HOUSEHOLD ARTHROPODS

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2015

OVERVIEW

GUIDELINES & PRINCIPLES

GROUPS OF PESTS

PUBLIC HEALTH PESTS

NUISANCE

HOUSEHOLD

STRUCTURAL PESTS

MANAGEMENT PRINCIPLES

DEFINE THE PROBLEM

+ Damage?
+ Critter(s)?

ID THE CRITTER

+ Pest?
+ Dangerous? (people, pets, or structures?)
+ Did it just stumble indoors?

APPROPRIATE MANAGEMENT

DETERMINE MANAGEMENT

ERADICATE?

CONTROL?

MANAGE?

TOLERATE?

VERIFY: PNW Insect Management Handbook

CAPTURE THE CRITTER

RECOMMENDATIONS

RESEARCH-BASED MANAGEMENT

EPA SAYS:

PEST CONTROL MATERIALS MUST BE LABELED FOR THAT PURPOSE

NO HOME REMEDIES
**PUBLIC HEALTH PESTS**

Blood feeders

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**PUBLIC HEALTH: BED BUGS**

- 3/16”
- Broadly flat, oval
- Cracks, crevices, & seams
- Eggs glued in place
- Bites w/o pain
- Odor: sweet; acrid
- Bed Bugs (FS070E)

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**MANAGEMENT: BED BUGS**

Key Points
- Mattress: Encase or heat Rx
- Launder bedding, clothes – hot!
- Pest control company

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**PUBLIC HEALTH: MOSQUITOES**

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**MANAGEMENT: MOSQUITOES**

Key Points
- Source reduction
- Personal protection
- Mosquito fish (Gambusia), if legal
- Rx for larvae: Bti
  \[(Bacillus thuringiensis israelensis)\]

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**PUBLIC HEALTH: FLEAS**

- Adults on animal
- Eggs drop off
- Larvae ½” w/tan head
- Larvae eat debris
- Pupa “waits”
- Nest parasites

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2015 Household Pests
MANAGEMENT: FLEAS
Key Points
- 3-step program
  1. Vacuum often
  2. Insect growth regulator (IGR) on carpet & pet’s “nest”
  3. Treat the pet
     Comb
     Apply IGR
- Bombs & foggers ineffective

PUBLIC HEALTH: TICKS
Rocky Mountain wood tick
- *Dermacentor* species
- East of Cascades
- Immatures feed mostly on rodents
- Adults feed on large mammals

PUBLIC HEALTH: Ticks
Western blacklegged tick
- *Ixodes pacificus*
- Western WA, OR, CA
- Woodland margins
- Only vector of Lyme disease in Oregon
- Low transmission

MANAGEMENT: Ticks
Key Points
- Sensible clothes
- Insect repellent (DEET most effective)
- Daily inspections
- Remove ticks ASAP
- Clean the area (soap & water)
- No Vaseline; no cigarette

PUBLIC HEALTH: BALD-FACED HORNET
- Annual colony
- Nest: aerial
- Beneficial insects
- Pesticides a last resort

PUBLIC HEALTH PESTS
Potential stinging pests
PUBLIC HEALTH: YELLOWJACKET

- Annual colony
- Nest: ground or aerial or wall/ceiling void
- Beneficial insects
- Pesticides a last resort

PUBLIC HEALTH: YELLOWJACKET

PUBLIC HEALTH: YELLOWJACKET

PUBLIC HEALTH: STINGING WASP

Key Points
- Tolerate if possible
- Don’t annoy
- Don’t cross flight path
- Pheromone traps of limited value
- If control required
  - Long-distance aerosol at night
  - Or hire a professional

MANAGEMENT: STINGING WASP
SELDOM STING: BUMBLE BEES

*Bombus morrisoni*
*B. fervidus*
*B. melanopygus; a red tail bee*

SELDOM STING: PAPER WASPS

KEY POINTS: WASPS & BEES

- Yellowjackets
- Bald-faced hornets
- Paper wasps
- Bumble bees
- Honey bees

Paper Wasp: *Polistes dominula*

PUBLIC HEALTH: SPIDERS

- Black widow (*Latrodectus hesperus*)
- Hobo spider (*Tegenaria agrestis*)

PUBLIC HEALTH PESTS

Spiders

Bites seldom succeed
PUBLIC HEALTH: SPIDERS

Western black widow
- About ¾”
- Glossy black
- Red “hourglass”
- Shy and reclusive
- Dark places
- Don’t run on ground
- Uncommon western OR

PUBLIC HEALTH: SPIDERS

Widow look-a-likes
- false widow
- Steatoda species

PUBLIC HEALTH: HOBO SPIDER

- Tegenaria agrestis
- To 1 ¾”
- “Funnel web” spider
- Moves rapidly
- 1st in NW: 1930; Seattle

PUBLIC HEALTH: FUNNELWEB

- (University of Michigan Museum)

PUBLIC HEALTH: HOBO SPIDER

Differentiate among look-a-likes

verify ID of sexual characters (PLS 116)
HOBO SPIDER vs. BROWN RECLUSE

MANAGEMENT: SPIDERS

Key Points
- Take care
  - Look before you reach
  - Teach children: “Don’t touch”
- Screen & seal
- Sticky traps
- Pesticides a last resort
  If so, Pest Control Operator apply a perimeter spray in late June

NUISANCE PESTS

Box elder bugs
Lady beetles
BMSB

NUISANCE: BOX ELDER BUG

- Boisea rubrolineata
- About 1/2”
- Gray w/red marks
- Fall & winter: Cluster on exterior wall
- Move indoors
- Don’t breed indoors
- Pesticides of little value

NUISANCE: ASIAN LADY BEETLES

- Harmonia axyridis
- On S or W wall
- Move indoors
- Might bite
- Stain
- Beneficial outdoors, nuisance indoors

NUISANCE: BMSB

- Brown marmorated stink bug
- Antennae: white bands
- 1st instar: bright color
- Ventrum “dirty”
- Emerging pest of fruits, veggies, etc.
NUISANCE: SPIDERS

- Crab spider
- Giant house spider

NUISANCE: BORERS

- Banded alder borer
  - From downed trees
  - Won't infest structure
- Pine Sawyer

NUISANCE: BORERS

- Longhorn flower beetle
- Oak cordwood borer

MANAGEMENT: NUISANCE PESTS

Key Points
- Remove food, if any
- Block access
  - Screens; caulk; copper "wool"
- Remove them

POTENTIAL DANGER IN FIREWOOD

Don't spread pests in firewood
Buy it where you burn it!

HOUSEHOLD PESTS

Pantry pests
PANTRY PESTS: FLOUR MOTHS

- Adults about 1/4”
- Fly daytime
- Active year-round
- Indian meal moth most common
  + Larvae = 1/2” “worms”
  + Crawl up wall
  + Pupate at ceiling

PANTRY PESTS: INDIAN MEAL MOTH

- Larvae = 1/2” “worms”
- Crawl up wall
- Pupate at ceiling

PANTRY PESTS: DRUGSTORE BEETLE

- To 1/10”
- Medium brown
- Diet: food, spices, wool, leather, books, seeds, dog food, & more

MANAGEMENT: PANTRY PESTS

Key Points
- Locate & destroy
- Pheromone traps
- Many potential foods
  - Cereals, seeds, nuts, grains, flour
  - Bulk or packaged
  - Birdseed; pet food
  - Craft stuff & more

HOUSEHOLD: ANTS

- Various ant species
- Visible ants < 10%
- Nest: indoors or out
- Enter via cracks, crevices
- Rx: Pre-formulated baits
- Be patient
**HOUSEHOLD PESTS**

Flies

- Small flies
  - Fruit flies
  - Fungus gnats (several)
- Larger flies
  - Filth flies
    (House flies; flesh flies; blow flies)
  - Cluster flies

**HOUSEHOLD: FLIES**

**HOUSEHOLD: FRUIT FLIES**

- 1/8”
- Yellow-brown
- Large red eyes
- Decaying veggies & fruit

**HOUSEHOLD: FUNGUS GNATS**

- Sciarid fungus gnat (wet potting mix)
- Mycetophilid gnat (moldy stuff)

**HOUSEHOLD: FILTH FLIES**

- Indoors & outdoors
- Foods: trash; carcasses
- Maggots leave food to pupate
- Management
  - Sanitation
  - Screens
HOUSEHOLD: CLUSTER FLIES

- 3/8”
- Thorax: gold hairs
- Adults
  - Cluster on ceiling
  - Fly in center of room
- Nuisance
- Larvae parasitize earthworms

MANAGEMENT: CLUSTER FLIES

Key Points
- Swatter; Fly paper
- Seal cracks, crevices
- 24-hour light
- Repair screens
- Aerosol or “bomb” little value

HOUSEHOLD PESTS

Fabric damagers
(Carpet beetle; Clothes moths)

HOUSEHOLD: VARIED CARPET BEETLE

- Most common fabric-damager
- To 1/8”
- Larva eats fur, woolens, insects & much more
- Adult eats pollen

HOUSEHOLD: CLOTHES MOTHS

Fly at night

MANAGEMENT: FABRIC DAMAGERS

Key Points
- Clean fabrics before storage
- Check stored goods
- Locate & destroy
  - Discard or clean infested materials
  - Vacuum thoroughly
- After clean-up, pheromone traps (moths)
- Moth balls/crystals ineffective
STRUCTURAL PESTS

Carpenter ants
Termites

STRUCTURAL: CARPENTER ANT

- Two species:
  + Camponotus modoc
  + C. vicinus
- Forage outdoors
  (honeydew, dead insects)
- Forage indoors
- Multiple nests

- Workers 1/4 to 1/2" Black, or red & black
- 10,000 to 20,000/nest
- Main nest
  = Queen, eggs, larvae, workers
- Satellite nests
  = Pupae, workers

- Fresh sawdust
- Moist wood, or dry
- Scraping sounds in the wall
- 2-way trails (Apr-Oct; 10 pm to 2 am)
- Alates (winged forms) in the spring

- Avoid wood-to-moisture contact
- Repair leak; replace wood
- Treatment best left to PCOs
  + Important: Rx main nest
  + One Rx + annual inspections
- Common ant baits don’t work
STRUCTURAL: CARPENTER ANT

Locate the main nest

IDENTIFY: CARPENTER ANT

- Elbowed antenna
- Rounded thorax
- One node on slender “waist”

IDENTIFY: CARPENTER ANT

- Worker
- Alates

STRUCTURAL: SUBTERRANEAN TERMITES

- Mud tube

IDENTIFY: CARPENTER ANT

- Queen
- 2 workers
- 3 males

Subterranean termites

- Fly any time
- Small (3/8”)
- Nest in ground
- Sound wood
- Shelter tubes

Dampwood termites *

- Fly in fall (Aug – Oct)
- Large (to 1”)
- Nest in wood
- Damp or sound wood

STRUCTURAL: DAMPWOOD TERMITES
MANAGEMENT: TERMITES

Key Points
- Avoid wood-to-soil contact
- Ventilate under buildings
- Install moisture barrier
- Remove wood debris
- Fix moisture problems
- Periodic inspection
- If subterranean termites, hire pest control company

ANT VS. TERMITE

carpenter ant queen
dampwood termites

STRUCTURAL: BORERS

golden buprestid
- About ½”
- Air-dried lumber
- Emerges 10-50 yrs later
- Doesn’t re-infest

STRUCTURAL: POWDERPOST BEETLES

- About 1/8”
- Hardwoods
- Powdery frass
- Exit hole 1/16”
- Re-infests
- Rx: Paint; varnish

SUMMARY

- Guidelines & Principles
- Groups of pests
  - Public health pests
  - Nuisance
  - Household
  - Structural pests