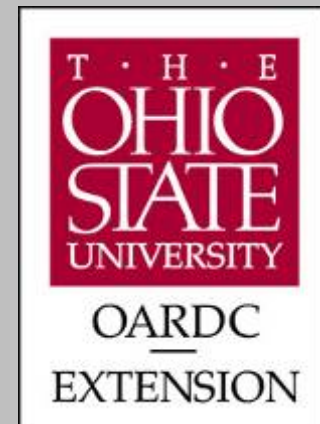


Helpful or Harmful? Stinging Insects, Oh! My! What you didn't learn in turf school!

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We'll define
NUISANCE PESTS
as ones not normally
damaging turf, but critters
associated with our turf or turf
facility and regularly causing
concern!



Common Turfgrass Nuisance Pests

- Turfgrass ant
- Solitary bees & wasps
- Social wasps
- Biting flies & Filth flies
- Spiders
- Ground beetles
- Earthworms
- Birds & Mammals (skunks, raccoons, moles, voles, etc.)
- Other?

Nuisance Solitary Bees & Wasps



Cicada Killer



***Bimbex* sand wasp**



Ground bees

Solitary Wasps

(family Sphecidae)

- **Medium to LARGE wasps, nesting in burrows.**
- **Usually White, Yellow, Red-Brown and Black color patterns.**
- **Usually solitary but may nest in common areas.**
- **Males may protect territory!**
- **Females generally non-aggressive!**
- **Females capture a specific group of insects as food to provision cells in soil.**
- **Also includes mud daubers & organ-pipe wasps.**

Bembix

(family Specidae)

- **Medium wasp with black/brown bodies and white/yellow stripes on abdomen.**
- **Prefer to nest in sand (play grounds and volleyball courts).**
- **Females use flies, even deer and horse flies, as prey.**



Cicada Killer

(family Sphecidae)

- **Large wasp!**
- **Black and Red-Brown body with white/yellow stripes on abdomen and red-orange wings.**
- **Often nest in common areas of several to 15-20 individuals.**
- **Males & Females hover back and forth over colony.**
- **Males & Females often fight each other!**
- **Females provision cells in soil with annual cicadas.**
- **Active for about 4-6 weeks in July-August.**

Cicada Killers
Commonly infest
volleyball courts and
other cleared areas!



Cicada Killer Control Recommendations

- **WHACK-em! Honestly! Tennis and badminton rackets are great!**
- **Dust burrow openings with insecticide dust – tedious but effective**
- **Just live with them – educate people that they are really harmless!**
- **Use ground cloth under sand.**

Mud Daubers – Pipe Organ Wasps – Potter or Mason Wasps (family Sphecidae & Vespidae)

- **Medium-sized wasps, often black or shiny blue in color.**
- **Construct nests using mud attached to permanent structures.**
- **Mud Daubers & Pipe Organ Wasps use spiders as food!**
- **Potter Wasps use beetle larvae, caterpillars or spiders as food.**
- **Need a source of mud!**



Mud Dauber Control Recommendations

- **Ignore if possible!!**
- **Improve drainage, especially on clay surfaces and around drinking fountains.**
- **Persistently destroy nests! (An extendable painting pole or light bulb changing pole is great for high areas. This can be done when the wasps are present!)**

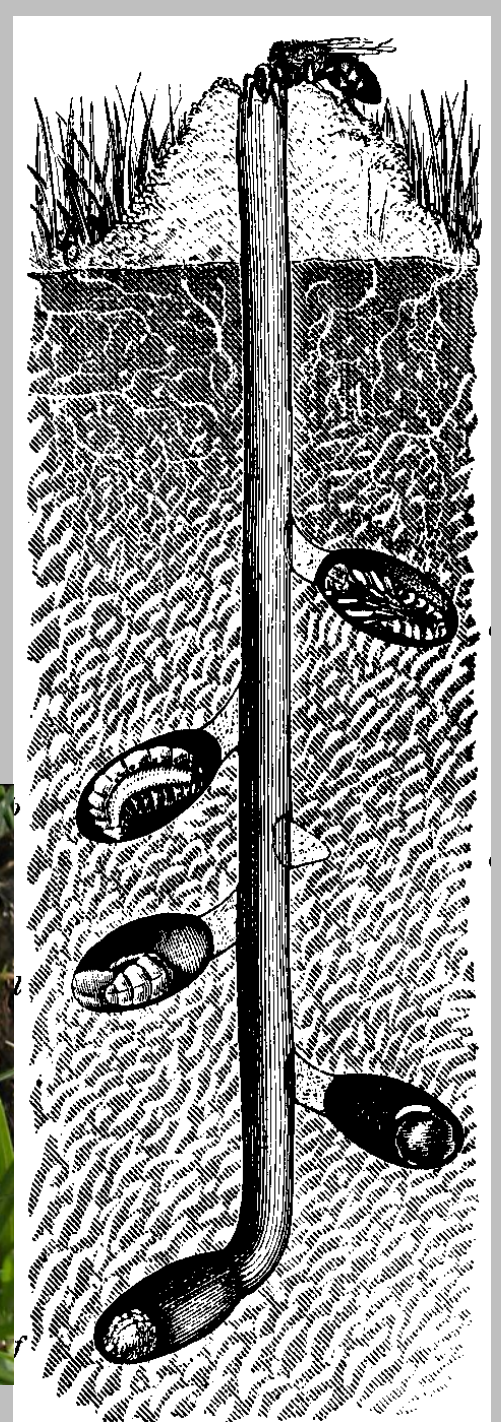
Ground Bees

(family Andrenidae)

- Hairy bees, about the size of a honey bee or slightly smaller.
- Browns and Blacks, never iridescent green.
- Often nest in colonies of several to hundreds.
- Males hover back and forth over colony.
- Males often try to capture females (for mating) and fight each other!
- Females provision cells in soil with nectar and pollen.
- Prefer open areas or thin turf areas.



**Andrenid
ground bees.**



Ground Bee Control Recommendations

- **Ignore if possible!! Educate!**
- **Improve ground cover – thicken turf, add more mulch when bee activity first starts.**
- **In mulch areas use ground netting – bees need 6 to 8-inch soil depth!**
- **Insecticide sprays and granules are generally not effective!**

Carpenter Bees

(family Apidae, subfamily Xylocopina)

- Large, hairy bees, the size of bumble bees, black, brown and yellow with shiny abdomens.
- Head almost as wide as thorax.
- Nest in burrows chewed into wood (in buildings, trees or even woody stems of plants).
- Often occur in groups with males hovering back and forth.
- Males can be aggressive, but can't sting!
- Females provision nests with pollen & nectar.

Carpenter Bees



Carpenter Bee Control Recommendations

- **WHACK-em! Honestly! Tennis and badminton rackets are great!**
- **Use treated lumber, avoid spruce, douglas-fir, and cedar wood!**
- **Persistently treat holes with caulk and/or fill holes with steel wool!**
- **Spray or dust holes with insecticides.**

Bottom Line on Solitary Bees/Wasps!

- Colony species may “defend” territory, but the defenders are usually males!
- Females prefer to not sting! (they run risk of being killed!)
- Can sting if captured or restrained.
- Considered beneficial – pollinators & predators.
- Habitat changes often discourage nesting.
- Sting allergies are SPECIES SPECIFIC!

Social Wasps

(family Vespidae)

- **Usually medium sized wasps with no apparent hair.**
- **Usually White, Yellow, Red-Brown and Black color patterns.**
- **Usually construct nests of paper – exposed or in ground or voids.**
- **Workers all female that will aggressively protect nesting site!**
- **Females can sting repeatedly!**
- **Capture other insects as food!**

Yellowjackets





**Yellowjacket
foundling nest.**



Yellowjacket nest contents!



Yellowjackets - *Vespula*

- 18 species in North America
- Most problematic species are:
 - German yellowjacket (all across NA)
 - Eastern yellowjacket (mainly NE NA)
 - Western yellowjacket (mainly west coast)
 - Southern yellowjacket (Gulf States)
- Most nest in ground or structural voids
- Related species:
 - Yellow Hornet (aerial nests, native)
 - Baldfaced Hornet (aerial nests, native)
 - European Hornet (giant import, nests in hollow trees)



Baldfaced Hornet



Yellowjacket Biology

- **Nests do not survive over winter!**
- **New queens hide in protected sites**
- **New queens establish nests in voids (mulch piles, rabbit/mouse burrows, wall voids)**
- **After initial brood reared, queen never leaves nest.**
- **Primarily carnivores in spring and early summer.**
- **Queen produces new queens and drones in July and August.**
- **New queens & drones solicit sugar from workers.**
- **Workers become pests as they look for sugar!**
- **Everybody dies at first frost, except for newly mated queens.**

Yellow Jacket/Hornet Control Recommendations

- **Suit up and spray them!!**
 - Use caution in wall or attic voids, wasps may enter building if entrance is blocked by pesticides!
 - Treat at night if possible – they don't fly in dark!
- **Vacuum them!** (use a wet-dry vac with soapy water)
- **Traps?** Generally only effective against the western yellowjacket!!
- **Sanitation** – keep trash containers covered and regularly emptied, clean food serving surfaces, etc.

Paper Wasps - *Polistes*

- 17 species in North America
- The German Paper Wasp is recent
- All make umbrella-shaped nests in protected places.
- Primarily predators of other insects.
- Overwintered queens may recruit other queens in spring!
- Generally won't sting unless provoked!

Paper-nest Wasps (*Polistes*)



Paper Wasp Control Recommendations

- **Suit up and knock them down!!**
 - Start early when nests is small, patrol regularly infested areas on weekly basis through June!
 - Use hornet sprays at night!
- **Vacuum them!** (use a wet-dry vac with soapy water)
- **Just ignore them!** – if high and out of the way, just ignore them!

Honey Bees

(family Apidae)

- Occasionally set up colonies in building voids (walls and/or attics).
- Often noticed when swarming! – just leave them alone and they will be gone in hours.
- We do have the Africanized honey bees in southern states! Should be handled by professionals!
- Try to make facility unfriendly to honey bees! (seal access to wall and attic voids; control flowering weeds in turf)
- Beneficial pollinators!



Honey bees

Bumble Bees

(family Apidae)

- Many species in NA.
- Prefer to start nests in old mouse or rabbit burrows!
- Like social wasps, a nest only lasts one year, new queens overwinter!
- Try to make facility unfriendly to bumble bees! (control mice and rats; use mulch so that voids are not created; clean up trash, wood pallets; control flowering weeds in turf)
- Beneficial pollinators!



**Bumble bees
have small heads
and hairy
abdomens!**

Things That Upset Bees & Wasps!

Recommendations

- Don't smell or look like a bear! (body odor, musk perfumes, bad breath, dark clothing).
- Don't' smell or look like flowers! (floral perfumes, flower patterns on clothing).
- Brush, don't Swat! (brushing bees or wasps away allow them to escape; swatting often traps them and they must sting).
- Avoid nests! (most social bees and wasps will protect their nesting sites).



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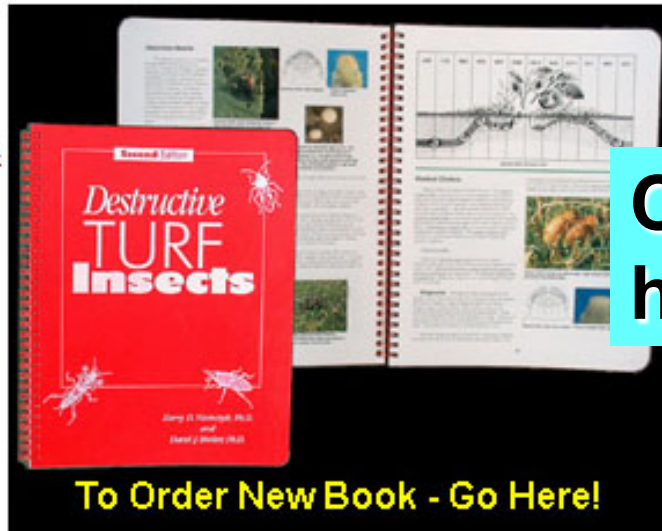
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