

Interesting & Peculiar Arthropods in the Landscape

Nebraska Statewide Arboretum
Brown Bag Series

James Kalisch, Extension Associate
Department of Entomology, University of Nebraska-Lincoln

**Today, a mixture of subjects
not necessarily related...**

Disguise or Camouflage

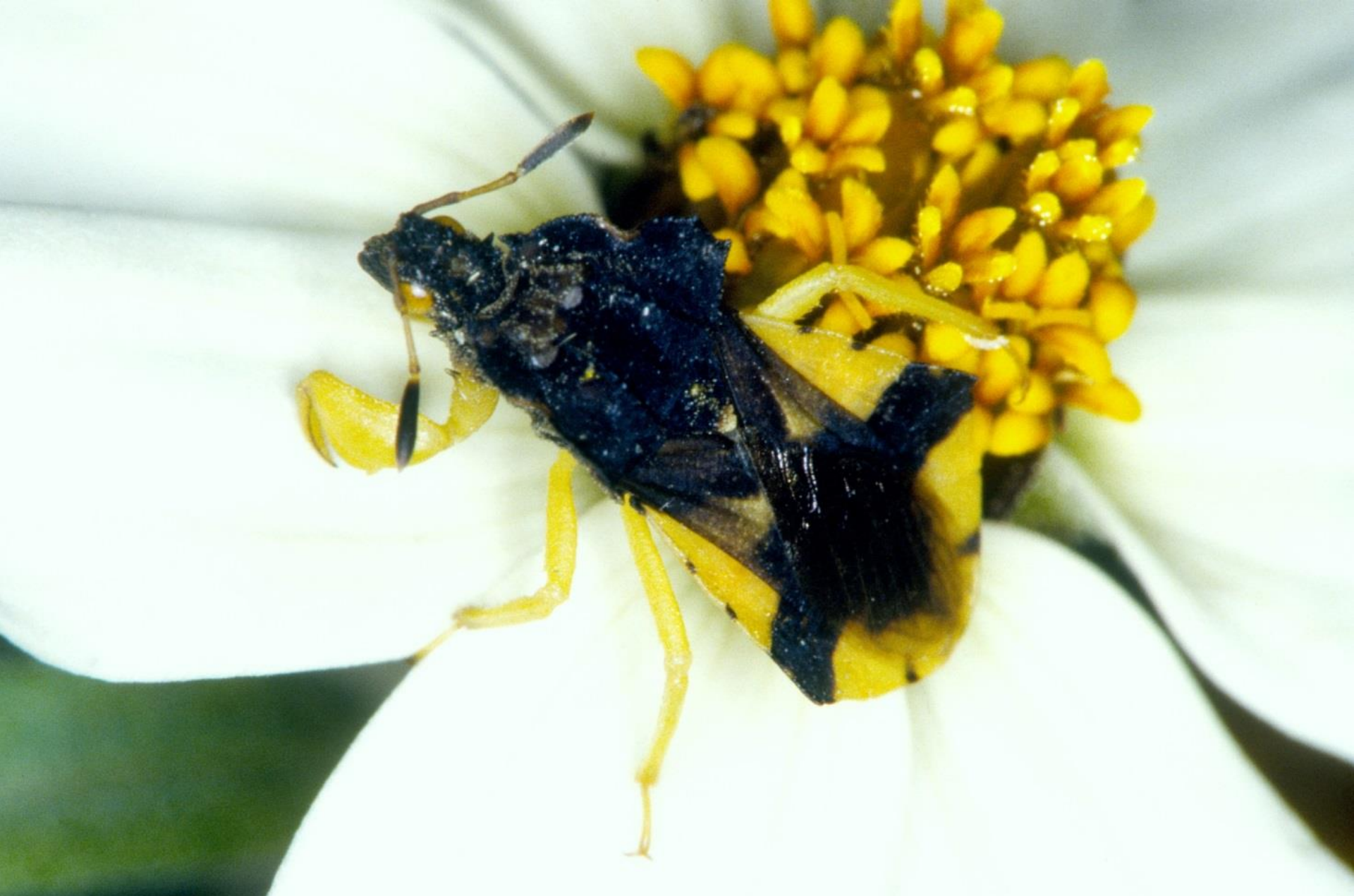
Mimicry

Protective Strategies

Interesting Late-Summer Spiders

Disguise and Camouflage

- Benefits either predator or prey.
- Predators not able to detect and locate prey.
- Predators in disguise or camouflaged can pounce on unsuspecting prey.
- Markings may evoke confusion.



Camouflage and Disruptive Coloration



Ambush Bug, *Phymata* sp.

*Disruptive
Coloration*



Unicorn Caterpillar, *Schizura unicornis*



Unicorn Caterpillar, *Schizura unicornis*



Bird turd?



Tortricid Moth.



Giant Swallowtail, *Papilio cresphontes*



Giant Swallowtail, *Papilio cresphontes*



Discolored Renia, *Renia discoloralis*



Broadwinged Katydid, *Microcentrum rhombifolium*



Crab Spider, *Misumenoides formosipes*



Goldenrod Spider, *Misumena vatia*



Moving mass of debris and dust.



Masked Hunter, *Reduvius personatus*



Feeds in trees!

Rough Stink Bug, *Brochymena* sp.



Disgusting!

Sunflower Tortoise Beetle Larvae, *Physonota helianthi*

Mimicry

- **Batesian** – A harmless, edible insect mimics one that is injurious or distasteful.



Pupa

Viceroy Butterfly, *Basilarchia (Limenitis) archippus*



Drone Fly, *Eristalis tenax*



Picture-Winged Fly, *Delphinia picta*



Successful kill of yellowjackets?



Mark Dreiling (InsectImages.Org)

Red Oak Clearwing, *Paranthrene simulans*, Male



Eastern Yellowjacket, *Vespula maculifrons*



Podosesia syringae

Ash/Lilac Borer



Polistes fuscatus

Paper Wasp

Protective Covers, Webbing, Secretions and Discharges

- Prey is concealed.
- Deterrent to access by predator or parasite.
- May entrap aggressor.



Bagworm, *Thyridopteryx ephemeraeformis*



Foliage enveloped with dense webbing.



Fall Webworm, *Hyphantria cunea*

Alder



Goldenrod



Spittle from inconsiderate young men?



Spittlebugs, Family Cercopidae



Juniper Spittlebug, *Clastoptera juniperina*



Rolled Leaves on Roughleaf Dogwood



Rolled Leaves on Roughleaf Dogwood



Leafroller Caterpillar, Family Tortricidae



Fuzzy mildew on purple coneflower?

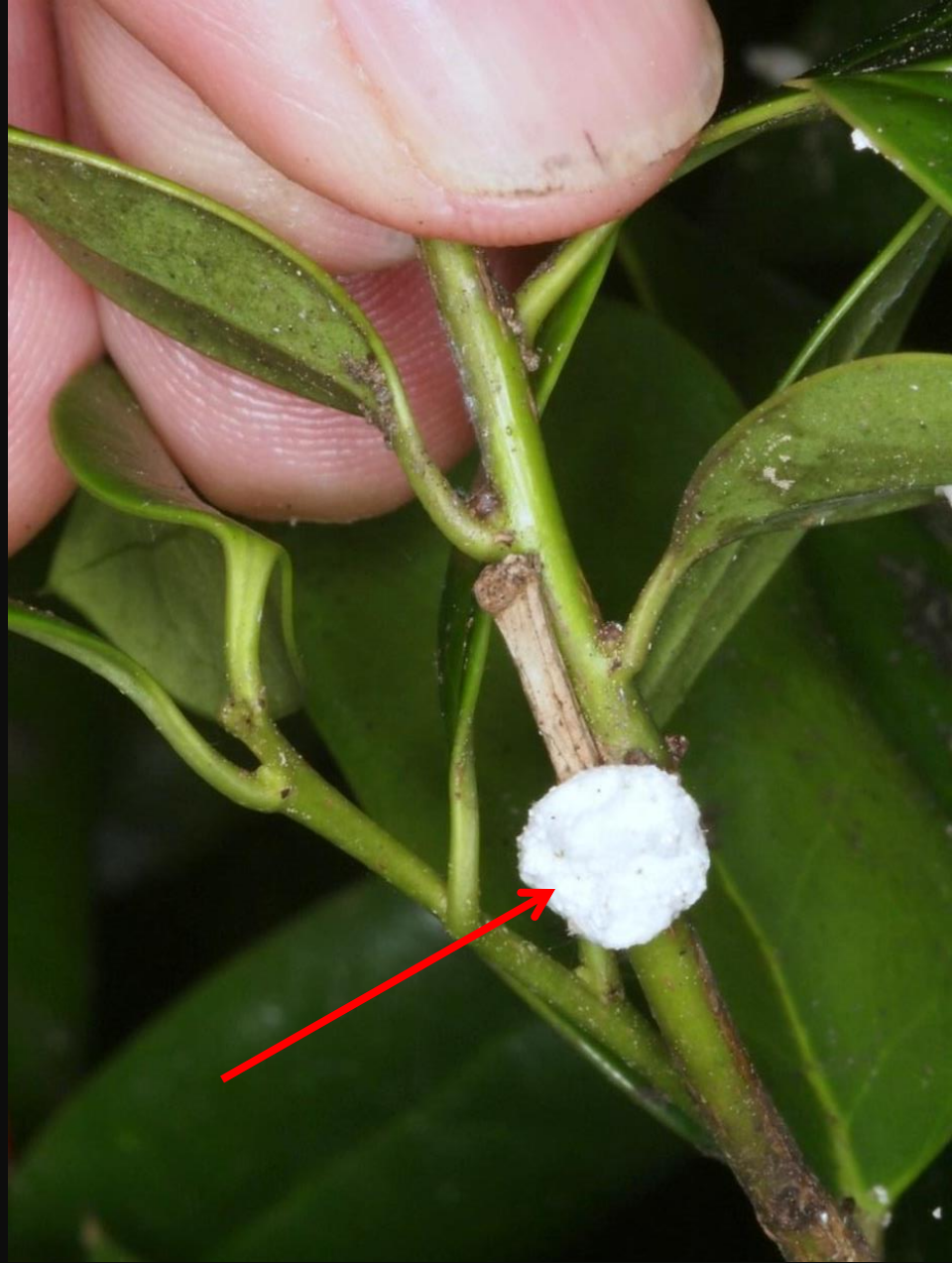


Citrus Flatid Planthopper, *Metcalfa pruinosa*



Citrus Flatid Planthopper, *Metcalfa pruinosa*

Holly



Cottony Scale?

*Hey! Hey!
Waddya
doin'!!*



Aggressive Mimicry by Green Lacewing Larva



Normal View of a Green Lacewing Larva

Safety in Numbers

- Overwhelming numbers in a narrow frame of time assure that at least some individuals will survive attack or escape predation.
- Insects fused into a group can appear as a single, large organism and intimidate predators.



Fuzzy Mass at Base of Walnut Tree



Walnut Caterpillar, *Datana integerrima*



Walnut Caterpillar, *Datana integerrima*



Bizarre Migration of Slimy Worms



Bizarre Migration of Slimy Worms



Darkwinged Fungus Gnat, *Sciara* sp.



What are these mud tubes from?.

Gene Kritsky,
Indiana Academy
of Science



Periodical Cicada (17-Year), *Magicicada septendecim*



***Returning
May 2015 for
a spectacular show
at selected state parks!***

Periodical Cicada (17-Year), *Magicicada septendecim*





Gene Kritsky,
Indiana Academy
of Science

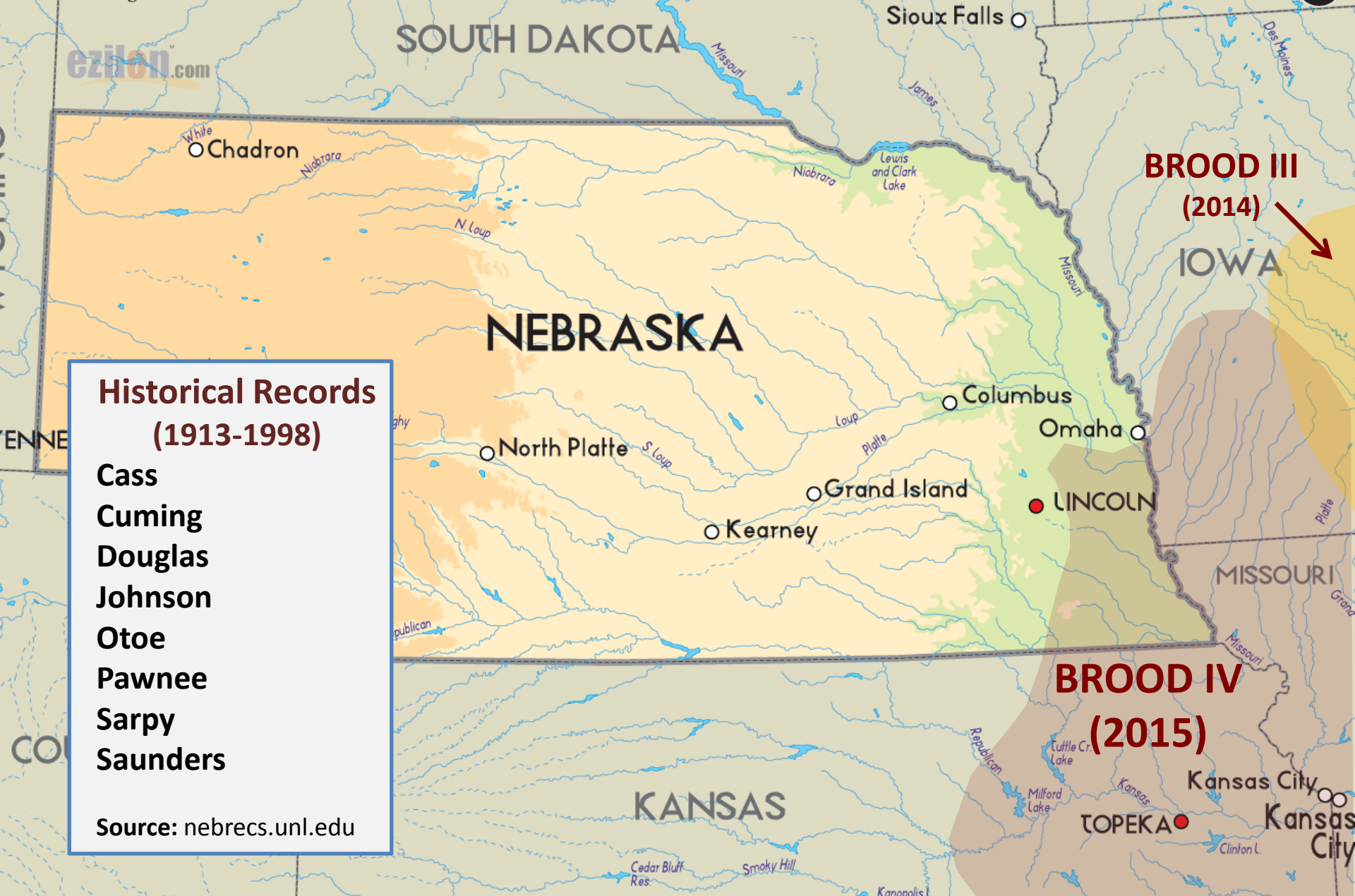


Rutgers
University

Example of numbers and twig damage.



What happens after all the cicadas die?



Don't miss Brood IV emergence in Late May-June, 2015!

Alliances

- One organism that benefits from another will guard it.
- Mutualistic relationship where each organism derives some benefit from the other.

A close-up photograph of a person's hand holding several green Bur Oak leaves. The leaves are characterized by their deeply lobed shape and a glossy, sticky top surface. Numerous small, circular holes are visible on the leaves, indicating insect damage. The background is dark and out of focus.

Bur Oak

Top surface of leaves glossy and sticky.

Oak Aphids

*Surplus sugars are
secreted by aphids
when feeding; called
“honeydew”.*

Aphids, Family Aphidae



Many insects lap up “honeydew”.



Ants often guard aphids and soft scale insects.

Interesting Late-Summer Spiders



Never put your finger in a hole!



Carolina Wolf Spider, *Hogna carolinensis*



***Why is it
black on the
underside
with banded
legs?***

***Who would
notice?***

Carolina Wolf Spider, *Hogna carolinensis*



Carolina Wolf Spider
Hogna (Lycosa) carolinensis



Wolf Spider
Hogna (Lycosa) aspersa

Both species are large and prowl about for crickets.



Long-Billed Curlew

Even predators may become prey!



Dave and Bente Fuller, Lincoln, NE, 20Aug2014

Spider wasp dragging a wolf spider to its lair.



Neoscona hentzi

Nocturnal barn spider constructing its web.



Nocturnal barn spider constructing its web.



Before sunrise, females recycle their silk.

Active during the day.



Garden Spider, *Argiope aurantia*



Why all the mess with extra mesh?

“Stabilimentum”

Extra strands, bands or decoration of silk radiating out from the center of orb webs.

Occurs with day-active orb-weaver spiders.

Proposals for function?

Functions of Stabilimenta

Source: Biology of Spiders, 3rd Edition, by Rainer F. Foelix, Oxford University Press, 2011.

- **Stability.**
- **Prey Attraction to pollinating insects.**
- **Defense.**
- **Camouflage.**
- **Bird Deterrent.**
- **Confusion.**

All Done!

Questions?