Urban IPM "*ANT*"swers

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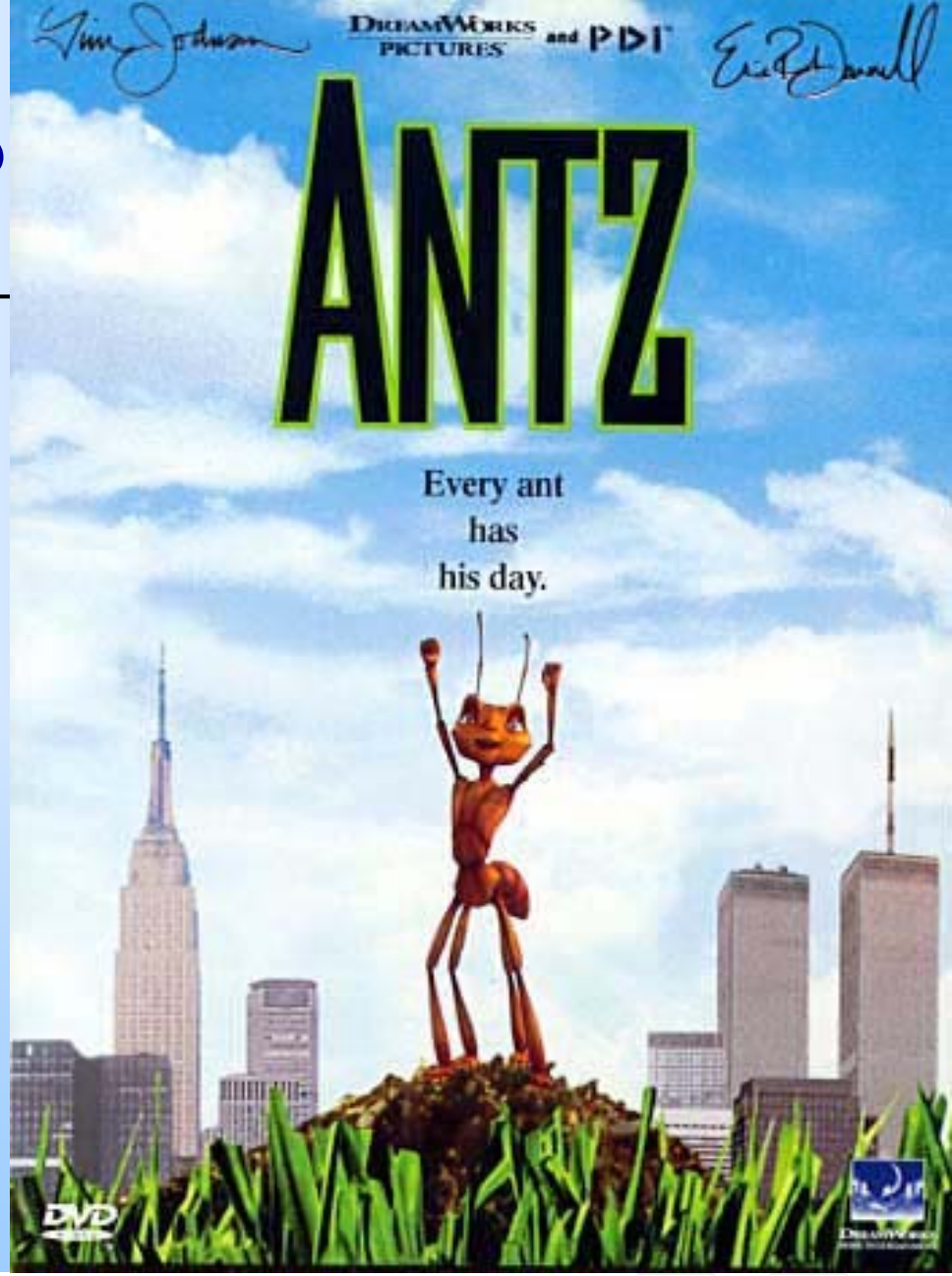
Ants = ANTZ ?



What are ants (indoors) ?

- Bad ?
- Pests ?
- Dirty ?
- Scary ?
- Nuisance ?
- Unhealthy ?
- Abundant ?
- Damaging ?
- Industrious ?

Castes of Thousands

- ~9000 species in the world
- ~ 600 species in North America
- ~ 20 species of U.S. pest ants
- ~ 10 species in a backyard
- Several million ants per acre
- Several thousand ants in a colony
- Advanced social insects

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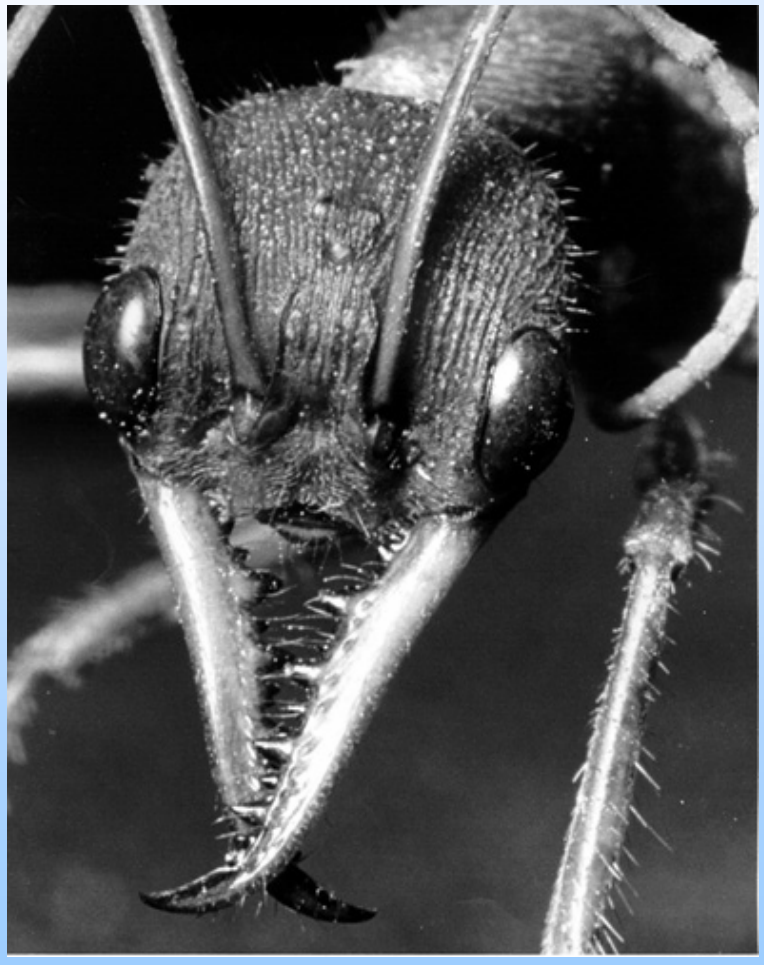
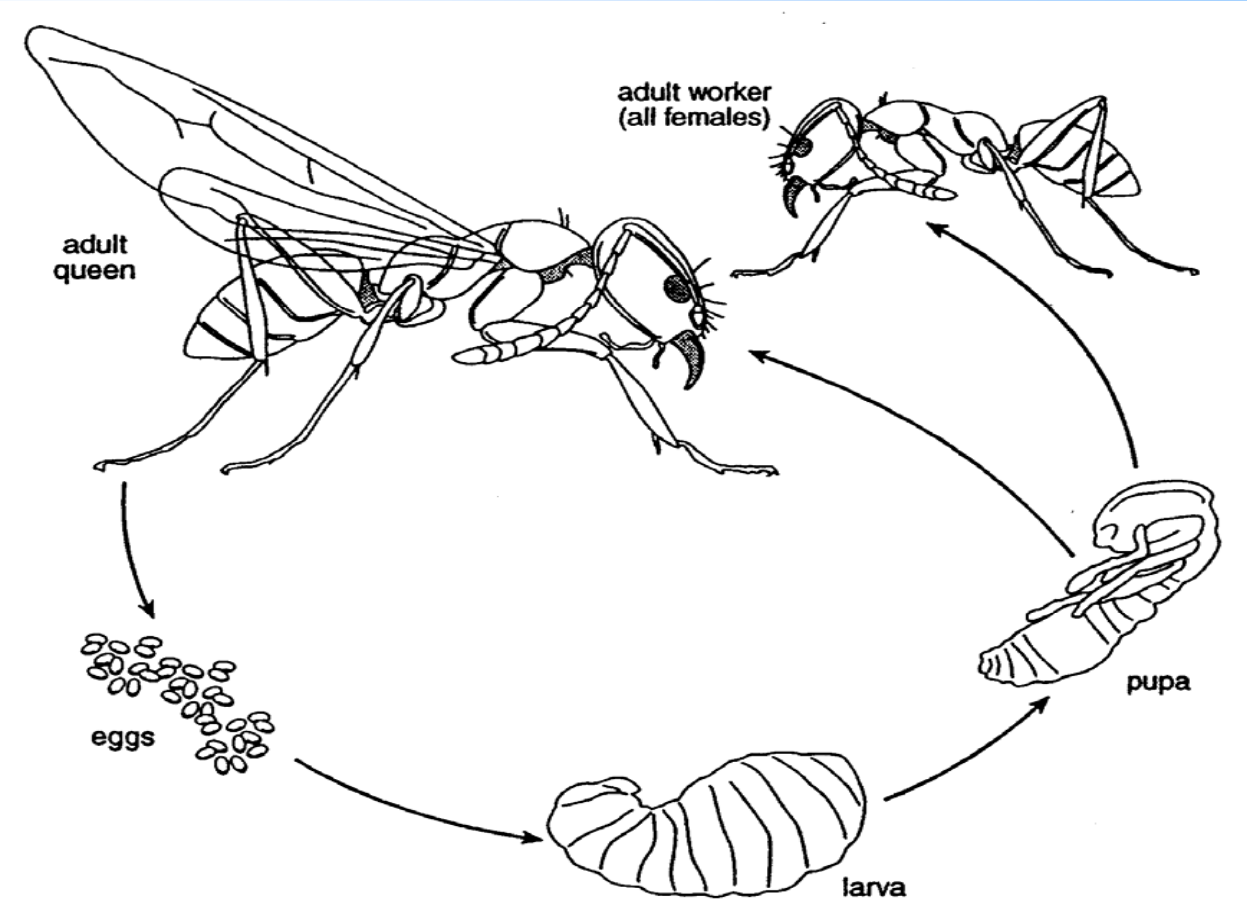
Ant Pest Importance?



- Damage
- Nests (tunnels & mounds)
- Unacceptable presence
- Nuisance and discomfort
- Confidence and morale
- Food contamination
- Bites and stings
- Infection and disease
- Death

An Ant's Life?



Ant Communication?

- Ants use pheromones to communicate
- Trail pheromones to a food resource
- Trail pheromones back to the nest
- Pheromones regulate the colony
- Alarm, flight, sex and other pheromones
- Antennae contain pheromone receptors
- Compound eyes are less important
- Temperature/humidity monitoring

Ant Food?

- Water and liquid
- Sweets (nectar)
- Protein (meat)
- Dead or alive
- Fats and oils
- Seeds and leaves
- Crumbs and garbage
- Whatever they need
- Worker feeds an army

- Digestion by larvae
- Trophallaxis and baiting success

Successful Ant Management

1. Professional identification of ant species
   - Single queen species or multiple queens?
2. Careful detailed inspection
   - Indoor/outdoor problem?
   - Nest locations?
   - Ant trail locations?
3. Appropriate strategy (strategies)
   - Exclusion?
   - Sanitation?
   - Insecticide application?
     - Non-repellent/repellent residual?
     - Sweet/Protein; liquid/gel/granular ant baits?
4. Monitoring and Evaluation
5. Client education/training

Successful Ant Management

1. Interview the customer
2. Determine “problem”
3. Determine treatment history
4. Determine ant “threshold”
   - Economic
   - Psychological
5. Situational risk analysis
   - Pest risk
   - Treatment(s) risk
     - Indoors
     - Outdoors
6. Offer treatment options, including costs

Ant Insecticides

Advantages

- Quick acting
- Long acting
- Repellency
- More toxicant
- Often less labor required to apply
- Often costs less

Disadvantages

- Quick acting
- Temporary results
- Repellency
- More toxicant
- Some applications more difficult
  - Nest proximity
  - Multiple queens

Ant Baits

Advantages

- Less toxicant
- Less hazard
- Carried to "nest"
- Easy applications
- Long term results

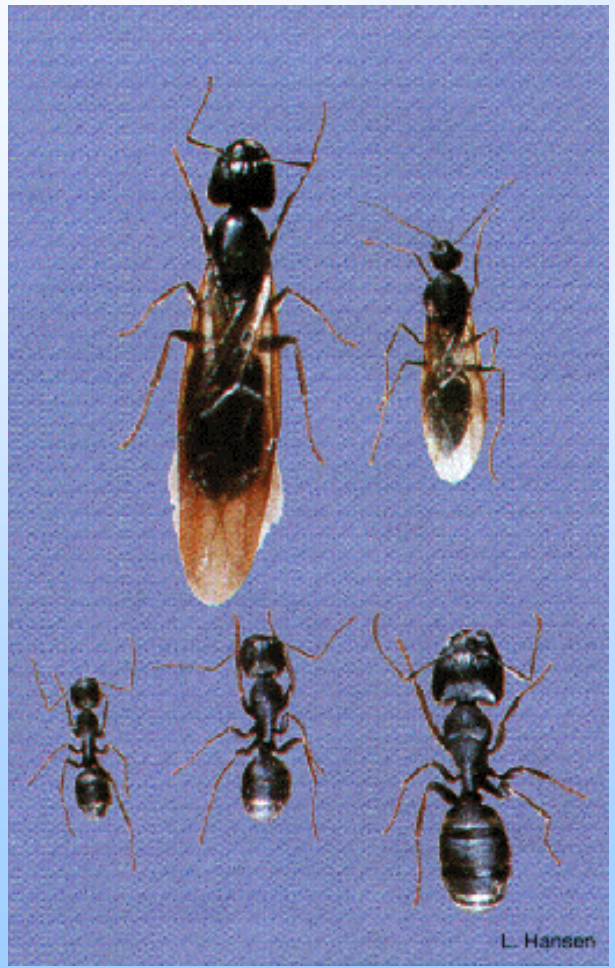
Disadvantages

- Large amounts of bait
- Frustrating preferences
- Relatively slow acting
- Often messy residue
- Very labor intensive to apply and service
- Inconsistent results
- Often more expensive
- Client dissatisfaction

Major Pest Ants

- Carpenter Ants
- Red Imported Fire Ants
- Pharaoh Ants
- Argentine Ants
- Pavement Ants
- Odorous House Ants
- Crazy Ants
- Thief Ants
- Ghost Ants
- Big-headed Ants
- White-footed Ants

Carpenter Ants



- No. 1 pest in most areas
- Several species
- "**Big**" ants (size varies)
- Nest in wood usually
- Don't eat wood
- Shavings/sawdust
- Wood rotting ?
- Kill the queen!!!
- Fix the problem!!!

Red Imported Fire Ants

- Aggressive ants
- Painful stings
- Agriculture problems
  - Livestock
  - Crops
- Electrical equipment
- Multiple queens
- Quarantine pest
- Management challenge

Pharaoh Ants

- Multiple queens
- Colony “budding”
- Nest mating
- Food varies
- Health pest
- No insecticide
- Baiting patience
- Management/control challenge

Argentine Ants

- Huge numbers
- Large trails/columns
- Forage long distances
- Multiple queens
- Colony “budding”
- Multiple colonies
- Prefer sweets
- Management challenge

Pavement Ants

- Common outdoors
- Nest under stones
- Thousands of workers
- Multiple queens
- Forage near nest
- Usually not difficult

Urban IPM "*ANT*"swers

Ant "management" is complex.

The "ANTswer" desired by the customer is most often quick, effective, cheap, permanent control and does not require their participation.

Safety and the "environment" are sometimes a concern. Occasionally the customer says they want "IPM", but it must be quick, effective, cheap, permanent, etc.

Urban ant IPM in the future will be determined by educating and selling the "customer" the overall value of an IPM approach.