumac

Sweet bay magnolia

Wild plum



FOOD PLANTS

SHRUBS

American beautyberry

Arrowwood

Blueberries

Chokeberry

Devil's walking stick

Elderberry

Hollies

Huckleberry

Red buckeye

Wahoo



VINES

Blackberry

Coral honeysuckle

Cross vine

Cypress vine

Greenbriar

Trumpet vine

Virginia creeper



FOOD PLANTS

PERENNIALS

Bee balm
Black-eyed Susan
*Butterfly ginger
Carolina vetch
*Cigar flower
Coralbean
*Firebush
*Foxtail grass
Ironweed
*Lantana
Lespedeza

Partridge pea
*Pentas
Purple coneflower
*Red hot poker
Rosin weed
Salvia
Sunflowers

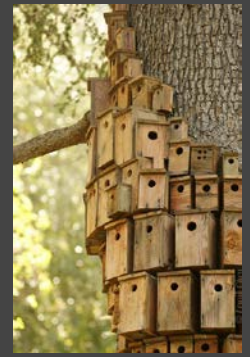
*Exotic Plants



Sources of Water



SHELTER/REPRODUCTIVE AREAS

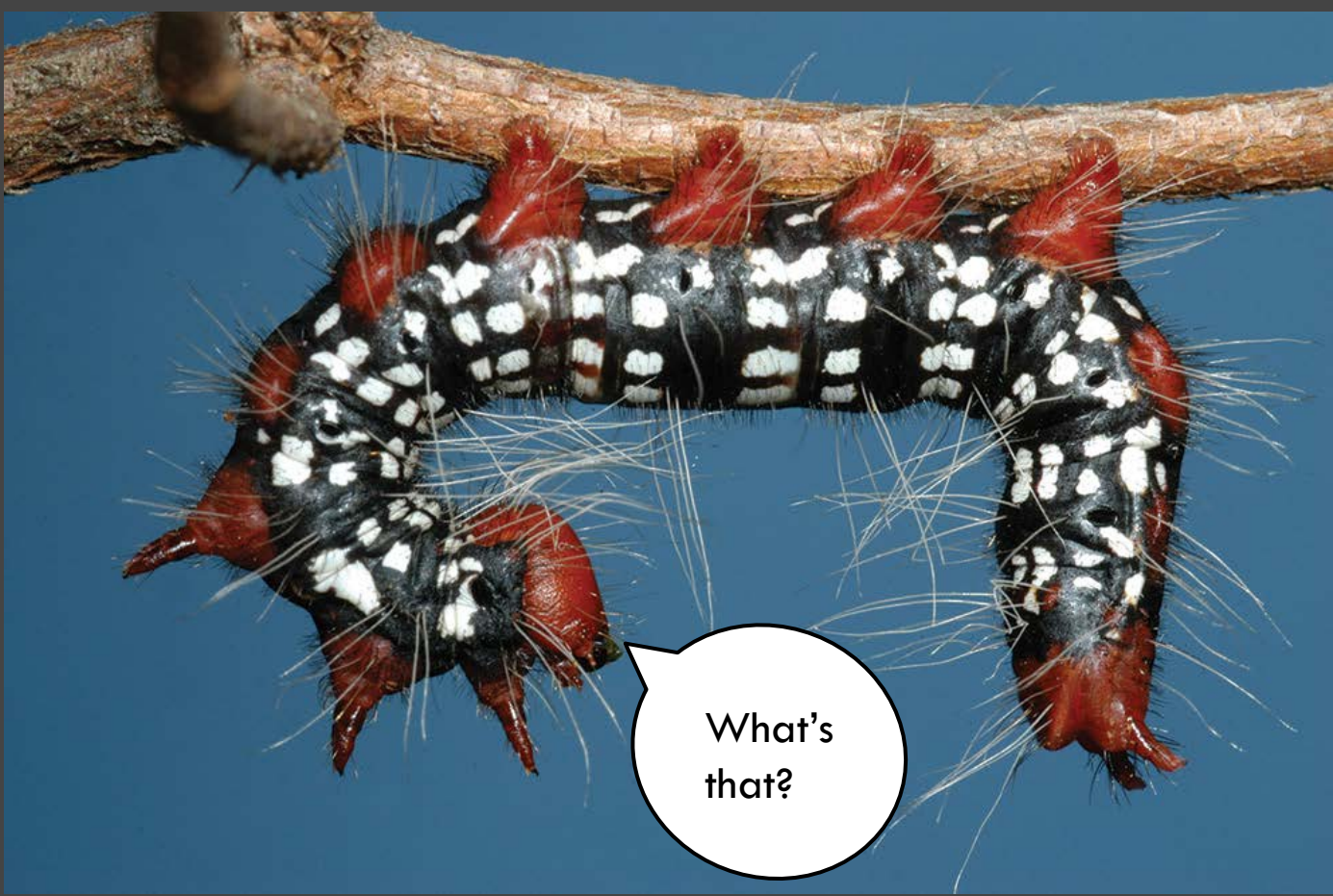


Plant Selection Checklist



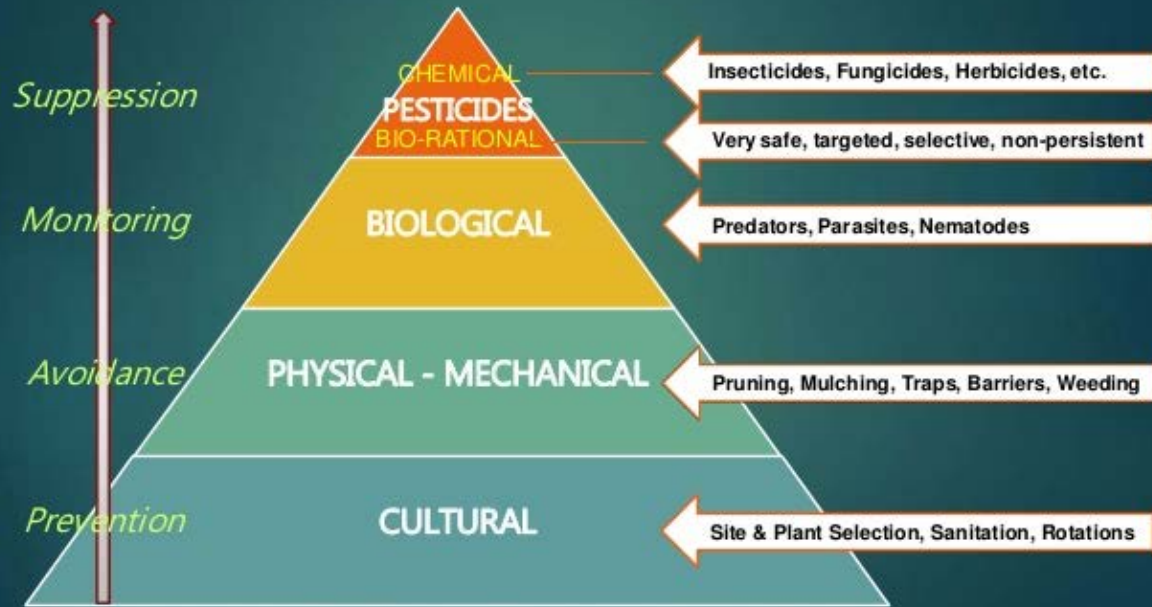
- Does it serve as food or shelter?
- Does it attract many types of wildlife? For example, does it provide nectar for butterflies as well as fruit/seed/shelter for birds?
- Is it adapted to the area so it will survive without coddling (i.e., climatic zone, wet/dry, shade/sun, soil pH, space, etc.)?
- Does it have attractive features that contribute to the overall beauty of the landscape?






What's
that?

IPM CONTROL MEASURES (plants)



Comparing Traditional and IPM

	<i>Traditional Pest Management</i>	<i>IPM</i>
<i>Program Strategy</i>	Reactive	Preventive
<i>Customer Education</i>	Minimal	Extensive
<i>Potential Liability</i>	High	Low
<i>Emphasis</i>	Routine pesticide application	Pesticides used when alternate methods are inadequate
<i>Inspection and Monitoring</i>	Minimal	Extensive
<i>Pesticide Application Frequency</i>	By schedule	By need
<i>Pesticide Application Target</i>	Area-wide spraying	Spot treatment

Components of IPM

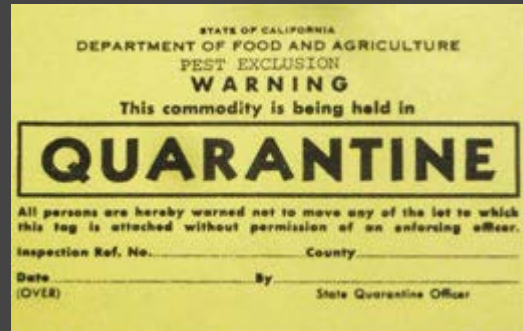
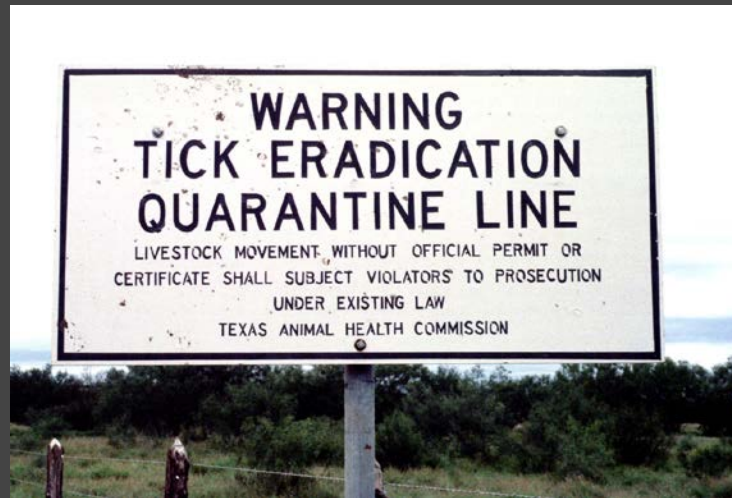
- Correct pest ID
- Know & understand pest biology
- Non-insecticidal management
- Monitor populations
- Use insecticides if needed



Methods of Insect Control

- Quarantine
- Physical exclusion
- Plant selection
- Cultural practices
- Physical control
- Biological control
- Insecticides





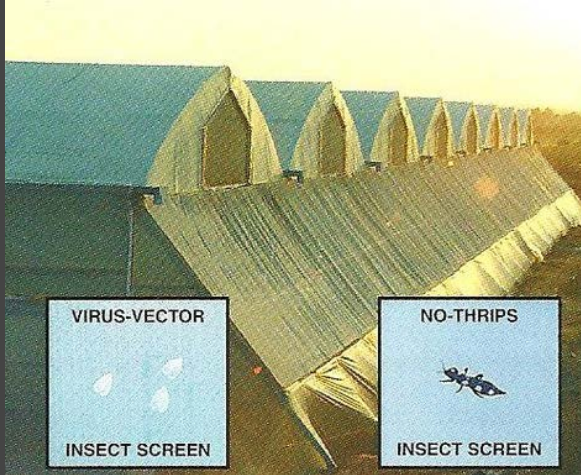
Quarantine



Cutworm collar



Sticky band on tree



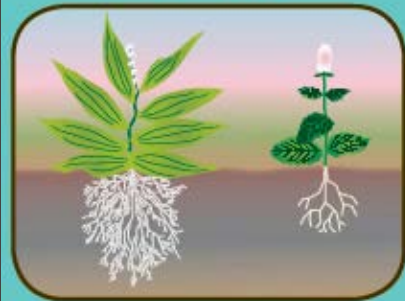
Benefits



Clean, Cool Water
Plants filter pollution;
provide shade



Wildlife
Provide habitats and food to
support diverse native species



Erosion Control
Different root lengths
reduce soil erosion



Resilience
Adapted to our climate,
pests, and diseases



**NATIVE
PLANTS**

Find the Best Plants for Wildlife

- Select plants adapted or native to your area
- Use mulches and hand-pulling to control weeds
- Plant trees and plants in the correct growing conditions
- Remove dead and diseased plant material



- Hand-picking
- Spraying with water
- Pruning
- Vacuuming
- Mulching
- Trapping

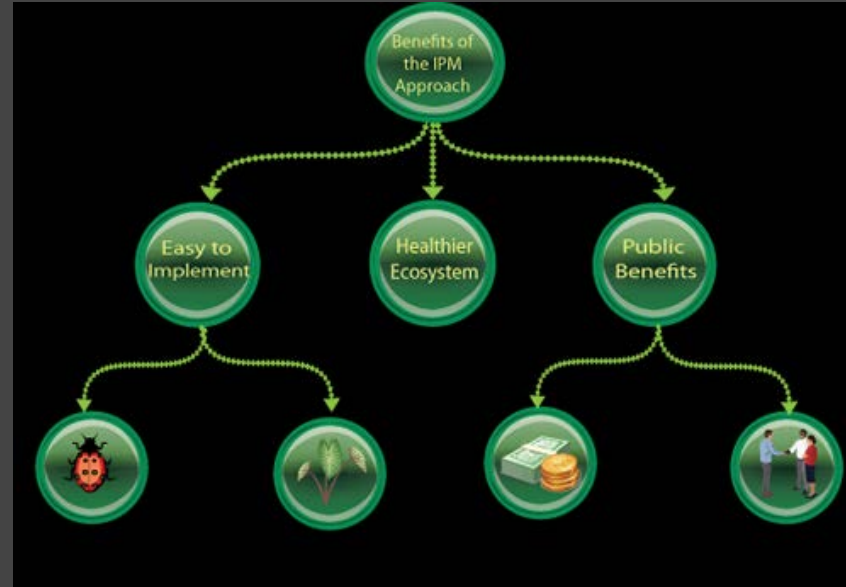




- Treat preventively when appropriate
- Scout for pest & treat if need.
- Treat only infested/susceptible plants
- Treat at the proper time
- Use soil-applied/systemic insecticides when possible



- Promotes healthy plants
- Reduces the environmental risk associated with pest management
- Reduces the potential for air and ground water contamination
- Protects the non-target species through reduced impact of pest management activities
- Reduces the need for pesticides by using several pest management methods
- Decreases exposure to pesticides
- Maintains or increases the cost-effectiveness of pest management programs



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For more Smart Landscapes info and media, be sure to visit:

1. **Mississippi Smart Landscapes website** available at <http://extension.msstate.edu/smartlandscapes>



2. Our Facebook page at <https://www.facebook.com/smartlandscapesmsu/>



Mississippi Smart Landscapes media

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