

LASIUS NIGER COLONY JOURNAL

23 JULY 2001

Today the mating flight of the common black garden ant, *Lasius niger*, took place all over the South of England in which thousands upon thousands of winged ants could be seen swarming out of their nests and taking to the air. Shortly afterwards the pavements were crawling with huge black, wingless ants - the newly fertilized queen ants that had removed their wings and were looking to build a new colony.

I obtained three of these queens and placed one of them into a large glass tank that I had set up, filled 3/4 with damp sand. The queen ant took about 24 hours to settle in the tank, examining every part of it for a suitable nesting site. She started digging a few holes here and there but obviously decided that these were not really ideal as she left them unfinished. After two days she had started to dig under a small stick that I had placed onto the sand inside the tank. This time she completed the dig and has now sealed herself in, the only sign of her ever being there is a very small pile of sand next to the stick.

The ant queen will lay perhaps 15 - 20 eggs, over the first 48 hours of moving into her new home and I would expect the eggs to go through their various stages of development and to 'hatch' in about 8 - 12 weeks time, most of the eggs will be eaten by her and the larvae that emerge from the remaining eggs.

The main ant colony is housed in the glass tank which measures 16 x 18 inches, with a circumference of 55 inches. It is filled with damp sand to a depth of 12 inches. I have a lamp with a 60 watt bulb that shines onto the glass tank between the hours of 8am and 10pm, which serves to keep the climate inside the tank at a warm 20 - 26 degrees, and at the same time keeping it humid, which *Lasius niger* seem to enjoy.

21 SEPTEMBER 2001

Today I have seen evidence that the first batch of brood has hatched; four tiny worker ants are foraging about on the surface of the sand in the glass tank. I have fed them with 'Ant Jelly,' jam and even some cat food, which they seem to enjoy. They are busy exploring their new world and finding food to feed the queen, further brood, and themselves. As I just mentioned these workers are tiny; first generation ants, known as 'nanitics,' or 'minims,' are always much smaller than later generation workers due to the very limited food supply they were fed with during their development. The queen has not emerged (as is typical with *Lasius niger*) at all since burrowing her small chamber two months ago, relying only on the by-products of her wing muscles which have been broken down, and also on the 'trophic' eggs she has laid, which would not develop into ants but are purely for food purposes.

29 SEPTEMBER 2001

There has been a lot of activity in the glass tank over the past week. A maximum of four workers seem to emerge from the nest at any one time, there may be one or more still inside to protect the queen whilst the others are out but I cannot tell. The workers have been busy collecting food (I am feeding them on 'Ant Jelly' and freshly killed, crushed blow flies,) and with the construction of the nest. A small pile of excavated sand has been brought to the surface and formed into a tiny mound around the entrance to the nest itself

05 OCTOBER 2001

The workers are still busy excavating their new home, and the mound is getting larger although still small at 1.5 cm in height

13 OCTOBER 2001

A little more nest excavation going on, and a little foraging too. In my secondary ant farm I have seen three nanitics emerge from the colony to feed on a blowfly that I had just killed for them. One of the nanitics seemed very nervous and gingerly approached the fly, every time her antennae touched the fly she would jump back as if having received an electric shock, her jaws opened in a threatening manner. This was despite two of her nest mates being present and feeding on the corpse, she kept touching her co-workers as if for comfort. Perhaps this was the first time that this particular nanitic had left the safety of the nest, this would explain her nervousness.

28 OCTOBER 2001

The nanitics have been foraging every day, generally only one or two at a time until a food item is found, then several more nanitics emerge from the nest to help eat it up. No sign of anymore, bigger, second generation workers yet, but it is still early days. I have a feeling that the queen in my secondary ant farm may have died. When I took a peek today she did not move despite the amount of light that flooded into her chamber. There only appears to be one nanitic left in this colony with no sign of further brood.

02 NOVEMBER 2001

False alarm regarding the above 'dead queen' scenario; I looked into the ant farm the other day and saw her move. There still appears to be one nanitic with her but there is also a large batch of second generation eggs in her chamber. I am hoping that the queen will be able to survive another period of being alone whilst these second generation eggs go through their

stages to adulthood - I am convinced that the nanitic that is with her will not last another 2 months. My main colony is busy eating some ant jelly and a dead fly. There are only three of them out today. I am hopeful that this queen has also laid a second batch of eggs.

24 DECEMBER 2001

Yes, today is my birthday!! But apart from that I have just come home for two weeks Xmas leave to find that all but one of my colonies has gone into hibernation. The main colony has sealed up the entrance to their nest and there is no sign of them. The active colony still has just a few workers but also has a large amount of brood; I am guessing that the cold conditions in the house (all electricity and heating are switched off when I am away) have slowed down the development of the brood. I am going to be away for most of 2002 so I am off now to talk my best friend into feeding the ants whilst I am away.

05 JANUARY 2002

Well it's time for me to return to work and I am not sure when I will be back. My active ant colony has not been very active at all; in fact I have not seen them forage once during my two weeks at home. The hibernating colonies have shown no signs of waking up despite a gentle source of heat being placed near the ant farm, for all I know they could be dead. I have decided to place a jar of sugar water with a multivitamin tablet dissolved into it into/next to each ant farm. I have placed a sponge wick in each jar to help the ants drink this whilst decreasing the risk of them falling into the solution. Hopefully these jars of sugar water should last a few months. I know that this is perhaps not the best diet for the ants to have but it is better than nothing. I will be away for most of 2002 and so I will not be able to update this journal very much, sorry.

04 AUGUST 2002

Hurrah! I am back home after almost 8 months away. I did manage to get home for a weekend in March but now I am back for six weeks. Anyway, to my great surprise my ants are still alive! I expected them to have survived as they have gone without food all this time. I believe that they may have eaten their dead or perhaps some trophic eggs, laid by the queen or perhaps the workers. The colonies are still very small in number, despite their being one year old (July 23rd was the colonies first birthday) and I reckon this is due to the fact that a food source was not available to them. As for water; the sand in the tank has always been damp and with the lid on there was always quite a high level of humidity and therefore condensation within the tank. This provided a constant source of water for the ants.

16 AUGUST 2002

I have noticed that newly born workers in this colony are increasing in size, though still quite small compared to one of the well established colonies I have in my garden. The workers are becoming bolder and more active than the first generation nanitics ever were, and what's more, some workers were found wandering around on the table that their glass tank stands (yet I have to admit that this was due to me failing to secure the lid properly.) It only took a few moments to pick them up and replace them back into the tank.

Both colonies been well feed over the past week with various flies that have strayed into my house, not forgetting 'Ant Jelly' as well. I have also been giving them pieces of fruit such as banana and apple, though they seem to prefers these once the fruit has been in the tank for a day or so and got a wee bit off.

01 JANUARY 2003

Welcome to a New Year at the *Lasius niger* colony. They have not been that active over the past few weeks, though they have been more so than the secondary colony. Fed on 'Ant Jelly' and mealworms, there have been a number of workers out foraging and some of them have managed to find a way out of the tank and onto the table on which their tank stands. There has never been more than 3 ants on the desk at any one time but, as I make a point of not eating at the desk and keeping it very clean, they have not found anything to cause them to call for their nest mates, however, this is something I will have to keep an eye on as the *Myrmica* colony is located on the opposite end of the same desk. So far none of the *L. niger* workers have gone anywhere near the *Myrmica* tank, and fortunately none of the *Myrmica* workers has been able to escape from their tank. It could end up with disastrous consequences if I am not careful. The *Lasius niger* colony do have a fairly large number of brood at larval and cocoon stage present in the nest.

05 JANUARY 2003

Have not been as active this week, but the average temperature in the room has dropped by a few degrees, this could explain why.

19 JANUARY 2003

I have not seen a single ant out foraging over the past few weeks, but then again I am currently on a 10 week course from which I can only get home at weekends. I have been leaving a supply of food for them when I go away, so they could be eating without my knowing about it.

26 JANUARY 2003

It would appear that the *Lasius niger* colony have gone into hibernation. I have not seen them foraging for a number of weekends and it seems that they have sealed closed the entrance to their nest. There is some brood present which I assume will enter a form of stasis, like the adults, and then continue to develop as the warmer weather approaches. This is good for me in a way as I will not have to worry about feeding them whilst I am away during the next few weeks. Therefore there will be no more journal entries until the ants wake up again.

15 MARCH 2003

Finally, they have awoken from hibernation, and have completely relocated their nest to another part of the tank. I was able to watch this take place, and though the colony is still small (about a dozen ants), the queen was alive and well, and there was a fair amount of brood at various stages of development. This brood could well have been present since before the colony went into hibernation, as it is common for brood to cease development during the hibernation period, only to re-commence growing when the colony awakens. A picture of the new nest location has been included on the Colony Photo page. Click on the link below.

23 MARCH 2003

They have been extremely active over the past few days with a steady stream of ants exiting the nest with sand particles in their jaws, obviously busily extending the nest for the growing number of adults and brood. Yesterday I placed a freshly killed fly into the tank and they became extremely excited, with workers running around in a very feverish manner. A dozen workers leapt onto the fly and immediately started pulling it to bits, their abdomens swelling with enlarged crops as they ate to feed themselves and also their brood and queen. They have also been eating from a fresh batch of 'Ant Jelly' that I recently made for them.

03 APRIL 2003

Still very active in this colony. After all that time they spent building a mound as the main entrance to the nest, they have closed off that entrance and opened another one a few centimetres away, this time with no mound. Today I placed a piece of freshly killed caterpillar into the tank which a few workers started to eat, though they didn't seem to enjoy it that much, and this was made more evident when I placed a freshly killed house fly into the tank a few minutes later. Almost immediately a lot of ants started to eat the fly, leaving the caterpillar abandoned. Clearly the fly is one of their favourite 'dishes'. I lifted the tank up the other day to peer underneath and I was able to see a lot of large chambers and tunnels spreading out over a fairly large area.

12 APRIL 2003

Continue to be very active, though the nest expansions seem to have settled down now. Often there are many worker ants out foraging (and managing to get out of the tank and have a look around on the stand on which their tank rests.) They are eating a lot of food and I have watch them take chunks of food into the nest; *Lasius niger* workers do not eat solid food, but their larvae do, therefore this is a sign that there are larvae in the nest developing.

22 APRIL 2003

Today I placed a dead worker from the *Myrmica* colony into the *L. niger* tank (the worker had died from natural causes). Several niger workers stumbled across the foreign worker and became very agitated. One of them picked up the dead worker and moved it away, and when I looked an hour later, the dead ant had disappeared, possibly taken into the nest to feed the larvae. There has been more nest expansion going on, and the usual foraging, which, if anything, has intensified even more, a good sign that there are more brood present. I have placed a couple of low def. pictures on the photo page of a niger worker examining the *Myrmica* worker.

10 MAY 2003

These naughty ants have found their way out of their tank and onto the carpet, though the most I have seen wandering on the floor is only 4. I also noticed that one of the niger workers has a rear leg that does not function properly, causing it to drag along the floor when the ant moves; however this does not appear to hamper the ant in any way. I tried nigers on freshly killed crickets this week which they seemed to enjoy. A small 'Money' spider has taken up residence in one of the top corners of the tank. The ants do not appear to take any notice of the spider, and neither has the spider preyed on any of the ants.

23 MAY 2003

The other day I noticed some empty cocoon cases dumped just outside the nest entrance, which is very good news, as it shows that the population is increasing. No sign of the money spider that had taken up residence within the tank, either it has run off, or the ants have eaten it.

08 JUNE 2003

This colony continues to actively forage on the surface, and react in numbers, though still small, whenever a food source is found. I cannot see into this nest at all, which is a shame, though I am sure as they expand they will dig near the glass of the tank. No evidence of further births of new ants, i.e., no older cocoon cases has been brought to the surface.

24 JUNE 2003

Still very active in their foraging with many ants running around the tank. Last week I noticed 2 niger workers running across the carpet of the room, each with a cocoon held in its jaws - coming from the direction of the *Lasius flavus* colony. On closer inspection of the flavus colony it became evident that somehow these naughty niger workers had found the flavus colony, entered their nest and stole some of their cocoons. I saw no fighting at all, though I did see a lot of agitated flavus workers running around, and also a dead niger worker that had been hacked up. I therefore moved the flavus tank to the opposite side of the room, however, 2 days later it appears that the niger's have found the flavus again, though there has been no evidence of any further raids.

23 JULY 2003 *(2nd birthday!)*

In the past week it would appear that there have been 2 batches of cocoons hatching, this was evident by the cocoon cases that have been placed in piles outside the nest, on two separate occasions. Though it is not that easy to determine how many adults have been born as the cocoon cases are fragmented, I estimate that perhaps a dozen ants have emerged. I have placed a photo of the empty cocoon cases on the Colony Photo Page. It is also apparent that the 'nautic age' is over, as the ants that are emerging now are almost twice the size of the remaining earlier generation workers.

07 AUGUST 2003

There seems to have been a population explosion within this colony. Many ants have been seen foraging about on the surface, and many more can be seen within the nest at times. The weather has been very warm here over the past few weeks, and this has probably helped the brood to develop faster. There have also been additional nest entrances constructed too, to help ease the flow of 'traffic'. The placing of some Vaseline on the lips of the glass sides has prevented anymore niger workers from making journeys outside the tank.

17 AUGUST 2003

This colony is still as busy as ever, and I have seen even more cocoon cases being brought up to the surface. Despite my placing the Vaseline on the lip of the tank, and the fact that the lid is on as well, these ants still continue to find ways out, although not in anywhere near as many numbers as before. Also, due to the hot weather of late I have been leaving the lids off of my ant tanks. There is also a new rubbish dump within the tank which seems to consist of dead workers, whole and in parts. There is evidence of fighting between the *Myrmica*'s and *flavus* colonies, which has been taking place right near the niger tank. I am wondering whether some nigers have also got involved, and have brought back their own dead.

31 AUGUST 2003

Last week I caused it to "rain" in the niger tank, and I made it a heavy shower, as the sand in the tank was becoming very dry, and it soon became apparent that the sand had become so hard that the ants were finding it difficult to dig new tunnels and chambers. This became apparent when, immediately after the rainfall, the workers began busying themselves in new extensions to the nest, made evident by the amount of sand they had brought up from the surface (a photo of this can be seen on the Colony Photo Page.) Large numbers of workers are still active above ground at any one time, which is very encouraging.

08 SEPTEMBER 2003

The niger's are by far the busiest colony I have, and perhaps the largest too, though I am sure the *Myrmica*'s would argue with that. There are ants everywhere above ground, even when no food source has been found. Nest expansion is still going on at an alarming rate and they have began to tunnel against the sides of the glass too, including the new brood chamber, though unfortunately it is not so clear as to be able to take a picture just yet. With the demise of the secondary *Lasius niger* colony queen, I placed the brood from that colony into this tank, as both colonies are *Lasius niger*. The niger's immediately busied themselves with removing the adopted brood into their brood chamber, where they will raise them as if they had been produced by the Ravenclaw queen herself. The niger's are certainly going to need a bigger tank before next summer. Judging by previous *Lasius niger* colonies I have had in the past it would seem that approximately 1/3 of the total number of ants in the colony is generally out and about. Usually there are about 20 ants out at any one time, and I estimate that there are probably about 60-70 ants within the colony altogether, excluding brood.

02 JULY 2004

It has been sometime since I have been able to update this colony journal, this is due to the fact that I have been out of the UK for some time. Still my most successful, and favourite, colony. Upon my return home I was very pleased to see that these ants have obviously

grown in colony size as there are many ants foraging out of the nest. Individual worker size has increased though perhaps still smaller than those outside in the garden. Considering that in the 3 years this colony has been going I have been away for almost 2 years and therefore the care and attention given to them has not been as I would have wished, they have managed wonderfully. I have every confidence that this colony will do well. No winged ants this year and I wonder whether it would have been a different story had I been at home in the UK for all of the colony's life so far. I gave them their first wax worm today as a food source and they loved it - or perhaps they were so hungry they couldn't care what they were eating. Some obvious colony expansion has been taking place.

10 NOVEMBER 2004

I have just arrived back home after spending the majority part of 8 months away from home. Fortunately my best friend has been feeding my ants for me whilst I have been away. Despite his best intentions, the ants have not really received as much food as I would have hoped as he has been away a lot too. This has caused all of my colonies to suffer in their queen's egg laying capabilities. I do not intend on hibernating my ants this year as the lack of food over the past 8 months means they may not have the necessary reserves to survive a prolonged cold spell. Now that I am back home for a long time I can update these journals more often.

Still my favourite colony. These ants have done remarkably well considering they have had a total of 2 years in the past 4 on their own with no food. Their activity has slowed down but I put this to the fact that the colder weather is drawing in now, particularly as I had switched off my central heating whilst I was away. Now the heating is back on I should see their activities increase somewhat. There were a few casualties over the past few months, mainly caused by a small number of ants drowning in a pot of water I had left for them. Some nest expansion is evident from the growth of the mound. The entire surface of the nesting material was covered in tiny fern-like moss when I got home last week, but I have removed it all, except for a ring of it around the base of the mound, as it looks more natural. I have removed enough to make a pathway for the ants away from the mound.

21 NOVEMBER 2004

Today I placed a piece of freshly killed wax worm into my *Lasius niger* colony tank. I placed it on a shelf that runs around the lip of the top of the tank, which is about 18cm from the surface of the soil. An ant, which happened to be on the shelf, found the food very quickly and immediately started to run around in circles, as I have noticed this species do a lot on finding food: Five reasons for this behaviour run through my mind:

1. The ant is simply excited and runs around purely for that reason. (By the by, I have noticed that ants who are starved for a period of time become extremely excited by a food find, and they visibly vibrate their abdomen, or so it appears.)
2. The ant is checking for any other bits of food nearby.

3. The ant is checking for any nearby enemies who might want to take the food whilst the ant goes for help.
4. The ant is looking for any nearby nest-mates, to tell them about the food before laying down a scent trail back to the nest.
5. The ant is laying scent all round the area to allow other ants to know when they are very close.

Personally, I think it is a mixture of reasons 3, 4, & 5

Anyway, this worker ant did the running around bit and started to lay a scent trail back to the nest. On the lip of the shelf she paused to have a quick wash - and fell all the way to the soil below. She was not hurt in the slightest, and did not appear disturbed by the fall. Immediately she started to continue laying down the scent trail as she headed back to the nest.

Several things interested me here;

- + The ant landed on her back, facing away from the nest, but once she uprighted herself she, without pause or delay, immediately headed in the direction of the nest, even though she was some distance (in ant terms) from it. She did not appear to be disorientated by the sudden fall and change of faceward direction.
- + The scent line had become broken due to the fall. The ant began laying down a scent trail toward the nest, as if the starting point had not been interrupted. It became obvious to me that any ant following the scent trail would come to a sudden 'dead end' with regards to the trail, and would not realise that the trail continued 18cm above its head.

I therefore moved the wax worm morsel to the soil, placing it on the scent line, but here I also conducted a little experiment; I placed the wax worm further along the scent trail, toward the nest, to see if the ants following the trail would stop at the food, or would they detect the continuation of the scent trail, and proceed to follow it to its full length.

The answer came within moments as a dozen ants emerged from the nest and followed the scent trail. 8 of them stopped at the food and began feeding. 4 continued on, becoming visibly confused by the sudden disappearance of the scent trail, with no food at the other end. They all turned around again and made their way back to the wax worm. No other ant did this; it was almost as if the 4 had indicated that the scent trail was a dead end.

Finally, another question arose in my head: Are scent lines directional? If there was a scent line, say, 1 metre in length going from a food source to a nest, and a worker ant stumbled across the scent line at the halfway point (between food and nest), would it know what

direction to go in? Or would it take its chances in either one of the two directions.

As if to appease me, a lone worker did exactly that; she found the newly laid scent line at about the mid-way point. She seemed to pause for a few moments, her antennae feverishly scanning the ground. Then she hurried along the scent line - in the direction of the food.

Did she know what direction to take? Did she just happen to pick the correct direction on chance? Did she just work out that the nest was in one direction so therefore the food must be in the opposite direction? (It is a well known fact that no matter how varied a route a foraging ant takes, once food has been found she knows exactly in which direction the nest lies, and makes a, more or less, straight line back to it.)

As several ants were gathered around the wax worm mentioned above, feeding, another worker arrived on the scene. One by one she grabbed a hold of three ants and pulled them away from the food source. These ants, instead of returning to the food, immediately ran back to the nest. The ant doing the pulling then ran back herself, but halfway there she turned about again and went back to the food. In the few minutes I was watching this behaviour the ant did not attempt this again with any of the remaining (6) ants.

Why did she do this?

Was she simply pulling ants out of the way so that she could feed herself? I am not so sure as when she did this she did not eat, but headed back herself. When she returned she did not repeat this behaviour. Prior to her pulling the ants, there was plenty of room at the wax worm for her to eat.

Could these ants have be young-uns that were not supposed to be out of the nest? As we all know, young ants tend to do jobs within the nest before being allowed out to forage. Was she telling them to get the heck back indoors?

Was she simply just over excited?

27 NOVEMBER 2004

Colony Tank Temperature: 18.5dc / Humidity: 63%

It took about half an hour for these ants to find a freshly killed blowfly that I had put into their tank, but within moments of the lone worker reporting the find back to her colony, there were 35-40 workers either on the fly, on making their way to and thro along the 'ant-line'. This is extremely encouraging for me to see as I was concerned about this, my favourite colony, due to the fact that over the past 36 months, they have been 16 months without food (2 separate periods of 8 months (2002, 2004).

24 DECEMBER 2004 (HAPPY BIRTHDAY TO MYRM!)

Ant Room Temperature = 16.8 dc
Humidity = 58%

Tank temperature = 15.1 dc
Humidity 75%

These ants have sealed off 2 of the 3 entrances to their nest, and around the 3rd have been placed large particles of sand (about the size of a boulder compared to the ants themselves). I am not sure of the meaning of these boulders but only can assume it is part of the closing down process of the nest for the winter. There have been a number of ants foraging and feeding over the past 3 weeks, despite temperatures falling below 13 dc.

01 JANUARY 2005 - HAPPY NEW YEAR TO YOU ALL!

Ant Room Temperature = 15.8 dc (and falling!)
Humidity = 66%

Ant Tank Temperature = 14.9 dc (and falling!)
Humidity 89%

About 7 or 8 ants were out feeding from a fly, whilst the temperature was at 13.4 yesterday. Still only one entrance open to the nest, the rest having been sealed for the winter. I have just made it rain in the tank hence the high humidity of the tank. There have been no signs of new ants having hatched; I can see no evidence of cocoon fragments, though this is to be expected at this time of year.

22 JANUARY 2005

Ant Room temperature = 12.5 dc / humidity 58%
Ant Tank temperature = 14.4 dc / humidity 60 %

My favourites! Below temperatures of 14 dc, these ants remain in the nest and block up the entrances. The main entrance has a lot of larger particles of sand, and slivers of things that they find in their tank, lying next to it. When the temperature falls, they close the entrance using these items. They send out foragers in small numbers when the temperature creeps above 14 dc, and will still actively recruit nest mates to food sources, though again in small number (perhaps no more than 8 at any one time.)

17 April 2005

I have been away from home for the past two and one half months during which time my ants have not received any food, other than the sugar lump I left in each tank. Still going strong (hurrah!) They swarmed over a freshly killed bluebottle fly that flew into my house. WHACK!!! It met its end and was placed into the ant tank. I was surprised to see that despite not having been fed in over two months, many of the workers have full crops. Perhaps they have been eating their dead or trophic eggs. I have also noticed several white 'creatures' living in the tank. They are a little smaller than the ants but do not seem to bother the ants at all, in fact the ants seem to ignore them, even when they approached the fly.

20 April 2005

There has been an 'explosion' of nest expansion activity going on in this nest over the past 3 days, with lines of workers emerging from the nest with soil in their jaws. This has been going on constantly and there is quite a pile of soil particles being built up around the main nest entrance. I placed a second fly into the tank yesterday and it has completely disappeared (last seen being dragged into the nest). Because the tank is placed near the window of the Ant Room, and due to the Ant Room being a south facing window, there has always been a lot of sun shining onto the tank. During the winter, when the sun was lower in the sky there was only about an hour each day that the sun shone directly onto the mound. Now that spring is here and the sun higher up in the sky, the amount of direct sunlight that this tank gets has increased about four-fold resulting in higher temperatures within the tank (though not too hot as to harm the ants). I have noticed that between 1200-1400 each day, when the sun is shining fully onto the tank and mound, the numbers of ants out foraging decreases until there are no ants out between these hours. I have, as an experiment, placed a spoon, without the handle and with the concave face downwards, on top of the mound. It is my hope that the spoon will collect heat during the day and release it into the nest at night. If I am lucky it may become warm enough under there that the ants will bring up some of their brood to be heated up underneath the spoon. The ants have also been drinking water from the test tube water supply.

28 April 2005

These ants have been very busy over the past week. I have seen the movement of a lot of brood (larvae and cocoons) within the nest, which is great news! Yesterday I was working on my computer when I heard a thump come from the Ant Room. Imagine my surprise and amazement when I went into the room - and saw a live tabby cat in my *Lasius niger* tank!!! The tank is situated directly below the window, which is always open. That is obviously how the cat got in you may say, and that is quite correct - but the room is on the top floor of my house! No damage was done to the tank or ants within, but there are 2 cat paw-prints in the sand. Upon seeing me the cat leapt out of the tank and ran to me, purring as if greeting an old friend. At the moment the ants are eating a piece of Satsuma that I have put into

their tank. It's a good job they are not Army ants in this tank, or they would have been feasting on fresh cat right now!

8 May 2005

Much has been happening in this colony over the past 7 days: They continue to increase in activity and have also widened their foraging area to my Ant Room, where I have seen workers on the carpet in the opposite corner of the room. Usually I pick these wandering workers up and replace them into the tank. As a result of their wanderings they have been meeting up with ants from the other colonies, however, not much as resulted from this. On the other hand, whilst glancing in on my ants as I prepared to leave for work the other day I saw a lot of ants looking very agitated at the entrance of their nest. As I looked closer I saw in among the jostling *Lasius niger* workers, a lone *Myrmica rubra* worker now clearly dead. She had no doubt ventured into the tank, just as a *Formica fusca* worker did a few days ago, but unlike the aforementioned worker, the rubra did not get away with it. She must have been attacked by a group of *Lasius niger* workers who overpowered and killed her. Later that day I saw the corpse of the *Myrmica rubra* ant on the ground outside the niger tank - minus half a leg, both her antennae, and the whole of her abdomen.

Another event that has been happening in the niger tank over the past week is the movement of cocoons, which I mentioned last week. It has now become apparent why they are doing this; the far end of the niger tank is exposed to the sun for a much longer period than the rest of the tank, this results in the ground at that part of the tank becoming quite warm. It just so happens that there is a series of natural tunnels and chambers leading from a hole in the ground which, believe it or not, was not created by the ants themselves but rather by the fact that the peat has shrunk a little where it has dried out. As the day progresses and the ground warms up, usually about midday, a stream of workers emerge from the nest carrying all the cocoons. These are taken into the warmed up natural chambers where they are placed in order to benefit from the extra heat (this causes the brood to develop faster). Once the sun goes moves away from the window (usually about 7pm) the worker ants remove the cocoons and return them to the main nest.

14 May 2005

These naughty ants still insist on sending small numbers of workers out of the tank and onto the Ant Room carpet, causing me to have to look before I tread.

Every day of this week the ants have been moving the cocoons out of the nest and into the burrow at the opposite end of the tank, just as I reported last week. As I get home from work every day I see them returning the cocoons back to the nest; sometimes just one ant doing all the work, and at other times there are many ants helping out. During the weekends I get to witness the cocoons being moved out of the nest, usually around midday.

There is a piece of broken pottery flowerpot that I place over the mound and entrance to the nest, and the ants seem to be very agreeable with it. Where the part of the pot does not reach the ground, the ants have built up a wall of earth around the edges so as to create a sealed chamber in which, I discovered yesterday, they store the cocoons that are being

readied for the move to the far burrow. There must have been about 30 or so cocoons when I looked with many more still being brought up from the depths of the nest itself. As new ants emerge from the nest I can clearly see a significant increase in the size of the workers compared with those born a few generations ago. Yesterday I also noticed one worker wandering around with a *Myrmica rubra* abdomen in its jaws; possibly the abdomen of the unfortunately *rubra* worker that was attacked and killed by the *niger* workers last week.

31 May 2005

The daily movement of the cocoons continues, but some of the cocoons have hatched and I can see discarded cocoon cases in various parts of the tank. These ants have discovered the cockroach tank on the opposite side of the Ant Room; and keep going over there and stealing the cockroaches food! The roaches sleep during the day so the ants can feast as much as they like, but once darkness falls the ants leave the tank, as the cockroaches come out to feed.

I have just seen a *Formica fusca* worker from the nearby tank running around in the *niger* tank, but it is too fast for them.

4 July 2005

A fresh batch of cocoons is being moved to the warm chamber as I type this up. The ants have been extremely busy this week, and continue to expand the nest. There have been 3 incidents over the past 14 days in which *Myrmica rubra* workers have wandered into the *niger* tank - and paid the price with their lives! This prompted 2 *Lasius niger* workers to stand guard near the point in which the *rubra* workers had entered the tank. They stood there for hours without movement, obviously waiting for any more intruders.

16 July 2005

The *Lasius niger*s have been very naughty this week! They sent a large raiding party into the neighbouring *Formica fusca* tank and stole the honey I had put out for them. There was also a dead fly I had placed in the *fusca* tank, which I found in the *niger* tank the following morning! They have also been in the *Lasius flavus* tank and witnessed grabbing pieces of their food and running off with it.

The cocoon movement still continues. The other day I watched as a lone ant moved 58 cocoons in 1 hour. Occasionally it was assisted by a second ant, but for the main part it was just the single ant doing the work. On other days I see 6 or more ants helping, taking only minutes to complete the work.

The first of the *Lasius niger* mating flights took place outside on Sunday, and I was hoping that this colony, now 4 years old, may have started to produce their own flying caste, but I have spotted none so far, which is quite disappointing, but not surprising.

Interestingly; though the nigers continually venture into the *Formica fusca* and *Lasius flavus* tanks, they have never gone into the *Myrmica rubra* tank. Although they can make quick work of killing a lone *Myrmica rubra* that strolls into their own tank, I think they know that they may not fair so well should there be many *rubra* workers in the vicinity. As far as I know that have not found the *Tetramorium* tank as yet, though it is in easy reach of them.

23 July 2005 (Happy Birthday to my *Lasius niger* colony (and to Kieron as well!))

It was four years ago today that this colony was born, when I obtained a newly fertilised queen from the *niger* mating flights. Despite the first 2 years of this colony's existence being a bit of a shaky start, these ants have done very well, and the queen is really churning out the eggs this year. Still no signs of any flying ants being produced this year, which is a shame as I was hoping that there might be, but hopefully next year.

Still extremely active, but have not been raiding any of the other tanks over the past week, which is nice! I have seen many discarded cocoon cases, and the ants have been eating for Great Britain. I found one *niger* worker in my bedroom yesterday! Fortunately she seems to be the only one and I returned her to her tank promptly.

7 August 2005

There has been a large number of cocoons present in the nest today, certainly over 100. On top of that there has been a large number of new workers emerging from their cocoons, (this is evident from the many empty cocoon cases that litter the tank.) More nest extension seems to be taking place.

I have had to take measures against the *niger* ants from conducting their usual out-of-tank wanderings; this follows my returning home from work one night last week and finding a long line of *Lasius niger* ants which lead from the tank, out of the Ant Room, down my stairs, and into my kitchen!! The tank is situated on top of a "thing" (I do not know what it is called), which has 4 castor wheels underneath it. The ants were using the wheels to get onto the floor of the Ant Room. I have now placed each wheel in a small container which are filled with washing up liquid. There have been a few casualties as *niger* workers try to cross it, but they seem to have learnt now that they cannot cross. The amount of ants escaping from the tank and its pedestal has decreased to virtually nil. However, believe it or not I have found several *Myrmica rubra* ants from the nearby tank eating some of the washing up liquid!!! Weird!

19 August 2005

The number of adult ants that are now in this colony is expanding at an alarming rate. Many species of ant, once very much established in newly formed colonies, will experience an exponential rise in the number of ants; and this is obviously the stage that my *Lasius niger*s

are going through now. As well as the dramatic increase in the number of ants, the same can be said for the number of brood. Last week I watched the colony move 328 cocoons from the main nest to their satellite brood chambers, which took them 30 minutes to do.

The washing up liquid traps that I set up to prevent them from escaping, have now been changed to cooking oil to prevent the neighbouring *Myrmica rubra* workers from drinking the washing up liquid, which by the way seems to have done them now harm. The cooking oil stops the *Lasius niger*s from escaping, though I have found a very small number of drowned ants in it. I say that it stops them from escaping, but yesterday something happened which showed how resourceful ants are: A few days ago a seed floated in through the Ant Room window and settled in the *Lasius niger* tank. I left it in there just to see what they would do; they seemed to ignore it. I am not sure what seed it was but it was one of those tiny seeds that is covered in long strands of white fur. They are often called "fairies" by kids, or so I am lead to believe. Anyway, when I walked into my Ant Room yesterday and discovered 50 or 60 *Lasius niger* workers running around on the floor. Puzzled at how they had passed the cooking oil traps I investigated further, only to find that the ants had taken the fur covered seed out of the tank and had dropped it into the oil. This caused a bridge which allowed them to safely cross the oil! Amazing huh?

27 August 2005

As ever these ants have been very active and continue to eat like horses! A few days ago I found one of their number trapped on a piece of sellotape. It took me a while but I managed to free her with the loss of part of a rear leg, and placed her back into the tank right near the entrance to the nest. She must have release an alarm or distress pheromone as a number of ants started to run about in an agitated manner. Four or five ants crowded around the stricken ant, touching her with their antennae and making a fuss over her. She was then carried back into the nest.

The daily cocoon move still goes on, and more empty cocoon cases are being discarded about the tank. Occasionally I see a white callow moving around, but these are normally picked up and taken back into the nest by the older workers.

I am currently clearing out my garden shed (which will take some time as I do not have a 50 megaton nuclear tipped missile to hand, the only thing that will help clear it out I think.) Once this is done I will transfer all my ant tanks into the shed so that I can reclaim my spare room. I hope to do this before the winter sets in.

10 September 2005

Just before I went away last week I placed some cuttings from a bush thing that I have in my garden, as I thought it would be nice for the ants to have a bit of greenery in their tank. When I placed it into the tank there were hardly any ants out of the nest, but when one of them discovered to plants, there were suddenly hundreds of ants swarming all over them.

They seem to like it. No escapes over the past 2 weeks!! Still many empty cocoon cases being brought to the surface.

9 December 2005

I have just got back after 2 months away from the UK, in much warmer climes. Due to the fact that the heating and electricity was isolated in the ant room when I went away, primarily to encourage hibernation.

Although these ants have clearly closed up the main entrance to their nest with soil, they are still active in smaller numbers, emerging from the nest via small holes made in the soil barrier to their nest. I have fed them with a cockroach which they are currently eating, but again only in small numbers. The ants themselves are very sluggish, and not acting with their usual excited behaviour. It is good to see that they have survived another time of no food during my travels. It just shows how resilient ants are.

29 December 2005

These ants still remain fairly active despite the cold, but I guess that even with the heating turned off in the Ant Room, it still doesn't get cold enough for these ants to hibernate. As far as I am aware the queen has stopped her egg laying during the winter, which is good news. I have very few cockroaches left and so I have been feeding these ants with fruit, namely strawberries and Clementine segments, which they seem to love. I have also been feeding them the "Ant Jelly" that I make, the recipe for which can be found on my website ("Diet" page.) The most ants I have seen out at any one time in this nest, this winter, has been about a dozen, and they are certainly not as fast as they normally would be in warmer temperatures. I notice that there is a small clump of fur near the entrance to their nest, which on closer examination appears to be a small clump of tabby cat hairs! Interesting!

22 January 2006

These ants have been very active over the past week due to the weather being fairly mild. Yesterday I placed some grass seeds at one end of the tank, just to see what the ants would do. If they did nothing then grass would grow at that end of the tank, which might give the ants something to look at! When I checked in on them today I noticed that the ants had collected many of the seeds and placed them in a pile somewhere in the middle of the tank. I also saw some grass seeds near the entrance to their nest. It is possible that they may have taken some of them into the nest.

1 April 2006

There is a lot more grass in the tank since I went away more than 5 weeks ago. I have not seen much ant activity except for a few lone workers on the floor of the ant room. It seems that they have been exploring the garden a little. I do not expect to see much activity just yet as it still gets pretty cold in the ant room.

5 April 2006

I have decided to update this website so soon after the previous update of 4 days ago as I thought I would share some news with you all about my longest running ant colony, the *Lasius niger*. I made a post about it in the best Ant Forum there is (ANT HILL WORLD UK) and I think it best if I reproduce that post here, and in the relevant colony journal)

5 Year Old *Lasius niger* Colony Leave Home:

This is weird!

I have emptied the *Lasius niger* tank after coming to the conclusion that some catastrophe had befallen my favourite colony during my 5 weeks away from home 🤔. I was mystified to find that there were no signs of any dead ants or abandoned cocoons/larvae. The colony had several hundred brood and a large number of adults, and of course 1 queen, when I left home 5 weeks ago.

I had a hunch and so looked out in the garden which is right outside the new ant room: there is a large nest of ants that were not there 5 weeks ago and certainly was not there prior to winter as I had dug over the garden (carefully checking for disturbed ant nests.) The workers running around outside are clearly not nanitics. I know for certain in my heart that this new ant nest is in fact my colony of *Lasius niger*s! They have left home and gone out on their own. The same thing that happened to my *Myrmica rubra* colony (which was kindly replaced by Wood & Jenant. I have a suspicious feeling that the old *Myrmica*'s moved into the *Lasius flavus* tank and were wiped out by the *flavus*.)

It seems that I am a foster parent to the ants; they start off with me, and then once established they move out into the big wide world. The *niger* moved must have happened recently. I had seen a few *niger* workers wandering around on the ant room floor, and I believe that these were the last to leave and were ensuring nothing had been left behind. I still feel a little disappointed that after rearing them up from a single queen over the past 5 years, that they have left home without even leaving a note. Perhaps they will flourish even more out in the garden, after all they can only do so much in a fish tank. But whenever I see the new ant nest in the garden I will know that I gave them their start in life. I really hope the colony makes it out there. I shall be keeping a very good eye on them over the course of this year. I now know how a parent must feel when their child grows up and leaves home to start his new life.

This journal will close here.