

DYNAMICS OF SOME INVERTEBRATES WITHIN THE TINCA VILLAGE (BIHOR COUNTY, ROMANIA) DURING SEPTEMBER 2024-MARCH 2025

ILIE Aurelian Leonardo, CIOBOIU Olivia, ILIE Lorena Cosma

Abstract. This paper presents some classes of invertebrates identified in the Tinca village during September 2024-March 2025 (cold season). Sixty two species belonging to three classes, 8 orders and 61 genera were identified. *Ophraella communa* LeSage, *Podagricra fuscipes* Fabr., *Steatoda triangulosa* Walk are mentioned for the first time in the fauna of the Tinca area. Phenological anomalies were observed in eleven species.

Keywords: dynamics, invertebrates, Tinca area, phenological anomalies.

Rezumat. Dinamica a unor nevertebrate din satul Tinca (județul Bihor, România) în perioada septembrie 2024-martie 2025. Această lucrare prezintă unele clase de nevertebrate identificate în satul Tinca în perioada septembrie 2024-martie 2025 (sezonul rece). Au fost identificate 62 specii aparținând la trei clase, 8 ordine și 61 genuri. *Ophraella communa* LeSage, *Podagricra fuscipes* Fabr., *Steatoda triangulosa* Walk sunt menționate pentru prima dată în fauna zonei Tinca. Anomalii fenologice au fost observate la unsprezece specii.

Cuvinte cheie: dinamica, nevertebrate, zona Tinca, anomalii fenologice.

INTRODUCTION

The Tinca area is located in the south-western part of the Bihor county, the Crișana province. The average altitude is 115 m, the climate is temperate-continental and the vegetation belongs to the oak layer. The hydrographic system is represented by the Crișul Negru river.

MATERIALS AND METHODS

The research was carried out between September 2024 and March 2025. Species identification was made using the specific literature (PANIN, 1951; GROSSU, 1983; KIS, 1984; RAKOSY, 1996; KIS, 2001; SZEKELY, 2008; PURICE & CIOBOIU, 2012; RAKOSY, 2013; MANU et al., 2017; CHIRIAC et al., 2023; ***. araneae.nmbe.ch; ***. lepiforum.de).

RESULTS AND DISCUSSIONS

In the analyzed period, the following species of some classes of invertebrates were identified in the Tinca village area (Table 1).

Table 1. Some classes of invertebrates within the Tinca area during September 2024-March 2025.

Taxa	IX	X	XI	XII	I	II	III
Class Insecta							
Order Coleoptera							
<i>Lepyrus capucinus</i> Schaller, 1783	2	1					1
<i>Leptinotarsa decemlineata</i> Say, 1824	2	1					
<i>Cyphocleonus dealbatus</i> Gmelin, 1790	1						
<i>Sitona hispidulus</i> Fabricius, 1777	2	4					2
<i>Chrysolina sturmi</i> Westhoff, 1882	3						
<i>Ophraella communa</i> LeSage, 1986	1						
<i>Longitarsus lycopi</i> Foudras, 1860	1						
<i>Meloe rugosus</i> Marsham, 1802		2		1			
<i>Meloe proscarabaeus</i> Linnaeus, 1758							1
<i>Dorcadion scopoli</i> Herbst, 1784							1
<i>Exochomus quadripustulatus</i> Linnaeus, 1758						2	
<i>Coccinella septempunctata</i> Linnaeus, 1758	3	1			2		
<i>Harmonia axyridis</i> Pallas, 1773						1	
<i>Gonioctena fornicata</i> Bruggemann, 1873	4						18
<i>Galeruca rufa</i> Germar, 1824	1						1
<i>Clerus mutillarius</i> Fabricius, 1775							1
<i>Adalia bipunctata</i> Linnaeus, 1758	2						1
<i>Podagricra fuscipes</i> Fabricius, 1775							1
<i>Pyrrhidium sanguineum</i> Linnaeus, 1758							486
Order Mantodea							
<i>Mantis religiosa</i> Linnaeus, 1758	3	2	4				

Order Lepidoptera						
<i>Galleria mellonella</i> Linnaeus, 1758			1			
<i>Caradrina clavipalpis</i> Scopoli, 1763				2L		
<i>Phigalia pilosaria</i> Denis & Schiffermuller, 1775				2	1	
<i>Emmelina monodactyla</i> Linnaeus, 1758			15	2	1	6
<i>Pieris rapae</i> Linnaeus, 1758	5	1	22L+1N	13L		27
<i>Vanessa atalanta</i> Linnaeus, 1758			10			20
<i>Boloria dia</i> Linnaeus, 1767						1
<i>Nymphalis polychloros</i> Linnaeus, 1758						1
<i>Valeria oleagina</i> Denis & Schiffermuller, 1775						3
<i>Macroglossum stellatarum</i> Linnaeus, 1758			4			9
<i>Phragmatobia fuliginosa</i> Linnaeus, 1758						1L
<i>Noctua pronuba</i> Linnaeus, 1758						1L
<i>Agriopis bajaria</i> Denis & Schiffermuller, 1775			2			
<i>Lasiommata megera</i> Linnaeus, 1767	4	2	2			
<i>Thalophila matura</i> Hufnagel, 1766			1			
<i>Allophyes oxyacanthae</i> Linnaeus, 1758			1	2		
<i>Colias croceus</i> Geoffroy, 1785			2			
<i>Tuta absoluta</i> Meyrick, 1917			2			
<i>Helicoverpa armigera</i> Hubner, 1808			2L			
<i>Erannis defoliaria</i> Clerck, 1759				2		
<i>Operophtera brumata</i> Linnaeus, 1758				12		
<i>Achroia grisella</i> Fabricius, 1794			1			
<i>Diaphora mendica</i> Clerck, 1759						
<i>Anthocharis cardamines</i> Linnaeus, 1758						1
Order Diptera						
<i>Eristalis tennax</i> Linnaeus, 1758	26	23	6	13		5
<i>Musca domestica</i> Linnaeus, 1758	53	45	13			4
Order Orthoptera						
<i>Melanogryllus desertus</i> Pallas, 1771	13	12	6		1	2
Order Hemiptera						
<i>Nezara viridula</i> Linnaeus, 1758	11	5	14		11	
<i>Perillus bioculatus</i> Fabricius, 1775		1				
<i>Acrosternum heegeri</i> Fieber, 1861				4		
<i>Pyrhocoris apterus</i> Linnaeus, 1758	26	21	17		6	15
<i>Rhaphigaster nebulosa</i> Poda, 1761	2	1	9			
<i>Leptoglossus occidentalis</i> Heidemann, 1910			9			
<i>Lygaeus equestris</i> Linnaeus, 1758						10
Class Arachnida						
Order Araneae						
<i>Pisaura mirabilis</i> Clerck, 1757	15	6	3		1	1
<i>Gibbaranea bituberculata</i> Walckenaer, 1802	2	1			1	1
<i>Steatoda triangulosa</i> Walckenaer, 1802		1				
Class Gastropoda						
Order Stylommatophora						
<i>Deroceas reticulatum</i> Muller, 1774	3	2	2		5	8
<i>Arion vulgaris</i> Moquin-Tandon, 1855						1
<i>Helix pomatia</i> Linnaeus, 1758						1
<i>Cepaea hortensis</i> Muller, 1774						13
<i>Caucasotachea vindobonensis</i> Pfeiffer, 1828	2	3	1			3

Legend: L = larva; N= nymph.

During the analyzed period, 62 species belonging to 3 classes, 8 orders and 61 genera were identified. The class Insecta predominates (54 species, 87.09 %), followed by the classes Gastropoda (5 species, 8.06%) and Arachnida (3 species, 4.83%) (Fig. 1).

Ophraella communa LeSage (Photo 1) is mentioned for the first time in the fauna of the Tinca area, in the Bihor county, in the Crişana region and in the western part of Romania : one specimen, Tinca, September 16, 2024. So far, the species has been identified in Bucharest and Ilfov county, having entered Romania relatively recently (ILIE et al., 2021). Is a North American invasive species, used in the biological control of ragweed (*Ambrosia* sp.), which produces a number of allergies due to its pollen.

Podagricra fuscipes Fabr. (Photo 2) is mentioned for the first time in the Tinca area (ILIE et al., 2019).

Regarding the presence of the gastropods, they were only present on rainy days. The presence of the species *Helix pomatia* L., considered a relatively rare species in the Tinca area, is a pleasant surprise (NEACŞU & CIOBOIU, 1999; 2000; CIOBOIU et al., 2021).

The presence of spider species in the cold season in the Tinca area is reconfirmed, as a result of high positive temperatures recorded during this period (ILIE et al., 2024). *Steatoda triangulosa* Walk (Photo 3) is mentioned for the first time in the fauna of the Tinca area (ILIE & MARINESCU, 2022; 2023a).

The high temperatures of the cold season explain the presence of the *Mantis religiosa* L species until November 21, 2024, probably one of the latest observations of the species in Romania (ILIE & MARINESCU, 2023b). Thermal variations in the cold season caused phenological anomalies in lepidopteran species: *Pieris rapae* L. – one specimen, Tinca, March 3, 2025 (premature emergence by one month, RAKOSY, 2013; SZEKELY, 2008); *Boloria dia* L. – one specimen, Tinca, March 5, 2025 (premature emergence by one month and a half (RAKOSY, 2013; SZEKELY, 2008); *Thalophila matura* Hufn. – one specimen, Tinca, November 3, 2024 (an extension of the flight period by one month, the flight period lasts until September, RAKOSY, 1996); *Allophyas oxyacanthae* L. – one specimen, Tinca, December 9, 10, 2024 (an extension of the flight period by half a month, RAKOSY, 1996).

Other invertebrates observed active in the cold season although they should normally be in hibernation are: *Meloe rugosus* Marsh., *Emmelina monodactyla* L., *Eristalis tennax* L., *Acrosternum heegeri* Fieb., *Deroceras reticulatum* Mill.

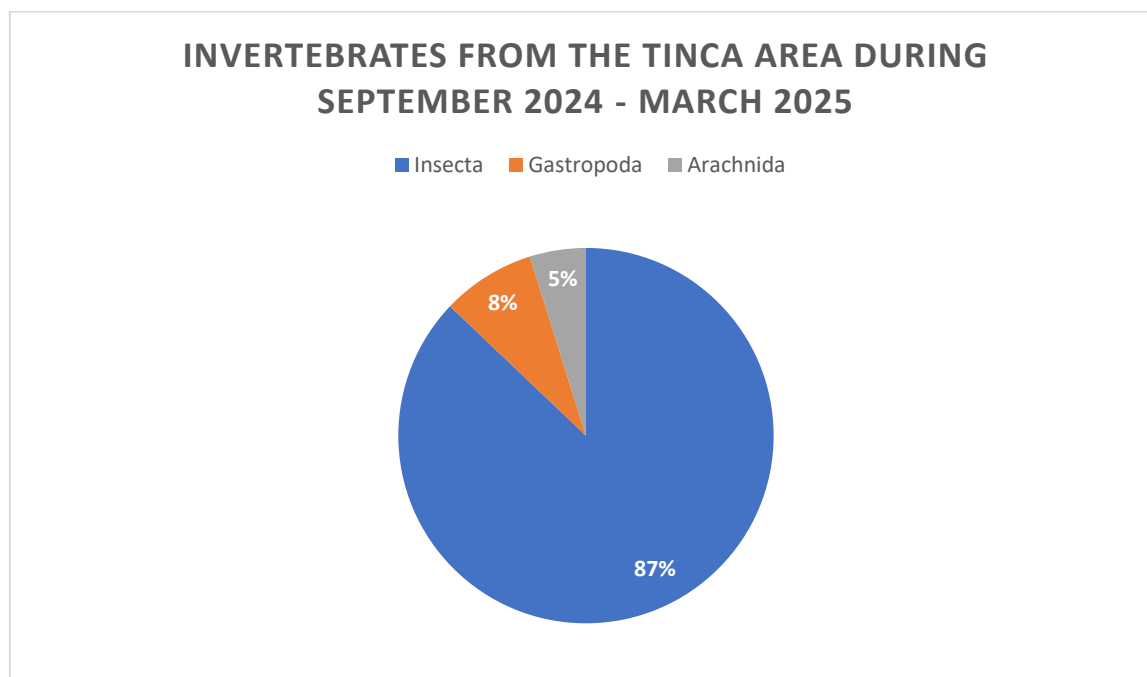


Figure 1. Some classes of invertebrates within the Tinca village during September 2024-March 2025 (original).



Photo 1. *Ophraella communis* LeSage (original).



Photo 2. *Podagricus fuscipes* Fabr. (original).



Photo 3. *Steatoda triangulosa* Walk (original).

CONCLUSIONS

During the analyzed period, 62 species, belonging to 3 classes, 8 orders and 61 genera were identified. Three species were mentioned for the first time in the fauna of the Tinca area. Phenological anomalies were observed in eleven species.

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Ilie Aurelian Leonardo

Nicolae Jiga Theoretical High School, 36A, Republicii Street, Tinca, Romania.
E-mail: aurelian_ilie@yahoo.fr

Cioboiu Olivia

The Oltenia Museum of Craiova, Popa Șapcă Street No 8, 200422, Craiova, Romania
E-mails: oliviacioboiu@gmail.com; cioboiu.olivia@yahoo.com

Ilie Lorena Cosma

Gymnasium School No 1, Batâr, Romania.
E-mail: aurelian_ilie@yahoo.fr

Received: April 15, 2025
Accepted: August 03, 2025