Ant & Spider Management in Oregon

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ODOROUS HOUSE ANTS

- Workers emit a rotten, coconut-like odor when crushed
- Uniform brown to black color
- One flat node segment, hidden by abdomen
- Uneven thorax; no spines
- 12-segmented antennae, no club
- Gaster has slit-like anal opening with no circle of hair
- No stinger
- Monomorphic workers, 1/8 in (3.5 mm) long
BASIC HABITS –
ODOROUS HOUSE ANTS

- Queens - multiple
- Workers – monomorphic
- Reproduction - primarily budding
- Prefer to build shallow nests in soil with solid top cover will nest in wall voids especially where there is moisture and warmth.
- Treatment with fast acting materials, like pyrethroids, often causes nest to fracture.
MORE HABITS - ODOROUS HOUSE ANTS

- Just because the ants have disappeared, don’t assume they are eliminated. Odorous House Ants regularly move their colonies to be closer to exploitable resources.

- Recent research finds that as Fall arrives, colonies often combine for the winter. They will begin to disperse again in the Spring and this is a good time to be looking for activity.

- Occasionally, Odorous House Ants may become active in a structure during Winter. This is a good indication that a colony is located within the structure.

- Since these ants primarily reproduce by budding, it is important to remember that to get to the structure they walked. By the time they reach a structure there can be dozens of nest locations outside waiting for the chance to enter.
IPM INFORMATION – ODOROUS HOUSE ANTS

- Exterior inspection is critical to success, too often we respond to interior complaints and forget that problems originate outside.
- Look under debris, paving stones, along walkways and driveways, and look for cracks or gaps in pavement or along foundation.
- Remember that odorous house ants are strongly attracted to honeydew, always inspect plants for aphids and other honeydew producers.
IPM PROCEDURES - ODOROUS HOUSE ANTS

- Recommend that debris be removed, or at the very least moved away from the structure.
- Rake back mulch from the foundation to view and gain access for treatment.
- Check mulched areas for plastic tarp or fiber weed guards, if the nest location is under this barrier they are protected from treatments.
- Recommend that aphids and honeydew producing insects be treated to reduce this attractive food source.
- Seal entry points and small gaps and/or cracks the ants are using. This is especially helpful on and around counter tops where treatment is difficult.
- Always explain to the customer the importance of sanitation, as well as the importance of not using over the counter sprays which can be detrimental to your treatment program.
TREATMENT - ODOROUS HOUSE ANTS

- Use of baits can be a good, low impact method of treatment, both inside and outside. This can be slow and customers must understand that ants foraging on bait materials should not be disturbed. Use more than one type of bait to see what they most readily take.

- Spray applications can be done with “non-detectable materials”. These materials have a slow action which doesn’t disrupt foraging activities. When foraging activities are disrupted, the ants may respond as if there are no exploitable resources and colonies may split up or fracture into numerous smaller groups.

- Whenever possible look for nesting sites and treat them directly. This uses less material and will be more effective in eliminating colonies around the structure.

- Whatever products you choose, always follow label instructions!
PAVEMENT ANTS

- Light brown to black with paler legs and antennae
- Two node segments
- Uneven thorax has pair of small spines on upper back
- 12-segmented antennae, 3-segmented club
- Head and thorax grooved or sculpted with characteristic parallel lines on workers and swarvers (visible with hand lens)
- Stinger present, but rarely used
- Monomorphic workers, 1/8 in (3.5 mm) long
BASIC HABITS - PAVEMENT ANTS

- Queens – usually single
- Workers – monomorphic
- Reproduction – flyers
- Like to nest under solid objects, leave typical mounds around entrances, but any open hole should be suspected of activity.
MORE HABITS - PAVEMENT ANTS

- During the warmer months pavement ants readily forage both indoors and outside. During the winter they will often move deep under slab foundations, often showing up in the middle of buildings.

- Pavement ants exhibit cryptobiotic behavior, that is they try to hid their movements. Emerging from cracks in the slab they often trail under baseboards or along tack strips to emerge close to resources. Often they are emerging from the base of door frames. This is a good place to start your inspection.
IPM PROCEDURES - PAVEMENT ANTS

- Inspect thoroughly, both inside and outside during the warmer months, and concentrate on the interior during colder months. Inside try to locate entry points and travel paths. Often wall voids are treated without success where ants are seen emerging from under a baseboard. Be sure to know what is really going on before treating.

- Treat entry points and seal with caulking. Over time this will limit the ants ability to gain access up into the structure.

- Outside inspect for openings in cracks, joints, and along the edges of concrete walks and drives. Mounds are not always present, but cracks and holes will quickly fill up with dirt. If there is an opening it's a good bet that it is being used.
TREATMENTS - PAVEMENT ANTS

- Treatment with baits can work well, but at times may be ignored by pavement ants. Use multiple baits to see which one they will take.
- Locating entry holes inside and treating and sealing can be effective. Exposed foragers can be vacuumed up.
- Outside treat both active and seemingly inactive holes and cracks. This often works much more effectively than perimeter sprays and reduces material usage.
- Use of “non-detectable” slow acting materials, especially those that will transfer between ants can be highly effective.
- Remember, always read and follow the product label for any pesticide!
CARPENTER ANTS (Camponotus spp.)

- Dull black body, reddish legs
- One node segment
- Golden hairs cover abdomen
- Circular ring of golden hairs at end of abdomen (visible with hand lens)
- Spineless thorax, profile evenly rounded on upper side
- 12-segmented antennae, no club
- No stinger
- Polymorphic workers, 1/4–1/2 in (7–13 mm) long
CARPENTER ANTS (Camponotus spp.)
Queens - Single

Workers – Polymorphic

Reproduction – Swarming Flyers

This serious structural pest nests in sound wood but prefers fungus- or moisture-damaged wood.

Outside, it nests in dead trees, rotting stumps and beneath rocks and logs. Colonies can be large, with up to 100,000 workers and multiple queens. Look for coarse sawdust piles (frass) that will also contain insect body parts. Another indicator is the sound produced as workers chew to remove wood to enlarge the nest.
Carpenter ants forage alone or along trails 300 or more feet from the nest. “Trunk trails” between parent and satellite nests are clear of vegetation and debris, typically cutting across lawns.

Carpenter ants enter buildings around door and window frames, through eaves, along plumbing and utility lines, and over branches touching the building. Peak foraging occurs at night.

Feeding Preferences: Carpenter ants feed primarily on insect honeydew, plant and fruit juices and insects. Indoors, they feed on food debris, including sweets, eggs, meats, cakes, pet foods and grease.
IPM PROCEDURES - CARPENTER ANTS

- Trim tree branches and shrubs away from structures to prevent access;
- Seal off potential entry points such as where utility lines enter a structure;
- Reduce mulch around building perimeters to a depth of 2 to 3 inches to discourage nesting;
- Eliminate any earth-to-wood contact of structural elements that might promote wood decay;
- Replace decayed or damaged wood and correct problems that cause decay such as clogged rain gutters or leaky pipes;
- Increase ventilation to damp areas such as attic or subfloor spaces;
- Store firewood off the ground and several feet away from structures; and
- Remove potential food sources inside a structure and store them in tightly sealed containers.
TREATMENTS - CARPENTER ANTS

- Find and directly treat as many nests as possible. Insecticidal Dusts are good flushing agents when inspecting voids.
- Check suspicious areas with a probe that will penetrate infested wood. Successful control depends on eliminating the parent colony, which is usually located outdoors.
- For colonies in wall voids, inject an insecticide dust.
- For effective perimeter treatments, apply “non-detectable” slow acting materials, especially those that will transfer between ants can be highly effective.
- Apply spot treatments to any possible ant entry point. Apply insecticide sprays around the base of trees that possibly harbor nests.
- Place appropriately labeled Ant Bait Gel on foraging trails, near suspected nest locations, where ants enter the building, in areas with water damage and on trunks of trees with ant activity.
SPIDERS OF THE NORTHWEST
Most spiders found in Oregon are not a health concern.

There are nearly 4,000 species of spiders in North America (North of Mexico), and at least 500 species occur in Oregon.

In spite of their fierce appearance, the majority of spiders in Oregon pose no threat, and are therefore considered a “nuisance” pest.

Only two Oregon spiders of medical importance for people who are bitten:

- **Western Black Widow Spider** (*Latrodectus hesperus*)
- **Yellow Sac Spider** (*Cheiracanthium spp*)
Spiders can be roughly grouped into two categories:

- Web Spinner
- Active Hunter
Spiders are commonly encountered spring through early fall.

In the spring, spider egg sacs begin to hatch and the young disperse. Hatchling spiders typically disperse by climbing to a high point on a structure or vegetation, casting a line of silk into the air, and becoming airborne, ultimately landing where the wind carries them.

Spiders frequent areas where lighting, food, clutter, and sometimes moisture are abundant.
The Western Black Widow Spider (*Latrodectus hesperus*)

- The adult female possesses a concentrated neurotoxin in her venom.
- Oregon's only black widow spider.
- Oregon's western black widow occurs statewide, but is most common in dryer regions - the central, southwest and eastern parts of the state.
- This spider is a web--spinner and builds a very messy web of strong silk in corners or protected areas among clutter, stored materials, in crawl spaces, sheds, electrical and irrigation boxes, etc.
- It is night--active, and rare rarely seen in the web during the daytime.
Yellow sac spiders (Cheiracanthium spp)

- Occasionally been implicated in ulcerative (necrotic) wounds following a bite, but research has been unable to verify this.
- Yellow sac spider venom may produce a red welt accompanied by itching, but is said to subside within a day or two. Their bite, is comparable to the pain of a bee sting.
- Yellow sac spiders are typically pale yellow or gray, with a body that measures 1/3 – 1/2 inches long (excluding legs).
- Both active hunting spiders and are frequently found indoors – particularly in fall and winter.
Hobo Spider (Eratigena agrestis)

Brown Recluse Spider (Loxosceles reclusa)
Not Found in Oregon
Spiders are ubiquitous, abundant, and fairly resilient to the effects of many pesticides. The most effective way to manage spiders involves prevention (using sanitation and exclusion).

Integrated pest management (IPM) employs pesticides as needed, after non-chemical, common sense approaches alone are tried. IPM is therefore the logical and effective choice for spider management.
SPIDER MANAGEMENT

- Organize and declutter as a way of reducing spider habitat and habitat used by their insect prey. Replace cardboard boxes for bins with lids whenever possible.

- Move stored items from the floor onto tables or shelves, allowing you to effectively clean along the wall base.

- Store all food products in containers with snap-tight or screw-top lids to reduce attracting insects that spiders prey on.

- Use a vacuum attachment or a detached hose to regularly vacuum corners, behind doors, under tables or equipment, in windowsills, behind furniture, and other areas where dust or webbing occur.

- In spring or summer, inspect exterior doors for gaps, worn-out door sweeps, and damaged thresholds. Replace them prior to fall to help reduce spider movement indoors, which may begin as early as September.

- Remove debris stacked against buildings, especially near exterior doors and windows.

- Trim vegetation (trees, shrubs) away from building so it is not touching. Reduce overhang wherever possible. This measure will also help reduce other pest traffic indoors.

- Repair or replace window screens on windows that staff open. Tight-fitting window screens help keep out spiders as well as wasps, bees, and other flying and crawling pests. Window screens are especially important summer through mid-fall.

- Replace bright white outdoor lights for a softer, yellow light, which is less attractive to nighttime flying insects. For particularly problematic areas, or if security prevents the use of softer light, ask your district to consider motion-activated lighting in those areas.

- Place sticky monitoring traps indoors in spider-prone areas to monitor spider activity and guide your management approach.
DISTINCTIONS

- Spiders develop without metamorphosis; insects have variable development from without metamorphosis to complete metamorphosis
- Spiders digest their food before swallowing; insects usually after swallowing
- Spiders have book lungs; insects respire through spiracles