

Pulaski County Butterfly Seminar

February 20, 2018 Afternoon Session
Kitty Sanders, Botanical Garden of the Ozarks



Butterfly Gardening

General Benefits to Butterfly Gardening

- Attract other beneficials
- Food/shelter for other organisms
- Increase pollinator habitat

Pollinator facts

- 1/3 of what we eat reliant on pollinators
- Many fruits/vegetables
- Also plants for foraging
- Other wildlife dependent on pollinators - fruits and seeds
- Some medicinal plants require pollination

Most people don't think of butterflies as pollinators

- Not as efficient, but carry farther

Butterfly Garden Plant Material Considerations

- Remember both host and nectar plants are needed

Why native plants?

- It's natural!
- Cooperative relationship
- Better nectar?
- Biodiversity
- Maintenance easier

But my neighbors will hate me!

- Appropriate pruning - end of May

Planting in color groups

- Masses of color helps butterflies find nectar plants more easily
- Butterflies see ultraviolet light - so notice certain colors
red, orange, purple, pink, yellow

Add plants of different heights

2

Different species nectar at different heights

Flower shape preferences

Pollinator syndrome - shapes of flowers matched to type of pollinator

Butterflies prefer

those with small clusters of flowers

those with landing pad

flowers with spikes

Garden plan should include season-long bloom

Early spring

Summer

Fall

Think shrubs and trees, too

Spring: New Jersey tea, dogwood, redbud

Summer Buttonbush, lead plant, clethra

Garden layout

Don't group all host plants together

Provide for windbreak and shelter

Puddling = sipping minerals from various damp sources

Create puddling spots - sink a shallow container filled with sand and rocks

Yummies to add: Manure, compost, fruit,

Don't overwater

Basking area

Large flat rock

Butterfly body temperature - raise to be able to fly



Other garden considerations

Fall cleanup

Woodpiles and brush piles for overwintering

Leave a messy area with leaf litter and stalks of perennials

Mulch at base of host plants - some cats are night feeders - hide out in day

Above all, avoid the use of pesticides and herbicides

Ask nurseries about neonicotinoids (systemics)

Some favorite nectar plants

Joe-Pye Weed	tall	late summer	
Butterfly Weed	short	used by MANY	pollinators
Coneflower	med	summer	
Tall garden phlox	med	summer	recommend 'Jeana'
New England aster	med	fall	recommend 'Purple Dome'
Rose verbena	short	spring but long	blooming
Ironweed		late summer	there are shorter var like <i>V. baldwinii</i>
Texas Greeneyes	short-med	s - f	one of longest blooming natives
Goldenrod	med - tall	fall	<i>S. nemrosa</i>
Liatris	med	varies	different species bloom at different times
Pale Coneflower	med	early summer	<i>E. pallida</i>
Ozark coneflower	med	early summer	<i>E. paradoxa</i>
Agastache	med	blooms all summer	into fall * some agastache no good for butterflies

Milkweed varieties are great nectar plants

<i>A. tuberosa</i>	Butterfly Weed.	Tap root
<i>A. syriaca</i>	tall	Common mw. Aggressive spreader
<i>A. purpurascens</i>		Purple mw. Not easy to find
<i>A. incarnata</i>	med	Swamp mw. Versatile plant
<i>A. viridis</i>		Green antelopehorn. Important early spring plant
<i>A. sullivanti</i>		Prairie mw. Similar to <i>syriaca</i> , but not quite as aggressive

BGO Butterfly Nanny Favorite Annuals

Zinnia	'Cut and Come Again'	'Lilliput'
Lantana		Penta
Dianthus		SuperCal (Petchoa)
Abelia	(skippers love)	
Tall verbena	(<i>V. bonariensis</i>)	

Other ways to provide sweets

Fruit

Life Cycles



Giant Swallowtail

(Instars)

(Length of life cycle)

Differs with each species

Many swallowtails and monarchs similar

Season and weather

Spicebush Swallowtail

Rolls leaf with silk

Small instars - bird-dropping

Cat changes color as ready to pupate

Cloudless Sulphur

Red-spotted Purple

Overwinters as third instar caterpillar inside hibernaculum

Pipevine Swallowtail

Eggs and small cats in clusters

Eastern Black Swallowtail

Many changes in caterpillar appearance

Chrysalis brown or green

Tiger Swallowtail

Bed of silk

Monarch

Caterpillar Defenses

Giant Swallowtail	bird dropping osmeterium mimicry
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Cloudless sulphur Spines	camouflage
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Spicebush Swallowtail	fake eyes mimicry rolled leaf
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Black Swallowtail	mimicry
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Butterfly Defenses

Buckeye	eyes of a deer - startle warning
Red Admiral/Gulf Fritillary	warning colors mimicry

It's hard to be a butterfly

5% reach adulthood
habitat destruction, use of pesticides, predators, disease, weather

Butterfly House Operations

- No pesticide use
- Plants raised so we know no harmful chemicals have been used
- Keep plants healthy

- Work to prevent overpopulation

- Destruction of materials/dead insects
 - Freeze
 - Burn
- Screened house with plenty of circulation

Cleanliness

Bleach

Hands off!

Bacteria, soap, lotion which can be absorbed

Use leaf/paintbrush to move

Caterpillar care

Fresh food

1) live plant, 2) single leaves replaced daily 3) stems in water

Safe home

Mesh container

Paint strainer over plant

Plastic containers

Holes in top or mesh cover

Clean home

Remove frass daily

Line bottom of container

Will also catch fluids released when caterpillars pupate

Also fluids when butterflies emerge

Limit population

Respect Mother Nature

Leave caterpillars alone when leave host plant

Leave to molt

Leave to pupate

Will remain in chrysalis for about 2 weeks

Color change day before emerging

Don't move or jostle

2-4 hours before release

Can wait until next day

Why we raise them (besides the fact that it's fascinating)

Protect from predators

Increase numbers

Monarchs - susceptible to tachinid fly among other things

Swallowtails - wasp lays one egg which emerges as full-grown wasp

Resources

Favorite books

The Life Cycles of Butterflies, Judy Burris and Wayne Richards

The Family Butterfly Book, Rick Mikula

Arkansas Butterflies and Moths, Lori Spencer

Bringing Nature Home, Doug Tallamy

Favorite websites

Journey North: www.learner.org/jnorth/

- Report sightings
- Watch the migration on maps
- Great materials for educators

Monarch Watch: <http://monarchwatch.org>

- Monarch Waystation information
- Tagging
- Scientific information

Monarch Joint Venture: monarchjointventure.org

- Wonderful resources (checkout downloads and links)
- Monarch Larva Monitoring Project: <http://monarchlab.org/mlmp>

Arkansas Monarch Mapping Project:

<https://www.inaturalist.org/projects/arkansas-monarch-mapping-project>

Brochures on demonstration table