APHIDS AND OTHER HEMIPTEROUS INSECTS	VOL. 13 51-66

An annotated check-list of aphids (*Hemiptera*: *Sternorryncha*: *Aphidinea*) of the Ojcowski National Park (Southern Poland)

Barbara Osiadacz*, Wacław Wojciechowski**

Department of Zoology, University of Silesia
Bankowa 9, 40-007 Katowice, Poland
*barosa@poczta.onet.pl;
**waclaw.wojciechowski@us.edu.pl

Introduction

So far 706 aphid species have been recorded in Poland (Węgierek & Wojciechowski, 2004; Osiadacz & Wieczorek, 2006), which constitutes almost 50% of the European aphid fauna. This number allows one to state that the aphid fauna in Poland has been well but probably unevenly studied. The lack of faunistic and faunologic studies, which would characterise the fauna of particular regions of Poland, is a serious weakness in the condition of knowledge on biodiversity of this country. With respect to the degree of knowledge the following regions stand out: Mazurian Lake District and the Wielkopolska-Kujawska Lowland (over 450 aphid species). A less known is the southern region of Poland. The only exception is the northern part of the Krakowsko-Częstochowska Upland, where the occurrence of 398 aphid taxons has been registered (Hałaj & Węgierek, 1998). Its southern part including the Ojcowski National Park (ONP), despite a long history and tradition of fauna research, has not been studied completely as yet. Until the research on aphids was taken up in the ONP in 2003 the official figure of aphid species that occur in ONP and its surrounding area had been 16 (Mordvilko, 1897; 1901; Moesz, 1919; Jakuczyn, 1972; Piechota, 1990; Skrzypczyńska, 1995).

The research on aphid fauna in the ONP will contribute to the better knowledge of biodiversity of the National Park, which is particularly protected.

This is essential because of the unique character of the ONP, which is connected with unremitting presence and activity of the man in this region. Better knowledge and understanding of links between aphids, their host plants and other organisms is significant for the well functioning protection of biological diversity.

The Ojcowski National Park is situated in the southern part of the Krakowsko-Częstochowska Upland, 19°46' E and 50°12' N, about 20 km away the north-west of the city of Kraków. Established in 1956, it was the sixth of its kind in Poland. At present the ONP's size is about 2146 ha, and it is the smallest national park in Poland. At the present the outline area of the Park occupies the central part of the River Prądnik Valley (12 km length), the lower and central part of the Sąspowska Valley (5 km length) and also parts of the Jurajska Gate adjoining the valleys. The ONP is situated on the upper-jurassic limestones with two clearly formed shapes: valley – cross profile valleys, canyons and karstic rifts, terraces, alluvial and heap cones and upper forms – island mountains scattered in karstic uplands and surrounded by quaternary formations. The climate of the ONP has features of the mountainous climate because of the sunshine changeability, high daily temperature amplitudes and frequent inversions. A varied shape of terrain and large diversification of climate conditions the richness of flora and the formation of numerous habitats with plant communities formed within them. It is estimated that there are about 950 vascular plant species present in the ONP and its surroundings. These plants occur within phytocenosis which are counted among 30 syntaxonomic units, though since the establishment of the park many of them have been transformed (Zabierowski, 1977; Michalik, 1978; Partyka, 1992; Dylewska & Wiśniowski, 2003; Medwecka-Kornaś, 2006).

Material and methods

The material was collected in 2003-2006 in the whole of the ONP' since the beginning of May until mid-October. The use of the so-called 'deer-stalking' method, which is based on a thorough search of the host plants, is thought to be the best to collect aphids (Szelegiewicz, 1959). Additionally the shaking down of branches and shrubs into sweep nets was used as well as collecting directly from the higher parts of trees with a 5m-long- sweep net. Aphids were collected from 530 vascular plant species that were recorded in the OPN and were claimed to belong to 92 families. The material which consisted of 1287 samples was collected from 134 sites, representing different types of habitats, as well as natural, semi-natural and synantropic phytocenosis all found in the area of the ONP.

Results

The Aphidinea systematic classification index is after HEIE (1980), nomenclature of aphid species – after REMAUDIERE & REMAUDIERE (1997).

Superfamilia: ***Phylloxeroidea***

Familia: ***Adelgidae***

Genus: ***Adelges*** Vallot, 1836

1. *Adelges laricis* Vallot, 1836

Genus: ***Pineus*** Shimer, 1869

2. *Pineus pini* (Ratzeburg, 1844)

Genus: ***Sacchiphantes*** Curtis, 1844

3. *Sacchiphantes abietis* (Linnaeus, 1758)
4. *Sacchiphantes viridis* (Ratzeburg, 1843)

Familia: ***Phylloxeridae***

Genus: ***Phylloxera*** Boyer de Fonscolombe, 1834

5. *Phylloxera coccinea* (von Heyden, 1837)
6. *Phylloxera glabra* (von Heyden, 1837)

Superfamilia: ***Aphidoidea***

Familia: ***Pemphigidae***

Subfamilia: ***Eriosomatinae***

Genus: ***Eriosoma*** Leach, 1818

7. *Eriosoma ulmi* (Linnaeus, 1758) **– WK-W**

Genus: ***Tetraneura*** Hartig, 1841

Subgenus: ***Tetraneura*** Hartig, 1841

8. *Tetraneura* (*Tetraneura*) *ulmi* (Linnaeus, 1758)

Subfamilia**: *Pemphiginae***

Genus: ***Pemphigus*** Hartig, 1839

9. *Pemphigus borealis* Tullgren, 1909 **– WK-W**

Genus: ***Prociphilus*** Koch, 1857

Subgenus: ***Prociphilus*** Koch, 1857

10. *Prociphilus* (*Prociphilus*) *bumeliae* (Schrank, 1801) **– WK-W**

Subgenus: ***Stagona*** Koch, 1857

11. *Prociphilus* (*Stagona*) *pini* (Burmeister, 1835)
12. *Prociphilus* (*Stagona*) *xylostei* (de Geer, 1773)

Genus: ***Thecabius*** Koch, 1857

Subgenus: ***Thecabius*** Koch, 1857

13. *Thecabius* (*Thecabius*) *affinis* (Kaltenbach, 1843)

Subfamilia: ***Fordinae***

Genus: *Forda* von Heyden, 1837

14. *Forda marginata* Koch, 1857

Familia: ***Thelaxidae***

Genus: ***Glyphina*** Koch, 1856

15. *Glyphina betulae* (Linnaeus, 1758)
16. *Glyphina jacutensis* Mordvilko, 1931 **– L**

Genus: ***Thelaxes*** Westwood, 1840

17. *Thelaxes dryophila* (Schrank, 1801)

Familia: ***Anoeciidae***

Genus: ***Anoecia*** Koch, 1856

Subgenus: ***Anoecia*** Koch, 1856

18. *Anoecia* (*Anoecia*) *corni* (Fabricius, 1775)
19. *Anoecia* (*Anoecia*) *vagans* (Koch, 1856)

Familia: ***Mindaridae***

Genus: ***Mindarus*** Koch, 1857

20. *Mindarus abietinus* Koch, 1857 **– WK-W**

Familia: ***Drepanosiphidae***

Subfamilia: ***Drepanosiphinae***

Tribus: ***Drepanosiphini***

Genus: ***Drepanosiphum*** Koch, 1855

21. *Drepanosiphum acerinum* (Walker, 1848)
22. *Drepanosiphum aceris* Koch, 1855 **– L**
23. *Drepanosiphum platanoidis* (Schrank, 1801)

Subfamilia: ***Phyllaphidinae***

Tribus: ***Phyllaphidini***

Genus: ***Calaphis*** Walsh, (1862) 1863

24. *Calaphis betulicola* (Kaltenbach, 1843)
25. *Calaphis flava* Mordvilko, 1928

Genus: ***Callipterinella*** van der Goot, 1913

26. *Callipterinella calliptera* (Hartig, 1841)
27. *Callipterinella tuberculata* (von Heyden, 1837)

Genus: ***Chromaphis*** Walker, 1870

28. *Chromaphis juglandicola* (Kaltenbach, 1843)

Genus: ***Clethrobius*** Mordvilko, 1928

29. *Clethrobius comes* (Walker, 1848)

Genus: ***Betulaphis*** Glendenning, 1926

30. *Betulaphis quadrituberculata* (Kaltenbach, 1843) **– L**

Genus: ***Eucallipterus*** Schouteden, 1906

31. *Eucallipterus tiliae* (Linnaeus, 1758)

Genus: ***Euceraphis*** Walker, 1870

32. *Euceraphis betulae* (Koch, 1855)

33. *Euceraphis punctipennis* (Zetterstedt, 1828) **– L**, **a**

Genus: ***Monaphis*** Walker, 1870

34. *Monaphis antennata* (Kaltenbach, 1843)

Genus: ***Myzocallis*** Passerini, 1860

Subgenus: ***Myzocallis*** Passerini, 1860

35. *Myzocallis* (*Myzocallis*) *carpini* (Koch, 1855)
36. *Myzocallis* (*Myzocallis*) *coryli* (Goeze, 1778)

Genus: ***Panaphis*** Kirkaldy, 1904

37. *Panaphis juglandis* (Goeze, 1778)

Genus: ***Phyllaphis*** Koch, 1856

38. *Phyllaphis fagi* Linnaeus, 1767

Genus: ***Pterocallis*** Passerini, 1860

39. *Pterocallis albidus* Börner, 1940 **– L**
40. *Pterocallis alni* (de Geer, 1773)

Genus: ***Symydobius*** Mordvilko, 1894

41. *Symydobius oblongus* (von Heyden, 1837)

Genus: ***Therioaphis*** Walker, 1870

42. *Therioaphis trifolii* (Monell, 1882) **– L**

Genus: ***Tinocallis*** Matsumura, 1919

Subgenus: ***Tinocallis*** Matsumura, 1919

43. *Tinocallis* (*Tinocallis*) *platani* (Kaltenbach, 1843) **– WK-W**
44. *Tinocallis* (*Tinocallis*) *saltans* (Nevsky, 1929)

Genus: ***Tuberculatus*** Mordvilko, 1894

Subgenus: ***Tuberculatus*** Mordvilko, 1894

45. *Tuberculatus* (*Tuberculatus*) *querceus* (Kaltenbach, 1843)
46. *Tuberculatus* (*Tuberculoides*) *annulatus* (Hartig, 1841)

Tribus: ***Saltusaphidini***

Genus: ***Sminthuraphis*** Quednau, 1953

47. *Sminthuraphis ulrichi* Quednau, 1953 **– L**

Genus: ***Subsaltusaphis*** Quednau, 1953

48. *Subsaltusaphis intermedia* (Hille Ris Lambers, 1939) **– L**

Subfamilia: ***Chaitophorinae***

Tribus: ***Chaitophorini***

Genus: ***Chaitophorus*** Koch, 1854

49. *Chaitophorus capreae* (Mosley, 1841)
50. *Chaitophorus hypogaeus* Hille Ris Lambers, 1947
51. *Chaitophorus mordvilkoi* Mamontova ex Szelegiewicz, 1961 **– WK-W**
52. *Chaitophorus populeti* (Panzer, 1804)
53. *Chaitophorus salicti* (Schrank, 1801)
54. *Chaitophorus salijaponicus niger* Mordvilko, 1929
55. *Chaitophorus tremulae* Koch, 1854
56. *Chaitophorus truncatus* (Hausmann, 1802)
57. *Chaitophorus vitellinae* (Schrank, 1801)

Genus: ***Periphyllus*** van der Hoeven, 1863

58. *Periphyllus acericola* (Walker, 1848)
59. *Periphyllus aceris* (Linnaeus, 1761)
60. *Periphyllus coracinus* (Koch, 1854)
61. *Periphyllus lyropictus* (Kessler, 1886)
62. *Periphyllus testudinaceus* (Fernie, 1852)

Tribus: ***Siphini***

Genus: ***Laingia*** Theobald, 1922

63. *Laingia psammae* Theobald, 1922

Familia: ***Aphididae***

Subfamilia: ***Pterocommatinae***

Genus: ***Plocamaphis*** Oestlund, 1922

64. *Plocamaphis flocculosa brachysiphon* Ossiannilsson, 1959

Genus: ***Pterocomma*** Buckton, 1879

65. *Pterocomma jacksoni* Theobald, 1921
66. *Pterocomma pilosum pilosum* Buckton, 1879
67. *Pterocomma pilosum konoi* Hori ex Takahashi, 1939
68. *Pterocomma rufipes* (Hartig, 1841)
69. *Pterocomma salicis* (Linnaeus, 1758)

Subfamilia: ***Aphidinae***

Tribus: ***Aphidini***

Genus: ***Aphis*** Linnaeus, 1758

Subgenus: ***Aphis*** Linnaeus, 1758

70. *Aphis* (*Aphis*) *affinis* del Guercio, 1911 **– KW-U**
71. *Aphis* (*Aphis*) *brohmeri* Börner, 1952 **– KW-U**
72. *Aphis* (*Aphis*) *brunellae* Schouteden, 1903
73. *Aphis* (*Aphis*) *chloris* Koch, 1854
74. *Aphis* (*Aphis*) *clinopodii* Passerini, 1861
75. *Aphis* (*Aphis*) *confusa* Walker, 1849
76. *Aphis* (*Aphis*) *coronillae* Ferrari, 1872 **– KW-U**
77. *Aphis* (*Aphis*) *craccae* Linnaeus, 1758
78. *Aphis* (*Aphis*) *craccivora* Koch, 1854
79. *Aphis* (*Aphis*) *crepidis* (Börner, 1940)
80. *Aphis* (*Aphis*) *cytisorum sarothamni* Franssen, 1928
81. *Aphis* (*Aphis*) *euphorbiae* Kaltenbach, 1843
82. *Aphis* (*Aphis*) *fabae* Scopoli, 1763
83. *Aphis* (*Aphis*) *fabae cirsiiacanthoidis* Scopoli, 1763
84. *Aphis* (*Aphis*) *fabae euonymi* Fabricius, 1775
85. *Aphis* (*Aphis*) *fabae solanella* Theobald, 1914 **– KW-U**
86. *Aphis* (*Aphis*) *farinosa* J. F. Gmelin, 1790
87. *Aphis* (*Aphis*) *forbesi* Weed, 1889
88. *Aphis* (*Aphis*) *frangulae* Kaltenbach, 1845
89. *Aphis* (*Aphis*) *galiiscabri* Schrank, 1801
90. *Aphis* (*Aphis*) *genistae* Scopoli, 1763
91. *Aphis* (*Aphis*) *hederae* Kaltenbach, 1843

92. *Aphis* (*Aphis*) *hieracii* Schrank, 1801
93. *Aphis* (*Aphis*) *idaei* van der Goot, 1912
94. *Aphis* (*Aphis*) *ilicis* Kaltenbach, 1843
95. *Aphis* (*Aphis*) *intybi* Koch, 1855
96. *Aphis* (*Aphis*) *jacobaeae* Schrank, 1801
97. *Aphis* (*Aphis*) *janischi* (Börner, 1940)
98. *Aphis* (*Aphis*) *lambersi* (Börner, 1940)
99. *Aphis* (*Aphis*) *lamiorum* (Börner, 1950)
100. *Aphis* (*Aphis*) *leontodontis* (Börner, 1950)
101. *Aphis* (*Aphis*) *lilago* F. P. Müller, 1968 **– PL**
102. *Aphis* (*Aphis*) *mammulata* Ghimingham et Hille Ris Lambers, 1949
103. *Aphis* (*Aphis*) *molluginis* (Börner, 1950)
104. *Aphis* (*Aphis*) *nasturtii* Kaltenbach, 1843
105. *Aphis* (*Aphis*) *origani* Passerini, 1860
106. *Aphis* (*Aphis*) *pilosellae* (Börner, 1952)
107. *Aphis* (*Aphis*) *plantaginis* Goeze, 1778
108. *Aphis* (*Aphis*) *podagrariae* Schrank, 1801
109. *Aphis* (*Aphis*) *pomi* de Geer, 1773
110. *Aphis* (*Aphis*) *praeterita* Walker, 1849
111. *Aphis* (*Aphis*) *proffti* (Börner, 1942)
112. *Aphis* (*Aphis*) *pseudocomosa* Stroyan, 1972
113. *Aphis* (*Aphis*) *ruborum* (Börner, 1932)
114. *Aphis* (*Aphis*) *rumicis* Linnaeus, 1758
115. *Aphis* (*Aphis*) *sambuci* Linnaeus, 1758
116. *Aphis* (*Aphis*) *sedi* Kaltenbach, 1843
117. *Aphis* (*Aphis*) *serpylli* Koch, 1854
118. *Aphis* (*Aphis*) *stachydis* Mordvilko, 1929
119. *Aphis* (*Aphis*) *taraxacicola* (Börner, 1940)
120. *Aphis* (*Aphis*) *triglochinis* Theobald, 1926
121. *Aphis* (*Aphis*) *urticata* J. F. Gmelin, 1790
122. *Aphis* (*Aphis*) *verbasci* Schrank, 1801
123. *Aphis* (*Aphis*) *verbenae* Nevsky, 1929 **– WK-W**
124. *Aphis* (*Aphis*) *verticillatae* (Börner, 1940)
125. *Aphis* (*Aphis*) *viburni* Scopoli, 1763

Subgenus: ***Bursaphis*** Mc Vicar Baker, 1934

126. *Aphis* (*Bursaphis*) *epilobii* Kattenbach, 1843
127. *Aphis* (*Bursaphis*) *grossulariae* Kaltenbach, 1843
128. *Aphis* (*Bursaphis*) *schneideri* (Börner, 1940)

Subgenus: ***Toxopterina*** Börner, 1940

129. *Aphis* (*Toxopterina*) *vandergooti* (Börner, 1939)

Genus: ***Hyalopterus*** Koch, 1854

130. *Hyalopterus pruni* (Geoffroy, 1762)

Genus: ***Rhopalosiphum*** Koch, 1854

131. *Rhopalosiphum padi* (Linnaeus, 1758)

Tribus: ***Macrosiphini***
Genus: ***Acyrthosiphon*** Mordvilko, 1914
132. *Acyrthosiphon* (*Acyrthosiphon*) *malvae* (Mosley, 1841)
133. *Acyrthosiphon* (*Acyrthosiphon*) *pisum* (Harris, 1776)
Subgenus: ***Liporrhinus*** Börner, 1939
134. *Acyrthosiphon* (*Liporrhinus*) *chelidonii* (Kaltenbach, 1843) **– KW-U**
Genus: ***Amphorophora*** Buckton, 1876
135. *Amphorophora* (*Amphorophora*) *idaei* (Börner, 1939)
136. *Amphorophora* (*Amphorophora*) *rubi* (Kaltenbach, 1843)
Genus: ***Aulacorthum*** Mordvilko, 1914
137. *Aulacorthum* (*Aulacorthum*) *solani* (Kaltenbach, 1843)
Genus: ***Brachycaudus*** van der Goot, 1913
Subgenus: ***Brachycaudus*** van der Goot, 1913
138. *Brachycaudus* (*Brachycaudus*) *helichrysi* (Kaltenbach, 1843)
Subgenus: ***Acaudus*** van der Goot, 1913
139. *Brachycaudus* (*Acaudus*) *cardui* (Linnaeus, 1758)
140. *Brachycaudus* (*Acaudus*) *lateralis* (Walker, 1848) **– KW-U**
141. *Brachycaudus* (*Acaudus*) *lychnidis* (Linnaeus, 1758)
Subgenus: ***Appelia*** Börner, 1930
142. *Brachycaudus* (*Appelia*) *prunicola* (Kaltenbach, 1943)
Genus: ***Brevicoryne*** van der Goot, 1915
143. *Brevicoryne brassicae* (Linnaeus, 1758)
Genus: ***Capitophorus*** van der Goot, 1913
144. *Capitophorus hippophaes* (Walker, 1852)
145. *Capitophorus pakansus* Hottes et Frison, 1931 **– KW-U**
146. *Capitophorus similis* van der Goot, 1915
Genus: ***Cavariella*** del Guercio, 1911
Subgenus: ***Cavariella*** del Guercio, 1911
147. *Cavariella* (*Cavariella*) *aegopodii* (Scopoli, 1763)
148. *Cavariella* (*Cavariella*) *archangelicae* (Scopoli, 1763)
149. *Cavariella* (*Cavariella*) *konoi* Takahashi, 1939
150. *Cavariella* (*Cavariella*) *pastinacae* (Linnaeus, 1758)
151. *Cavariella* (*Cavariella*) *salicicola* (Matsumura, 1917) **– PL**
152. *Cavariella* (*Cavariella*) *theobaldi* (Gillette et Bragg, 1918)
Genus: ***Chaetosiphon*** Mordvilko, 1914
Subgenus: **Chaetosiphon** Mordvilko, 1914
153. *Chaetosiphon* (*Pentatrichopus*) *tetrarhodum* (Walker, 1849) **– KW-U**
Genus: ***Coloradoa*** Wilson, 1910
154. *Coloradoa artemisiae* (del Guercio, 1913)
Genus: ***Corylobium*** Mordvilko, 1914
155. *Corylobium avellanae* (Schrank, 1801)
Genus: ***Cryptomyzus*** Oestlund, 1922
Subgenus: ***Cryptomyzus*** Oestlund, 1922
156. *Cryptomyzus* (*Cryptomyzus*) *alboapicalis* (Theobald, 1916)

157. *Cryptomyzus* (*Cryptomyzus*) *galeopsidis* (Kaltenbach, 1843)
158. *Cryptomyzus* (*Cryptomyzus*) *ribis* (Linnaeus, 1758)

Genus: ***Delphiniobium*** Mordvilko, 1914

159. *Delphiniobium junackianum* (Karsch, 1887) **– WK-W**

Genus: ***Dysaphis*** Börner, 1931

Subgenus: ***Dysaphis*** Börner, 1931

160. *Dysaphis* (*Dysaphis*) *apiifolia petroselini* (Börner, 1950)
161. *Dysaphis* (*Dysaphis*) *bonomii* (Hille Ris Lambers, 1935)
162. *Dysaphis* (*Dysaphis*) *lappae* (Koch, 1854)
163. *Dysaphis* (*Dysaphis*) *newskyi aizenbergi* (Shaposhnikov, 1949) **– KW-U**
164. *Dysaphis* (*Dysaphis*) *ranunculi* (Kaltenbach, 1843)

Subgenus: ***Pomaphis*** Börner, 1939

165. *Dysaphis* (*Pomaphis*) *plantaginea* (Passerini, 1860)
166. *Dysaphis* (*Pomaphis*) *pyri* (Boyer de Fonscolombe, 1841)
167. *Dysaphis* (*Pomaphis*) *sorbi* (Kaltenbach, 1843)

Genus: ***Hayhurstia*** del Guercio, 1917

168. *Hayhurstia atriplicis* (Linnaeus, 1761)

Genus: ***Hyadaphis*** Kirkaldy, 1904

169. *Hyadaphis foeniculi* (Passerini, 1860)
170. *Hyadaphis coriandri* (B. Das, 1918) **– L**, **b**

Genus: ***Hyperomyzus*** Börner, 1933

Subgenus: ***Hyperomyzus*** Börner, 1933

171. *Hyperomyzus* (*Hyperomyzus*) *lactucae* (Linnaeus, 1758)
172. *Hyperomyzus* (*Hyperomyzus*) *pallidus* Hille Ris Lambers, 1935

Genus: ***Impatientinum*** Mordvilko, 1914

Subgenus: ***Impatientinum*** Mordvilko, 1914

173. *Impatientinum* (*Impatientinum*) *asiaticum* Nevsky, 1929
174. *Impatientinum* (*Impatientinum*) *balsamines* (Kaltenbach, 1862)

Genus: ***Liosomaphis*** Walker, 1868

175. *Liosomaphis berberidis* (Kaltenbach, 1843)

Genus: ***Lipaphis*** Mordvilko, 1928

Subgenus: ***Lipaphis*** Mordvilko, 1928

176. *Lipaphis* (*Lipaphis*) *erysimi* (Kaltenbach, 1843)
177. *Lipaphis* (*Lipaphis*) *rossi* Börner, 1939

Genus: ***Macrosiphoniella*** del Guercio, 1911

Subgenus: ***Macrosiphoniella*** del Guercio, 1911

178. *Macrosiphoniella (Macrosiphoniella*) *absinthii* (Linnaeus, 1758)
179. *Macrosiphoniella* (*Macrosiphoniella*) *artemisiae* (Boyer de Fonscolombe, 1841)
180. *Macrosiphoniella* (*Macrosiphoniella*) *millefolii* (de Geer, 1773)
181. *Macrosiphoniella* (*Macrosiphoniella*) *tanacetaria* (Kaltenbach, 1843)

Subgenus: ***Phalangomyzus*** Börner, 1939

182. *Macrosiphoniella* (*Phalangomyzus*) *oblonga* (Mordvilko, 1901

Genus: ***Macrosiphum*** Passerini, 1860

183. *Macrosiphum* (*Macrosiphum*) *albifrons* Essig, 1911 **– PL**

184. *Macrosiphum* (*Macrosiphum*) *cholodkovskyi* (Mordvilko, 1909)
185. *Macrosiphum* (*Macrosiphum*) *funestum* (Macchiati, 1885)
186. *Macrosiphum* (*Macrosiphum*) *gei* (Koch, 1855)
187. *Macrosiphum* (*Macrosiphum*) *rosae* (Linnaeus, 1758)
188. *Macrosiphum* (*Macrosiphum*) *sileneum* Theobald, 1913 **– KW-U**

Genus: ***Megoura*** Buckton, 1876

189. *Megoura litoralis* F. P. Müller, 1952 **– WK-W**
190. *Megoura viciae* Buckton, 1876

Genus: ***Metopeurum*** Mordvilko, 1914

191. *Metopeurum fuscoviride* Stroyan, 1950

Genus: ***Microlophium*** Mordvilko, 1914

192. *Microlophium carnosum* (Buckton, 1876)

Genus: ***Myzaphis*** dan der Goot, 1913

193. *Myzaphis rosarum* (Kaltenbach, 1843)

Genus: ***Myzus*** Passerini, 1860

Subgenus: ***Myzus*** Passerini, 1860

194. *Myzus* (*Myzus*) *cerasi* (Fabricius, 1775)
195. *Myzus* (*Myzus*) *lythri* (Schrank, 1801)

Subgenus: ***Galilobium*** Börner, 1933

196. *Myzus* (*Galilobium*) *langei* (Börner, 1933)

Subgenus: ***Nectarosiphon*** Schouteden, 1901

197. *Myzus* (*Nectarosiphon*) *ligustri* (Mosley, 1841)
198. *Myzus* (*Nectarosiphon*) *myosotidis* (Börner, 1950)
199. *Myzus* (*Nectarosiphon*) *persicae* Sulzer, 1776

Genus: ***Nasonovia*** Mordvilko, 1914

Subgenus: ***Nasonovia*** Mordvilko, 1914

200. *Nasonovia* (*Nasonovia*) *compositellae compositellae* Theobald, 1924 **– KW-U**
201. *Nasonovia* (*Nasonovia*) *compositellae nigra* (Hille Ris Lambers, 1931)
202. *Nasonovia* (*Nasonovia*) *pilosellae* (Börner, 1933)
203. *Nasonovia* (*Nasonovia*) *ribisnigri* (Mosley, 1841)

Genus: ***Ovatus*** van der Goot, 1913

Subgenus: ***Ovatus*** van der Goot, 1913

204. *Ovatus* (*Ovatus*) *insitus* (Walker, 1849) **– WK-W**
205. *Ovatus* (*Ovatus*) *mentharius* (van der Goot, 1913)

Genus: ***Phorodon*** Passerini, 1860

Subgenus: ***Phorodon*** Passerini, 1860

206. *Phorodon* (*Phorodon*) *humuli* (Schrank, 1801)

Genus: ***Rhopalomyzus*** Mordvilko, 1921

207. *Rhopalomyzus* (*Judenkoa*) *lonicerae* (Siebold, 1839)

Genus: ***Semiaphis*** van der Goot, 1913

208. *Semiaphis dauci* (Fabricius, 1775)

Genus: ***Sitobion*** Mordvilko, 1914

Subgenus: ***Sitobion*** Mordvilko, 1914

209. *Sitobion* (*Sitobion*) *avenae* (Fabricius, 1775)

Genus: ***Trichosiphonaphis*** Takahashi, 1922
Subgenus: ***Xenomyzus*** Aizenberg, 1935
210. *Trichosiphonaphis* (*Xenomyzus*) *corticis* (Aizenberg, 1935)
Genus: ***Uroleucon*** Mordvilko, 1914
Subgenus: ***Uroleucon*** Mordvilko, 1914
211. *Uroleucon* (*Uroleucon*) *achilleae* (Koch, 1855)
212. *Uroleucon* (*Uroleucon*) *cichorii cichorii* (Koch, 1855)
213. *Uroleucon* (*Uroleucon*) *cichorii grossum* (Hille Ris Lambers, 1939)
214. *Uroleucon* (*Uroleucon*) *cirsii* (Linnaeus, 1758)
215. *Uroleucon* (*Uroleucon*) *hypochoeridis* (Fabricius, 1779)
216. *Uroleucon* (*Uroleucon*) *murale* (Buckton, 1876)
217. *Uroleucon* (*Uroleucon*) *obscurum* (Koch, 1855)
218. *Uroleucon* (*Uroleucon*) *sonchi* (Linnaeus, 1767)
219. *Uroleucon* (*Uroleucon*) *tanaceti* (Linnaeus, 1758)
220. *Uroleucon* (*Uroleucon*) *tussilaginis* (Walker, 1850)
Subgenus: ***Lambersius*** Olive, 1965
221. *Uroleucon* (*Lambersius*) *erigeronense* (Thomas, 1878)
Subgenus: ***Uromelan*** Mordvilko, 1914
222. *Uroleucon* (*Uromelan*) *aeneum* (Hill Ris Lambers, 1939)
223. *Uroleucon* (*Uromelan*) *campanulae* (Kaltenbach, 1843)
224. *Uroleucon* (*Uromelan*) *jaceae jaceae* (Linnaeus, 1758)
225. *Uroleucon* (*Uromelan*) *jaceae henrichi* (Börner, 1950)
226. *Uroleucon* (*Uromelan*) *nigrocampanulae* (Theobald, 1928)
227. *Uroleucon* (*Uromelan*) *rapunculoidis* (Börner, 1939)
228. *Uroleucon* (*Uromelan*) *simile* (Hille Ris Lambers, 1935)
229. *Uroleucon* (*Uromelan*) *solidaginis* (Fabricius, 1779)
230. *Uroleucon* (*Uromelan*) *taraxaci* (Kaltenbach, 1843)

Familia: ***Lachnidae***
Subfamilia: ***Lachninae***
Genus: ***Lachnus*** Burmeister, 1835
231. *Lachnus longirostris* (Mordvilko, 1909)
232. *Lachnus pallipes* (Hartig, 1841)
233. *Lachnus roboris* (Linnaeus, 1758)
Genus: ***Stomaphis*** Walker, 1870
234. *Stomaphis quercus* (Linnaeus, 1758)
Subfamilia: ***Cinarinae***
Genus: ***Cinara*** Curtis, 1835
Subgenus: ***Cinara*** Curtis, 1835
235. *Cinara* (*Cinara*) *brauni* Börner, 1940
236. *Cinara* (*Cinara*) *confinis* (Koch, 1856) **– KW-U**
237. *Cinara* (*Cinara*) *costata* (Zetterstedt, 1828)
238. *Cinara* (*Cinara*) *cuneomaculata* (del Guercio, 1909)
239. *Cinara* (*Cinara*) *hyperophila* (Koch, 1855) **– KW-U**

240. *Cinara* (*Cinara*) *laricis* (Hartig, 1839)
241. *Cinara* (*Cinara*) *nuda* Mordvilko, 1895
242. *Cinara* (*Cinara*) *pectinatae* (Nördlinger, 1880)
243. *Cinara* (*Cinara*) *piceicola* (Cholodkovsky, 1896)
244. *Cinara* (*Cinara*) *pilicornis* (Hartig, 1841)
245. *Cinara* (*Cinara*) *pinea* (Mordvilko, 1895)
246. *Cinara* (*Cinara*) *pini* (Linnaeus, 1758)
247. *Cinara* (*Cinara*) *pinihabitans* (Mordvilko, 1895) **– KW-U**

Subgenus: ***Cupressobium*** Börner, 1940

248. *Cinara* (*Cupressobium*) *juniperi* (de Geer, 1773)

Genus: ***Schizolachnus*** Mordvilko, 1909

249. *Schizolachnus pineti* (Fabricius, 1781)

Subfamilia: ***Traminae***

Genus: ***Trama*** von Heyden, 1837

Subgenus**:** ***Trama*** von Heyden, 1837

250. *Trama* (*Trama*) *troglodytes* von Heyden, 1837

PL – new species for Poland;
KW-U – new species for the Krakowsko-Wieluńska Upland;
L – bibliographic data unconfirmed during the research of 2003-2007;
a – possibility of false identification, *Euceraphis betulae*;
b – named as *Hyadaphis tatarica*.

Discussion

Until the beginning of research in 2003, the ONP was considered to be one of the best known areas for hemipterons that inhabited it, including aphids *Aphidinea*, scale insects *Coccinea*, whiteflies *Aleyrodinea*, psyllids *Psyllinea*, planthoppers *Fulgoromorpha* and leafhoppers *Cicadomorpha*; the last two groups were counted together as cicadis of the parks "Auchenorrhyncha"-*Homoptera* (Banaszak *et al.*, 2004). Such a situation did not concern the aphid fauna of the OPN because composite unity research of the fauna of aphids of the ONP had not been carried out previously. During the research carried out in 2003-2006 in the area of the ONP, aphids of 241 taxons from 2 superfamilies were recorded and identified. These families were: *Phylloxeroidea* and *Aphidoidea*: 229 species and 12 subspecies. The checklist of aphid taxons from the ONP at present includs 250 taxons, out of which 234 were recorded for the first time since the research began in 2003. The presence of 9 aphid species was not recorded. Eight of those were previously mentioned by Piechota (1990): *Glyphina* j*acutensis* Morvilko, 1931, *Drepanosiphum aceris* Koch, 1855, *Betulaphis quadrituberculata* Kaltenbach, 1843, *Euceraphis punctipennis* Zetterstedt, 1828 (perhaps the misidentified *E. betulae* Koch, 1855), *Pterocallis albidus* Börner,

1940, *Sminthuraphis ulrichi* Quednau, 1953, *Subsalthusaphis intermedia* Hille Ris Lambers, 1939. JAKUCZYN (1972) mentions also *Hyadaphis coriandri* B. Das, 1918 (also named *Hyadaphis tataricae* Aizenberg, 1935).

The confirmed aphid species belong to 9 families, 11 subfamilies, 6 tribes and 76 genera. Among the aphids confirmed in the ONP area there were 3 species that were new to Poland: *Aphis lilago* F.P Müller, 1968, *Cavariella salicicola* (Matsumura, 1917) and *Macrosiphum albifrons* Essig, 1911. Moreover, in the studied area there were 24 species that were new to the region of the Kraków-Wieluń Upland: *Eriosoma ulmi*, *Pemphigus borealis*, *Prociphilus bumeliae*, *Mindarus abietinus*, *Tinocallis platani*, *Chaitophorus mordvilkoi*, *Aphis affinis, A. brohmeri*, *A. coronillae*, *A. fabae* subsp. *solanella*, *A. verbenae*, *Acyrthosiphon chelidonii*, *Brachycaudus lateralis*, *Capitophorus pakansus*, *Chaetosiphon tetrarhodum*, *Delphiniobium junackianum*, *Dysaphis newskyi* subsp. *aizenbergi*, *Macrosiphum sileneum*, *Megoura litoralis*, *Nasonovia compositellae compositellae*, *Ovatus insitus*, *Cinara confinis*, *C. hyperophila*, *C. pinihabitans*.

The following species were registered to be the most frequent in the sample collected in the ONP area *Aphis fabae fabae* (11.34%), *Sitobion avenae* (5.44%), *Macrosiphum rosae* (5.13%). *Aphis fabae fabae* is a poliphagous aphid that occurs on 49 plant species and was registered 146 times. It was considered to be a common species. The two following poliphagous species *Sitobion avenae* (5.44%) and *Macrosiphum rosae* were classified to be quite frequent in the ONP area. They were recorded 70 and 66 times, respectively. As many as 82 species were registered only once in the ONP. Ninety-eight species were considered to be very rare. Over 70% of aphid species, which were registered in the ONP, were considered to be very rare or have been recorded once only.

The *Aphididae* family was the most numerous (68.9%) of the entire aphid fauna of the ONP. Then there followed the *Drepanosiphidae* (14.9%) and the *Lachnidae* (8.3%) families. The remaining families such as the *Adelgidae*, the *Mindaridae*, the *Pemphigidae, Phylloxeridae* and the *Thelaxide* were mostly represented by single species e.g. the *Mindaridae* (0.41%) were represented only by *Mindarus abietinus*. Over 66% of all the registered species were of the *Aphidinae* subfamily. Much less numerous were species of the following subfamilies: *Phyllaphidinae* (7.88%), *Chaitophorinae* (6.22%) and *Cinarinae* (6.22%). The most numerous species of the tribes were *Macrosiphini* (about 41%) and *Aphidini* (about 26%). The *Aphis* genus was found to be the most numerous of all the genera as it comprised 60 species that were present in the ONP. Much less numerous were species of the following genera: *Uroleucon* (20), *Cinara* (14), *Chaitophorus* (9) and *Dysaphis* (8).

Considering the knowledge of the aphid fauna, the ONP is, at the present, the best maintained national park in Poland. Other national parks in Poland also have their lists of aphid fauna, as follows: The Bieszczady National Park has 147 aphid species on record, (WĘGIEREK & CZYLOK, 2000), the Babia Góra

National Park – 140 aphid species (CELARY, 2003), whereas the Białowieża National Park only 59 aphid species on record (WĘGIEREK & WOJCIECHOWSKI, 2001).

The species registered it the ONP comprise over 35% of all the *Aphidinae* to be found in Poland (WĘGIEREK & WOJCIECHOWSKI, 2004, OSIADACZ & WIECZOREK, 2006). This data makes the region of the Krakow-Wieluń Upland the third in Poland with respect to the number of all the registered aphid species and subspecies (415 taxons), after the Mazurian Lake District and the Wielkopolska-Kujawska Lowland, in which 450 aphid species were registered. Up until now 398 aphid species have been recorded in the Krakow-Wielun Upland (HAŁAJ & WĘGIEREK, 1998). This information concerns only the central part of this Upland (Częstowska Upland), and does not take into consideration its southern part, where the ONP is situated. The aphid fauna of the northern part of the Krakow-Wieluń Upland**,** i.e. the Wieluń Upland has not been studied as yet.

The species richness of the aphid fauna of the ONP, in comparison with the whole region becomes even more visible when one takes into consideration the mean number of aphid species per a unit of the area (SZELEGIEWICZ, 1978). This factor for the ONP (i.e. the number of species per 1km^2) the size of which is 21.46 km^2 is 11.65. For the Krakow-Wieluń Upland, the area of which well exceeds 2500 km^2, this factor is 0.16. One still has to highlight the fact that in the OPN area, which comprises less than 1% of the total region area lacks numerous plant communities present in the area of Jura Krakow-Wieluń, including psammophil grasses, sedge community or pine forest (BABCZYNSKA-SENDEK *et al.*, 1992) in which there is a large number of aphid species familiar to the plants of this type of habitat.

It is important that the research of the aphid fauna of the national parks is continued since it is important not only for cataloguing value but most of all it may contribute to the knowledge of biodiversity, as well as preservation and protection of many valuable habitats.

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Mszyce (*Hemiptera: Sternorrhyncha: Aphidinea*) Ojcowskiego Parku Narodowego – wykaz z komentarzem

Streszczenie

Przedstawiono wykaz mszyc stwierdzonych z obszaru Ojcowskiego Parku Narodowego wraz z krótkim komentarzem. Materiał zbierany był w latach 2003-2006, zweryfikowano także obecność gatunków uprzednio wykazywanych jako występujące na terenie OPN. Na terenie OPN wykazano 3 gatunki nowe dla Polski: *Aphis lilago*, F. Müller, 1968, *Cavariella salicicola* Matsumura, 1917 oraz *Macrosiphum albifrons* Essig, 1911 oraz 24 gatunki nowe dla regionu Wyżyny Krakowsko-Wieluńskiej, tj: *Eriosoma ulmi*, *Pemphigus borealis*, *Prociphilus bumeliae*, *Mindarus abietinus*, *Tinocallis platani*, *Chaitophorus mordvilkoi*, *Aphis affinis, A. brohmeri*, *A. coronillae*, *A. fabae solanella*, *A. verbenae*, *Acyrthosiphon chelidonii*, *Brachycaudus lateralis*, *Capitophorus pakansus*, *Chaetosiphon tetrarhodum*, *Delphiniobium junackianum*, *Dysaphis newskyi aizenbergi*, *Macrosiphum sileneum*, *Megoura litoralis*, *Nasonovia compositellae compositellae*, *Ovatus insitus*, *Cinara confinis*, *C. hyperophila*, *C. pinihabitans*. Materiał dowodowy zdeponowany jest w Katedrze Zoologii Uniwersytetu Śląskiego w Katowicach.