

Ants

It is important to note that ants forage from the nest looking for food and water. They mark their routes or trails with pheromones so that they can find their way to the nest, food and water. If you disturb these pheromone trails the ants will not be able to find their way back to the nest and if the foraging ants do not return to the nest then the original nest may bud or split up and the whole life cycle will be sped up to produce more ants and the net result will be that you will have more ants to deal with than what you originally had.

It is important not to spray chemicals on these pheromone trails as this will destroy the pheromone trails and you may only kill some foraging ants but will disturb the whole nest leading to budding. By spraying the foraging worker ants you will only destroy about 5-10% of the colony and you will accomplish very little.

The ideal way to control ants is to provide them with baits formulated from proteins and carbohydrates to take down into their nests and to distribute these by food sharing or tropholaxes. In this way you will use the behaviour of the ants to get your baits deep into the nest and thereby controlling the ants with the ants themselves.

The following steps must always be used when contemplating a treatment program for ants:

A full inspection of the facility must be done to determine the extent of the infestation noting the position of the nest, water and food source. These locations will normally be linked with foraging trails or pheromone trails. You need to know where the ant is living before you can treat them effectively.

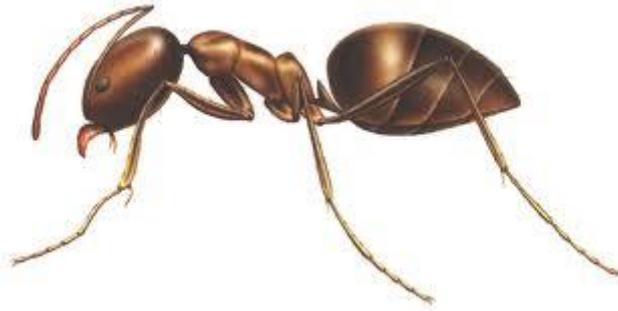
The ant must be identified so that the correct treatment procedure can be determined. Remember that some ants prefer protein based food while others prefer carbohydrates. This is important as some bait is protein based and some of your liquid gel baits are carbohydrate based.

Direct drenching of the colony in its nesting place can be performed if you know where it is. It is important not to disturb the pheromone trails with chemical sprays as this will lead to budding. Remember you need to take away the nesting site or material and remove the food and water source. This can only be done by focussing on hygiene and sanitation and excluding the ants from the structure.

Follow up. Ant management is not a once off treatment. You will only be successful if you keep following up and replenish baits and treatments as you are normally working with hundreds of thousands of ants.

Argentine Ant

(*Linepithema humile*)



Nodes on Waist

One

Gaster Tip

No circular opening

Worker Size

2.2 - 3.8 mm workers are all one size (Queen: 4 – 6 mm) multiple queens in the colony, brown in colour. 1 Queen per 100 ants. Eggs are mainly laid in summer. The larvae hatch after about 28 days depending on temperature. Larvae mature between 11 – 61 days and the pupal stage may take between 12 – 15 days. The life cycle from egg to adult varies from 33 to 141 days with an average of 74 days. Colonies vary from 50 000 to 600 000 workers

Behaviour

Foraging often stops when temperature exceeds 30° Celsius. Trails are always along structural guidelines, along walls, wires, fences and along branches.

Odour when Crushed

“Disagreeable, rotten-coconut-like” or a banana-like odour with an additional faint musty odour.

Colour

Light to dark brown.

Food

Honeydew on plants normally produced by aphids and mealy bugs eating into the plant, producing the honeydew.

Control

The aphids and mealy bugs must be controlled on the plants with a systemic insecticide that kills the aphids and mealy bugs systemically and in this way the food source is removed.

Baits containing carbohydrates or sweets must be used. Cut branches away from structures to keep ants away. Apply a perimeter spray to stop colonies from the exterior moving into a controlled area. Once the location of the nest is established a total residual insecticide spray should be applied to the nest only.

Ensure that the spray is applied deep down into the nest by removing mulch and leaves or the treatment will be done above the heads of the ants. If the nests are detected in walls, small holes can be drilled into the wall and powders or aerosols applied to the nest only.

Carpenter Ant

(*Camponotus sp.*)



Nodes on Waist

One

Gaster Tip

Circular opening

Worker Size

Relatively large; 6 – 17 mm. One fertilised queen per colony. The colony begins after the queens mating flight; she finds a suitable nesting site and rears a number of workers called minors, from her initial batch of eggs. These workers then begin nest excavations, food gathering and caring for the next brood of larvae.

Normally the nest will begin in a pre-existing cavity and will expand into dead damaged wood. Most mature colonies will have a parent colony and satellite colonies.

Behaviour

Nest in cavities in shrubs and trees and in cavities and voids. Carpenter ants are mostly active at night emerging at dusk and returning at dawn, following established foraging trails. The sawdust made by the carpenter ant normally contains parts of dead ants and other insects mixed with wood debris. The sawdust is normally deposited close to or in the nest.

Carpenter ants follow established routes from the nest to food and water sources marked by odour and specific landmarks to orient them to get back to the nest, sometimes even using an outside light to direct them. Carpenter ants are often found in roofs close to a water source or behind a skirting that they have hollowed out where the timber has decayed due to a water source or leak. Often if there is poor ventilation the timber will be damp and these are ideal conditions for carpenter ants to start nesting.

Shape of Thorax

Evenly rounded and is unique in this feature

Colour

Black, black and red, golden. Different for each species

Food

Insects, meat, sweets, fruit and eggs.

Control

Once a thorough inspection has been done and all nests are found the most important method of control is to rectify the conditions leading to infestation.

The damp conditions and the source of the water must be removed and once this is done a small amount of residual insecticide can be introduced into the nest or a total release fogger can be used inside a confined space.



Pharaoh Ant

(*Monomorium pharaonis*)



Nodes on Waist

Two

Gaster Tip

Sting

Worker Size

1.5-2mm in length.

Antennae

2-segmented antennae with a three-segmented club

Colour

Yellow or orange with the end of the abdomen darkened

Colony

The colony can grow quite large to hundreds of thousands with many queens. The life cycle from egg to adult takes about 76 days. Reproductive females and males take about four days longer to develop due to their larger size requiring more time for feeding and growth.

Food

Sweets, meat, grease, food in general. Predominantly protein based foodstuffs.

Behaviour:

The pharaoh ant is a sub-tropical species that lives predominantly indoors and finds it difficult to nest outdoors in cold climates. Pharaoh ants are very often found in hospitals where they are looking for protein feed. This is dangerous as these ants have been reported to carry many potentially pathogenic bacteria on their bodies due to their foraging habits. Nests are normally located in buildings where it is warm and moist like kitchens and bathrooms. Outside the nests are normally located near heating elements and toilets and drains.

Nests are often located inside the cavity of double outside walls below the window sill where they are in close proximity to dead and dying insects lying on the windowsills where they were attracted to by light. The queens and the colonies are very mobile and will easily move if they are feeling threatened, which a process is called "budding" where the nest will split up with half of the nest relocating to a new area and thus making the problem and infestation worse.

They use electrical wire and fencing to forage and have very specific routes of foraging marked with pheromones. Nesting always occurs close to water sources. These ants are more active during cooler periods and night time where they walk following walls, corners and edges. These ants often feed on pet food left out for pets.

Control

The most important thing when it comes to management of pharaoh ants is to find the foraging routes between the nest, food and water. Once these pheromone trails have been established care must be taken not to disturb these routes to ensure that no budding takes place. Spraying of insecticides will kill and disturb the pheromone trails and thus lead to budding.

Sprinkle protein based baits along the pheromone trails so that the ants can take the baits down to the nest where the workers will share the baits by tropholaxes and this will eliminate the colony. If the nest is found treat only the nest with a residual insecticide.

Once you have reduced the number of ants, you can then treat a one meter perimeter band around the perimeter fence to stop other colonies from moving into the treated zone. Remember that only about 5% of the pharaoh ant colony will forage so spraying of the foraging ants will not accomplish any control but will rather lead to budding as the colony will then feel threatened.

Pavement Ant

(Tetramorium caespitum)



Nodes on Waist

Two

Gaster Tip

Sting

Worker Size:

3 – 4 mm

Shape of Thorax

A small pair of spines on the propodeum, narrow, parallel furrows in the head and thorax

Colour

Dark brown to black. Key identifying characteristic is the heavy sculpting on the head and thorax which forms numerous parallel grooves.

Behaviour

The pavement ant derives its name from the habit of nesting beside and under sidewalks, driveways and building foundations. The pavement ant makes little mounds of soil on top of the paved area.

The reason for this is that the ant excavates soil out of the nest leaving it on the pavement to heat up and then taking the warm soil down into the nest at night to warm up the eggs and larvae.

Pavement ants have very defined trails toward their food and water from the nest. These ants can forage up to 10 meters away from the nest. Pavement ants are noted in the warmer months of the year. The most common place to find them inside is in expansion joints between concrete slabs.

Food

Pavement ants feed on a variety of foodstuffs like dead insects, greasy foods, seeds and sweets. They also like honeydew produced from plants when aphids and mealy bugs puncture the stems of plants. They also tend to feed on pet food left out for pets.

Control

The entire colony can be treated by placing granular bait around the soil ant mound and along the foraging trails which will give you very good control. Another method would be to treat and drench the nest with a residual liquid insecticide.

Acrobat Ant Also known as the Cocktail ant
(*Crematogaster spp.*)



Nodes on Waist:

Two-segmented waist that is attached to the top of the gaster; holds heart-shaped abdomen up over their bodies. The key identifying character is when viewed from the side, the pedicel attaches to the upper part of the abdomen and the abdomen is shaped like a heart. Acrobat ants get their name from the fact that they hold their abdomens above their thorax- like acrobats.

Gaster Tip

Sting is replaced by gland that secretes irritant defensive fluid.

Worker Size

About 3- 6 mm. Colonies are small with a single queen.

Shape of Thorax

Spines on the thorax

Colour

Light brown to dark brown black, varies

Food

Honeydew, sweets, meats.

Behaviour

When disturbed the workers will defend the colony by giving off a repulsive odour and biting fiercely. When the colonies are large they defend fiercely but where the colonies are small they are usually quite docile.

Acrobat ants can nest in insulating board and also in areas vacated by carpenter ants. Foraging ants will normally enter buildings walking along cables and tree branches. Inside structures colonies are normally found near water leaks. Workers will tend aphids and coccids for honeydew

Control

Where colonies are found inside timber small holes must be drilled and injected with a residual insecticide or insecticidal dust. An aerosol spray can also be used effectively.

If the infestation is detected in a cavity wall a small hole must be drilled above the skirting and injected with a residual insecticide liquid or insecticidal dust. A total release fogger can also be used effectively in this situation.

Big-Headed Ant Also known as the Brown House Ant
(*Pheidole megacephala*.)



Nodes on Waist

Two

Gaster Tip

Sting

Worker size

Two sizes of workers. Major worker ants (soldiers) have a relatively large head compared to their bodies and then smaller workers. 1.5 to 3.5mm in length.

Antennae

12-segmented antennae with a three-segmented club

Shape of Thorax

Spines on the thorax

Colour

Yellowish-red to reddish-brown

Behaviour

These ants live primarily outdoors only occasionally coming indoors. The huge heads of the soldiers are removed in winter by the workers as it is easier to breed new soldiers than to feed old soldiers.

The big headed ant will often nest in the crack between a foundation and the soil. These ants will establish the nest outside and will then make foraging trails to the inside to look for food and water. Often found in pot plants. These ants are mostly active at night. These ants sometimes do not run in definite trails

Food

Food preferences include fats, sugar. These ants feed on live and dead insects, seeds and honeydew.

Control

For the control of big headed ants a full inspection must be done to locate the nest. Once found the foraging trails could be baited with granular baits. For well-defined nests the entire nest can be drenched with a liquid residual insecticide. Perimeter treatments will also stop this ant from infesting a structure in the first place.

Odorous House Ant

(*Tapinoma sessile*)



Nodes on Waist

One, very flat, barely noticeable node hidden by the gaster.

Gaster Tip

No circular opening.

Worker Size

2.4 - 3.25 mm, workers are all one size. Multiple queens and colonies number tens of thousands with numerous sub colonies. Females produce one egg per day and eggs take between 11-26 days to hatch, larvae take from 13-29 days to develop and the pupal stage last from 10-28 days. Lifecycle from egg to adult can be completed in 5-9 weeks during summer 6-7 months during cooler periods.

Odour when Crushed

“Disagreeable, rotten-coconut-like” or a banana-like odour

Colour:

Brown to black.

Food

Honeydew, sweets, meats and dairy products

Location

In soil, beneath stones, walls and beneath floors of houses. Piles of items are attractive to this ant in shaded and moist areas. Often close to hot water pipes and heaters. The spaces underneath bath tubs are often used for nesting.

Control

Remove all water and food sources and apply baits to the foraging or pheromone trails taking care not to disturb the trails. This ant is not very common in South Africa but is slowly spreading especially in the northern parts of the country.

Black Sugar Ant

(*Lepisiota capensis*)



Nodes on Waist

Two

Gaster Tip

Sting

Worker Size

1.5-2mm in length. Workers are all one size

Antennae

2-segmented antennae with a three-segmented club

Colour

Shiny black

Colony

The colony can grow quite large to thousands with many queens. The life cycle from egg to adult takes about 76 days.

Food

Will take most kinds of food but specifically carbohydrates.

Behaviour

Nest in sheltered soil under paving and in structures. Colonies can split into more than one colony when disturbed. These ants are active 24 hours per day.

Control

Remember their preference for carbohydrates / sweet foods. The ideal pesticide would be a sweet carbohydrate gel like "Quantum". For complete control the aphids or mealy bugs also have to be controlled by treating the host plant directly.

Pugnacious Ant Also known as the “malmier”
(*Anoplolepis custodiens*)



Size

Small to medium (body length) 2-10mm, queens 13mm

Behaviour

These ants live primarily outdoors and was observed to tend mealy bugs and is a very dominant species relating to other ants

Colour

Reddish brown with the head redder than the rest of the body

Waist

1 Segmented waist, abdomen appearing chequered because of 3 rows of refractive hairs. Workers with rounded abdomen.

Biology

Does not run in trails. Nest below ground, without a mound around the nest entrance. Colonies are large, with several queens. The workers are fast running, very aggressive and predatory. These ants also tend aphids and coccids for their honeydew, often causing outbreaks of these pests.

Control

Remember their preference for carbohydrates / sweet foods. The ideal pesticide would be a sweet carbohydrate gel like “Quantum”. For complete control the aphids or mealy bugs also have to be controlled by treating the host plant directly.

Bal-byter

(Camponotus fulvopilosus)



Identification

Large (body length of workers 10-18mm, queen 20mm. Workers are black with a slender head and thorax, 1 segmented waist and abdomen covered with reddish fawn hairs. Major workers and soldiers have much enlarged heads.

Biology

Does not run in trails. They nest in soil below large rocks, fallen trees and bases of small bushes. Colonies are small, with one queen in each nest. Workers do not sting, but spray formic acid at attackers by tucking the abdomen forwards under the thorax. Workers visit mealy bugs and aphids on bushes for honeydew, prey on termites and other insects, and also collect bird droppings. These ants have a painful bite and can sometimes run up your legs.

Habitat

Arid savannah and woodland with sandy soil and are also found on melkbos.

Control

Maxforce scatter bait and Quantum gel.