

A Year in the Garden

Presented by Ann Bone, MGEV

July 11, 2026

Disclaimers !!

This presentation focuses Atlanta's most common:

- Resident Birds (11 species)
- Migratory Birds (14 species)
- Native Nectar/Berry-producing Trees (10 species)
- Native Nectar/Seed/Berry-producing Perennials (10 species)
- Native Nectar/Seed-producing Annuals (8 species)
- Pollinators (11 species)
- Garden Pests (9 Species)

None of the references consulted seem to quite agree with any of the others, so take all this information with a grain of salt!

Mother Nature is ever-evolving!

January

DORMANT
GARDEN



Looks empty and peaceful, but.....

Pupae of beetles, cutworms, grubs, ladybugs, aphids, hornworms and vine borers.
Overwintering ladybugs, squash bugs, spiders and queen bees (Carpenter, Sweat and Bumble)



To clean up or not to clean up?

Clean out and clean up the food-growing beds

- Pull up and discard dead/bolting plants.
- Remove pest habitats
- Turn the soil to expose eggs, larvae and nests
- Watch cool-season crops (kale, spinach, collards, etc) for aphid eggs and hose off

Elsewhere, leave the leaves!

- Yard areas
- Wooded areas
- Perennial beds

January



Most year-round birds are still sheltering in shrubs and winter debris.

- Northern Cardinal
- Blue Jay
- Tufted Titmouse
- Carolina Wren
- American Robin
- Brown Thrasher
- Northern Mockingbird

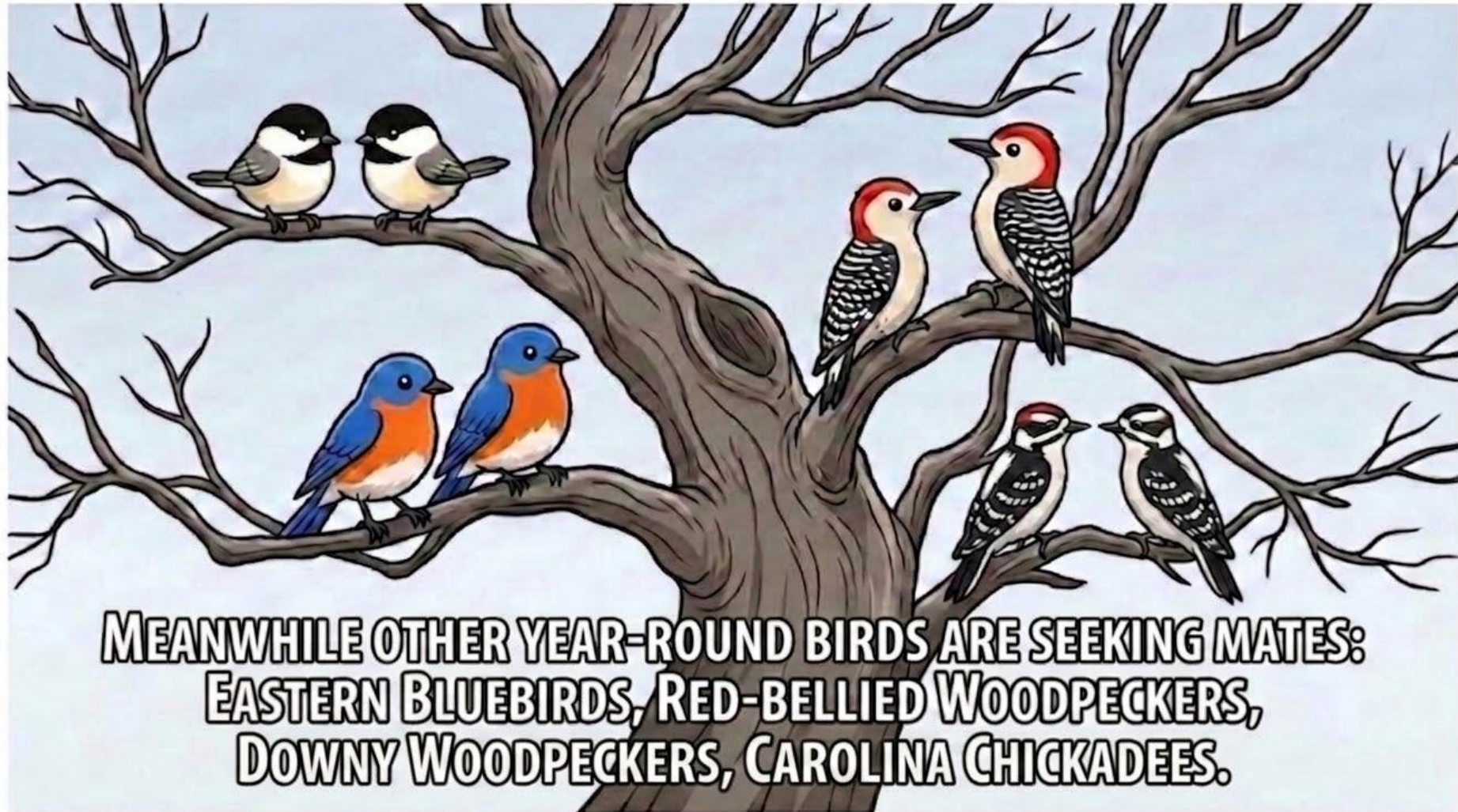


FORAGING FOR FOOD

Year-round birds search winter debris for vital insects, pupae, chrysalises, and cocoons.

- Insect Larvae and Adults
- Pupae and Chrysalises
- Protective Silk Cocoons





**MEANWHILE OTHER YEAR-ROUND BIRDS ARE SEEKING MATES:
EASTERN BLUEBIRDS, RED-BELLIED WOODPECKERS,
DOWNY WOODPECKERS, CAROLINA CHICKADEES.**

Hold-over Winter visitors are still here....



- Cedar Waxwings are still here in flocks, focused on one mission:
- Consuming winter berries.
- Watch out for stripped native shrubs (like hollies and beautyberries)!

February comes along.....

Red Maples bud and begin producing nectar.

Bluebirds are checking out nest boxes.

The Northern Cardinals, Blue Jays, Tufted Titmice, Carolina Wrens, American Robins, Brown Thrashers and Northern Mockingbirds start mating....there is much bird calling, aerobatics, squabbling, chasing.

The insects and pollinators are still sheltering in the winter debris, hoping not to be eaten by hungry birds.



Sparrows and Goldfinches Arrive

They love the seed heads of coneflowers and black-eyed Susans.



Purple Martins Arrive

- ➞ Typical arrival window:
Early to mid-February.
-  Arrive to consume
abundant early-season
flying insects.
-  Heavily reliant on
human-maintained
gourd nesting colonies.



March Arrivals

CHIPPING SPARROWS:

BARN SWALLOWS:

BROAD-WINGED HAWKS:



March Awakening: Serviceberry & Redbud Produce Nectar

SERVICEBERRY (*Amelanchier* spp.)

1. BUDDING: Fuzzy, green and bronze buds emerge early.
2. BLOOMING: Showy white, star-shaped flowers appear in clusters.



EASTERN REDBUD (*Cercis canadensis*)

3. BUDDING: Distinctive cauliflory - tiny magenta buds burst directly from old wood.
4. BLOOMING: Dense clusters of vibrant, pink-to-lavender pea-like

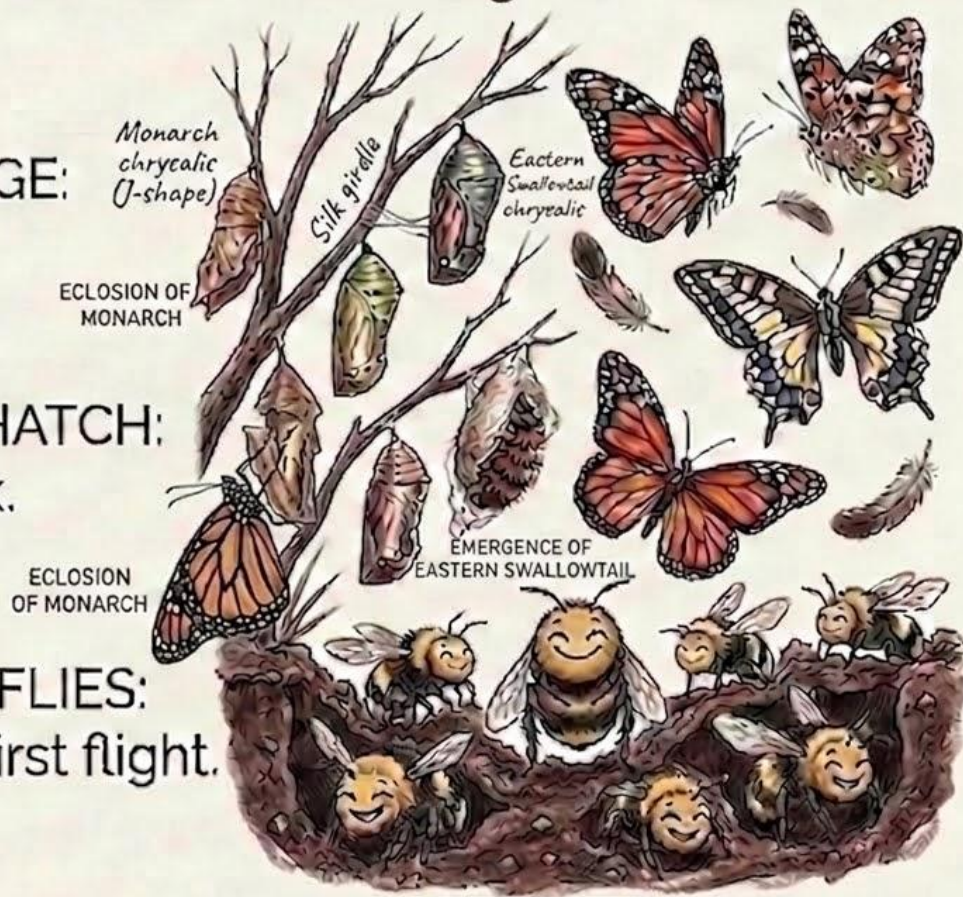


The March Awakening

QUEEN BUMBLEBEES EMERGE:
From dark soil and leaf litter.

CHRYSLISES & COCOONS HATCH:
On bare twigs and under bark.

RELEASING SPRING BUTTERFLIES:
Delicate wings unfurl for the first flight.



The Next Wave: Pest Eruptions

1. **APHID EXPLOSION:** Form dense clusters on new growth; rapidly multiply.
2. **LACE BUG INVASION:** Hiding on leaf undersides, identified by distinct wings and stippling damage.
3. **BUDS DECIMATED:** Voracious appetites of pests destroy buds and new shoots, stunting growth.



WASPS EMERGE:

- Queen paper wasps exit winter shelter.

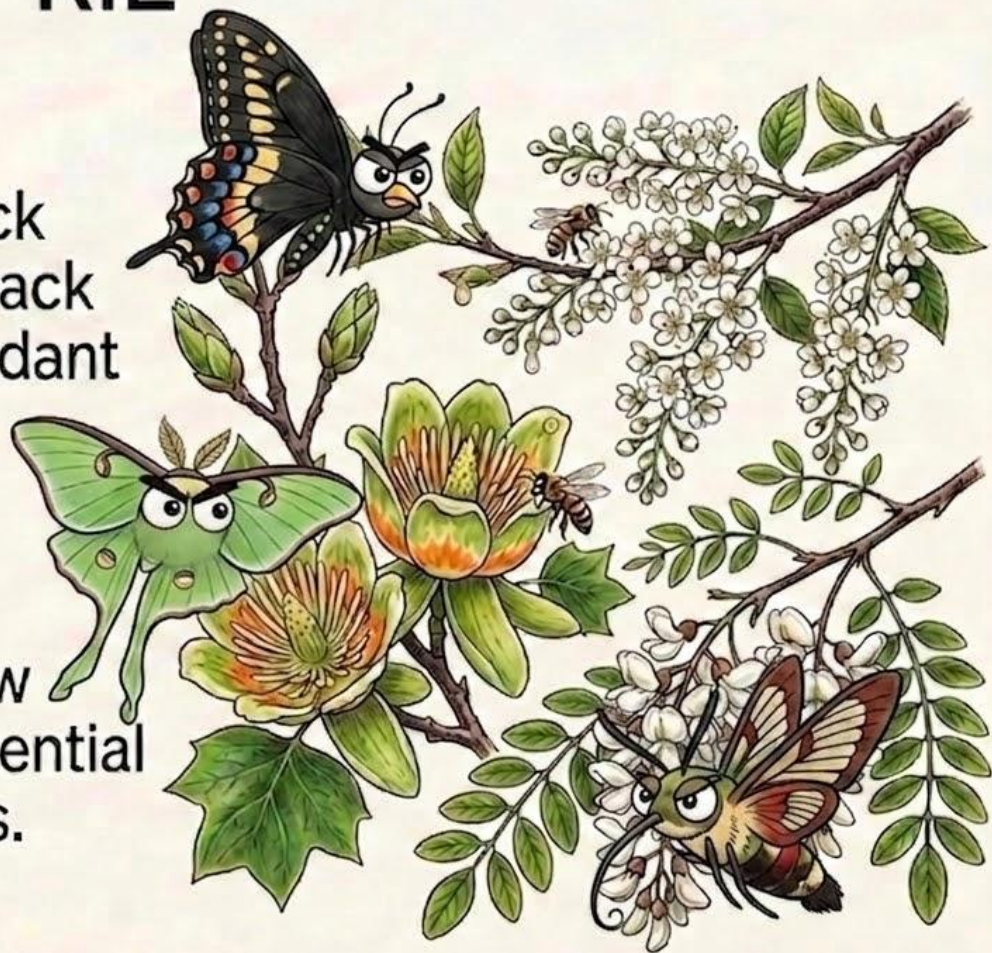
ANTS ACTIVE:

- Worker ants begin foraging and cleaning.



APRIL

- **EARLY TREES BLOOM:** Black Cherry, Tulip Poplar, and Black Locust trees produce abundant blossoms and nectar.
- **POLLINATOR ACTIVITY INCREASES:** The spring flow attracts bees and other essential pollinators to these sources.



EARLY SPRING NESTING

- NORTHERN CARDINALS: (*Cardinalis cardinalis*)
Male feeds female.
They select a dense shrub or vine.
Build cup-shaped nest.
- CAROLINA CHICKADEES: (*Poecile carolinensis*)
Look for decaying tree cavities.
Monogamous pairs.
Line nest with moss.
- BROWN THRASHERS: (*Toxostoma rufum*)
A secretive, pair-bonded species.
Weave large, sturdy stick nest.
Hidden in thick brush.



LATE APRIL ARRIVALS

- **MIGRANTS ARRIVE**
Species like Ruby-throated Hummingbird, Chimney Swift, and Yellow Warbler return to breed and establish territories.
- **FOREST BIRDS ESTABLISH**
Wood Thrush and Ovenbird appear in suitable understory and ground foraging habitats.



April

Pests: Invading the Garden



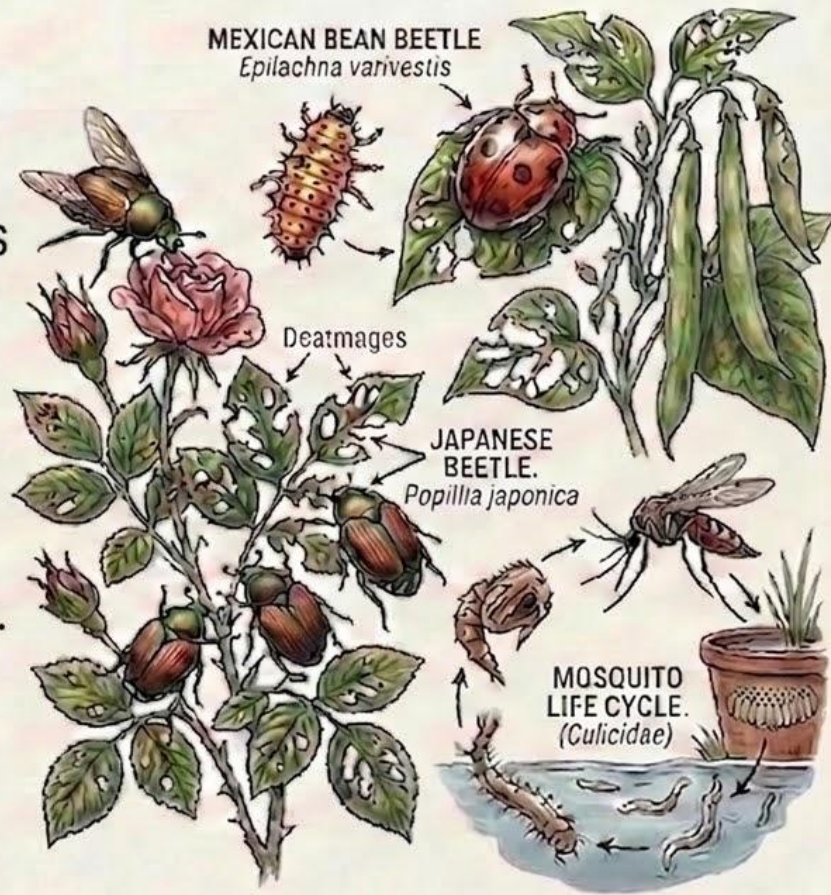
- **MEXICAN BEAN BEETLE:** Damage to crops like to beans, cucumbers and others
- Spiky larvae and copper beetles.



- **JAPANESE BEETLE:**
- Metallic sheen and group feeding.



- **MOSQUITO:** Impact of standing water
- Breeds in water; annoyance and vector risk.



Subterranean Activity: Termites

April

1. **TERMITE SWARMERS EMERGE:**
Swarms of winged reproductive termites (alates) appear on warm spring days.
2. **SEEKING NEW HABITATS:** They locate decaying wood and moisture sources like dead logs and garden borders.
3. **ESTABLISHING COLONIES:** Burrowing into the wood and soil to start a new underground colony, threatening structure.



GARDEN DRAMA: APHIDS AND BENEFICIALS

Aphids congregate in large, destructive masses on tender new growth and developing cucumbers, sucking sap. (*Cucumis sativus*),

Beneficial insects, such as adult ladybugs and their alligator-like larvae, arrive to consume hundreds of aphids.

They provide essential biological control.



Slugs and Snails! Yuck...

1. **EMERGENCE AND FEEDING:** Slugs and snails (Gastropoda) emerge from soil and leaf litter during damp conditions and at night.
2. **CHEWING HOLES:** They use a radula to rasp large, irregular holes and feed on the foliage of Hostas (*Hosta* spp.).
3. **EGG LAYING:** In cool, moist soil at the plant's base, they lay clusters of transparent, jelly-like eggs.



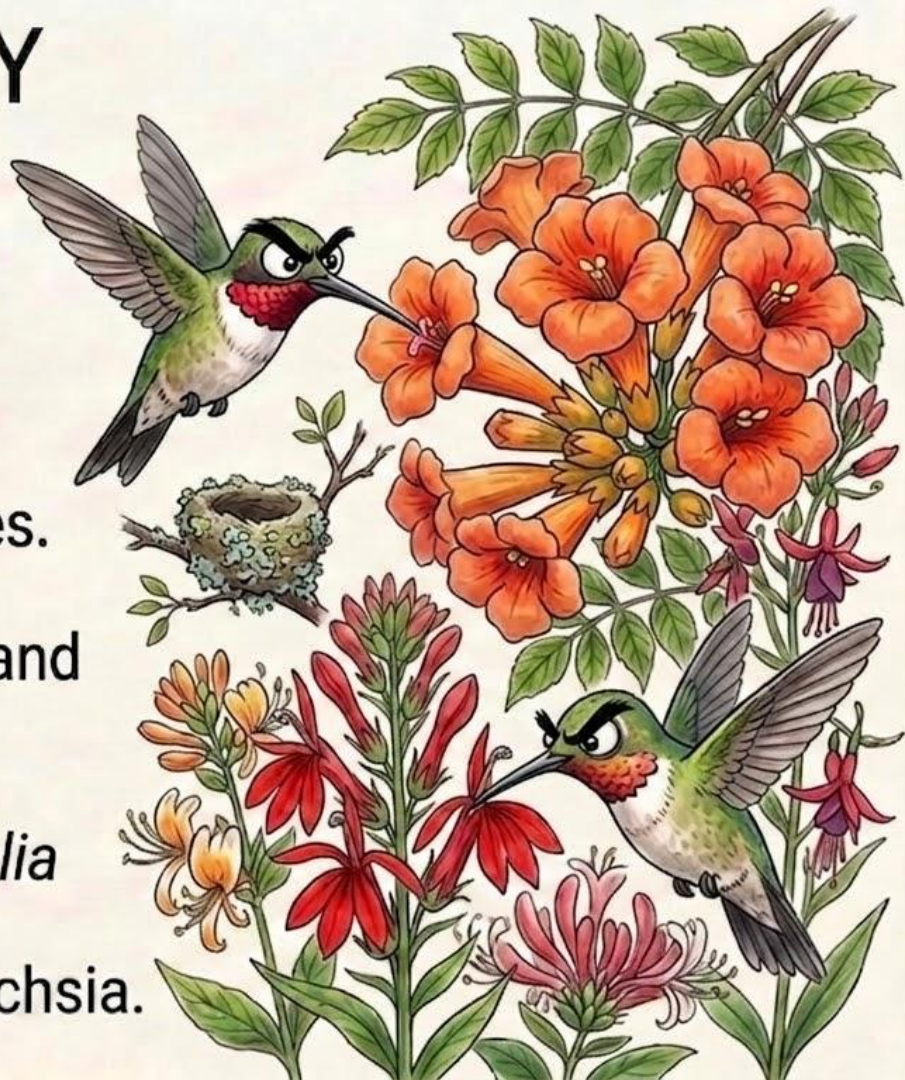
MAY IS HERE

- **NEW GROWTH & BLOOMS:** Daisy Fleabane (*Erigeron annuus*), Indian Blanket (*Gaillardia pulchella*), and Butterfly Weed (*Asclepias tuberosa*) begin their first strong blooms.
- **NECTAR GALORE:** These species, along with Southern Magnolia (*Magnolia grandiflora*) and Sweetbay Magnolia (*Magnolia virginiana*), provide abundant nectar and pollen for essential pollinators.



MAY

- **NESTING AND NECTAR:** Hummingbirds (Ruby-throated), beginning nest construction and establishing around consistent nectar sources.
- **FAVORITE BLOOMS:** Key native and exotic species provide essential food: Trumpet Vine (*Campsis radicans*), Cardinal Flower (*Lobelia cardinalis*), Coral Honeysuckle (*Lonicera sempervirens*), and Fuchsia.



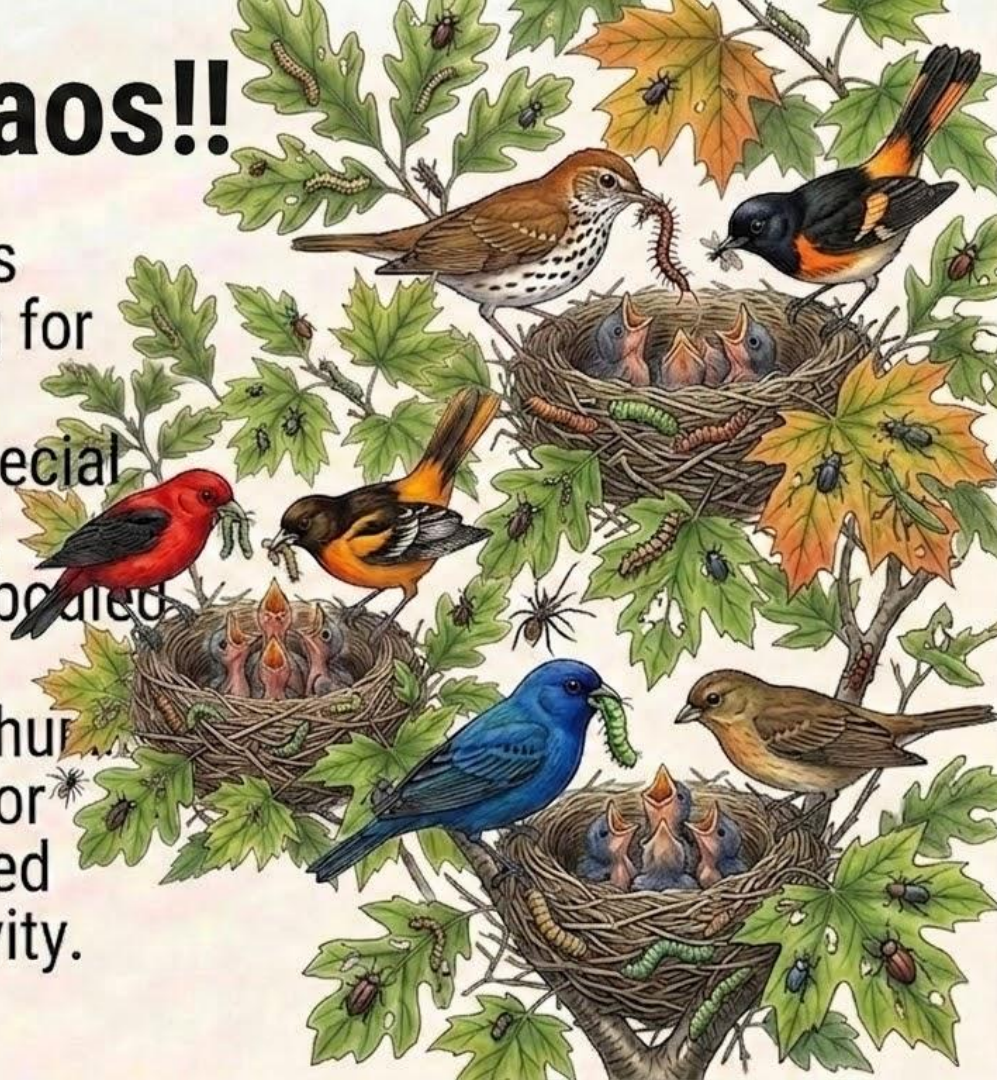
MAY ARRIVALS

- **They just keep coming (loudly):**
Brilliant males of the Indigo Bunting, Scarlet Tanager, Baltimore Oriole, and Rose-breasted Grosbeak establish territories with loud, complex songs.
- **MATING & COURTSHIP:** Pairs form through intricate flight displays, wing-fluttering, and chasing, solidifying bonds around fresh foliage and future nesting sites.



Chaos!!

- **FEEDING FRENZY:** Adult birds transition to intense foraging for protein-rich insects.
- **CATERPILLARS & GRUBS:** Special focus on capturing abundant caterpillars, larvae, and soft-bodied insects.
- **NESTLING NEEDS:** Constant hunting provides essential nutrition for rapidly growing, newly hatched chicks, driving non-stop activity.



Pollinators are busy...

- **POLLINATION POWER:** Diverse pollinators ensure strong fertilization and better fruit and seed production.
- **NECTAR NEST EGG:** They collect nectar and pollen to feed their nests and growing larvae.
- **ACTIVE FORAGING:** High-energy needs keep them moving constantly between different flowers.



The Long-Distance Travelers Depart

- CEDAR WAXWINGS: Sleek long-distance travelers.
- MIGRATION: Journey north to mate and nest in cooler weather.
- FOOD: Fuel up on early spring berries.



June Arrives

- **NECTAR EXPLOSION:** Prolific blooming of summer perennials like bee balm and stokes asters provides an essential nectar source for bees and butterflies.
- **BUDDING BEAUTY:** Sourwood trees begin budding, preparing their fragrant flowers which are a key nectar flow for bees.
- **BLOOM & SEED:** Black-eyed Susans and Purple Coneflowers are in full bloom, attracting pollinators, while early flowers begin setting seed, starting the cycle of food for birds.



Young Birds Fledge



- **NEST DWELLERS:** Fledglings remain in the nest, receiving continuous care and feeding from parents.



- **THE JUMP:** Parent birds encourage fledglings to take their first flights, offering food as motivation.



Pests in Action

- **HORNWORM DESTRUCTION:** Large Tomato Hornworms aggressively consuming foliage, stripping a tomato plant to its bare stems.
- **VINE BORER INVASION:** A squash vine stem is tunneled out by an established larva, causing the entire vine to wilt and fail.



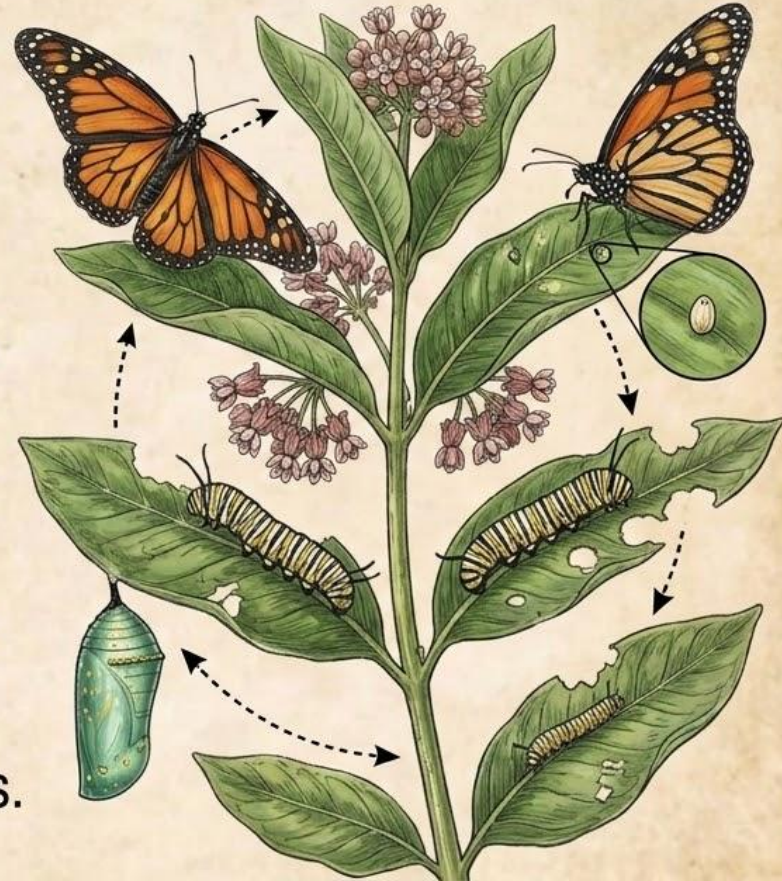
Hummingbirds

FORAGING & DARTING:
Hummingbirds are attracted to tubular red and orange summer flowers (e.g., Cardinal Flower, Bee Balm). They must feed frequently due to high metabolism.



Monarch Life Cycle on Milkweed

- **MATING & EGG LAYING:** Adult Monarch butterflies find partners for mating. Female Monarchs selectively lay single eggs, usually on the underside of young Common Milkweed leaves.
- **CATERPILLARS FEEDING:** After hatching, the caterpillars (larvae) feed exclusively on Milkweed, quickly growing through several stages (instars). They sequester toxins from the plant for defense.
- **CHRYSALIS FORMATION:** When fully grown, the caterpillar spins a silk pad, hangs upside down, and molts one final time to form a beautiful, jade-green chrysalis with gold spots.



June Nocturnal Activity

- **MOTH POLLINATION:** Many moths are critical night pollinators, attracted to heavily scented, pale, or night-blooming flowers (e.g., Moonflower, Evening Primrose). Their navigation uses moonlight.
- **BAT FORAGING:** Nocturnal bats use echolocation to hunt. A single bat can eat up to 1,000 small, night-flying insects (especially pests like moths) in one hour.
- **NIGHT-FLYING INSECTS:** Beyond moths, numerous insects are active. Beetles (e.g., June beetles), crickets, and katydids are busy. Fireflies use bioluminescent signals.



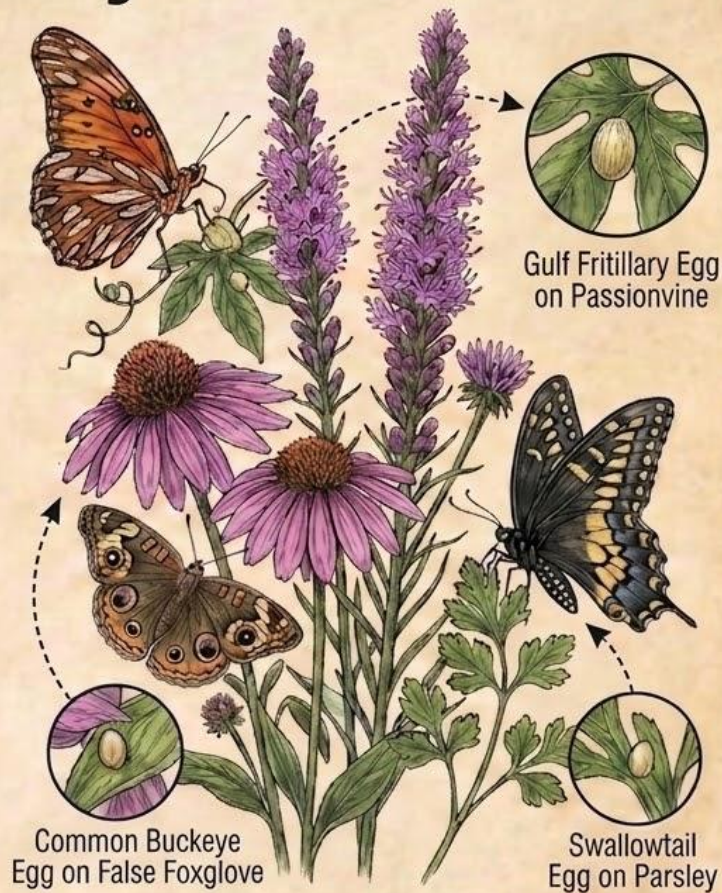
July's Rich Blooms

- **CARDINAL FLOWER** (*Lobelia cardinalis*): Bright red spikes. *Nectar*: Attracts Hummingbirds and specialized bees.
- **ANNUAL SUNFLOWER** (*Helianthus annuus*): Large, vibrant yellow heads. *Nectar*: Visited by diverse native bees and butterflies.
- **PARTRIDGE PEA** (*Chamaecrista fasciculata*): Showy yellow flowers with red centers.
- **JOE-PYE WEED** (*Eutrochium fistulosum*): Massive, dusty pink-purple flower clusters. *Nectar*: Powerful monarch and swallowtail magnet.
- **BLAZING STAR** (*Liatris* spp.): Spikes of feathery, purple florets. *Nectar*: High quality, late summer butterfly food.



July is Peak Butterfly Time

- **GULF FRITILLARY:** Large orange-and-black butterflies that visit Liatris spikes for nectar. Females seek Passionvine to lay their ribbed yellow eggs.
- **COMMON BUCKEYE:** Recognizable by large eyespots and a fondness for nectar-rich Coneflowers. They lay dome-shaped green eggs on host plants like False Foxglove and Plantain.
- **SWALLOWTAILS** (e.g., Black Swallowtail): Large, striking butterflies often seen among Liatris and garden blooms. Females lay tiny spherical eggs on plants in the Carrot family, including Parsley and Dill.



Hummingbirds Go Crazy

- **UNPARALLELED ENERGY:** A single Ruby-throated Hummingbird can visit up to **2,000 flowers in a single day**, driven by an incredible metabolism. This massive scale makes them essential pollinators.
- **METABOLISM & DIET:** To support their constant activity, they consume 3 to 14 times their body weight in nectar daily.



Early Migration Starts

- **WARBLER'S NIGHT VOYAGE:** Hundreds of species begin their silent, nocturnal journeys.
- **NAVIGATION BY STARS:** Warblers utilize celestial cues and magnetic fields to navigate thousands of miles south.
- **PURPLE MARTINS:** Gather by the thousands before leaving at dusk.



JULY



JULY'S PERSISTENT PESTS IN THE GARDEN HEAT



APHIDS



- Rapidly multiply in the warm weather
- Cover soft new growth
- Distort and curl leaves

WHITEFLIES



- Swarm when plants are disturbed
- Secrete sugary honeydew
- Cause silvering and virus transmission

LEAFOOTED BUGS



- Feed with piercing-sucking mouthparts
- Introduce cosmetic defects and decay
- Form large, aggregate populations

STINK BUGS



- Broad, shield-shaped bodies
- Damage fruit, nuts, and crops
- Distinct odor when threatened

CATERPILLARS



- Larval stage of moths/butterflies
- Rapidly defoliate plants
- Vary widely in species and diet

JULY'S BUZZING & BENEFICIAL INSECTS

JULY
HEAT
INDEX



95°F/35°C

HONEYBEES



- Crucial crop pollinator
- Work for the hive
- Complex social structure

NATIVE BEES



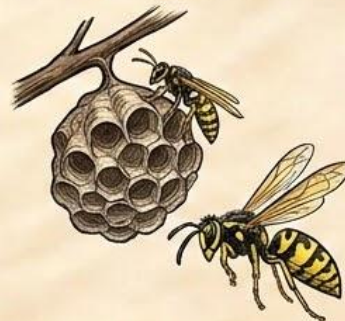
- Diverse solitary species
- Highly efficient pollinators
- Adapted to local flora

LADYBUGS & LARVAE



- Voracious aphid predators
- Commercial control option
- Active in warm temperatures

WASPS & YELLOWJACKETS



- Generalist predators
- Control garden caterpillars
- Defend nests aggressively

MOSQUITOES



- Breed in stagnant water
- Vector for diseases
- Attracted to heat and CO₂

And the Crescendo of the Summer.....

FIREFLY MAGIC: A SUMMER TWILIGHT SPECTACLE

1. SPECIES-SPECIFIC
FLASHES



Photuris

1. SPECIES-SPECIFIC
FLASHES

2. MATING
COMMUNICATION



Photinus

2. MATING COMMUNICATION
Males synchronize complex flash patterns (dances in the dark) to signal to females on foliage.

3. A CHOREOGRAPHED
BALLET



Pyractomena

3. A CHOREOGRAPHED BALLET
BANCES



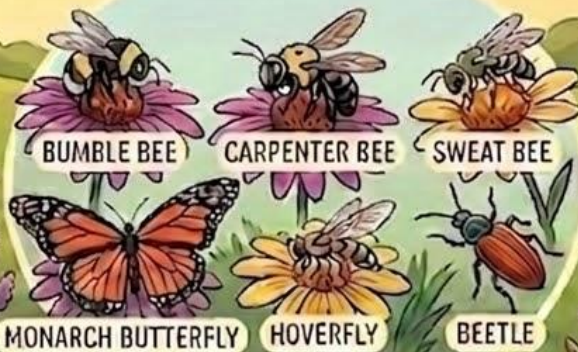
AUGUST BLOOMS

- **Native Floral Resources:** Goldenrod (*Solidago*) and Tickseed Sunflower (*Bidens*) provide critical late-summer nectar and pollen.
- **Pollinator Paradise:** Essential habitat for diverse bees, wasps, beetles, and butterflies.
- **The Food Web Connection:** Abundant insects support foraging birds and their fledglings.
- **Preparing for Fall:** These plants fuel the ecosystem as it transitions from late summer.



THE GREAT SOUTHEAST POLLINATOR COUNT

1. OBSERVE FOR
15 MINUTES



2. IDENTIFY POLLINATORS

MAKE
COUNTING
FUN!



3. PARTICIPATE



HELP CONSERVE
OUR NATIVE
POLLINATORS!

AUGUST

4. RECORD FINDINGS

THE LAST MONARCH EGG OF THE SEASON

A mature female Monarch butterfly meticulously deposits her final egg on a native milkweed plant (*Asclepias syriaca*) before the autumn migration.



August



AUTUMN TO-DO LIST



EAT, EAT AND
EAT MORE



MIGRATE



And in the Garden

Saddleback caterpillars and
Fall Webworms eat their way through
ornamental plants and the undersides
of leaves before pupating into moths.





“August Symphony”

Cicadas buzzing and chirping

Meanwhile, silently, the Japanese beetles are laying eggs in the soil.

Last but not least of the Native blooms and berries **Georgia Asters,** **American Beautyberry** **and Dogwoods**





SEPTEMBER

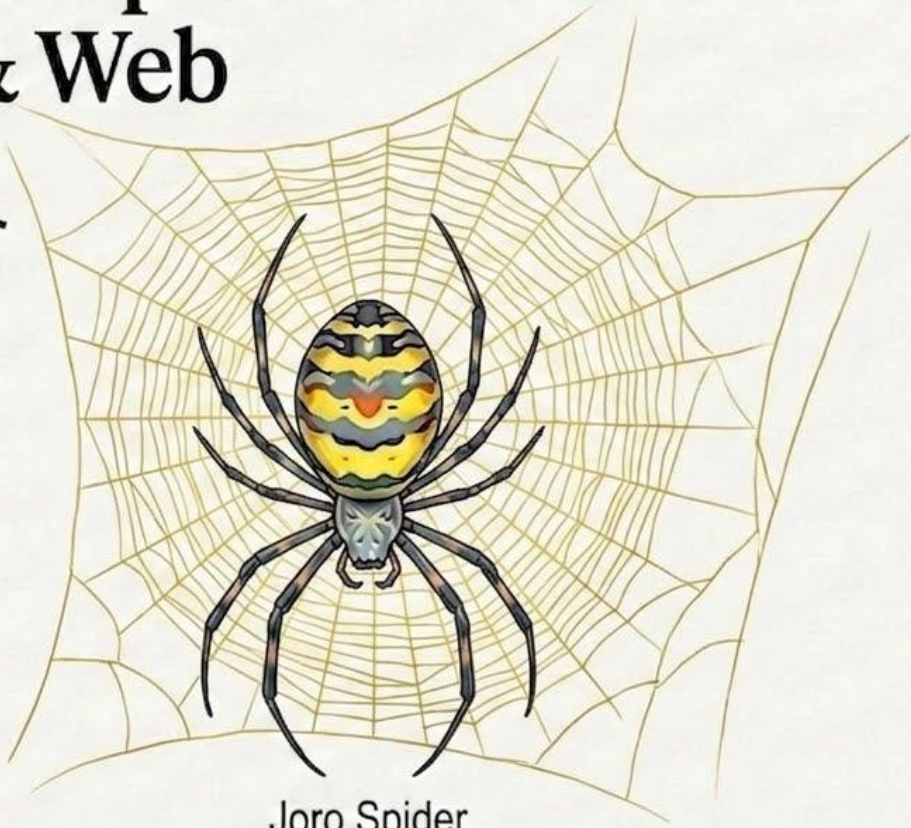
Transition: The Great Fall Southward Migration

- Warblers, Orioles, and Thrushes observed migrating south in increasing numbers.
- Ruby-throated Hummingbirds fuel up at nectar feeders, preparing for their long journey across the Gulf of Mexico.

September is Peak Spider Season!

The Joro Spider & Web

Large orb-weaver spider from East Asia, recognized by its distinctive body pattern. Creates complex, multi-layered golden-silk webs in residential and natural areas.



Joro Spider
(Adult Female)

Comparing Common Large Orb-Weaver Spiders

Joro Spider
(*Trichonephila clavata*)



Joro Spider
(Adult Female)

- **Appearance:** Large, intricate yellow/gray/blue/red body pattern
- **Web:** Complex, multi-layered, very strong golden-silk webs
- **Location:** Native to East Asia, now in Southeastern USA; residential/natural areas

Golden Silk Orbweaver
(*Nephila clavipes*)



Golden Silk Orbweaver
(Adult Female)

- **Appearance:** Distinctive elongated, bright yellow/gold abdomen, leg tufts
- **Web:** Extensive, strong, often permanent golden-silk webs
- **Location:** Native to Americas; widely in tropical/subtropical regions

Yellow Garden Spider
(*Argiope aurantia*)



Yellow Garden Spider
(Adult Female)

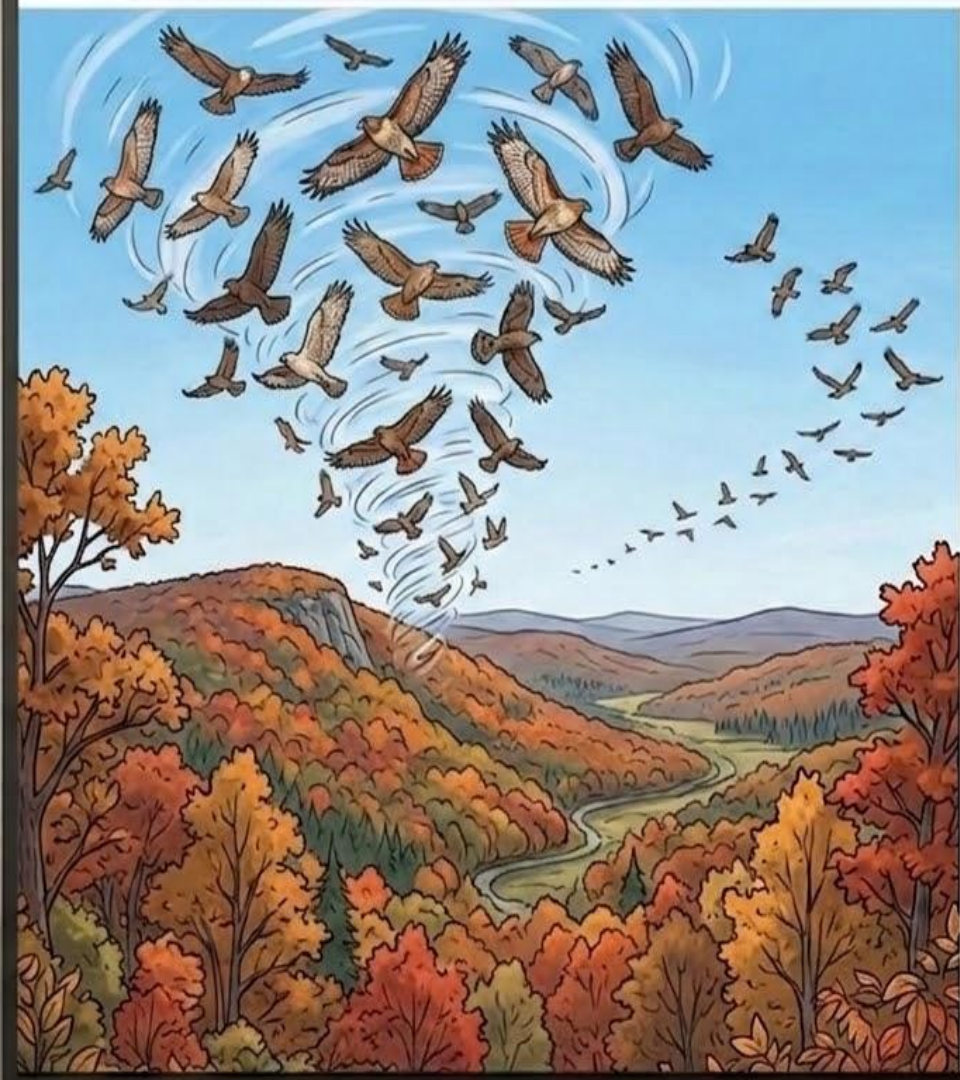
- **Appearance:** Distinct bright yellow and black pattern; large, round abdomen
- **Web:** Large orb webs, characteristic vertical zigzag (stabilimentum) in center
- **Location:** Widely across USA, Canada, Mexico; common in sunny gardens

Banded Garden Spider
(*Argiope trifasciata*)



Banded Garden Spider
(Adult Female)

- **Appearance:** Distinctive alternating white, yellow, and brown/black horizontal bands
- **Web:** Large orb webs, often with horizontal zigzag patterns
- **Location:** Common throughout the USA, often in grasslands and fields



OCTOBER TRANSITION: The Daytime Raptors Depart

- Broad-winged Hawks, Red-tailed Hawks, and Sharp-shinned Hawks observed moving in large, loose groups.
- Known as “kettles,” these raptors utilize warm air currents (thermals) to gain altitude and glide, saving energy on their long journeys.

THE MIGRATION CONTINUES: Late Fall Returnees

Kinglets and Cedar Waxwings
Arrive from the North.

Golden-crowned Kinglets

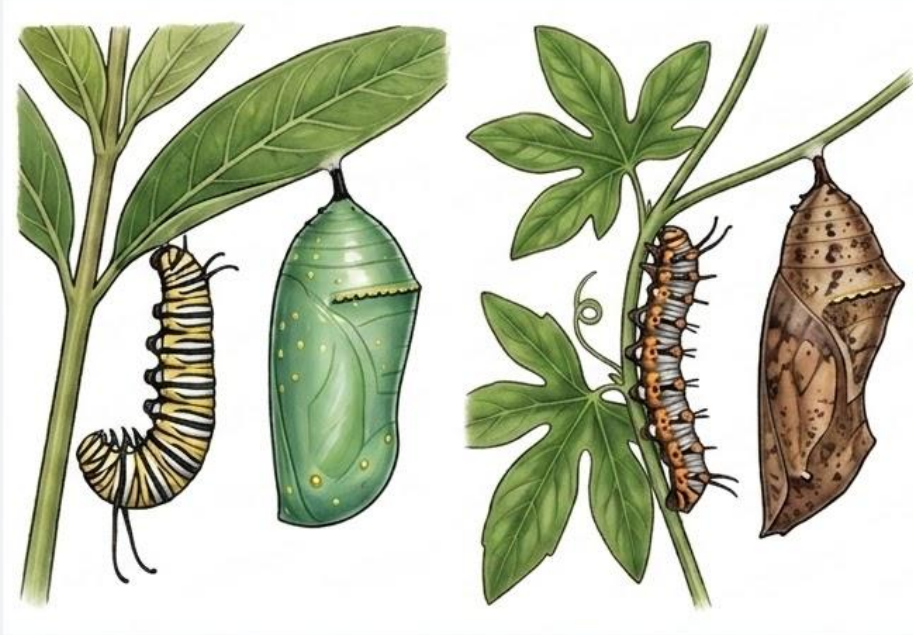


Cedar Waxwings



MONARCH AND GULF FRITILLARY:

Pupation Phase



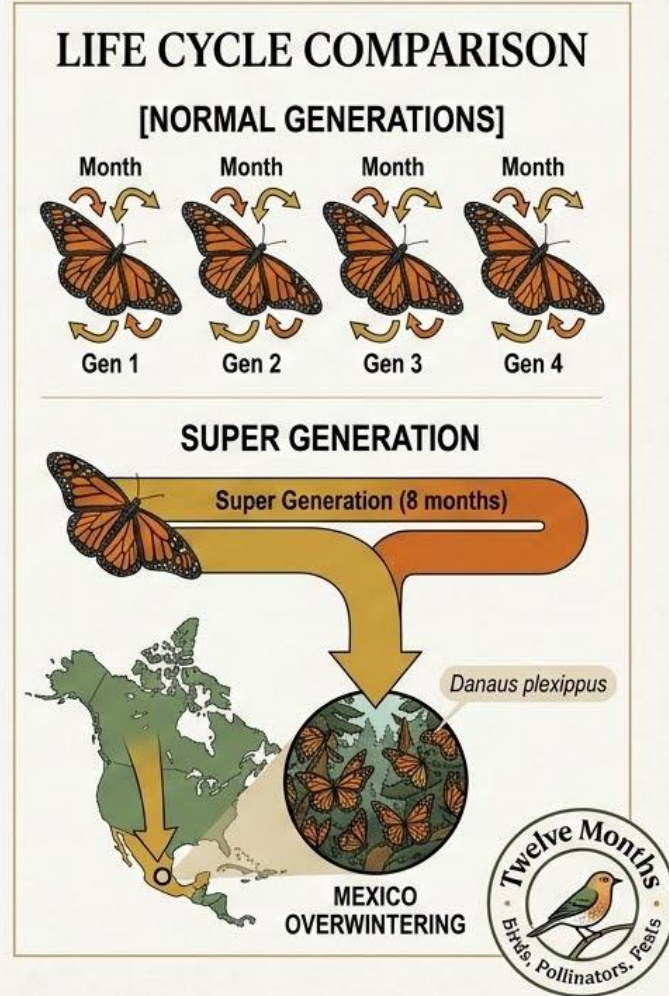
Monarch

Gulf Fritillary

- **Monarchs** (*Danaus plexippus*):
- Form a distinctive, smooth, bright green chrysalis marked with gold dots.
- Pupa phase typically lasts 10-14 days.
- **Gulf Fritillary** (*Dione vanillae*):
- Create a distinct, brown, angled chrysalis resembling a dried leaf.
- Commonly pupate on or near passionvines (their primary host plant). Process occurs in late summer into early fall.

THE SUPER GENERATION: MONARCH MIGRATION

- **Unique Life Cycle:** The final Monarch generation of the year is biologically different from its parents.
- **Diapause:** They emerge non-reproductive, entering a state of diapause to focus energy on migration and overwintering.
- **Extended Lifespan:** Living for up to 8 months, compared to the 2-6 weeks of earlier generations.
- **The Epic Journey:** A single butterfly undertakes the entire multi-thousand mile flight from Canada/US all the way to central Mexico.



OCTOBER

Wings Over Atlanta

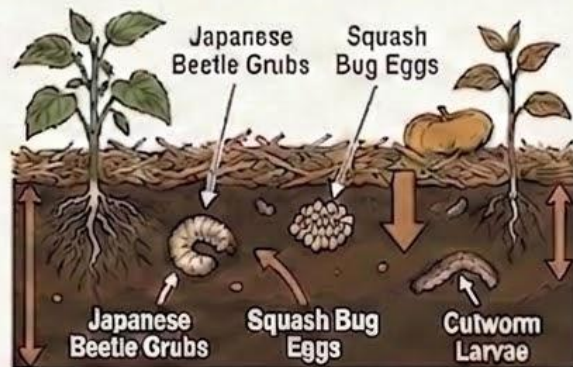
Millions of birds utilize the nocturnal environment for massive, synchronized movements through the metropolitan area.



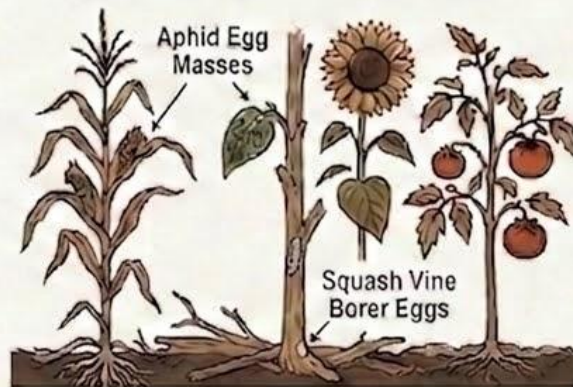
GARDEN PESTS SEEK COVER IN NOVEMBER

- **Strategic Habitats:** Pests and their progeny seek shelter and insulation.
- **Deep in the Soil:** Protecting larvae, grubs, and eggs from extreme temperatures.
- **Under Mulch & Debris:** A preferred overwintering site for various beetles and bugs.
- **On Dead Stems:** Stalks and standing debris provide ideal locations for egg laying.

SOIL & MULCH HARBORAGE

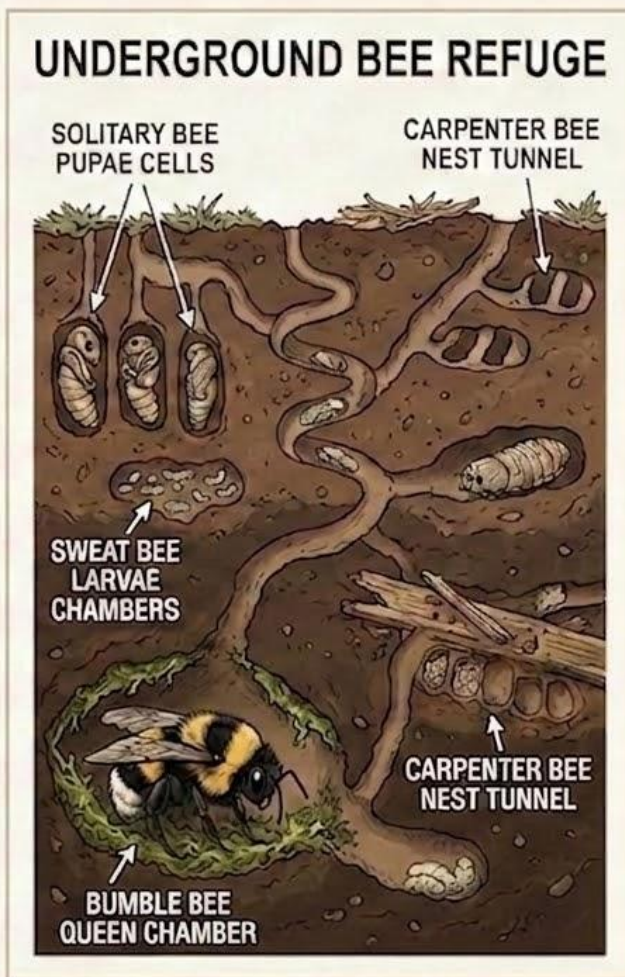


DEAD STEMS & DEBRIS



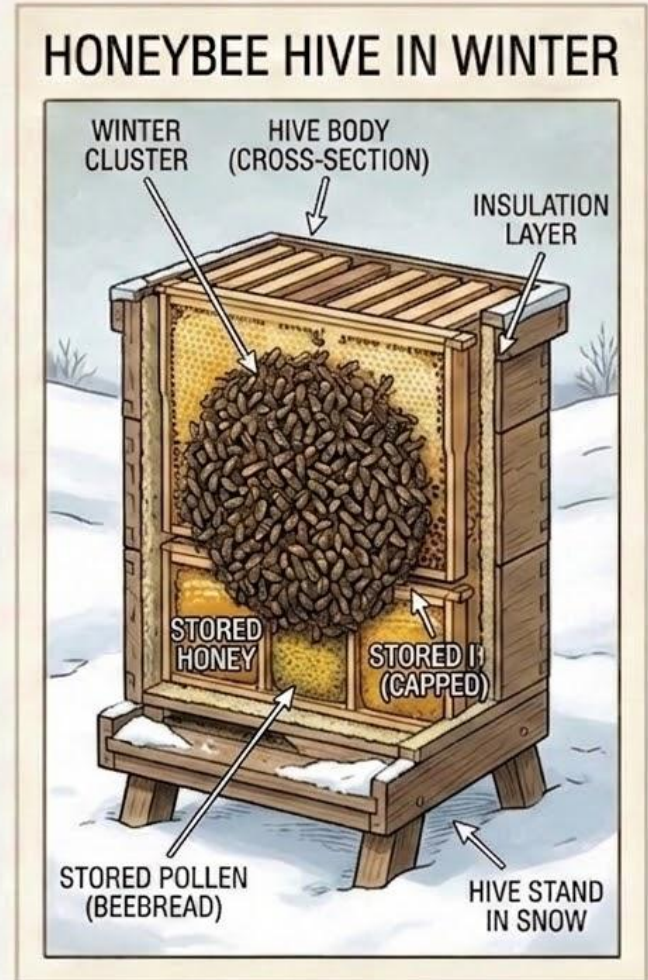
NATIVE BEES OVERWINTERING

- **Strategic Cells:** Bees create deep underground refuges to escape freezing.
- **Natural Insulation:** Soil protects against extreme winter temperatures.
- **Specific Nests:** Bumble, Carpenter, and Sweat bees have distinct chamber types.



HONEYBEE WINTER SURVIVAL

- Bees cluster for warmth.
- Core bees shiver for heat.
- Special “winter bees” survive the cold.
- Strict use of stored honey/pollen.



December



Monthly Ecosystem Activity by Species Category in Atlanta



Sources

- Frederick C. Lincoln, 1950, *Migration of Birds*, Fish and Wildlife service, US Dept. of Interior
- Jim Wilson and Anselm Atkins, 1998, *Common Birds of Atlanta*, Hexagon Publications
- Douglas Tallamy, 2007, *Bringing Nature Home*, Timber Press, Inc.
- Douglas Tallamy, 2019, *Nature's Best Hope*, Timber Press, Inc.
- Douglas Tallamy, 2021, *The Nature of Oaks*, Timber Press, Inc.
- Matt Kracht, 2019, *The Field Guide to Dumb Birds of North America*, Chronicle Books
- Many illustrations created with Nano Banana 2

Species included in this presentation

Resident Birds: Carolina Chickadee, Eastern Bluebird, Downy Woodpecker, Red-bellied Woodpecker, Northern Cardinal, Blue Jay, Tufted Titmouse, Carolina Wren, American Robin, Brown Thrasher, Northern Mockingbird

Migratory Birds: Purple Martin, Broad-Winged Hawk, Barn Swallow, Chipping Sparrow, Ruby-throated Hummingbird, Chimney Swift, Yellow Warbler, Wood Thrush, Ovenbird, Indigo Bunting, Scarlet Tanager, Baltimore Oriole, Rose-breasted Grosbeak, Cedar Waxwing

Native Trees: Red Maple, Eastern Redbud, Serviceberry, Tulip Poplar, Black Locust, Black Cherry, American Holly, Southern Magnolia, Sweetbay Magnolia, Sourwood

Native Perennials: Milkweed, Black-eyed Susan, Purple Coneflower, Bee Balm, Stokes' Aster, Joe-Pye Weed, Cardinal Flower, Blazing Star (Liatris), Georgia Aster

Native Annuals: Daisy Fleabane, Indian Blanket, Bitterweed, Spotted Jewelweed, Annual Sunflower, Partridge Pea, Tickseed Sunflower (Coreopsis)

Species, con't

Pollinators: Monarch Butterfly, Carpenter Bee, Common Eastern Bumblebee, Honey Bee, Sweat Bee, Wasps, Eastern Tiger Swallowtail, Zebra Swallowtail, Black Swallowtail, Luna Moth, Hummingbird Clearwing

Garden Insects:

Bad Guys: Aphids, Mosquitoes, Squash Bugs, Mexican Bean Beetles, Japanese Beetles, Tomato Hornworms, Squash Vine Borers

Good Guys: Spiders, Lady Beetles, Wasps