

## CONTRIBUTIONS TO THE KNOWLEDGE OF EXISTING ENTOMOFAUNA IN THE LAVENDER CROPS

Stela-Daniela ENACHE (TROIA)<sup>1</sup>, Nela TALMACIU<sup>1</sup>, Ion MITREA<sup>2</sup>, Monica HEREA<sup>1</sup>,  
Mihai TALMACIU<sup>1</sup>

(1) "Ion Ionescu de la Brad" University of Life Sciences, 3 Mihail Sadoveanu Alley, Iasi, Romania

(2) University of Craiova, 19 Libertății street, Craiova, Romania

author email: [farmacia.verde.ro@gmail.com](mailto:farmacia.verde.ro@gmail.com)

Corresponding author email: [monica28is@yahoo.com](mailto:monica28is@yahoo.com)

### Abstract

The observations were made during the year 2022, starting from May to August, in a *Lavandula* crops in the Raducaneni, stationary from Iasi, located about 40 km from the Iasi city and about 45 km from the Husi city.

The existing entomofauna was grouped by taxon categories up to the insect order level, only the coleopterans being determined up to the species level.

**Key words:** medicinal herbs, entomofauna, yellow sticky trap.

### INTRODUCTION

The medicinal plants are a category of plant species that accumulate in some parts of the plant various active principles useful in treating various ailments of the human or animal body. Until a century ago,

almost all the "cures" used by man were of vegetable origin (Crăciun Florentin et al.).

Lavender was originally used by the Phoenicians, Egyptians and Arabs as a perfume and for mummification, then it was used to flavor bath water by the Romans, who took it to England as they expanded north to conquer. It was one of the plants brought by the colonists to America together with other plant species (Răducanu Dumitru et al.).

Around are known 30 species of lavender, the most cultivated being *Lavandula angustifolia*. The lavender species are cultivated according to their end use, so not the same species are cultivated for therapeutic uses and for the cosmetic or detergent industry.

Lavender production can be affected by weeds, as they compete with lavender for sun, water and nutrients (Bilteanu Ghe). Also, the plants can be affected by insects or the appearance of some diseases. The main pests that can affect the lavender crops:

- Cercopoidea beetles. They are visible in the spring and secrete a substance similar to saliva on the plants.

- Aleyrodidae. They feed on lavender sap and can affect plant development. They are small, white insects that can be found under leaves. When they are present in large numbers, the plant can turn yellow and wilt.

- Aphidoidea insects. Although these insects are not directly harmful to plants, they can transmit alfalfa mosaic virus, a virus that causes yellow spots on leaves and shoots. Sometimes the affected tissue shrinks and changes shape. In general, the virus does not kill plants, but prevents them from growing and flowering.

### MATERIALS AND METHODS

The entomofauna that constitutes the material of this paper was captured with the yellow sticky traps type Bio Plantella, which

were installed in the lavender culture from May to August, these being replaced after about 4 weeks.

The yellow adhesive traps are specially designed to attract insects in order to monitor and combat them biologically. It also contributes to the reduction of insect populations.

The yellow sticky trap comes in the form of a yellow plastic strip covered with glue to monitor the insects and is specially designed to attract the small insects. These traps are specially designed to attract pests

insects. The harmful species of insects are attracted to the color of the traps, and the strong adhesive holds them captive, eliminating the threat to the plants.

They can be hung above the crop surface, parallel to the crop rows or in the center of the infected area. They are resistant to high temperatures and are not affected by sprinkler systems.

The readings were done periodically, from May to August, in the Raducaneni stationary, Iasi county.



Fig. 1. Yellow sticky traps Bio Plantella

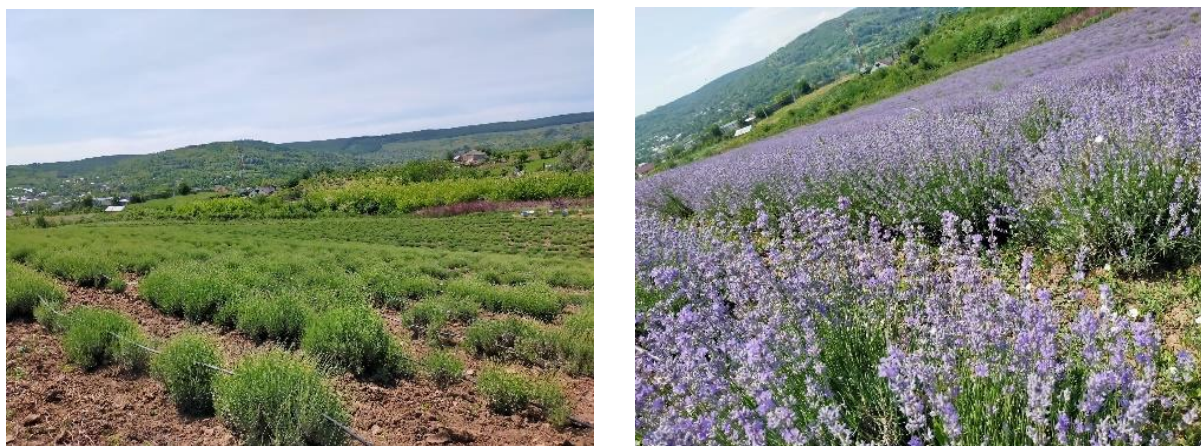


Fig. 2. The Raducaneni stationary - lavender culture

The identification of the taxa, respectively of the species, was done with the naked eye or with a binocular station.

During the year 2022, were made 5 readings on the following dates: 25.05; 07.06; 27.06; 18.07; 02.08; 15.08.

The identification of the coleopters species was done with the help of Reitter, Panin determinants book.

## RESULTS AND DISCUSSIONS

On 25.05.2022, at trap no. 1, the situation was as follows: were captured 139 samples belonging to the following insect groups (tab. 1): ants - 71 samples, dipters - 17 samples, mecopters - 2, aphids - 47 samples and lepidopters 2 samples.

At trap no. 2, were collected a total of 108 samples belonging to the following groups: diptera - 17, coleoptera 4, hymenoptera 3, lepidoptera 2, aphids 43 and cycads 39 samples.

**Table 1. The situation regarding the catches from 25.05.2022**

Variants	Yellow sticky traps	
Lavandula	Species	No samples
Trap no. 1	Ants	71
	Dipters	17
	Panorpa communis	2
	Aphids	47
	Lepidopters	2
<b>Total</b>	<b>139</b>	
Trap no. 2	Dipters	17
	Philanthus triangulum	3
	Ichneumonids	3
	Lepidopters	2
	Phyllotreta atra	1
	Aphids	43
	Cicads	39
<b>Total</b>	<b>108</b>	

On 07.06.2022, at trap no. 1, in the Raducaneni stationary, were collected 90 samples of insects belonging to the following groups (tab. 2): cicads - 20 samples, diptera - 1 sample, lepidoptera 1

sample, wasps 30, coleoptera 20 and bees 2 samples.

At trap no. 2, were collected in total 33 samples belonging to the following groups: coleopters 5, lepidopters 1, dipters 25 and bees 2 samples.

**Table 2. The situation regarding the catches from 06.07.2022**

Variant	Yellow sticky traps	
Lavandula	Species	No. samples
Trap no. 1	Cicads	Colony
	Dipters	17
	Loxostage stricticalis	1
	Ichneumonids	30
	Agriotes sp.	7
	Coccinella punctata	1
	Bees	2
	Phyllotreta atra	5
	Anthaxia nitidula	4
	Curculionids	3
	Arahnids	6
<b>Total</b>	<b>90</b>	
Trap no. 2	Meligetes aeneus	3
	Mordella aculeata	2
	Loxostage stricticalis	1
	Dipters	25
	Bees	2
<b>Total</b>	<b>33</b>	

On 27.06.2022, in the Raducaneni stationary, were collected a number of 186 samples of insects belonging to the following groups (tab. 3): dipters 48, mecopters 4, lepidopters 2, bees 25, cycads

30, aphids 60, ants 15 and beetles 2 samples.

**Table 3. The situation regarding the catches from 27.06.2022**

Variants	Yellow sticky traps	
Lavandula	Species	No. samples
Trap nr. 2	Panorpa communis	4
	Lepidopters	2
	Bees	25
	Dipters	48
	Cicads	30
	Aphids	60
	Ants	15
	Anthaxia nitidula	2
<b>Total</b>	<b>186</b>	

On 18.07.2022, in the Raducaneni stationary, at trap no. 1, were captured 103 samples belonging to the following groups (tab. 4): lepidoptera 3, diptera 30, hymenoptera 11, ants 47, coleoptera 5, mecoptera 2.

**Table 4. The situation regarding the catches from 18.07.2022**

Variants	Yellow sticky traps	
Lavandula	Species	No samples
Traps no. 1	Plutelids	3
	Dipters	30
	Ants	47
	Ichneumonids	11
	Phyllotreta atra	4
	Longitarsus anchusae	1
	Panorpa communis	2
	Arahnids	5
<b>Total</b>	<b>103</b>	

On 02.08.2022, in the Raducaneni stationary, at trap no. 1, were captured 163 samples of insects belonging to the following groups (tab. 5): cicads 89, dipters 49, coleopters 23, lepidopters 1, bees 1 samples.

At trap no. 2, were collected 33 samples belonging to the following groups: dipters

32, cicads 74, ants 69, coleopters 1, mecopters 5 samples.

**Table 5. The situation regarding the catches from 02.08.2022**

Variants	Yellow sticky traps	
Lavandula	Species	No of samples
Trap nr. 1	Agriotes sp.	7
	Anthaxia nitidula	4
	Vanessa cardui	1
	Dipters	49
	Bees	1
	Cicads	89
	Micraspis sedecimpunctata	1
	Philanthus triangulum	11
<b>Total</b>	<b>163</b>	
Trap no. 2	Panorpa communis	5
	Dipters	32
	Anthaxia nitidula	1
	Cicads	74
	Ants	69
	<b>181</b>	

On 15.08.2022, in the Raducaneni stationary, at trap no. 1, were collected 155 samples belonging to the following groups (tab. 6): dipters 71, cicads 49, ants 24, coleopters 11 samples.

**Table 6. The situation regarding the catches from 15.08.2022**

Variants	Yellow sticky traps	
Lavandula	Species	No of samples
Trap no. 1	Dipters	71
	Cicads	49
	Anthaxia nitidula	3
	Ants	24
	Philanthus triangulum	8
<b>Total</b>	<b>155</b>	

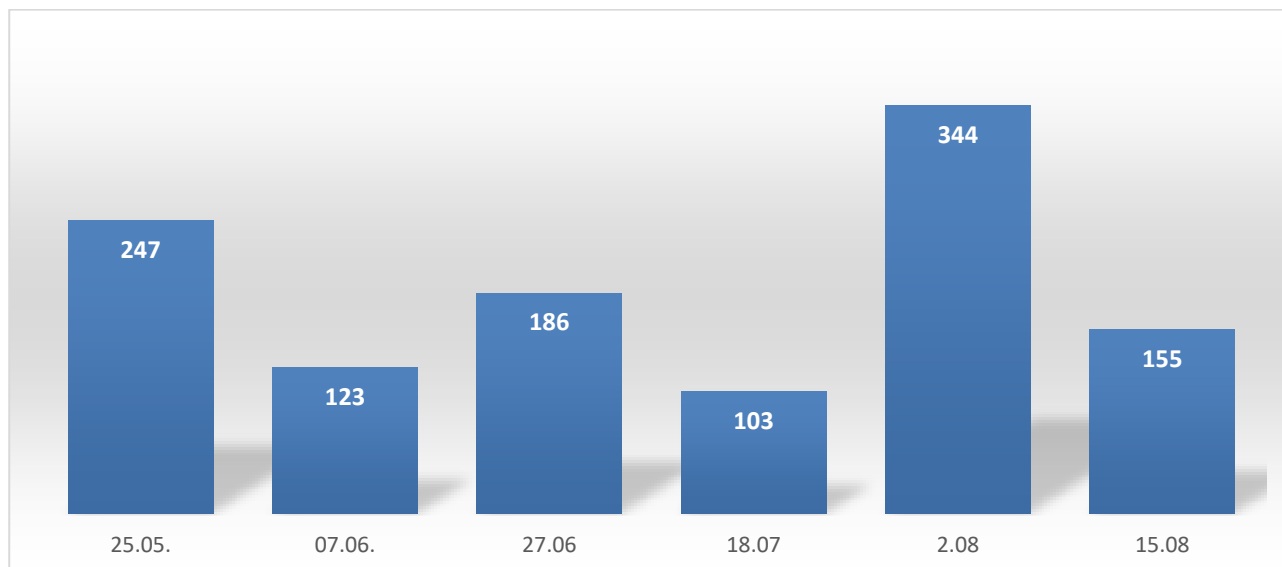


Figure 3. The situation of fauna collection in 2022

In total, in the year 2022, were collected a number of 1158 samples of insects in the lavender culture. (fig. 1).

### CONCLUSIONS

The identified entomofauna was captured with the help of Bio Plantella sticky yellow traps, in a lavender crop during the year 2022, from May to August and totaled a number of 1158 specimens.

The species collected belong to the following groups of insects: wasps, Diptera, Heteroptera, Coleoptera, Lepidoptera, Mecoptera and Homoptera.

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