

PESTS

I found them, now what?

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BLACK WIDOW PEST ACADEMY

SEPTEMBER 23, 2021 YANKEE CONFERENCE

The top four favorites

Bed Bugs

Bat Bugs

Roaches

- German
- American
- Oriental
- Wood

Mice

Rats

Flies

- Filth
- Drain
- Fruit

Bed Bug vs. Bat Bugs

Bed Bug

Bat Bug



Bed Bug vs. Bat Bug

Bed Bugs

Reddish Brown

Flat

Roundish

Short hairs: body looks shiny

Furniture

Bat Bugs

- Dark brown
- Flat
- Oval
- Long hairs on the body
- Primarily in attics, corners of ceilings

Bed Bug and Bat Bugs Biology

- Gradual metamorphosis
 - Egg , Nymph -> Adult
- Nymphal stages or instars develop to adults
- Eggs hatch in 6-17 days



Bat Bug- Infestation-Bed Bug



Bed Bug: Treatment

Always follow your state regulations

If your state allows you to treat yourself, always read the label prior to application

If your state does not allow you to treat personally, hire a professional, fully licensed company

- Know before you call that a reputable company will treat surrounding units in an apartment or condominium facility as well as the initial infestation.

Bat Bug Treatment

- Besides the different location of infestation, Bat Bugs sightings happen Mid-Late Fall.
- Bats migrate to warmer climates, leaving the structure they are living in or on.
- Bat Bugs lose their food source and will move to find a new host. That's when the sightings begin
- Bats need to be removed from the structure and an appropriate bat job must be done
- Sealing up the structure. Bats are extremely territorial. They return every spring to the same location. The only way to prevent roosting is to eliminate harborages

QUESTIONS...

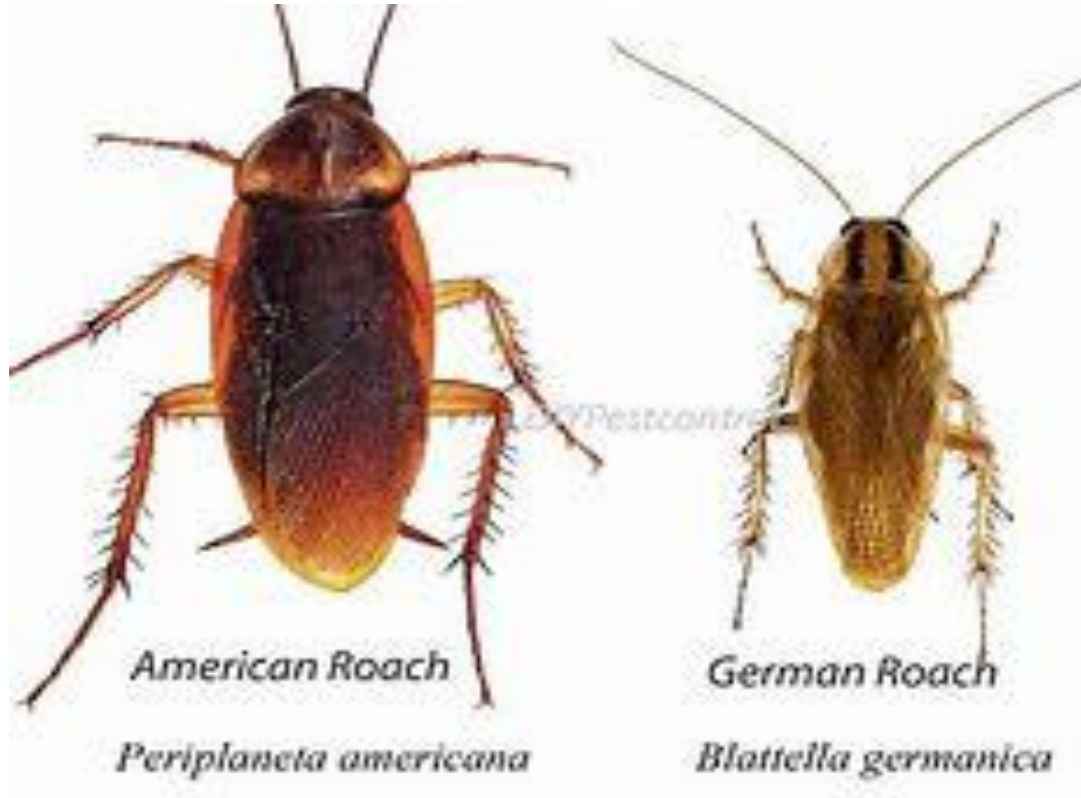
Anything else?



Cockroaches

- American Cockroach

- German Cockroach



German Cockroach: Biology

28 days from
formation of egg
capsule until
hatching

2 weeks between
formation of egg
capsules

4-8 egg capsule in
a females' life span

Each capsule
contains 30-48
eggs

Typical life span of
an adult is 20 to
30 weeks

American Roach or Palmetto Bug: Biology

1 egg capsule is formed per week until 15 to 90 have been produced

Each capsule contains 14 to 16 eggs, at room temp 50 to 55 days the nymphs emerge

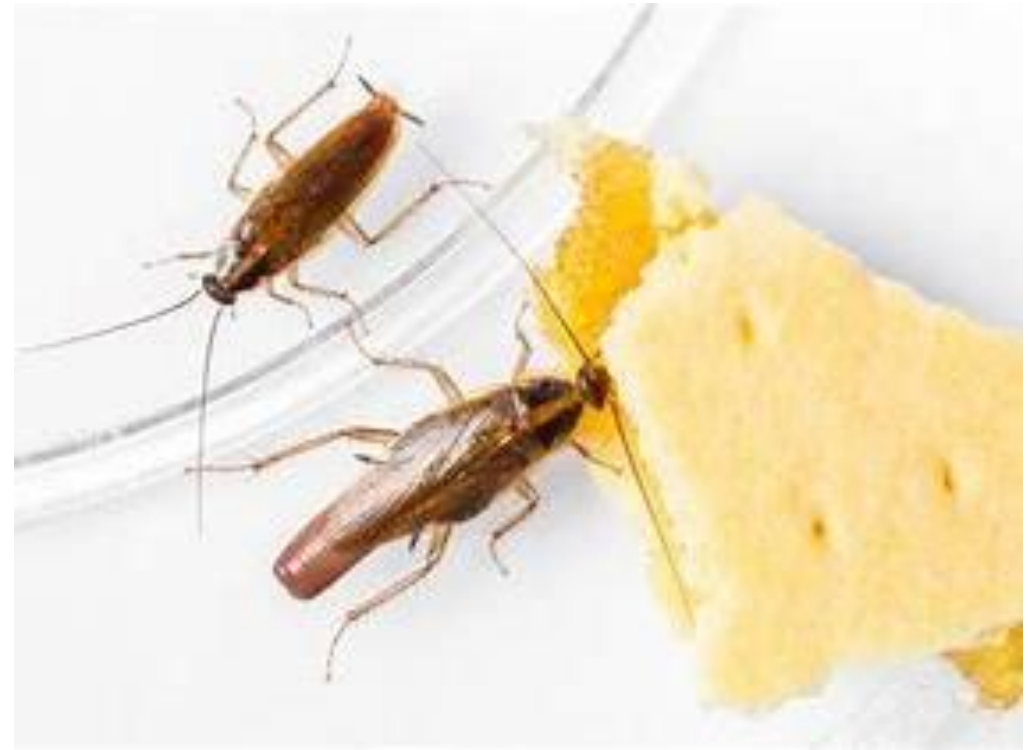
They grow to 1" to 1.5"

Typical life span of an adult is 1-2 years

German Cockroach:
Male
Female / egg capsule

Why the German cockroach is so prolific

- Adult females produce 4-8 egg capsules in their lifetime
- Each capsule contains 30-48 eggs, hatching about 28 days later
- The formulation of the next capsule happens in 10-14 days
- 6 or 7 instars (molts) complete in 40-125 days



German Roach: Treatment

01

Always follow your
state regulations

02

If your state allows
you to treat yourself,
always read the label
prior to application

03

If your state does not
allow you to treat
personally, hire a
professional, fully
licensed company

American Roach: Infestation

- The “Palmetto Bug” is typically found southern states. The American roach loves heat and humidity.
- Why talk about them in the Northeast?
- In downtown New Haven CT a popular hang out began having sightings in the bar area
- When I did my inspection, I found the basement to be extremely hot and humid. Perfect breeding environment.
- I deduced with a cliental of international travelers, the American roach was introduced purely randomly and established itself in the “tropical Zone” of the structure



American Roach: Treatment

01

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state regulations

02

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you to treat yourself,
always read the label
prior to application

03

If your state does not
allow you to treat
personally, hire a
professional, fully
licensed company

Oriental Roach

- Average of 8 egg capsules in a life span
- Approx. 16 eggs per capsule
- Incubation period of about 42-81 days
- Life span of an adult 34-180 days
- Typically found outdoors
- Office Lobbies and Retail Malls



QUESTIONS...

Are you sure?

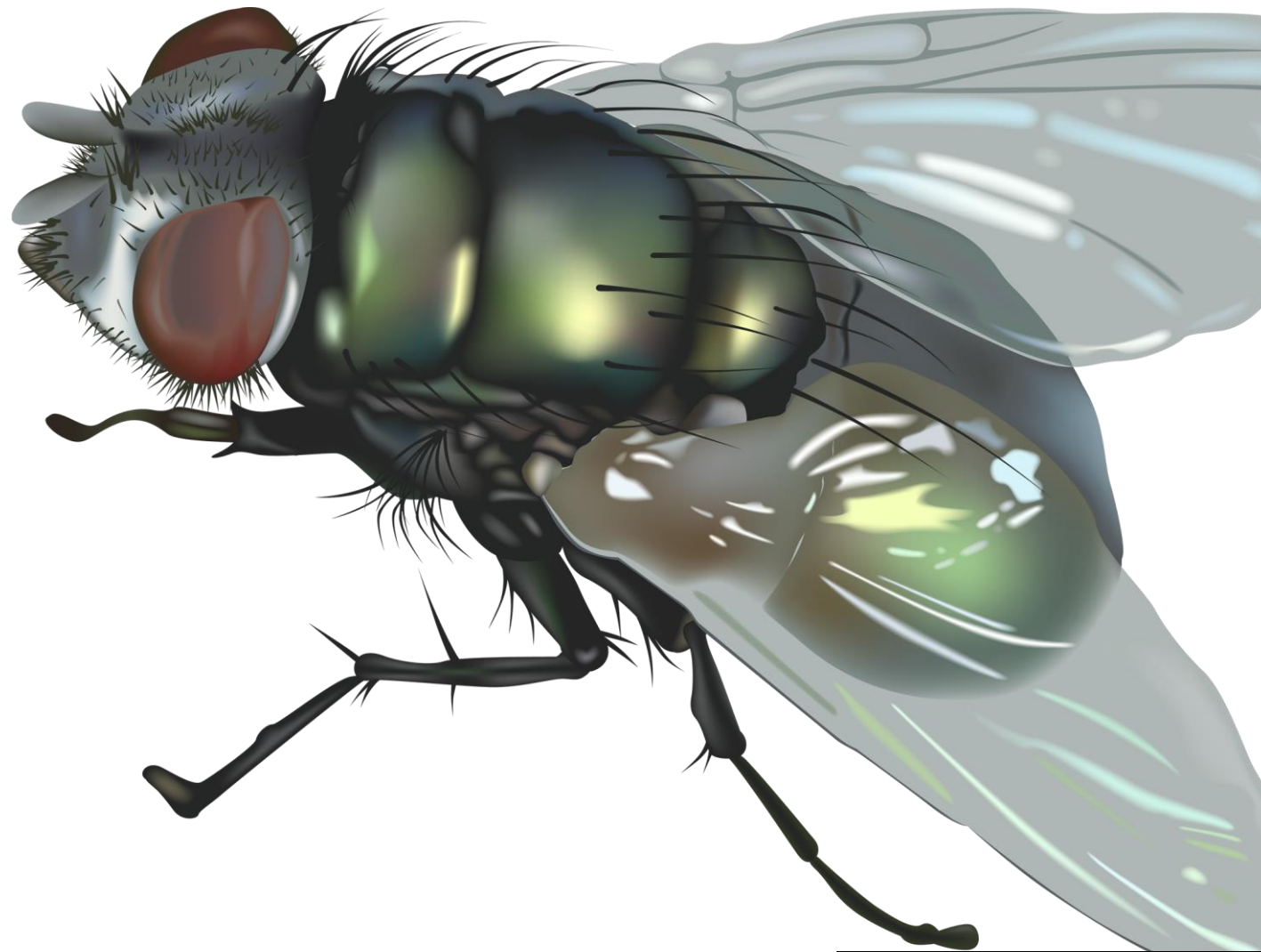


Flies

Filth Flies

Drain Flies

Fruit Flies



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Filth Flies

- House Fly
- Flesh Fly
- Blow Fly
- Preferred food choices:
 - Animal Feces
 - Decaying organic matter
 - Animal carcasses
 - Manure
 - Garbage'

Filth Flies: Characteristics and Treatment

Found in unsanitary environments

Includes a variety of species

Decaying matter preferred (rotting meats or organic matter)

Locate and remove source

Clean and sanitize at source location and surrounding areas

Implement IPM after cleaning and sanitizing

Drain Flies

- Delicate and handsome
- Also known as the Moth Fly
- Will be in close proximity to sinks and toilets



Drain Flies: Treatment

After inspection to confirm species, there is NO pesticide application.

The home or business will need to call a plumber, or City or Town.

Drain Fly sightings indicate a broken septic pipe (s)

Section of cut PVC pipe showing drain fly eggs



Do not confuse one for the other

Fruit Flies and Gnats can be similar in appearance. The Fruit Fly has extremely large red eyes and breed in sugary waste.

Eye Gnats breed in plant debris, damp wood decay. They are attracted to mucous secretions, blood and pus. When they are brushed away, they quickly return.

Drain or Moth Flies are also small but quickly identified by their lace wings



Fruit fly

VS



Gnat



Fruit Flies: Characteristics and Treatment

Most always starts in the soda dispenser or bar area

Metamorphous of the Fruit Fly



SUGAR!!!



Found around soda dispensing systems



Huge red eyes



Clean and sanitize where found



QUESTIONS...

Now's the time to ask

House Mouse

House Mouse



House Mouse litter



House Mouse: Infestation

- Mice are the best freeloaders in our society. Once introduced into a structure, they very rarely leave.
- Mice are extremely curious and that helps when it comes to control and elimination.
- Mice will live inside the walls of a structure, scavaging for food and nesting material
- Mice will derive water out of the food stuffs they eat



House Mouse



'Mickey Mouse' type ears



Light brown/tan fur



Find entry via windows, doors, behind siding, small cracks and holes around a structure



Once inside, they're rarely seen



Nocturnal



Omnivorous

House Mouse: Treatment

- There are many rodent bait formulations available to the general public for do it yourself work.
- Hiring an experienced licensed individual for a visual inspection of property is recommended
- The observations of a pest control reports make for the beginning of an IPM Plan
- Snap traps are the best mechanical means of elimination
- Remember, always follow your State and Federal regulations and always read the label. The label is the law.

House Mouse: Gestation

How long does it take for mice to reproduce?

Mice gestating period of 19 to 21 days

Female mice get pregnant about 5 to 10 times each year

A litter is 5 to 14 pups

On the 21st day 1+10 another 21 days 10+100
another 21 days 100+1000

1000 in 63 days 8 Weeks

House Mouse: IPM

Assess	Assess infestation
Assess	Assess landscaping
Inspect	Inspect exterior of structure
Seal	Seal any holes or gaps as needed <ul style="list-style-type: none">•Check things such as window frames, garage doors, under siding, and chimneys



QUESTIONS...

Anymore questions, we're moving on

Norway Rat

Norway Rat



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Norway Rat Droppings



Norway Rat

- Burrowing nature
- In urban settings, found in dark, confined spaces such as next to the foundation and crawl spaces in lieu of burrowing
- Droppings are large, blunt on one end and pointed on the other
- Omnivorous
- Nocturnal



Norway Rat

Alpha male, largest rat in population, most dominate and aggressive

The Alpha male will fight off other male rats to secure dominance

If rat sightings are occurring during the daylight hours, it's an indicator the colony size is large

Seeing daytime activity means the young males most forage for food when the alpha is at rest



Norway Rat

Can naw and chew through bone, lead pipe, concrete

Norway Rat: Gestation

- Females come into heat every 4-5 days and they mate within a day or two after a litter is born
- An average litter consists of 8-12 pups, they are weaned 10-15 days later
- The young reach sexual maturity by 2-3 months
- The average female has 4 to 7 litters a year

Norway Rat: Treatment

Always follow your State regulations, and read the label

If you are allowed to treat yourself, always read the label prior to application and be sure to have PPE

Find all the burrows and address each one. If your state does not allow you to treat personally, hire a professional, fully licensed company

In addition to mechanical trapping an anticoagulant bait is typically utilized. Successful rodent work is laborious and frequent the first 6 weeks

Norway Rat: IPM

Assess

Assess infestation

Assess

Assess landscaping

Inspect

Inspect exterior of structure

Seal

Seal any holes or gaps as needed

- Check things such as window frames, garage doors, under siding, and chimneys

References:

- Truman's Scientific Guide to Pest Control
- University of Cornell Core Manual
- Dr. Kirby Stafford, CAES
- Perdue University Entomology Department

THANK YOU FOR LISTENING

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