

**Moths, Monkeys, Morphos  
and More of Panamá**

**Or**

**25 Cents for Number One or  
50 Cents for Number Two, Oh Boy!**

**by Wade Wander**

**The photographers:**

**FP = Fred Pfeifer**

**JS = Jim Springer**

**JB = Joe Burgiel**

**Unattributed photos  
are by the presenter**

**? means unidentified species**

People my age are always on the lookout for bathrooms  
no matter the cost!

# BANOS



25¢

**ORINAR \$ 25**  
**DEFECAR \$ 50**

FECHA:  
VIERNES 01  
DE MARZO

- LUGARES PARA VISITAR  
21 DE MARZO EN 2019
1. AGUA FRIA #1
  2. PALMIRA
  3. SABANA
  4. CLARITA

ATENCION MEDICA  
Y EXAMENES DE  
LABORATORIOS DE  
SANGRE, URINE Y  
EXCREMENTO  
SOLO PARA  
PERSONAS  
MAYORES DE 40  
AÑOS

¡GRATIS!  
EN EL C.E.B. AGUA FRIA

PRESTAMOS BANCARIOS

PRESTAMOS BANCARIOS

# Central America and the Caribbean

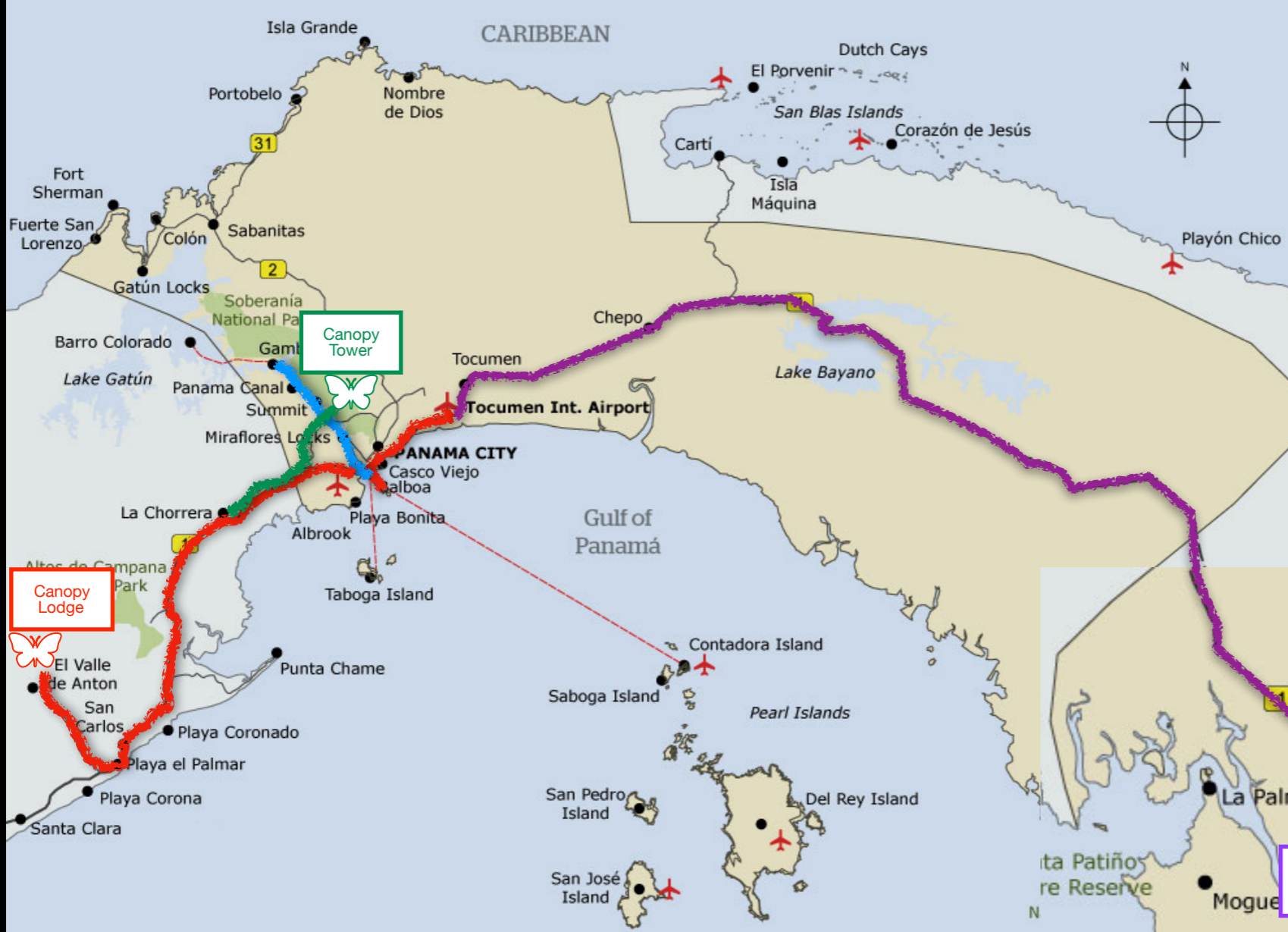


Scale 1:12,500,000

Lambert Conformal Conic Projection,  
standard parallels 9°N and 17°N

0 500 Kilometers  
0 500 Nautical Miles

Boundary representation is not necessarily authoritative.



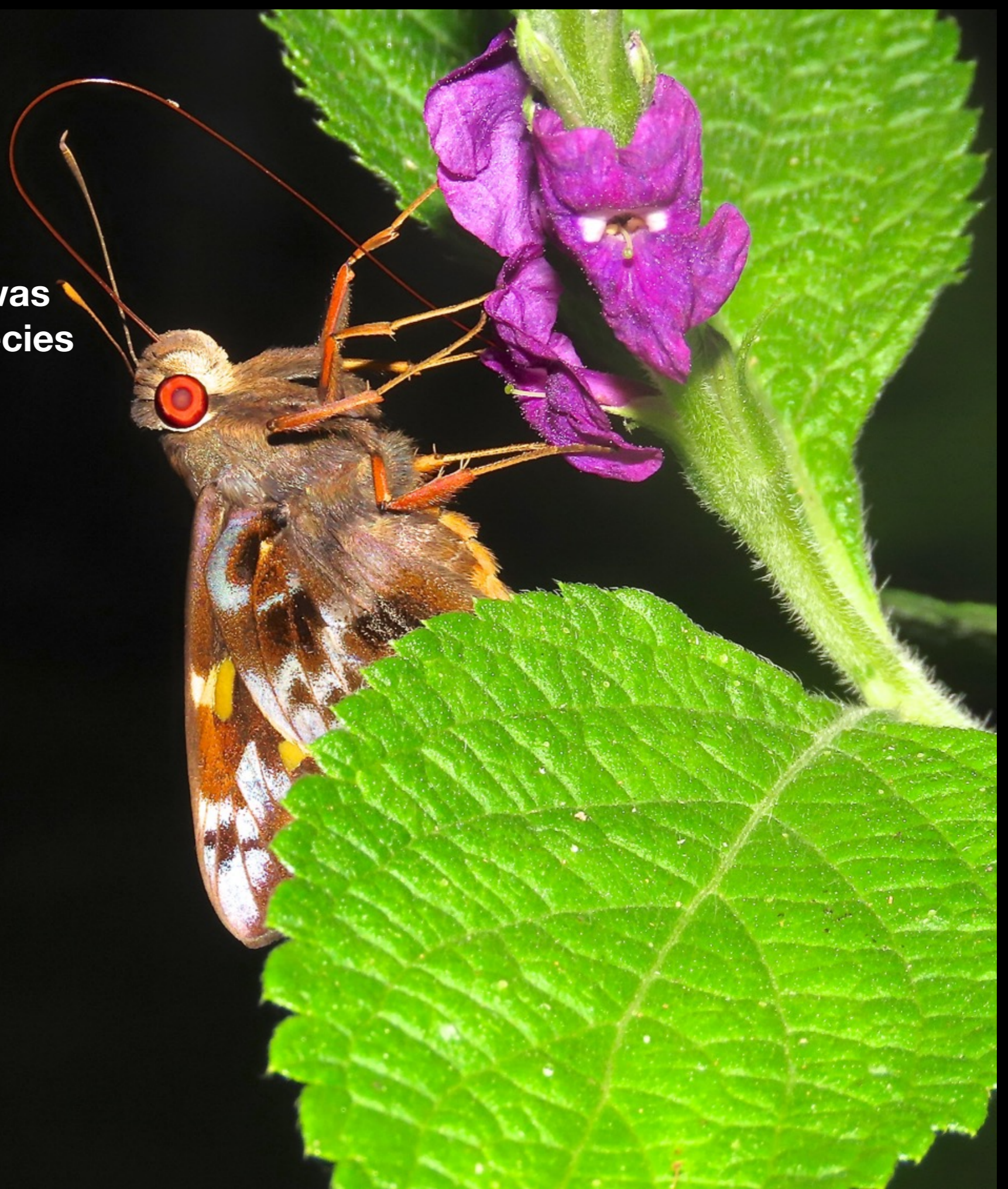
**August 16-30, 2019**

**Locations of the 3 facilities that we stayed at,  
all operated by The Canopy Family**



**Green-backed  
Ruby-eye**

**The butterfly trip list was  
a bit more than 360 species**



*Urbanus* sp.



**Gesneriadaceae — African Violet Family**



**First, a few flowers**

***Oncidium crista-galli*  
orchid**





*Stanhopea* sp.  
orchid



***Costus guanaiensis***  
**f. spiral ginger**



Plants in the Costaceae family have important medicinal and cosmetic applications

The Rubiaceae family contains more than 600 genera, including *Coffea*, which is the source of coffee



***Psychotria correae***  
**Rubiaceae**

**Cockroaches are closely related to mantids.**

**People of “civilized” countries freak out when they see little cockroaches. Imagine their reactions to a bunch of these giants scampering about!**

**Giant Cave Cockroach  
3-4”**



**Stagmomantis sp.**



**Peruvian Shield Mantis  
munching on  
silk moth**



small mantids of less than 2 inches

Porterweed  
Verbenaceae

*Pseudomiopteryx* spp.



FP grizzled mantis sp.  
a lichen mimic



## walking sticks



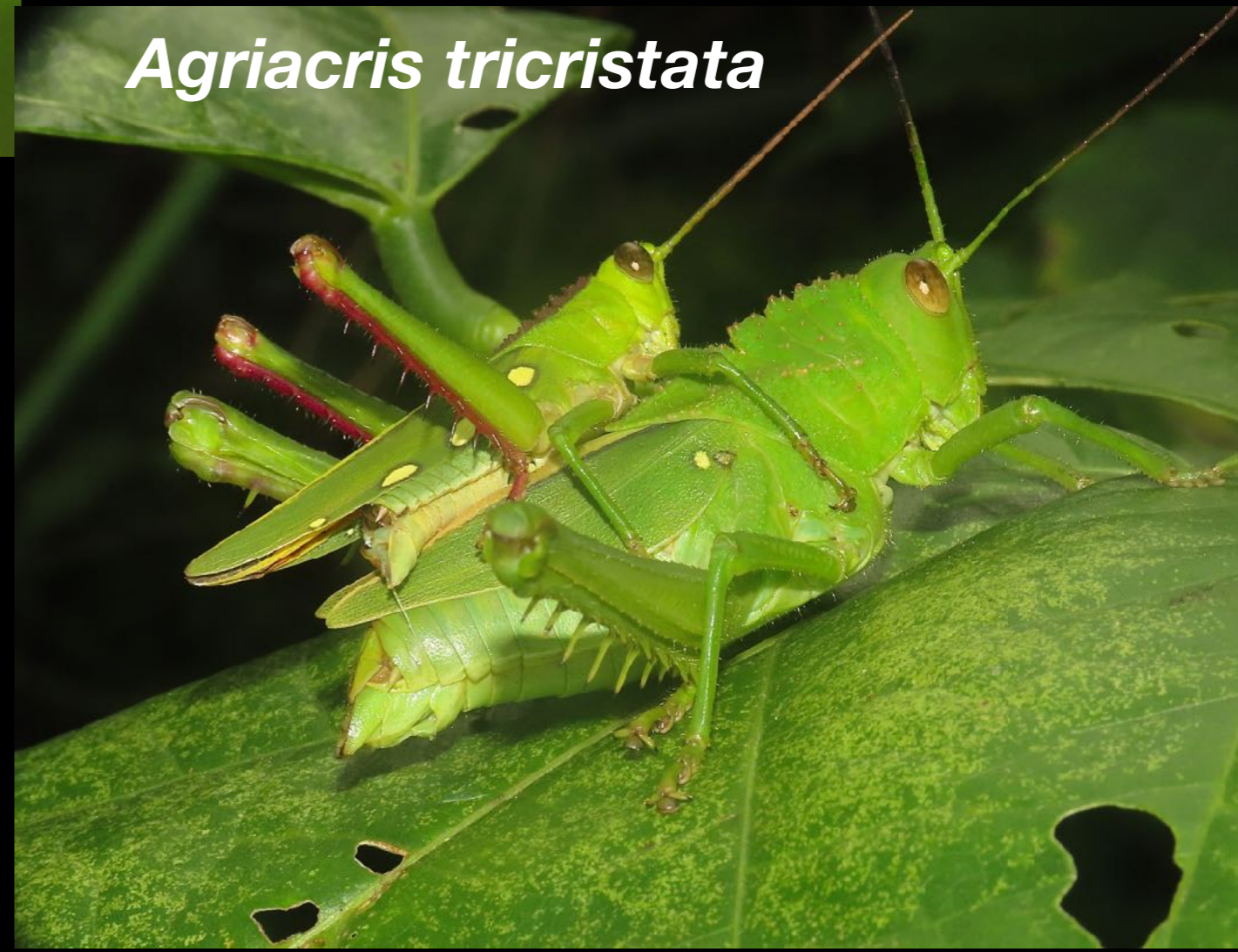
**The northern walking stick is the only species of stick insect found in NJ, but more than 2000 species occur in the tropics.**



?

grasshoppers

Note long antennae, and spines on tibia.



*Agriacris tricristata*

*Taeniopoda varipennis*



*Chromacris* sp.



*Piezops ensicornis*



*Chromacris* sp.



JS



**f. Stick Grasshopper or Jumping Stick  
Proscopiidae**

This is actually a separate family of grasshoppers.

“horse face,” with  
short antennae

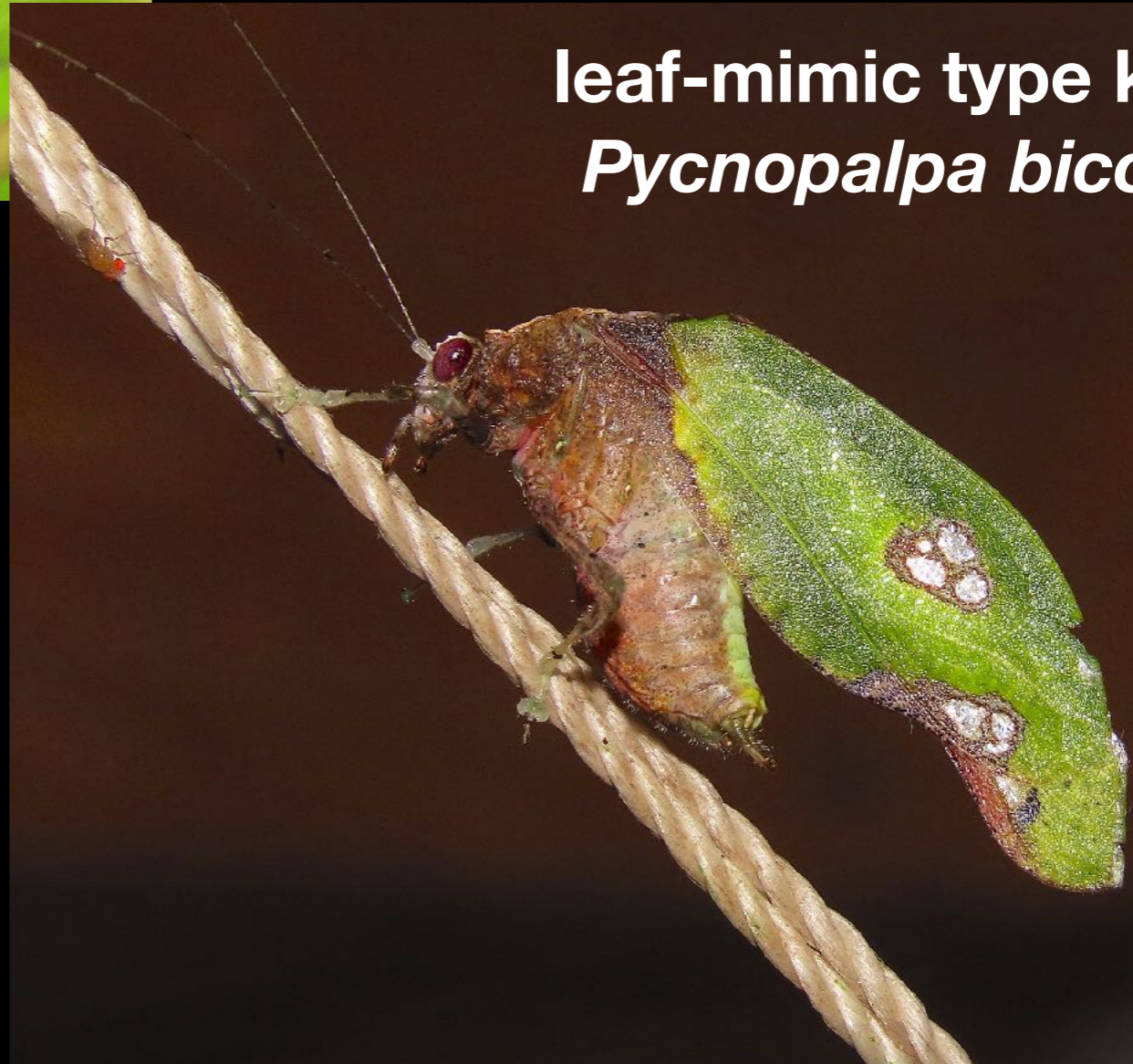


*Insara bolivari*



weird katydids

leaf-mimic type katydid  
*Pycnopalpa bicordata*



**dead-leaf mimic Katydid  
Pterochrozinae**

**weirder katydid**

**This was found by the kitchen staff  
and shown to us because they knew  
we liked oddball things.**

**Katydids are among  
the favorite foods  
of monkeys.**





**wasp, fly, bee, or  
none of the above?**

**moth (note pectinate antennae)  
that mimics wasps**

**mantisfly in the order Neuroptera  
which includes lacewings,  
antlions, fish flies, etc.  
These are neither mantids nor flies!  
Several spp. occur in NJ.**



**Heliconia Bug**  
*Leptoscelis tricolor*

note thickened femur  
on hind leg of male





**Flag-footed bug (*Anisoscelis* sp.)**  
similar to our leaf-footed bugs but  
much more extravagant



# seed bug family

A few insects display  
some level of parental care

adult

nymphs



leafhopper sp.



*Baleja flavoguttata*



*Sphenorhina nigricephala*

Caught by jumping spider



Very diverse group of tiny  
plant-sucking true bugs,  
with thousands of species  
in the tropics

planthopper sp.



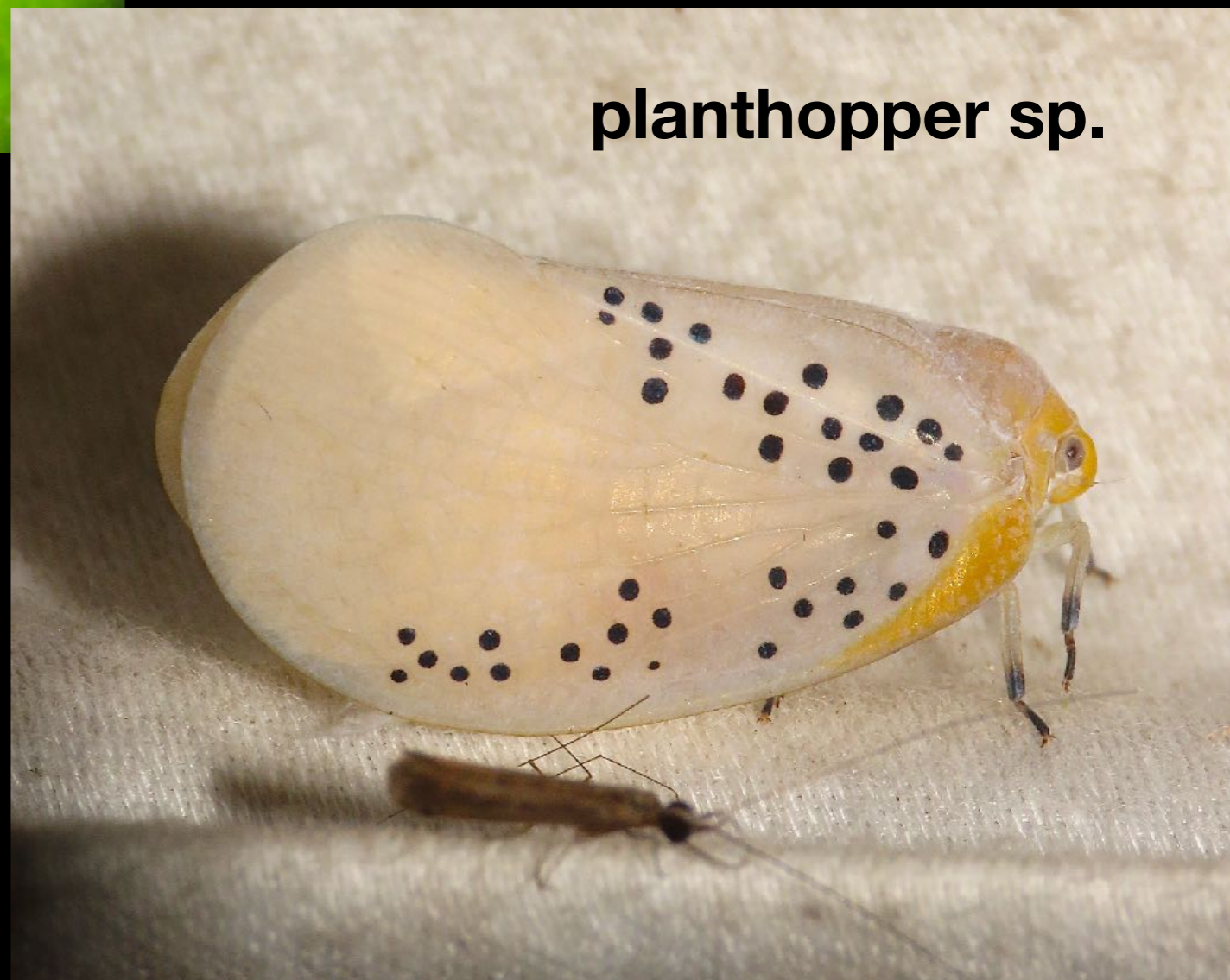


*Mahanarva costaricensis*



Many species of insects (not just moths) and spiders are attracted to lights at night

planthopper sp.



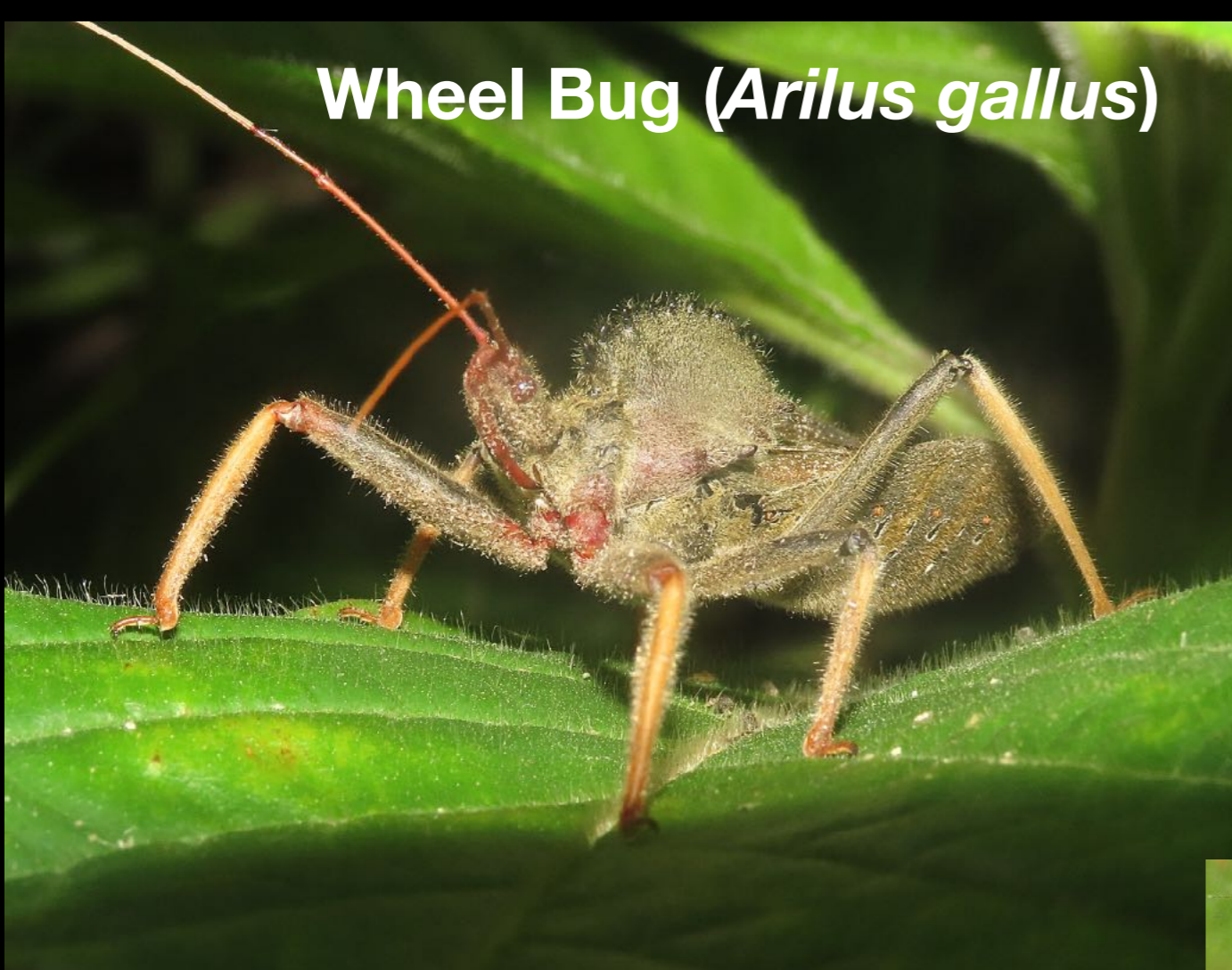


The tiny cicada is not a nymph but an adult of a very small species

**Emerald Cicada**  
*(Zammara olivacea)*



**Wheel Bug (*Arilus gallus*)**



**Assassin Bugs**

***Zelurus spinidorsis***  
***tarantula killer mimic***



**Note curved rostrum (like a beak)  
under the head of both species.  
Assassin bugs inject enzymes  
into their prey through the rostrum  
and then suck up the liquified remains.**



**Beetles**



**tortoise  
beetles**



**Ceiba tree**  
**Malvaceae**

**Ceiba Borer**  
**(*Euchroma gigantea*)**

**2-2.5"**

**The elytra (wing coverings) and pronotum are metallic shiny and are incorporated into jewelry made by indigenous peoples.**





***Chauliognathus*  
spp.**

**more  
beetles**



***Photuris* sp.**  
a genus of “lightning bugs,” which  
are actually beetles

Central American  
Montane Tiger Beetle



Tiger beetles are one of the *least* diverse groups of beetles.

Weevils are by far the *most* diverse group of beetles

Broad-nosed Weevil sp.  
g. *Exophthalmus*

the lesser of 2 weevils



**rubyspot sp.**



**Odonates**

**Flame-tailed Pondhawk**







?

dragonflies



Slender Skimmer



Black-winged  
Dragonlet

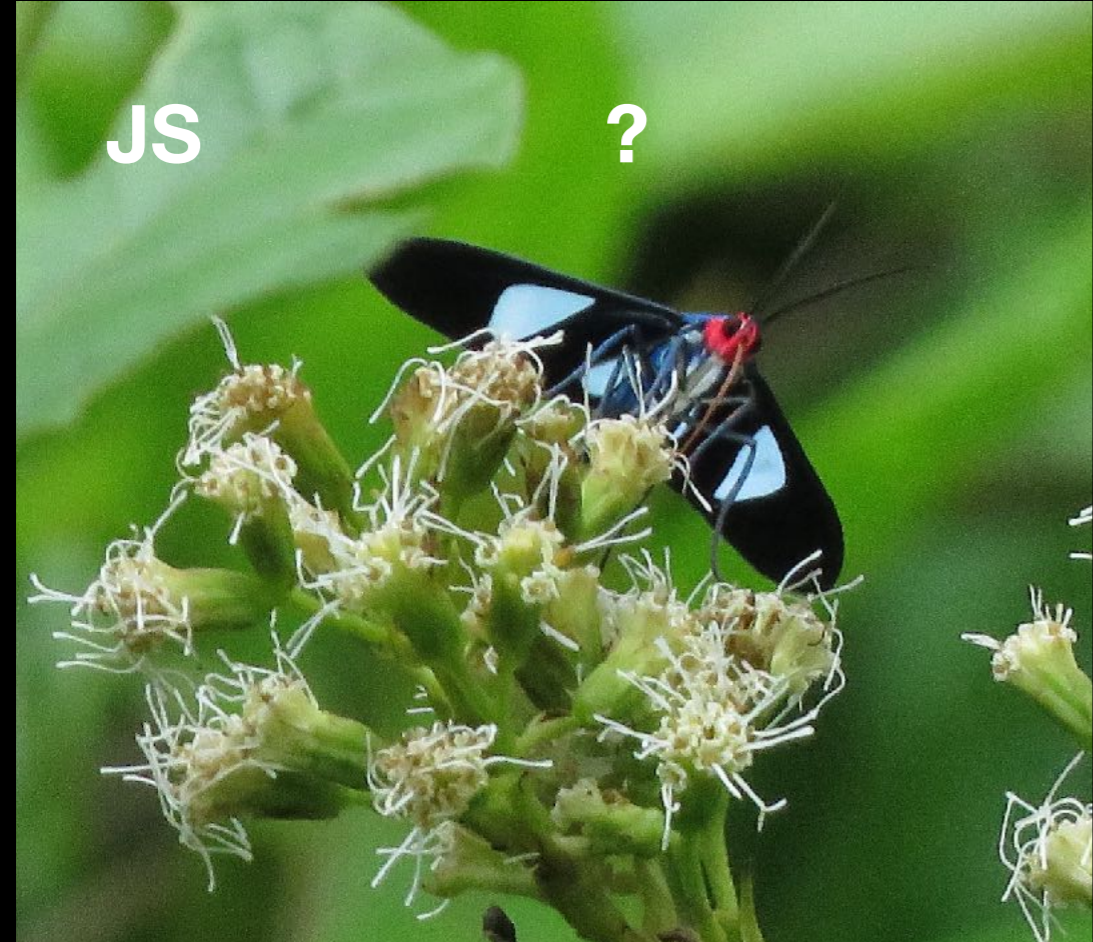


**butterfly-like  
moths**

***Telchin atymnius***



***Urania fulgens***



**JS**

**?**



**JS**

**Orange Satyr Moth**

**JS**

**Spartan moth set-up  
at the Canopy Tower**

**Most species of moths are nocturnal  
and easily attracted to  
lights or to bait.**

HILTI  
canopy tower  
www.canopytower.com  
canopytower.com  
+507.264.5720  
CA1895

**Walker's Moth (*Sosextra grata*) — Erebididae**



?

**Other Moths**



**Erebidae is a superfamily that includes tiger moths**

**Vine Moth**

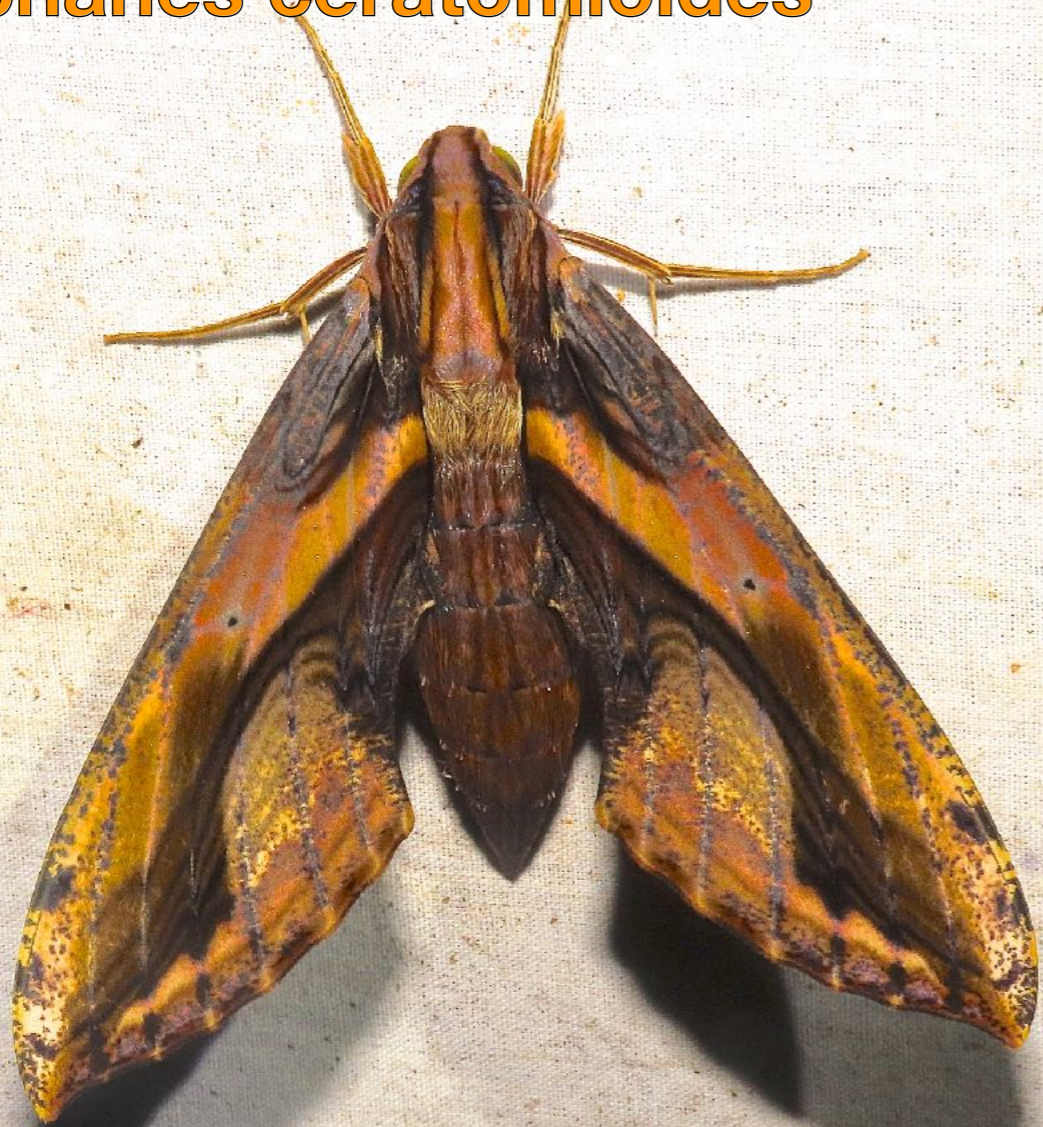


**The Vine Moth occurs up into  
the southeastern U.S.**

**Sphinx moth sp.**



**Xylophanes ceratomioides**



**Sphinx moth sp.**



***Copaxa rufinans***  
**Saturniidae (silk moths)**



***Hylesia continua***  
laying eggs







**Dead-leaf Moth**  
**(*Oxytenis modesta*)**



**Cerodirphia sp.**



***Asthenidia transversaria***





*Adeloneivaia subangulata*

more silk moths (Saturniidae)

*A. centrojason*

very similar to our  
Oak Worm Moths



what's up  
with this?



**“Wood Chip” moths**  
**g. *Pentobesa*?**  
**f. Notodontidae**





????



**Paramacna natterari**



?



**Anisodes nodigera**



**Tecmessa rarata**



*Epimecis* sp.



*Moresa* sp.  
Notodontidae



*Nemoria* sp.



*Coenostolopsis apicalis*?



?



and the moths keep coming...

?



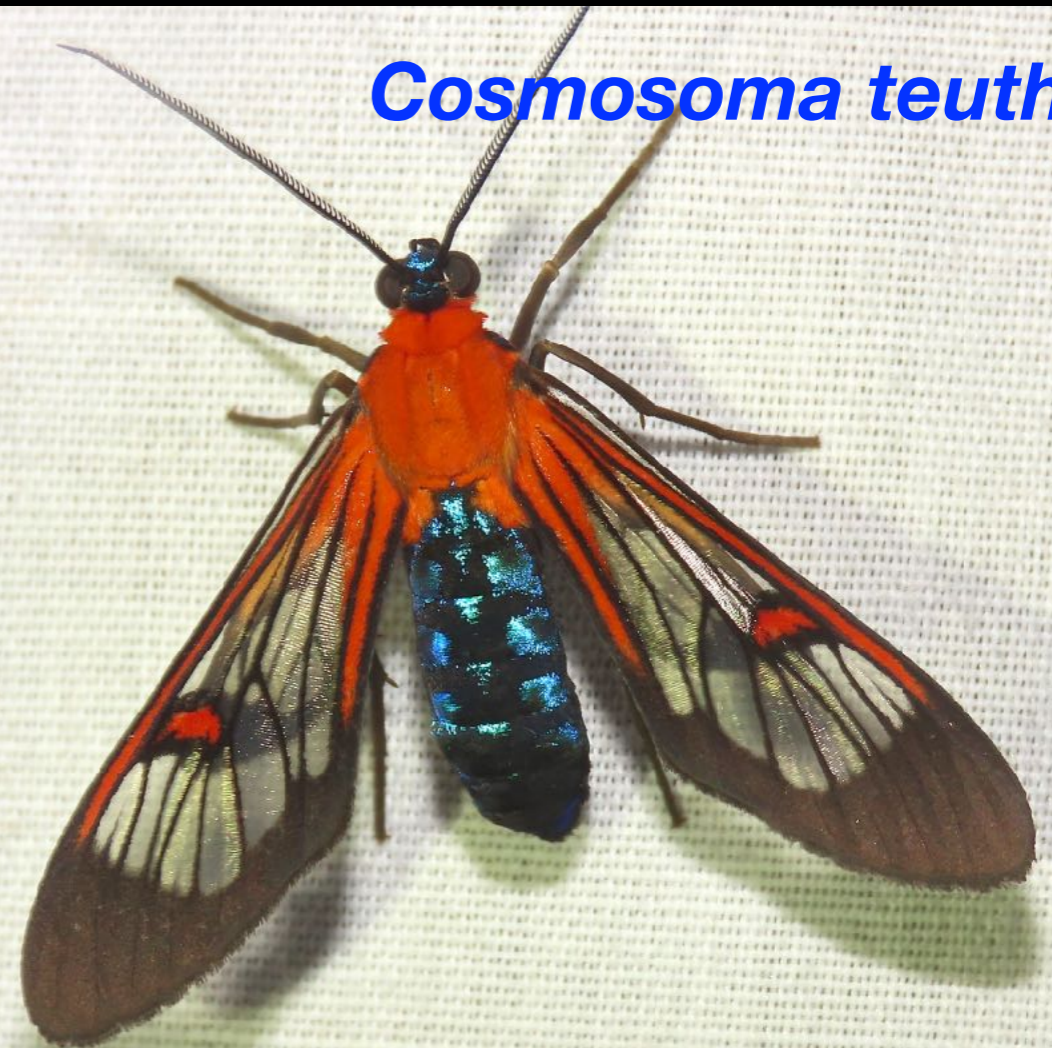


***Phaeomolis lineatus***



**tiger moths**

***Cosmosoma teuthras***



*Trosia nigropunctigera*



flannel moths

*Megalopyge tharops*



Shamrock Moth—  
(I named this myself)



*Opisthoxia* sp.



bat signal



**Io Moth**  
**(*Automeris metzli*)**



Touching these hairs with bare skin  
is like walking through a patch of  
stinging nettle.



**morpho sp.**



**Thoas Swallowtail—very similar  
to our Giant Swallowtail**



**owl butterfly sp.**

5-6"



*Schizura* moth sp.



**Tersa Sphinx**—adults rarely stray into NJ from the south



**fruitpiercer  
moth sp.**



**defensive posture**



**tussock moth sp.**





*Tarchon felderi*  
Bombycidae

***Hemileuca* sp.** — same genus as  
our buck moths



The caterpillars of some species  
of flannel moths have venomous spines  
imbedded within the hairs that can cause severe  
distress to some people.

flannel moth sp.  
*Megalopyge*





jumping spider  
(*Bagheera kiplingi*)



orb-weaver



JS



Sylvan Jumping Spider

*Phiale guttata*



**Huntsman spider**  
**(*Curicaberis* sp.)**



**Wolf Spider**  
**JB**



*Argiope argentata*



These round webs may be constructed by immatures

JB



# Tailless Whip Scorpion FP

Also known as whip spiders, these ancient arachnids are neither scorpions nor spiders and, despite their appearance, are essentially harmless to humans. Nonetheless, I would not want to be in bed at night and have one of these crawling up my leg!



**Brown Basilisk**

**Up to 2 feet in length**

**Rainbow Whiptail**  
**JS**

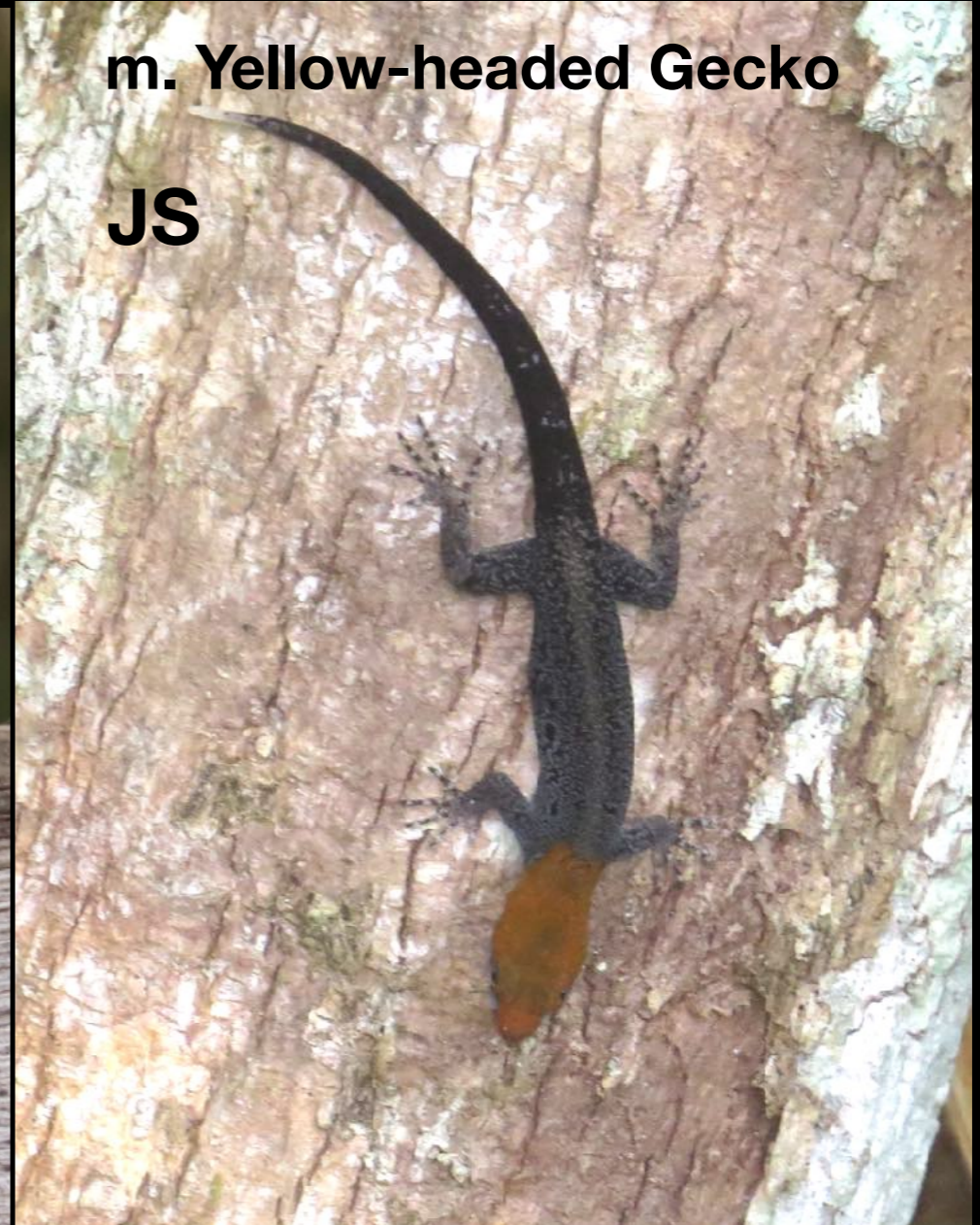


**FP**

?



**m. Yellow-headed Gecko**  
**JS**





**Green Iguana**



**JB**

**Cat-eyed Snake**  
**FP**



?

**Blotched Snailsucker**  
**FP**





**Granular Streamside Treefrog**



**Green-and-black  
Poison Dart Frog**



**FP**

**Smoky Jungle Frog**  
**Huge—similar in size to Marine Toad**



**Scarlet-webbed Treefrog**



**Hourglass Treefrog**



***Cochranella* sp.**



**FP**

**glass frogs**

**called glass frogs because some species have translucent skin around the abdomen allowing observation of the internal organs**

***Hyalinobatrachium* sp.**



Mantled Howler Monkey






**White-faced  
Capuchin**

## Red-naped (Geoffrey's) Tamarin



A photograph of a Brown-throated Three-toed Sloth clinging to a tree trunk. The sloth is covered in long, brownish hair with a noticeable greenish tint, particularly on its neck and forelimbs. It is positioned vertically, with its head tilted upwards and its limbs wrapped around the tree. The background shows green leaves and a clear sky.

## Brown-throated Three-toed Sloth

The greenish coloration on the hairs of the neck and forelimb are algae that, along with other critters such as specialized moths and beetles, form a symbiotic relationship with their sloth hosts—and no, I did not make this up!

## Harpy Eagle

Primary predator  
of sloths



**Bat Falcons**  
FP





## Capped Heron



**Rufescent Tiger-heron**



**Crane Hawk**



**Amazon Kingfisher**  
**FP**



**Common Potoo**



**Orange-bellied Trogon**  
**FP**



**Black-and-White Owl**



**White-vented Plumeleteer**



**Blue-chested Hummingbird**



**Panamá—  
a great place  
to hang around!**

