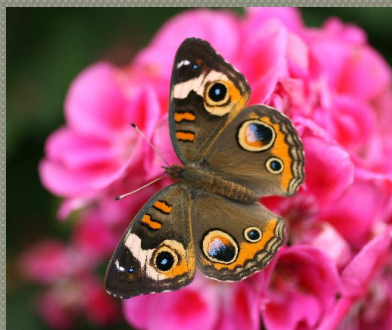


OLD RAG CHAPTER of the VIRGINIA MASTER NATURALISTS



BUTTERFLIES OF THE PIEDMONT



2012 BUTTERFLY COUNT
Little Washington, VA
July 28th

Goals for Today

- Discuss ORMN 2ND annual North America Butterfly Association (NABA) count
- BEGIN butterfly identification education
- Go outside!

BUTTERFLY COUNTS: WHY?

- Collect data – monitor butterfly populations
 - Butterflies are measures of biodiversity
- Enjoy meeting other “butterfliers”
- Raise public awareness



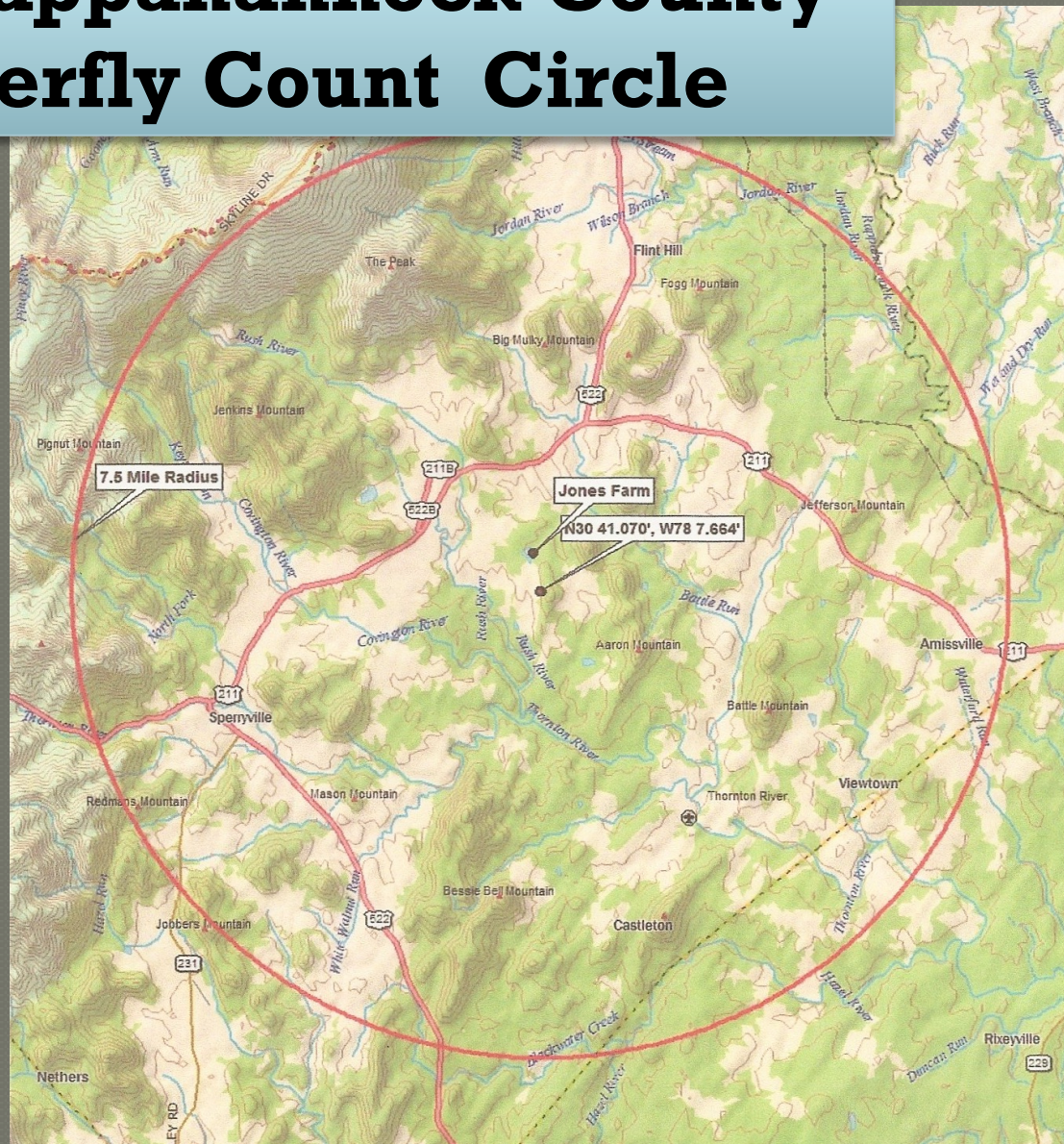
2nd ANNUAL BUTTERFLY COUNT

- NABA Guidelines
- Survey area – 15 mi. diameter
- Multiple teams in survey area
- JULY 28th – Little Washington

BE THERE!

BE THERE!

2012 Rappahannock County Butterfly Count Circle



Sample Data Form

ORMN RAPPAHANNOCK BUTTERFLY COUNT TALLY SHEET—July 28, 2012

Property: _____ Location on Property _____ Lat/Long _____

Scribe: _____ Team Members: _____

Time Start: _____ Time End: _____ Distance in miles by vehicle _____ On Foot _____

Temperature: _____ Cloud Cover: _____ Precipitation: _____

	Tot		Tot
PAPILIONIDAE – Swallowtails		NYMPHALIDAE – Satyrs	
Pip evine Swallowtail		Northern Pearly-eye	
Zebra Swallowtail		Little Wood-Satyr	
Black Swallowtail		Common Wood-Nymph	
Giant Swallowtail			
Eastern Tiger Swallowtail		NYMPHALIDAE – Milkweed	
Spicebush Swallowtail		Monarch	
Swallowtail spp			
		HESPERIIDAE – Spread Skippers	
PIERIDAE – Whites & Sulphurs		Silver-spotted Skipper	
Cabbage White		Hayhurst's Scallop wing	
Clouded Sulphur		Horace's Duskywing	
Orange Sulphur		Wild Indigo Duskywing	
Cloudless Sulphur		Common Checkered-Skipper	



Observation

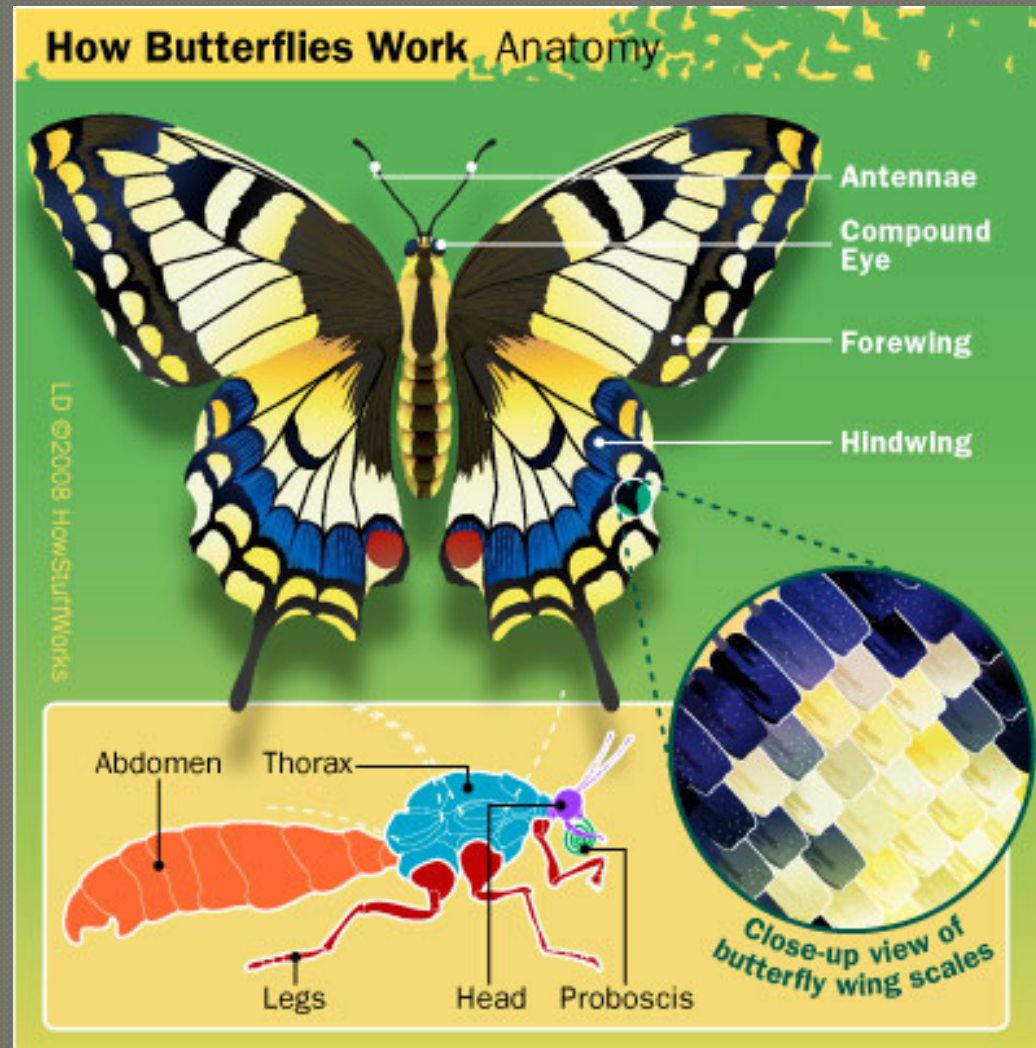
- Walk slowly and use binoculars
- Avoid shadows on butterfly
- Don't guess! Photograph, make field notes
- Use data collection forms to record observations



BUTTERFLY ANATOMY

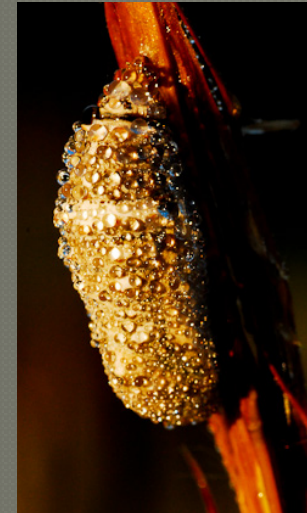
How to describe what you see...

- Forewing (FW)
- Hindwing (HW)
- Topside
- Underside



LIFE CYCLE

- ◆ EGG
- ◆ CATERPILLAR
- ◆ PUPA – chrysalis
- ◆ ADULT



BUTTERFLY or MOTH?

BUTTERFLY

- ◆ Clubbed or hooked antennae
- ◆ Slender bodies; skippers often hairy
- ◆ Fly during the day

MOTH

- ◆ Comb or Thread-like antennae
- ◆ Thick bodies, usually hairy
- ◆ Fly day or night

Factors in Butterfly Identification

- Size
- Wing Shape
- Color
- Habitat
- Flight Pattern
- Seasonal Occurrence

METHODS OF IDENTIFICATION

- ◉ By Scientific Key
- ◉ By Family Characteristics
- ◉ By Size and Color

BUTTERFLIES

- ◉ KINGDOM Animalia
- ◉ PHYLUM Arthropoda
- ◉ CLASS Insecta
- ◉ ORDER Lepidoptera

“scale wing”



5 COMMON BUTTERFLY FAMILIES

Swallowtails - Papilionidae

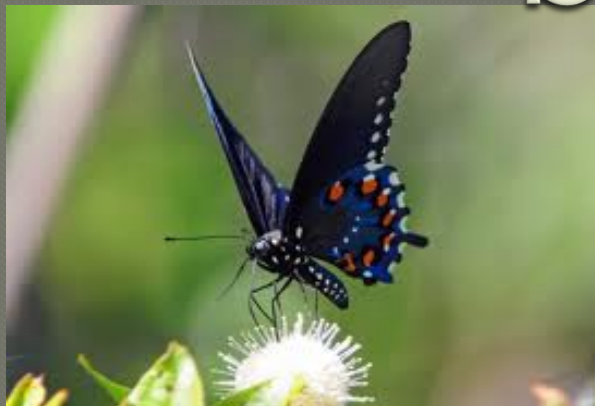
Whites and Sulphurs - Pieridae

Coppers, Hairstreaks, Blues - Lycaenidae

Brush-footed – Nymphalidae

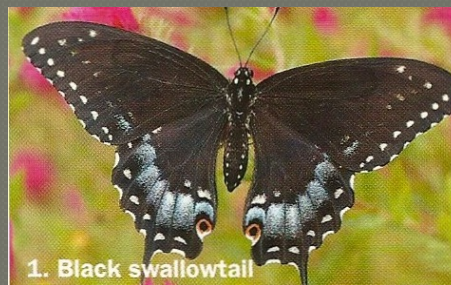
Skippers - Hesperiidae

SWALLOWTAILS



PIPEVINE

BLACK SWALLOWTAIL



SPICEBUSH

ZEBRA



N. Weiss



TIGER –dark form

WHITES AND SULPHURS

Small 1.5 to 2.5

Cabbage White



Clouded Sulphur



Orange Sulphur



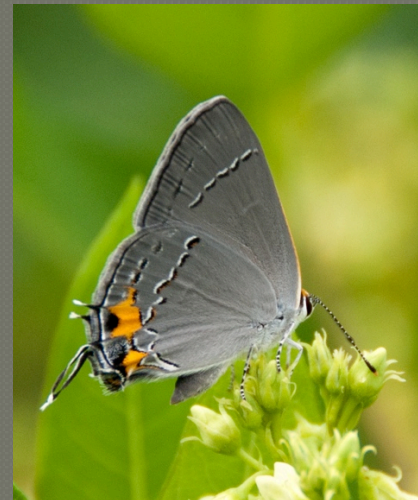
COPPERS, HAIRSTREAKS, BLUES

VERY SMALL .5 TO 1 INCH

SPRING AZURE



AMERICAN COPPER



GRAY HAIRSTREAK

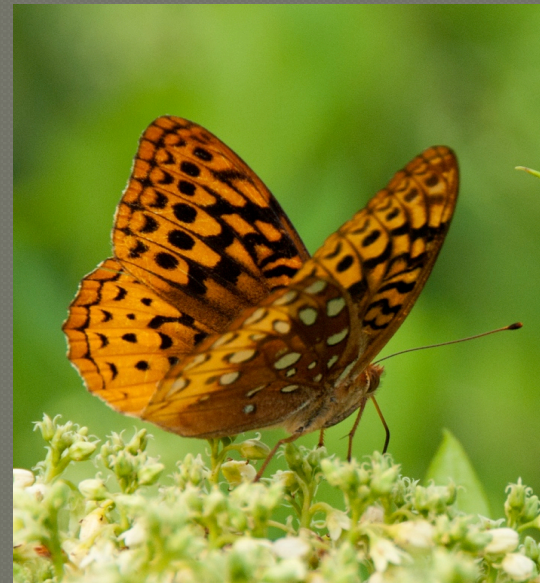


BUCKEYE

BRUSH-FOOTED

Size varies: small to large

GREAT SPANGLED FRITILLARY



QUESTION MARK

SKIPPER

Most are very small

SILVER-SPOTTED SKIPPER



HORACE'S DUSKYWING



SACHEM



IDENTIFICATION by Size and Color

IVY CREEK NATURAL AREA ID GUIDE

by Mike Scott

Based on Size and Color

- LARGE: 3.5 to 5"
- MEDIUM: 2.5 to 3.5"
- SMALL: 1.5 to 2.5"
- VERY SMALL: .5 to 1.5"

LARGE BUTTERFIES

3.5 to 5"

SWALLOWTAILS

● Characteristics

- Large
- Tails

● Common types

- Pipevine
- Spicebush
- Tiger Swallowtail – yellow and black form (female)
- Zebra



EASTERN TIGER SWALLOWTAIL

Identifying Features

- Light Form: yellow with black stripes
- Dark Form: charcoal black; stripe on hind wing; female



ZEBRA SWALLOWTAIL

Identifying Features

- Unique
- Black and white striped triangular wings

Habitat

- Open spaces, water

Host Plant

- Pawpaw



PIPEVINE SWALLOWTAIL



Single band
of orange;
underside

SPICEBUSH SWALLOWTAIL



Identifying Features:

- Greenish-bluish topside of hindwing
- Two orange bands; lacks yellow cell spot (blue comet)

Habitat:

- Woods and wet places



BLACK SWALLOWTAIL

Identifying Features

- Topside: subapical spot
- Underside: 2 rows (bands) of orange spots



Habitat

- Open fields

Host Plants

- Parsley, carrot, rue

COMPARISON OF “BLACK” SWALLOWTAILS



BLACK TIGER



PIPEVINE



BLACK



SPICEBUSH

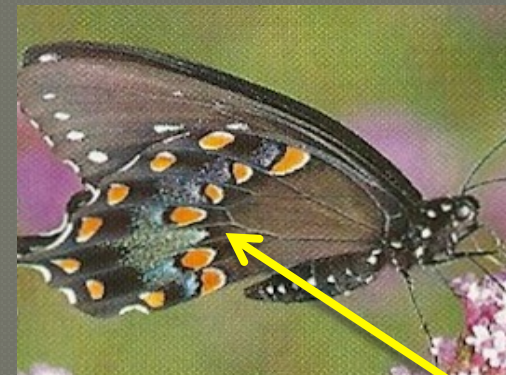


3. Pipevine swallowtail

Single orange band



2 bands; all cells filled
All bodies have white spots



2 bands; one cell “blue”



Tiger Swallowtail:
Black form; female

Single band of orange

Body w/o spots

Stripe -“shadow” as in
yellow form

COMPARISON of “BLACK” TIGER with other DARK SWALLOWTAILS



3. Pipevine swallowtail

Pipevine



Black



Spicebush



LARGE BUTTERFLY, NON-SWALLOWTAIL



MONARCH (Large)

Larger
No black line across
post median area

Males have knob-like black line



VICEROY (Medium)

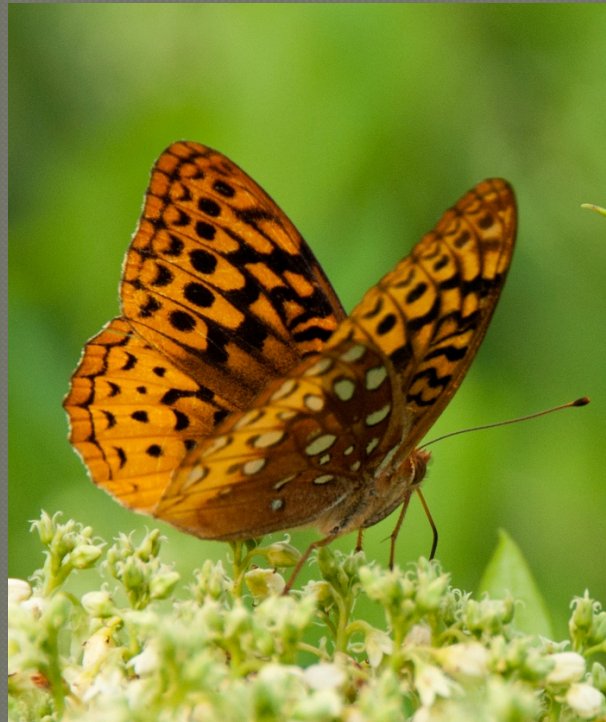
Smaller
HW has a black line across
post median area

HABITAT: fields with milkweed

LARGE BUTTERFLY, NON-
SWALLOWTAIL
Great Spangled Fritillary



J. Connelly



J. Connelly

MEDIUM SIZE BUTTERFLIES

2.5 to 3.5''

Red-Spotted Purple

Identifying Features:

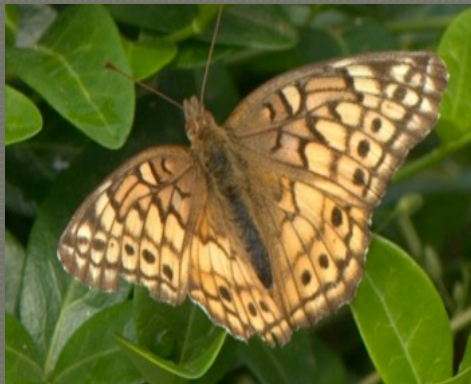
- Very large, no tails
- Topside HW black band
- Underside with red spots

Habitat:

- Deep woods, moist areas



VARIGATED FRITILLARY



P. Temples



J. Connelly

Great Spangled

Varigated

Meadow

Largest

Medium, size varies

Smallest

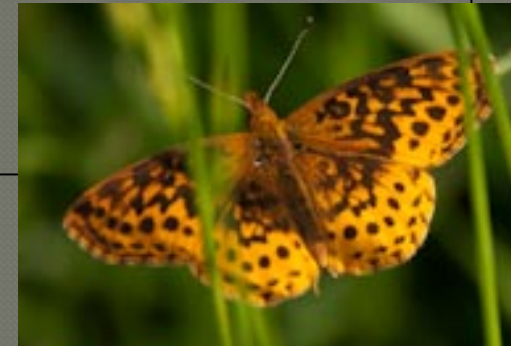
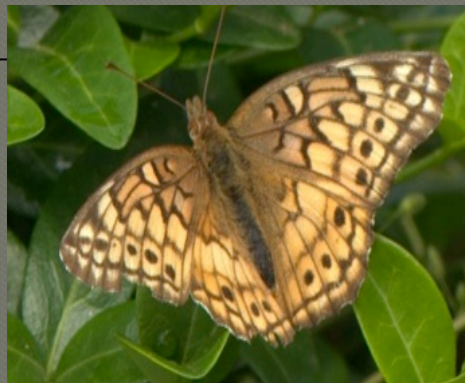
Underside: Silver spots

Top: absent black

Top: black spots
around FW and HW;
pale submarginal band

border

Underside: HW pale patches



VICEROY



VICEROY (Medium)

- Smaller than Monarch
- HW has a black line across post median area

Question Mark

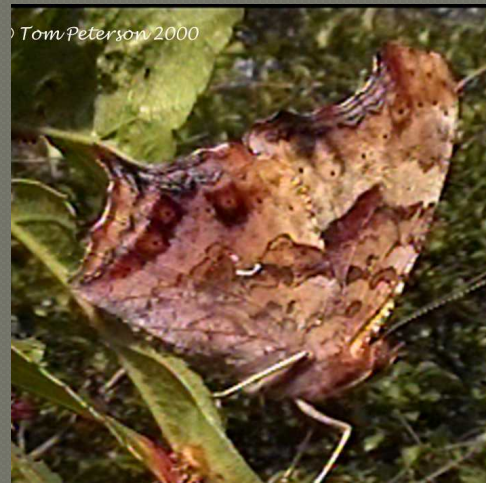
Identifying Features:

- Medium size
- Forewing 2 spots
- Silver question mark underside



Habitat:

- Forests, wooded edges



SMALL BUTTERFLIES

1.5 to 2.5''

Clouded Sulphur

Identifying Features:

Underside – no orange,
HW double silver spot,
FW series of tiny spots



Orange Sulphur

Identifying Features:

Underside – orange,
HW double silver spot,
FW series of tiny spots



Cabbage White



Identifying Features:

- Medium size
- Forewing has 1-2 black dots
- VERY common

Habitat:

- Everywhere!
- Open areas

RED ADMIRAL

Identifying Features:

- Medium size
- Unique red bands



Habitat:

- likes rotting fruit, scat
- open areas, nectars

COMMON BUCKEYE

Identifying Features:

- Medium size
- Unique eyes of FW and HW

Habitat:

- open areas, fields
- common



QUESTION MARK AND EASTERN COMMA



HACKBERRY AND TAWNY EMPEROR



HACKBERRY – brown to grey

FW white spots on apex

FW one large eyespot

HW row of marginal eyespots



TAWNY EMPEROR – rich warm brown

FW lacks white spots at apex

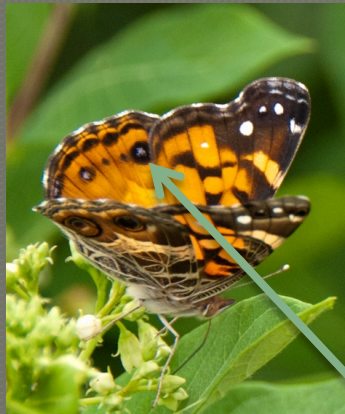
FW lacks eyespots

HW 6 eyespots

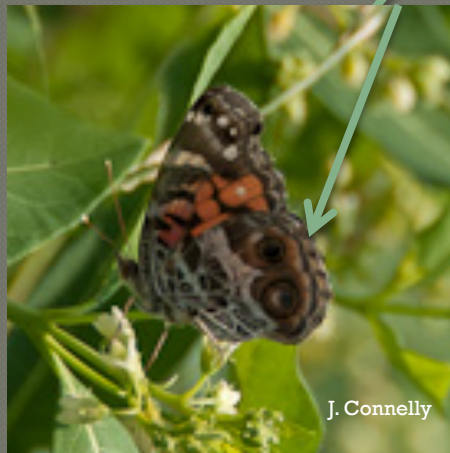
HABITAT: similar, Hackberry trees, rotten fruit,
may land on your shoulder

American Lady and Painted Lady

American Lady



Top: FW eyespots, bluish
Underside: 2 large eyespots



Painted Lady



Top: no eyespots, black dots
Underside: poorly defined eyespots



Little Wood Nymph

2 distinct eyespots HW and FW;
Same top and underside



Common Wood Nymph



J. Connelly

Northern Pearly Eye

Underside: 4 spots on FW; HW with large
medial eyespot
HW white band medial to eyespots



VERY SMALL BUTTERFLIES

.5 to 1.5''

Silver Checkerspot

Identifying Features

- submarginal row of black spots often have white centers
- no row of crescents
- 1.5 - 2 in.



Habitat

Open fields

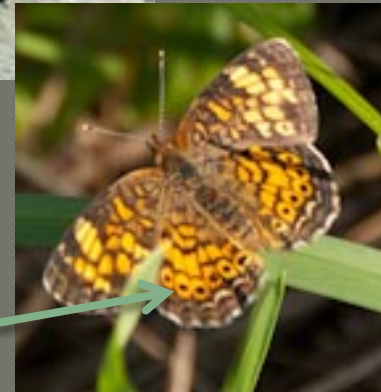
Pearl Crescent

Identifying Features:

- HW: marginal row of crescents
- HW: black spots without white centers
- 1.25 - 1.5 in

Habitat:

Open fields and meadows



Pearl Crescent



- Submarginal row of crescents
- Smaller

Silver Checkerspot



- Black spots with white centers

BLUES AND AZURES

Eastern-Tailed Blue

Identifying Features:

- Very small
- Orange eyespots on HW; top and undersides
- 2 small hairs (tails) on HW
- Dark outline around wings



Habitat:

- Open areas, fields

Summer Azure (Common Blue)

Identifying Features:

- Very small
- Almost moth-like
- Often very pale blue



Habitat:

- Hardwood forest, fields, edges

Eastern-tailed Blue or Summer Azure ?



J. Connelly

Eastern-tailed Blue

Distinct orange spots
on HW

Tiny tails on HW



Summer Azure

No orange

No tails

COPPERS



J. Connelly



American Copper

Identifying Features:

- Small
- Bright orange flash
- Forewings with black spots
- Flies near the ground

Habitat:

- Disturbed fields

HAIRSTREAKS

Red-Banded Hairstreak



Identifying Features:

- Small
- Red band of underside

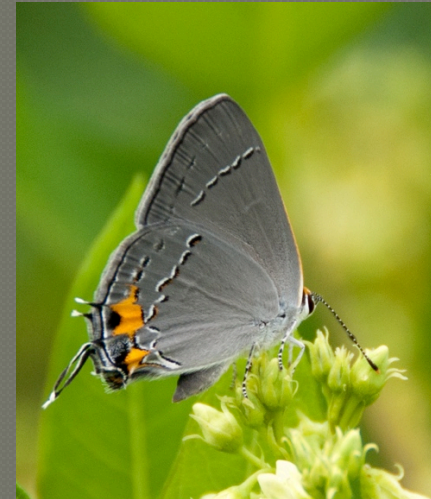
Habitat:

- Overgrown, forest margins

Gray Hairstreak

Identifying Features:

Underside HW: orange spots
with straight band and
some orange



J. Connelly

Habitat:

Open areas, fields

Resources

- Digital camera
- Binoculars
- Field guides
 - *Butterflies through Binoculars: the East* – Jeffery Glassberg
 - *A Field Guide to Eastern Butterflies* – Peterson Field Guide
- Internet
 - North America Butterfly Assn
 - <http://www.butterfliesandmoths.org/>

JULY 28TH, 2012

SECOND ANNUAL OLD RAG MASTER
NATURALIST BUTTERFLY COUNT

LITTLE WASHINGTON, VA

BE THERE!!
BE THERE!!

Contributors

- Power Point: Julie Connelly
- General Information: Robin Williams
- Photographs: some by ORMNs, including Julie Connelly, Pat Temples, Nancy Weiss, Don Hearl, Dana Squire
- Others: Alfred Goossens, Pam Owens