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Home Invaders Uninvited Pests

And what to do about them!

WASHINGTON STATE UNIVERSITY
EXTENSION

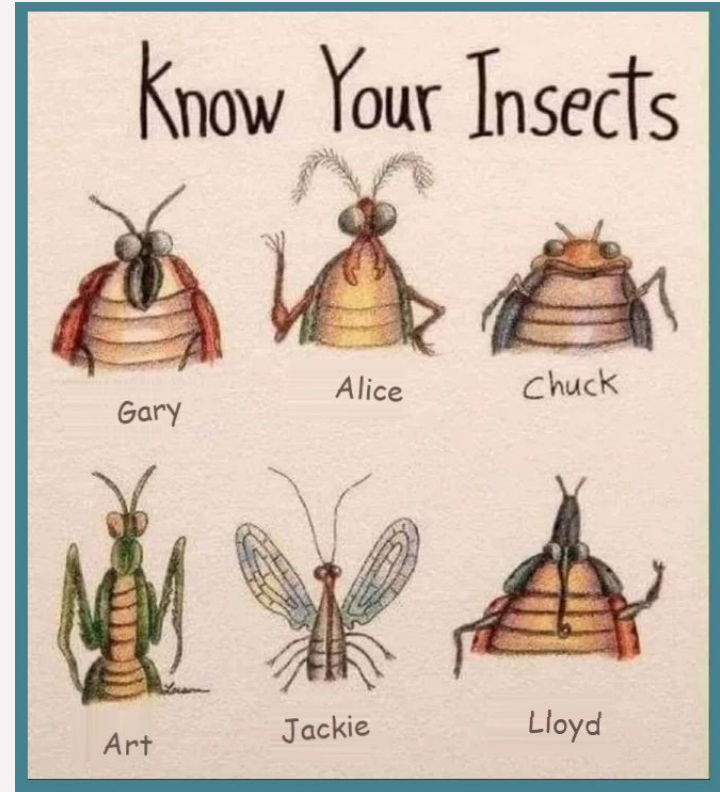


Cowlitz County Master Gardeners



What we're going to cover

- IPM (Integrated Pest Management)
- Overview of insects' life cycles
- Spiders
- Pantry Pests
- Common visitors
- Common Ants
- Bedbugs



Our FREE Plant and Insect Clinic

Call: 360-577-3014 Ext. 8

Drop off your sample:

WSU Extension Office

1946 3rd Ave., Longview, WA 98632

Problem or question? cowlitzcomg.com/plant-and-insect-clinic

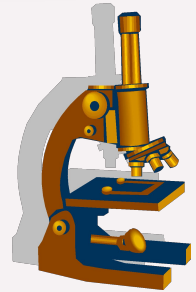
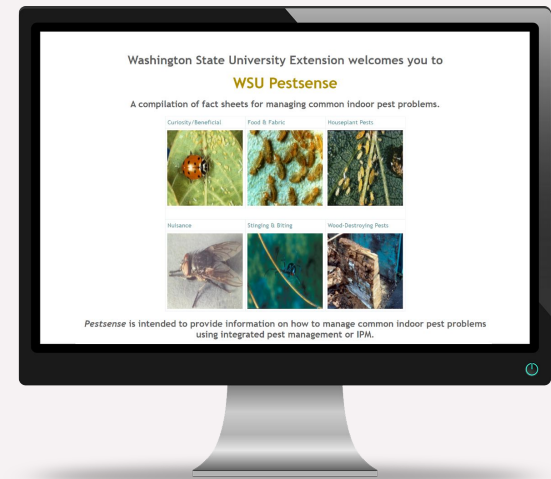
Visit us on Facebook facebook.com/cowlitz.mastergardeners

This presentation and many others are available on our website:

cowlitzcomg.com/lookingahead#minicourses

Want to know what to do and what to look for in your garden this month? View our month-by-month guide:

cowlitzcomg.com/lookingahead



How to preserve your specimen

- If it **squishes**, put it in a jar with a little vinegar or alcohol
- If it **crunches**, put it in a bag or jar and freeze it.

Overview: Life Cycles of Insects

- Question: Why do we have know this?
 - 1.) Because the immature forms of insects may not even resemble the adults!
 - 2.) Because there may be a certain part of the life cycle in which an insect causes damage
 - 3.) Because insects may be susceptible to chemical treatment only at a certain stage of the life cycle

Incomplete metamorphosis

- Three stages:

Egg



Nymph (several (usually 3-6) immature forms called “instars”)

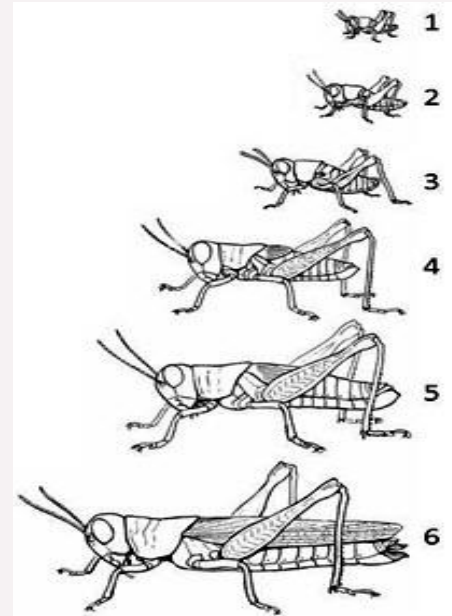
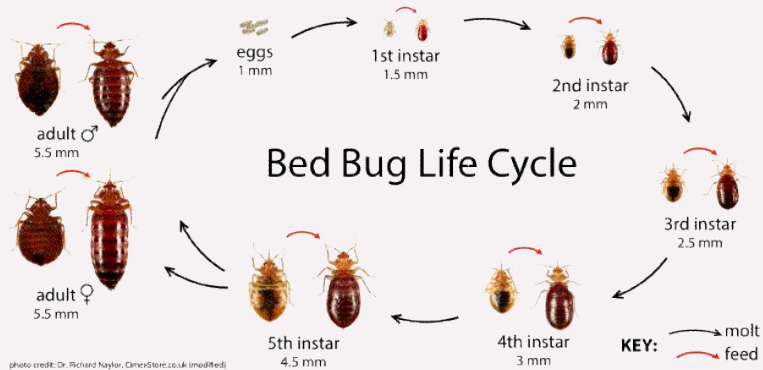


Adult

- Examples: *true bugs, grasshoppers, cockroaches, termites, praying mantises, crickets, and lice.

***True bugs** have piercing-sucking mouthparts and undergo incomplete metamorphosis—such as cicadas, aphids, planthoppers, leafhoppers and shield bugs

Incomplete metamorphosis



In grasshopper metamorphosis, you can see that young grasshoppers (1-5) look very similar to the adults (6) as they grow larger.

Source: <https://askabiologist.asu.edu/incomplete-metamorphosis>

Incomplete metamorphosis

- Or nymphs may look completely different than the adult
- Young nymphs shed their skins to transform to the next instar



Photo#1403735
Copyright © 2017 Aggva

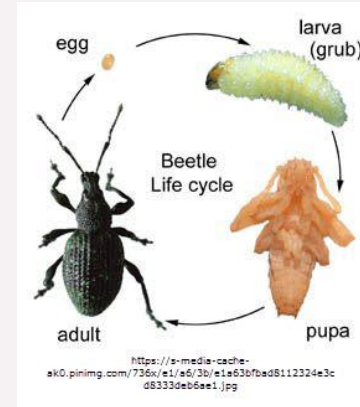
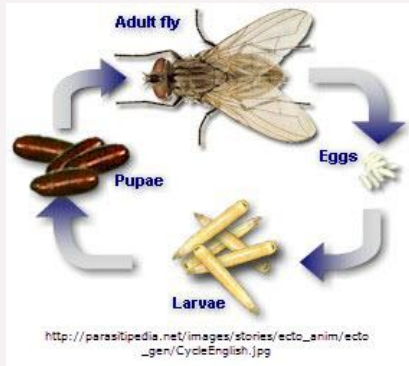
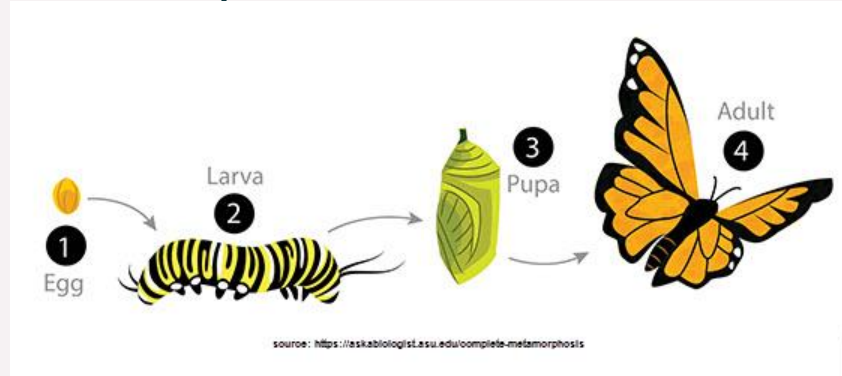


Complete metamorphosis

- 4 stages, 4 completely different appearances
- Egg ➡ Larva ➡ Pupa ➡ Adult
- Insects with complete metamorphosis include flies, beetles, bees, ants, butterflies, moths, fleas, and mosquitoes.

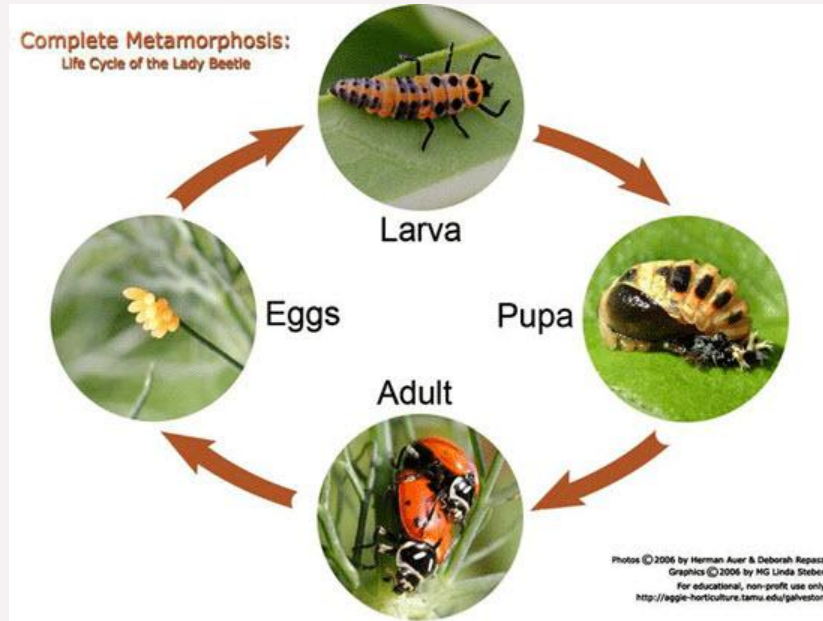


Complete metamorphosis



Did you know?

- Ladybugs—undergo complete metamorphosis



Integrated Pest Management (IPM)

- 1.) Observe damage and ID pest
- 2.) Learn pest life cycle and biology
- 3.) Monitor pest population
- 4.) Establish action threshold (How much can YOU tolerate?)
- 5.) **Choose appropriate combination of management tactics.** For any pest situation, there will be **several options** to consider.
- 6.) Did it work?

Always choose

NON-CHEMICAL OPTIONS first

- **Physical tools**—manual removal, vacuums, caulking, screens
- **Cultural tools**—reducing the pest's food, access to water, hiding places
- **Biological tools**—Not as important *IN* the home, but essential in the garden.
- **Chemical tools**—Pheromones, baits, repellents, least toxic pesticide

When using chemical controls







- Do your homework—choose the right pesticide
- Follow label directions carefully about mixing, protective clothing, application, disposal. (Don't wear soft contact lenses when applying)
- Don't eat or smoke when applying chemicals
- **ONLY USE PESTICIDES IN THE HOME THAT ARE LABELED FOR THAT USE!** Remove food and eating utensils from area.

Bee precaution pesticide ratings: <https://www2.ipm.ucanr.edu/beeprecaution/#>

Pollinator protection chart: <http://cpg.treefruit.wsu.edu/bee-protection/pollinator-protection-chart/>

WSU Pestsense

A compilation of fact sheets for managing common indoor pest problems.

Curiosity/Beneficial	Food & Fabric	Houseplant Pests
		
Nuisance	Stinging & Biting	Wood-Destroying Pests
		

<http://pestsense.cahnrs.wsu.edu/>

YOUR
BEST
RESOURCE:

Nuisance

Breadcrumbs

Bagworms
Brown marmorated stink bug
Centipedes
Clover mites
Cluster flies
Cockroaches
Firebrats
Fruit flies
Fungus gnats
Giant house spider
Hobo spider
House centipede
House dust mites
House flies
Little house flies
Mice and rats
Millipedes
Moat flies (drain flies)
Multi-colored Asian lady beetle
Odorous house ants
Pavement ants
Pseudoscorpions
Root weevils
Seed bugs
Silverfish
Sowbugs and pillbugs
Spiders (non-biting)
Springtails
Thatching ants



Caption: pavement ant workers
Photo by: J.R. Glass

[print version](#) | [pdf version](#) | [email url](#)

Pavement ants

(revision date: 2/13/2015)

Use **Integrated Pest Management (IPM)** for successful pest management.

Biology

Pavement ants are becoming more common as a nuisance ant pest in the Pacific Northwest. This small ant measures about 1/8 inch or a little less in length. Body colors range from light brown to darker browns and blacks while the appendages are lighter in color. These ants have a stinger but are rarely aggressive against humans. They feed on a wide variety of foods including insects, honeydew, pollen, plant sap, meats, grease, nuts, cheese, bread, and honey. Nests can be found in exposed soil under stones or pavement, in rotting wood, and sometimes in homes. Reproductive swarms can occur throughout the year but are most common in June and July.

Management Options

Non-Chemical Management

- Non-chemical or cultural options are non-existent since these ants are common in our soils and nest anywhere they want.

Select non-chemical management options as your first choice!

Chemical Management

IMPORTANT: Visit Home and Garden Fact Sheets for more information on using pesticides

To prevent entry into homes, use barrier treatments of a registered material applied around the foundation. Make sure the product gets under the siding. If the pavement ant nest is found, directly treating the nest can be effective. Baiting may also work.

If you choose to use a pesticide, some examples of products that are legal in Washington are listed below. Some products are labeled for just INDOOR or just OUTDOOR use, or may allow both uses. Be sure to choose a product appropriate for your situation. Always read and follow all label directions.

IT'S THE LAW!

- Ortho HomeDefense Perimeter & Indoor Insect Killer RTU
Active ingredient: bifenthrin | EPA reg no: 239-2663
- Combat Outdoor Ant Killing Granules
Active ingredient: hydramethylnon | EPA reg no: 64240-25
- Combat Outdoor Ant Stakes
Active ingredient: fipronil | EPA reg no: 64240-30
- Bayer Advanced Garden PowerForce Multi-Insect Killer Concentrate
Active ingredient: cyfluthrin | EPA reg no: 3125-502-72155
- Bonide Termite & Carpenter Ant Killer Conc
Active ingredient: permethrin | EPA reg no: 4-349
- Combat Ant Killing Gel
Active ingredient: fipronil | EPA reg no: 64240-42
- Revenge Liquid Ant Bait

SPIDERS!



Winner of the MFV Award!



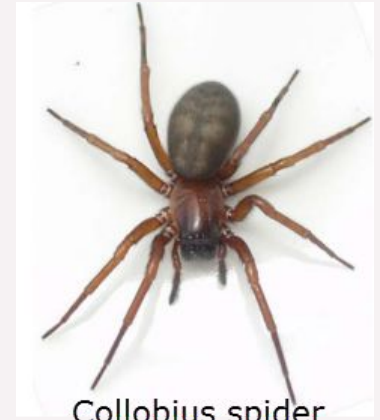
Is it a HOBO? Amaze your friends!

- It's NOT a hobo spider if it has
 - Two dark stripes on cephalothorax
 - Striped legs
 - Shiny orange body

*2 dark stripes on cephalothorax

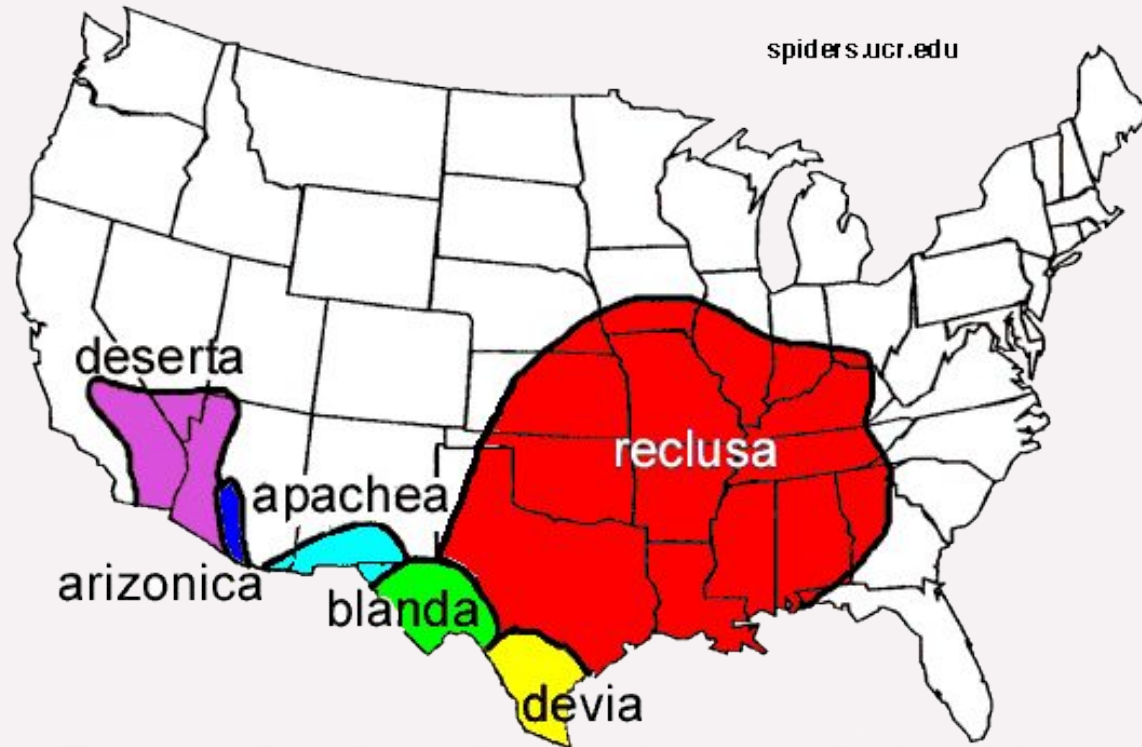


*dark rings around the legs
Grass spider



Collobius spider
Dark orange,
shiny
cephalothorax and

NO Brown Recluse Spiders in Washington!



Range of recluse (genus *Loxosceles*) spiders
in the United States

What about the dreaded hobo spider?

- Most common spiders we see are Giant House Spiders
- Hobos are smaller!



Hobo Spider's venom is no more dangerous than any other

(Yup—it's TRUE!)

But my doctor said it's a Hobo/Brown Recluse bite

Two criteria must be met:

1. Someone has to see the bite happen

2. An expert has to identify the spider species

- Some sensitive people may react strongly to any kind of bite
- MRSA, causes poor healing skin wounds and is often referred to as “false spider bite diagnosis.”



Female hobo spider-Body length one inch, leg span 1 1/2 inches

Photo by M Bush WSU Extension



Giant House spider--body length one inch, leg span over 3 inches

Photo Todd Murray WSU Extension

Other common spiders in WA

- **Remember:**
- Spiders are usually not aggressive and bites are rare.
- Most bites occur when the spider is trapped against the skin or accidentally touched
- **There are NO BROWN RECLUSE SPIDERS IN WASHINGTON OR OREGON**



Black Widow Spider

<http://www.doh.wa.gov/CommunityandEnvironment/Pests/Spiders>



Yellow Sac Spider

Not in western WA

Pantry Pests

- Beetles, weevils, and moths
- Chemical management **not** usually advised around food
- Can usually be controlled by good housekeeping and food storage practices.

How to keep 'em out of your kitchen!

- Don't store excess foodstuffs, such as grains, cereals, baking mixes, etc., for long periods of time.
- Locate the food source immediately and get rid of it.
- Use a vacuum cleaner with very hot water and a strong detergent. Allow the areas to dry.

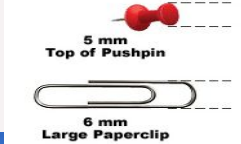
How to keep 'em out of your kitchen!

- Store pet food, bird seed in tightly sealed plastic containers.
- Bulk grain products, especially those grown organically: place items in a deep freeze for three to four days. Or heat the oven around 133 to 140 ° F, heat food for 20 minutes.



Pantry Pests:

Confused Flour Beetle



Drugstore Beetle



Larder Beetle



1/4 inch

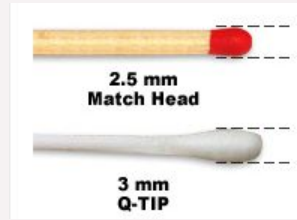


Steve Jacobs
PSU Entomology



Pantry Pests: Weevils

- Rice Weevil



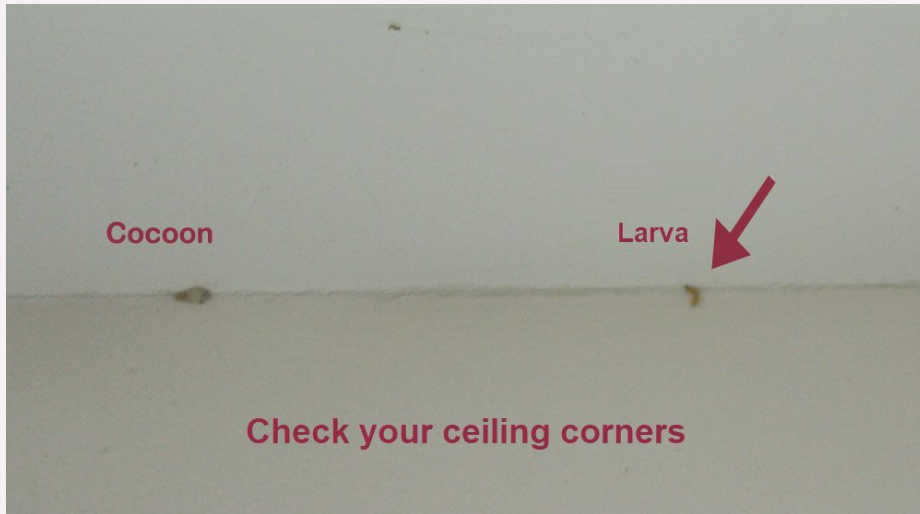
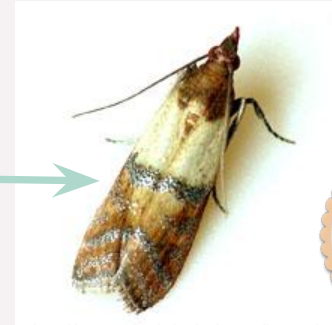
- Granary Weevil



Pantry Pests: Moths

- Indian Meal Moth

1/2 inch long



Pantry Pests: Moths - what to do

- Clean out your pantry
- Discard infested food items
- Vacuum the shelves thoroughly
- Use a moth trap
- Store all food in sealed plastic containers or store in freezer



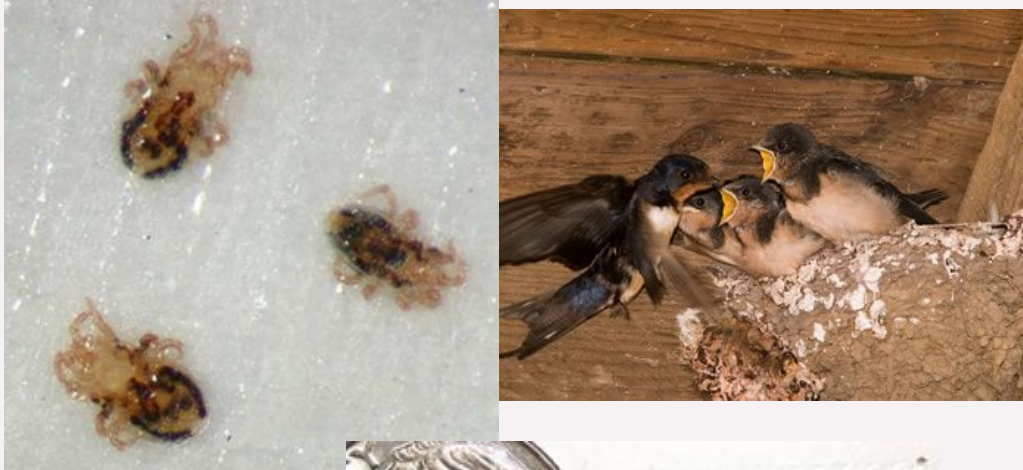
Incidental uninvited guests:

Carpet Beetles

- 1/10 inch



Incidental uninited guests: Bird mites



1/26 inch!! Very tiny

“Walking flakes of pepper”



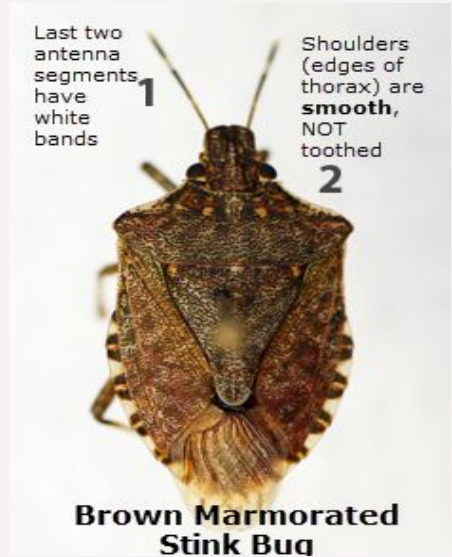
Caption:
Photo by: Michael R. Bush

After blood meal

Seasonal Trespassers



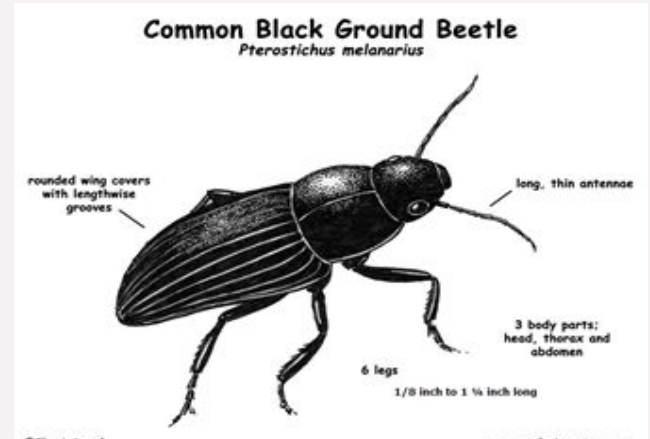
Western Conifer Seed Bug
7/8 inch
A "leaf-footed" bug)



Asian lady beetles vary in color. Note the whitish area with M-shaped marking behind the head.



Earwigs



Seasonal Trespassers

Last two antenna segments have white bands **1**

Shoulders (edges of thorax) are **smooth**, NOT toothed **2**



Brown Marmorated Stink Bug

**Brown Marmorated Stink Bug
BMSB**



Seasonal Trespassers



Boxelder Bugs

1. Hot, dry summers when followed by warm springs.
2. Attracted to buildings with a large southern or western exposure
3. Boxelder bugs are active until it becomes cold
4. Congregate in nooks and crannies, inactive in the cold but come out on warmer sunny days.
5. Button up all points of possible entry
6. Spray off wall with soapy water
7. Use an insecticide on areas where bugs gather at doors and around windows.
8. They don't live long if they get indoors.
9. Sweep up with a broom or vacuum

Moisture loving insects



House Centipede

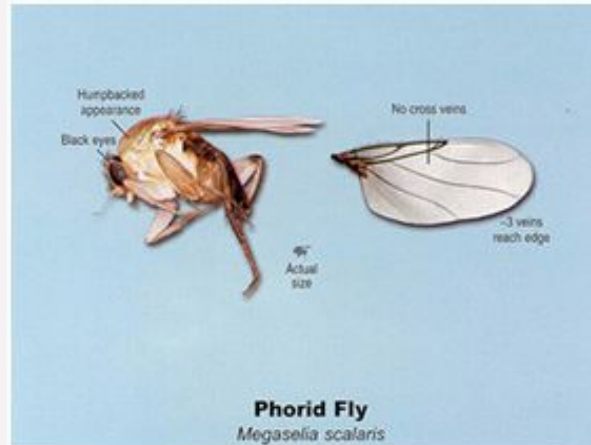
BENEFICIAL- quick, agile hunters of spiders and insects, including flies, cockroaches, moths, and many other insects found indoors

CAUTION- They may inflict a painful bite if handled.



DRAIN FLIES (MOTH FLIES)

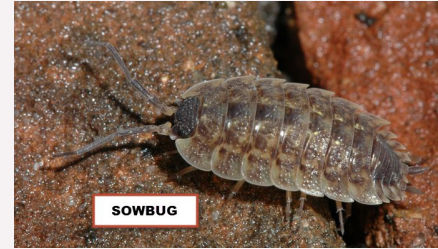
1/8 length, short, hairy bodies and wings giving them a "furry" moth-like appearance



PHORID FLIES

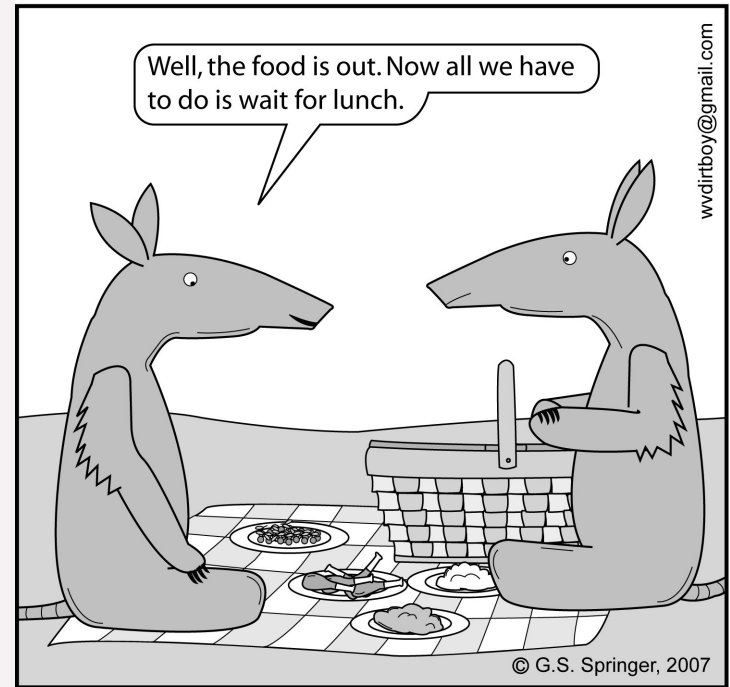
1/8 length, rapid, jerky motion

Moisture loving insects



Ants—Most frequently seen in our Plant and Insect Clinic

- Odorous House Ant (Sugar Ant)
- Pavement Ants
- Carpenter Ants



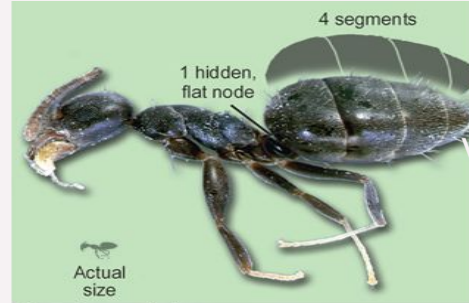
Anteater Picnic

Ants—Odorous House Ants (Sugar Ants)

Odorous House Ant (Sugar Ant)

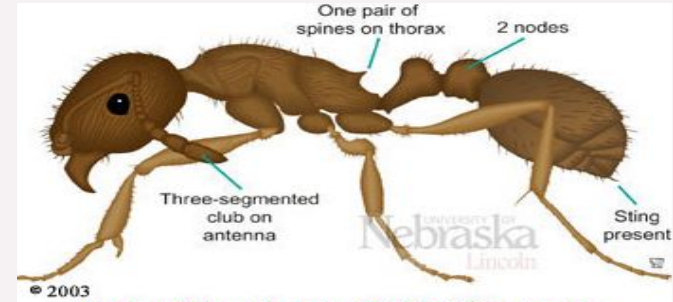
Hortsense

- Rotten coconut odor when crushed
- Often seen in homes in PNW in mid-spring to mid-summer
- Sanitation and liquid ant gels with boric acid as the active ingredient, such as Terro Ant Killer and Revenge Liquid Ant Bait. Hortsense also suggests other alternatives.



Ants—Pavement Ants

- from **light brown to darker browns and blacks**
- Swarms June/July
- Usually eat outside, but may come into and nest in homes
- Can damage garden vegetables, intermediate host for poultry tapeworms
- Chemical options only!
 - Gels, granules, stakes, sprays
 - 1/16 inch—tiny



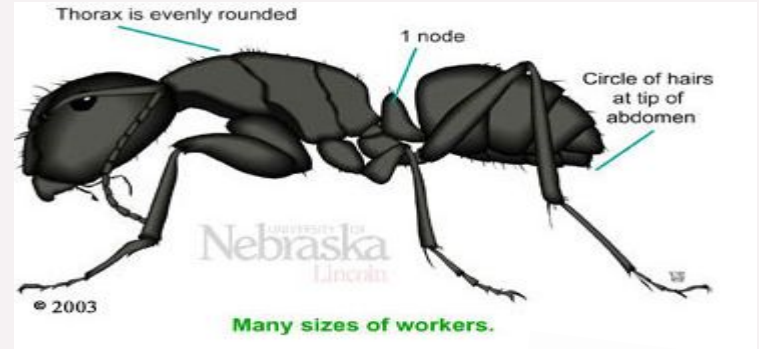
Head and thorax is covered with visible grooves.

PAVEMENT ANT



Ants—Carpenter Ants

- Many sizes
- Winged reproductives swarm April-early June
- If only a couple seen, not a problem.
- Two types of carpenter ant nests:
 - parent nests (eggs)
 - satellite nests (nursery)



POLL: What do they eat

So what DO ants eat?

Carpenter ants feed on sources of protein and sugar.

- Outdoors, they feed on living and dead insects.
- They feed on a sweet liquid produced by aphids and scale insects, called honeydew.
- Indoors, carpenter ants feed on meats and pet food, as well as syrup, honey, sugar, jelly and other sweets.

Carpenter ants do not eat wood. They remove wood as they create galleries and tunnels for nesting.

Carpenter Ants continued

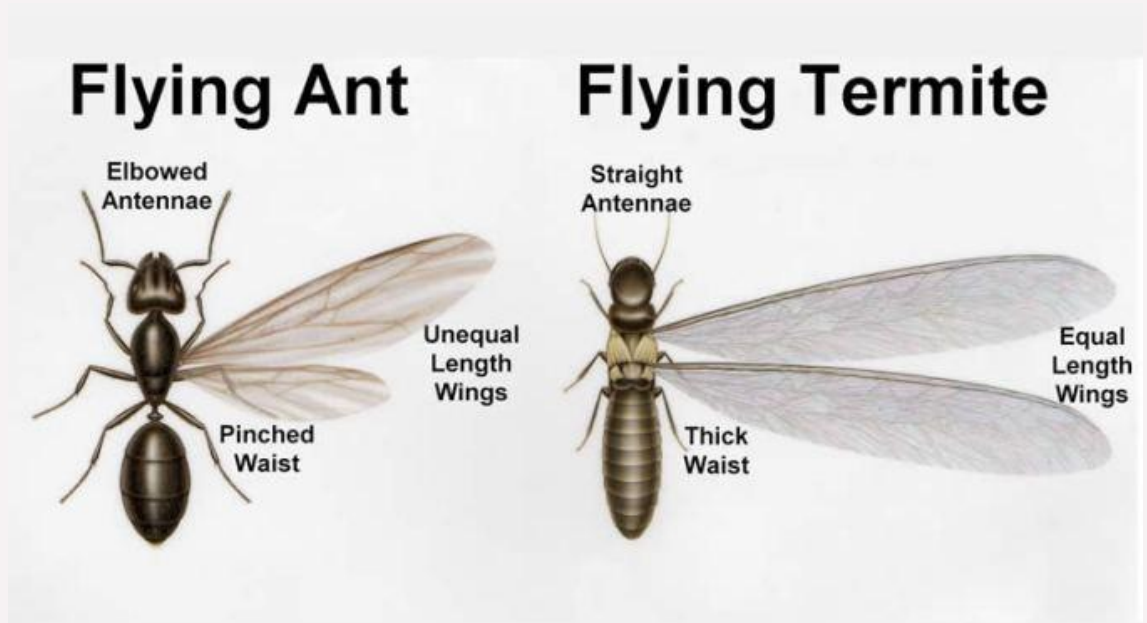
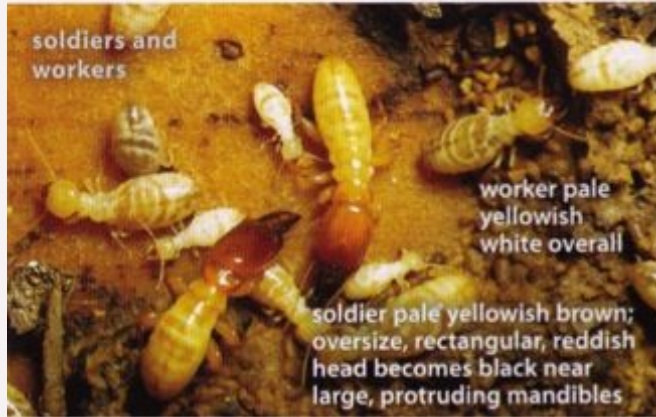
- Don't eat wood, but they will excavate it for nesting, structural damage possible
- Avoid:
 - dense shrubbery
 - wood/soil contact
 - finely shredded bark mulch
 - Stumps/log piles near house
- parent nest are found in moist or decayed wood (water leaks, condensation,)

Carpenter Ants continued



- The best way to control carpenter ants is to locate and destroy the nest, replace damaged or decayed wood and eliminate moisture problems.
- Chemical treatment—in heavily wooded areas—2-3 times in April/May, mid-July, Sept./Oct.
 - Bayer Advanced Garden PowerForce Multi-Insect Killer Concentrate
 - Bonide Termite & Carpenter Ant Killer Concentrate
 - Ortho HomeDefense Perimeter & Indoor Insect Killer RTU

Do I have ants or termites?



Bedbugs

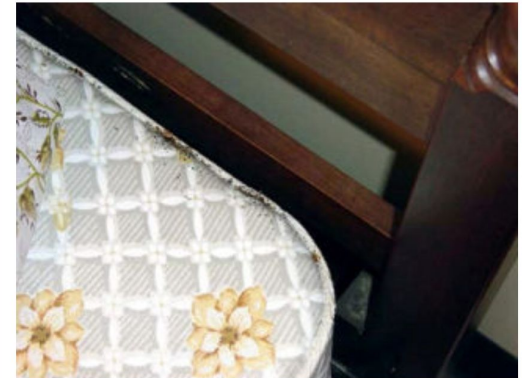
- Feed on humans and animals and use their blood to grow and reproduce.
- Do not transmit disease to people.
- Live close to where people sleep, rest or sit for long periods of time.
- Active at night and generally hide during the day.
- Do not try to treat bed bugs yourself. Contact a pest control service for effective removal of bed bugs.



Bed bug nest



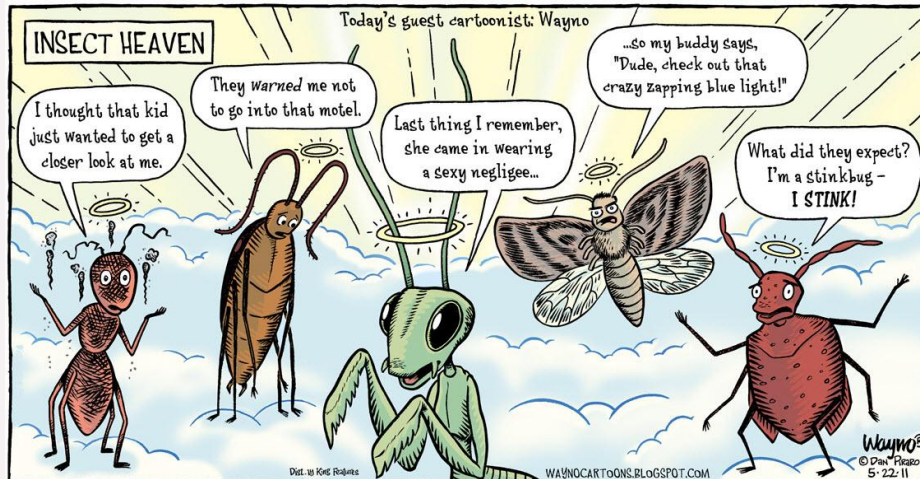
Bed bugs on the underside of a box spring



Bed bugs along a mattress seam

Wrap-up

- What Master Gardeners do
- IPM (Integrated Pest Management)
- Overview of insects' life cycles
- Spiders, Pantry Pests, Common visitors, Bedbugs, Common Ants





Resources

- **WSU's Pestsense**

[http://pestsense.cahnrs.wsu.edu/Search/MainMenuWithFac
tsheet.aspx](http://pestsense.cahnrs.wsu.edu/Search/MainMenuWithFac
tsheet.aspx)

- **Insects that infest homes**

[https://extension.umn.edu/household-insects/insects-infest-
homes](https://extension.umn.edu/household-insects/insects-infest-
homes)

- **Nuisance insects**

<https://extension.umn.edu/nuisance-insects/>




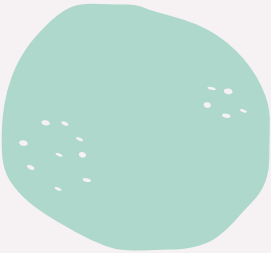


Thanks!



Do you have any questions?

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