Household Spiders and other Colorado Arachnids
Arachnid Feature – Two Body Regions

- Cephalothorax
- Abdomen
Arachnid Feature – Four Pairs of Legs
Face of a longjawed spider showing chelicerae and pedipalps

Photo courtesy of Brian Valentine
Spiders

Order Araneae
Some spiders use webbing to snare prey.
Some spiders hunt prey without the aid of silk.
Key Points – Household Spiders in Colorado

- Many of the spiders found in homes are transients, that do not reproduce in buildings.
- The only potentially dangerous species is the western widow.
- Better identification of spiders can calm many concerns of clients.
- Selective use of insecticides, trapping, and vacuuming are the primary controls for spiders.
Spiders Found In CO Homes

Seasonal Transients
- Most funnel weavers
- “Roly-poly hunter”
- Jumping spiders
- Crab spiders
- Wolf spiders

May Breed Indoors
- Barn funnel weaver
- Widow spiders
- Other cobweb spiders
- Cellar spiders
- Yellowlegged sac spider
Colorado Spiders of Interest that *Do Not* Occur Indoors

Oklahoma Brown Tarantula
*Aphelenoma hentzi*
Orb-weaver Spiders

Family Araneidae
Colorado Spiders of Interest that *Do Not* Occur Indoors

Banded Garden Spider

*Argiope trifasciata*
Colorado Spiders of Interest that *Do Not* Occur Indoors

“Catfaced Spider”
*Araneus gemmoides*
“Charlotte A. Cavaticus”

*Araneus cavaticus*, sometimes called the ‘barn spider’
Coming this September!
The 6th Annual “How-Big-is-your-Catface-Spider Contest”

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<th>Name</th>
<th>Measurement</th>
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<td>Hannibal the Cannibal</td>
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Present Colorado Record Holder - Lila

Cat-faced Spider Contenders

- Lila: 2744 mg
- Aretha: 982 mg
- Petunia: 785 mg
- TBA: 694 mg
- Daisy: 613 mg
- Blondie: 610 mg
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Most Common Spiders in Homes

Funnel weaver Spiders

Family Agelenidae, three common genera
Funnel-weaver Spiders

Family Agelenidae
Funnel weaver webs
Male funnel weaver spiders have grossly enlarged pedipalps (*not fangs!!*)
Spider Mating – Transfer of Sperm Via Pedipalps

Pedipalps
Most funnel weavers found in homes are incidental transients, wandering indoors in late summer/early fall.

*Agelenopsis* species

*Hololena* species
Some funnel weaver spiders can reproduce indoors

*Tegenaria domestica*

Barn funnel weaver/domestic house spider

*Eratigena agrestis*

Hobo spider
The Wood Louse (Roly-Poly) Hunter

Family Dysderidae

*Dysdera crocata*
Ground spiders (Gnaphosidae family) that may incidentally enter buildings

*Drassodes* sp.

*Zelotes* sp.

*Herpyllus* spp. – “parson spiders”
Jumping spiders have the best visual acuity of any terrestrial arthropod.
Most common jumping spider found in homes

Bold Jumper

*Phidippus audax*
Other Jumping Spiders found indoors

Platycryptus spp.

Zebra Jumper
Scenicus salticus
Bark crab spiders sometimes wander into building in mid-late summer.
Wolf Spiders
Lycosidae Family
Wolf Spiders carry the egg sac. It is attached to the spinnerets.
Wolf Spiders Carrying Young
Giant Wolf Spiders  *Hogna* species
Burrowing Wolf Spiders

*Geolycosa* species
Spiders Found In CO Homes

Seasonal Transients
- Most funnel weavers
- “Roly-poly hunter”
- Jumping spiders
- Ground spiders
- Crab spiders
- Wolf spiders

May Breed Indoors
- Barn funnel weaver
- Hobo spider
- Widow spiders
- Other cobweb spiders
- Cellar spiders
- Yellowlegged sac spider
Some funnel weaver spiders can reproduce indoors

*Tegenaria domestica*

Barn funnel weaver/domestic house spider

*Eratigena agrestis*

Hobo spider
Longlegged Sac Spiders/Yellow Sac Spiders

Family Miturgidae
Cellar Spiders (aka “daddylonglegs spiders”)

Family Pholcidae
Combfooted/Cobweb Spiders

Family Theridiidae
Some common – and harmless – cobweb-making spiders found in Colorado homes

*Enoplagnatha* sp.

*Parasteatoda tepidariorum*

*Steatoda triangulosa*
Steatoda spp. are sometimes mistaken for widow spiders.

Steatoda grossa
“False widow spider”
Western Widow

*(Latrodectus hesperus)*
There are many kinds of widow spiders (*Latrodectus* spp.) in the world:

- Black widow (*L. mactans*)
- Western widow (*L. hesperus*)
- Australian redback spider
- Malmignatte (Europe)....
Western Widow (*Latrodectus hesperus*)
Widow spiders show strong sexual dimorphism.
Male Widow spiders are much smaller than females.

Coloration may vary, but the pattern on the underside is similar.

Males, of course, have greatly enlarged pedipalps.
Immature female
Some symptoms of widow spider bites

- Pinprick, may not be noticed
- General sense of malaise, impending doom
- Muscle tightening, particularly of abdominal muscles
- Nausea
- Sweating
- Most deaths due to effects on blood pressure
Venomous Species of Spiders Around The World

Cytotoxic Venoms

Mediterranean recluse *Loxosceles rufescens*
Brown Spiders (*Loxosceles* spp.)

Includes the brown recluse/fiddleback spider, *Loxosceles reclusa*
Some features:

“Fiddleback pattern” on cephalothorax

Uniform coloration on the legs
Three pairs of eyes
Confirmed *Loxosceles* Records from Colorado

- Five records of *L. rufescens* (Mediterranean recluse) - Denver, Bent, Larimer, Las Animas Counties
- Four records of *L. reclusa* (Boulder, Otero, Prowers)
- One record of *L. apachea* (Larimer)
Funnel weaver spiders (Agelenidae family) are very, very, very, very, very commonly mistaken for brown recluse throughout Colorado.
Clockwise, Top Left: Funnel weaver spider, solpugid/sunspider, wolf spider, brown spider (lower left)
Some Symptoms of Brown Recluse Bite

• Often - pain at time of bite
  – Typically persists for 30 minutes or so

• Often reddened area or white halo at bite site

• Very uncommonly – ulceration and slow healing

• Very uncommonly – systemic effects that include nausea, fever, cramping
Factors affecting Severity of Bites from Brown Recluse

• Individual immune response
• Amount of venom introduced during bite
• Secondary involvement of wound-infecting bacteria
Misdiagnosis (overdiagnosis) of brown recluse bites as a cause for most any slow healing wound of unknown origin is probably, by far, the most common misdiagnosis US medical doctors make regarding arthropods.

“Yep, that is DEFINITELY a Brown Recluse bite”
Conditions That Can Be Confused With or Have Been Misdiagnosed As Recluse Spider Bites

Bacterial
Staphylococcus infection
Sterptococcus infection
Cutaneous anthrax

Viral
Infected herpes simplex
Chronic herpes simplex
Varicella zoster (shingles)

Fungal
Sporotrichosis

Lymphoproliferative disorders
Lymphoma
Lymphomatoid papulosis

Vascular disorders
Focal vasculitis
Purpura fulminans

Reaction to drugs
Warfarin poisoning

Arthropod-induced
Lyme disease
Rocky Mountain spotted fever
Ornithodoros coriaceus bite (soft tick)
Insect bites (flea, mite, biting fly)

Misc. / multiple causative agents
Pyoderma gangrenosum
Pressure ulcers
The Most Common Source of Slow Healing Wounds in the US!

Methicillin-resistant Staphylococcus aureus (MRSA)

aka, “flesh eating bacteria”, “false spider bite diagnosis”
MRSA Infections

aka, “flesh eating bacteria”, “false spider bite diagnosis”
The Myth of the Toxic “Hobo Spider”

*Tegeneria agrestis* – aka “hobo spider”

- The most common household spider in most of Europe
- Introduced into US; now common in Fort Collins
- An original report suggested it might bite and cause slow healing wounds

This report has been completely refuted and discredited
Myth of the “Hobo Spider” Toxicity

• Published account in late 1980s appeared to link spider with necrotizing bites
  – Results of original paper have never been replicated
  – *Original paper is considered to be thoroughly discredited and without merit*

• Spider in Europe never associated with biting problems

• No difference in toxins between US and European spiders

• Necrotizing wounds thought to have been due to non-spider causes (MRSA, etc.)
USA SPIDER CHART

DEADLY & DANGEROUS

- BROWN RECLUSE SPIDER
- BLACK WIDOW SPIDER
- HOBO SPIDER

SPIDER BITE FIRST AID

- Keep patient calm
- Apply ice to decrease pain and swelling
- Use anti-inflammatories for pain relief
- Contact your doctor

NOTICE: MALE SPIDERS HAVE A SMALLER ABDOMEN. LONGER LEGS & SWOLLEN PALPS (FOR REPRODUCTION)

TOXIC (POISONOUS) – PAINFUL BITE

- FEMALE MOUSE SPIDER
- MALE MOUSE SPIDER
- BLACK HOUSE SPIDER
- WOLF SPIDER

WARNING: MOST OF THESE SPIDERS CAN BE DANGEROUS TO PEOPLE WITH ALLERGIES OR HYPER SENSITIVITIES

THE “LOW RISK” SPIDERS

- FEMALE TRAP-DOOR
- MALE TRAP-DOOR
- GARDEN ORB-WEAVING
- SAINT ANDREW’S CROSS
- HUNTSMAN

SPIDERS CAN BE BENEFICIAL IN THE CONTROL OF MOSQUITOES & FLIES. BUT IF THEY PRESENT A DANGER – CALL FUMAPEST

- SWOLLEN PALPS
- MILDLY TOXIC • NON AGGRESSIVE
- GROUND DWELLING (BURROW • OFTEN WITHOUT A LID)
- RELATIVELY HARMLESS • BENEFICIAL
- OFTEN SEEN IN A LARGE WEB IN THE GARDEN
- FOUND UNDER LOOSE BARK
- MAY WANDER INDOORS

Don’t believe everything you see!!!!
Spider Control in the Home
Regular vacuuming and movement of furniture kills and disrupts the activities of household spiders
Spider Traps
Caulking can prevent egress into the home by spiders that develop outdoors.
Insecticides applied indoors should only be used as spot treatments at points where spiders are expected to rest and establish webs.
Persistent insecticides applied to potential entry points can prevent egress into the home by spiders that develop outdoors.
Daddy longlegs (aka, harvestmen, phalangids)

Class Arachnida

Order Opiliones
Daddy longlegs
Daddylonglegs
Daddy long legs
Daddy-long-legs

They’re all OK spellings!
Leiobunum species

Phalangium opilio

Common Colorado Species
4 pairs of legs

Eyes mounted on a large dorsal tubercle
Daddy longlegs do have:

- Very long legs (4 pair)
- A body of not clearly separated into regions
- A pair of eyes
- Weakly muscled mouthparts, designed to crush
- Defensive glands for protection
Daddy longlegs *do not* have:

- Glands for silk production
- Jaws connected to poison glands
Cellar Spider
Order Aranae
(spiders)

Daddy long legs
Order Opiliones
Male daddy longlegs tend to have longer legs and a smaller body than the females.
Mating pair of daddy longlegs. Photograph by David Leatherman.
Adults are present in fall, hence the name ‘harvestmen’. Eggs are inserted into the soil, behind bark and in other protected sites.
Scorpions

Class  Arachnida
Order  Scorpiones
Common Striped Scorpion found in Southern Colorado

Giant Desert Hairy Scorpion – Found in Western Colorado
Pedipalps (chelae) for prey capture
Scorpion jaws (chelicerae)
Stinger used for defense
Pedipalps (chelae) for prey capture

Scorpion chelicerae (jaws)
Scorpion mothers carry their young for the first weeks of their life.
An adorable scorpion picked up south of La Junta, CO
Stinger primarily used for defense
Medically Important Scorpions

• Only about 20-25 species considered to be medically important
  – All in family *Buthidae*
  – No dangerous species in Colorado
  – Bark scorpion (“Durango scorpion”) in southern AZ and northern Mexico is dangerous
  – Fattailed scorpion of North Africa has caused most human fatalities
Scorpions found in Colorado are not considered to be medically important.
Fat-tailed Scorpions of Northern Africa –

The worlds most dangerous scorpions

Arabian fat-tailed scorpion, *Androctonus crassicauda*
Arizona bark scorpion
Arizona Bark Scorpion
Symptoms from sting of bark scorpion

Immediate burning pain

– Pain quickly subsides
– Site remains very painful if (and after being) touched (Positive tap test)

Systemic reactions rare, but serious

– Restlessness
– Thickened tongue, slurred speech
– Staggering
– Convulsions
Pseudoscorpions

(Order: Pseudoscorpioines)
Pseudoscorpions being transported (phoresy) by longhorned beetle
Sunspiders
(a.k.a. windscorpions, solpugids)

Class Arachnida
Order Solifugae
Leglike pedipalps (chelae)
Sunspiders, Windscorpions, Solpugids
The infamous "Camel Spider" photograph circulating on the Web
Pseudoscorpions

(Order: Pseudoscorpionenes)
Pseudoscorpions being transported (phoresy) by longhorned beetle
Mites and Ticks

Class Arachnida
Order Acari
Hard Ticks
Dermacentor spp. include the Rocky Mountain Wood Tick and the American Dog Tick
Dermacentor species are 3-host ticks

Small mammals are needed to support the development of early stages
Brown Dog Tick
*Rhipicephalus sanguinipes*

The only tick in Colorado that can breed indoors.

A single host tick of dogs
Mites found In Homes

• Associated with plants
  – Clover mites
  – Spider mites of houseplants

• Associated with birds and/or rodents
  – Northern fowl mite
  – American bird mite

• Associated with dogs, cats
  – *Cheyletiella* mites
Clover mites migrating indoors from lawns

Mites associated with plants, fungi

Dust mites

Spider mites on indoor plants
Dust Mites

*Dermatophagoides* spp.

- An important human allergen (feces, cast skins)
- Feeds on fungus grown on skin flakes (*Aspergillus penicilloides*)
- Optimum humidity – ca. 75%
  - Minimum RH around 60%
What the heck are “Duct Mites”???

This is a typical example of dirty duct containing mold spores, bacteria, fungus, dust, pollen and other "Ductmites" causing "Sick Building Syndrome" and "Building Related Illnesses".
Cheyletiella Mange

Mites

*Cheyletiella* spp.

“Walking dandruff”
Northern Fowl Mite
Ornithyssus sylviarum
American Bird Mite

*Dermanyssus galliniae*
Bird Mite Study?

Incidence of mites in bird nests attached to buildings?

Survival of mites after hosts (birds) have left?
This presentation will be posted at the Insect Information web site

- Housed at Department of Bioagricultural Sciences and Pest Management
  - Search “BSPM CSU”
- Within “Extension and Outreach”
- “Insect Information”
  - Extension presentations for 2014 posted at bottom of page