

Ant Keeper Magazine

A close-up photograph of two ants on a green leaf. One ant is in the foreground, facing left, and another is in the background, facing right. They are both positioned around a small, clear, gelatinous piece of food on the leaf. The background is a soft-focus green.

FREE
SAMPLE

**Why Do Ants
Make Great
Pets?**

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This sample issue cover features an amazing photograph of two *Camponotus singularis* workers collecting dew. Image © Martin Ants853.



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A close-up photograph of several ants in a petri dish. The ants are dark brown and are scattered across the white surface of the dish. The background is slightly blurred, showing the edges of the petri dish and some reflections on the surface.

ANT KEEPER MAGAZINE

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Why ants make great pets

They're small, they're cheap to feed and they're easy to get hold of. The question really is, 'Why WOULDN'T you want ants as pets?'



As ant keepers, many of us will have experienced the confusion and perhaps even disapproval of others who have not been converted to the Joy of Ants. Perhaps we've even been one of those who don't like ants ourselves. I know I have! We have to face the facts that most people think of ants as pests rather than pets, but it is up to us to educate them and perhaps even convert them.

Ants are the most populous animals on the planet and have been around for millions of years! They co-existed with dinosaurs, have been building cities and farming for far longer than we've been around and can perform incredible feats of strength. Yet many people, including farmers, gardeners and home owners think of them as pests and spray them, stomp

on them and generally try to be rid of these remarkable creatures. Perhaps you're hoping to convince parents, significant others or housemates to agree to share a home with a colony...or five. Let's delve a little deeper into why ants make such great pets and see if we can't bring a few more people over to the dark (chitinous) side!

A bit of history

Ants evolved from wasp-like ancestors during the Cretaceous period around 140 million years ago. During this period, flowering plants became really widespread, leading to the diversification of ant species. At least 12,500 species have been classified so far, but it is thought that there may be as many as 22,000 species of ants on the planet!

A bit of biology

Ants are eusocial invertebrates. The term eusocial refers to the fact that there is generally being only one (or sometimes more in polygynous species) reproductively active female, with non-breeding individuals being involved in the care of the young. It's a highly organised form of cooperative social structure found in a few animals such as ants, bees and naked mole rats. Invertebrates are animals that lack a spinal column and include animals like insects, spiders and jellyfish.

There is an amazing variety in founding behaviour noted in different species of ants, from the claustral queens who establish a nest and do not gather or hunt for food until their first workers have matured (and take over the role)

Ant keeping checklist

What kit do you REALLY need – as a minimum – to keep ants?

- a test tube
- some cotton wool (one ball)
- some water (filtered tap water is fine, bottled if you're feeling fancy)
- a queen ant

That's it! That's all there is to it.

to the semi-claustral queens who will hunt a bit during the foundation of their colonies (again, until their first workers can take over), to the polygynous (multiple) versus monogynous (single) queen colony founding methods to the parasitic queens to mimic the scent of a host nest and take over from the existing queen. Some species have gamergates and any mated worker can take over the reproductive role within the colony. There is even a species - *Pristomyrmex pungens* – that has dispensed with the need for males, and all worker ants are able to clone themselves.

Many ant colonies have a caste system in which there is one or more reproductive female (the queen) and anywhere from a few dozen to millions of sterile female worker ants (ergates).

Male alates are produced seasonally once the colony is large enough to fertilise the next generation. They rarely live much beyond the nuptial flights when their job is done. The queen will mate only during this one nuptial flight, storing up sufficient sperm to produce thousands of eggs! Some species of ant also have additional castes, including minor, median and major ergates. There are also species that have gamergates: mated workers with the ability to reproduce. Workers can live as long as three years while in some species, the queen can live up to 30 years!

Getting started

Getting started in ant keeping is actually very cheap and easy. After all, ants are very small, so it therefore follows that the space you



Whether you catch your first queens yourself or purchase them, a test tube with water reservoir is the best way to get them started. It'll suit them for at least several months!

need to keep them in is likewise very small. Depending on your location and the time of year, it is very much possible to catch your own queen ants and start your own colony from scratch. This is probably the very best way to do it as the outlay is minimal and you can see the whole process, right from the first egg! It has to be said that this is incredibly satisfying, and I know of many a proud ant parent (myself included!) who has boasted proudly of their first egg or worker! If it's the wrong time of year where you are, there are many reputable

If you want to find out more about ants and ant keeping, there is an active and vibrant community of fellow ant lovers out there, many of whom are willing to share their wealth of knowledge. Some of the resources I can recommend to help you along the way include:

- *Ant Keeper Magazine* (of course!) – available in print and online as subscriptions or single issue, the magazine is published quarterly and offers great information on products, species and keeping
- YouTube – there are many great channels that offer updates, reviews and tutorials about ants. Some very popular channels include AntsCanada (with almost three million subscribers) and Ants Australia (with great footage and informative commentary) and
- Facebook – there are loads of great groups on there where members show off their colonies, discuss ants and ask questions. Search for 'ants' and 'myrmecology' to find groups. There are even more localised groups for you to find other keepers in your area. The Ultimate Ants & Myrmecology Facebook Group is probably one of the biggest, started up by the founder of the AntsCanada YouTube channel



As your colony gets bigger, you can offer them an outworld in which to forage for food. Many stylish designs are available, such as those shown above



Once your ants outgrow their test tube, you might want to consider purchasing a ready-made nest for the queen and brood. Many styles are available, including (from top, working clockwise): ytong, acrylic and 3D-printed options

sellers of queens and colonies who will be able to provide you with what you need to get started. Do be wary here as there are some very questionable 'dealers' out there, as in any hobby, so ask around first.

What do you really need to get cracking? The answer is: not much. If you have timed it right, you can simply go outside with a test tube setup (you read that right – a test tube!) and catch a queen or two. All you will need is a test tube, some cotton wool and some water. Videos on how to set these up are readily available on YouTube (and will be available on the *Ant Keeper Magazine* channel!), but essentially, this set up will provide your queen with a ready-made nest with water source. Happily, this simple and cheap set up is optimum for providing a queen with what she needs for several months at least while she is generating her first workers. If you have a claustral queen, all you will need for several

months is a small amount of water, a test tube, a bit of cotton wool (balls are better, compressed cotton pads don't really work as you need to make a plug with it) and some patience! Make that lots of patience! If you have a semi-claustral queen, you'll need to periodically add tiny amounts of food too.

That's it! You can literally get started on a shoestring budget with very little space. Ants make great pets for those with very little space and very little money.

Looking ahead

Once your colony starts growing, you will need to feed your ants, of course. Their primary needs are for sugar (from honey, honey/sugar water or fruit such as apple) and protein (in the form of other invertebrates or small bits of meat or egg). The adults consume the sugars for energy while the protein is necessary for the larvae.

In terms of housing, once you get to about 20 workers, you will probably need to add an outworld or formicarium. These often take the form of a clear box in which you place the food and additional water supply and acts as a foraging area for the workers. Ant accommodation usually comprises two parts: the nest, where the queen lives and lays and the brood is raised; and the outworld, where the workers forage for food. Step one of adding to your ant housing (at around 20 workers) is adding an outworld. This doesn't need to be big either. Step two, when the population gets to the point where the test tube is full of brood or the water supply in it dries up (although you can do this before this stage to offer the queen options) it is to offer a new, larger nest.

While formicaria or outworlds are essentially just clear containers, nests come in a variety of types. The main types generally available commercially are plaster, resin, ytong (made from a type of aerated building block), acrylic and the relative newcomer to the market – 3D printed nests. All should contain tunnel-like chambers for the brood to be stored and cared for and there should be some sort of humidity control system (generally a separate chamber with a cellulose sponge the keeper can keep topped up with water). Test tubes can also still be used as nests, although these are limited in size with larger colonies. Some keepers don't use nests at all but prefer natural setups where soil and/or sand is layered in the bottom of a tank and a variety of natural materials such as moss, stones and wood are offered for the ants to excavate their own nests. Different species have different preferences, so it's worth doing a bit more specific research on your species

AMAZING ANT FACTS!

- Ants have colonised almost every landmass and can be found everywhere except Antarctica and a few, very remote islands
- Ants are able to communicate with each other and solve complex problems
- There are an estimated 22,000 species of ant, only 12,500 of which have been classified
- Ants are related to wasps, but you can tell them apart because ants have elbowed antennae
- Ants represent 15-25% of the terrestrial animal landmass
- The Australian jumper jack ant (*Myrmecia pilosula*) has only one pair of chromosomes. They have the smallest number of chromosomes in the animal kingdom
- Some queen ants can live as long as 30 years, making them the longest-lived insects in the world
- Ants smell through their antennae
- The most painful stings are dished out by bullet ants (*Paraponera spp.*) from Central and South America
- The sting of the jumper jack ant from Australia can be lethal to humans
- Some species of ants build temporary nests from their own bodies, with workers holding on to each other to form a barrier to the outside world
- Weaver ants use their larvae to spin silk that is used to hold leaves together to form their nests
- Ants 'farm' aphids, some caterpillars and other insects in order to harvest sweet secretions from them in return for care and protection
- Leafcutter ants (*Atta* and *Acromyrmex spp.*) grow fungi gardens, feeding the fungus leaves and other vegetative material and eating hyphal swellings of the fungus known as gongylidia

before you get stuck in. Ytong and acrylic nests are probably the most popular types of nest, particularly with more experienced keepers, but 3D nests are an attractive option for many newer keepers as they are very affordable and come in a range of creative designs and colours. Gel 'nests' containing a blue goo have also been marketed towards ant keepers and appear to be quite popular. However, these are really not advisable as the gel often becomes mouldy and this substrate is selected for its attractiveness to humans rather than its suitability for ants.

Summary

In short, ants make great pets primarily because they are so accessible. They are cheap to start up with, particularly if you're catching your own; they don't take up much space at all; they're fascinating creatures and although you do need patience (as with any hobby), you can enjoy seeing the entire lifecycle of ants in a relatively short time frame.

It's not surprising that ant keeping is growing as a hobby. We can learn so much from ants, from their social structures to their farming techniques and even military strategy! I hope that you have learned a bit about ants that you didn't know before and perhaps you are ready to take the next step in ant keeping. Make sure you look out for the forthcoming new series of articles on ant keeping for beginners, where we cover all the basics of ant keeping. Until then, happy anting!



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Ant Keeper Magazine