

**ENTOMOFAUNA FROM THE FOREST DISTRICT VULTURESTI  
OLT COUNTY**

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**ABSTRACT**

*From our observation regarding the entomofauna of F. D. Vulturesti (Olt County) area during the research, 72 species of Arthropods were collected and identified (belonging to the orders: Coleoptera with 27 species (37.5%), Lepidoptera with 14 species collected (19.44%), Heteroptera with 11 species collected (15.27%), Hymenoptera with 9 species collected (12.5%), Orthoptera with 5 species collected (6.94%), Diptera with 3 species collected (4.16%), Neuroptera with 2 species collected (2.77%), the order Dermaptera with one species collected (1.38%), of which 55 species (76.38%) are harmful and 17 species (23.61) are useful parasites or predators.*

**INTRODUCTION**

Vulturesti Forest District is located in the northern extremity of Olt County, at the border between Olt, Valcea and Arges counties. The total surface of the F.D.Vulturesti is 4256, 67 hectare and is divided into four production units.

From a phytoclimatic point of view, the trees are located on the hilly floor of oaks and hill creeks.

The main species that vegetate in the area are: *Quercus frainetto* (47%), *Quercus ceris* (18%), *Robinia pseudoacacia* (15%) and *Quercus petraea* (6%). (ICAS Pitești, O.S. Vulturesti Development, p. 22, 2011).

The entomofauna is represented both by harmful species specific to the forest in the area, as well as by useful antagonistic species formed by parasites and predators, as well as indifferent species present in the area.

A series of specific antagonistic relationships are established between harmful and useful species, which under human influence, determine the structure of the entomofauna at a certain moment.

Usually in natural ecosystems the balance is established by parasites and predators but also by other abiotic factors such as: physical, chemical, mechanical and biotic ones: pathogens, also called "natural enemies", antagonists, as well food and competition (Toncea I., 2011)

Classical biological control (natural enemy introductions) has long served as a paradigm for the role of predators and parasitoids in insect herbivore population dynamics, and it is widely held that there is no fundamental difference between

successful biological control and the action of native natural enemies 'natural control' (Bradford A. Hawkins et al, 1999).

### MATERIAL AND METHODS

Observations were conducted during 2020-2021 in the Vulturesti Forest District – Olt county, area.

To determine the structure of the harmful entomofauna were made collection of material using various means and methods: directly by hand from plants or soil, frame metric, soil surveys and soil surface collected, visual inspection, collection with sticky traps for flying insects, light traps, analyzing samples with binocular magnifier glass directly in the field or laboratory.

After collecting of biological material was made the material collected was analyzed and determined with the binocular magnifier glass using the Identification Manual (Panin L. 1951, Chatened du Gaetan 1990, Chinery M. 1998, Godeanu S.P. 2002).

For as little impact on the ecosystem we have preferred to capture images with the camera than to capture live specimens were subsequently removed from their natural environment.

### RESULTS AND DISCUSSIONS

During the research, 72 species of Arthropods were collected and identified (belonging to the orders: Orthoptera, Dermaptera, Hymenoptera, Coleoptera, Lepidoptera, Diptera) of which 56 species are harmful and 16 species are useful parasites or predators (table no. 1)

Table nr.1

Entomofauna identified from O. S. Vulturesti - Olt

1. 2. 3. 4. 5.	<b>Order</b>  <b>ORTHOPTERA</b> <b>(5 species)</b>	<b>Harmful species</b> <i>Gryllotalpa gryllotalpa</i> L. <i>Gryllus campestris</i> L. <i>Gryllus desertus</i> L. <i>Caliptamus italicus</i> L. <i>Dociostaurus maroccanus</i> Thunb.
1.	<b>DERMAPTERA</b> <b>(1 specie)</b>	<b>Harmful species</b> <i>Forficula auricularia</i>
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	<b>HETEROPTERA</b> <b>(11 species)</b>	<b>Harmful species</b> <i>Lygus pratensis</i> L. <i>Dolycoris baccarum</i> L. <i>Eurygaster maura</i> L. <i>Eurygaster austriaca</i> Schr. <i>Aelia acuminata</i> L. <i>Aelia rostrata</i> Boh. <i>Eurygaster integriceps</i> L. <i>Pirocorys apterus</i> L. <i>Eurydema oleracea</i> L. <i>Eurydema ornata</i> L. <i>Grafosoma lineatum</i> L.
1. 2. 3.	<b>HYMENOPTERA</b> <b>(9 species)</b>	<b>Harmful species</b> <i>Vespa vulgaris</i> L. <i>Viespea germanica</i> L. <i>Vespa crabro</i> L.
1. 2. 3.		<b>Beneficial species</b> <i>Scolia flavifrons</i> F. <i>Bombis terrestris</i> L. <i>Syracopa violaceea</i> F.

4.		<i>Formica rufa</i> L.	
5.		<i>Formica polyctena</i> Fors.	
6.		<i>Formica pratensis</i> Rets.	
1.	<b>NEUROPTERA</b> <b>(2 species)</b>	<b>Beneficial species</b> <i>Crisopa carnea</i> Steph. <i>Crisopa perla</i> Steph.	
1.	<b>COLEOPTERA</b> <b>(27 species)</b>	<b>Harmful species</b> <i>Melolontha melolontha</i> L. <i>Amphimalon solstitialis</i> L. <i>Rhizothrogus aequinoctialis</i> Herb. <i>Polyphila fullo</i> F. <i>Anoxia villosa</i> F. <i>Agriotes obscurus</i> L. <i>Agriotes ustulatus</i> Schall: <i>Agriotes lineatus</i> L. <i>Phyllopertha horticola</i> L. <i>Cetonia aurata</i> L. <i>Anisoplia segetum</i> Hrbst. <i>Melasoma populi</i> L. <i>Opatrum sabulosum</i> L. <i>Subcoccinella 24 punctata</i> L. <i>Scolytus scolytus</i> Ratg. <i>Pentodon idiota</i> Hbst. <i>Cryptorrhynchus lapathi</i> L. <i>Saperda carcharis</i> L. <i>Saperda populnea</i> L. <i>Balaninus ( curculio) glandium</i> Marsh.	
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7.			
1.		<b>COLEOPTERA</b>	<b>Beneficial species</b> <i>Adalia decimpunctata</i> L. <i>Adalia bipunctata</i> L. <i>Coccinella 7 punctata</i> L <i>Carabus ulrichi</i> L. <i>Carabus violaceus</i> L. <i>Carabus cancelatus</i> L. <i>Calosoma sycophanta</i> L.
2.			
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7.			
1.		<b>LEPIDOPTERA</b> <b>(14 species)</b>	<b>Harmful species</b> <i>Lymantria dispar</i> L. <i>Hyphantria cunea</i> Drury <i>Agrotis segetum</i> Schiff. <i>Plusia gamma</i> L. <i>Zeuzera pyrina</i> L. <i>Pieris brassicae</i> L. <i>Aporia crataegi</i> L. <i>Tortrix viridana</i> L. <i>Leucoma salicis</i> L. <i>Euproctis chrysorrhoea</i> L. <i>Malacosoma neustria</i> L. <i>Operophtera brumata</i> L. <i>Erannis defoliaria</i> Cerk. <i>Dasychira pudibunda</i> Marsh.
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1.	<b>DYPTERA</b> <b>(3 species)</b>	<b>Beneficial species</b> <i>Syrphus ribesii</i> L. <i>Syrphus torvus</i> L.	
2.			
1.		<b>Harmful species</b> <i>Musca domestica</i> L.	

The most numerous order was Coleoptera with 27 species (37.5%), out of a total of 72 species of arthropods collected, followed by the order Lepidoptera with 14 species collected (19.44%), the order Heteroptera with 11 species collected (15 .27%), the order Hymenoptera with 9 species collected (12.5%), the order

Orthoptera with 5 species collected (6.94%), the order Diptera with 3 species collected (4.16%), the order Neuroptera with 2 species collected (2.77%), the order Dermaptera with only one species collected (1.38%). (Fig. 1.)

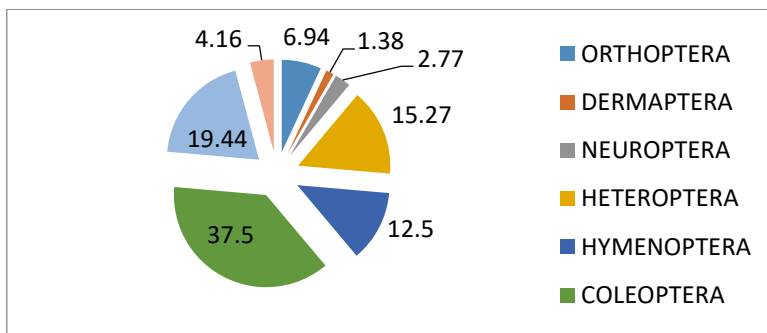


Fig.1. Systematic distribution of the identified entomofauna

Analyzing from the point of view of the damages caused to the plants, the structure of the entomofauna characteristic of the studied area, it can be observed that out of the 72 species collected 76.38% are harmful species and 23.61% useful species (parasites and predators).

### CONCLUSIONS

The entomofauna identified in the F. D. Vulturesti – Olt area corresponds to the forestry ecosystems in the area.

Some of the species identified as pests, for example *Forficula auricularia* or *Vespa* spp. they feed on other insect species (especially caterpillar), becoming useful at a certain time.

Along with the useful entomofauna in the studied area, there is a rich avifauna and a wide variety of mammal species that also contributes to the regulation of harmful populations of insects.

All these species considered useful fully contribute to the regulation of harmful populations of insects.

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