

Birds - Bees - Butterflies



We can make a difference-we really can!



- We can be an oasis in a desert of asphalt and single crop farms for birds, bees and butterflies.
- **Small places help.**

Lots of talk about urban yards and small places being important



Honeybees and other Insect pollinators

- **Insect pollination is integral to food security in the United States.** The 2012-2013 winter, indicates an average loss of 45.1 percent of hives across all U.S. beekeepers, up 78.2 percent from the previous winter. This is also a global problem. **About a third of our foods (some 100 key crops) rely on these insects**, including apples, nuts, all the favorite summer fruits (like blueberries and strawberries), alfalfa (which cows eat), and guar bean (used in all kinds of products). **In total, bees contribute more than \$15 billion to U.S. crop production.**

US Dept. of Agriculture says it best:

Without pollinators, we don't eat—it's simple as that—and, at the moment, large numbers of pollinators are dying. With the world's population projected to exceed 9 billion in just the next 30 years or so, that is not a good position for us to be in.



Drone Pollinator 3 million dollars MIT



Honey Bees - not native - from Europe in 1622



Arkansas native bees



- No protective gear necessary-gentle
- Tunnel-Nesting Bees

Solitary bees

Many species of solitary bees are native to Arkansas.

These bees will rarely, if ever, sting!

The need to help pollinators is becoming mainstream



your yard
CAN BEE
the **CHANGE**
#Lawns2Legumes

Not bees

Yellow Jackets

Wasps

Hornets

**Not attracted
to bee
friendly plants**



Butterflies pollinate plants, but in ways different from all other pollinators



- Butterflies fly longer distances
- Butterflies perch and disturb pollen
- Butterflies like hot sun when bees take shelter

Monarch Butterflies

- Counts of the familiar orange-and-black insects, admired for their flights of up to thousands of miles a year, are trending down so sharply that their migration is now under threat.
- **Monarchwatch.org**





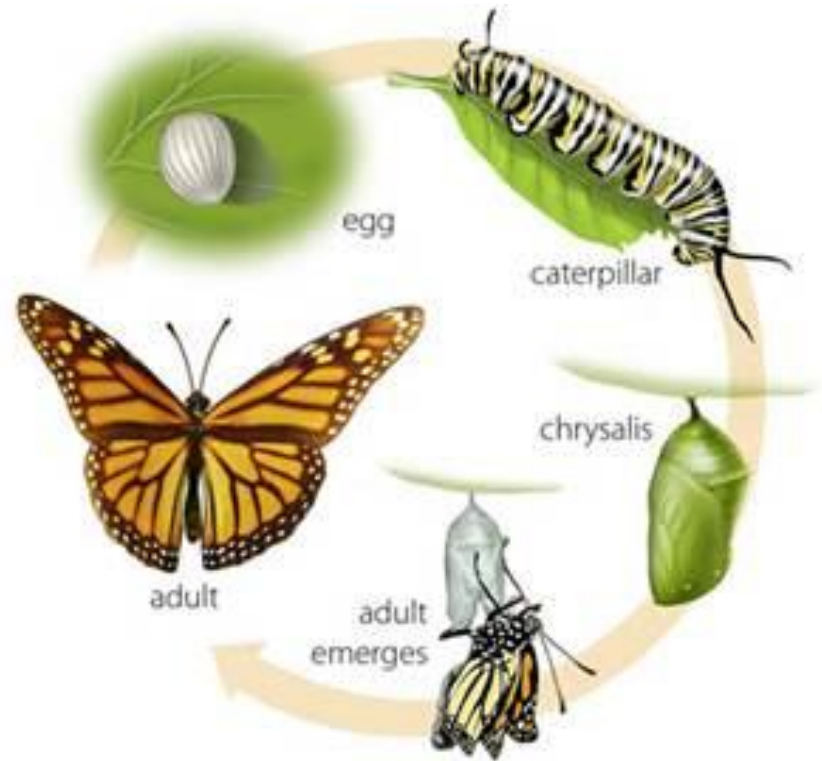
AVERAGE LIFE SPAN OF A BUTTERFLY?

- **Winged time- 1 to 2 weeks!!!!**
- **Total 6-8 weeks**
- In some species, adults that emerge in late summer or early fall hibernate overwinter in a sheltered spot. Also fall-hatched monarch butterflies migrate south in fall and northward in spring. Adults of these species may survive for **8-9 months** or longer.



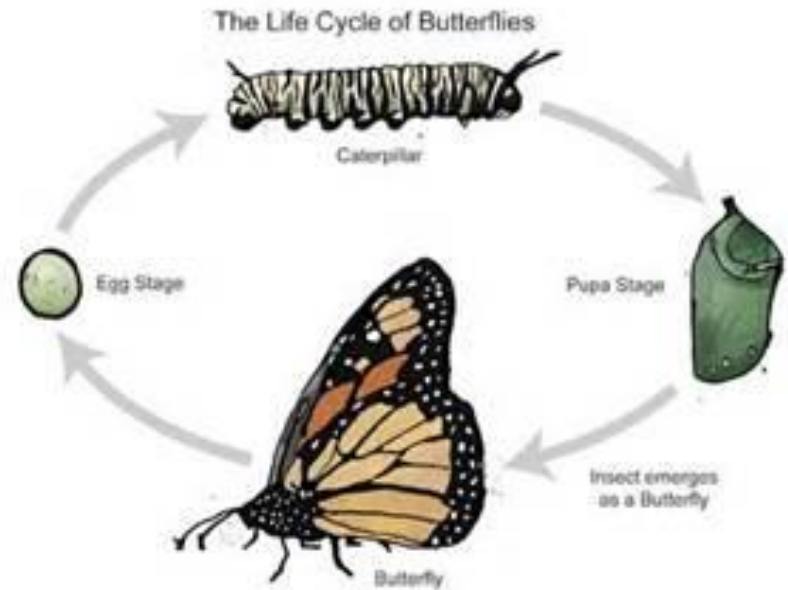
March/April

- **1st generation**
are born - egg,
caterpillar,
chrysalis, adult
butterfly, mate,
lay eggs, die



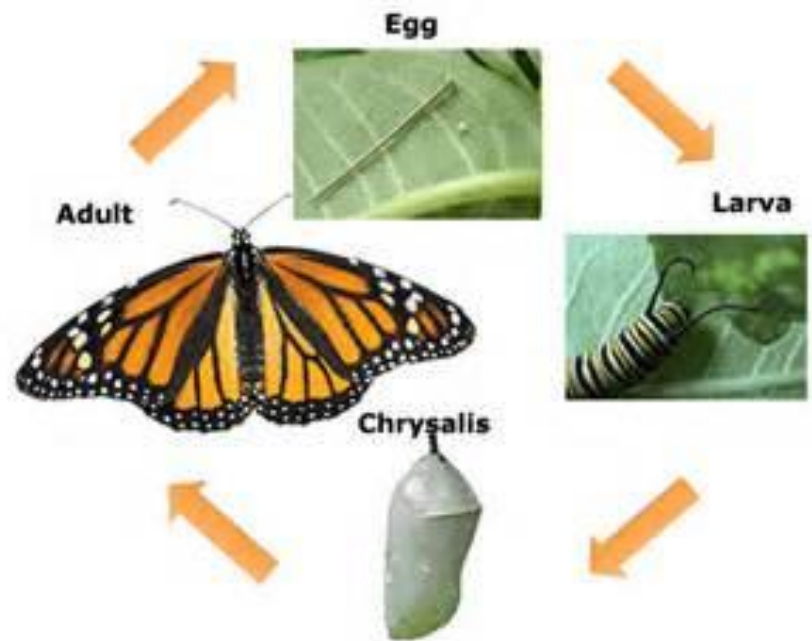
May/June

- **2nd generation**
are born - egg,
caterpillar,
chrysalis, adult
butterfly, mate,
lay eggs, die



July/August

- **3rd generation** are born - egg, caterpillar, chrysalis, adult butterfly, mate, lay eggs, die



Sept/October

- **4th generation** are born - egg, caterpillar, chrysalis, adult butterfly, **no mate, no lay eggs,** **no die,** start migrating **SOUTH,** get there and sleep



February/March

- still 4th generation - wake up, mate, start migrating North and lay eggs on way, die



Similarly, migrating and breeding monarch populations are vulnerable to harsh weather and to human activities that reduce milkweed and nectar sources. This can reduce the number of monarchs that reach overwintering sites. **Every backyard can be an oasis! Quote: Monarchwatch.org**





**5 STAR HOTEL—
your yard?**

3 Basics = 3 Star Hotel

Food



Shelter



Water



Plus One

Arrangement



1. Plant in tiers

- Trees
- Bushes
- Small plants
- Ground covers



2. Evergreen & Deciduous



Red Maple 20

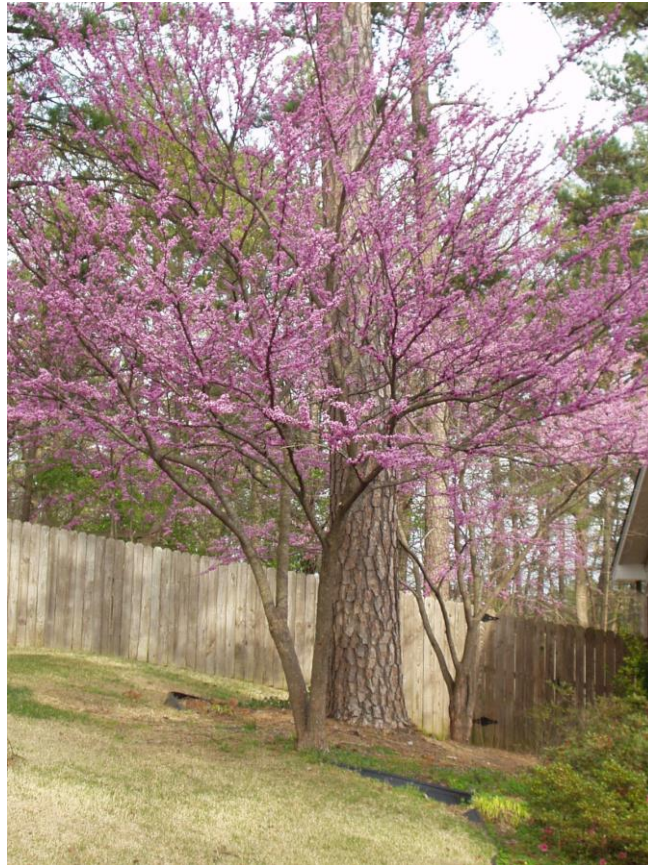


Eastern Red Cedar 50



Redbud

seeds- Goldfinches



Redbud flowers - early nectar source

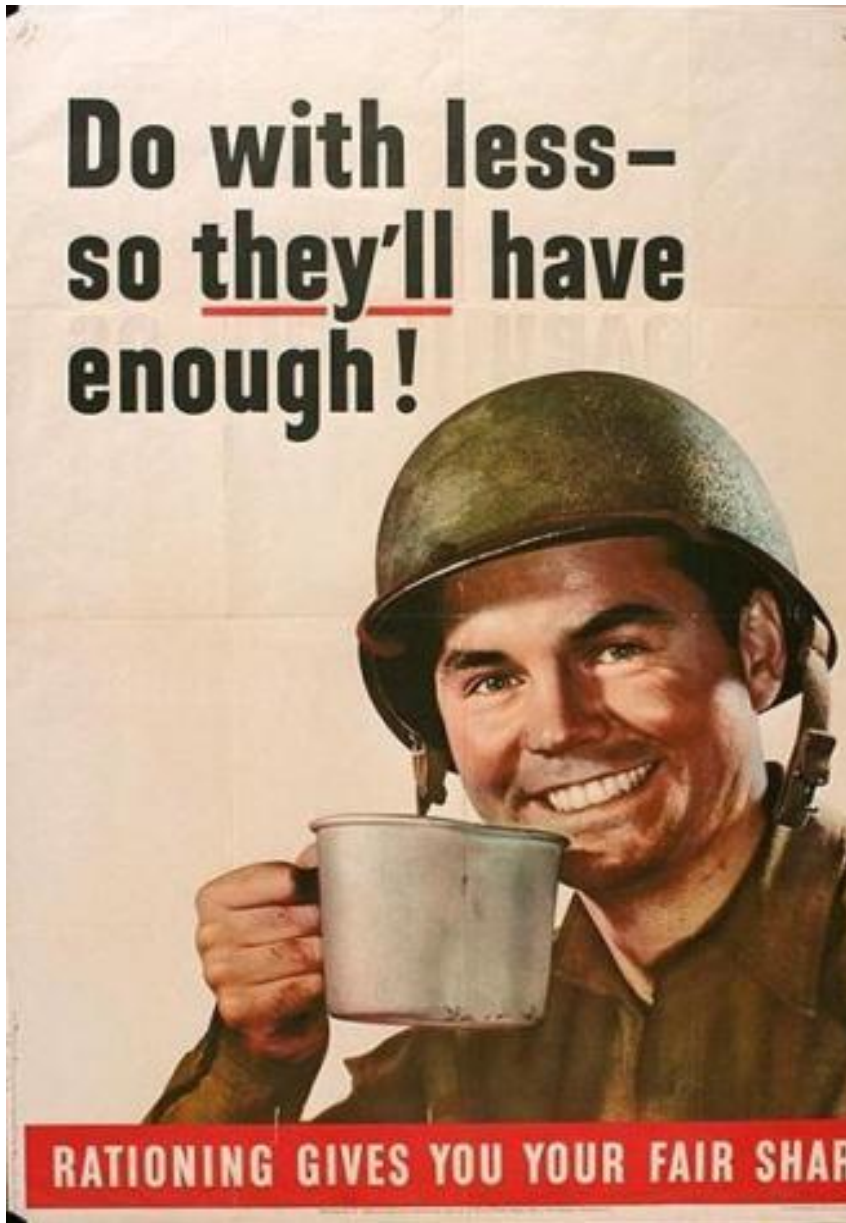


Yaupon 25



Yaupon- berries female only





Nov 29, 1943



Tall Shrubs

Holly



Native hardy hibiscus



Deciduous and evergreen plants must be mixed in the landscape

Medium Plants

Rose



Hydrangea



Beauty Berry



Ninebark



Short Plants



Ground cover



Tiers

In your yard

In pots

In hanging baskets

Tall-medium-short-trailing

- Thriller, filler, spiller
- Odd numbers



3. Plant in Drifts

Plant in Tiers

Plant in Drifts

- Tall to short
- Deciduous/Evergreen



All Arkansas native plants



Butterflies love drifts



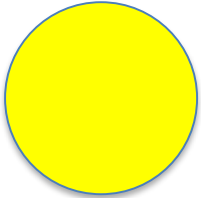
Bees love Drifts



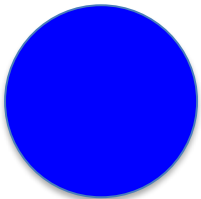
Colors

Bees

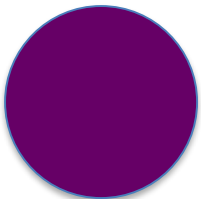
- Yellow



- Blue

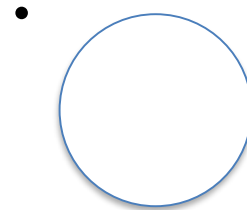


- Purple

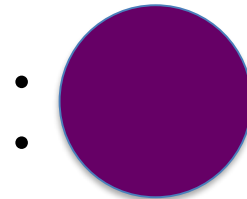


Butterflies

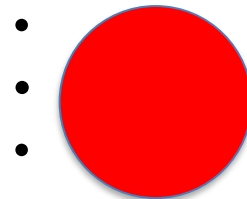
- White



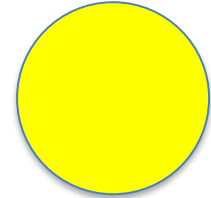
- Purple



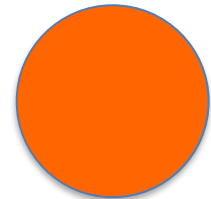
- Red



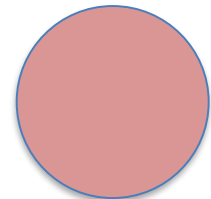
- Yellow



- Orange



- Pink



Wish List to Come Visit

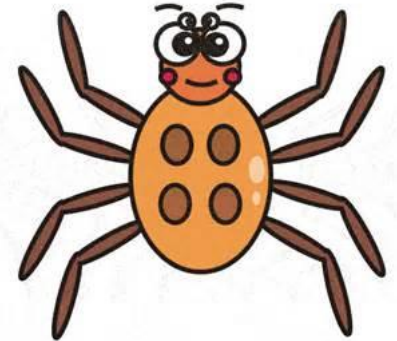
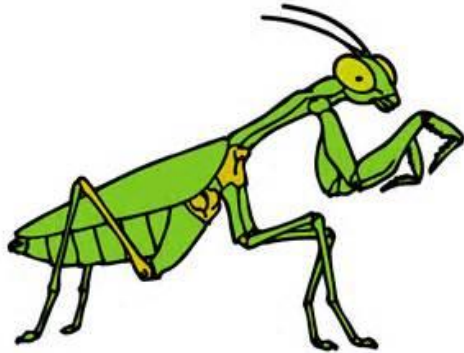
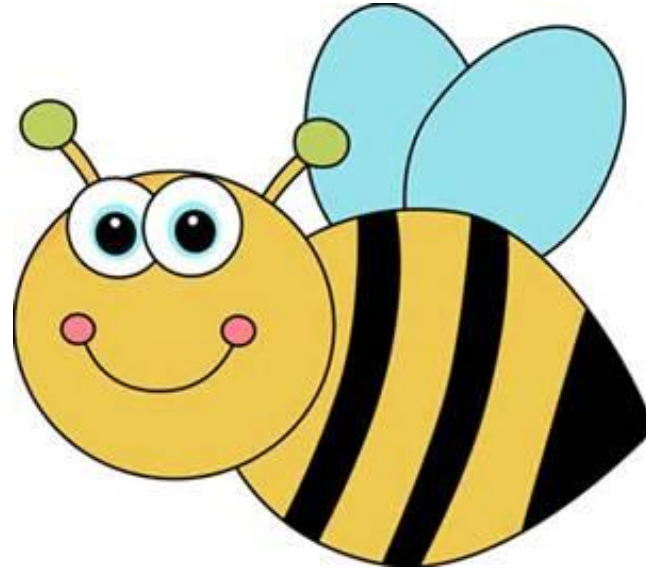
Bees

- Nectar - to make honey
 - Drifts
 - Sunny
 - Water/Shallow- bird bath, drip
 - Flowers spring to fall
 - Native plants
 - Flower shapes-varied
pollinator shapes
- Pollen - for food and energy

Butterflies

- Nectar
- Drifts
- Sunny
- Water/Shallow - bird bath, drip
- Flowers spring to fall
- Native plants
- Flower shape/flat to land
- Host plants/lay eggs
- Rocks/ flat, warm
- Shelter from wind

Birds will come to eat



Your help makes a difference!

Wise decisions-plants and arrangement



Wise decisions- management-care, pesticides



Basics = 3 Star*** Food, Shelter, Water, Arrangement

Plant in tiers

Evergreen – deciduous

Drifts

Colors

4 Star****

Research

Supplemental Shelter

Supplemental Food

Special Water Drip/Mist

Spring to Fall flower or berries

Do research = 4 Star

.org .gov. or .edu sites - make informed decisions

- **uaex.edu**

Gives accurate info
for Arkansas

- **monarchwatch.org**

Factual info,
migration maps

- **birds.cornell.edu**

allaboutbirds.org

Fabulous! Cornell
University

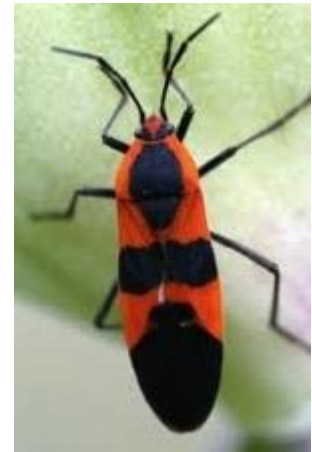
- **si.edu**

Smithsonian has lots
of info about all kinds
of insects

Monarch caterpillar



**Asclepias tuberosa(Orange)/incarnata
(Swamp)/purpurascens(Purple)/sullivantii
(Prairie)/varigata(White)/viridis/(Green)**



Large and small milkweed bugs



Large
piercing,
sucking
Feeds on
seeds, stems,
leaves- leave
alone



Small eats
milkweed seeds,
caterpillars, and
chysalides- leave
alone



- **Aphids on Milkweed- generally Oleander aphids-not native to USA- generally orange**
- **Aphids do not bother the caterpillar**
- **Mash with your fingers or spray with hose**



Lady Bugs



Ladybugs -
they eat
aphids but
they also eat
Monarch
eggs and
larva!

Monarch Butterfly eggs



Jane Sulley

ARKANSAS

Butterflies and Moths



Lori A. Spencer

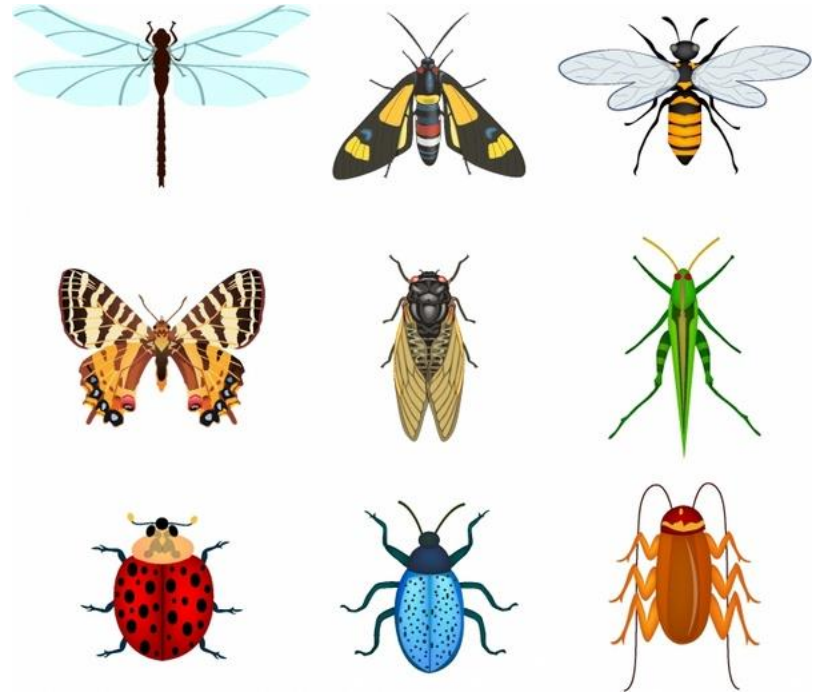
With a Foreword by Robert Michael Pyle

Factual decisions not common sense decisions



Insects so much to learn

- 200 million to one
- Food chain
- **Most are beneficial**
- Destructive



"If you have a backyard, this book is for you."
—Richard Louv, author of *Last Child in the Woods*

Bringing Nature Home

UPDATED AND EXPANDED

**How You Can
Sustain Wildlife
with Native Plants**

Douglas W. Tallamy

Foreword by Rick Darke

Shelter = 4 Star



Build to specifications-no treated wood

Food = 4 Star



Keep clean!

Black Oil Sunflower Seed

- Over all best
- All the pretty birds
- Cornell University
- **birds.cornell.edu**



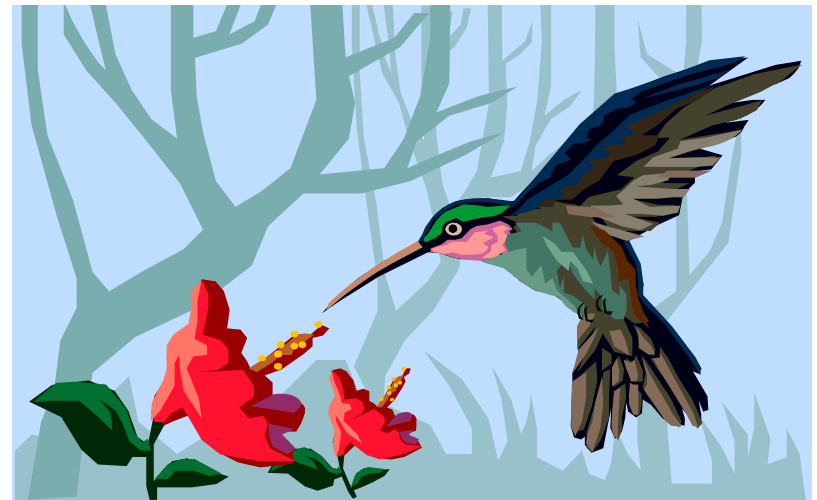
Striped Sunflower Seed/ Corn/ Milo/ “ Bird Seed ”

- Not good choices
- Blackbirds
- Pigeons
- Squirrels love



Hummingbirds

- Do not use artificial sweetener or honey
- No pesticides/eat insects
- 60% diet insects
- Pound for pound insects contain more protein than beef.
- Flowers vary in nectar from 10 to 80% calories per ounce hummers prefer 32%
- Nectar is sucrose, glucose, and fructose.



Feeder close to window

- Do not hit window with force if scared
- Remind you to clean
MOST IMPORTANT
- **1 part sugar/ 4 parts water- -
boil/cool/
refrigerate**



Butterfly feeder

- 1 part sugar/ 4 parts water- - boil/cool/ refrigerate, **same as hummingbirds**
- Overly ripe fruit
- **CLEAN**



Water = 4 Star



Keep clean!

Spring to Fall Interest = 4 Star



Basics = 3 Star*** Food, Shelter, Water, Arrangement

Plant in tiers

Evergreen – deciduous

Drifts

Colors

4 Star****

Research

Supplemental Shelter

Supplemental Food

Special Water

Spring to Fall flower or berries

5 Star *****

No pesticides

Go native

Dust bath – Puddling – Veggies

No cats outside!



No Pesticides = 5 Star



Birds feed insects to their young =
protein and fats



Insects and other arthropods, particularly spiders that themselves eat insects, are essential dietary components for 96 percent of North American terrestrial bird species. **Insects are extraordinarily high in protein: They have up to twice as much protein, pound for pound, as does beef. Insects also have organs in their abdomens called fat bodies that are rich in high-energy lipids. Both protein and fat are the stuff of growth and thus make up the bulk of what breeding birds need to feed their nestlings.** Quote from Douglas W. Tallamy

















Use Natives = 5 Star



You do not have to start over



What is Native?



- Always in Arkansas
- Before Columbus

Nonnatives contain fewer insect prey, which can result in increased starvation by nestlings relying on insect prey as food. This notion is supported by the finding that about 120 species of insects are found feeding on purple loosestrife in Europe, whereas only 12 were found in a study in southern Illinois. In 2000 a similar study, by Karen Burhardt, was conducted in suburban landscapes found that **landscapes dominated by Asian ornamentals were correlated with a significant loss in breeding bird species and abundance.**



Carolina Chickadee









78 caterpillars per baby!
6 to 8 babies!



16 to 18 days





Every three minutes

6am to 8pm



**about 10,000
per nest**



Lots of ins and outs!



1/3 ounce





2.7oz



1oz



1.4oz



2oz



3oz



3oz

No food = No live babies



Native oaks most productive, 557 species of caterpillars



Bradford Pear and Crape Myrtle zilch



Great Site: Pollinator Partnership

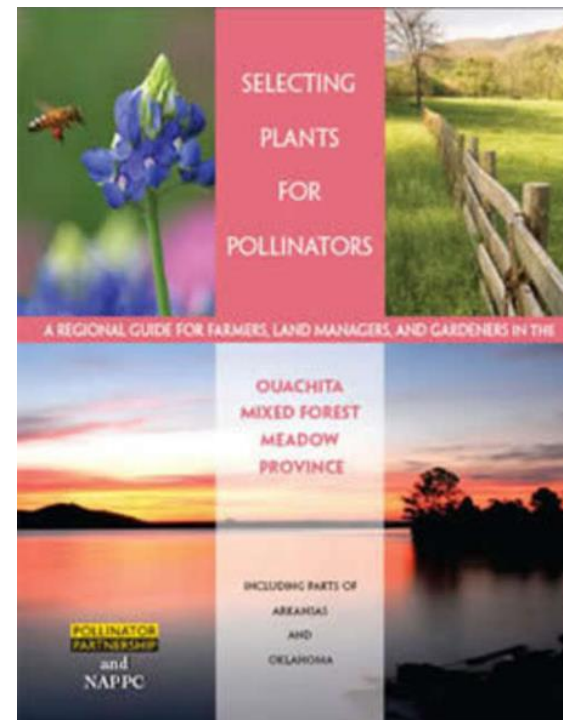
POLLINATOR PARTNERSHIP

U of A DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Cooperative Extension Service

Protect their lives. Preserve ours.

- Our site, typed in Native bees-got info on PP site – ours, UAEX.EDU, has vides and lots of info on pollinators.



Pollinator Partnership app-free



- Common name
- Botanical name
- Color
- Height
- Flower season
- Sun
- Soil
- Which pollinators will visit

Dust bath and puddling spots = 5 Star

Birds=Dust bath



Butterflies = Puddling



Bees: let your veggies bolt = 5 Star



5 Star



No Cats Scientists from the Smithsonian Conservation Biology Institute and the Fish and Wildlife Service estimated that domestic cats in the United States — both the pet Fluffies that spend part of the day outdoors and the unnamed strays and ferals that never leave it — **kill a median of 2.4 billion birds and 12.3 billion mammals a year.**



[CATBIB INFO](#)

[SCIENTIFIC PROOF](#)

[TESTIMONIALS](#)

[FAQ](#)

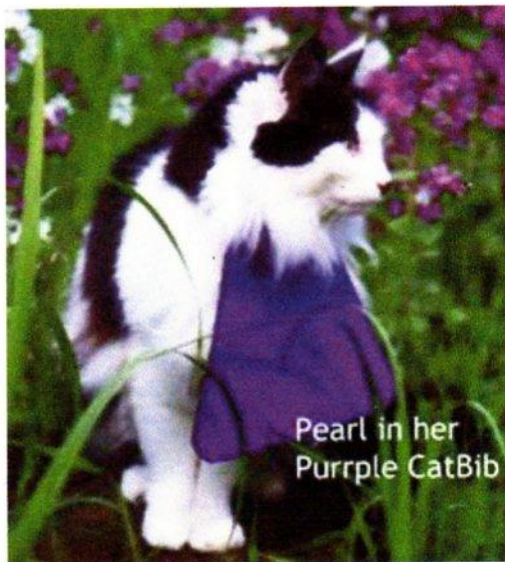
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Thursday, August 16, 2007

How to stop your cat from catching wild birds!



Pearl in her Purrple CatBib

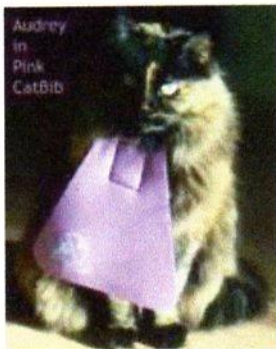
Welcome to Cat Goods, Inc, makers of the CatBib. The CatBib stops cats from catching wildbirds! Invented by a bird-feeding cat lover. It protects wild birds whenever your cat is outdoors. With the CatBib, your cat can be allowed outdoors for fresh air and exercise. The birds will be protected, and you will have a clear conscience.

[Independent University trial proves the CatBib works!](#)

[BIOLOGICAL CONSERVATION 137, Issue 3, July 2007, Pg 341-348](#)

[Over 100 testimonials!](#) [More information...](#)

[Secure online ordering | Free worldwide shipping](#)



Audrey in Pink CatBib

[Australian customers now have the option of ordering from an Australian distributor.](#)



Thanks for caring about cats and birds!

Cats wearing schrunchies



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Plant in tiers

Evergreen – deciduous

Drifts

Colors

4 Star****

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Supplemental Food

Special water features

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