

PMP PestManagement PROFESSIONAL

MOST WANTED ANTS



Camponotus spp.
ALIAS Carpenter ant



Tetramorium immigrans
ALIAS Pavement ant



Tapinoma sessile
ALIAS Odorous house ant



Solenopsis invicta
ALIAS Red imported fire ant



Linepithema humile
ALIAS Argentine ant

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MGK helps PMPs in their ant control strategies

By Dr. Ryan Neff

With more than 700 species of ants in the United States, and a few dozen considered pests, it's no surprise they are one of the highest revenue-generating pests for pest management professionals (PMPs). Ants can damage crops and building structures, and bite and sting people. For some species, colony size can easily number in the thousands, and those kinds of numbers will have homeowners calling for immediate help.

Few ant infestations are alike, but here are some guidelines to ensure an effective treatment:

- **Identify the ant.** Proper identification of the species is key, and will inform your treatment plan.
- **Set your strategy.** The product and application method you choose should be specific to the ant species you identified.
- **Don't give up.** Ants can be picky. You might need to try multiple methods before achieving control.
- **Know your product.** It's important to understand how product formulations differ, and which are most effective for the infestation you are managing.

Here are some important features that MGK's ant control products include:

- **Nonrepellent.** You can enhance the performance of your nonrepellent by baiting the treated area. This ensures more ants will encounter the treatment.
- **Flexible-use sites.** Many of our products are labeled for use both indoors or outdoors, saving you material costs as well as space on your vehicle. With a

product that's approved for outdoor broadcast, you can be sure to catch even hard-to-find nests.

- **Long-lasting.** Look at the product's residual. A longer timeframe means the product remains hard at work even after you leave the customer's property, so you get more time between treatment intervals.
- **Effective.** Certain ant species — as you'll see on the following pages — are notoriously difficult to control. For example, Argentine ants and odorous house ants each can have hundreds or thousands of queens across numerous satellite nests; the colony size alone makes effective treatment nearly impossible. In such circumstances, you need a product that's labeled for multi-queen species.
- **Versatile.** Check the product label. Is it only approved for ants? If so, choose a solution that controls a variety of pests. That way, you'll be able to knock out all of your customers' problem pests with the same solution.

- **No signal word.** Products without a signal word have fewer restrictions. Also, choose products that require minimal personal protective equipment (PPE) — just a long-sleeved shirt, long pants, socks and shoes.



DR. NEFF is the western technical field specialist for MGK.

A TRADITION OF INNOVATION

MGK has been helping PMPs control pests for nearly a century, and continues to bring industry innovations to the forefront, especially in the area of ant control. This season, we're excited to introduce the revolutionary Sumari Insecticide. This non-repellent, all-in-one solution boosts productivity and gives PMPs more control to get it right the first time:

- Indoor/outdoor use and outdoor broadcast
- 90-day residual
- Kills multi-queen species
- Proven NyGuard IGR (insect growth regulator)
- No signal word

Visit MGK.com/Sumari for more ant control resources and additional product information.

We are proud to partner with *Pest Management Professional* to sponsor this "Most Wanted Ants" supplement. We hope you will find the following pages to be both informative and useful for your business, making you even more successful in the coming year.



Carpenter ants

Camponotus spp.

DESCRIPTION

- The nest galleries some carpenter ant species cut into wood generally are smooth and clean, which is how they earned the “carpenter” moniker.
- Workers of invasive carpenter species vary in size, among the smallest being those of *C. nearcticus*, which are 3/16 to 1/4 of an inch long.
- Carpenter ants seen indoors are mostly black; however, some species, such as *C. vicinus*, *C. chromaiodes*, and *C. floridanus* have reddish body sections and/or leg segments.
- Polymorphic workers for the larger species vary in size, from 1/4- to 3/4-inch long.

LIFE CYCLE

- The queen is present in the primary nest, which is located away from the home or infested structure.
- No egg-laying queen is present in the secondary, or satellite nests, which are located within the structure.
- More than one satellite nest may be associated with different primary nests, and therefore, separate colonies.
- Each colony typically has only one egg-laying queen.
- For most colonies, alates, or winged reproductives, form in three to six years, at which time about 2,500 or more individuals will be present.
- Populations within colonies vary; some include more than 100,000 individuals.
- Alates may be produced any time of the year, but usually develop in late summer.

BEHAVIOR

- Although some carpenter ant species (*Camponotus modoc* and *C. pennsylvanicus*) excavate cavities in structural wood and foamboard (EPS) insulation, most structure-invading species are opportunistic nesters,

occupying existing cavities/gaps in exterior walls, roofing, and interior features.

- They often excavate tunnels and galleries in structural wood that already is in a state of decay due to retained moisture.
- They do not use wood for food.
- They establish nests in many different outdoor situations, such as tree trunks and branches, stumps, logs, landscaping timbers, fenceposts and sometimes in covered soil.
- Indoor nests may be found in windowsills, hollow doors, roofs, porch substructures, baseboards, fireplaces, shingles or other naturally hollow areas. A hollow pipe may even serve as a nest.
- Nesting activities may weaken building structures, but not as seriously as termites.
- In wooded areas, many colonies may be present around an infested home.
- Carpenter ants often move into a building solely to scavenge and feed.
- They may be carried into homes in firewood, or enter and establish colonies via other routes.
- Foragers can enter homes via tree limbs or wires that touch the house; thus the nest may or may not be inside the home.

FOOD

- Foraging ants will travel 100 yards or more from the nest for food.
- During warm months, they will forage most actively in early nighttime hours.
- Carpenter ants feed on a variety of animal and plant foods, and will feed on other living or dead insects.
- They will feed on nearly anything people eat, including sweets. Aphid honeydew is especially appealing.



Two black carpenter ants (*Camponotus pennsylvanicus*) engage in trophallaxis.

RANGE

→ Various species are widespread throughout the United States.

PREVENTION

→ Eliminate moisture and water sources; remove food sources by keeping food sealed; prune shrubs and trees so they do not touch the structure; seal entry points into structures; store firewood and lumber away from the home.

SOURCE

TRUMAN'S SCIENTIFIC GUIDE TO PEST MANAGEMENT OPERATIONS

MOST WANTED ANTS

Pavement ant

Tetramorium immigrans (previously *T. caespitum*)



A pavement ant worker takes food back to share with its colony.

DESCRIPTION

- This species is a small, 1/8- to 1/6-inch long, dark brown ant with paler legs and antennae.
- On the head and thorax are visible parallel lines, or ridges, that are the same color as the cuticle; they give the cuticle a grooved texture.
- A pair of small spines are at the back of the thorax.
- The body has a sparse array of small hairs all over it.
- The pavement ant's stinger is used more for applying trailing pheromone and less for defensive purposes.
- Queens are larger, at 1/4- to 1/3-inch, and are dark brown. They also have a sculpted head and thorax.

LIFE CYCLE

- Pavement ants form large colonies that often contain 3,000 to more than 10,000 workers.
- They have distinct castes, with one or a few reproductive queens, and

numerous non-reproductive female workers.

- Winged reproductive females and males are produced in early summer.
- Most colonies are monogynous — they are started by a single reproductive queen that carries out all reproduction for the lifetime of that colony — but they occasionally may have two, or possibly more, queens.

BEHAVIOR

- They prefer to nest in areas with minimal vegetation, such as an urban habitat.
- Nests usually are located outdoors under stones, garden pavers, and pavement (asphalt and concrete). Nests also can be located under porches and foundation slabs. They occasionally are found in exterior walls, under flooring, and in insulation.
- In homes with slab-on-grade construction, foragers enter through cracks in the slab, expansion joints and utility penetrations.
- Large-scale fights between non-related pavement ant colonies are common in the spring and beginning of summer, when the ants are developing their territories.
- They move slowly and enter buildings in search of food.

FOOD

- Pavement ants prefer greasy and sweet materials, which means they will respond at different times to either sugar- or protein-based baits.
- Workers use pheromones to recruit fellow workers to a food source, making it possible for large groups of workers to take unwieldy food back to the colony.

RANGE

→ Pavement ants are common throughout most of the United States, in the Midwest and in the Pacific Northwest, but they are an occasional pest in southern states.

→ Its native range in Europe is wide; at the beginning of the 19th century, it was introduced into the United States.

PREVENTION

→ Seal entry points into structures, and remove food sources by keeping food sealed.

SOURCES

TRUMAN'S SCIENTIFIC GUIDE TO PEST MANAGEMENT OPERATIONS
UNIVERSITY OF FLORIDA, INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES EXTENSION

Odorous house ant

Tapinoma sessile

DESCRIPTION

- The odorous house ant (OHA) gives off a pungent, unpleasant rotten coconut odor when crushed, which led to its common name.
- Monomorphic workers are 1/12- to 1/8-inch long, and are brownish-black.
- OHA has a 12-segmented antenna without a club.
- They are monomorphic, or all of similar size.
- Frequently confused with Argentine ants, OHA can be easily distinguished by its darker color and abdominal gaster that overhangs and hides its flattened pedicel.
- OHA can be confused with velvety tree ants (*Liometopum occidentale*) because of the similar odor produced, but can be distinguished by the velvety tree ant's vertical node.

LIFE CYCLE

- Colonies are large, with several thousand workers and many active queens.
- Winged reproductives appear May through July.

BEHAVIOR

- Nests are located indoors and outdoors, in a variety of situations.
- Outside, nests are shallow and can be found under a board or stone.
- OHA can be found in mulch, and under logs and rocks.
- In structures, nests frequently can be found behind exterior sheathing/siding and masonry, in the layered construction of exterior walls (especially under window sills), damp roofing, and under flooring and toilets.



An OHA worker feeds on a bit of gel bait.

- Workers forage along regular trails.
- OHA use edges to guide them as they move from place to place. Indoors, these can be siding, home foundations, baseboards, counters, wires or pipes. Outdoors, these can be trees or vines.
- They may forage in tubes abandoned by subterranean termites.

FOOD

- OHA prefer sweet foods, such as sugars. They also will feed on dead insects, pet food and grease.
- Outdoors, OHA feed on aphid honeydew and nectar from flowers and buds.
- They move indoors late in the year when honeydew, one of their primary foods, becomes less abundant.
- Honeydew availability also may be reduced at other times, such as during and after excessive rainfall. As a result, OHA may move indoors in search of food.

RANGE

→ OHA are found throughout the United States and southern Canada; they are common along the West Coast, Atlantic coastal and New England regions, and in the mid-southern region of the United States.

PREVENTION

→ Eliminate moisture and water sources; remove food sources by keeping food sealed; prune trees and ivy so they do not touch the structure; seal entry points into structures; store firewood and lumber away from the home; move garbage cans away from the structure.

SOURCES

TRUMAN'S SCIENTIFIC GUIDE TO PEST MANAGEMENT OPERATIONS

PENN STATE EXTENSION
UNIVERSITY OF TENNESSEE
EXTENSION

MOST WANTED ANTS

Argentine ant

Linepithema humile

DESCRIPTION

- This species originated in Northern Argentina near the Paraná River, and adapts well to urban and suburban environments.
- Argentine ants will persist where other species do not thrive.
- They may be the only ant species present in many locations.
- Workers are very aggressive, and often eliminate other ants in the area.
- Because different Argentine ant colonies may coexist in the same area, the number of colonies in an area may be large. As a result, locating every nest may be challenging.
- Workers are 1/12- to 1/8-inch long, and are light to dark brown. They have one segmented petiole and 12-segmented antennae with no club.
- Queens are 1/16- to 1/4-inch long.

LIFE CYCLE

- Many fertile queens are present in each nest, where they lay eggs.
- Because mating usually takes place inside the nest, winged forms typically are not found.

- Queens clean and feed themselves, and are active in feeding and grooming immatures.
- New colonies may be formed through “budding,” whereby some fertile queens and some workers become isolated from other members of the colony and establish a new colony.

BEHAVIOR

- Nests usually are located near water and food sources, in moist soil next to or under buildings, along sidewalks and brick or stone walkways, or under boards and potted plants.
- Backyard landscape features provide an ideal habitat.
- Argentine ants use cracks and crevices to gain entry to homes in search of food or water.
- Nests may be located within a structure or other locations not typically considered soil-related, such as under a bathtub set above a slab-on-grade foundation; under the cracks or expansion joints of slabs; or under the insulation in an exterior wall void.

FOOD

- Argentine ants prefer sweet foods, especially sugars, syrup, fruit juices, plant secretions, and honeydew.
- Workers forage for food along paths extending out from the nest, branching out to explore every part of an area.
- Foragers may enter homes in large numbers, particularly when conditions outdoors become too wet or dry.
- Foraging range is such that nests may be located in properties adjacent to a customer’s yard and home, making control challenging.

RANGE

- The ants may be found in most regions with Mediterranean climates or with mild winters and moderate to high humidity.
- In the United States, they are common in coastal regions, such as California.

PREVENTION

- Maintain proper sanitation in homes and yards; seal entry points into structures; and remove landscape features (such as those that generate excess water) that provide ideal habitats.



An Argentine worker ant.

SOURCES

TRUMAN'S SCIENTIFIC GUIDE
TO PEST MANAGEMENT
OPERATIONS
UNIVERSITY OF CALIFORNIA
RIVERSIDE, CENTER FOR
INVASIVE SPECIES RESEARCH

PHOTO COURTESY OF NPMA

Red imported fire ants

Solenopsis invicta

DESCRIPTION

- *Solenopsis* spp. fire ants are capable of inflicting stings that can be serious; the venom they inject causes a burning sensation, which is how they got their name.
- In the United States, four *Solenopsis* fire ant species can be found: red imported fire ant (RIFA, *S. invicta*), black imported fire ant (*S. richteri*), southern fire ant (*S. xyloni*), and tropical fire ant (*S. geminata*). Of these, most problematic encounters involve RIFA and black imported fire ants.
- RIFA polymorphic workers are dark reddish-brown. Their size varies from 1/15 to 1/4 of an inch in length.
- They have either one reproductively active queen per colony, which is known as a monogynous colony, or many reproductively active queens, which is known as a polygynous colony.
- Control may be more difficult in areas with multiple-queen colonies.
- The home range of large, polygynous colonies may be difficult to determine, and the range of individual colonies can overlap.
- Large colonies can have up to 500,000 workers that forage over an area with a radius of more than 100 yards.

LIFE CYCLE

- Average-size yards may contain several mounds, whereas larger yards may contain several dozen mounds.
- Each mound may be inhabited by a separate colony, which typically will be a monogynous colony, or one colony may occupy several distinct mounds that are connected by underground foraging tunnels.
- Occasionally, the ants will nest under bathtubs (the slab under the



RIFA workers scavenge for food.

tub often offers access to soil), next to water heaters or near other sources of warmth inside homes or buildings such as hospitals or nursing homes, especially in the winter.

BEHAVIOR

- Nests, with their characteristic earth mounds, are mostly found in soil. However, they can occasionally be found indoors — in undisturbed piles of dirty laundry, for example.
- When their earth mounds are disturbed, the workers appear to boil, or swarm, out of the ground in an aggressive defensive behavior. They will repeatedly sting any animal they consider to be an intruder.
- They often can be found where people congregate, such as lawns, parks, cemeteries and ballfields. Their aggressive stinging behavior becomes intolerable in most situations.

FOOD

- RIFA are both predators and scavengers. They may attack and kill other insects and small animals, or feed on dead animals.
- They also feed on sweets, such as honeydew, certain parts of plants, and plant secretions.

RANGE

→ In the United States, RIFA can be found in the Coastal Plain areas of the southern states, from South Carolina along the Atlantic Coast into northern and central Florida, across the southern states and into much of the eastern half of Texas. They also are established in the urban and coastal areas of Southern California, and outbreaks occur in some of the desert cities between West Texas and Southern California.

→ Distribution in northern areas is limited by the severity of winter conditions; they are not found where moderate to hard frosts are common during winter.

PREVENTION

→ Seal entry points into structures.

SOURCES

TRUMAN'S SCIENTIFIC GUIDE TO PEST MANAGEMENT OPERATIONS
USDA COOPERATIVE EXTENSION

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