ANNALS OF THE UNIVERSITY OF CRAIOVA

Series: ✔*Biology*
✔*Horticulture*
✔*Food products processing technology*
✔*Environmental engineering*

Vol. XXVII (LXIII) - 2022

RESEARCH REGARDING THE ENTOMOFAUNA FROM PESTISANI AREA, GORJ COUNTY

Stan Catalin[1], Tuca Ovidiu[1],Ciupeanu Calugaru Eleonora Daniela[1]
[1]University of Craiova, , Faculty of Horticulture
** Correspondence author. E-mail*: catalin.stan@edu.ucv.ro

Keywords*: entomofauna, harmful species, predators species, parasites species*

ABSTRACT

From our observation regarding the entomofauna of Pestisani (Gorj County) area during the research, 100 species of Arthropods were collected and identified (belonging to the orders: Coleoptera with 40 species, Lepidoptera with 24 species collected, Heteroptera with 12 species collected, Hymenoptera with 10 species collected, Orthoptera with 7 species collected, Diptera with 4 species collected, Neuroptera with 2 species collected), the order Dermaptera with one species collected, of which 80 species are harmful and 20 species are useful parasites or predators.

INTRODUCTION

The commune of Peștișani belongs to Gorj county and is part of the Natura 2000 Site – Nordul Gorjului de Vest ROSCI0129, which covers an area of 86,958 hectares in 9 communes of Gorj county (Peștisani - Protected Area of National Interest - Piatra Boroștenilor - 28 ha)

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 2011)

MATERIAL AND METHODS

Observations were conducted during 2021-2022 in the Pestisani Gorj 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 1951, Chatened du Gaetan 1990, Chinery 1998, Godeanu 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, 100 species of Arthropods were collected and identified, belonging to the orders: Orthoptera, Dermaptera, Neuroptera, Hymenoptera, Coleoptera, Lepidoptera, Diptera (Table 1)

Table 1

Entomofauna identified

	Order	***Harmful species***
1.		*Gryllotalpa gryllotalpa* L.
2.	**ORTHOPTERA**	*Gryllus campestris* L.
3.	**(7 species)**	*Gryllus desertus* L.
4.		*Caliptamus italicus* L.
5.		*Dociostaurus maroccanus* Thunb.
6.		*Tetigonia viridisima* L.
7.		*Locusta migratoria* L.
	DERMAPTERA	***Harmful species***
1.	**(1 specie)**	*Forficula auricularia* L.
		Harmful species
1.		*Lygus pratensis* L.
2.		*Dolycoris baccarum* L.
3.	**HETEROPTERA**	*Eurygaster maura* L.
4.	**(12 species)**	*Eurygaster austriaca* Schr.
5.		*Aelia acuminata* L.
6.		*Aelia rostrata* Boh.
7.		*Eurygaster integriceps* L.
8.		*Pirocorys apterus* L.
9.		*Eurydema oleracea* L.
10.		*Eurydema ornata* L.
11.		*Grafosoma lineatum* L.
12.		*Nezara viridula L.*
		Harmful species
1.		*Vespa vulgaris* L.
2.	**HYMENOPTERA**	*Viespea germanica* L.
3.	**(10 species)**	*Vespa crabro* L.
		Beneficial species
1.		*Scolia flavifrons* F.
2.		*Bombis terestris* L.
3.		*Syrcopa violaceea* F.
4.		*Formica rufa* L.
5.		*Formica polyctena* Fors.
6.		*Formica pratensis* Retz.
7		*Apis melifera* L.
	NEUROPTERA	***Beneficial species***
1.	**(2 species)**	*Crisopa carnea Steph.*
2.		*Crisopa perla Steph.*
		Harmful species
1.		*Melolontha melolontha* L.
2.		*Amphimalon solstitialis* L.
3.		*Rhizothrogus aequinoctialis* Herb.
4.		*Polyphila fullo* F.
5.		*Anoxia villosa* F.
6.		*Agriotes obscurus* L.
7.	**COLEOPTERA**	*Agriotes ustulatus* Schall.
8.	**(40 species)**	*Agriotes lineatus* L.
9.		*Phyllopertha horticola* L.
10.		*Cetonia aurata* L.
11.		*Melasoma populi* L.
12.		*Opatrum sabulosum* L.
13.		*Subcoccinella 24 punctata* L.
14.		*Scolytus scolytus* Ratg.

15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 1. 2. 3. 4. 5. 6. 7.		*Pentodon idiota Hbst.* *Cryptorrhynchus lapathi* L. *Saperda carcharis* L. *Saperda populnea* L. *Balaninus(curculio) glandium* Marsh. *Epicometis hirta* Poda *Oxythyrea funesta* Poda *Anisoplia segetum* Herb. *Anisoplia austrica* Herb. *Anisoplia agricola* Poda *Zabrus tenebricoides* Goeze. *Melasoma populi* L. *Leptinotarsa decemlineata* Say. *Opatrum sabulosum* L. *Anomala solida* Er. *Phytodecta furnicata* L. *Ruguloscolytus rugulosus* Ratg. *Cerambyx cerdo* L. ***Beneficial species*** *Adalia decimpunctata* L. *Adalia bipunctata* L. *Coccinella 7 punctata* L. *Carabus ulrichi* L. *Carabus violaceus* L. *Carabus cancelatus* L. *Calosoma sycophanta* L.
1. 2. 3. 4 5. 6. 7. 8. 9. 10. 11 12 13 14 15 16 17 18 19 20 21 22 23 24	**LEPIDOPTERA** **(24 species)**	***Harmful species*** *Lymantria dispar* L. *Hyphantria cunea* Drury *Agrotis segetum* Schiff. *Plusia gamma* L. *Zeuzera pyrina* L. *Pieris brassicae* L. *Aporia crataegi* L. *Leucoma salicis* L. *Euproctis chrysorrhoea* L. *Malacosoma neustria* L. *Operophthera brumata* L. *Erannis defoliaria* Cerk. *Vanessa io* L. *Tortrix viridana* Drury *Agrotis segetum* Schiff. *Mamestra brassicae* L. *Zeuzera pyrina* L. *Cossus cossus* L. *Pieris brassicae* L. *Pieris rapae* L. *Aporia crataegi* L. *Pieris napi* L. *Argynnis paphia* L. *Lycaena dispar* L.
1. 2. 3 4	**DYPTERA** **(4 species)**	***Beneficial species*** *Syrphus ribesii* L. *Syrphus torvus* L. *Sarcophaga carnaria* L. *Musca domestica* L.

The most numerous order was Coleoptera with 40 species, out of a total of 100 species of arthropods collected, followed by the order Lepidoptera with 24

species collected, the order Heteroptera with 12 species collected, the order Hymenoptera with 10 species collected, the order Orthoptera with 7 species collected, the order Diptera with 4 species collected, the order Neuroptera with 2 species collected, the order Dermaptera with only one species collected. (Fig. 1.)

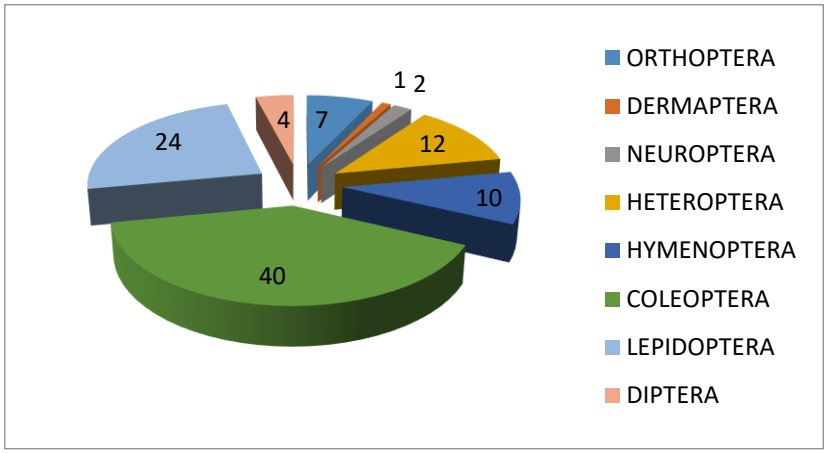

Figure 1. Systematic distribution of the identified entomofauna

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 100 collected species, 80 species are harmful species and 20 are useful species (parasites and predators) (Table 1).

CONCLUSIONS

The entomofauna identified in the Peștisani (Gorj county) area, corresponds to differently ecosystems in the area.

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.

REFERENCES

Chatened du Gaetan. 1990. Guide des Coleopteres d'Europe. Delacrois et Niestle, Paris.

Chinery M. 1998. Guida degli inseti d"Europa. Grupo editoriale Franco Muzzio editore, Padova, Italy.

Godeanu S.P. 2002: Diversitatea lumii vii. Determinatorul ilustrat al florei şi faunei României, Ed. Bucura Mond, Bucureşti, 2002.

Panin L. 1951. Determinatorul Coleopterelor dăunătoare şi folositoare din R.P.R. Editura de Stat, Bucureşti.

Toncea I. 2011. Perspective in controlul populatiilor de insecte Revista Fermierul online :martie 2011. ISSN 1843-0821.

*** Planul de management Situl Natura 2000 - Nordul Gorjului de Vest ROSCI0129. 2014.