

A SURVEY OF KNOWN PARASITOIDES OF FAMILY CERAMBYCIDAE (INSECTA: COLEOPTERA: CHRYSOMELOIDEA)

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Abstract. The paper presents a survey of data on the parasite fauna on long-horned beetles taken from papers published in 1961-2009 (PANIN & SĂVULESCU, 1961; PISICĂ, 2001; PISICĂ & POPESCU, 2009). There were identified 85 species of parasites belonging to the order Hymenoptera, family Ichneumonidae, which parasitize on 67 species of host beetles.

Keywords: Ichneumonidae, Cerambycidae, parasites, beetle-host.

Rezumat. Studiul parazitoizilor întâlniți la familia Cerambycidae (Insecta: Coleoptera: Chrysomeloidea). Lucrarea prezintă o sinteză a datelor referitoare la parazitofauna unor specii de coleoptere (Cerambycidae) preluate din lucrări publicate între 1961-2009 (PANIN & SĂVULESCU, 1961; PISICĂ, 2001; PISICĂ & POPESCU, 2009). Au fost identificate 85 specii de paraziți aparținând ichneumonidelor (Hymenoptera: Ichneumonidae) care parazitează 67 de specii de coleoptere-gazdă.

Cuvinte cheie: Ichneumonidae, Cerambycidae, paraziți, coleoptere-gazdă.

INTRODUCTION

Ichneumonidae include a relatively large number of parasitic species in Romania. Adults feed on the nectar of flowers, but their larvae parasitize especially caterpillars and pupae of Lepidoptera, Coleoptera, Tenthredinidae etc. The adults may be pests of agricultural and silvicultural plants. But the larvae can be effectively used for biological control of insect pests of economically important plants (CONSTANTINEANU, 1959).

The first step in our investigation of parasites found in beetles is a synthesis of existing literary data. taken mainly from the papers published in 1961, 2001 and 2009 (PANIN & SĂVULESCU, 1961; PISICĂ, 2001; PISICĂ & POPESCU, 2009).

MATERIAL AND METHODS

The taxonomy and nomenclature of the identified species is in accordance with Fauna Europaea database. The species of parasites are presented in the alphabetical order and within them, in alphabetical order on subfamilies and tribes, in tabular form, which include host of beetles. Species of beetle-hosts (Coleoptera: Cerambycidae) and the subfamilies are also arranged alphabetically.

RESULTS AND DISCUSSIONS

After processing the data, there were identified 85 species of parasitic Ichneumonida (Table 1) and 67 hosts species of longhorned beetles Cerambycidae (Table 2). On the left of the table there are listed the species of parasites and on the right - the species of beetles (Table 1).

Table 1. Parasites of some species of Cerambycidae.

Tabel 1. Paraziții unor specii de cerambycide.

No.	Taxa (subfamilies, tribes, species)	Species of Cerambycidae	References
	Family ICHNEUMONIDAE		
Subfamily Acaenitinae			
Tribe Acaenitini			
1	<i>Arotes albicinctus</i> GRAVENHORST, 1829	<i>Plagionotus arcuatus</i> LINNÉ 1758	PISICĂ, 2001
2	<i>Phaenolobus saltans</i> (GRAVENHORST, 1829)	<i>Oberea (Amaurostoma) erythrocephala</i> (SCHRANK 1776)	
3	<i>P. terebrator</i> (SCOPOLI 1763)	<i>O. linearis</i> (LINNAEUS 1761)	
4	<i>P. fulvicornis</i> GRAVENHORST, 1829	<i>Phytoecia coerulescens</i> (SCOPOLI, 1763)	
Tribe Coleoceatrinii			
5	<i>Coleocentrus caligatus</i> GRAVENHORST 1829	<i>Callidium</i> sp.	PISICĂ, 2001
		<i>Phymatodes testaceus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Tetropium castaneum</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
Subfamily Banchinae			
Tribe Lissonotini			
6	<i>Lissonota buccator</i> THUNBERG 1822	<i>Tetropium castaneum</i> LINNÉ 1758	PISICĂ, 2001
		<i>T. gabrieli</i> WEISE 1905	
Tribe Stilbopini			
7	<i>Glypta ephipigera</i> KRIECHBAUMER 1895	<i>Sarpeda populnea</i> LINNÉ 1758	PISICĂ, 2001
8	<i>G. rostrata</i> HOLMGR.	<i>Sarpeda populnea</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
9	<i>G. teres</i> GRAVENHORST 1829	<i>Sarpeda populnea</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961 PISICĂ, 2001 PISICĂ & POPESCU, 2009

Subfamily Cryptinae (Gelinae)			
Tribe Acaenitini			
10	<i>Acoenitus dubitator</i> PANZER, 1800	<i>Phymatodes testaceus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Plagionotus arcuatus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
		<i>Toxotus cursor</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
Tribe Cryptini (Mesostenini)			
11	<i>Cryptus viduatorius</i> FABRICIUS 1804	<i>Sarpeda (Anaerea) carcharias</i> LINNÉ 1758 <i>S. populnea</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
12	<i>Caenocryptus minor</i> (GRAVENHORST, 1829)	<i>Hylotrupes bajulus</i> LINNÉ 1758	
13	<i>C. tener</i> THOMPSON 1873	<i>Exocentrus balteatus</i> MEYER 1933	PISICĂ, 2001
14	<i>Idiolispa analis</i> GRAV. 1807	<i>Sarpeda populnea</i> LINNÉ 1758	
15	<i>Mesostenus gladiator</i> (SCOPOLI, 1763)	<i>Monochamus galloprovincialis</i> OLIVIER 1795 <i>M. galloprovincialis pistor</i> GERMAR 1818	PANIN & SĂVULESCU, 1961 PISICĂ & POPESCU, 2009
16	<i>Nematopodius formosus</i> GRAV.	<i>Leiopus nebulosus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
17	<i>Stenarella gladiators</i> SCOPOLI 1763	<i>Monochamus galloprovincialis</i> OLIVIER 1795	PISICĂ, 2001
18	<i>Xylophrurus lancifer</i> GRAV.	<i>Hylotrupes bajulus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
19	<i>X. dispar</i> THUNBERG 1822	<i>Sarpeda (Anaerea) carcharias</i> LINNÉ 1758	PISICĂ, 2001
		<i>S. populnea</i> LINNÉ 1758	
Tribe Gelini			
20	<i>Hemiteles pedestri</i> FABRICIUS 1775	<i>Criocephalus (Arhopalus) quinquepunctatus</i> HARR.	PISICĂ, 2001
21	<i>Mastrus annulatus</i> BRISCHKE 1864	<i>Tetrops praeustus</i> (LINNAEUS 1758)	
Tribe Hemigasterini			
22	<i>Demopheles caliginosus</i> (GRAVENHORST, 1829)	<i>Clytus</i> sp.	PISICĂ, 2001
23	<i>Echthrus reluctator</i> L.	<i>Acanthocinus aedilis</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Phymatodes testaceus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Plagionotus arcuatus</i> LINNÉ 1758	PISICĂ & POPESCU, 2009
		<i>Rhagium inquisitor</i> LINNÉ 1758	PISICĂ, 2001
		<i>Sarpeda populnea</i> LINNÉ 1758	
Tribe Phygadeuontini			
24	<i>Phygadeon detestator</i> THUMB.	<i>Leiopus nebulosus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
25	<i>Hemiteles melanarius</i> GRAV.	<i>Pogonocherus (Pityphilus) fasciculatus</i> DEGEER 1775	PISICĂ, 2001
Subfamily Campopleginae			
26	<i>Pyracmon austriacus</i> TSCHKE.	<i>Aromia moschata moschata</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Monochamus sutor</i> LINNÉ 1758	
		<i>Tetropium castaneum</i> LINNÉ 1758	
		<i>T. fuscum</i> FABRICIUS 1787	
27	<i>P. lucidus</i> CLEM.	<i>Clytus arietis</i> LINNÉ 1758	
28	<i>P. xoridiformis</i> HOLMGR.	<i>Criocephalus rusticus</i> LINNÉ 1758	
		<i>Leptura rubra</i> LINNÉ 1758	
		<i>Pogonocherus (Pityphilus) fasciculatus</i> DEGEER 1775	
		<i>Tetropium fuscum</i> FABRICIUS 1787	
29	<i>P. xoridoideus</i> STROBL.	<i>Callidium violaceum</i> LINNÉ 1758	
		<i>Mesosa (Aphelocnemis) nebulosa</i> FABRICIUS 1781	
		<i>Phyrrhidium sanguineum</i> LINNÉ 1758	
		<i>Tetropium fuscum</i> FABRICIUS 1787	
Tribe Limnerini			
30	<i>Rhimphoctona fulvipes</i> HOLMGREN, 1858	<i>Rhopalopus macropus</i> GERMAR 1824	PISICĂ, 2001
		<i>Sarpeda (Anaerea) carcharias</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
Subfamily Diplozontinae			
31	<i>Promethes sulcator</i> (GRAVENHORST, 1829)	<i>Adimonia rustica</i> HW.	PISICĂ, 2001
Subfamily Ichneumoninae			
Tribe Ichneumonini			
32	<i>Barichneumon scriptorius</i> THUMB.	<i>Semanotus ruscicus ruscicus</i> FABRICIUS 1776	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
Tribe Phaeogenini			
33	<i>Diadromus subtilicornis</i> (GRAVENHORST, 1829)	<i>Saperda populnea</i> LINNÉ 1758	PISICĂ, 2001
Subfamily Lycorinae			
34	<i>Lycorina triangulifera</i> HOLMGREN, 1859	<i>Sarpeda populnea</i> LINNÉ 1758	PISICĂ, 2001
Subfamily Pimplinae (Ephialtinae)			
Tribe Perithoini			
35	<i>Calliclisis hectica</i> GRAV.	<i>Vadonia livida</i> FABRICIUS 1776	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
36	<i>Perithous divinator</i> ROSSI	<i>Aromia moschata moschata</i> LINNÉ 1758	
		<i>Leptura quadrifasciata</i> LINNÉ 1758	
		<i>Monochamus galloprovincialis</i> OLIVIER 1795	
37	<i>P. mediator</i> FABRICIUS	<i>M. galloprovincialis pistor</i> GERMAR 1818	
		<i>Srangalia quadrifasciata</i> LINNÉ 1758	
Tribe Ephialtini			
38	<i>Clistipyga sauberi</i> BRAUNS 1898	<i>Tetropium gabrieli</i> WEISE 1905	PISICĂ, 2001
39	<i>Dolichomitus aciculatus</i> HELLEN 1915	<i>T. gabrieli</i> WEISE 1905	
40	<i>D. cephalotes</i> HOLMGREN 1860	<i>Monochamus rosenmuelleri</i> (CEDERJELM 1798)	PISICĂ, 2001
41	<i>Ephialtes (Dolichomitus) dux</i> TSCHKE.	<i>Rhagium inquisitor</i> LINNAEUS 1758	
		<i>Tetropium fuscum</i> FABRICIUS 1787	PANIN & SĂVULESCU, 1961

42	<i>E. (Dolichomitus) gauronii</i> GREGOR	<i>Gaurotes excellens</i> BRANCSIK 1874	PISICĂ, 2001
43	<i>E. manifestator</i> L.	<i>Cerambix cerdo</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Clytus tropicus</i> PANZER 1795	PANIN & SĂVULESCU, 1961
		<i>C. lama</i> MULSANT 1847	
		<i>Hylotrupes bajulus</i> LINNÉ 1758	
		<i>Oberea oculata</i> LINNÉ 1758	
		<i>Phymatodes testaceus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Plagionotus arcuatus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Pogonocherus hispidus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>P. hispidulus</i> PILLER & MITTERPACHER 1783	PISICĂ, 2001
		<i>P. (Pityphilus) fasciculatus</i> DEGEER 1775	PANIN & SĂVULESCU, 1961
		<i>Sarpeda populnea</i> LINNÉ 1758	PISICĂ, 2001
		<i>Spondylis buprestoides</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Xylotrechus rusticus</i> LINNÉ 1758	
		<i>Acanthocinus aedilis</i> LINNÉ 1758	
<i>Cerambix scopoli</i> FUESSLY 1775			
44	<i>E. (Dolichomitus) mesocentrus</i> GRAV.	<i>Gaurotes excellens</i> BRANCSIK 1874	PANIN & SĂVULESCU, 1961
		<i>Phymatodes testaceus</i> LINNÉ 1758	
		<i>Plagionotus detritus</i> LINNÉ 1758	
		<i>Purpuricenus kaehleri</i> LINNÉ 1758	
45	<i>E. (Dolichomitus) messor</i> GRAV.	<i>Aromia moschata moschata</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Lamia textor</i> LINNÉ 1758	
		<i>Oberea oculata</i> LINNÉ 1758	
		<i>Sarpeda populnea</i> LINNÉ 1758	
46	<i>E. (Dolichomitus) populneus</i> RTZB.	<i>S. populnea</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>S. (Anaerea) carcharias</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Plagionotus arcuatus</i> LINNÉ 1758	PISICĂ, 2001
		<i>Rhagium inquisitor</i> LINNÉ 1758	
47	<i>E. (Dolichomitus) tuberculatus</i> FOURCR.	<i>Acanthocinus aedilis</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Aromia moschata moschata</i> LINNÉ 1758	
		<i>Cerambix cerdo</i> LINNÉ 1758	
		<i>C. scopoli</i> FUESSLY 1775	
		<i>Gaurotes excellens</i> BRANCSIK 1874	
		<i>Monochamus galloprovincialis</i> OLIVIER 1795	
		<i>M. galloprovincialis pistor</i> GERMAR 1818	
		<i>Oplosia fennica</i> PAYKULL 1800	
		<i>Phymatodes testaceus</i> LINNÉ 1758	
48	<i>E. (Dolichomitus) terebrans</i> RATZEBURG	<i>Rhagium mordax</i> DEGEER 1775	PANIN & SĂVULESCU, 1961
		<i>Pogonocherus (Pityphilus) fasciculatus</i> DEGEER 1775	
		<i>P. hispidus</i> LINNÉ 1758	
		<i>Tetropium fuscum</i> FABRICIUS 1787	
49	<i>E. (Townesia) tenuiventris</i> HOLMGR.	<i>Phymatodes testaceus</i> LINNÉ 1758	PISICĂ, 2001
		<i>Sarpeda populnea</i> LINNÉ 1758	
50	<i>E. (Dolichomitus) sagax</i> HARTING	<i>Pogonocherus (Pityphilus) fasciculatus</i> DEGEER 1775	PANIN & SĂVULESCU, 1961
51	<i>E. (Dolichomitus) sericeus</i> HARTIG 1847	<i>Tetropium cinnamopterum</i> KIRBY 1837	PISICĂ, 2001
		<i>Tetropium</i> sp.	
52	<i>E. subglabratus</i> PERK.	<i>Molorchus (Caenoptera) minor</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Phymatodes testaceus</i> LINNÉ 1758	
53	<i>Paraperithos gnahtaulax</i> THOMPSON 1877	<i>Achantocinus carinulatus</i> GEBLER 1833	PISICĂ, 2001
54	<i>Scambus triangularis</i> VERHOEFF 1890	<i>Oberea linearis</i> (LINNAEUS 1761)	
55	<i>Townesia tenuivenrtis</i> HOLMGREN 1860	<i>Sarpeda populnea</i> LINNÉ 1758	
Tribe Theroniini			
56	<i>Atractogaster semisculptus</i> KRIECHBAUMER 1872	<i>Acanthocinus aedilis</i> LINNÉ 1758	PISICĂ, 2001
57	<i>Pseudorhyssa maculicoxis</i> KRIECHBAUMER 1889	<i>Monochamus</i> sp.	PISICĂ, 2001
Subfamily Orthocentrinae			
58	<i>Orthocentrus fulvipes</i> GRAV.	<i>Leiopus nebulosus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Sarpeda scalaris</i> LINNÉ 1758	
Subfamily Phaeoginae			
59	<i>Proscus suspicax</i> WESM.	<i>Sarpeda populnea</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
Subfamily Poemeniinae			
Tribe Poemeniini			
60	<i>Neoxorides collaris</i> GRAV.	<i>Acanthocinus aedilis</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>A. carinulatus</i> GEBLER 1833	PISICĂ, 2001
		<i>Plagionotus arcuatus</i> LINNÉ 1758	
		<i>Rhagium inquisitor</i> LINNÉ 1758	
		<i>Tetropium castaneum</i> LINNÉ 1758	

		<i>T. fuscum</i> FABRICIUS 1787	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
		<i>T. gabrieli</i> WEISE 1905	PISICĂ, 2001
61	<i>N. nitens</i> var. <i>albicollis</i> CLÉM.	<i>Plagionotus detritus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
62	<i>N. nitens</i> GRAV.	<i>Asemum striatum</i> LINNÉ 1758	PISICĂ, 2001
		<i>Clytus arietis</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Clytus</i> sp.	PISICĂ, 2001
		<i>Phymatodes testaceus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Phyrrhidium sanguineum</i> LINNÉ 1758	PISICĂ, 2001
		<i>Plagionotus arcuatus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>P. detritus</i> LINNÉ 1758	
		<i>Sarpeda (Anaerea) carcharias</i> LINNÉ 1758	
63	<i>Deuteroxorides albitarsus</i> GRAV.	<i>Tetropium castaneum</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
		<i>Callidium aeneum</i> DE GEER 1775	PISICĂ, 2001
		<i>Leiopus nebulosus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
		<i>L. nebulosus</i> LINNÉ 1758	PISICĂ, 2001
		<i>Prionus coriarius</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
64	<i>Poemia notata</i> HOLMGREN, 1859	<i>Nothorhina punctata</i> (DALMAN 1817)	PISICĂ, 2001
65	<i>Podoschistus scutellaris</i> DESVIGNES 1856	<i>Clytus arietis</i> LINNÉ 1758	
		<i>Leiopus nebulosus</i> LINNÉ 1758	
Subfamily Rhyssinae			
Tribe Rhyssini			
66	<i>Rhyssa amoena</i> GRAV.	<i>Criocephalus rusticus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Cerambix cerdo</i> LINNÉ 1758	PISICĂ, 2001
		<i>Monochamus sutor</i> LINNÉ 1758	
67	<i>R. persuasoria</i> L.	<i>Tetropium fuscum</i> FABRICIUS 1787	PANIN & SĂVULESCU, 1961
		<i>T. gabrieli</i> WEISE 1905	PISICĂ, 2001
		<i>Cerambix cerdo</i> LINNÉ 1758	
		<i>C. scopoli</i> FUESSLY 1775	
		<i>Monochamus sartor</i> FABRICIUS 1787	
		<i>Spondylis buprestoides</i> LINNÉ 1758	
Subfamily Xoridinae			
68	<i>Sichelia filiformis</i> GRAV.	<i>Acanthocinus aedilis</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Callidium aeneum</i> DEGEER 1775	
		<i>Clytus tropicus</i> PANZER 1795	
		<i>Phymatodes testaceus</i> LINNÉ 1758	
		<i>Phyrrhidium sanguineum</i> LINNÉ 1758	
		<i>Plagionotus arcuatus</i> LINNÉ 1758	
		<i>P. detritus</i> LINNÉ 1758	
		<i>Rhagium inquisitor</i> LINNÉ 1758	
69	<i>Xylophrura lancifer</i> GRAV.	<i>Xylotreccus rusticus</i> LINNÉ 1758	
70	<i>Xorides ater</i> GRAVENHORST 1829	<i>Sarpeda populnea</i> LINNÉ 1758	PISICĂ, 2001
		<i>Criocephalus rusticus</i> LINNÉ 1758	
		<i>Tetropium castaneum</i> LINNÉ 1758	
		<i>T. fuscum</i> FABRICIUS 1787	
71	<i>X. alpestris</i> HABERMEHL 1903	<i>T. gabrieli</i> WEISE 1905	
72	<i>X. brachyalis</i> KRIECHBAUMER 1889	<i>Necydalis major</i> LINNAEUS 1758	PISICĂ, 2001
		<i>Tetropium castaneum</i> LINNÉ 1758	
		<i>T. fuscum</i> FABRICIUS 1787	
73	<i>X. fuliginator</i> THUMB.	<i>T. gabrieli</i> WEISE 1905	PANIN & SĂVULESCU, 1961
		<i>Acanthoderes clavipes</i> SCHRANK 1781	
		<i>Criocephalus rusticus</i> LINNÉ 1758	
74	<i>X. gracilicornis</i> GRAVENHORST 1829	<i>Molorchus minor</i> LINNÉ 1758	PISICĂ, 2001
75	<i>X. (Xorides) irrigator</i> FABRICIUS 1793	<i>Acanthocinus aedilis</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Acanthocinus carinulatus</i> GEBLER 1833	PISICĂ, 2001
		<i>Mesosa (Aphelocnemia) nebulosa</i> FABRICIUS 1781	PANIN & SĂVULESCU, 1961
		<i>Tetropium gabrieli</i> WEISE 1905	PISICĂ, 2001
		<i>Plagionotus arcuatus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Rhagium inquisitor</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
76	<i>X. niger</i> PFEFFER var. <i>bicolor</i> GRAV.	<i>Tetropium castaneum</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Molorchus minor</i> LINNÉ 1758	
77	<i>X. (Gonophonus) propinquus</i> TSCHKE .	<i>M. minor</i> LINNÉ 1758	PISICĂ, 2001
		<i>Niphona picticornis</i> MULSANT 1839	
		<i>Semanotus ruscicus ruscicus</i> FABRICIUS 1776	PANIN & SĂVULESCU, 1961 PISICĂ, 2001
		<i>Trichoferus griseus</i> FABRICIUS 1792	PISICĂ, 2001

78	<i>X. (Xorides) praecatorius</i> F.	<i>Aromia moschata moschata</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Callidium aeneum</i> DEGEER 1775	PISICĂ, 2001
		<i>Gaurotes excellens</i> BRANCSIK 1874	PANIN & SĂVULESCU, 1961
		<i>Tetropium castaneum</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Phymatodes testaceus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Phyrrhidium sanguineum</i> LINNÉ 1758	PISICĂ, 2001
		<i>Plagionotus arcuatus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Sarpeda scalaris</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Tetropium fuscum</i> FABRICIUS 1787	PISICĂ, 2001
		<i>Callidium violaceum</i> LINNÉ 1758	PISICĂ, 2001
		<i>Leiopus nebulosus</i> LINNÉ 1758	
79	<i>X. (Moerophora) rufipes</i> GRAV.	<i>Tetropium castaneum</i> LINNÉ 1758	PISICĂ, 2001
		<i>Rhagium inquisitor</i> LINNÉ 1758	
80	<i>X. securicornis</i> HOLMGR.	<i>Leiopus nebulosus</i> LINNÉ 1758	PANIN & SĂVULESCU, 1961
		<i>Phymatodes alnis</i> LINNÉ 1758	PISICĂ, 2001
		<i>P. (Poecilium) fasciatus</i> VILLERS, 1789	
81	<i>Ischnoceros caligatus</i> GRAVENHORST 1829	<i>Aromia moschata</i> LINNÉ 1758	PISICĂ, 2001
		<i>Criocephalus rusticus</i> LINNÉ 1758	
		<i>Leiopus nebulosus</i> LINNÉ 1758	
		<i>Rhagium bifasciatum</i> FABRICIUS 1775	
		<i>R. inquisitor</i> LINNÉ 1758	
		<i>R. mordax</i> DEGEER 1775	
		<i>Sarpeda carcharias</i> LINNÉ 1758	
82	<i>I. caligatus</i> GRAVENHORST 1829	<i>Aromia moschata</i> LINNÉ 1758	
		<i>Rhagium mordax</i> DEGEER 1775	
		<i>R. bifasciatum</i> FABRICIUS 1775	
		<i>Sarpeda carcharias</i> LINNÉ 1758	
83	<i>Odontocolon dentipes</i> GMELIN, 1790	<i>Criocephalus rusticus</i> LINNÉ 1758	
		<i>Spondylis buprestoides</i> LINNÉ 1758	
84	<i>O. quercinum</i> THOMSON 1877	<i>Monochamus galloprovincialis</i> OLIVIER 1795	
85	<i>O. spinipes</i> GRAVENHORST 1829	<i>Pogonocherus hispidulus</i> PILLER & MITTERPACHER 1783	
		<i>Rhagium</i> sp.	

The 85 species of parasitich Ichneumonids belong to 13 subfamilies: Acaenitinae (5 species), Banchinae (4 species), Cryptinae (16 species), Campopleginae (5 species), Diplozontinae (1 species), Ichneumoninae (2 species), Lycorinae (1 species), Pimplinae (23 species), Orthocentrinae (1 species), Phaeoginae (1 species), Poemeniinae (6 species), Rhyssinae (2 species), and Xoridinae (18 species). Some of the subfamilies are subdivided into tribes (Table 2).

Table 2. Numerical and percentage distribution of the parasite species on subfamilies and tribes.
Tabel 2. Distribuția numerică și procentuală a speciilor de paraziți pe subfamilii și triburi.

No.	Subfamilies	Tribes	No. of species		%
1	Subfamily Acaenitinae	Tribe Acaenitini	4	5	7%
		Tribe Coleoceatrinini	1		
2	Subfamily Banchinae	Tribe Lissonotini	1	4	5%
		Tribe Stilbopini	3		
3	Subfamily Cryptinae (Gelinae)	Tribe Acaenitini	1	16	21%
		Tribe Cryptini (Mesostenini)	9		
		Tribe Gelini	2		
		Tribe Hemigasterini	2		
		Tribe Phygadeuontini	2		
4	Subfamily Campopleginae		4	5	7%
		Tribe Limnerini	1		
5	Subfamily Diplozontinae		1	1	1%
6	Subfamily Ichneumoninae	Tribe Ichneumonini	1	2	3%
		Tribe Phaeogenini	1		
7	Subfamily Lycorinae		1	1	1%
8	Subfamily Pimplinae	Tribe Ephialtini	18	23	31%
		Tribe Perithoini	3		
		Tribe Theroniini	2		
9	Subfamily Orthocentrinae		1	1	1%
10	Subfamily Phaeoginae		1	1	1%
11	Subfamily Poemeniinae	Tribe Poemeniini	6	6	8%
12	Subfamily Rhyssinae	Tribe Rhyssini	2	2	3%
13	Subfamily Xoridinae		18	18	11%
Total			85	85	100

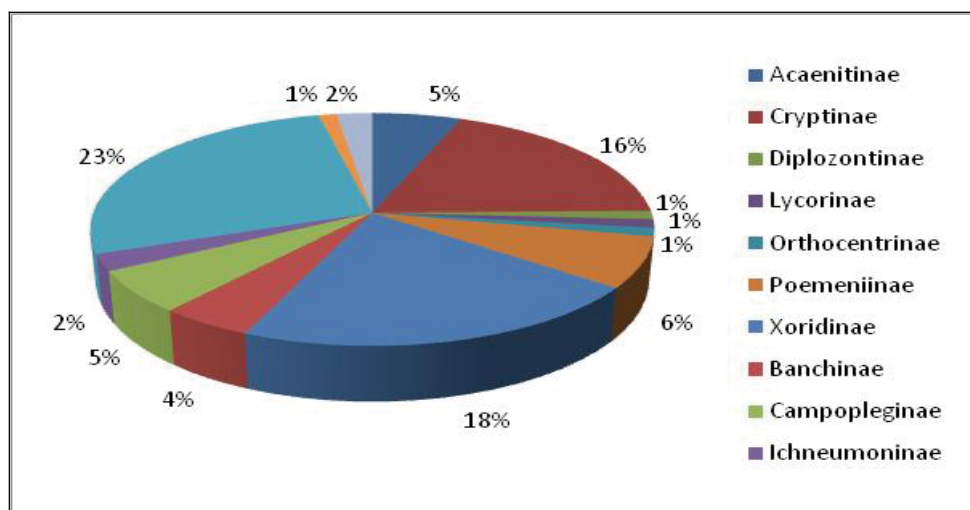


Figure 1. Comparative percentages of species of the family Ichneumonidae.
 Figura 1. Procentajele comparative ale speciilor de paraziți (Ichneumonidae).

Most parasites found on long-horned beetles belong to Pimplinae subfamily (23 species), while the lowest number (each one species) belongs to the subfamilies Diplozontinae, Lycorinae, Orthocentrinae and Phaeoginae (Fig. 1).

Most host beetle belong the subfamily Lamiinae (26 species), and other hosts belong to the following subfamilies: Cerambycinae (21 species), Lepturinae (8 species), Necydalinae (1 species), Prioninae (1 species) and Spondylidinae (11 species) (Fig. 2).

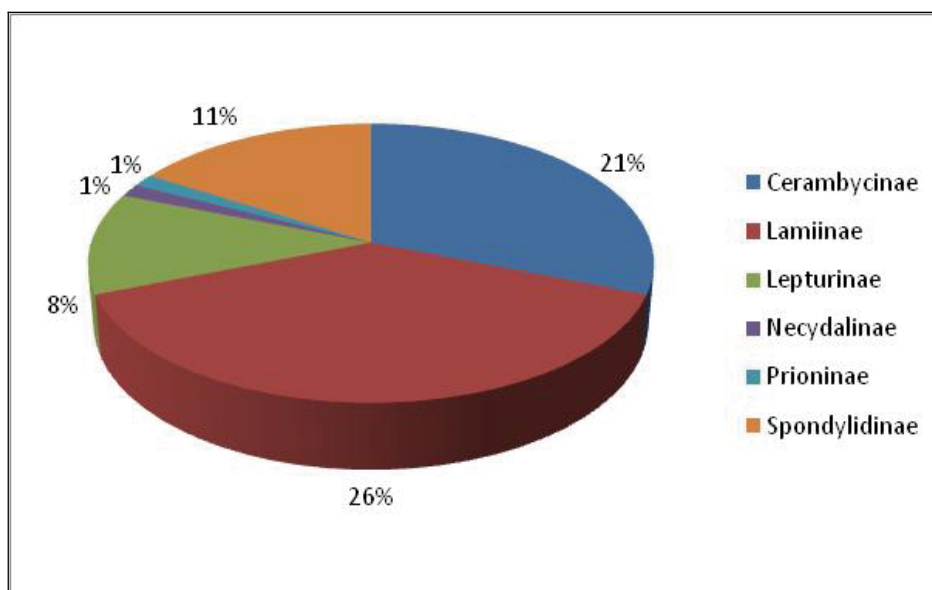


Figure 2. Distribution of subfamilies within the family of Cerambycidae.
 Figura 2. Distribuția subfamiliilor în cadrul familiei Cerambycidae.

We analyzed the data to be useful material and in terms of diversity of hosts. We found 67 species of beetles belonging to the family Cerambycidae. Each of them are hosts of several species of parasites (Table 3).

Table 3. Cerambycid host species for Ichneumonidae.
 Tabel 3. Specii de cerambycide-gază pentru Ichneumonidae.

No.	Species of beetles	Subfamilies of beetles
1	<i>Aromia moschata moschata</i> LINNÉ 1758	Subfamily Cerambycinae
2	<i>Callidium aeneum</i> DEGEER 1775	
3	<i>C. violaceum</i> LINNÉ 1758	
4	<i>Cerambyx cerdo</i> LINNÉ 1758	
5	<i>C. scopoli</i> FUESSLY 1775	
6	<i>Clytus arietis</i> LINNÉ 1758	
7	<i>C. lama</i> MULSANT 1847	
8	<i>C. tropicus</i> PANZER 1795	

9	<i>Hylotrupes bajulus</i> LINNÉ 1758	Subfamily Cerambycinae
10	<i>Molorchus (Caenoptera) minor</i> LINNÉ 1758	
11	<i>Phymatodes alnis</i> LINNÉ 1758	
12	<i>P. (Poecilium) fasciatus</i> VILLERS, 1789	
13	<i>Phyrrhidium sanguineum</i> LINNÉ 1758	
14	<i>P. testaceus</i> LINNÉ 1758	
15	<i>Plagionotus arcuatus</i> LINNÉ 1758	
16	<i>P. detritus</i> LINNÉ 1758	
17	<i>Purpuricenus kaehleri</i> LINNÉ 1758	
18	<i>Rhopalopus macropus</i> GERMAR 1824	
19	<i>Semanotus ruscicus ruscicus</i> FABRICIUS 1776	
20	<i>Trichoferus griseus</i> FABRICIUS 1792	
21	<i>Xylotreccus (Rusticoclytus) rusticus</i> LINNÉ 1758	
22	<i>Acanthoderes (Aegomorphu) clavipes</i> SCHRANK 1781	Subfamily Lamiinae
23	<i>Acanthocinus aedilis</i> LINNÉ 1758	
24	<i>A. carinulatus</i> GEBLER 1833	
25	<i>Lamia textor</i> LINNÉ 1758	
26	<i>Mesosa (Aphelocnemia) nebulosa</i> FABRICIUS 1781	
27	<i>Monochamus galloprovincialis</i> OLIVIER 1795	
28	<i>M. galloprovincialis pistior</i> GERMAR 1818	
29	<i>M. rosenmulleri</i> (CEDERJELM 1798)	
30	<i>M. sartor</i> FABRICIUS 1787	
31	<i>M. sutor</i> LINNÉ 1758	
32	<i>Niphona picticornis</i> MULSANT 1839	
33	<i>Oberea (Amaurostoma) erythrocephala</i> (SCHRANK 1776)	
34	<i>O. oculata</i> LINNÉ 1758	
35	<i>O. linearis</i> (LINNAEUS 1761)	
36	<i>Phytoecia coerulea</i> (SCOPOLI, 1763)	
37	<i>Pogonocherus (Pityphilus) fasciculatus</i> DEGEER 1775	
38	<i>P. hispidulus</i> PILLER & MITTERPACHER 1783	
39	<i>P. hispidus</i> LINNÉ 1758	
40	<i>Acanthocinus aedilis</i> LINNÉ 1758	
41	<i>A. carinulatus</i> GEBLER 1833	
42	<i>Leiopus nebulosus</i> LINNÉ 1758	
43	<i>Sarpeda (Anaerea) carcharias</i> LINNÉ 1758	
44	<i>S. populnea</i> LINNÉ 1758	
45	<i>S. scalaris</i> LINNÉ 1758	
46	<i>Tetrops praeustus</i> (LINNAEUS 1758)	Subfamily Lepturinae
47	<i>Gaurotes excellens</i> BRANCSIK 1874	
48	<i>Leptura rubra</i> LINNÉ 1758	
49	<i>L. quadrifasciata</i> LINNÉ 1758	
50	<i>Rhagium inquisitor</i> LINNÉ 1758	
51	<i>R. bifasciatum</i> FABRICIUS 1775	
52	<i>R. mordax</i> DEGEER 1775	
53	<i>Strangalia quadrifasciata</i> LINNÉ 1758	
54	<i>Vadonia livida</i> FABRICIUS 1776	Subfamily Necydalinae
55	<i>Necydalis major</i> LINNAEUS 1758	
56	<i>Prionus coriarius</i> LINNÉ 1758	Subfamily Prioninae
57	<i>Arhopalus rusticus</i> LINNÉ 1758	
58	<i>Asemum striatum</i> LINNÉ 1758	Subfamily Spondylidinae
59	<i>Criocephalus (Arhopalus) quinquepunctatus</i> HARR.	
60	<i>C. rusticus</i> LINNÉ 1758	
61	<i>C. quinquepunctatus</i> HARR.	
62	<i>Nothorhina punctata</i> (DALMAN 1817)	
63	<i>Spondylis buprestoides</i> LINNÉ 1758	
64	<i>Tetropium castaneum</i> LINNÉ 1758	
65	<i>T. cinnamopterum</i> KIRBY 1837	
66	<i>T. fuscum</i> FABRICIUS 1787	
67	<i>T. gabrieli</i> WEISE 1905	

Most host beetle found in the subfamily Lamiinae (25 species), and other parasites belong to the following subfamilies: subfamily Cerambycinae (21 species), subfamily Lepturinae (8 species), subfamily Necydalinae (1 species), subfamily Prioninae (1 species) and subfamily Spondylidinae (11 species) (Fig. 2).

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