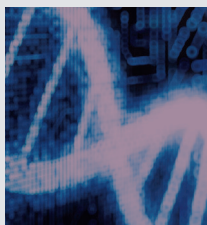
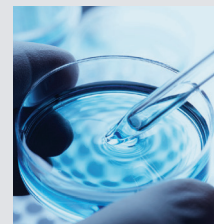
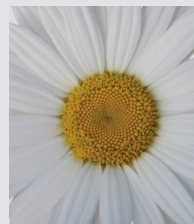




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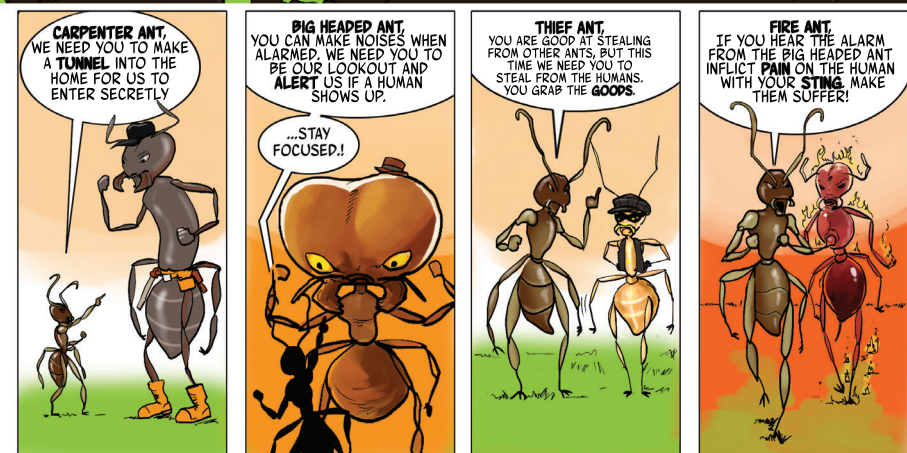
Ants

The Same But Different

ANT SPECIES have different needs, habits, and preferences and these variations can be significant. Controlling ants, like many types of pests, will depend on properly identifying the species and knowing the habits, food preferences and needs of the specific species you are dealing with. For instance, carpenter ants nest in damp, decaying wood and are one of the few species that cause structural damage. Odorous house ants will readily nest in wall voids around warmth and moisture and have a pungent odor when crushed. Big-headed ants are soil nesting and are often found under stones or wood and indoors in potted plants. There are many more species, all with unique characteristics. However, ants also have similarities that can help you when you are trying to treat.



One thing almost all ants like is the sweet honeydew aphids excrete. Controlling aphids will likely help you control a nearby ant colony if you see ants tending them. Other things you can do that are helpful for most ant species are to remove any plants that are touching the home. They provide easy access for ants to trail from something like a tree branch onto the roof and inside. Seal entry points around windows, door thresholds, wires, and exterior faucets. Sanitation and removing excess water will reduce the likelihood of foraging ants in the area. These are some good starting points. The more you know, the better you will be able to solve each customer's unique ant problems so keep reading to learn more about ants.

Author: Sandra Sleezer
MGK Technical Service Coordinator and Entomologist



Key Ant Pests:

HOW TO IDENTIFY THEM AND CONTROL THEM

Ant Species	Why a Key Pest?	Identification	Control Strategies
Odorous House Ant 	Will nest indoors in voids, have large colonies, and found throughout most of the U.S.	SIZE: 1/8 inch COLOR: Workers are black to brownish black. COMMON HABITAT: Outdoors under stones & around trees/shrubs. Will nest indoors or in subareas.	DISTINGUISHING CHARACTERISTICS: Have a distinct odor when crushed. Trim tree branches that touch structures. Treat with gel baits and concentrates. Treat structures, trails and the base of trees. Treat nest directly when located.
Fire Ant 	Public health pest due to stings, can damage electrical systems and mounds are located outdoors.	SIZE: 1/8 to 1/4 inch COLOR: Reddish head & thorax, brown/black abdomen. COMMON HABITAT: Domed-shaped mounds are located outdoors, rarely come indoors.	DISTINGUISHING CHARACTERISTICS: Move in uniform trails along trees, cable lines or on the ground. Reduce conducive conditions. Use mostly granular bait applications and concentrates. Treat identified mound locations.
Carpenter Ant 	Wood destroying organism that can nest indoors in structures. Found throughout the entire U.S.	SIZE: 1/4 to 1/2 inch COLOR: Workers are black or bi-colored red and black. COMMON HABITAT: Often found on trees or structures with moisture-damaged wood.	DISTINGUISHING CHARACTERISTICS: Frass [piles of discharged wood] is often present indoors. Trim tree branches that touch structures. Treat with granular baits and liquid concentrates. Treat structures, utility lines, trails and the base of trees.
Argentine Ant 	Large colonies with multiple nests that can extend for miles, making them difficult to control.	SIZE: 1/8 inch COLOR: Workers are light to dark brown. COMMON HABITAT: Prefer Mediterranean-type habitats around moisture sources.	DISTINGUISHING CHARACTERISTICS: Well-defined trails can be more than 3 ants wide. Trim tree branches that touch structures. Treat with liquid and gel baits and concentrates. Treat structures, trails and base of trees.
Pavement Ant 	Nest close to structures, under rocks, or next to driveways and are a nuisance to homeowners.	SIZE: 1/8 inch COLOR: Workers are dark brown to black. COMMON HABITAT: Found along edges of concrete brick and asphalt driveways and sidewalks.	DISTINGUISHING CHARACTERISTICS: Pronounced grooves on head and thorax. Treat structures, trails, under rocks, and next to concrete and asphalt driveways.
Rover Ant 	Can be found indoors and outdoors. Traditional methods of controlling rover ants often fail. They can be difficult to find in structures.	SIZE: 1/16 inch COLOR: Workers are dark brown to black. COMMON HABITAT: Often found in potted plants.	DISTINGUISHING CHARACTERISTICS: Very tiny, robust ant that appear jet black when viewed from a distance. Reduce conducive conditions. Treat trails and entry points with liquid concentrates.
Little Black Ant 	Can be found indoors and outdoors, will often nest indoors due to environmental factors, and colonies are often small and difficult to locate indoors.	SIZE: 1/16 inch COLOR: Workers are a shiny black to brownish black. COMMON HABITAT: Found around trees, under stones, in wall voids, cabinets and foundation material.	DISTINGUISHING CHARACTERISTICS: Thorax uneven in shape, they travel in defined trails and are slow moving. Remove conducive conditions. Treat trails and entry points with liquid concentrates.
Black Crazy Ant 	Have large colonies that invade structures, lawns and vehicles, have been known to damage electrical equipment and displace other ants.	SIZE: 1/8 inch COLOR: Workers are black. COMMON HABITAT: Found indoors and outdoors, often near trash sites, plant and tree cavities and rotten wood.	DISTINGUISHING CHARACTERISTICS: Long antennae and legs and do not have uniform trails. Remove all ground cover. Reduce conducive conditions. Use liquids, gels or granular baits and concentrates. Use broadcast treatments.
Pharaoh Ant 	Public health pest that typically nests indoors, can be difficult to locate indoors. Notorious for budding if disturbed and having satellite colonies.	SIZE: 1/16 inch COLOR: Workers are yellowish light brown to reddish. COMMON HABITAT: Found behind baseboards, cabinets and wall voids, window sills and under floors.	DISTINGUISHING CHARACTERISTICS: All workers are the same size, and poor eyesight. Reduce conducive conditions. Treat with gel baits and concentrates. Treat trails when located.

Baiting for Ant Control

Author: Jessica Strange-George | MGK R&D Manager and Research Entomologist

RESIDUAL SPRAY TREATMENTS

alone for controlling nuisance ants, although effective against foraging ants, can have a more limited impact on other fragments of the ant colony [depending on the active ingredients]. Therefore, baiting can be an effective way to reduce both the ants you see and the colony from which they originate. When employing baits, there are several important aspects to effectively apply for ant control that must be observed for ideal results.

The first is foraging preference determination. Using small amounts of different baits [either toxic or non-toxic], determine whether ants are feeding on sugar- or protein-based food sources, as well as whether they have a preference for liquids, gels or solids. Identification of the ant species may also aid in determining what nutritional preferences an infesting ant may have.

Second, bait placement is important. Bait should be applied on or near an active foraging trail or where ant activity has recently been observed. Since ants have to find the bait and come directly in contact for efficacy, baits too far off the foraging trail may not be discovered. Additionally, ants must be able to access baits to carry back to the nest to impact the entire colony.



Third, bait volume and longevity should be monitored. If bait is fully consumed in a short period of time, there may not be enough toxicant to impact an entire colony. Replace depleted baits and stations as needed. Baits that are left to the elements for too long may also become less palatable, and thus ignored by foraging ants. Dry or damaged baits should be replaced as well.

Finally, if pairing baits with a surface treatment, be sure the treatment is non-repellant and moderate-to slow-acting. Repellent treatments will deter the ants from foraging in the area in which the baits were applied. Fast-acting treatments will kill workers too quickly, which will lower the probability that toxicants [from both the treatment and bait] will be carried back to the nest to contaminate non-foraging nest-mates.

It will also be important to manage the expectations of the customer when using bait products. Although potentially highly effective, customers may see foraging ants for days or longer before the treatment begins to reduce visible ant numbers. Be sure to reiterate that ant activity shortly after application should not infer that a treatment isn't effect, but rather, that the treatment is likely achieving better nest penetration, and therefore overall control.

TIPS & TRICKS

How To Distinguish Carpenter Ant Tunnels From Termite Tunnels



CARPENTER ANTS tunnel across the wood's grain. This distinguishes them from termite tunnels because termite tunnels always follow the wood's grain. Another difference between carpenter ant tunnels and termite tunnels is that carpenter ant tunnels are clean whereas termite tunnels are covered in mud. The final difference to distinguish carpenter ant tunnels and termite tunnels is the sawdust that carpenter ants leave at the entrances of their tunnels. Termites don't leave any sawdust piles.



ANTS



QUEENS aren't exactly treated like royalty. Every spring, Argentine ants kill off roughly 90% of their queens. They pretty much wipe the slate clean and start over with new queens that are often able to produce more eggs.

Much Ado About Polygyne

Author: Ryan Neff | MGK Technical Field Specialist and PhD Entomologist

EVERY YEAR ANTS are at or near the top of service numbers for PMPs across the US. Pest species vary, from Argentine ants in the coastal states, to odorous house ants (OHA) in the Midwest (really all over the US, but I digress). It is common knowledge that ants are social, but it may come as a surprise to some that how colonies are organized is the most important factor governing the pest status of many ants. Many pest ants, including Argentine, OHA, pharaoh, ghost, tawny crazy, and black crazy ants, are what entomologists refer to as “polygyne”, meaning there are multiple queens present in the same colony.

To further complicate the picture, ants can be either primarily or secondarily polygyne. Primary polygyny is less frequent and occurs when multiple queens found a colony without the help of workers. Queens in these species often fight with one another to suppress egg laying in less-dominant queens, especially if resources are scarce. More common is secondary polygyny, where single-queen colonies accept additional queens or fuse with other colonies. These include the perennially pestiferous Argentine, odorous house, and crazy ants (tawny and black for our purposes).

So why do polygyne species pose such a problem? The answer lies in their nesting habits. Species like OHA, ghost ants, pharaoh ants, and black crazy ants are opportunistic nesters and have multiple nesting sites. They exploit short-lived nest sites, like clumps of leaves or tufts of dead grass that are available for a few days or weeks. One study found that OHA colony fragments moved every 13 days. By tolerating multiple queens in a colony they are able to quickly exploit these sites and extend their invasion front, akin to the island hopping strategy employed by the Allies in the Pacific during WWII. Because these fragments will inevitably lose contact with one another, sometimes forever, having enough reproductive females to provide offspring to the many subunits means polygyne colonies are better at exploiting rapidly fluctuating environments.

WHAT IMPACT DOES THIS HAVE ON CONTROL?



















The paradigm of “kill the queen, kill the colony” doesn’t apply to ants that exhibit a high degree of polygyny.

For example, a bad Argentine ant infestation may have tens of millions of ants. At 17 queens for every 1000 workers, we’re looking at hundreds of thousands of queens, and even more if the house happens to be on an invasion front. Good luck killing all 170,000 queens with a single treatment. Even if you did, workers can rear new queens from existing eggs and 1st instar larvae. The goal for many polygyne species is to eliminate as many individuals as possible, which is generally accomplished using non-repellent products that don’t kill too quickly and transfer between nestmates. Baits, especially exterior baiting, should be considered as well.

To summarize, polygyne ants have multiple queens, exploit short-lived habitats, and don’t fall under the “kill the queen, kill the colony” paradigm. They exhibit some of the most complex social behavior in the animal kingdom and by understanding their behavior and colony structure it is possible to set appropriate expectations and provide superior control for customers.

ANT SPECIES

POLYGYNE or MONOGYNE?

Rover Ant	Little Black Ant	Pharaoh Ant	Odorous House Ant	Argentine Ant	Pavement Ant	Black Crazy Ant	Fire Ant	Carpenter Ant
MONOGYNE OR POLYGYNE	POLYGYNE	POLYGYNE	POLYGYNE	POLYGYNE	MONOGYNE OR POLYGYNE	POLYGYNE	MONOGYNE OR POLYGYNE	MONOGYNE OR POLYGYNE
								
								

APPROX. ACTUAL SIZE

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