

STRUCTURE, DYNAMICS AND ABUNDANCE OF ARTHROPODS COLLECTED FROM SOME APPLE FRUIT TREE ORCHARDS

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Keywords: *apple orchards, arthropods, useful species.*

ABSTRACT

For the study of the arthropods species of apple orchards and observations were made of the collected material by the soil traps type Barber.

The traps placed in plantation were six in number, it's situated on two row, by three per line.

The traps were put in a formaldehyde solution with a concentration of 3-4%. The gathering of the material was made on the following dates: 15.05; 30.05; 30.06 and 15.07. The most common taxons collected were : *Coleoptera*, *Heteroptera*, *Diptera*, *Hymenoptera*, *Dermaptera*, *Arahnida*, *Miriapoda*, *Lepidoptera*, *Homoptera*.

INTRODUCTION

Arthropods are animals to which appear the articulated legs. They belong to several classes, namely: *Crustacea*, *Arachnida*, *Miriapoda* and *Insecta*.

The *Crustacea* class (crustaceans) are the arthropods that have the hard skin, covered with a crust. Most of them are aquatic species, but there are also harmful species that live on land. These belong to the order of Isopoda and the prefall of the *Armadillidium vulgare* species.

MATERIAL AND METHOD

The collection of arthropods was made with the soil traps type Barber in the year 2018 on the following dates: 15.05, 30.05, 30.06 and 15.07.

RESULTS AND DISCUSSIONS

At the first harvest from 15.05.2018 were collected 162 specimens, belonging to a number of 10

Among the arthropods, the most numerous specimens belong to the Class Insecta (*Hexapoda*) (Radu Ghe. V. 1967).

In the *Arahnida* class are both harmful and useful species. The harmful species belong to the *Acari* order, and the useful species belong to the order of *Aranea* (spiders) (Boguleanu and colab. 1980).

In this paper are brought some contributions to the knowledge of these groups of animals in some orchards.

The material consisting of the arthropods collected was selected on traps and data to harvest them. It was cleared of plant debris, then identified and inventoried the main groups of arthropods.

taxons. Most belong to the insect class at the following orders: *Hymenoptera* with most specimens, 48, *Coleoptera* with 41 specimens and *Diptera* with 31 specimens.

In the 2nd harvest dated 30.05.2018, the specimens of arthropods belonging to 10 taxons were collected. The greatest representation had a hyenopters with 173 specimens, arachnids with 39 specimens, heteropters with 36 specimens and coleopters with 35 specimens.

At the 3rd Harvest of 15.06.2018, 171 specimens of arthropods were collected belonging to the following taxon groups: *Coleoptera*, *Heteroptera*, *Hymenoptera*, *Diptera*, *Miriapoda*, *Colembola* and *Arachnida*. The most well represented were himenopters with a number of 49 specimens, followed by coleopters with 46 specimens.

At the 4th Harvest of 30.06.20185 were collected 55 specimens of arthropods belonging to 7 taxons. It was best to represent the order of *Hymenoptera* with 15 specimens collected.

At the 5th Harvest of 15.07.2018, only 72 specimens were collected. The largest number of specimens had the himenopters with 27 specimens and the coleopters with 17specimens.

During the observation, 795 specimens belonging to collected arthropods fauna. Most specimens belonged to the Insecta class and to the following groups: *Hymenoptera* (308 specimens), *Coleoptera* (167 specimens), *Heteroptera* (99 specimens) and *Diptera* with 98 specimens.

CONCLUSIONS

1. The most numerous arthropods that were collected belong to the insect class. The most numerous insect groups belong to *Hymenoptera* and *Diptera*.

2. In total, 795 specimens of arthropods belonging to a number of 10 taxons were collected.

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Table 1

Situation of collections on 15.05.2018

No.	Name of taxon	Samples						Total
		1	2	3	4	5	6	
1	Diptere	-	4	-	19	2	7	32
2	Himenoptere	10	-	1	32	-	5	48
3	Coleoptere	8	5	5	12	3	8	41
4	Miriapode		1	-	5	-	-	6
5	Arahnide	3	1	-	13	-	-	17
6	Heteroptere	5	-	-	-	-	5	10
7	Homptere	2	-	-	-	-	-	2
8	Lepidoptere	1	-	1	1	-	1	4
9	Ortoptere	-	-	-	1	-	-	1
TOTAL								161

Table 2

Situation of collections on 30.05.2018

No.	Name of taxon	Samples						Total
		1	2	3	4	5	6	
1	Coleoptere	9	6	10	-	8	2	35
2	Heteroptere	6	5	17	-		8	36
3	Diptere	13	-	-	-	13	3	29
4	Himenoptere	18	45	53		22	35	173
5	Dermaptere	2	-	-	-	-	-	2
6	Crisopide	1	-	-	-	-	-	1
7	Arahnide	13	5	8	-	5	8	39
8	Miriapode	2	-	1	-		2	5
9	Lepidoptere	2	-	-	-	2	2	6
10	Homoptere	3	-	3	-	-	3	9
Total								335

Table 3

Situation of collections on 15.06.2018

No.	Name of taxon	Samples						Total
		1	2	3	4	5	6	
1	Coleoptere	19	-	-	6	-	18	43
2	Heteroptere	15	-	-	10	-	1	26
3	Himenoptere	28	-	-	14	-	7	49
4	Diptere	3	-	-	8	-	6	17
5	Homoptere	5	-	-	-	-	2	7
6	Miriapode	3	-	-	-	-	-	3
7	Colembole	17	-	-	-	-	-	17
8	Arahnide	-	-	-	5	-	4	9
Total								171

Table 4

Situation of collections on 30.06.2018

No.	Name of taxon	Samples						Total
		1	2	3	4	5	6	
1	Heteroptere	5	-	-	-	-	6	11
2	Cicade	2	-	-	-	-	-	2
3	Arahnide	3	-	-	-	-	-	3
4	Himenoptere	10	-	-	-	5	-	15
5	Lepidoptere	1	-	-	-	-	1	1
6	Coleoptere	11	-	-	-	-	3	14
7	Diptere	-	-	-	-	2	7	9
Total								55

Table 5

Situation of collections on 15.07.2018

No.	Name of taxon	Samples						Total
		1	2	3	4	5	6	
1	Dermaptere	1	-	-	-	-	-	1
2	Homoptere	2	3	-	-	-	1	5
3	Heteroptere	4	7	-	-	-	5	16
4	Diptere	8	4	-	-	-	2	14
5	Himenoptere	2	2	-	-	-	23	27
6	Coleoptere	1	11	-	-	-	5	17
7	Arahnide		4	-	-	-	-	7
8	Lepidoptere	-	-	-	-	-	1	1
Total								72

Table 6

Situation of collections on 2018

No.	Name of taxon	Samples						Total
		1	2	3	4	5	6	
1	Diptere	24	8	-	26	15	25	98
2	Himenoptere	68	47	54	46	22	75	308
3	Coleoptere	37	50	15	18	15	36	171
4	Miriapode	5	1	1	5	-	-	12
5	Arahnide	16	10	8	18	5	15	72
6	Heteroptere	35	12	17	10	-	25	99
7	Homoptere	9	3	3	-	-	6	18
8	Lepidoptere	4	-	1	1	2	5	13
9	Ortoptere	-	-	-	1	-	-	1
10	Dermaptere	3	-	-	-	-	-	3
TOTAL								795