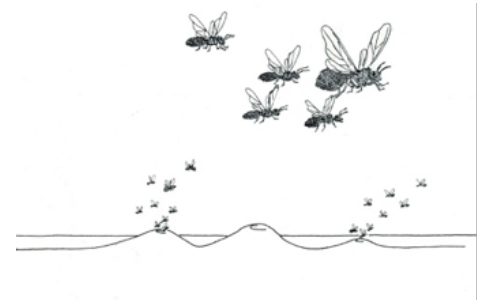


## Vulnerability of Leafcutter Ants: easiest control!

It is necessary to know the biological/ecological cycle of the leafcutter ants (brasilian=saúvas), to identify its moments of vulnerability and facilitated biological control. It follows a description of the early stages of the lifecycle of leafcutter ants.

### 1 - Nuptial flight

In the Brazilian southeast, leafcutter ants swarms occur from October to December (January), when it begins to rain. It is in spring that the young queens are prepared for a long life of procreation, when they leave the colony in "nuptial flight", during which they attract some males and are fertilized by them, thus ensuring a long and continuous production of eggs in their life cycle (15 to 25 years).



### 2 - Landing and 1st excavation (natural predation)

After fertilization, the queens land on the ground, cut their own wings, dig a small chamber and begin a new anthill. This is the most vulnerable moment in a colony's entire cycle. More than 90% of queens are preyed on as they enter/exit the first "hole" they make in the soil.

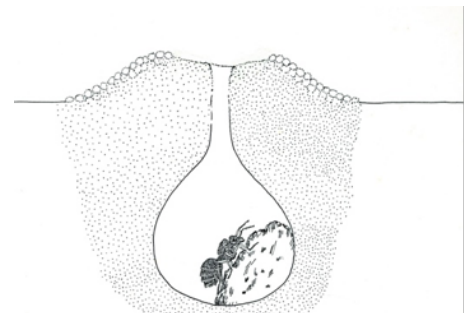
Natural enemies 1: Birds, lizards and other insectivorous animals get tired of this delicacy: "Içá". But do not think that the survivors are few. There are many! Tens and tens per hectare, maybe hundreds. Future anthills, growing, causing losses in crops.



**WARNING:** The surviving queens, the 2% or 5% or how many will survive natural predation, will have to be hunted down and eliminated as long as this is an easy task. Look at it next.

### 3 - Foundation of the 1st nest

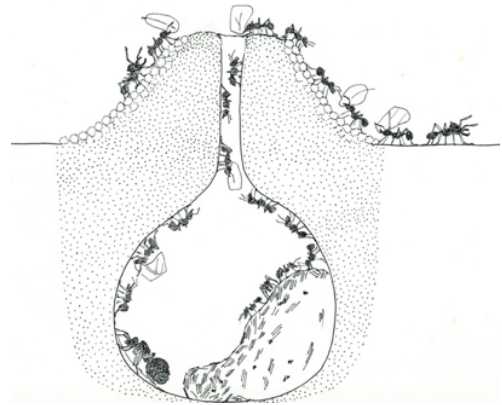
Immediately after having excavated a small chamber, a few cm from the surface, the new queen begins the laying of eggs and the cultivation of the food fungus, while awaiting until 50 days the birth of the first workers. The tiny nest becomes invisible and seems not to exist.



With the first workers taking on the tasks of building and organizing the new colony, around 2-3 months after its foundation, there is the opening of the first hatch and the accumulated loose mound of earth will have dimensions around 10x10 cm. The single pot where the queen lives and the young ants are living, is at an average depth of 30 cm, which facilitates the physical control in this phase of the colony's life. Here's how it's done:

#### 4 - The "Volcano" phase

This phase becomes visible to the observer, because the young colony begins to dig a nest a little deeper, throwing land out in a characteristic way: forming a "little volcano". This phase lasts about 5 months, from January to June, for the Brazilian southeast. Every year we'll have new little volcanoes to hunt.

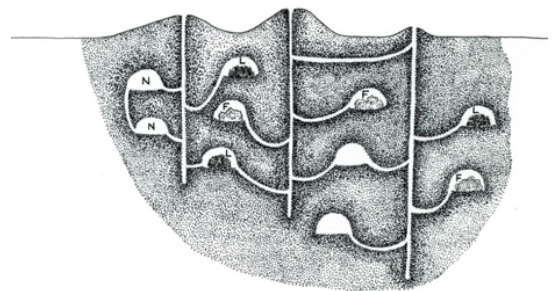


**EASY TASK:** dig a hole in the place of the "volcano". Using a mattock. The single chamber of the ant hill will be only 30 cm (20 to 50) from the surface, easy to find. In it we will find the fungus, several ants and 'gardeners' (the very small ants, caring the nursery) and the QUEEN! Which is easy to identify, as it is MUCH BIGGER than the others. Eliminating the queen, the anthill dies on the same day. All operation should last from 2 to 5 min per volcano. Swift, efficient, (100%) and cheap. Just patrol the crop areas and surrounding areas and do the hunting.

Natural enemies 2: at this stage (in productive landscapes) the human being is the only predator/hunter able to act efficiently. The physical control of the colony is completely without contraindication and fully accepted by all bio-certifiers. A motivated collaborator can hunt 30 to 70 queens a day, because we have to count the time of lurking and searching.

#### 5 - What if we miss the deadline?

If we let the little volcano evolve? In this case the colony of leafcutter ants continues to develop, digging nests (many !!) to depths that are out of common reach and cannot be preyed upon by a simple manual effort (excavation). On the possibilities of ecological control in this phase of colony maturation, there will be another article.



Natural enemies 3: In the mature stage of the colony, there are no predators that can act efficiently. Chemical control (with substances authorized by the bio-certifier) of the colonies is costly and the only way to kill them. Deserving of a separate article.

## **7 - Repeat the volcano hunt every year.**

If we do it every year, the overflow infestation tends to fall, as the unbridled reinfestation cycle is broken, especially if the control is done in larger areas (including neighboring areas)!

The fight against the leafcutter ants requires knowledge of its biological cycle and a lot of observation! Social insects are very intelligent.

Manfred v. Osterroht

ART PROJECT

[www.regenerativa.art.br](http://www.regenerativa.art.br)

[agricultura@regenerativa.art.br](mailto:agricultura@regenerativa.art.br)