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**ARTHROPODS (*ACARI*, *ANOPLURA*, *COLEOPTERA*,
SIPHONAPTERA) OF SMALL MAMMALS
OF THE PODKARPACIE PROVINCE (SOUTH-EAST POLAND)**

**STAWONOGI (*ACARI*, *ANOPLURA*, *COLEOPTERA*,
SIPHONAPTERA) DROBNYCH SSAKÓW WOJEWÓDZTWA
PODKARPACIEGO (POLSKA POŁUDNIOWO-WSCHODNIA)**

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2870 arthropods belonging to 128 species were obtained from 1157 small mammals of 23 species of the Podkarpackie province. 62 species were found in Bieszczady Mts, 87 in Beskid Niski Mts, 49 Pogórze Przemysko-Dynowskie and 73 species in Nizina Sandomierska. Total, 2414 Acari of 100 species, 162 Anoplura of 7 species, 14 Coleoptera of 1 species and 280 Siphonaptera of 20 species were found in the Podkarpackie province. *Schizophthirus jaczewskii*, *S. pleurophaeus*, *Palaeopsylla steini*, *Laelaps algericus*, *Haemogamasus hirsutosimilis*, *Lophioglysus liciosus*, *Gliricoptes muscardinus*, *Crocidurobia michaeli* and *Leptotrombidium silvaticum* are very rare species in Poland. Most arthropod species were collected from *C. glareolus* (50), *S. araneus* (45), *A. agrarius* (43) and *M. arvalis* (40).

KEY WORDS: *Acari*, *Anoplura*, *Coleoptera*, *Siphonaptera*, mammals, South-East Poland, faunistic

INTRODUCTION

The arthropod fauna of small mammals were examined in Bieszczady Mts., Beskid Niski Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska in the Podkarpackie

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province. The arthropods occurring on small mammals living in studied areas were not satisfactorily examined. Only some information about the Siphonaptera from Bieszczady Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska were given (Skuratowicz 1964, 1967, 1981, Haitlinger 1978, 1983b, 1987b, 2006a, Bartkowska 1986, Haitlinger & Turek, 2006); on Anoplura from Bieszczady Mts. (Gerwel 1954, Szczęśniak 1963); sporadic information on Acari from all studied areas were given by Haitlinger (1981a, 1987b, 1989a, 2006a) and Haitlinger & Turek (2006). In this paper information about the arthropods occurring on small mammals are based on rich material. Many species of arthropods were found in studied areas for the first time

MATERIAL AND METHODS

The investigation were carried out in 1972–2007. Mammals were caught into snap-traps. The arthropods were combed from fur of mammal and then preserved in ethanol and later they were mounted in Berlese's fluid. Small mammals were collected in the Podkarpackie province in: Bieszczady Mts. (including the Pogórze Bieszczadzkie): Berezka, Bóbrka n. Solina, Brzegi Górne, Dział, Hoczew, Kalnica, Lutowiska, Myczków, Polana, Połonina Wetlińska, Przełęcz Wetlińska, Rabe, Rajskie, Skorodne, Stuposiany, Wielka Rawka, Wołosate, Wola Michowa; Beskid Niski Mts., (incl. part of the Małopolskie prov.): Bodaki, Bukowsko, Chyrowa, Folusz, Gładyszów, Grab, Hańczowa, Iwonicz, Klimkówka, Nowy Żmigród, Olchowiec, Polany, Posada Górna, Świątkowa Wielka, Wisłok; Pogórze Przemysko-Dynowskie: Bircza, Czarnorzeki, Dydnia, Huwniki, Nowosiółki Dydyńskie, Piątkowa, Rokszycy, Tarnawka, Tyrawa Wołoska and Nizina Sandomierska (part of the Podkarpackie prov.): Baranów Sandomierski, Basznia Dolna, Basznia Górna, Dzikowiec Stary, Horyniec, Huta Różaniecka, Kamionka, Nowa Grobla, Nowy Lubliniec, Pilzno, Podemszczyzna, Ruda Łańcucka, Sędziszów Małopolski, Sieraków, Skopanie Fabryczne, Werchrata). 2870 arthropods of 128 species were caught from 1157 small mammals of 23 species (Tab. 1): 2414 *Acari* of 100 species, 162 *Anoplura* of 7 species, 280 *Siphonaptera* of 20 species and 14 *Coleoptera* of 1 species (Tab. 2, 3). Moreover 5 species: *Schizophthirus jaczewskii* Cais, 1974, *Palaeopsylla steini* Jordan, 1932, *Rhadinopsylla integella* Rothschild & Jordan, 1921, *R. pentacantha* (Rothschild, 1897) and *Amalareus arvicolae* Ioff, 1948 were found by Skuratowicz (1967) and Cais (1974).

Table 1

Tabela 1

Number of small mammals collected in regions of South-East Poland: 1 – Bieszczady Mts.,

2 – Beskid Niski Mts., 3 – Nizina Sandomierska, 4 – Pogórze Przemysko-Dynowskie

Liczba drobnych ssaków odłowionych w regionach południowo-wschodniej Polski:

1 – Bieszczady, 2 – Beskid Niski, 3 – Nizina Sandomierska,

4 – Pogórze Przemysko-Dynowskie

| Species Gatunki | 1 | 2 | 3 | 4 | Total Razem |
|--|-----|-----|-----|-----|----------------|
| 1. <i>Apodemus agrarius</i> (Pallas, 1771) | 50 | 66 | 74 | 25 | 215 |
| 2. <i>A. flavicollis</i> (Melchior, 1834) | 55 | 59 | 11 | 16 | 141 |
| 3. <i>A. sylvaticus</i> (Linnaeus, 1758) | 4 | 8 | 22 | 9 | 43 |
| 4. <i>A. uralensis</i> (Pallas, 1811) | | 9 | 2 | | 11 |
| 5. <i>Micromys ninutus</i> (Pallas, 1778) | | | 3 | | 3 |
| 6. <i>Mus musculus</i> Linnaeus, 1758 | 8 | 13 | 40 | 21 | 82 |
| 7. <i>Clethrionomys glareolus</i> (Schreber, 1780) | 19 | 38 | 42 | 40 | 139 |
| 8. <i>Microtus agrestis</i> (Linnaeus, 1761) | 12 | 10 | 7 | 5 | 34 |
| 9. <i>M. arvalis</i> (Pallas, 1779) | 36 | 36 | 48 | 18 | 138 |
| 10. <i>M. oeconomus</i> (Pallas, 1776) | | | 7 | | 7 |
| 11. <i>M. subterraneus</i> (de Selys Longchamps, 1835) | 17 | 18 | 6 | 3 | 44 |
| 12. <i>Arvicola terrestris</i> (Linnaeus, 1758) | 3 | 1 | 1 | | 5 |
| 13. <i>Glis glis</i> (Linnaeus, 1766) | 1 | | | | 1 |
| 14. <i>Muscardinus avellanarius</i> (Linnaeus, 1758) | | 1 | | | 1 |
| 15. <i>Sicista betulina</i> (Pallas, 1758) | 3 | | | | 3 |
| 16. <i>Crocidura leucodon</i> (Hemann, 1780) | | | 7 | | 7 |
| 17. <i>C. suaveolens</i> (Pallas, 1811) | | 2 | | | 2 |
| 18. <i>Neomys anomalus</i> Cabrera, 1907 | 7 | 4 | | | 11 |
| 19. <i>N. fodiens</i> (Pennat, 1771) | 4 | 2 | 2 | 1 | 9 |
| 20. <i>Sorex alpinus</i> Schinz, 1837 | | 2 | | | 2 |
| 21. <i>S. araneus</i> Linnaeus, 1758 | 59 | 60 | 73 | 37 | 229 |
| 22. <i>S. minutus</i> Linnaeus, 1766 | 5 | 3 | 13 | 2 | 23 |
| 23. <i>Talpa europaea</i> Linnaeus, 1758 | 1 | 3 | 2 | 1 | 7 |
| Total – Razem | 284 | 359 | 360 | 154 | 1157 |

Table 2

Tabela 2

List of arthropods collected on small mammals from regions: Bieszczady Mts. (1), Beskid Niski Mts. (2), Nizina Sandomierska (3) and Pogórze Przemysko-Dynowskie (4)
 Lista stawonogów zebranych z drobnych ssaków w regionach: Bieszczady (1), Beskid Niski (2), Nizina Sandomierska (3) i Pogórze Przemysko-Dynowskie (4)

| <i>Anoplura</i> | 1 | 2 | 3 | 4 | Total Razem |
|--|----|-----|----|----|----------------|
| 1. <i>Hoplopleura acanthopus</i> (Burmeister, 1839) | 20 | 19 | 14 | 9 | 62 |
| 2. <i>H. affinis</i> (Burmeister, 1839) | 11 | 19 | 4 | 1 | 35 |
| 3. <i>H. edentula</i> Fahrenholz, 1916 | 4 | 9 | 19 | 2 | 34 |
| 4. <i>H. longula</i> (Neuman, 1909) | | | 1 | | 1 |
| 5. <i>Polyplax serrata</i> Burmeister, 1839 | 30 | 9 | 3 | 4 | 46 |
| 6. <i>Schizophthirius pleuophaeus</i> (Burmeister, 1839) | | 4 | | | 4 |
| 7. <i>S. jaczewskii</i> Cais, 1974* | | | | | |
| <i>Siphonaptera</i> | | | | | |
| 8. <i>Ctenophthalmus agyrtes kleinschmidtianus</i> Peus, 1950 | 31 | 59 | 13 | 26 | 129 |
| 9. <i>C. uncinatus</i> (Wagner, 1898) | | 5 | 1 | 8 | 14 |
| 10. <i>C. assimilis</i> (Taschenberg, 1880) | | 6 | 7 | 3 | 16 |
| 11. <i>C. solutus</i> Jordan & Rothschild, 1920 | | 1 | 2 | | 3 |
| 12. <i>C. bisoctodentatus</i> Kolenati, 1863 | | 1 | | | 1 |
| 13. <i>C. obtusus</i> Jordan & Rothschild, 1912 | 2 | | | | 2 |
| 14. <i>Rhadinopsylla integella</i> Jordan & Rothschild, 1921** | | | | | |
| 15. <i>R. pentacantha</i> (Rothschild, 1897) ** | | | | | |
| 16. <i>Hystriochopsylla orientalis</i> Smit, 1956 | | 3 | 7 | 2 | 12 |
| 17. <i>Leptopsylla segnis</i> (Schönherr, 1811) | | | 11 | 11 | 22 |
| 18. <i>Nosopsyllus fasciatus</i> (1800) | | | 3 | | 3 |
| 19. <i>Peromyscopsylla bidentata</i> (Kolenati, 1860) | | 1 | 1 | | 2 |
| 20. <i>P. silvatica</i> (Meinert, 1896) | | | 1 | | 1 |
| 21. <i>Doratopsylla dasyncnema cuspi</i> Rothschild, 1915 | | 2 | 1 | | 3 |
| 22. <i>Palaeopsylla soricis starki</i> Wagner, 1930 | 1 | 4 | 9 | 3 | 17 |
| 23. <i>P. similis</i> Dampf, 1910 | | 1 | 1 | | 2 |
| 24. <i>P. steini</i> Jordan, 1932** | | | | | |
| 25. <i>Megabothris turbidus</i> (Rothschild, 1909) | 17 | 13 | 6 | 10 | 46 |
| 26. <i>Amalareus penicilliger</i> (Grube, 1851) | 1 | 3 | 3 | | 7 |
| 27. <i>A. arvicolae</i> Ioff, 1948 | | | | | |
| <i>Ixodida</i> | | | | | |
| 28. <i>Ixodes ricinus</i> (Linnaeus, 1758) | 5 | 23 | 22 | 8 | 57 |
| 29. <i>I. trianguliceps</i> Birula, 1895 | 3 | 10 | | | 13 |
| <i>Mesostigmata</i> | | | | | |
| 30. <i>Laelaps agilis</i> C.L. Koch, 1836 | 80 | 189 | 30 | 34 | 333 |
| 31. <i>L. algericus</i> (Hirst, 1925) | | 1 | | | 1 |
| 32. <i>L. clethrionomydis</i> Lange, 1955 | 8 | 13 | 2 | 3 | 26 |
| 33. <i>L. hilaris</i> C.L. Koch, 1836 | 53 | 32 | 52 | 17 | 154 |
| 34. <i>L. pavlovskiyi</i> Zachvatkin, 1948 | 14 | 22 | 29 | 4 | 69 |
| 35. <i>L. muris</i> (Ljungh, 1799) | 42 | 1 | 7 | | 50 |
| 36. <i>Hyperlaelaps microti</i> (Ewing, 1933) | 7 | 9 | 14 | 6 | 36 |
| 37. <i>H. amphibian</i> Zachvatkin, 1948 | 6 | | | | 6 |
| 38. <i>Myonyssus ingricus</i> Bregetova, 1956 | 1 | | | | 1 |

Table 2 cont. – Tabela 2 c.d.

| | 1 | 2 | 3 | 4 | Total Razem |
|---|----|----|-----|----|----------------|
| 39. <i>M. rossicus</i> Bregetova, 1956 | | 7 | | | 7 |
| 40. <i>Hypoaspis forcipata</i> Willmann, 1955 | | 1 | | | 1 |
| 41. <i>H. sardoa</i> (Berlese, 1911) | 1 | | | 1 | 2 |
| 42. <i>H. vacua</i> (Michael, 1891) | | 2 | | | 2 |
| 43. <i>Androlaelaps fahrenheitzi</i> (Berlese, 1911) | 21 | 5 | 9 | 3 | 38 |
| 44. <i>E. isabellinus</i> (Oudemans, 1913) | 9 | 5 | 17 | 22 | 53 |
| 45. <i>Echinonyssus carnifex</i> (C.L. Koch, 1839) | | 8 | 144 | | 152 |
| 46. <i>E. laticutatis</i> De Meillon & Lavoipierre, 1944 | | 1 | 4 | | 5 |
| 47. <i>E. soricis</i> (Turk, 1945) | 3 | 5 | 2 | 1 | 11 |
| 48. <i>E. sunci</i> (Wang, 1962) | | 8 | 15 | 5 | 28 |
| 49. <i>E. talpae</i> Zenskaya, 1955 | | 2 | 11 | | 13 |
| 50. <i>Haemogamasus hirsutosimilis</i> Willmann, 1952 | | 2 | 1 | | 3 |
| 51. <i>H. hirsutus</i> Berlese, 1889 | 8 | 7 | 14 | | 29 |
| 52. <i>H. horridus</i> Michael, 1892 | 3 | | 3 | 4 | 10 |
| 53. <i>H. nidi</i> Michael, 1892 | 7 | 34 | 20 | 11 | 72 |
| 54. <i>Eulaelaps stabularis</i> (C. L. Koch, 1836) | 22 | 33 | 29 | 13 | 97 |
| 55. <i>Macrocheles glaber</i> (Müller, 1860) | 1 | 15 | 8 | | 24 |
| 56. <i>M. matrius</i> (Hull, 1925) | | 1 | | | 1 |
| 57. <i>Geholaspis longispinosus</i> (Kramer, 1876) | | | | 1 | 1 |
| 58. <i>Glypholaspis americana</i> (Berlese, 1888) | | 1 | | | 1 |
| 59. <i>Macrocheles</i> sp. | 1 | 1 | | | 2 |
| 60. <i>Pachylaelaps furcifer</i> Oudemans, 1903 | | | | 1 | 1 |
| 61. <i>Porrhostaspis lunulata</i> Müller, 1859 | 3 | 2 | 1 | 4 | 10 |
| 62. <i>Vulgarogamasus kraepelini</i> (Berlese, 1905) | 12 | 7 | 1 | 3 | 23 |
| 63. <i>V. remberti</i> (Oudemans, 1912) | 7 | 4 | 1 | | 12 |
| 64. <i>Poecilochirus necrophori</i> Vitzthum, 1930 | 2 | 13 | 1 | 4 | 20 |
| 65. <i>Parasitidae</i> gen., sp. | | 4 | | 1 | 5 |
| 66. <i>Parasitus consanguineus</i> Voigts & Odemans, 1904 | | 1 | | | 1 |
| 67. <i>P. quisquiliarus</i> (G.&R. Canestrini, 1882) | | 1 | | | 1 |
| 68. <i>P. loricatus</i> (Wankel, 1851) | | | | 1 | 1 |
| 69. <i>P. fimetorum</i> (Berlese, 1904) | | | 2 | | 2 |
| 70. <i>Pergamasus brevicornis</i> (Berlese, 1903) | 1 | 3 | | | 4 |
| 71. <i>P. crassipes</i> (Linnaeus, 1758) | | 1 | | | 1 |
| 72. <i>P. longicornis</i> Berlese, 1905 | | 1 | | | 1 |
| 73. <i>P. runcatellus</i> (Berlese, 1903) | 1 | | | | 1 |
| 74. <i>Amblygamasus septentrionalis</i> (Oudemans, 1902) | | 1 | 1 | | 2 |
| 75. <i>Eviphis ostrinus</i> (C.L. Koch, 1836) | | 1 | | 1 | 2 |
| 76. <i>Iphidosoma fimetarium</i> (Müller, 1859) | 1 | | | 1 | 2 |
| 77. <i>Proctolaelaps pygmaeus</i> (Müller, 1859) | 24 | 7 | 24 | 10 | 65 |
| 78. <i>Lasioseius berlesei</i> Oudemans, 1938 | 1 | | 3 | | 4 |
| 79. <i>Platyseius major</i> (Halbert, 1923) | | 1 | 1 | 2 | 4 |
| 80. <i>Cyrtolaelaps minor</i> Willmann, 1952 | | 1 | | 1 | 2 |
| 81. <i>E. emarginatus</i> (C.L. Koch, 1839) | 4 | 2 | 1 | 1 | 8 |
| 82. <i>Ameroseius</i> sp. | | | 1 | | 1 |
| 83. <i>Epicriopsis</i> sp. | | | | 1 | 1 |
| 84. <i>Uropodida</i> g. sp. | | | 4 | | 4 |

| | Table 2 cont. – Tabela 2 c.d. | | | | Total |
|---|-------------------------------|-----|-----|-----|-------|
| | 1 | 2 | 3 | 4 | Razem |
| <i>Astigmata</i> | | | | | |
| 85. <i>Listrophorus leuckati</i> Pagenstecher, 1862 | 2 | 16 | | | 18 |
| 86. <i>L. brevipipes</i> Dubinina, 1968 | 2 | 21 | | | 23 |
| 87. <i>Listrophorus</i> sp. | | | 1 | | 1 |
| 88. <i>Trichoecius tenax</i> (Michael, 1880) | 2 | 2 | | | 4 |
| 80. <i>T. apodemi</i> Fain, Munting & Lukoschus, 1969 | 1 | | | | 1 |
| 90. <i>Myocoptes japonensis</i> Radford, 1955 | 4 | | 8 | | 12 |
| 91. <i>M. musculus</i> (C.L. Koch, 1844) | | 1 | 1 | | 2 |
| 92. <i>Gliricoptes mucardinus</i> Kok, Lukoschus & Fain, 1971 | | 2 | | | 2 |
| 93. <i>Glycyphagus hypudaei</i> (C.L. Koch, 1841) | 32 | 45 | 75 | | 152 |
| 94. <i>Acarus farris</i> (Oudemans, 1905) | | 1 | | | 1 |
| 95. <i>Rhizoglyphus echinopus</i> (Fumouze & Robin, 1968) | | | 1 | | 1 |
| 96. <i>Labidophorus talpae</i> Kramer, 1877 | | 10 | | | 10 |
| 97. <i>Lophioglyphus liciosus</i> (Volgin, 1964) | | | 3 | | 3 |
| 98. <i>Orycteroxenus sorcis</i> (Oudemans, 1915) | 17 | 4 | 56 | 55 | 132 |
| 99. <i>Xenoryctes krameri</i> (Michael, 1886) | 1 | 1 | 4 | | 6 |
| 100. <i>Glycyphagidae</i> g. sp. | | 2 | 2 | | 4 |
| 101. <i>Prowichmannia spinifera</i> (Michael, 1901) | 3 | 3 | | | 6 |
| <i>Prostigmata</i> | | | | | |
| 102. <i>Protomyobia claparedei</i> (Poppe, 1896) | | 1 | | | 1 |
| 103. <i>P. onoi</i> Jameson & Dusbabek, 1971 | | 2 | 1 | | 3 |
| 104. <i>Amorphacarus elongatus</i> (Poppe, 1896) | | | | 1 | 1 |
| 105. <i>A. parvisetosus</i> Lukoschus & Driessen, 1971 | 15 | | 1 | 3 | 19 |
| 106. <i>Eadidea brevihamata</i> (Haller, 1882) | | | 4 | | 4 |
| 107. <i>Myobia agrarian</i> Gorissen & Lukoschus, 1982 | 2 | 1 | | | 3 |
| 108. <i>M. multivaga</i> Poppe, 1908 | 1 | | 1 | | 2 |
| 109. <i>M. murismusculi</i> (Schrank, 1781) | | | 3 | | 4 |
| 110. <i>M. micromydis</i> Lukoschus & Driessen, 1970 | | 1 | 1 | | 1 |
| 111. <i>Radfordia lemnina</i> (C.L. Koch, 1841) | | 5 | | | 7 |
| 112. <i>R. lancearia</i> (Poppe, 1909) | 2 | 1 | | | 1 |
| 113. <i>Crocidurobia michaeli</i> (Poppe, 1896) | | | 2 | | 2 |
| 114. <i>Erythraeus gertrudae</i> Haitlinger, 1987 | | 1 | | | 1 |
| 115. <i>Hirsutiella zachvatkini</i> (Schluger, 1948) | 10 | 11 | 3 | | 24 |
| 116. <i>Cheladonta costulata</i> (Willmann, 1952) | 8 | 8 | | | 16 |
| 117. <i>Neotrombicula autumnalis</i> (Shaw, 1790) | 26 | 46 | 26 | 89 | 187 |
| 118. <i>N. inopinata</i> (Oudemans, 1909) | 26 | 38 | | 76 | 140 |
| 119. <i>N. talmiensis</i> (Schluger, 1955) | 4 | 17 | | 81 | 102 |
| 120. <i>Leptotrombidium silvaticum</i> Hushcha & Schluger, 1967 | | 4 | | | 4 |
| 121. <i>Eucheyletia flabellifera</i> (Michael, 1878) | | 1 | 1 | 1 | 3 |
| 122. <i>Cheyletus eruditus</i> Schrank, 1781 | 1 | 1 | 1 | 1 | 1 |
| <i>Heterostigmata</i> | | | | | |
| 123. <i>Pygmephorus sorcis</i> Krczal, 1959 | 2 | | | 1 | 3 |
| 124. <i>P. spinosus</i> Kramer, 1877 | | 2 | 2 | | 4 |
| 125. <i>P. forcipatus</i> Willmann, 1952 | | 1 | 1 | | 2 |
| 126. <i>Bakerdania bavarica</i> Krczal, 1959 | | | 2 | | 2 |
| 127. <i>Oribatida</i> g. sp. | 1 | 1 | 1 | | 3 |
| <i>Coleoptera</i> | | | | | |
| 128. <i>Leptinus testaceus</i> Müller, 1817 | 7 | 6 | | 1 | 14 |
| Total – Razem | 637 | 901 | 781 | 551 | 2870 |

*Cais (1974), ** Skuratowicz (1967)

Table 3 cont.
Tabela 3 c.d.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
|-------------------------------------|----|---|---|---|---|---|----|----|---|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|-----|
| <i>Pergamasus brevicornis</i> | | 1 | | | | | | | | 2 | | | | | | | | | 1 | | | | | | 4 | |
| <i>P. crassipes</i> | | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| <i>P. longicornis</i> | | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| <i>Paragamasus runcatelius</i> | | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| <i>Amblygamasus septentrionalis</i> | 1 | | | | | | 1 | 3 | | 1 | | | | | | | | | | | 1 | | | | | 2 |
| <i>Parasitide g. sp.</i> | | | | | | | | | | | | | | | | | | | | 1 | | | | | | 5 |
| <i>Ameroseius sp.</i> | | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 |
| <i>Epicriopsis sp.</i> | | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| <i>Lasioseius berlesei</i> | | 2 | | | | | | | | 1 | | 1 | | | | | | | | | | 1 | | | | 4 |
| <i>Platyseius major</i> | | | 1 | | | | | | | | | 1 | | | | | 1 | | | | | 2 | | | | 4 |
| <i>Uropodida</i> | | | | | | | 1 | 3 | | | | | | | | | | | | | | | | | | 4 |
| <i>Listrophorus brevipes</i> | | | | | | | 2 | 14 | | | 3 | | | | | | | | | | | | 4 | | | 23 |
| <i>L. leuckarti</i> | | | | | | | | | | | | | 18 | | | | | | | | | | | | | 18 |
| <i>Listrophorus sp.</i> | | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 |
| <i>Trichoecius tenax</i> | 1 | | | | | | | | | 2 | | | | | | | | | | | | 1 | | | | 4 |
| <i>T. apodemi</i> | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| <i>Myocoptes japonensis</i> | 2 | | | | | | | | | 3 | 5 | | | | | | | | | | 1 | | | | | 12 |
| <i>M. musculinus</i> | | | | | | | 2 | | | | | | | | | | | | | | | | | | | 2 |
| <i>Gliricoptes muscardinus</i> | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 2 |
| <i>Acarus farris</i> | | | | | | | | 1 | | | | | | | | | | | | | | | | | | 1 |
| <i>Rhizoglyphus echinopus</i> | | | | | | | | | | | | | | | | | 1 | | | | | | | | | 1 |
| <i>Glyciphagus hypudaei</i> | 10 | 8 | | 1 | 2 | 1 | 36 | | | | 88 | | | | | 1 | 1 | | | 1 | 2 | | 1 | | | 152 |
| <i>Oryctoxenus soricis</i> | 8 | | | | | | | | | | | | | | | | | 3 | 119 | | 1 | 1 | 1 | | | 132 |
| <i>Labidophorus talpae</i> | | | | | | | | | | | | | | | | | | | | | | | | 10 | | 10 |
| <i>Lophoglyphus lictosus</i> | | | | 3 | | | | | | | | | | | | | | | | | | | | | | 3 |
| <i>Xenoryctes krameri</i> | | | | | | | | 1 | | | | 2 | | | | 2 | | | | 1 | | | | | | 6 |
| <i>Glyciphagidae g. sp.</i> | | | | | | | 2 | 1 | | 1 | | | | | | | | | | | | | | | | 4 |
| <i>Prowichmannia spinifera</i> | | | | | | | | 2 | | | | | | | | | | | | 4 | | | | | | 6 |

Table 3 cont. – Tabela 3 c.d.

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-----|-----|----|----|---|----|-----|----|-----|----|-----|-----|----|----|----|----|----|----|-----|----|-----|----|-----|------|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
| <i>Eucheyletia flabellifera</i> | | | | | | 1 | 1 | | 1 | | | | | | | | | | | | | 1 | | 3 | |
| <i>Cheyletus eruditus</i> | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| <i>Amorphacarus elongatus</i> | | | | | | | | | | | | | | | | | | | | | | 1 | | | 1 |
| <i>A. parvisetosus</i> | | | | | | | | | | | | | 1 | | | | | 1 | 12 | 5 | | | | 19 | 1 |
| <i>Protomyobia onoi</i> | | | | | | | | | | 1 | | | | | | | | | | 2 | | | | | 3 |
| <i>P. claparedei</i> | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| <i>Crocidurobia michaeli</i> | | | | | | | | | | | | | | | | 2 | | | | | | | | | 2 |
| <i>Myobia agraria</i> | 3 | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| <i>M. multivaga</i> | | | 2 | | | | | | | | | | | | | | | | | | | | | | 2 |
| <i>M. murismusculi</i> | | | | | | 4 | | | | | | | | | | | | | | | | | | | 4 |
| <i>M. micromydis</i> | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 |
| <i>Radfordia lemnina</i> | | | | | | | 6 | 1 | | | | | | | | | | | | | | | | | 7 |
| <i>R. lancearia</i> | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| <i>Eadicia brevihamata</i> | | | | | | | | | | | | | | | | | | | | | | | 4 | | 4 |
| <i>Erythraeus gertrudae</i> | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| <i>Hirsutiella zachvatkini</i> | | | | | | | 10 | 10 | 2 | 1 | | | | | | | | | | | | | | | 1 |
| <i>Neotrombicula autumnalis</i> | 7 | 12 | 1 | | | 1 | 40 | 77 | 4 | 4 | 1 | 1 | 1 | 2 | 5 | | | 1 | 1 | 2 | 5 | 35 | 187 | | 24 |
| <i>N. inopinata</i> | 3 | 6 | 3 | | | | 104 | 8 | 14 | | | | | | | | | | 1 | 1 | 1 | | | | 140 |
| <i>N. talmiensis</i> | 4 | | | | | | 69 | 22 | 2 | 2 | | | | | | | | | 1 | 2 | 1 | 1 | 1 | | 102 |
| <i>Leptotrombidium silvaticum</i> | | | | | | | 2 | | | 2 | | | | | | | | | | | 3 | | | | 4 |
| <i>Cheladonia costulata</i> | | | | | | | | | | 7 | 6 | | | | | | | | | | | | | | 16 |
| <i>Pymephorus soricis</i> | | | | | | | | | | | | | | | | | | | 1 | | | | 2 | 3 | |
| <i>P. forcipatus</i> | | | | | | | 1 | | | | | | | | | | | | | | | | 1 | 2 | |
| <i>P. spinosus</i> | | | | | | | | | | | | | | | | | | | | 1 | | | 3 | 4 | |
| <i>Bakerdania bavaria</i> | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | |
| <i>Bakerdania</i> sp. | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| <i>Oribatida</i> | | | | | | | | 1 | | | | | | | | | | | | | | 1 | 1 | | 3 |
| <i>Leptinus testaceus</i> | 1 | 11 | | | | | | 1 | | 1 | | | | | | | | | | | | | | | 14 |
| Total – Razem | 300 | 374 | 82 | 49 | 9 | 83 | 506 | 87 | 458 | 16 | 194 | 100 | 3 | 8 | 8 | 26 | 1 | 13 | 159 | 13 | 128 | 17 | 245 | 2870 | |

RESULTS

Siphonaptera

Family *Ctenophthalmidae* Tiraboschi, 1904

Ctenophthalmus uncinatus (Wagner, 1898)

Material. Beskid Niski Mts. Posada Górna, 1♀, 21.07.1989, *Clethrionomys glareolus* (Schreber, 1780), Klimkówka, 2♀♀, 14.05.1972, *C. glareolus*, Gładyszów, 2♀♀, 15.07.2001, *C. glareolus*: Nizina Sandomierska: Nowy Lubliniec, 1♀, 18.07.2001, *Sorex araneus* Linnaeus, 1758; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1♀, 9.08.1975, *Apodemus flavicollis* (Melchior, 1834), 1♀, 9.08.1975, *C. glareolus*, Nowosiółki Dydyńskie, 3♀♀, 3♂♂, 6.09.1975, *C. glareolus*.

In the Carpatian Mts. this species was known from Pogórze Przemysko-Dynowskie, the Tatra Mts., Pieniny Mts., Gorce Mts., Beskid Wyspowy Mts., Pasma Radziejowej Mts., Beskid Niski Mts. and Kotlina Sądecka (Skuratowicz 1964, Bartkowska 1973, Haitlinger 1974, 1978). Until now, the most numerously it was in Gorce Mts. Moreover, it was known from Nizina Sandomierska (Skuratowicz 1964).

C. agyrtes kleinschmidtianus Peus, 1950

Material. Bieszczady Mts., Polana, 1♀, 1♂, 27.07.1985, *A. flavicollis*, 2♀♀, 6.08.1991, *A. flavicollis*, Wola Michowa, 1♂, 20.07.1985, *Microtus arvalis* (Pallas, 1779), Bóbrka k. Soliny, 1♂, 2.08.2003, *Apodemus agrarius*, Przełęcz Wetlińska, 2♀♀, 1♂, 28.07.1975, *M. arvalis*, Skorodne, 1♀, 2♂♂, 5.08.1991, *Arvicola terrestris* (Linnaeus, 1758), 1♀, 1♂, 4.08.1991, *A. agrarius* (Pallas, 1771), 2♂♂, 5.08.1991, *A. flavicollis*, Lutowiska, 1♀, 26.08.2007, *Microtus subterraneus* (de Selys Longchamps, 1835), 2♀♀, 26.08.2007, *A. agrarius*, Kalnica, 1♀, 20.07.1985, *A. agrarius*, 1♀, 20.07.1985, *M. subterraneus*, Brzegi Górne, 1♂, 24.08.1970, *A. agrarius*, Stuposiany, 4♂♂, 8.08.1991, *A. flavicollis*, 1♀, 1♂, 9.08.1991, *C. glareolus*, 1♀, 10.08.1981, *Microtus agrestis* (Linnaeus, 1761), 1♂, 7.08.1991, *A. agrarius*, Hoczew, 1♀, 14.08.1991, *A. flavicollis*; Beskid Niski, Polany, 3♀♀, 1♂, 20.07.1975, *A. agrarius*, Posada Górna, 4♀♀, 2♂♂, 21.07.1989, *C. glareolus*, 1♂, 21.07.1989, *A. agrarius*, 1♀, 1♂, 21.07.1989, *M. subterraneus*, Folusz, 1♀, 12.08.1975, *C. glareolus*, Klimkówka, 5♀♀, 3♂♂, 14.05.1972, *A. flavicollis*, 1♂, 14.05.1972, *C. glareolus*; Bodaki, 2♀♀, 1♂, 13.08.2007, *M. arvalis*, 1♀, 13.08.2007, *C. glareolus*, 3♀♀, 2♂♂, 13.08.2007, *A. flavicollis*, 1♂, 13.08.2007, *Apodemus uralensis* Pallas, 1811), Wisłok, 2♂♂, 22.07.1975, *M. arvalis*, 3♀♀, 2♂♂, 22.07.1975, 1♀, 1♂, 15.08.2007, *M. subterraneus*, Nowy Żmigród, 2♀♀, 17.08.2007, *A. flavicollis*, Hańczowa, 1♀, 1♂, 15.07.1989, *M. arvalis*, 2♀♀, 1♂, 19.08.2007, *A. agrarius*, 1♂, 10.08.2007, *M. subterraneus*, Olchowiec, 2♀♀, 17.07.1985, *C. glareolus*, Gładyszów, 2♀♀, 1♂, 15.07.2001, *C. glareolus*, Chyrowa, 1♀, 2♂♂, 20.07.1993, *M. arvalis*, Bóbrka k. Krosna, 1♂, 23.08.2005, *M. subterraneus*: Nizina Sandomierska: Nowy Lubliniec, 1♂, 19.07.2001, *M. agrestis*, 1♂, 19.07.2001, *A. agrarius*, Nowa Grobla, 1♀, 14.08.2003, *A. flavicollis*, Kamionka, 1♀, 1♂, 7.07.2001, *C. glareolus*, 1♂, 9.07.2001, *M. arvalis*, Pilzno, 1♀, *A. agrarius*, Skopanie Fabryczne, 1♂, 5.08.1989,

Micromys minutus (Pallas, 1778), Basznia Górna, 1♂, 21.08.2007, *Apodemus sylvaticus* (Linnaeus, 1768), Basznia Dolna, 1♀, 24.08.2007, *A. sylvaticus*, Huta Różaniecka, 1♀, 15.10.1985, *Crocidura leucodon* (Hermann, 1780), Horyniec, 1♂, 20.07.1997, *Talpa europaea* Linnaeus, 1758, Podemsczyzna, 1♀, 9.08.1985, *Mus musculus* Linnaeus, 1758; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1♀, 9.08.1975, *M. agrestis*, 1♂, 9.08.1975, *C. glareolus*, Tyrawa Wołoska, 1♀, 21.07.1985, *C. glareolus*, Piątkowa, 1♀, 15.07.1997, *A. flavicollis*, Tarnawka, 1♀, 7.08.1975, *C. glareolus*, Nowosiółki Dydyńskie, 8♀♀, 6♂♂, 6.08.1975, *C. glareolus*, 1♀, 6.08.1975, *M. arvalis*, Rokrzyce, 1♀, 9.08.1985, *A. agrarius*, 2♀♀, 1♂, 2.08.1985, *M. musculus*, Huwniki, 1♀, 5.08.1983, *Sorex araneus*, Dydnia, 1♀, 24.07.1989, *M. arvalis*.

This subspecies earlier was noted from Bieszczady Mts., Beskid Niski Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska (Haitlinger 1978, 1987b, 2006a, Haitlinger & Turek 2006). In studied regions it is the most numerous species among *Siphonaptera*.

C. assimilis (Taschenberg, 1880)

Material. Beskid Niski Mts.: Wisłok, 2♂♂, 22.07.1975, *M. arvalis*, Chyrowa, 1♀, 2♂♂, 10.07.1993, *M. arvalis*, 1♂, 20.07.1993, *A. agrarius*; Nizina Sandomierska: Werchrata, 1♂, 22.07.1991, *C. glareolus*, Skopanie Fabryczne, 3♀♀, 2♂♂, 5.08.1989, *M. arvalis*; Huta Różaniecka, 1♀, 15.10.1985, *C. leucodon*; Pogórze Przemysko-Dynowskie: Tyrawa Wołoska, 1♂, 21.07.1985, *C. glareolus*, Nowosiółki Dydyńskie, 2♀♀, 6.08.1975, *M. arvalis*.

Earlier this species was mentioned from Beskid Niski Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska (Skuratowicz 1964, 1981, Haitlinger 1978, 1987b). Rare species; in mountains more often only in Nizina Sandomierska. First record from Bieszczady Mts.

C. bisoctodentatus Kolenati, 1863

Material. Beskid Niski Mts.; Hańczowa, 1♀, 15.07.1989, *T. europaea*.

Earlier this species was found in Pogórze Przemysko-Dynowskie and Beskid Niski Mts. (Skuratowicz 1964, Haitlinger 2006a).

C. obtusus Jordan & Rothschild, 1912

Material. Bieszczady Mts.: Polana, 1♂, 6.08.1991, *M. subterraneus*, Myczków, 1♀, 9.08.1985, *C. glareolus*.

Earlier was found in Bieszczady Mts (Skuratowicz 1964). Rare species in Polish mountains; it was noted also in Tatra Mts., Gorce Mts. and Kotlina Sądecka (Haitlinger 1978).

C. solutus Jordan & Rothschild, 1920

Material. Beskid Niski Mts.: Klimkówka, 1♀, 14.05.1972, *A. flavicollis*; Nizina Sandomierska: Pilzno, 1♂, 14.07.1999, *A. flavicollis*, Basznia Dolna, 1♂, 24.08.2007, *A. agrarius*.

Earlier this species was found in Beskid Niski Mts. and Pogórze Przemysko-Dynowskie (Skuratowicz 1964, 1967, Haitlinger 1978). First record from Nizina Sandomierska.

Rhadinopsylla integella Rothschild & Jordan, 1921

This species is known from Pogórze Przemysko-Dynowskie. (Skuratowicz 1967).

R. pentacantha (Rothschild, 1897)

This species is known from Pogórze Przemysko-Dynowskie (Skuratowicz 1967).

Palaeopsylla soricis starki Wagner, 1930

Material. Bieszczady Mts.: Rabe, 1♀, 23.06.1975, *Neomys fodiens*; Beskid Niski Mts.: Polany, 1♂, 20.07.1975, *S. araneus*, Folusz, 2♂♂, 12.08.1995, *Sorex alpinus*, Nowy Żmigród, 1♂, 19.08.2007, *N. fodiens*; Nizina Sandomierska: Huta Różaniecka, 1♀, 15.19.1985, *S. araneus*, 2♀♀, 2♂♂, 15.10.1985, *N. fodiens*, 1♂, 15.10.1985, *C. leucodon*, Dzikowiec Stary, 1♀, 16.07.1987, *A. agrarius*, Sędziszów Małopolski, 1♀, 1♂, 22.06.1999, *S. araneus*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1♀, 9.08.1975, *N. fodiens*, Huwniki, 1♂, 3.08.1983, *S. araneus*, Dydnia, 1♂, 24.07.1989, *S. araneus*.

Earlier this subspecies was found in Beskid Niski Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska (Haitlinger, 1978, 1987b). First record from Bieszczady Mts.

P. similis Dampf, 1910

Material. Beskid Niski Mts.: Hańczowa, 1♀, 15.07.1989, *T. europaea*; Nizina Sandomierska: Horyniec, 1♀, 20.07.1997, *T. europaea*.

Earlier this species was found in Pogórze Przemysko-Dynowskie, Beskid Niski Mts. and Nizina Sandomierska (Skuratowicz 1964, Haitlinger 2006a). First record from Bieszczady Mts.

P. steini Jordan, 1932

This species was collected from *T. europaea* in Bieszczady Mts. (Skuratowicz 1967).

Doratopsylla dasycnema cuspis Rothschild, 1915

Material. Beskid Niski Mts.: Folusz, 1♂, 12.08.1995, *S. alpinus* Schinz, 1837, Bukowsko, 1♂, 30.07.1995, *C. glareolus*; Nizina Sandomierska: Huta Różaniecka, 1♂, 15.10.1985, *S. araneus*.

Earlier this subspecies was mentioned from Bieszczady Mts. (Dolina Solinki), Beskid Niski Mts. and Pogórze Przemysko-Dynowskie (Skuratowicz 1957, Haitlinger 1978). Relatively rare species in studied areas. First record from Nizina Sandomierska.

Hystrichopsyllidae Tiraboschi, 1904

Hystrichopsylla orientalis Smit, 1956

Material. Beskid Niski Mts.: Folusz, 1♂, 12.08.1975, *C. glareolus*, Bodaki, 1♀, 13.08.2007, *M. arvalis*, Świątkowa Wielka, 1♂, 21.07.1999, *S. araneus*; Nizina

Sandomierska: Huta Różaniecka, 1♀, *M. arvalis*, Nowa Grobla, 1♂, 14.08.2003, *S. araneus*, Skopanie Fabryczne, 1♀, 5.08.1989, *M. arvalis*, 1♂, 5.08.1989, *S. araneus*, Basznia Górna, 1♀, 1♂, 21.08.2007, *Microtus oeconomus* (Pallas, 1776), Basznia Dolna, 1♀, 24.08.2007, *S. araneus*; Pogórze Przemysko-Dynowskie: Rokszyce, 1♀, 3.08.1989, *S. araneus*, Nowosiółki Dydyńskie, 1♂, 6.08.1975, *C. glareolus*.

Very common species mentioned from Beskid Niski Mts., Pogórze Przemysko-Dynowskie, Bieszczady Mts. and Nizina Sandomierska (Haitlinger 1978, Bartkowska 1986).

Leptopsyllidae Rothschild & Jordan, 1915

Peromyscopsylla bidentata (Kolenati, 1860)

Material. Beskid Niski Mts.: Klimkówka, 1♂, 14.05.1972, *A. flavicollis*; Nizina Sandomierska: Huta Różaniecka, 1♂, 15.10.1985, *A. agrarius*.

First record from Beskid Niski Mts. and Nizina Sandomierska.

P. silvatica (Meinert, 1896)

Material. Nizina Sandomierska: Huta Różaniecka, 1♂, 13.08.1985, *M. arvalis*.

First record from Nizina Sandomierska.

Leptopsylla segnis (Schönherr, 1811)

Material. Nizina Sandomierska: Huta Różaniecka, 1♀, 15.10.1985, *C. leucodon*, 5♀♀, 5♂♂, 15.10.1985, *M. musculus*; Pogórze Przemysko-Dynowskie: Rokszyce, 8♀♀, 3♂♂, 2.08.1985, *M. musculus*.

This species was known from Pogórze Przemysko-Dynowskie, Beskid Niski Mts and Nizina Sandomierska. (Skuratowicz 1964, Haitlinger 1978, 1987b, Haitlinger & Turek 2006).

Family *Ceratophyllidae* Wagner, 1889

Megabothris turbidus (Rothschild, 1909)

Material. Bieszczady Mts.: Wola Michowa, 1♂, 20.07.1985, *M. arvalis*, 1♀, 7.08.1997, *A. agrarius*, Bóbrka k. Soliny, 1♀, 2.08.2003, Przełęcz Wetlińska, 1♀, 28.07.1975, *M. arvalis*, Dział, 1♂, 21.07.1975, *Sorex araneus*, Stuposiany, 1♀, 1♂, 8.08.1991, *C. glareolus*, Polana, 3♀♀, 27.07.1975, *A. agrarius*, 3♀♀, 6.08.1991, *A. flavicollis*, Brzegi Górne, 4♀♀, 24.08.1970, *A. agrarius*; Beskid Niski Mts., Polany, 1♀, 11.08.1997, *A. agrarius*, Klimkówka, 1♀, 14.05.1972, *C. glareolus*, 4♀♀, 14.05.1972, *A. flavicollis*, Folsz, 1♀, 20.07.1989, *M. agrestis*, Nowy Żmigród, 1♂, 17.08.2007, *A. agrarius*, 1♀, 1♂, 17.08.2007, *A. flavicollis*, Olchowiec, 1♂, *M. agrestis*, Gładyszów, 1♀, 15.07.2001, *C. glareolus*, Bodaki, 1♀, 13.08.2007, *M. arvalis*; Nizina Sandomierska: Nowy Lubliniec, 1♀, 19.07.2001, *M. agrestis*, Baranów Sandomierski, 1♂, 22.07.2001, *M. agrestis*, Werchrata, 1♀, 22.07.1991, *C. glareolus*, Huta Różaniecka, 1♂, 15.10.1985, *A. agrarius*, 1♀, 4.08.1995, *C. leucodon*, Kamionka, 1♂, 7.07.2001, *C. glareolus*; Pogórze Przemysko-

-Dynowskie: Czarnorzeki, 1♂, 9.09.1975, *M. agrestis*, 2♀♀, 9.08.1975, *M. arvalis*, 2♀♀, 9.08.1975, *A. flavicollis*, 1♂, 9.08.1975, *C. glareolus*, Huwniki, 1♀, 4.08.1993, *A. sylvaticus*, Tarnawka, 1♀, 7.08.1975, *A. agrarius*, Nowosiółki Dydyńskie, 2♀♀, 6.08.1975, *M. arvalis*.

This species earlier was found in Bieszczady Mts., Beskid Niski Mts. and Pogórze Przemysko-Dynowskie (Skuratowicz 1964, 1981). It is very common species in studied areas. First record from Nizina Sandomierska.

Amalareus penicilliger (Grube, 1852)

Material. Bieszczady Mts.: Kalnica, 1♀, 20.07.1985 *M. arvalis*; Beskid Niski Mts.: Wisłok, 2♀♀, 22.07.1975, *M. arvalis*, Bodaki, 1♀, 15.08.2007, *M. subterraneus*; Nizina Sandomierska: Pilzno, 3♀♀, 14.07.1999, *A. agrarius*.

In studied areas it is rare species. First record from Bieszczady Mts., Beskid Niski Mts. and Nizina Sandomierska.

Amalareus arvicolae Ioff, 1948

This species was found in Bieszczady Mts. (Skuratowicz 1967).

Nosopsyllus fasciatus (Bosc, 1800)

Material. Nizina Sandomierska: Huta Różaniecka, 1♂, 15.10.1985, *A. agrarius*, 1♀, 1♂, 15.10.1985, *A. sylvaticus*.

This species earlier was noted from Bieszczady Mts., Beskid Niski Mts. and Pogórze Przemysko-Dynowskie (Skuratowicz 1964, Haitlinger 1978). First record from Nizina Sandomierska.

Anoplura

Family *Hoplopleurida* Ferris, 1951

Hoplopleura acanthopus (Burmeister, 1839)

Material. Bieszczady Mts.: Polana, 1♀, 27.07.1985, *A. flavicollis*, 3♀♀, 6.08.1991, *M. subterraneus*, Wola Michowa, 5♀♀, 20.07.1985, *M. arvalis*, Lutowiska, 2♀♀, 26.08.2007, *A. sylvaticus*, Przełęcz Wetlińska, 1♀, 1♂, 28.07.1975, *M. arvalis*, Hoczew, 1♂, 14.08.1991, *A. flavicollis*, 1♀, 15.08.1991, *M. subterraneus*, 1♀, 14.08.1991, *M. agrestis*, Stuposiany, 3♀♀, 10.08.1991, *M. agrestis*, Skorodne, 1♀, 5.08.1991, *A. flavicollis*; Beskid Niski Mts.: Hańczowa, 2♀♀, 1♂, 15.07.1989, *M. arvalis*, 1♀, 2n, 15.07.1989, *S. araneus*, Bodaki, 1♀, 17.08.2007, *M. arvalis*, Chyrowa, 1♀, 20.07.1993, *A. flavicollis*, 4♀♀, 1♂, 20.07.1993, *M. arvalis*, Folsz, 1♂, 18.07.1989, *M. agrestis*, 1♀, 12.08.1975, *A. agrarius*, 1♂, 19.07.1989, *M. musculus*, Klimkówka, 1♀, 14.05.1972, *A. flavicollis*, Wisłok, 1♀, 22.07.1975, *M. arvalis*, Posada Górna, 1♀, 21.07.1989, *M. subterraneus*; Nizina Sandomierska: Podemsczyzna, 2♀♀, 3♂♂, 9.08.1985, *M. oeconomus*, Nowy Kubliniec, 2♀♀, 19.07.2001, *M. agrestis*, Baranów Sandomierski, 2♀♀, 22.07.2001, *M. arvalis*, Skopanie Fabryczne, 1♀, 1n, 5.08.1989, *Micromys*

minutus, 1♀, 5.08.1989, *A. agrarius*, 1♀, 5.08.1989, *M. arvalis*, Kamionka, 1♀, 9.08.2003, *T. europaea*; Pogórze Przemysko-Dynowskie, Czarnorzeki, 1♀, 9.08.1975, *M. agrestis*, 1♀, 9.08.1975, *C. glareolus*, Rokszyce, 1♀, 1♂, 8.08.1985, *S. araneus*, Dydnia, 1♀, 24.07.1989, *A. flavicollis*, 1♀, 1♂, 2n, 24.07.1989, *M. arvalis*.

It is very common species in studied areas. *H. acanthopus* was known from, Bieszczady Mts. and Nizina Sandomierska (Gerwel 1954, Szczęśniak 1963, Haitlinger & Turek 2006). First record from Beskid Niski Mts. and Pogórze Przemysko-Dynowskie.

H. affinis (Burmeister, 1839)

Material. Bieszczady Mts.: Polana, 1♀, 27.07.1985, *A. agrarius*, Kalnica, 4♀♀, 1♂, 24.07.1985, *A. agrarius*, Hoczew, 2♀♀, 14.08.1991, *A. agrarius*, Stuposiany, 1♀, 1♂, 7.08.1991, *A. agrarius*, Skorodne, 1♀, 4.08.1991, *A. agrarius*; Beskid Niski Mts.: Bukowsko, 1♀, 30.07.1995, *A. agrarius*, Folsz, 1♀, 12.08.1975, *A. agrarius*, Grab, 1♂, 14.08.1995, *A. flavicollis*, Bodaki, 5♀♀, 16.07.1975, *A. agrarius*, Olchowiec, 4♀♀, 2♂♂, 17.07.1985, *A. agrarius*, Polany, 3♀♀, 2♂♂, 20.07.1975, *A. agrarius*; Nizina Sandomierska: Huta Różaniecka, 1♀, 15.10.1985, *A. agrarius*, Kamionka, 1♀, 9.08.2003, *T. europaea*, Basznia Dolna, 1♂, 1n, 24.08.2007, *M. arvalis*; Pogórze Przemysko-Dynowskie, 1♀, 24.07.1989, *A. agrarius*.

Common species in studies areas. First record from all areas.

H. edentula (Fahrenholz, 1916)

Material. Bieszczady Mts.: Stuposiany, 1♀, 8.08.1991, *C. glareolus*, Polana, 1♂, 29.07.1985, *C. glareolus*, Lutowiska, 1♀, 1♂, 26.08.2007, *M. arvalis*; Beskid Niski Mts.: Olchowiec, 1♀, 17.07.1985, *C. glareolus*, Bodaki, 2♀♀, 16.08.2007, *C. glareolus*, Klimkówka, 3♀♀, 1♂, 1n, 14.05.1972, *C. glareolus*, Folsz, 1♂, 12.08.1975, *C. glareolus*; Nizina Sandomierska: Podemsczyzna, 10♀♀, 5♂♂, 2n, 9.08.1985, *C. glareolus*, Kamionka, 1♂, 7.07.2001, *C. glareolus*, Skopanie Fabryczne, 1♀, 5.08.1989, *A. sylvaticus*; Pogórze Przemysko-Dynowskie: Huwniki, 1n, 21.07.1985, *C. glareolus*, Nowosiółki Dydyńskie, 1♀, 6.08.1975, *C. glareolus*.

Common species in studied areas. First record from all areas.

H. longula (Neuman, 1909)

Material. Nizina Sandomierska: Podemsczyzna, 1♀, 10.08.1985, *M. minutus*.

First record from Nizina Sandomierska.

Polyplax serrata (Burmeister, 1839)

Material. Bieszczady Mts.: Polana, 5♀♀, 6.08.1991, *A. agrarius*, 5♀♀, 27.07.1985, *A. flavicollis*, 4♀♀, 6.08.1991, *A. flavicollis*, Kalnica, 3♀♀, 2n, 27.07.1985, *A. agrarius*, Lutowiska, 1♀, 26.08.2007, *A. sylvaticus*, 1♂, 26.08.2007, *M. arvalis*, Wola Michowa, 1♀, 20.07.1985, *A. flavicollis*, Skorodne, 1♀, 5.08.1991, *A. flavicollis*, Stuposiany, 3♀♀, 1n, 7.08.1991, *A. agrarius*, 2♀♀, 8.08.1991, *A. flavicollis*, 1♂, 4.08.1991, *A. agrarius*; Beskid Niski Mts.: Olchowiec, 1♀, 17.07.1985, *S. araneus*, Bodaki, 1♂, 14.08.2007,

A. uralensis, 1♂, 16.07.2007, *C. glareolus*, Polany, 1♀, 1♂, 1n, 20.07.1975, *A. agrarius*, 1♀, 1n, 20.07.1975, *S. minutus* Linnaeus, 1766, Świątkowa Wielka, 1♂, 21.07.1991, *M. agrestis*; Nizina Sandomierska: Huta Różaniecka, 1♂, 1n, 15.10.1985, *A. agrarius*, Nowy Lubliniec, 1♂, 19.07.2001, *A. agrarius*; Pogórze Przemysko-Dynowskie: Rokszyce, 2♀♀, 3.08.1989, *A. sylvaticus*, 1♀, 2.08.1985, *M. musculus*, Nowosiółki Dydyńskie, 1♂, 6.08.1975, *M. musculus*.

P. serrata was known from Bieszczady Mts. and Nizina Sandomierska (Szczęśniak 1963, Haitlinger & Turek 2006). Very common species in studied areas.

First record from Beskid Niski Mts. and Pogórze Przemysko-Dynowskie.

Schizophthirius pleurophaeus (Burmeister, 1839)

Material. Beskid Niski Mts.: Olchowiec, 3♀♀, 1n, 18.07.1985, *Muscardinus avellanarius* (Linnaeus, 1758).

Very rare species. In Poland was known only from Jurków (Beskid Wyspowy Mts.) (Haitlinger 1977b). First record from Beskid Niski Mts.

S. jaczewkii Cais, 1974

This species was collected from *Sicista betulina* Pallas, 1758) in Cisna and Ustrzyki Górne (Bieszczady Mts.) (Cais 1974).

Acari

Family *Ixodidae* Murray, 1877

Ixodes ricinus (Linnaeus, 1758)

Material. Bieszczady Mts.: Lutowiska, 1 l, 26.08.2007, *A. agrarius*, Przełęcz Wetlińska, 2 l, 28.07.1975, *M. arvalis*, Bóbrka k. Soliny, 1 l, 10.08.2003, *C. glareolus*, 1 l, 10.08.2003, *M. subterraneus*; Beskid Niski Mts.: Hańczowa, 1 l, 10.08.2007, *A. flavicollis*, Bóbrka k. Krosna, 1 l, 23.08.2003, *S. araneus*, 1 l, 1n, 23.08.2003, *A. flavicollis*, Posada Górna, 7 l, 21.07.1989, *C. glareolus*, 3 l, 21.07.1989, *A. flavicollis*, 3 l, 21.07.1989, *A. agrarius*, Bodaki, 1 l, 13.08.2007, *S. araneus*, Polany, 1 l, 20.07.1975, *C. glareolus*, Wiśłok, 1 l, 22.07.1975, *C. glareolus*, Nowy Żmigród, 1 n, 11, 19.08.2007, *N. fodiens* (Pennant, 1771), Nizina Sandomierska: Podemsczyzna, 1 l, 1 n, 9.08.1985, *M. oecionomus*, Werchrata, 2 l, 22.07.1991, *C. glareolus*, Huta Różaniecka, 1 l, 8.08.1994, *A. agrarius*, 1 l, 15.10.1985, *C. leucodon*, Nowa Greobla, 1 l, 1 n, 14.08.2003, *A. flavicollis*, 1 l, 14.08.2003, *S. araneus*, Kamionka, 1 l, 2 n, 12.07.1987, *A. agrarius*, 3 l, 3.07.2001, *S. araneus*, Basznia Górna, 1 l, 21.08.2007, *C. glareolus*, 1 n, 21.08.2007, *S. araneus*, Basznia Dolna, 2 l, 24.08.2007, *M. arvalis*, Horyniec, 2 l, 20.07.1997, *T. europaea*; Nowy Lubliniec, 1 l, 20.09.1985, *M. musculus*; Pogórze Przemysko-Dynowskie, Czarnorzeki, 1 l, 9.08.1975, *M. agrestis*, 1 l, 0.08.1975, *C. glareolus*, Tyrawa Wołoska, 1 l, 21.07.1985, *C. glareolus*, Tarnawka, 4 l, 7.08.1975, *C. glareolus*, Huwniki, 1 l, 5.08.1993, *S. araneus*.

It is common species in studied areas.

I. trianguliceps Birula, 1895

Material. Bieszczady Mts.: Bóbrka k. Soliny, 1 l, 2.08.2003, *A. agrarius*, Liszna, 1 l, 26.07.1975, *S. araneus*, Kalnica, 1 n, 26.07.1985, *M. subterraneus*; Beskid Niski Mts.: Olchowiec, 1 l, 17.07.1985, *A. flavicollis*, 2 n, 17.07.1985, *S. araneus*, 1 l, 17.07.1985, *M. agrestis* Bodaki, 1 l, 13.08.2007, *S. araneus*, 3 l, 16.08.2007, *S. minutus*, Polany, 1 l, 20.07.1975, *A. agrarius*, 1 l, 20.07.1975, *N. fodiens*.

It is common species in Poland but relatively rare in studies areas.

*Mesostigmata**Laelapidae* Berlese, 1892*Laelaps hilaris* C.L. Koch, 1836

Material. Bieszczady Mts.: Polana, 3 ♀♀, 1 ♂, 28.07.1985, *M. arvalis*, Wola Michowa, 7 ♀♀, 2 ♂♂, 20.07.1985, *M. arvalis*, Berezka, 1 ♂, 5.08.1999, *M. subterraneus*, 1 ♀, 28.07.1999, *M. arvalis*, Wielka Rawka, 3 ♀♀, 31.07.1975, *S. araneus*, Przełęcz Wetlińska, 25 ♀♀, 1 ♂, 1d, 28.07.1975, *M. arvalis*, Rajske, 1 ♀, 4.08.1975, *C. glareolus*, Skorodne, 1 ♀, 5.08.1991, *M. arvalis*, Lutowiska, 2 ♀♀, 26.08.2007, *M. subterraneus*, Stuposiany, 3 ♀♀, 10.08.1981, *M. agrestis*; Hoczew, 1 ♀, 14.08.1991, *M. agrestis*; Beskid Niski Mts.: Hańczowa, 2 ♀♀, 15.07.1989, *M. arvalis*, 1 ♀, 15.07.1989, *S. araneus*, Chyrowa, 1 ♀, 20.07.1993, *S. araneus*, 4 ♀♀, 1 ♂, 1d, 20.07.1993, *M. arvalis*, Sędziszów Małopolski, 2 ♀♀, 21.06.1999, *M. arvalis*, Folsz, 1d, 18.07.1989, *M. agrestis*, Bodaki, 2 ♀♀, 13.08.2007, *M. arvalis*, 1 ♀, 13.08.2007, *C. glareolus*, Wiśłok, 5 ♀♀, 2 ♂♂, 22.07.1975, *M. arvalis*, Olchowiec, 6 ♀♀, 1 ♂, 17.07.1985, *M. agrestis*, 2 ♀♀, 18.07.1985, *M. avellanarius*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 3 ♀♀, 0.08.1975, *M. agrestis*, 2 ♀♀, 1 ♂, 9.08.1975, *M. arvalis*, Dydnia, 7 ♀♀, 24.07.1989, *M. arvalis*, 1 ♀, 24.07.1989, *S. araneus*, Stara Bircza, 2 ♀♀, 26.07.1995, *M. arvalis*, Posada Rybotycka, 1 ♀, 5.08.1975, *M. arvalis*; Nizina Sandomierska: Huta Różaniecka, 6 ♀♀, 13.08.1985, *M. arvalis*, 21 ♀♀, 7 ♂♂, 2d, 15.10.1985, *M. arvalis*, Nowy Lubliniec, 1 ♀, 19.07.2001, *M. agrestis*, Baranów Sandomierski, 2 ♀♀, 22.07.2001, *M. agrestis*, 1 ♂, 22.07.2001, *M. arvalis*, Skopanie Fabryczne, 5 ♀♀, 5.08.1989, *M. arvalis*, Kamionka, 2 ♀♀, 2 ♂♂, 1d, 9.07.2001, *M. arvalis*, Sieraków n. Ulanów, 1 ♀, 22.07.1995, *M. agrestis*, Basznia Dolna, 1 ♂, 24.08.2007, *M. arvalis*.

L. hilaris is very common in studied areas; it was known from Bieszczady Mts. (Haitlinger 1989a). First record from Beskid Niski Mts., Pogórze Przemysko-Dynowskie, Nizina Sandomierska. and *M. avellanarius*.

L. agilis C.L. Koch, 1836

Material. Bieszczady Mts.: Stuposiany, 1 ♀, 8.08.1991, *S. araneus*, Polana, 22 ♀♀, 1 ♂, 2d, 27.07.1985, *A. flavicollis*, Wola Michowa, 1 ♂, 20.07.1985, *S. araneus*, Berezka, 3 ♀♀, 5.08.1989, *A. flavicollis*, Lutowiska, 2 ♀♀, 1d, 26.08.2007, *S. araneus*, 5 ♀♀, 1 ♂, 1d, 26.08.2007, *A. sylvaticus*, Kalnica, 8 ♀♀, 1 ♂, 24.07.1985, *A. flavicollis*, Dział, 1 ♀, 1d, 31.07.1975, *S. araneus*, Rabe, 10 ♀♀, 1d, 23.07.1975, *A. flavicollis*, Rajske, 4 ♀♀,

4.08.1975, *A. flavicollis*, Hoczew, 1♀, 2♂♂, 3d, 14.08.1991, *A. flavicollis*, Bóbrka n. Solina, 1♀, 1d, 10.08.2003, *A. sylvaticus*, Skorodne, 5♀♀, 1d, 5.08.1991, *A. flavicollis*; Beskid Niski Mts. Hańczowa, 1♀, 5♂♂, 9d, 10.08.2007, *A. flavicollis*, 1♀, 1d, 11.08.2007, *S. araneus*, 2d, 17.07.1989, *A. sylvaticus*, Olchowiec, 25♀♀, 17.07.1985, *A. flavicollis*, Bodaki, 31♀♀, 6♂♂, 6d, 14.08.2007, *A. uralensis*, 2♀♀, 1d, 17.08.2007, *A. flavicollis*, 3♀♀, 13.08.2007, *S. araneus*, 1♂, 13.08.2007, *M. arvalis*, 1♂, 13.08.2007, *S. minutus*, Chyrowa, 10♀♀, 1♂, 1d, 20.07.1993, *A. flavicollis*, Bóbrka n. Krosno, 1♀, 23.08.2005, *S. araneus*, Klimkówka, 14♀♀, 4♂♂, 1d, 14.05.1972, *A. flavicollis*, Polany, 1♀, 20.07.1975, *C. glareolus*, 3♀♀, 20.07.1975, *A. flavicollis*, Folusz, 10♀♀, 2d, 18.07.1989, *A. flavicollis*, 1♀, 12.08.1995, *S. alpinus*, 2♀♀, 12.08.1975, *M. subterraneus*, 1♀, 12.08.1975, *C. glareolus*, Grab, 3♀♀, 1♂, 1d, 14.08.1995, *A. flavicollis*, Nowy Żmigród, 10♀♀, 6d, 19.08.2007, *A. flavicollis*, 4♀♀, 3♂♂, 13d, 19.08.2007, *A. sylvaticus*, Wisłok, 1♀, 22.07.1975, *M. arvalis*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1♀, 9.08.1975, *M. agrestis*, Huwniki, 3♀♀, 5.08.1993, *M. arvalis*, 2♀♀, 4.08.1993, *A. sylvaticus*, Tarnawka, 3♀♀, 7.08.1975, *A. flavicollis*, Rokszyce, 3♀♀, 9.08.1985, *A. agrarius*, 1♀, 3.08.1989, *S. araneus*, 1♀, 2♂♂, 9d, 3.08.1989, *A. sylvaticus*, Dydnia, 7♂♂, 1d, 24.07.1989, *A. flavicollis*, Tyrawa Wołoska, 1♀, 7.07.1985, *M. arvalis*; Nizina Sandomierska: Nowa Grobla, 2♀♀, 14.08.2003, *C. glareolus*, 2♀♀, 1♂, 2d, 14.08.2003, *A. flavicollis*, Nowy Lubliniec, 1d, 22.07.2001, *S. araneus*, Huta Różaniecka, 7♀♀, 4.08.1985, *C. leucodon*, Basznia Górna, 2♀♀, 21.08.2007, *A. flavicollis*, 4♀♀, 21.08.2007, *A. sylvaticus*, 1♀, 21.08.2007, *C. glareolus*, 2♀♀, 21.08.2007, *C. leucodon*, Basznia Dola, 3♀♀, 24.08.2007, *A. sylvaticus*, Skopanie Fabryczne, 1♀, 5.08.1989, *M. minutus*, 1♀, 5.08.1989, *A. uralensis*, 1♀, 5.08.1989, *M. subterraneus*.

L. agilis is very common in studied areas. It was earlier mentioned from Bieszczady Mts. and Nizina Sandomierska by Haitlinger (1987b, 1989a). First record from Beskid Niski Mts. and Pogórze Przemysko-Dynowskie.

L. pavlovskiyi Zachvatkin, 1948

Material. Bieszczady Mts.: Lutowiska, 5♀♀, 1♂, 26.08.2007, *A. agrarius*, Kalnica, 3♀♀, 24.07.1995, *A. agrarius*, Hoczew, 1♂, 2d, 14.08.1991, *A. agrarius*, Stuposiany, 1♀, 7.08.1991, *A. agrarius*, Skorodne, 1♀, 4.08.1991, *A. agrarius*; Beskid Niski Mts.: Chyrowa, 1♀, 20.07.1993, *A. agrarius*, Bóbrka n. Krosno, 1♀, 23.08.2005, *A. agrarius*, 1♀, 23.08.2005, *M. subterraneus*, Posada Górna, 2♀♀, 21.07.1989, *A. agrarius*, Folusz, 1♀, 1♂, 12.08.1975, *A. agrarius*, Nowy Żmigród, 13♀♀, 1♂, 1d, 17.08.2007, *A. agrarius*; Pogórze Przemysko-Dynowskie: Dydnia, 4♀♀, 24.07.1989, *A. agrarius*; Nizina Sandomierska: Huta Różaniecka, 12♀♀, 15.10.1985, *A. agrarius*, 1♀, 8.08.1994, *A. agrarius*, 1♀, 15.10.1985, *C. leucodon*, Nowy Lubliniec, 3♀♀, 19.07.2001, *A. agrarius*, Werchrata, 2♀♀, 22.07.1991, *A. agrarius*, Basznia Górna, 5♀♀, 2d, 21.08.2007, *A. agrarius*, Basznia Dolna, 3♀♀, 24.08.2007, *A. agrarius*.

It is common species in studied areas. First record from all areas.

L. clethrionomydis Lange, 1955

Material. Bieszczady Mts.: Stuposiany, 6♀♀, 8.08.1991, *C. glareolus*, Myczków, 1♀, 9.08.1995, *C. glareolus*, Hoczew, 1♀, 14.08.1991; Beskid Niski Mts.: Olchowiec, 2♀♀, 17.07.1985, *C. glareolus*, Gładyszów, 6♀♀, 1♂, 15.07.2001, *C. glareolus*, Polany, 1♀, 20.07.1975, *C. glareolus*, Klimkówka, 2♀♀, 14.05.1972, Bodaki, 1♀, 13.08.2007, *C. glareolus*; Pogórze Przemysko-Dynowskie: Tyrawa Wołoska, 1♀, 21.07.1985, *C. glareolus*, Nowosiółki Dydyńskie, 2♀♀, 6.08.1975, *C. glareolus*; Nizina Sandomierska: Nowa Grobla, 1♂, 14.08.2003, *C. glareolus*, Horyniec, 1♀, 20.07.1997, *C. glareolus*.

First record from all studied areas.

L. algericus (Hirst, 1925)

Material. Beskid Niski Mts.: Grab, 1♀, 19.07.1975, *M. musculus*.

In Poland this species is known only from Grab and this locality earlier was mentioned by Haitlinger (1981b) and Haitlinger & Turek (2006).

L. murus (Ljungh, 1799).

Material. Bieszczady Mts.: Polana, 1♀, 1d, 23.07.1985, *M. musculus*, 4♀♀, 6.08.1991, *A. terrestris*, Bóbrka n. Solina, 19♀♀, 4♂♂, 3d, 10.08.2003, *A. terrestris*, Skorodnie, 6♀♀, 1♂, 3d, 5.08.1991, *A. terrestris*; Beskid Niski Mts.: Hańczowa, 1♀, 16.07.1989, *A. terrestris*; Nizina Sandomierska: Podemsczyzna, 4♀♀, 1♂, 1d, 9.08.1985, *A. terrestris*, Huta Różaniecka, 1♀, 15.10.1985, *M. musculus*.

It was known from Nizina Sandomierska (Haitlinger & Turek 2006). First record from Bieszczady Mts. and Beskid Niski Mts. Monoxenic species associated with *A. terrestris*; also was collected from *M. musculus* (Haitlinger & Turek 2006).

Hyperlaelaps microti (Ewing, 1933)

Material. Bieszczady Mts.: Polana, 1♀, 27.07.1985, *A. flavicollis*, Wola Michowa, 2♀♀, 20.07.1985, *M. arvalis*, Przełęcz Wetlińska, 1♀, 1♂, 28.07.1975, *M. arvalis*, Kalmica, 1♀, 1♂, 26.07.1985, *M. subterraneus*; Beskid Niski Mts., Bodaki, 1♀, 17.08.2007, *M. arvalis*, Chyrowa, 1♀, 20.07.1993, *M. arvalis*, Folsz, 5♀♀, 18.07.1989, *M. agrestis*, Wisłok, 1♀, 22.07.1975, *M. arvalis*, Posada Górna, 1♀, 21.07.1988, *M. musculus*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 3♀♀, 1♂, 9/08.1975, *M. agrestis*, Stara Bircza, 1♀, 26.07.1995, *M. arvalis*, Posada Rybotycka, 1♀, 5.08.1975, *M. arvalis*; Nizina Sandomierska: Huta Różaniecka, 1♀, 13.08.1985, *M. arvalis*, 1♀, 15.10.1985, *M. arvalis*, Podemsczyzna, 1♀, 9.08.1985, *S. minutuus*, Nowy Lubliniec, 5♀♀, 19.07.2001, *M. agrestis*, Kamionka, 1♀, 1♂, 1d, 9.07.2001, *M. arvalis*, Sędziszów Małopolski, 1♀, 21.06.19999, *M. arvalis*, Skopanie Fabryczne, 1♀, 5.08.1989, *S. araneus*, Sieraków n. Ulanów, 1♂, 1d, 22.07.1995, *M. agrestis*.

It is very common species in studied areass. Earlier was found in Bieszczady Mts. and Beskid Niski Mts. (Haitlinger 1989a). First record from Pogórze Przemysko-Dynowskie and Nizina Sandomierska.

H. amphibia Zachvatkin, 1948

Material. Bieszczady Mts.: Polana, 1♀, 23.07.1985, *A. terrestris*, Bóbrka n. Solina, 2♀♀, 10.08.2003, *A. terrestris*, Skorodne, 2♀♀, 1d, 5.08.1991, *A. terrestris*.

In Poland this species was known only from Babia Góra Mts., Dźwirzyno (the Zachodnio-Pomorskie prov.), Miłuki n. Pasym (the Warmińsko-Mazurskie prov.) and Murowany Most (the Podlaskie prov.) (Haitlinger 1989a). First record from Bieszczady Mts.

Myonyssus ingricus Bregetova, 1956

Material. Bieszczady Mts.: Skorodne, 1♀, 6.08.1991, *Neomys anomalus*.

Rare species. In Poland was known from not many localities (Haitlinger 1984, 1989a, 2006b). First record from Bieszczady Mts.

M. rossicus Bregetova, 1956

Material. Beskid Niski Mts.: Klimkówka, 5♀♀, 2d, 14.05.1972, *A. flavicollis*.

In Poland rare it is known from Białowieża, Poznań, Śrem, Sowie Mts. and Pieniny Mts (Haitlinger 1983a). First record from Beskid Niski Mts.

Hypoaspis (Geolaelaps) forcipata Willmann, 1955

Material. Beskid Niski Mts.: Wisłok, 1♀, 22.07.1975, *M. arvalis*.

In Poland rare species. First record from Beskid Niski Mts.

H. (Cosmolaelaps) vacua (Michael, 1891)

Material. Beskid Niski Mts.: Hańczowa, 1♀, 10.08.2007, *A. flavicollis*, Chyrowa, 1♀, 20.07.1983, *A. flavicollis*.

This species is rarely collected from small mammals. In Poland was found on *Apodemus agrarius*, *A. flavicollis*, *C. glareolus* and *M. musculus* (Haitlinger 1987c, Haitlinger & Turek 2006). First record from Beskid Niski Mts.

H. (Euandrolaelaps) sardoa (Berlese, 1891)

Material. Bieszczady Mts.: Rajske, 1♀, 4.08.1975, *M. subterraneus*; Pogórze Przemysko-Dynowskie: Nowosiółki Dydyńskie, 1♀, 6.08.1975, *C. glareolus*.

It is rarely collected from small mammals. In Poland was found on *A. flavicollis*, *A. agrarius*, *M. arvalis*, *M. subterraneus* and *C. glareolus* (Haitlinger 1976, 1983a, 1986c, 1997). First record from Bieszczady Mts. and Pogórze Przemysko-Dynowskie.

Androlaelaps fahrenheitzi (Berlese, 1911)

Material. Bieszczady Mts.: Polana, 6♀♀, 23.07.985, *A. terrestris*, Kalnica, 2♀♀, 20.07.1985, *A. agrarius*, Przełęcz Wetlińska, 5♀♀, 28.07.1975, *M. arvalis*, Wołosate, 1♀, 2.08.1975, *Glis glis*, Hoczew, 1♀, 14.08.1991, *M. arvalis*, Lutowiska, 1♀,

26.08.2007, *M. subterraneus*, Bóbrka n. Solina, 1♀, 10.08.2003, *C. glareolus*, 4♀♀, 10.08.2003, *M. subterraneus*; Beskid Niski Mts.: Bodaki, 1♀, 14.08.2007, *A. uralensis*, Iwonicz, 1♀, 23.07.1999, *M. subterraneus*, Świątkowa Wielka, 1♀, 18.07.2007, *C. glareolus*, Nowy Żmigród, 1♀, 17.08.2007, *A. agrarius*, 1♀, 19.08.2007, *A. flavicollis*; Pogórze Przemysko-Dynowskie, Huwniki, 1♀, 4.08.1993, *A. sylvaticus*, 1♀, 26.07.1991, *C. glareolus*, Nowosiółki Dydyńskie, 1♀, 6.08.1975, *M. arvalis*; Nizina Sandomierska: Huta Różaniecka, 2♀♀, 15.10.1985, *A. agrarius*, 1♀, 8.08.1994, *M. arvalis*, 1♀, 15.10.1985, *M. arvalis*, Sędziszów Małopolski, 1♀, 21.06.1999, *M. arvalis*, Kamionka, 1♀, 9.07.2001, *M. arvalis*, Pilzno, 1♀, 14.07.1999, *C. glareolus*, Skopanie Fabryczne, 1♀, 5.08.1989, *M. arvalis*, Basznia Dolna, 1♀, 24.08.2007, *A. agrarius*.

Very common species on small mammals in studied regions. It was known from Bieszczady Mts. (Haitlinger 1989a). First record from Beskid Niski Mts., Pogórze Przemysko-Dynowskie, Nizina Sandomierska and *Glis glis*.

Hirstionyssidae Evans & Till, 1966

Echinonyssus isabellinus (Oudemans, 1913)

Material. Bieszczady Mts., Polana, 4♀♀, 1♂, 23.07.1985, *A. terrestris*, Przełęcz Wetlińska, 2♀♀, 1d, 28.07.1975, *M. arvalis*; Kalnica, 1♀, 26.07.1985, *M. subterraneus*; Beskid Niski Mts., Chyrowa, 1♀, 20.07.1993, *M. arvalis*, Świątkowa Wielka, 1♀, 18.07.1999, *M. subterraneus*, Wiśtok, 1♀, 22.07.1975, *M. arvalis*, Hańczowa, 1♀, 15.07.1989, *T. europaea*, Olchowiec, 1♀, 17.07.1986, *M. agrestis*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 3♀♀, 9.08.1975, *M. agrestis*, Huwniki, 3♀♀, 5.08.1993, *M. arvalis*, Dydnia, 16♀♀, 24.07.1989, *M. arvalis*; Nizina Sandomierska: Podemsczyzna, 2♀♀, 9.08.1985, *C. glareolus*, 1♀, 1d, 9.08.1985, *M. musculus*, Huta Różaniecka, 2♀♀, 15.10.1985, *M. arvalis*, 1♀, 1♂, 1d, 15.10.1985, *M. musculus*, Kamionka, 1♀, 1♂, 7.07.2001, *C. glareolus*, 1♀, 12.07.1987, *A. agrarius*, Skopanie Fabryczne, 3♀♀, 5.08.1989, *A. agrarius*, Sieraków n. Ulanów, 1♀, 22.07.1995, *M. agrestis*, Horyniec, 1♀, 20.07.1997, *T. europaea*.

It was known from Nizina Sandomierska (Haitlinger 2006a, Haitlinger & Turek 2006). Common species in studied areas. First record from Bieszczady Mts., Beskid Niski Mts. and Pogórze Przemysko-Dynowskie.

E. sunci (Wang, 1962)

Material. Beskid Niski Mts.: Folsz, 6♀♀, 1♂, 12.08.1975, *A. agrarius*, Nowy Żmigród, 1♀, 19.08.2007, *A. flavicollis*; Pogórze Przemysko-Dynowskie: Dydnia, 5♀♀, 24.07.1989, *A. flavicollis*; Nizina Sandomierska: Huta Różaniecka, 4♀♀, 16.08.1985, *A. agrarius*, Nowy Lubliniec, 1♀, 19.07.2001, *A. agrarius*, Werchrata, 3♀♀, 22.07.1991, *A. agrarius*, 1♀, 22.07.2001, *A. sylvaticus*, Nowa Grobla, 1♀, 14.08.2003, *A. flavicollis*, Skopanie Fabryczne, 1♀, 5.08.1989, *M. minutus*, Basznia Górna, 1♀, 21.08.2007, *A. agrarius*, Basznia Dolna, 1♀, 24.08.2007, *A. sylvaticus*, 2♀♀, 22.08.2007, *A. agrarius*.

First record from Beskid Niski Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska.

E. talpae Zemskaya, 1955

Material. Beskid Niski Mts.: Bodaki, 1♀, 1d, 16.07.1975, *T. europaea*; Nizina Sandomierska: Kamionka, 11♀♀, 9.08.2003, *T. europaea*.

It was known from Beskid Niski Mts. (Haitlinger 1983b). First record from Nizina Sandomierska.

E. carnifex (C.L. Koch, 1839)

Material. Beskid Niski Mts.: Hańczowa, 2♀♀, 1♂, 2d, 15.07.1989, *T. europaea*; Folusz, 2♀♀, 1d, 12.08.1975, *T. europaea*; Nizina Sandomierska: Kamionka, 66♀♀, 2♂♂, 74d, 9.08.2003, *T. europaea*, Horyniec, 2♀♀, 20.07.1997, *T. europaea*.

It was known from Beskid Niski Mts. and Nizina Sandomierska (Haitlinger 2006a).

E. soricis (Turk, 1945)

Material. Bieszczady Mts.: Dział, 1♀, 31.07.1975, *N. fodiens*, Skorodne, 2♀♀, 5.08.1991, *N. anomalus*; Beskid Niski Mts.: Chyrowa, 1♀, 20.07.1993, *S. araneus*, Folusz, 3♀♀, 12.08.1995, *S. alpinus*; Grab, 1♀, 19.07.1978, *S. araneus*; Pogórze Przemysko-Dynowskie: Dydnia, 1♀, 24.07.1989, *S. araneus*; Nizina Sandomierska: Basznia Górna, 2♀♀, 21.08.2007, *S. minutus*.

It was known from Beskid Niski Mts. (Haitlinger 1986b). First record from Bieszczady Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska.

E. laticutatus De Meillon & Lavoipierre, 1944

Material. Beskid Niski Mts.: Olchowiec, 1♀, 17.07.1985, *M. musculus*; Nizina Sandomierska: Huta Różaniecka, 4♀♀, 15.10.1985, *M. musculus*.

Earlier it was known from Nizina Sandomierska (Haitlinger & Turek 2006).

Haemogamasidae Oudemans, 1926*Haemogamasus nidi* Michael, 1892

Material. Bieszczady Mts.: Stuposiany, 1d, 8.08.1991, *S. araneus*, 2♀♀, 8.08.1991, *N. anomalus*, 1♀, 8.08.1991, *A. flavicollis*, Kalnica, 2♀♀, 20.07.1985, *A. agrarius*, 1♀, 20.07.1985, *A. flavicollis*; Beskid Niski Mts. Gładyszów, 1♀, 15.07.2001, *C. glareolus*, Bukowsko, 1♀, 30.07.1995, *C. glareolus*, Bodaki, 1♀, 17.08.2007, *M. arvalis*, 1♀, 13.08.2007, *A. flavicollis*, Chyrowa, 2♀♀, 20.07.1993, *M. arvalis*, Klimkówka, 3♀♀, 14.05.1972, *A. flavicollis*, 1♀, 14.05.1972, *C. glareolus*, Posada Górna, 1♀, 21.07.1989, *A. flavicollis*, Folusz, 4♀♀, 18.07.1989, *A. flavicollis*, Iwonicz, 3♀♀, 23.07.1999, *M. subterraneus*, 1♀, 23.07.1999, *S. araneus*, Wiśtok, 1♀, 22.07.1975, *M. subterraneus*, 11♀, 1d, 22.07.1975, *M. arvalis*, Nowy Żmigród, 2♀♀, 19.08.2007, *A. flavicollis*, Olchowiec, 1♀, 17.07.1985, *A. agrarius*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1d, 9.08.1975, *M. arvalis*, Tyrawa Wołoska, 1♀, 21.07.1985, *C. glareolus*, Nowosiółki Dydyńskie, 1♀, 6.08.1975, *C. glareolus*, 4♀♀, 6.08.1975, *M. arvalis*, Huwniki, 1♀, 3.08.1993, *S. araneus*, Rokszyce, 3♀♀, 8.08.1985, *M. arvalis*; Nizina Sandomierska: Huta Różaniecka,

2♀♀, 15.10.1985, *M. arvalis*, 1♀, 15.10.1985, *A. uralensis*, 1♀, 15.10.1985, *A. agrarius*, 1♀, 15.10.1985, *C. leucodon*, Podemsczyzna, 4♀♀, 9.08.1985, *M. oeconomus*, 1♀, 9.08.1985, *M. musculus*, Nowa Grobla, 1♀, 14.08.2003, *A. flavicollis*, Sędziszów Małopolski, 1♂, 21.06.1999, *M. arvalis*, Kamionka, 3♀♀, 7.07.2001, *A. agrarius*, 1♀, 7.07.2001, *C. glareolus*, 1d, 9.07.2001, *M. arvalis*, Basznia Górna, 2♀♀, 21.08.2007, *A. sylvaticus*, Skopanie Fabryczne, 1♀, 5.08.1989, *M. subterraneus*.

H. nidi is the very common species in all studied areas. It was known from Nizina Sandomierska (Haitlinger & Turek 2006). First record from Bnieszczady Mts., Beskid Niski Mts. and Pogórze Przemysko-Dynowskie.

H. hirsutus Berlese, 1889

Material. Bieszczady Mts.: Stuposiany, 2♂♂, 8.08.1991, *N. anomalus*, 2♀♀, 8.08.1991, *C. glareolus*, Kalnica, 1♂, 1d, 25.07.1985, *A. agrarius*, Bóbrka n. Solina, 1d, 10.08.2003, *A. terrestris*, Skorodne, 1d, 5.08.1991, *A. flavicollis*; Beskid Niski Mts.: Bodaki, 1♀, 16.07.1975, *S. alpinus*, 1♀, 17.08.2007, *M. arvalis*, 1♂, 15.07.1975, *T. europaea*, Folusz, 1♂, 12.08.1995, *S. alpinus*, Grab, 1♀, 19.07.1975, *C. glareolus*, 2d, 19.07.1975, *M. musculus*; Nizina Sandomierska: Huta Różaniecka, 1♀, 15.10.1985, *S. araneus*, 3d, 15.10.1985, *S. araneus*, Sędziszów Małopolski, 3d, 21.06.1999, *M. arvalis*, Podemsczyzna, 1♀, 9.08.1985, *M. oeconomus*, Kamionka, 3♀♀, 1♂, 7.07.2001, *A. agrarius*, Horyniec, 2d, 20.07.1997, *T. europaea*.

This species was known from Beskid Niski Mts. (Haitlinger & Turek 2006). First record from Bieszczady Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska.

H. hirsutosimilis Willmann, 1952

Material. Beskid Niski Mts.: Bodaki, 1♀, 13.08.2007, *A. flavicollis*, Hańczowa, 1♀, 15.07.1989, *T. europaea*; Nizina Sandomierska: Podemsczyzna, 1♀, 9.08.1985, *M. oeconomus*.

In Poland rare species. First record from Beskid Niski Mts. and Nizina Sandomierska.

H. horridus Michael, 1892

Material. Bieszczady Mts.: Wola Michowa, 1♀, 20.07.1985, *S. araneus*, Berezka, 1d, 5.08.1989, *A. flavicollis*, Hoczew, 1d, 14.08.1991, *A. agrarius*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 2d, 9.08.1975, *M. arvalis*, 2d, 9.08.1975, *C. glareolus*; Nizina Sandomierska: Kamionka, 2d, 7.07.2001, *C. glareolus*, Sieraków n. Ulanów, 1♀, 22.07.1995, *M. agrestis*.

First record from Bieszczady Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska.

Eulaelaps stabularis (C.L. Koch, 1836)

Material. Bieszczady Mts.: Stuposiany, 1♀, 8.08.1991, *N. anomalus*, Polana, 2♀♀, 27.07.1985, *M. arvalis*, Wola Michowa, 1♀, 20.07.1985, *M. arvalis*, 1♀, 7.08.1997,

A. agrarius, Berezka, 1♀, 28.07.1999, *M. arvalis*, Lutowiska, 1♀, 26.08.2007, *A. agrarius*, 1♀, 26.08.2007, *M. arvalis*, Kalnica, 1♀, 24.07.1985, *S. araneus*, 1♀, 24.07.1985, *A. agrarius*, 1♀, 20.07.1985, *A. flavicollis*, Bóbrka n. Solina, 1♀, 10.08.2003, *A. terrestris*, 3♀♀, 10.08.2003, *M. subterraneus*, Dział, 1♀, 31.07.1975, *S. araneus*, 1♀, 31.07.1975, *N. fodiens*, Rajske, 1♀, 4.08.1975, *A. flavicollis*, 1♀, 4.08.1975, *M. subterraneus*; Rabe, 1♀, 23.07.1975, *M. arvalis*, 1♀, 23.07.1975, *A. flavicollis*, Przełęcz Wetlińska, 1♀, 28.07.1975, *M. arvalis*, Beskid Niski Mts. Olchowiec, 1♀, 17.07.1985, *A. flavicollis*, Bodaki, 1♀, 15.07.1975, 3♀♀, 17.08.2007, *M. arvalis*, 1♀, 13.08.2007, *S. araneus*, 1♀, 13.08.2007, *C. glareolus*, 3♀♀, 13.08.2007, *A. flavicollis*, 1♀, 16.07.1975, *T. europaea*, Chyrowa, 1♀, 20.07.183, *A. flavicollis*, Bóbrka n. Krosno, 2♀♀, 23.08.2005, *A. agrarius*, 1♀, 23.08.2005, *A. flavicollis*, Klimkówka, 4♀♀, 14.05.1972, *C. glareolus*, 3♀♀, 14.05.1972, *A. flavicollis*, Folusz, 1♀, 12.08.1975, *A. agrarius*, 1♀, 18.07.1989, *A. flavicollis*, 1♀, 12.08.1975, *C. glareolus*, Posada Górna, 1♀, 21.07.1989, *A. agrarius*, 1♀, 21.07.1989, *M. subterraneus*, Nowy Żmigród, 1♀, 17.08.2007, *A. agrarius*, 2♀♀, 19.07.2007, *N. fodiens*, 1♀, 19.08.2007, *A. sylvaticus*, 1♀, 19.08.2007, *A. flavicollis*, Wisłok, 1♀, 2.07.1975, *M. arvalis*; Pogórze Przemysko-Dynowskie: Tyrawa Czarnorzeki, 1♀, 9.08.1975, *M. agrestis*, 1♀, 9.08.1975, *M. arvalis*, 2♀♀, 9.08.1975, *C. glareolus*, Wołoska, 1♀, 7.07.1985, *A. agrarius*, Tarnawka, 1♀, 7.08.1975, *C. glareolus*, Nowosiółki Dydyńskie, 2♀♀, 6.08.1975, *C. glareolus*, 4♀♀, 6.08.1975, *M. arvalis*, Dydnia, 1♀, 24.07.1989, *A. agrarius*; Nizina Sandomierska: Werchrata, 1♀, 23.07.1991, *N. fodiens*, 2♀♀, 22.07.1991, *C. glareolus*, Huta Różaniecka, 5♀♀, 15.10.1985, *M. arvalis*, 4♀♀, 15.10.1985, *A. agrarius*, 1♀, 15.10.1985, *A. sylvaticus*, 2♀♀, 15.10.1975, *M. musculus*, Podemszczyzna, 1♀, 9.09.1985, *M. musculus*, 6♀♀, 9.08.1985, *A. terrestris*, Nowy Lubliniec, 1♀, 19.07.2001, *A. agrarius*, Basznia Górna, 1♀, 21.08.2007, *A. flavicollis*, Kamionka, 1♀, 7.07.2001, *C. glareolus*, 1♀, 9.08.2003, *T. europaea*, Pilzno, 2♀♀, 14.07.1999, *A. flavicollis*, Skopanie Fabryczne, 1♀, 5.08.1989, *M. subterraneus*.

It was known from Bieszczady Mts., Beskid Niski Mts. and Nizina Sandomierska (Haitlinger 1984, 1989a, Haitlinger & Turek 2006). Very common species in all studied areas. First record from Pogórze Przemysko-Dynowskie.

Macrochelidae Vitzthum, 1930

Macrocheles glaber (Müller, 1860)

Material. Bieszczady Mts.: Hoczew, 1♀, *C. glareolus*. Beskid Niski Mts.: Posada Górna, 2♀♀, 21.07.1989, *A. agrarius*, Wisłok, 12♀♀, 22.07.1975, *M. arvalis*, Świątkowa Wielka, 1♀, 21.07.1999, *M. agrestis*; Nizina Sandomierska: Nowa Grobla, 6♀♀, 14.08.2003, *M. subterraneus*, Basznia Górna, 1♀, 21.08.2007, *A. flavicollis*, Basznia Dolna, 1♀, 24.08.2007, *A. sylvaticus*.

Free-living species known from the entire Poland. It was found also in all studied areas (Haitlinger 1999). From small mammals collected rarely.

M. matrius Hull, 1925

Material Beskid Niski Mts.: Polany, 1♀, 20.07.1975, *A. agrarius*.

Free-living species on small mammals collected very rarely. In Poland it was collected from *A. agrarius*, *C. glareolus* and *M. arvalis* (Haitlinger 1986c). First record from Beskid Niski Mts..

Geholaspis longispinosus (Kramer, 1876)

Material. Pogórze Przemysko-Dynowskie: Nowosiółki Dydyńskie, 1♀, 6.08.1975, *C. glareolus*.

Free-living species occasionally collected from small mammals. It was known from Bieszczady Mts. (Skorupski et al. 2000). First record from Pogórze Przemysko-Dynowskie.

Glyphtholaelaps americana (Berelese, 1888)

Material. Beskid Niski Mts.: Folsz, 1♀, 12.08.1975, *A. agrarius*.

Rare species in Poland. First record from *A. agrarius*. It was known also from Bieszczady Mts. where it was collected from *Oxythorea funesta* (Poda) (Haitlinger 2002). First record from Beskid Niski Mts.

Macrocheles sp.

Material. Bieszczady Mts.: Hoczew, 1♀, 14.08.1991, *C. glareolus*; Beskid Niski Mts.: Polany, 1♀, 20.07.1975, *M. musculus*.

Pachylaelapidae Vitzthum, 1931

Pachylaelaps furcifer Oudemans, 1903

Material Pogórze Przemysko-Dynowskie: Tyrawa Wołoska, 1♀, 3.07.1985, *S. araneus*.

It occurs occasionally on small mammals. In Poland was collected from *A. flavicollis* and *C. glareolus* (Haitlinger 1983a). It was known also from Bieszczady Mts. (Skorupski et al. 2000). First record from Pogórze Przemysko-Dynowskie and *S. araneus*.

Rhodacaridae Oudemans, 1902

Cyrtolaelaps minor Willmann, 1952

Material. Pogórze Przemysko-Dynowskie: Czarnorzeki, 1d, 9.08.1975, *C. glareolus*, Beskid Niski Mts.: Bodaki, 1d, 13.08.2007, *C. glareolus*.

Rare species in studied regions. First record from Pogórze Przemysko-Dynowskie.

Euryparasitus emarginatus (C.L. Koch, 1839)

Material. Bieszczady Mts.: Kalnica, 1d, 24.07.1985, *A. flavicollis*, Rajske, 1d, 4.08.1975, *A. flavicollis*, 1d, 4.08.1975, *C. glareolus*, Hoczew, 1d, 15.08.1991, *M. subterraneus*; Beskid Niski Mts.: Bóbrka n. Krosno, 1d, 23.08.2005, *S. araneus*, Polany, 1d, 20.07.1979, *A. agrarius*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1d, 9.08.1975, *C. glareolus*; Nizina Samdomierska: Horyniec, 1d, 20.07.1997, *T. europaea*.

It was known from Beskid Niski Mts. and Bieszczady Mts. (Haitlinger 1989a, Skorupski et al. 2000). First record from Pogórze Przemysko-Dynowskie and Nizina Sandomierska.

Ascidae Voigts & Oudemans, 1905

Proctolaelaps pygmaeus (Müller, 1859)

Material. Bieszczady Mts.: Polana, 19♀♀, 27.07.1985, *M. arvalis*, Wola Michowa, 4♀♀, 23.07.1985, *C. glareolus*, Hoczew, 1♀, 14.08.1991, *M. arvalis*; Beskid Niski Mts. Olchowiec, 1♀, 17.07.1985, *M. musculus*, Bukowsko, 5♀♀, 30.07.1995, *A. agrarius*, Posada Górna, 1♀, 21.07.1989, *C. glareolus*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1♀, 9.08.1975, *M. agrestis*, Tyrawa Wołoska, 1♀, 7.07.1985, *S. araneus*, Rokszyce, 6♀♀, 8.08.1985, *S. araneus*; 2♀♀, 2.08.1985, *M. musculus*; Nizina Sandomierska: Nowa Grobla, 2♀♀, 14.08.2003, *M. subterraneus*, Kamionka, 1♀, 9.07.2001, *M. arvalis*, Basznia Dolna, 1♀, 24.08.2007, *A. sylvaticus*, 1♀, 24.08.2007, *M. arvalis*, 3♀♀, 22.08.2007, *A. agrarius*, Huta Różaniecka, 1♀, 15.10.1985, *C. leucodon*, 13♀♀, 9.08.1985, *M. musculus*, Horyniec, 1♀, 20.07.1997, *S. araneus*, 1♀, 20.07.1997, *T. europaea*.

It is widely distributed in the whole Poland (Gwiazdowicz 2007) also was found in Bieszczady Mts. (Skorupski et al. 2000). Common species in studied areas. It was often collected from small mammals. First record from *M. agrestis*.

Lasioseius berlesei Oudemans, 1938

Material. Bieszczady Mts.: Berezka, 1♀, 28.07.1999, *M. arvalis*; Nizina Sandomierska: Basznia Górna, 1♀, 21.08.2007, *A. agrarius*, Basznia Dolna, 1♀, 22.08.2007, *A. agrarius*, Skopanie Fabryczne, 1♀, 5.08.1989, *M. subterraneus*.

In Poland it was gathered from *S. araneus*, *A. agrarius* and *M. arvalis* (Haitlinger 1989a, 1997). First record from Bieszczady Mts., Nizina Sandomierska and *M. subterraneus*.

Platyseius major (Halbert, 1923)

Material. Beskid Niski Mts.: Bóbrka n. Krosno, 1♀, 23.08.2005, *A. flavicollis*; Pogórze Przemysko-Dynowskie: Nowosiółki Dydyńskie, 2♀♀, 08.1975, *S. araneus*; Nizina Sandomierska: Huta Różaniecka, 1♀, 15.10.1985, *C. leucodon*.

In Poland was found in mountains and submountains areas (Śnieżnik Kłodzki, Beskid Wyspowy Mts., Beskid Sądecki Mts., Pogórze Przemysko-Dynowskie and Tatra Mts. (Willmann 1956, Haitlinger 1987a, b, Gwiazdowicz 2007). This species was obtained very rarely from small mammals. In Poland it was found on *S. araneus*, *C. leucodon* and *A. flavicollis*.

Eviphididae Berlese, 1913*Eviphis ostrinus* (C.L. Koch, 1836)

Material Beskid Niski Mts.: Posada Górna, 1♀, 21.07.1989, *A. flavicollis*; Pogórze Przemysko-Dynowskie: Piątkowa, 1♀, 16.07.1997, *A. agrarius*.

This species occurs on small mammals occasionally. In Poland it was found on *S. araneus*, *A. agrarius* and *C. glareolus* (Haitlinger 1978, 1983a, 1997). First record from *A. flavicollis*. It was known from Bieszczady Mts. (Skorupski et al. 2000). First record from Beskid Niski Mts. and Pogórze Przemysko-Dynowskie.

Iphidosoma fimetarium (Müller, 1859)

Material. Bieszczady Mts.: Stuposiany, 1d, 9.08.1991, *C. glareolus*; Pogórze Przemysko-Dynowskie: Hwniki, 1d, 3.08.1993, *S. araneus*.

Deutonymphs of this species area associated with various insects. From small mammals were obtained very rarely. It was known from Bieszczady Mts. and Pogórze Przemysko-Dynowski (Skorupski et al. 2000, Haitlinger 2004).

Parasitidae Oudemans, 1902*Porrhostaspis lumulata* Müller, 1859

Material. Bieszczady Mts.: Polana, 1♀, 27.07.1985, *A. flavicollis*, Wołosate, 1♀, 2.08.1975, *G. glis* (Linnaeus, 1766), Bóbrka n. Solina, 1♀, 10.08.2003, *A. flavicollis*; Beskid Niski Mts.: Bodaki, 1♀, 16.08.2007, *A. sylvaticus*, 1♀, 13.08.2007, *M. arvalis*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 2♂♂, 9.08.1975, *C. glareolus*, Tyrawa Wołoska, 1♀, 21.07.1985, *C. glareolus*, Nowosiółki Dydyńskie, 1♀, 6.08.1975, *C. glareolus*; Nizina Sandomierska: Basznia Górna, 1♀, 21.08.2007, *S. araneus*.

Free-living species, relatively often collected from small mammals. It was known from Bieszczady Mts. (Skorupski et al. 2000). First record from Beskid Niski Mts., Pogórze Przemysko-Dynowskie, Nizina Sandomierska and *G. glis*.

Vulgarogamasus remberti (Oudemans, 1912)

Material. Bieszczady Mts.: 1d, 6.08.1991, *A. flavicollis*, Dział, 2d, 31.07.1975, *S. araneus*, Rajskie, 1d, 4.08.1975, *M. subterraneus*, Skorodne, 1d, 5.08.1991, *M. arvalis*, Bóbrka n. Solina, 2d, 10.09.2003, *S. araneus*; Beskid Niski Mts. Olchowiec, 1d, 17.07.1985, *A. flavicollis*, Hańczowa, 1d, 15.07.1989, *T. europaea*, Bodaki, 1d, 15.07.1975, *M. subterraneus*, Wisłok, 1d, 22.07.1975, *C. glareolus*; Nizina Sandomierska: Nowa Grobla, 1d, 14.08.2003, *S. araneus*.

Free-living species relatively often collected from small mammals. It was known from Bieszczady Mts. (Skorupski et al. 2000). First record from Beskid Niski Mts. and Nizina Sandomierska.

V. kraepelini (Berlese, 1905)

Material Bieszczady Mts.: Polana, 1♀, 6.08.1991, *A. flavicollis*, Wola Michowa, 1♀, 1♂, 20.07.1985, *S. araneus*, Lutowiska, 1♀, 26.08.2007, *A. agrarius*, 1d, 26.08.2007, *S. araneus*, 1d, 26.08.2007, *M. subterraneus*, Kalnica, 1♀, 1d, 24.07.1985, *A. agrarius*, Wielka Rawka, 1♀, 31.07.1975, *S. araneus*, Dział, 1d, 31.07.1975, *N. fodiens*, 1d, 31.07.1975, *S. araneus*, Bóbrka n. Solina, 1d, 10.08.2003, *A. flavicollis*; Beskid Niski Mts. Hańczowa, 1d, 11.08.2007, *S. araneus*, Bodaki, 1d, 17.08.2007, *A. flavicollis*, Chyrowa, 1d, 20.07.1993, *A. agrarius*, Klimkówka, 2d, 14.05.1972, *C. glareolus*, Folsz, 1♀, 18.07.1989, *A. flavicollis*, 1♀, 12.08.1975, *A. agrarius*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1d, 9.08.1975, *C. glareolus*, Piątkowa, 1♀, 16.07.1997, *A. agrarius*, Tyrawa Wołoska, 1♀, 3.07.1985, *S. araneus*; Nizina Sandomierska: Huta Różaniecka, 1♂, 15.10.1985, *A. agrarius*.

Free living species relatively often occurring on small mammals. It was known from Bieszczady Mts. (Skorupski et al. 2000). First record from Beskid Niski Mts., Pogórze Przemysko-Dynowskie and Nizina Sandomierska.

Poecilochirus necrophori Vitzthum, 1930

Material. Bieszczady Mts.: Myczków, 1d, 9.08.1995, *N. fodiens*, Rajske, 1♀, 4.08.1975, *C. glareolus*; Beskid Niski Mts.: Bodaki, 1d, 17.08.2007, *M. arvalis*, 4d, 13.08.2007, *A. flavicollis*, Bóbrka n. Krosno, 1d, 23.08.2005, *S. araneus*, 2d, 23.08.2005, *A. flavicollis*, Grab, 1d, 19.07.1975, *S. araneus*, Nowy Żmigród, 4d, 17.08.2007, *A. agrarius*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1d, 9.08.1975, *A. flavicollis*, Nowosiółki Dydyńskie, 1♀, 2♂♂, 6.08.1975, *C. glareolus*; Nizina Sandomierska: Nowa Grobla, 1♀, 14.08.2003, *C. glareolus*.

Deutonymphs of this species relatively rarely are collected from small mammals. First record from all studied areas.

Parasitus consanguineus Voigts & Oudemans, 1904

Material. Beskid Niski Mts.: Bodaki, 1♀, 15.07.1975, *C. glareolus*.

This species occurs exceptionally on small mammals. First record from Beskid Niski Mts. and *C. glareolus*.

P. fimetorum (Berlese, 1904)

Material. Nizina Sandomierska: Huta Różaniecka, 2d, 9.08.1985, *M. musculus*.

This species occurs exceptionally on small mammals. Earlier it was mentioned from Nizina Sandomierska (Haitlinger & Turek 2006).

P. loricatus (Wankel, 1861)

Material. Pogórze Przemysko-Dynowskie: Tarnawka, 1♂, 7.08.1975, *A. flavicollis*.

This species occasionally occurs on small mammals. First record from Pogórze Przemysko-Dynowskie.

Pergamasus brevicornis (Berlese, 1903)

Material. Bieszczady Mts.: Dział, 1♀, 31.07.1975, *N. fodiens*; Beskid Niski Mts.: Posada Górna, 1♀, 21.07.1989, *A. flavicollis*, Wisłok, 2♀♀, 22.07.1975, *M. arvalis*

Species sporadically gathered from small mammals. It was known from Bieszczady Mts. (Skorupski et al. 2000). First record from Beskid Niski Mts.

P. crassipes (Linnaeus, 1758)

Material. Beskid Niski Mts.: Grab, 1♀, 18.07.1978, *S. araneus*.

This species occasionally occurs on small mammals. First record from Beskid Niski Mts.

P. longicornis Berlese, 1905

Material. Beskid Niski Mts.: Polany, 1♀, 20.07.1975, *S. araneus*.

This species rarely was obtained from small mammals (Haitlinger 1976). First record from Beskid Niski Mts.

P. quisquiliarus (G. & R. Canestrini, 1882)

Material. Beskid Niski Mts.: Wisłok, 1♀, 22.07.1975, *M. arvalis*.

Species occasionally occurred on small mammals. First record from Beskid Niski Mts. and *M. arvalis*.

Paragamasus runcatellus (Berlese, 1903)

Material. Bieszczady Mts.: Dział, 1♀, 31.07.1975, *S. araneus*.

This species is exceptionally noted on small mammals. It was known from Bieszczady Mts. (Skorupski et al. 2000).

Amblygamasus septentrionalis (Oudemans, 1902)

Material. Beskid Niski Mts.: Nowy Żmigród, 1♀, 17.08.2007, *A. agrarius*; Nizina Sandomierska: Huta Różaniecka, 1♀, 15.10.1985, *M. arvalis*.

Species occasionally occurring on small mammals. In Poland was obtained from *C. glareolus* and *S. araneus* (Haitlinger 1983, 1989a). First record from Beskid Niski Mts., Nizina Sandomierska, *A. agrarius* and *M. arvalis*.

Parasitidae undet.

Material. Beskid Niski Mts.: Bodaki, 1d, 16.07.1975, *S. alpinus*, Folsz, 3d, 20.07.1989, *C. glareolus*; Pogórze Przemysko-Dynowskie: Rokszyce, 1d, 2.08.1985, *M. musculus*.

Ameroseiidae Berlese, 1919*Ameroseius* sp.

Material. Nizina Sandomierska: Werchrata, 1♂, 23.07.1991, *N. fodiens*.

Epicriopsis sp.

Material. Pogórze Przemysko-Dynowskie: Huwniki, 1d, 3.08.1993, *S. araneus*.

Uropodida

Material Nizina Sandomierska, 2d, 14.08.2003, *C. glareolus*, Ruda Łańcucka, 1d, 27.08.1987, *M. musculus*, Horyniec, 1d, 20.07.1997, *C. glareolus*.

Astigmata

Listrophoridae Megnin & Trouessart, 1884

Listrophorus brevipes Dubinina, 1968

Material. Bieszczady Mts.: Hoczew, 2, 14.08.1991, *M. subterraneus*; Beskid Niski Mts.: Hańczowa, 4, 16.07.1989, *S. minutus*, Bodaki, 2, 16.07.1975, *C. glareolus*, Świątkowa Wielka, 1, 18.07.1999, *M. subterraneus*, 14, 21.07.1999, *M. agrestis*.

L. brevipes was known from Beskid Niski Mts. (Haitlinger 1989a). First record from Bieszczady Mts.

Listrophorus leuckarti Pagenstecher, 1862

Material. Bieszczady Mts.: Polana, 2, 23.07.1985, *A. terrestris*; Beskid Niski Mts.: Hańczowa, 16, 16.07.1989, *A. terrestris*.

In Poland this species was known only from Pieniny (voi. Małopolskie, Dźwirzyno, Wicie (the Zachodnio-Pomorskie prov.), Miłuki n. Pasym (the Warmińsko-Mazurskie prov.) and Murowany Most n. Suwałki (the Podlaskie prov.) (Haitlinger 1983a, 1989a). First record from Bieszczady Mts and Beskid Niski Mts..

Listrophorus sp.

Material. Nizina Sandomierska: Huta Różaniecka, 1, 15.10.1985, *M. musculus*

Myocoptidae Gunther, 1942

Trichoecius tenax (Michael, 1889)

Material. Bieszczady Mts.: Przełęcz Wetlińska, 1♀, 27.07.1975, *M. arvalis*, Polana, 1♀, 27.07.1985, *A. agrarius*; Beskid Niski Mts.: Hańczowa, 1♀, 16.07.1989, *S. minutus*, Nowy Żmigród, 1♀, 17.08.2007, *M. arvalis*.

Rare species earlier mentioned from Bieszczady Mts. (Haitlinger 1986a). First record from Beskid Niski Mts.

Trichoecius apodemi Fain, Munting & Lukoschus, 1969

Material. Bieszczady Mts.: Hoczew, 1♂, 14.08.1991, *A. agrarius*.

In Poland rare species known from Wrocław (Haitlinger 1986a, 1987c, 1997). First record from Bieszczady Mts.

Myocoptes japonensis Radford, 1955

Material. Bieszczady Mts.: Przełęcz Wetlińska, 2♀♀, 1tr, 27.07.1975, *M. arvalis*, Polana, 1♀, 6.08.1991, *M. subterraneus*; Nizina Sandomierska: Huta Różaniecka, 1♀, 15.10.1985, *C. leucodon*, Skopanie Fabryczne, 4♀♀, 5.08.1989, *M. subterraneus*, Podemszczyzna, 2♀♀, 9.08.1985, *A. agrarius*, Horyniec, 1♀, 20.07.1997, *S. araneus*.

In Poland it is known from many localities, also was known from Bieszczady Mts. (Haitlinger 1986a, 1989a). First record from Nizina Sandomierska.

M. musculus C. L. Koch, 1844

Material. Beskid Nisk Mts.: Folusz, 1♀, 19.07.1989, *M. musculus*; Nizina Sandomierska: Ruda Łańcucka, 1tr, 27.08.1987, *M. musculus*.

M. musculus is known from few localities in Poland (Haitlinger 1986a, 1997, Haitlinger & Turek 2006). First record from Beskid Niski.Mts.

Gliricoptes muscardinus Kok, Lukoschus & Fain, 1971

Material. Beskid Niski Mts.: Olchowiec, 2♀♀, 17.07.1985, *Muscardinus avellanarius*.

In Poland was known only from Beskid Niski Mts. (Haitlinger, 1986a).

*Acaridae**Acarus farris* (Oudemans, 1905)

Material. Beskid Niski Mts.: Bodaki, 1d, 16.07.1975, *C. glareolus*.

A. farris was very rarely stated on small mammals. In Poland it was found on 4 species of small mammals (Haitlinger 1977a).

Rhizoglyphus echinopus (Fumouze & Robin, 1868)

Material. Nizina Sandomierska: Huta Różaniecka, 1d, 15.10.1985, *C. leucodon*.

This species was exceptionally obtained from small mammals. It was already mentioned from Nizina Sandomierska (Haitlinger 1987b).

Glycyphagidae Berlese, 1887*Glycyphagus hypudaei* (C. L. Koch, 1841)

Material. Bieszczady Mts.: Hoczew, 6d, 14.08.1991, *A. agrarius*, 12d, 14.08.1991, *M. subterraneus*, Stuposiany, 4d, 7.08.1991, *A. agrarius*, Kalnica, 10d, 26.07.1989, *M. subterraneus*; Beskid Niski Mts.: Hańczowa, 3d, 10.08.2007, *A. flavicollis*, 4d, 10.08.2007, *M. subterraneus*, Bodaki, 1d, 16.07.1975, *S. alpinus*, 1d, 14.08.2007, *A. uralensis*, 14d, 16.07.1975, *C. glareolus*, 16d, 13.08.2007, *C. glareolus*, Świątkowa Wielka, 5d, 18.07.1999, *M. subterraneus*; Grab, 1d, 19.07.1978, *Crocidura suaveolens*; Nizina Sandomierska: Basznia Górna, 5d, 21.08.2007, *A. flavicollis*, Kamionka, 6d, 7.07.2001, *C. glareolus*, 1d, 9.08.2003, *T. europaea*, Huta Różaniecka, 1d, 15.10.1985, *C. leucodon*, Podemszczyzna, 1d, 9.08.1985, *M. musculus*, 2d, 10.08.1985, *M. minutus*, Skopanie

Fabryczne, 57d, 5.08.1989, *M. subterraneus*, Sędziszów Małopolski, 2d, 22.06.1999, *S. araneus*.

Very common species known from the entire country. It was known also from Beskid Niski Mts. (Haitlinger 1989a). First record from Bieszczady Mts. and Nizina Sandomierska.

Orycteroxenus soricis (Oudemans, 1915)

Material. Bieszczady Mts.: Stuposiany, 1d, 8.08.1991, *N. anomalus*, Hoczew, 8d, 14.08.1991, *A. agrarius*, Dział, 5d, 31.07.1975, *N. fodiens*, Lutowiska, 2d, 26.0.2007, *N. anomalus*; Rabe, 1d, 23.07.1975, *N. fodiens*, Beskid Niski Mts.: Hańczowa, 1d, 16.07.1989, *S. minutus*, Nowy Żmigród, 3d, 19.08.2007, *N. fodiens*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 55d, 9.08.1975, *N. fodiens*; Nizina Sandomierska: Werchrata, 55d, *N. fodiens*, Sędziszów Małopolski, 1d, 22.06.1999, *S. araneus*.

Very common species; it was already mentioned from Beskid Niski Mts. and Bieszczady Mts. (Haitlinger 1984). First record from Nizina Sandomierska and Pogórze Przemysko-Dynowskie.

Labidophorus talpae Kramer, 1877

Material. Beskid Niski Mts.: Folusz, 2d, 2.08.1979, *T. europaea*, Hańczowa, 8d, 15.07.1989, *T. europaea*.

It was already mentioned from Beskid Niski (Haitlinger 2006a).

Lophioglyphus liciosus (Volgin, 1964)

Material. Nizina Sandomierska: Skopanie Fabryczne, 3d, 5.08.1989, *A. sylvaticus*.

Very rare species. In Poland was obtained from small mammals in Drewnik n. Kock (the Lubelskie prov.), Łękuk n. Giżycko (the Warmińsko-Mazurskie prov.) and Zieleniec (the Dolnośląskie prov.) (Haitlinger 1981b, 2006b). First record from Nizina Sandomierska.

Xenoryctes krameri (Michael, 1886)

Material. Bieszczady Mts.: Hoczew, 1d, 15.08.1991, *M. subterraneus*; Beskid Niski Mts.: Nowy Żmigród, 1d, 19.08.2007, *N. fodiens*; Nizina Sandomierska: Kamionka, 1d, 7.07.2001, *C. glareolus*, Huta Różaniecka, 2d, 15.10.1985, *C. leucodon*, Skopanie Fabryczne, 1d, 5.08.1989, *M. subterraneus*.

This species is known from many localities in the country. First record from Bieszczady Mts., Beskid Niski Mts. and Nizina Sandomierska.

Glycyphagidae gen. sp.

Material. Beskid Niski Mts.: Bodaki, 1 , 17.08.2007, *M. arvalis*, 1 , 18.08.2007, *C. glareolus*; Nizina Sandomierska: Ruda Łańcucka, 2♀♀, 22.07.1987, *M. musculus*.

Anoetidae Oudemans, 1904

Prowichmannia spinifera (Michael, 1901)

Material. Bieszczady Mts.: Dział, 3d, 31.07.1975, *N. fodiens*; Beskid Niski Mts.: Bodaki, 2d, 13.08.2007, *C. glareolus*, Folusz, 1d, 13.08.1976, *N. fodiens*.

It was already known from Bieszczady Mts. (Haitlinger 1989a). First record from Beskid Niski Mts.

Prostigmata

Myobiidae Megnin, 1877

Amorphacarus elongatus (Poppe, 1896)

Material. Pogórze Przemysko-Dynowskie: Tarnawka, 1♀, 7.08.1975, *S. araneus*.

This species was already known from Pogórze Przemysko-Dynowskie (Haitlinger 1988a).

A. parvisetosus Lukoschus & Driessen, 1971

Material. Bieszczady, Dział, 7♀♀, 3♂♂, 31.07.1975, *N. fodiens*, 3♀♀, 31.07.1975, *S. araneus*, Skorodne, 1♀, 5.08.1991, *N. anomalus*, 1♀, 2.08.1975, *G. glis*; Pogórze Przemysko-Dynowskie: Huwniki, 1♀ 1♂, 3.08.1993, *S. araneus*; Czarnorzeki, 1♂, 9.08.1975, *N. fodiens*; Nizina Sandomierska: Werchrata, 1♂, 8.08.1975, *N. fodiens*.

It was known from Bieszczady Mts. (Haitlinger 1981b, 1988a). First record from Pogórze Nizina Sandomierska and *G. glis*.

Protomyobia onoi Jameson & Dusbabek, 1971

Material. Beskid Niski Mts.: Bodaki, 2♀♀, 10.1975, *S. araneus*; Nizina Sandomierska: Skopanie Fabryczne, 1♂, 5.08.1989, *M. subterraneus*.

It was known from Beskid Niski Mts. (Haitlinger 1988a). First record from Nizina Sandomierska and *M. subterraneus*: (accidental host).

P. claparedei Poppe, 1896

Material. Beskid Niski Mts.: Wisłok, 1♀ 22.07.1975, *S. araneus*.

It was already known from Beskid Niski Mts. (Haitlinger 1988a).

Crocidurobia michaeli (Polle, 1896)

Material. Nizina Sandomierska: Huta Różaniecka, 2♀♀, 15.10.1985, *C. leucodon*.

It was already known from Nizina Sandomierska (Haitlinger 1987b).

Myobia agraria Grissen & Lukoschus, 1982

Material. Bieszczady Mts.: Kalnica, 1♀, 20.07.1985, *A. agrarius*, Hoczew, 1♀, 11.08.1991, *A. agrarius*; Beskid Niski Mts.: Olchowiec, 1♀, 17.07.1985, *A. agrarius*. Moreover,

was found in Jarosz (Pogórze Przemysko-Dynowskie) (Gorissen & Lukoschus, 1982, Haitlinger 1988a). First record from Bieszczady Mts. and Beskid Niski Mts.

M. multivaga Poppe, 1908

Material. Bieszczady Mts.: Bóbrka n. Solina, 1♀, 8.08.2003, *A. flavicollis*; Nizina Sandomierska: Skopanie Fabryczne, 1♀, 5. 08.1989, *A. sylvaticus*.

In Poland this species was known only from Wrocław and Stołowe Mts. (Haitlinger 1987a, 2006b). First record from Bieszczady Mts. and Nizina Sandomierska.

M. murismusculi (Schrank, 1781)

Material. Beskid Niski Mts.: Folusz, 1♀, 19.07.1989, *M. musculus*; Nizina Sandomierska: Huta Różaniecka, 1♀, 9.08.1985, *M. musculus*, Podemsczyzna, 1♀, 9.08.1985, *M. musculus*, Ruda Łańcucka, 1d, 22.07.1987, *M. musculus*.

It was already known from Beskid Niski Mts. and Nizina Sandomierska (Haitlinger & Turek 2006).

M. micromydis Lukoschus & Driessen, 1970

Material. Nizina Sandomierska: Podemsczyzna, 1♀, 10.08.1985, *M. minutus*.

In Poland rare species. It was known only from Wrocław and Podemsczyzna (Haitlinger 1988a).

Radfordia lemnina (C.L. Koch, 1841)

Material. Bieszczady Mts.: Rajske, 1♀, 4.08.1975, *M. arvalis*, 1♀, 4.08.1975, *C. glareolus*; Beskid Niski Mts.: Wisłok, 3♀♀, 2♂♂, 22.07.1975, *C. glareolus*.

It was known already from Bieszczady Mts. and Beskid Niski Mts. (Haitlinger 1988a).

R. lancearia (Poppe, 1909)

Material. Beskid Niski Mts.: Olchowiec, 1♀, 17.07.1985, *A. agrarius*.

In Poland rare species known from Brodzica n. Hrubieszów and Zubrzyk (Małopolskie prov.) (Haitlinger 1988a). First record from Beskid Niski Mts.

Eadiea brevihamata (Haller, 1882)

Material. Nizina Sandomierska: Kamionka, 1♀, 3♂♂, 9.08.2003, *T. europaea*.

It was known already from Nizina Sandomierska (Haitlinger 2006a).

Erythraeidae Robineau-Desvoidy, 1828

Erythraeus gertrudae Haitlinger 1987

Material. Beskid Niski Mts.: Wisłok, 1 l, 22.07.1975, *S. araneus*.

First record from Beskid Niski Mts. and *S. araneus*. Larvae of this species are associated with insects; from small mammals larvae of *Erythraeidae* were found exceptionally. In Poland the following erythraeids larvae were obtained from small mammals: *Charletonia cardinalis* (C.L. Koch, 1837) from *Mustela erminea* Linnaeus, 1758, *L. (L.) ignotus* (Oudemans, 1903) from *C. glareolus*, *L. (L.) clethrionomydis* Haitlinger, 1977 from *C. glareolus*, *Hauptmannia kazimierae* Haitlinger, 1986 from *A. flavicollis*, *L. beroni* Fain, 1992 from *C. glareolus*, *Erythraeus dubiosus* Schweizer, 1951 from *M. arvalis* and *Balaustium wratislaviensis* Haitlinger 1996 from *T. europaea* (Haitlinger 1985, 1987d, 1989b, 1991, 2006a).

Trombiculidae Ewing, 1929

Hirsutiella zachvatkini (Schluger, 1948)

Material. Bieszczady Mts.: Hoczew, 10 I, 14.08.1991, *M. agrestis*; Beskid Niski Mts.: Gładyszów, 1 I, 15.07.2001, *C. glareolus*, Bodaki, 5 I, 16.07.1975, *C. glareolus*, Posada Górna, 1 I, 21.07.1989, *C. glareolus*; Wisłok, 2 I, 22.07.1975, *M. arvalis*, 1 I, 22.07.1975, *S. araneus*, 1 I, 22.07.1975, *M. subterraneus*; Nizina Sandomierska: Nowa Grobla, 3 I, 14.08.2003, *C. glareolus*.

In Poland very common species. It was found already in Beskid Niski Mts. (Haitlinger 1989a). First record from Bieszczady Mts. and Nizina Sandomierska.

Cheladonta costulata (Willmann, 1952)

Material. Bieszczady Mts.: Bóbrka n. Solina, 6 I, 10.08.2003, *A. terrestris*, 2 I, 10.08.2003, *S. araneus*; Beskid Niski Mts.: Bodaki, 6 I, 15.08.2007, *M. subterraneus*, Chyrowa, 1 I, 20.07.1993, *S. araneus*, Folusz, 1 I, 12.08.1975, *M. subterraneus*.

It was known already from Beskid Niski Mts. (Haitlinger 1989a). First record from Bieszczady Mts. and *A. terrestris*.

Neotrombicula autumnalis (Shaw, 1790)

Material. Bieszczady Mts.: Przełęcz Wetlińska, 9 I, 28.07.1975, *M. arvalis*, Stuposiany, 1 I, 9.08.1991, *N. anomalus*, Wola Michowa, 1 I, 20.07.1985, *M. arvalis*, Bóbrka n. Solina, 2 I, 8.08.2003, *A. agrarius*, 1 I, 10.08.2003, *A. terrestris*, 6 I, 10.08.2003, *C. glareolus*, 2 I, 10.08.2003, *M. subterraneus*, Rajske, 1 I, 4.08.1975, *M. arvalis*, 1 I, 4.08.1975, *A. flavicollis*, Hoczew, 2 I, 14.08.1991, *M. subterraneus*; Beskid Niski Mts.: Hańczowa, 2 I, 10.08.2007, *A. flavicollis*, 2 I, 15.07.1989, *T. europaea*, Bodaki, 1 I, 13.08.1993, *M. arvalis*, 1 I, 16.07.1975, *S. alpinus*, 10 I, 16.07.1975, *T. europaea*, Chyrowa, 4 I, 20.07.1993, *A. flavicollis*, 4 I, 20.07.1993, *M. arvalis*, Klimkówka, 4 I, 14.05.1972, *C. glareolus*, Polany, 1 I, 20.07.1975, *A. agrarius*, Nowy Żmigród, 3 I, 17.08.2007, *M. arvalis*, 4 I, 19.08.2007, *A. flavicollis*, Folusz, 3 I, 13.08.1976, *A. agrarius*, 1 I, 12.08.1975, *N. fodiens*, 1 I, 20.09.1973, *S. alpinus*, Wisłok, 5 I, 22.07.1975, *M. arvalis*; Pogórze Przemysko-Dynowskie: Nowosiółki Dydyńskie, 4 I, 6.08.1975, *C. glareolus*, 3 I, 7.08.1975, *M. arvalis*, 1 I, 6.08.1975, *M. musculus*, Tarnawka, 1 I, 4.08.1975, *C. glareolus*, 1 I, 4.08.1975, *A. flavicollis*, Huwniki, 48 I, 5.08.1993, *M. arvalis*, 3 I, 3.08.1993, *S. araneus*, Piątkowa, 1 I, 16.07.1997, *A. agrarius*, 23 I, 16.07.1997, *T. europaea*,

Roksyce, 11, 8.08.1985, *S. araneus*, Posada Rybotycka, 21, 5.08.1975, *M. arvalis*, Tyrawa Wołoska, 11, 3.07.1985, *S. araneus*; Nizina Sandomierska: Baranów Sandomierski, 11, 22.07.2001, *A. sylvaticus*, Nowa Grobla, 251, 14.08.2003, *C. glareolus*.

In Poland the commonest species among *Trombiculidae*. It was known from Bieszczady Mts., Beskid Niski Mts. and Pogórze Przemysko-Dynowskie (Haitlinger 1989a, 2006a). First record from Nizina Sandomierska and *A. terrestris*.

N. inopinata (Oudemans, 1909)

Material. Bieszczady Mts.: Rajske, 31, 4.08.1975, *M. arvalis*, 51, 4.08.1975, *C. glareolus*, 11, 4.08.1975, *M. subterraneus*, Hoczew, 11, 14.08.1991, *A. agrarius*, Lutowiska, 11, 26.08.2007, *A. sylvaticus*, Bóbrka n. Solina, 51, 9.08.2003, *A. flavicollis*, 11, 10.08.2003, *C. glareolus*, 41, 10.08.2003, *M. subterraneus*, Przełęcz Wetlińska, 51, 28.07.1975, *M. arvalis*; Beskid Niski Mts.: Hańczowa, 11, 10.08.2007, *A. flavicollis*, 81, 10.08.2007, *M. subterraneus*, Bodaki, 11, 15.08.2007, *M. subterraneus*, 111, 13.08.2007, *C. glareolus*, Chyrowa, 21, 20.07.1993, *A. agrarius*, Posada Górna, 121, 21.07.1989, *C. glareolus*, Nowy Żmigród, 11, 19.08.2007, *N. fodiens*, 21, 19.08.2007, *A. sylvaticus*; Pogórze Przemysko-Dynowskie: Nowosiółki Dydyńskie, 751, 6.08.1975, *C. glareolus*, Tarnawka, 11, 7.08.1975, *S. araneus*.

It was known from Bieszczady Mts. and Pogórze Przemysko-Dynowskie (Haitlinger 1989a). First record from Beskid Niski Mts.

N. talmiensis (Schluger, 1955)

Material. Bieszczady Mts.: Połonina Wetlińska, 11, 27.07.1975, *T. europaea*, Rajske, 21, 4.08.1975, *C. glareolus*, Wielka Rawka, 11, 31.07.1975, *S. araneus*; Beskid Niski Mts.: Hańczowa, 21, 10.08.2007, *M. subterraneus*, Bodaki, 141, 13.08.2007, *C. glareolus*; Folsz, 11, 13.08.1976, *N. fodiens*, Pogórze Przemysko-Dynowskie: Huwniki, 21, 5.08.1993, *M. arvalis*, Dydnia, 201, 24.07.1989, *M. arvalis*, Tarnawka, 41, 7.08.1975, *A. agrarius*, 41, 7.08.1975, *C. glareolus*, 11, 7.08.1975, *S. minutus*, 11, 7.08.1975, *S. araneus*, Nowosiółki Dydyńskie, 491, 6.08.1975, *C. glareolus*.

It was known from Bieszczady Mts. and Pogórze Przemysko-Dynowskie (Haitlinger 1981a, 2006a). First record from Beskid Niski Mts.

Leptotrombidium silvaticum Hushcha & Schluger, 1967

Material. Beskid Niski Mts.: Wisłok, 21, 22.07.1975, *C. glareolus*, Bodaki, 21, 07.1975, *M. subterraneus*.

It was already known from Beskid Niski Mts. (Haitlinger 1981a).

Cheyletidae Leach, 1815

Eucheyletia flabellifera (Michael, 1878)

Material. Beskid Niski Mts.: Wisłok, 1♀, 22.07.1975, *M. arvalis*; Pogórze Przemysko-Dynowskie; Nowosiółki Dydyńskie, 1♀, 6.08.1975, *C. glareolus*; Nizina Sandomierska: Horyniec, 1♀, 20.07.1997, *T. europaea*.

In Poland *E. flabellifera* was obtained from various species of small mammals. It was known from Pogórze Przemysko-Dynowskie and Nizina Sandomierska (Haitlinger 1982, 2006a).

Cheyletus eruditus Schrank, 1781

Material. Bieszczady Mts.: Polana, 1♀, 8.08.1991, *M. musculus*.

In Poland very common species obtained from many species of small mammals (Haitlinger 1983a).

Heterostigmata

Pygmephoridae Cross, 1965

Pygmephorus soricis Krczal, 1959

Material. Bieszczady Mts.: Połonina Wetlińska, 2♀♀, 27.07.1975, *T. europaea*, Pogórze Przemysko-Dynowskie: Czarnorzeki, 1♀, 9.08.1975, *N. fodiens*.

It was known from Bieszczady Mts. and Pogórze Przemysko-Dynowskie (Haitlinger 1984, 1989a, 2006a).

P. forcipatus Willmann, 1952

Material. Beskid Niski Mts.: Bodaki, 1♀, 13.08.2007, *C. glareolus*; Nizina Sandomierska: Kamionka, 1♀, 9.08.2003, *T. europaea*.

P. forcipatus is known from many localities in Poland, it was mentioned also from Nizina Sandomierska (Haitlinger 2006a). First record from Beskid Niski Mts.

P. spinosus Kramer, 1877

Material. Beskid Niski Mts.: Bodaki, 1♀, 16.07.1975, *S. araneus*; 1♀, 16.07.1975, *T. europaea*, Nizina Sandomierska: Kamionka, 1♀, 9.08.2003, *T. europaea*, Horyniec, 1♀, 20.07.1997, *T. europaea*.

In Poland common species; it was known from Beskid Niski Mts. and Nizina Sandomierska (Haitlinger 1989a, 2006a).

Bakerdania bavarica Krczal, 1959

Material. Nizina Sandomierska: Kamionka, 2♀♀, 9.08.2003, *T. europaea*.

In Poland it was collected from *C. glareolus* and *A. agrarius* (Kiełczewski et al. 1974, Haitlinger 1977a). First record from *T. europaea*.

Bakerdania sp.

Material. Nizina Sandomierska: Horyniec, 1♀, 20.07.1989, *T. europaea*.

Oribatida

Material. Bieszczady Mts.: Hoczew, 1, 14.08.1991 *M. arvalis*; Beskid Niski Mts.:1, Polany, 20.07.1975, *S. minutus*; Nizina Sandomierska: Nowa Grobla, 1, 14.08.2003, *S. araneus*.

*Coleoptera**Leptinidae* Leconte, 1836*Leptinus testaceus* Müller, 1817

Material. Bieszczady Mts.: Polana, 1, 27.07.1985, *A. flavicollis*, Berezka, 1, 5.08.1989, *A. flavicollis*, Bóbrka n. Solina, 2, 10.08.2003, *A. flavicollis*, Stuposiany, 3, 8.08.1991, *A. flavicollis*; Pogórze Przemysko-Dynowskie: Czarnorzeki, 1, 9.08.1975, *A. flavicollis*; Beskid Niski Mts.: Hańczowa, 1, 10.08.2007, *M. subterraneus*, Olchowiec, 1, 17.07.1985, *A. flavicollis*, Bodaki, 1, 17.08.2007, *A. flavicollis*, Chyrowa, 1, 20.07.1993, *M. arvalis*, Bóbrka n. Krosno, 1, 23.08.2005, *A. agrarius*, Folusz, 1, 18.07.1989, *A. flavicollis*.

This common beetle is relatively often found on *A. flavicollis* (Haitlinger 1989a). First record from *M. subterraneus* and *A. agrarius*.

DISCUSSION

The richest arthropod fauna was found in Beskid Niski Mts. (89 species); poorer arthropod fauna were stated in Nizina Sandomierska (73), Bieszczady Mts. (62) and in Pogórze Przemysko-Dynowskie 49 species only. The most species of *Siphonaptera* were collected from small mammals in Nizina Sandomierska (14) and Beskid Niski Mts. (12). The most species of *Acari* were found in Beskid Niski Mts. (71); Nizina Sandomierska (52), Bieszczady Mts. (51) and 33 species in Pogórze Przemysko-Dynowskie. Of course, part of the species obtained in Beskid Niski Mts. are living also in other studied areas (especially free-living species). Some rare species of small mammals: *S. alpinus*, *N. anomalus*, *S. betulina*, *A. microps*, *M. minutus*, *A. terrestris*, *M. oeconomus* *M. avellanarius* and *G. glis* were collected in some areas only, but at least *A. terrestris*, *M. minutus*, *S. alpinus*, *S. betulina*, *M. avellanarius* and *N. anomalus* occur also in other areas together with their specific arthropods. In Bieszczady Mts. the most numerous species are: *L. agilis* (75), *L. hilaris* (50), *L. muris* (35), 32 *G. hypudaei*, *C. agyrtes* (31), *P. serrata* (30), *N. autumnalis* (26) and *N. inopinata* (26); in Beskid Niski Mts.: *L. agilis* (190), *C. agyrtes* (60), *O. soricis* (59), *N. autumnalis* (46), *G. hypudaei* (45), *N. inopinata* (38), *L. hilaris* (38), *H. nidi* (37) and *E. stabularis* (37) in Pogórze Przemysko-Dynowskie: *N. autumnalis* (89), *N. talmiensis* (81), *N. inopinata* (76), *C. agyrtes* (24) and *L. agilis* (24); in Nizina Sandomierska: *E. carnifex* (144), *G. hypudaei* (75), *O. soricis* (56), *L. hilaris* (52), *L. agilis* (30) and *L. pavlovskyi* (29).. In studied areas were found rare species in Poland *H. longula*, *L. algericus*, *M. rossicus*, *M. ingricus*, *H. hirsutosimilis*, *G. muscardinus*, *L. liciosus*, *M. multivaga*, *M. micromydis*, *C. michaeli* and *L. silvaticum*. In Poland the arthropod fauna of *G. glis* and *M. avellanarius*, is known very poorly. 8 species were

collected from *G. glis*: *Monopsyllus sciurorum* (Schrank, 1803) *A. fahrenholzi*, *P. lunulata*, *N. inopinata*, *A. parvisetosus*, *Radfordia* sp., *G. hypudaei*, *O. sricis* and 8 species were collected from *M. avellanarius*: *M. sciurorum*, *C. agyrtes*, *M. turbidus*, *Peromyscopsylla fallax* (Rothschild, 1909), *I. ricinus*, *L. hilaris*, *G. muscardinus* and *O. soricis*.

Among the most numerous mammals (over 20 caught specimens) the most varied fauna was observed in *C. glareolus* (50 species), *S. araneus* (45), *A. agrarius* (43), *M. arvalis* (40), *A. flavicollis* (34) and *M. subterraneus* (32).

To sum up, it should be stated the arthropod fauna of small mammals from the Podkarpackie province is now very good known (128 species). Only 73 arthropod species were found in Nizina Sandomierska and 114 species were found in the mountain areas. In Polish mountains, higher number of arthropod species was known only from Middle Sudetes Mts. (123) (Haitlinger 2006b).

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**STAWONOGI (*ACARI, ANOPLURA, COLEOPTERA, SIPHONAPTERA*)
DROBNYCH SSAKÓW WOJEWÓDZTWA PODKARPACKIEGO
(POLSKA POŁUDNIOWO-WSCHODNIA)**

Streszczenie

2870 stawonogów należących do 128 gatunków zebrano z 1157 drobnych ssaków należących do 23 gatunków w województwie podkarpackim. W Bieszczadach stwierdzono obecność 62 gatunków stawonogów, w Beskidzie Niskim 89, na Pogórzu Przemysko-Dynowskim 49 i na Nizinie Sandomierskiej 73 gatunki. Ogółem zebrano 2414 osobników *Acari* należące do 100 gatunków, 162 *Anoplura* (7 gatunków), 14 *Coleoptera* (1) i 280 *Siphonaptera* należące do 20 gatunków. *Schizophthirius jaczewskii*, *S. pleurophaeus*, *Palaeopsylla steini*, *Laelaps algericus*, *Haemogamasus hirsutosimilis*, *Lophioglyphus liciosus*, *Gliricoptes muscardinus*, *Crocidurobia michaeli* i *Leptotrombidium silvaticum* należą do gatunków bardzo rzadkich w Polsce. Najwięcej gatunków stawonogów stwierdzono na 4 gatunkach ssaków: *C. glareolus* (50), *S. araneus* (45), *A. agrarius* (43) i *M. arvalis* (40).

SŁOWA KLUCZOWE: *Acari, Anoplura, Coleoptera, Siphonaptera*, ssaki, południowo-wschodnia Polska, faunistyka.

Reviewer – Recenzent: Wit Chmielowski, Prof. Dr. Hab., Research Institute of Pomology and Floriculture, Apiculture Division Puławy, Poland