

A 3D Model set by Ken Gilliland

### **Nature's Wonders**

# ANTS

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#### **Nature's Wonders**



#### Introduction

Ants are common insects, but they have some unique capabilities. There are more than 12,500 known ant species that occur around the world. They are especially prevalent in tropical forests. Up to half of all the insects living in some of these locations may be ants. By weight, ants equal or surpass the weight of the human population on the planet.

#### **Overview and Use**

This set uses a common model to recreate digitally the Ant species included in this and future volumes. Each species uses specific morphs from the generic model to single-out its unique features.

#### Models included in this volume:

- Natures Wonders Ant Base This model is used with all ants included in this set. There are 2 versions of this model:
  - In the DAZ Studio version, the "Ant" character will work for 3Delight or Irav renders.
  - In the Poser version, the "Ant" character will work for FireFly or SuperFly renders.

## **Creating a Specific Ant using Poser**

- 1. For this example, we'll create the Leaf Cutter Ant.
- 2. Load Poser, select the FIGURES library and go to the Nature's Wonders Insects folder.
- 3. To create a Leaf Cutter Ant, use the "Nature's Wonders Ant" base model.
- 4. Go to the POSES library, then to the Nature's Wonders Insects/Ants of the World folder and the Firefly or Superfly sub-folder.
- 5. Select the Leaf Cutter Ant (or an ant of your choice) and load/apply it to the Ant base model by clicking the mouse. This species pose contains both the morph and texture settings to turn the generic model into the selected ant.

## Creating a Specific Ant using DAZ Studio

- 1. For this example, we'll create the Leaf Cutter Ant.
- 2. Load DAZ Studio and go to the "Animals" "Nature's Wonders" "Insects" folder.
- 3. To create a Leaf Cutter Ant, use the "Nature's Wonders Ant" base model.
- 4. Go to the Nature's Wonders Insects/Ants of the World folder and select the sub-folder of which renderer you want to use, 3Delight or Iray.

5. Select the Leaf Cutter Ant (or an ant of your choice) and load/apply it to the ant base model by clicking the mouse. This species pose contains both the morph and texture settings to turn the generic model into the selected ant.

#### The AntCam

All the ants in this set have been scaled to their appropriate sizes in relation to human figure models. In all cases, these ants can be very, very small with the length of the largest at a little over half an inch (18 mm). With that in mind, this set comes with the "AntCam".

The AntCam is a camera set-up to focus on the default position of the ant. With Poser, it will also change the "hither" setting from it's default value of 0.800 to 0.0 to allow close focus.

## Sizing & Poser Issues

An issue that can appear when rendering in Poser, with only an ant (no other items) in the scene, is that it will produce a default square shadow. It is a known bug within Poser. To correct this issue, include a second larger item off-screen and the shadows will render correctly.



## Posing the Ant

With most figure-based models the center of the model is the "hip" area. Since ants have three sets of hips, the center of this model is the middle hip called "Thorax2". Bending "Thorax3" will move all parts from the Thorax to the "Head" on the ant, while bending "Thorax1" will move all parts from the Thorax to the rump (or "Abdomen1-2-3" parts).

## **Species Actions**

**Species Actions** (found in the **Action Controls** section of the model) are morphs that are specific to a species of Ant. In the case of the "**Honey Pot Ant Full**" morph, this morph tries to match the shape of Honey Pot Ant workers that are feed nectar which fills up their abdomen into a ball-like shape. The "**Trap Jaw Open Close**" will open the Trap Jaw Ants mandibles wider than the normal control.

## Ants, a collective force

from Wikipedia

Ants are eusocial (cooperative brood care) insects of the family, *Formicidae* and, along with the related wasps and bees, belong to the order *Hymenoptera*. Ants evolved from wasp-like ancestors in the Cretaceous period, about 99 million years ago, and diversified after the rise of flowering plants. More than 12,500 of an estimated total of 22,000 species have been classified. They are easily identified by their elbowed antennae and the distinctive node-like structure that forms their slender waists.

Ants form colonies that range in size from a few dozen predatory individuals living in small natural cavities to highly organized colonies that may occupy large territories and consist of millions of individuals. Larger colonies consist of various castes of sterile, wingless females, most of which are workers (ergates), as well as soldiers (dinergates) and other specialized groups.

Nearly all ant colonies also have some fertile males called "drones" (aner) and one or more fertile females called "queens" (gynes). The colonies are described as superorganisms because the ants appear to operate as a unified entity, collectively working together to support the colony.

Ants have colonized almost every landmass on Earth. The only places lacking indigenous ants are Antarctica and a few remote or inhospitable islands. Ants thrive in most ecosystems and may form 15–25% of the terrestrial animal biomass. Their success in so many environments has been attributed to their social organization and their ability to modify habitats, tap resources, and defend themselves. Their long co-evolution with other species has led to mimetic, commensal, parasitic, and mutualistic relationships.

Ant societies have division of labor, communication between individuals, and an ability to solve complex problems. These parallels with human societies have long been an inspiration and subject of study.

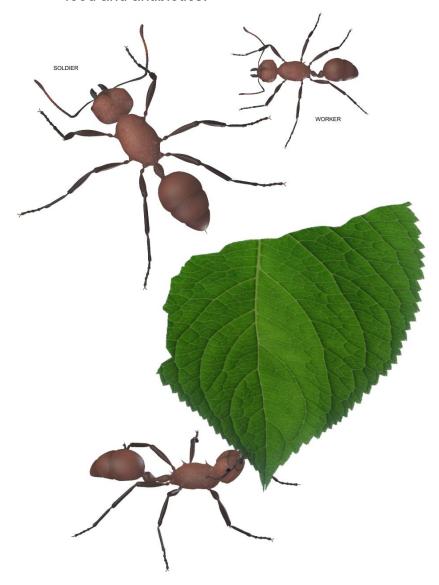
Megaponera analis, a small black ant species native to sub-Saharan Africa, wages war on termite nests. Attacking ants can have limbs ripped off or even be decapitated by the termites. Instead of leaving the hurt ants behind, other ants will carry them back home where they can heal and participate again in future raids.

Many human cultures make use of ants in cuisine, medication, and rituals. Some species are valued in their role as biological pest control agents. Their ability to exploit resources may bring ants into conflict with humans, however, as they can damage crops and invade buildings. Some species, such as the red imported fire ant (*Solenopsis invicta*), are regarded as invasive species, establishing themselves in areas where they have been introduced accidentally.

## **Leaf Cutter Ants**

Leaf cutter ants are the largest and most complex of animal societies found on Earth. There are around 50 different known leaf cutting or fungus growing ant species.

These ants are gardeners. They cut and carry leaves back to their nest where they create an environment ideal to grow a special fungus which is used for food and antibiotics.



Their nests are so large that they build their own ventilation systems into them to maintain a constant flow of fresh air for the colony and fungus growth.

## **Species names**Atta sp and Acromyrmex sp.

#### **Distribution**

Leaf cutter ants are wide spread across tropical Central and Southern America. Atta cephalotes ranges from southern Mexico to Bolivia and Brazil.

#### Habitat

Leaf cutter ant colonies are found near tropical forest edges. Their underground nests can be up to 30 feet (9 m) deep covering

areas of up to one acre. The central mounds can reach 98 feet (30 m) width in only a few years. Sub-entrances can be found as far as 262 feet (80 m) from the main nest.

#### Diet

Leaf cutter ants cultivate fungus grown from the leaves of brambles, rose, citrus and oak trees.

#### Colony size

Leaf cutter ant colonies have been found with up to 10 million workers.

#### Queen

Leaf cutter ant queens are typically 1.8 inches (30 mm) length, they are dull brown, very chubby, and are 'monogyn' (one queen per colony). These queens have been known to live for up to 15 years. They can lay up to 1000 eggs each day.

#### **Minor Workers**

Leaf cutter worker ants are typically 0.31-0.47 inches (8-12mm). They are light brown to orange in color with spikes on their backs. These ants also have median castes which are sized in-between the minor and major workers.

#### **Major workers**

They are 0.7 inches (18 mm) in size and generally brown in color with a large head and mandibles used for cutting thick vegetation. The largest major workers can weigh 100 times more than the smallest of minor workers.

#### **Risks**

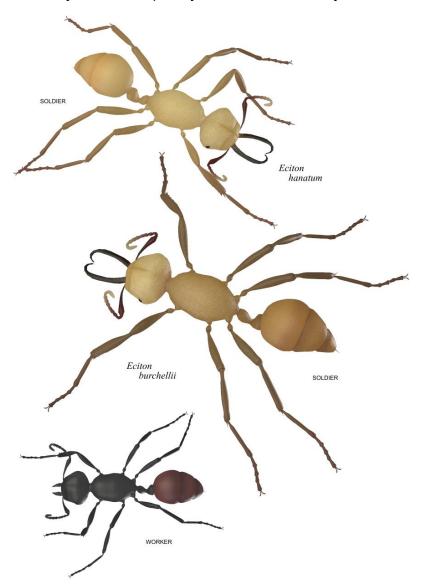
Leaf cutter ant workers have powerful mandibles that can cause a strong and painful bite. Major workers can even cut through leather.

One colony of these ants can strip a whole tree of its leaves in just one day. They are responsible for destroying more vegetation than any other group of animals, as a result of this they cost the crop industry more than one billion dollars each year.

## **Army Ants**

There are over 200 different known species of army ant.

They are very aggressive and can tackle among some of the largest prey. They rest in temporary nests made entirely of ants, also known as a 'bivouac'.



The queen ant and her brood stay safe in the center of the mass of ants. The colony moves at night to its next location which could be up to 600 feet (183 m) away at speeds of 60 feet per hour (18.3 meters per hour).

At dawn, the workers spread out into a fan shaped swarm raiding almost all life in their way. They travel around 325-650 feet (100-200 m) on their raiding days. Lead workers leave a chemical trail for others to follow. Smaller workers lead the column, while the major workers protect the flanks.

The entire colony can relocate to a

new nesting site when they need a fresh food supply. Army ant colonies move in such large numbers that they can be heard marching along the forest floors. Sometimes workers connect together to make 'ant bridges' so that the army can flow faster over cracks, holes and even flowing streams.

The male drone ants are known as 'sausage ants' because of their large size and sausage shape.

#### Species names

Mostly Ecitoninae sp.

#### Distribution

Army ants can be found in the tropics and subtropics of Brazil, Peru and Mexico.

#### Habitat

Army ants are normally found in hot and humid lowland tropical rain forests. They do not build a nest like most other ants. Instead, they build a living nest with their bodies, known as a bivouac. Bivouacs tend to be found in tree trunks or in burrows dug by the ants. The members of the bivouac hold onto each other's legs and so build a sort of ball, which may look unstructured to a layman's eyes, but is actually a well-organized structure. The older female workers are located on the exterior; in the interior are the younger female workers. At the smallest disturbance, soldiers gather on the top surface of the bivouac, ready to defend the nest with powerful pincers and (in the case of the Aenictinae and Ecitoninae) stingers. The interior of the nest is filled with numerous passages and contains many chambers with food, the queen, the larvae, and the eggs.

#### Diet

Mostly insects including tarantulas, scorpions, beetles and other ant species; all in large amounts. Occasionally frogs, snakes and lizards are taken, and in rare instances, some mammals.

#### Colony size

Established colonies may be found with between 150,000 to 2,000,000 individuals.

#### Queen

Army ant queens are born without wings. They are large queens that change size depending if she is relocating to a new nest or not. She can lay up to 30,000 eggs each day. The queen and her colony can live between 10-20 years. Army Ants are 'monogyn' (one queen per colony).

#### **Minor Workers**

Minor army ant workers are typically between 0.12-0.28 inches (3-7 mm). They are dark ants with orange abdomens. They generally live for about 1 year.

#### **Major Workers**

Army ants are polymorphic and have major castes which are typically 0.39-0.47 inches (10-12 mm) long. They have pale orange heads, dark orange legs and dark over-sized mandibles.

#### **Risks**

Army ants are highly aggressive, and have a very strong bite. Their scissor-like mandibles can cut through human flesh. They have a serious impact on anything that cross their paths.

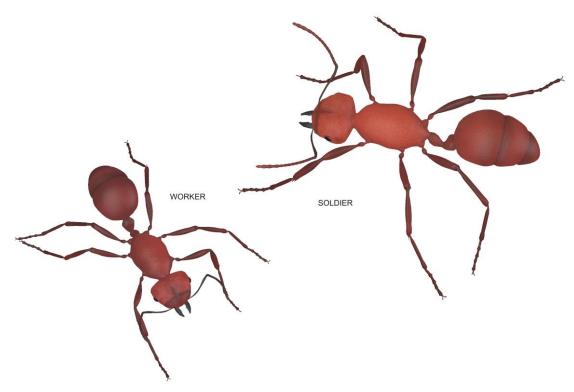
## **Harvester Ants**

There are hundreds of different 'harvester ant' species found worldwide.

These ants use their large mandibles to grind seeds into a bread-like substance which is placed in storage areas called 'granaries' in their nest. This provides year round food for them.

Harvester ant workers can be found collecting seeds as far as 50-60 Km from their nest, they use their chemical scent trails to navigate back to the nest.

A few horned lizard species feed almost exclusively on harvester ants. They have adapted ways to survive the ants' stings and attacks. In some areas, Argentine ants have displaced Harvester ants causing the horned lizards to become an endangered species.



Harvester ants are known to aid seed dispersal via myrmecochory.

For over 50 years, workers of this species have been sold as pets in United States, living in ant habitats such as "Ant Farm" and "Antworks". Harvester Ants are very resilient ants and have been known to chew through some habitats; that and their sting may deter beginners.

#### Species names

Pogonomyrmex sp, Messor sp, and Pheidole sp. One of the more common harvesters is Pogonomyrmex barbatus, which is known as the 'Red Harvester ant'.

#### Distribution

Most *Pogonomyrmex sp.* are common across Southwest America, and occasionally they are found in Mexico.

#### Habitat

Harvester ants typically live in dry desert like conditions. They favor exposed open areas for their underground nests which can be around 15 feet (4.5 m) deep.

#### Diet

Harvester ants mostly feed on the 'bread' they make from grass seeds, however they may eat other insects too.

#### Colony size

Established harvester ant colonies can have around 10,000 ants.

#### Queen

Harvest ant queens typically reach around 0.59-0.67 inches (15-17 mm) in length. They are dark red to orange. They are 'monogyn' ants (one queen per colony) and queens have reportedly lived for up to 30 years.

#### **Workers**

Harvester ants are polymorphic with both major and minor workers. They are typically 0.2-0.28 inches (5-7 mm) in length and are red to orange in color. Some workers are known to lay unfertilized eggs that are fed to the larvae and queen. They typically live for a few months.

#### **Risks**

These ants are not so aggressive, but they do have a strong bite and a sharp sting that can hurt for up to 8 hours. Their sting is listed as a "3" out of "4" on the Schmidt sting pain index.

## **Weaver Ants**

Weaver ants are best known for their nest building abilities. Using precise coordination, the weaver ants create very strong ant chains by linking legs to pull and bend leaves into desired tent like positions. The ants then use their own larvae to secrete a silk that is used to stitch leaves together to create a nest. They may have several nests dominating a few trees at once.

They are very aggressive territorial ants and for over 1000 years they have often been used by farmers to control agricultural pests.

Weaver ant workers have a vice like grip and tremendous strength. Weaver ants have been recorded to support 100 times their own weight, while standing upside down on a piece of glass.

#### Species names

Oecophylla sp.

#### Distribution

Weaver ants can be found in Australia and South East Asia; particularly in the Philippines.



#### Habitat

Weaver ant nests are usually found in forest trees, but can also be seen in any high up crevices, including roofs and telegraph poles.

#### Diet

Weaver ants farm scale bugs for their honeydew, they also eat small insects.

#### Colony size

Established weaver ant colonies can reach up to 500,000 individuals.

#### Queen

Weaver ant queens are typically around 20-25 mm, they are normally greenish brown. They are a monogyn species (one queen per colony).

#### **Minor Workers**

5-6 mm. Mostly orange. Sometimes this species has bright green gasters. Minor workers tend to look after the brood and farm scale bugs for honey dew.

#### **Major workers**

Major workers are slightly larger at 8-10mm. They are mostly orange. This ant has long strong legs, long flexible antennae and large mandibles. They forage, maintain and expand the nest.

#### **Risks**

Strong mandibles allow for a painful slicing bite and they will spray formic acid into any wounds. Weaver ants tend to be very aggressive and responsive to disturbance.

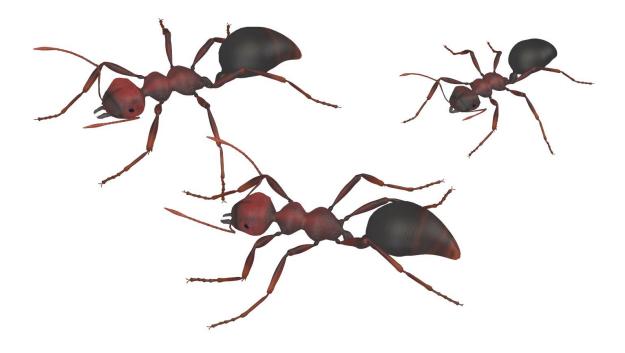
## **Fire Ants**

There are over 280 known fire ant species. Solenopsis invicta is one of the most talked about, mostly because of how much damage they have caused. They are also known as 'Red imported fire ants' (RIFA).

As an invasive species, they now live in many countries across the world, it is believed that they reached these countries via shipping crates.

Fire ants are more aggressive than most native species and so have pushed many other species away from their local habitats, and have possibly even caused their extinction.

Fire ants are renowned for their ability to survive extreme conditions, they do not hibernate, but can survive cold temperatures as low as 16° (-9°C) despite originating from South America.



Fire ants can uniquely deal with a flood situation, they gather to form a raft with the queen in the middle, they float until they come across dry land. During droughts fire ants can also dig their nests deep to the water table.

Fire ants species work well as pets for ant owners. They are low maintenance, easy to find in the countries noted above, very tough, active, and long lasting. Multiple queens makes colony growth easier. Their strong sting may deter beginners.

## Species names

Solenopsis sp.

#### Distribution

Fire ants were originally found in South America. These ants are now a common pest in southern North America, Australia, Taiwan, Philippines and South China.

#### Habitat

Fire ants normally nest underground in grassy areas creating soil mounds up to 20 inches (50 cm) in height.

#### Diet

Fire ants eat dead animals, including insects, earthworms, and mammals. Workers also collect honeydew and will forage for sweets, proteins, and fats in homes. They are sometimes attracted to piles of dirty laundry.

#### Colony size

Established colonies of fire ants have been found with up to 150,000 to 2,000,000 ants with multiple queens.

#### Queen

Fire ant queens are typically 0.31-0.39 inches (8-10 mm) and are darker brown with a reddish head and legs. They are polygyn (multiple queens per colony).

#### Workers

Workers are 0.12-0.24 inches (3-6 mm) and are typically reddish brown with darker abdomens. Larger workers are found near the nest entrance to offer protection.

#### **Risks**

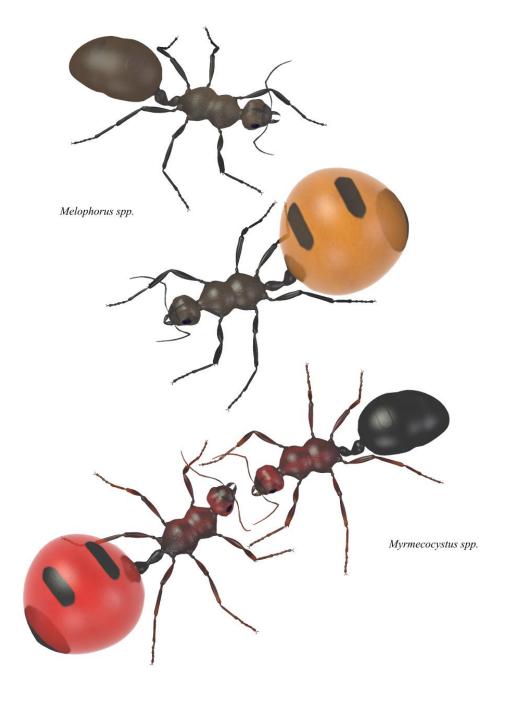
Fire ants have a strong, painful and persistent sting that produces lumps on our skin which can last for days and even hospitalize some. They may cause injury or death to livestock, pets, and wildlife; damage to crops, ornamental plants, electrical equipment and irrigation systems; and cause serious declines in biodiversity.

The FDA estimates an annual \$5 billion spent on medical treatment, damage and control in infested areas because of this one ant species.

## **Honey Pot Ants**

There are around 34 different species of honey pot ants. They all share the ability to store large amounts of nutritious liquid, especially in the larger workers known as 'repletes'.

During the rainy seasons the honey pot ant repletes are fed so much that they swell up and become living underground refrigerators, some can become so large that it's impossible for them to leave their nest. The food is stored for the whole colony and is used during the dry seasons when food is not so plentiful. These ants hold so many nutrients and energy that they have become a favored food for many other animals including humans.



Some *Myrmecocystus* species have been known to attack other colonies of the same species, kill their queen and take the workers as their slaves. A few honey pot ant species are known to be able to change colors to greens, oranges, reds, blues and yellows, depending on the type of liquid they are carrying.

#### Species names

Myrmecocystus sp, Melophorus sp, Leptomyrmex sp, Camponotus inflatus and Plagiolepsis trimineni.

#### Distribution

Honey pot ants can be found in Western America, Mexico, Australia, South Africa and New Guinea.

#### Habitat

Honey pot ants are normally found in hot dry areas such as the edges of deserts.

#### Diet

Honey pot ants mostly gorge on desert flowers for the sugary nectar during the rainy seasons. They will also eat small insects.

#### Queen

They are mostly monogyn (one queen per colony). The *Myrmecocystus sp* queen has been reported to have lived for 11 years. She can lay up to 1,500 eggs per day.

#### **Workers**

The workers range in size (0.12-0.30 inches / 3–7 mm in length) and color, especially the repletes when they have been filled with nutritious liquid, they resemble walking grapes.

#### **Risks**

Honey pot ants have no known risks in their natural habitats.

## **Argentine Ants**

In their native countries, they normally out-breed to ensure genetic diversity. However, since they have successfully invaded other countries something strange is happening. The princesses lose their wings at birth, they then either act as workers or mate with directly related drones. The nuptial flight never occurs. This means that the new colony will be genetically identical to the original colony, and so they can live together and work as an ever expanding super colony.

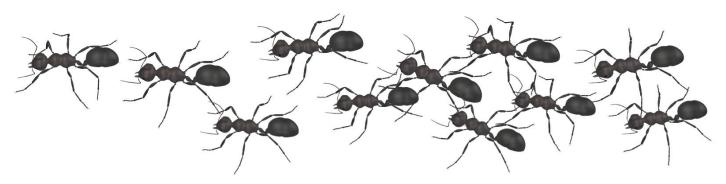
Three distinct super colonies have been discovered in America, Japan and Europe spanning distance over 3700 miles (6000 km). Individuals from each super colony have been introduced together by myrmecologists (ant scientists), the ants acted as if they were from the same colony. The researcher concluded that these ants have made a single global super colony.

#### Species names

Linepithema humile

#### Distribution

Argentine ants originated in South America including Argentina, Uruguay, Paraguay, and southern Brazil. They have since become a major invasive species and can be found in Australia, South Africa, New Zealand, Japan, Hawaii, Europe, and the United States.



#### Habitat

Argentine ants prefer areas with year round mild temperatures. They nest under rocks, pavement, logs, refuse and in holes found in the soil.

#### Diet

Argentine ants mostly farm honeydew from aphids and scale bugs. They will also eat small insects.

#### Colony size

With Argentine ant colony sizes stretching 3700 miles (6000 km) wide; the number of individuals is incalculably high.

#### Queen

Argentine ant queens are typically around 0.39-0.47 inches (10-12 mm) and are dark brown. They are polygyn (multiple queens per colony). They are known to live for up to 7 years.

#### Workers

Argentine worker ants are around 0.12 inches (3 mm), brownish-black and are known to live for 6-9 months.

#### **Risks**

These ants are ranked among the world's 100 worst animal invaders. Although these ants do not sting or bite humans, they are aggressive and attack other ant species in large numbers, they have effectively driven away many ant species including red harvester ants and invasive fire ants.

They also often enter homes in search of food and water.

## **Trap Jaw Ants**

Trap jaw ants are well known for their large mandibles that can lock back at 180 degrees. The mandibles can snap shut on prey or objects when sensory hairs found on the inside of their mandibles are touched, in a similar process to a venus fly trap.

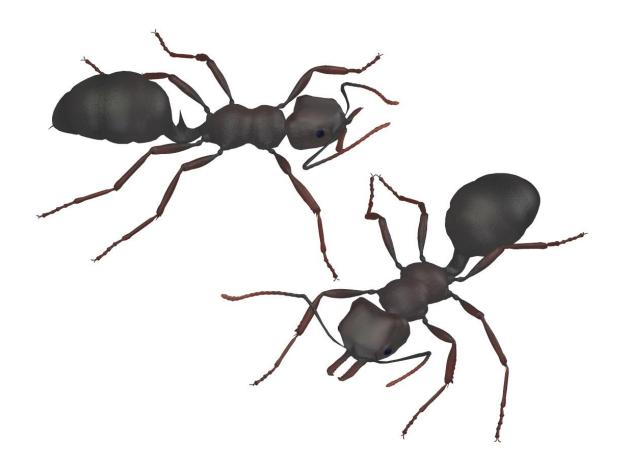
Trap jaw ant (*Odontomachus bauri*) owns the record for the fastest movement within the animal kingdom. Its mandibles can exert forces 300 times its own weight, at maximum speeds of 140 mph (230 km/h). They can be used to kill or damage prey and in times of danger it can push its head to the ground to literally fling itself away.

#### Species names

Odontomachus Sp, Anochetus Sp, Stumigenys Sp, and Orectognathus Sp.

#### Distribution

Trap jaw ants can be found in the tropics and sub-tropics throughout the world; particularly South Asia, America and Madagascar.



#### Habitat

Trap jaw ants can normally be found under dead wood or forest floors.

#### Diet

Trap jaw ants eat other insects and are carnivorous; they are also attracted to sweet substances.

#### Colony size

Trap jaw ants have small colonies, with less than 200 individuals.

#### Queen

Trap jaw queen ants are 0.51 inches (13 mm) in length with slim builds and black to dark brown in color. They are monogyn (normally one queen per colony).

#### Workers

They have a similar appearance to that of their queen, but are slightly smaller; 0.47 inches (12 mm) in length.

#### **Risks**

Its strong jaws can make for a painful bite; it also has a strong stinger.

## **Black Garden Ants**

The black garden ant, otherwise known as just 'black ant' is one of the most common ant species found in Europe.

It is a very active, fast moving ant. They will typically run away from human confrontation.

They are well known for the once a year nuptial flight, when flying princesses and drones can be found almost everywhere.

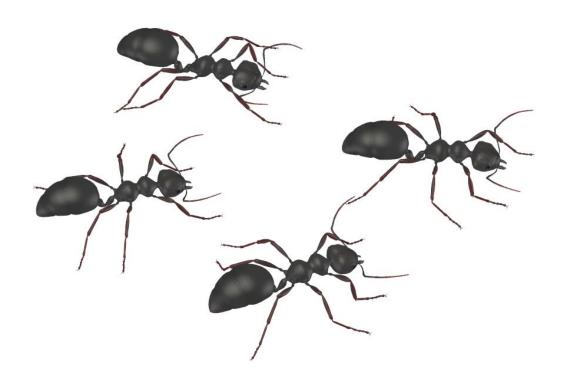
They are a very strong ant species and can thrive in a wide range of areas. They are used as pets by insect collectors.

#### **Species names**

Lasius (Niger group)

#### Distribution

Black garden ants are wide spread across Europe, some parts of North America and Asia.



#### **Habitat**

Black garden ants are typically found in gardens under bricks and flower pots. The most common place to find them in urban areas is between pavements and curbs. They will often enter our homes foraging for food.

#### Diet

Black garden ants eat anything from leftovers, soft fruits, seeds, to other small insects. They can also frequently be seen farming honeydew; farmed from aphids around gardens and vegetation.

#### **Colony size**

Black garden ants colonies can have up to 10,000 workers.

#### Queen

The queen is around 0.45 inches (9 mm), dark brown with black-reddish legs and antenna. She has been known to live for up to 29 years. Black garden ants are monogyn (one queen per colony).

#### **Workers**

They are 0.12-0.20 inches (3-5 mm) in length, black with reddish legs and antenna.

#### **Risks**

Black garden ants are particularly fond of ripe soft fruits like strawberries, annoying for farmers and allotment owners. They also often enter homes in search of food, sometimes larger nests can weaken building foundations.

## **Red Stinging Ants**

There are around 200 different known species of the red stinging ant. It is also known as the European fire ant, and is renowned for its reddish color and nettle like sting.

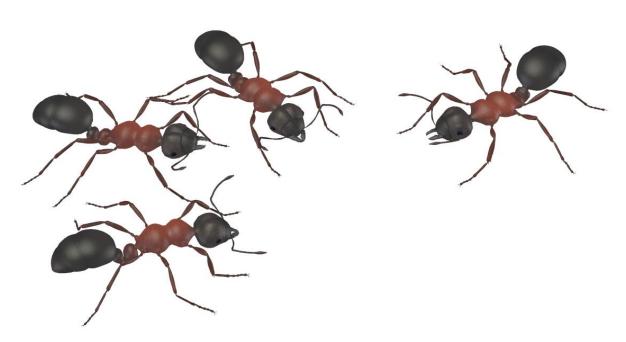
They are aggressive ants that will attack when disturbed or confronted.

#### **Species names**

Myrmica sp.

#### Distribution

Red stinging ants originated in Europe and have become invasive species in many parts of the world including Asia and North America.



#### Habitat

Red stinging ants can be found in meadows, gardens and wastelands under stones, fallen trees and in the soil.

#### Diet

They eat other small insects. They also farm honeydew from aphids.

#### Colony size

Established red stinging ant colonies have be found with up to 250,000 worker ants with many queens.

#### Queen

Red stinging ant queens are typically 0.4-0.45 inches (8-9mm) in length, dark red, and polygyn (multiple queens per colony). They have been known to live for up to 15 years.

#### Workers

They are 0.16-0.20 inches (4-5 mm) in length and dark red.

#### **Risks**

Red stinging ants can effectively sting humans, the sting gives a small burning sensation that can last for a few hours to one day.

They are an invasive species. Although the obvious risks apply, they do not cause issues on the same level as the notorious fire ants.

## **Yellow Meadow Ants**

Yellow meadow ants are very common in Europe. They are a relatively slow moving and shy ant species that avoids confrontation. They are often mistaken for the red stinging ant, but this ant actually struggles to sting humans at all.

They tend to avoid sunlight and create intricate underground sand/soil structures. They are often collected as pets.

#### Species names

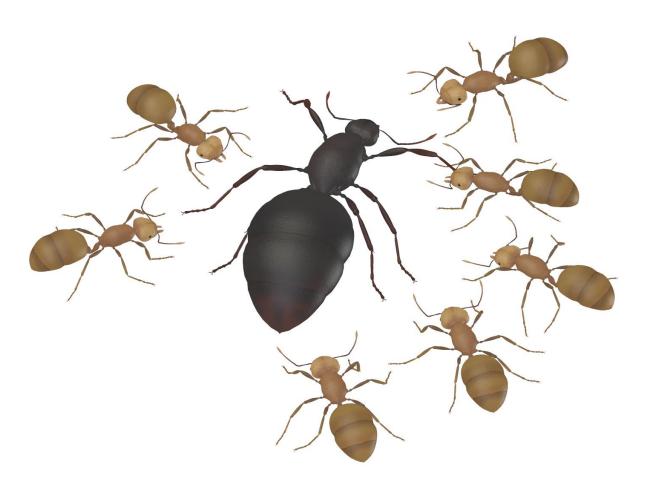
Lasius sp.

#### Distribution

Yellow meadow ants are wide spread across central Europe, some parts of North Africa, North America and Asia.

#### Habitat

For the most part, Yellow meadow ants live in the safety and darkness of a subterranean environment. Their nest mounds are commonly seen on or in lawns and pastures. The mound may be as large as a basketball and are typically covered in grass and vegetation.



#### Diet

Anything sweet. Seeds are collected and small insects that crawl into their nest are eaten. They occasionally farm under-ground coccids and aphids.

#### Colony size

Established yellow meadow ants can have colonies of around 5,000 ants.

#### Queen

The queen is around 0.41 inches (8 mm) and is dark orange. This species is monogyn (one queen per colony).

#### **Workers**

They are 0.08-0.20 inches (2-5 mm) in length and are orange; some have dark brown under gasters. Although yellow meadow ants don't have major worker castes, there are some slightly larger workers than others; these could be referred to as median workers.

#### **Risks**

Yellow meadow ants are harmless to us as they will struggle to bite or sting. However they are frequently an annoyance to home owners with lawns as they up-turn soil to make their nests each year.

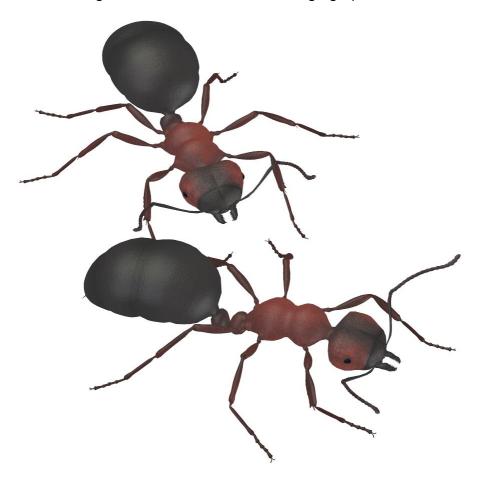
## **Wood Ants**

There are around 200 different types of wood ant. This group of ants has other common names such as mound ants, field ants, horse ants and piss ants.

Formica rufa, also known as the southern wood ant, is an aggressive, active, and large ant. It is capable of spraying formic acid at enemies up to a few feet away.

Wood ant nests are made from a mass of gathered pine needles, which are typically placed on top of old tree stumps. Nests can reach a few meters in height.

Larger workers can be found foraging up to 50 meters from their nest.



Wood ants collect a natural resin found dripping from pine trees, individual ants will walk over the resin to disinfect themselves from bacteria and fungi. This characteristic is unique to wood ants.

Over one year a single colony of wood ants may consume over 10 million insects. They are very efficient predators, and

play a crucial role in protecting a forests natural ecosystem.

Wood ants sometimes nest in other ants species (particularly *Formica fusca*) nests by becoming temporary social parasites.

Wood ant species, *Formica rufa*, is categorized as 'near threatened' under the IUCN Red list of Threatened Species

#### **Species names**

Formica sp.

#### Distribution

Wood ants can be found across southern Britain, North to Mid-Europe, Pyrenees and Siberia.

#### Habitat

Wood ant nests are typically found in deciduous woodlands and the edges of dense conifer plantations.

#### Diet

Wood ants eat a large range of insects, even other ant species. They aggressively protect and farm honeydew from aphids.

#### Colony size

Established colonies can have around 100,000 workers with about 100 queens. However some nests have been reported to have up to half a million individuals.

#### Queen

The wood ant queen is typically 12-15mm, she is dark red and black, and mostly polygyn (multiple queens per colony). They are known to have lived for up to 15 years.

#### Workers

8-10mm in size with dark reds and blacks.

#### Risks

Wood ants have large mandibles that allow for a mid-level bite. Wood ants species 'Formica rufa' are legally protected in many countries and their nests should not be disturbed.

## Special Thanks to:

.. to my beta tester, FlintHawk

## Sources:

- Wikipedia (http://wikipedia.org/)
- AntArk (http://antark.net/)
- School of Ants (http://www.schoolofants.org)

