



# Le Butineur

Pollinium.fr, créateur de biodiversité



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- Beehive history -

## Gardeners, think of them!

Newsletter of bees of ADELAC

Spring 2019

Committed to protect biodiversity, ADELAC invests in sponsorship of bees. Come and get an inside peek of the incredible life of foraging bees. If you are a nature lover, you will certainly enjoy it.



- Beehive history -

## Experts in coded messages



Do bees have a language? This is what Karl von Frisch (1886-1982), an Austrian ethologist, wanted to find out. We owe him a surprising discovery: the dance of bees. A dance that allows the swarm to obtain a wealth of information about the surrounding food sources.

To convey her message, a foraging bee won't speak, instead, she will move her abdomen. And according to the information she wants to communicate, she will perform different movements. If, for example, her supply of nectar does not come far from the hive, she will simply perform the round dance.

Her girlfriends will go and look for the treasure knowing that they don't need to go far. If it is necessary to go a little further, their guide will go around in the shape of a sickle, creating two elongated ellipses separated by an axis. She will also give them information on the



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direction to follow regarding the Sun's position. Finally, if she wants to reveal a spot located further away from the hive, she will opt for the waggle dance i.e. she will dance in figure-of-eight pattern. The duration of the waggle part of the dance signifies the distance. If she moves vertically, the direction to the source is directly towards the Sun.

This last 'choreography' is apparently also used during the swarming to inform the colony about the direction of the new nest-site location.



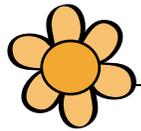
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It's almost time to take out spades and pickaxes. And why not take the opportunity to plant some honey plants? They are particularly appreciated by the bees because of their richness in nectar, pollen or propolis.

The first simple reflex would be not to mow the dandelions because they provide bees with nectar and pollen in spring. Often yellow and blue, honey plants grow all year round.

Phacelia, borage, sainfoin ... are among the best known. But they also like flat maple, mountain ash, chestnut, cherry, griottier, apple, white fir, hazel, gooseberry, white clover, mustard, thyme, bay leaf, raspberry, lavandin, rhododendron, boxwood, acacia ...

There is a non-exhaustive list to spoil yourself while spoiling the bees too.



– Bees and men –

## Commercial prospection explained by bees

As soon as the first rays of sun appear one early morning in May, a few scout bees will venture out of the hive to visit the surroundings. Their aim is to find the flowers that are the closest to the hive and with the most nectar.

At the end of this quest, those scout bees will return back home loaded with nectar. But they will also bring strategic information to the teams of foraging bees who are about to go to work.

They will tell them where the closest resources are in order to collectively optimize the harvest of the day. This information is clear, operational and amplified thanks to the dance of bees. In

half an hour, thousands of foraging bees are mobilized. As a result, there will be a lot of nectar in the honeycombs for the whole colony. "After a regularly updated market survey, you should quickly indicate which are the most promising targets, provide precise, motivating and operational information in order to optimize both the quantity and quality of resources". Here is a method of commercial prospection advised by bees to all the companies that want to flourish!

### Henri Duchemin.

a beekeeper, a sociologist and a founder of Mélilot Consulting  
For more info, please click on <http://melilotconsulting.com>



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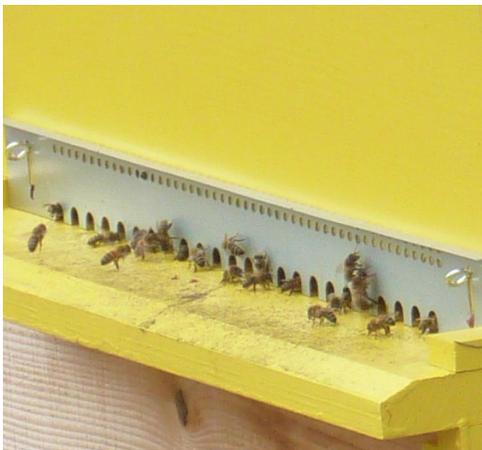
## Entrance gate to the hive – a removable protection

The gate keeps the hive closed either partially or totally. The entrance gate of the hive is that metal element crenelated in the shape of small arches that the beekeeper places in front of the entrance of the hive. A relatively sophisticated object since it can be used in several ways. It lets the bees pass, but it also prevents big intruders (mice for example) to enter. The entrance also allows guard bees to filter the visitors more easily. This is how a beekeeper uses it from the end of summer until early spring.

When the stock of nectar and pollen becomes important and the comings and goings of for-

aging bees multiply, the entrance gate facilitates their task by raising the crenelated part. There is a large slit that makes the traffic more fluid. It happens that a beekeeper needs to close the hive.

This is particularly the case when he wants to move it. He then comes (preferably at night when all the foraging bees have returned) to reverse the entrance gate that is completely closed on its other side. This way the gate is hermetically closed and the hive can be transported safely. The holes, smaller than a bee's thorax, provide proper ventilation.



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# Brief

Proverbs and sayings

*«We see a bee land on all the plants and draw the best from each of them»*

Isocrate

## INDISPENSABLE POLLINATION

According to the Bee Institute, pollination creates two billion euros in value in the production of cereals, fruits and seeds. Beekeepers now put their hives in the service of market gardeners and other arborists.



A recently published study in the Science Advances review suggests that bees know how to add and subtract. We already knew that they were able to count to four and that they know zero. The study was conducted by the Royal Melbourne Institute of Technology and the Toulouse Centre for Animal Cognition Research.