

# CONTRIBUTION TO THE AUCHENORRHYNCHA FAUNA OF ȘALAJ COUNTY, ROMANIA

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**ABSTRACT:** The entomofauna of the Șalaj County in Romania has remained poorly known so far. Concerning Auchenorrhyncha (Hemiptera), only 29 species have been recorded earlier voucher specimens of several of them are deposited in the Hungarian Natural History Museum. Intensive collectings were organized in the area by the Vasile Goldiș University (Arad) and the Hungarian Natural History Museum (Budapest) during 2014–2015. The collecting trips have resulted specimens of 198 species. Together with species reported by an earlier paper but not found during the present study, a checklist of 215 species known from the area is presented. The collected material is diverse, most of the species are widely distributed all over the Palaearctic Region. *Oncopsis appendiculata* Wagner, 1944 (Cicadellidae) is recorded from Romania for the first time. *Scaphoideus titanus* Ball, 1932 (Cicadellidae) and *Stictocephala bisonia* Kopp & Yonke, 1977 (Membracidae) are invasive polyphagous species of high agricultural importance. One specimen of an *Anakelisia* species different from all previously described species known to us were found, they require further taxonomic study.

**Keywords:** Șalaj County, Hemiptera, Auchenorrhyncha, faunistics, checklist, new country record, invasive species

## INTRODUCTION:

Șalaj County in Romania is greatly occupied by agricultural and other anthropogenic landscapes, intermixed with small, isolated patches of natural habitats, for example semi-natural pastures and forest fragments. The first and so far the only data on the Homoptera of Șalaj County, Romania, were published by Horváth (1897) who recorded 29 species from the area. Voucher specimens of part of the species recorded in this study are deposited in the Hungarian Natural History Museum (HNHM), Budapest. After his seminal work only sporadic collectings happened in Șalaj County and no further data have been published on Hemiptera.

Intensive collectings were organized in Șalaj County by the Vasile Goldiș University (Arad) and the HNHM during 2014–2015. The collecting trips have resulted specimens of 198 species. Together with species reported by Horváth (1897) but not found during the present study, a checklist of 215 species known from the area is provided in the present paper.

## MATERIALS AND METHODS:

Data of the collecting localities were presented by Gubányi (2015). The authors have been participated in three field trips: 2–6. June 2014. (leg. A. Orosz, G.

Puskás, Z. Soltész & M. Tóth); 11–14. August 2014. (leg. A. Gubányi, G. Katona, A. Orosz & G. Puskás); 7–10. September 2015. (leg. A. Gubányi, A. Orosz, L. Ronkay & M. Tóth), and collected Hemiptera specimens at 55 localities. Further trips to the area by our colleagues resulted in a few additional species; all of them have been mounted, identified, deposited in the HNHM Hemiptera Collection, and included in the final checklist.

Specimens were collected by sweep netting, hand collecting, at UV light (light trap and light tower), using a leaf Hoover modified for insect collecting, and in a few cases by pitfall trap; colleagues participating other trips used other methods too. Most of the specimens were collected by netting, the most frequently used and most successful method for collecting diurnal, Auchenorrhyncha species.

The checklist presented below follows the taxonomic arrangement and nomenclature used by Nast (1972), Holzinger et al. (1997, 2003), Györffy et al. (2009). In case of the records of Horváth (1897) both the original scientific names and the current valid names are given.

## RESULTS:

**Table 1.**  
List of the species recorded by Horváth (1897)

Valid names of species recorded by Horváth (1897)	Scientific names as published by Horváth (1897)	Localities (Horváth, 1897)
<i>Anoscopus albifrons</i> (Linnaeus, 1758)	<i>Acocephalus albifrons</i> L.	Zilah
<i>Anoscopus serratulae</i> (Fabricius, 1775)	<i>Acocephalus fuscofasciatus</i> Goeze ( <i>serratulae</i> Fabr.)	Szilágynagyfalu, Somlyócsehi
<i>Euscelis distinguendus</i> (Kirschbaum, 1868)	<i>Athysanus distinguendus</i> Kb.	Zilah
<i>Euscelidius schenckii</i> (Kirschbaum, 1868)	<i>Athysanus schenckii</i> Kb.	Szilágynagyfalu
<i>Limotettix striola</i> (Fallén, 1806)	<i>Athysanus striola</i> Fall.	Zilah
<i>Cicada orni</i> (Linnaeus, 1758)	<i>Tettigia orni</i> L.	Szilágysomlyó
<i>Cicadetta podolica</i> (Eichwald, 1830)	<i>Cicadetta adusta</i> Hag.	Szilágynagyfalu
<i>Cicadivetta tibialis</i> (Panzer, 1788)	<i>Cicadivetta tibialis</i> Panz.	Szilágynagyfalu

<i>Macrosteles sexnotatus</i> (Fallén, 1806)	<i>Cicadula sexnotata</i> Fall.	Zilah
<i>Cixius stigmaticus</i> (Germar, 1818)	<i>Cixius stigmaticus</i> Germ.	Zilah
<i>Tachycixius pilosus</i> (Olivier, 1791)	<i>Cixius pilosus</i> Ol.	Zilah
<i>Arthaldeus striifrons</i> (Kirschbaum, 1868)	<i>Deltocephalus striifrons</i> Kb.	Diósad
<i>Delphax crassicornis</i> (Panzer, 1796)	<i>Aeropus crassicornis</i> Fabr.	Szilágynagyfalu
<i>Forcipata citrinella</i> (Zetterstedt, 1828)	<i>Dicraneura fieberi</i> Löw.	Zilah
<i>Erythria montandoni</i> (Puton, 1880)	<i>Erythria montandoni</i> Put.	Zilah, Kásapatak
<i>Euconomelus lepidus</i> (Boheman, 1847)	<i>Conomelus limbatus</i> Fabr.	Zilah
<i>Idiocerus populi</i> (Linnaeus, 1761)	<i>Idiocerus populi</i> L.	Zilah
<i>Issus muscaeformis</i> (Schrank, 1781)	<i>Issus muscaeformis</i> Schrk.	Zilah
<i>Allygidius furcatus</i> (Ferrari, 1882)	<i>Jassus furcatus</i> Ferr.	Szilágynagyfalu
<i>Allygidius atomarius</i> (Fabricius, 1794)	<i>Jassus atomarius</i> Germ.	Somlyócsehi
<i>Kervillea conspurcata</i> (Spinola, 1939)	<i>Hysteropterum dohrnii</i> Kb.	Zilah
<i>Ledra aurita</i> (Linnaeus, 1758)	<i>Ledra aurita</i> L.	Zilah
<i>Batracomorphus irroratus</i> (Lewis, 1834)	<i>Macropsis microcephala</i> H.-Sch.	Zilah, Szilágysomlyó
<i>Elymana sulphurella</i> (Zetterstedt, 1828)	<i>Pediopsis virescens</i> Fabr.	Zilah
<i>Macropsis megerlei</i> (Fieber, 1868)	<i>Pediopsis megerlei</i> Fieb.	Szilágynagyfalu
<i>Penthimia nigra</i> (Goeze, 1778)	<i>Penthimia nigra</i> Goeze ( <i>atra</i> Fabr.)	Szilágynagyfalu
<i>Pithytettix abietinus</i> (Fallén, 1806)	<i>Thamnotettix abietinus</i> Fall.	Egrespatak
<i>Hesium domino</i> (Reuter, 1880)	<i>Thamnotettix biguttatus</i> Fall.	Zilah
<i>Anoplotettix fuscovenosus</i> (Ferrari, 1882)	<i>Thamnotettix fuscovenosus</i> Ferr.	Zilah
<i>Stictocoris picturatus</i> (C. Sahlberg, 1842)	<i>Thamnotettix lineatus</i> Fabr.	Kásapatak

List of species in taxonomical and alphabetical order with the number of localities of collectings in 2014-2015. The records of Horváth (1897) were signed as H1897.

#### Aphrophoridae

*Aphrophora alni* (Fallén, 1805) - 57; 76; 267  
*Aphrophora pectoralis* Matsumura, 1903 - 58; 91  
*Aphrophora salicina* (Goeze, 1778) - 77; 91

#### Cercopidae

*Cercopis arcuata* Fieber, 1844 - 66  
*Cercopis sanguinolenta* (Scopoli, 1763) - 72; 162  
*Cercopis vulnerata* Rossi, 1807 - 69  
*Lepyronia coleoprata* (Linnaeus, 1758) - 66; 90  
*Neophilaenus campestris* (Fallén, 1805) - 57; 58; 59; 61; 62; 66; 72; 74; 78; 80; 81; 82; 86; 89; 92  
*Neophilaenus lineatus* (Linnaeus, 1758) - 76; 96  
*Philaenus spumarius* (Linnaeus, 1758) - 57; 78; 82; 85; 86; 88; 278

#### Cicadellidae

*Acericerus* - 87  
*Acericerus rotundifrons* (Kirschbaum, 1868) - 72  
*Adarrus multinotatus* (Boheman, 1847) - 102; 260; 271  
*Agallia brachyptera* (Boheman, 1847) - 264  
*Alebra albostriella* (Fallén, 1826) - 60; 72  
*Alebra wahlbergi* (Boheman, 1845) - 61  
*Allygidius atomarius* (Fabricius, 1794) - 57; H1897  
*Allygidius commutatus* (Fieber, 1872) - 72  
*Allygidius furcatus* (Ferrari, 1882) - 267; 271; H1897  
*Allygidius mayri* (Kirschbaum, 1868) - 85  
*Allygus mixtus* (Fabricius, 1794) - 57; 74  
*Anaceratagallia laevis* Ribaut, 1935 - 76;  
*Anaceratagallia ribauti* (Ossiannilsson, 1938) - 271  
*Anaceratagallia venosa* (Fourcroy, 1785) - 267

*Anoplotettix fuscovenosus* (Ferrari, 1882) - H1897 (no new occurrence)  
*Anoplotettix horvathi* Metcalf, 1955 - 72  
*Anoscopus albifrons* (Linnaeus, 1758) - H1897 (no new occurrence)  
*Anoscopus flavostriatus* (Donovan, 1799) - 264  
*Anoscopus serratulae* (Fabricius, 1775) - H1897 (no new occurrence)  
*Aphrodes bicinctus* (Schrank, 1776) - 271  
*Aphrodes makarovi* Zachvatkin, 1948 - 76  
*Arboridia parvula* (Boheman, 1845) - 267  
*Arboridia pusilla* (Ribaut, 1936) - 267  
*Arboridia ribauti* (Ossiannilsson, 1937) - 72; 82; 93  
*Arocephalus languidus* (Flor, 1861) - 74; 78  
*Arthaldeus pascuellus* (Fallén, 1826) - 92; 94; 270  
*Arthaldeus striifrons* (Kirschbaum, 1868) - 57; 58; 59; 66; 74; 76; 78; 89; 90; 264; H1897  
*Artianus interstitialis* (Germar, 1821) - 78  
*Austroasca vittata* (Lethierry, 1884) - 60; 91  
*Balclutha punctata* (Fabricius, 1775) - 58; 59; 78; 80; 82; 89; 90; 92  
*Batracomorphus irroratus* Lewis, 1834 - 267; H1897  
*Chlorita paolii* (Ossiannilsson, 1939) - 78; 80; 86; 87; 90; 94; 96  
*Cicadella lasiocarpae* Ossiannilsson, 1981 - 264  
*Cicadella viridis* (Linnaeus, 1758) - 57; 59; 66; 77; 85; 90; 91; 92; 93; 260; 264; 267; 270  
*Cicadula albingensis* Wagner, 1940 - 264  
*Cicadula persimilis* (Edwards, 1920) - 260  
*Cicadula quadrinotata* (Fabricius, 1794) - 58; 59; 66; 260; 264  
*Deltocephalus pulicaris* (Fallén, 1806) - 59; 61; 69; 72; 81; 82; 89; 90; 92; 93; 94; 271  
*Doratura exilis* Horváth, 1903 - 76  
*Doratura homophyla* (Flor, 1861) - 89; 94; 96  
*Doratura impudica* Horváth, 1897 - 80; 94

- Doratura stylata* (Boheman, 1847) - 80; 96  
*Dryodurgades reticulatus* (Herrich-Schäffer, 1834) - 85; 88  
*Edwardsiana avellanae* (Edwards, 1888) - 61; 91  
*Edwardsiana crataegi* (Douglas, 1876) - 85  
*Edwardsiana flavescens* (Fabricius, 1794) - 80  
*Edwardsiana froggatti* (Baker 1925) - 61  
*Edwardsiana lethierryi* (Edwards, 1881) - 60  
*Edwardsiana plurispinosa* (Wagner, 1935) - 60  
*Edwardsiana prunicola* (Edwards, 1914) - 61; 264  
*Edwardsiana rosae* (Linnaeus, 1758) - 60; 85  
*Edwardsiana stehliki* Lauterer, 1958 - 60  
*Edwardsiana tersa* (Edwards, 1914) - 57  
*Elymana sulphurella* (Zetterstedt, 1828) - 80; H1897  
*Emelyanoviana mollicula* (Boheman, 1845) - 82; 264; 270  
*Empoasca decipiens* Paoli, 1930 - 267  
*Empoasca pteridis* Dahlbom, 1850 - 58; 85; 86; 92; 267  
*Empoasca vitis* (Göthe, 1875) - 93  
*Eohardya fraudulenta* (Horváth, 1903) - 72  
*Errastunus ocellaris* (Fallén, 1806) - 57; 59; 60; 78; 86; 89; 257; 270  
*Errhomenus brachypterus* Fieber, 1866 - 61  
*Erythria montandoni* (Puton, 1880) - 105; 113; H1897  
*Eupelix cuspidata* (Fabricius, 1775) - 66  
*Eupteryx atropunctata* (Goeze, 1778) - 82; 271  
*Eupteryx aurata* (Linnaeus, 1758) - 66  
*Eupteryx calcarata* Ossiannilsson, 1936 - 74  
*Eupteryx collina* (Flor, 1861) - 60  
*Eupteryx curtisii* (Flor, 1861) - 80  
*Eupteryx notata* Curtis, 1837 - 90; 264  
*Eupteryx stachydearum* (Hardy, 1850) - 76  
*Eupteryx vittata* (Linnaeus, 1758) - 61  
*Eurhadina concinna* (Germar, 1831) - 85  
*Euscelidius schenckii* (Kirschbaum, 1868) - H1897 (no new occurrence)  
*Euscelis distinguendus* (Kirschbaum, 1868) - H1897 (no new occurrence)  
*Euscelis incisus* (Kirschbaum, 1858) - 57; 59; 61; 78; 81; 82; 85; 86; 88; 89; 90; 91; 94; 96  
*Evacanthus acuminatus* (Fabricius, 1794) - 72  
*Evacanthus interruptus* (Linnaeus, 1758) - 54  
*Fieberiella florii* (Stål, 1864) - 271  
*Forcipata citrinella* (Zetterstedt, 1828) - 59; 93; 260; H1897  
*Forcipata forcipata* (Flor, 1861) - 93  
*Goniagnathus brevis* (Herrich-Schäffer, 1835) - 267  
*Graphocraerus ventralis* (Fallén, 1806) - 57; 58; 69  
*Handianus flavovarius* (Horváth, 1897) - 88  
*Handianus ignoscus* (Melichar, 1896) - 88  
*Hephathus nanus* (Herrich-Schäffer, 1835) - 58; 59; 61; 66; 74; 76; 78; 90; 94; 96  
*Hesium domino* (Reuter, 1880) - 264; H1897  
*Idiocerus albicans* Kirschbaum, 1868 - 57  
*Populicerus populi* (Linnaeus, 1761) - H1897 (no new occurrence)  
*Idiocerus stigmatalis* Lewis, 1834 - 77  
*Idiocerus vittifrons* Kirschbaum, 1868 - 87  
*Jassargus flori* (Fieber, 1869) - 61; 66; 80; 82; 90; 92; 94; 102  
*Jassargus obtusivalvis* (Kirschbaum, 1868) - 57; 72; 78; 88; 271  
*Kybos populi* (Edwards, 1908) - 61  
*Kybos sp. affinis austriacus* (Wagner, 1949) - 61  
*Ledra aurita* (Linnaeus, 1758) - H1897 (no new occurrence)  
*Limotettix striola* (Fallén, 1806) - 57; 61; 62; 66; 69; 74; H1897  
*Linnavuoriana sexmaculata* (Hardy, 1850) - 93  
*Macropsis megerlei* (Fieber, 1868) - H1897 (no new occurrence)  
*Macropsis notata* (Prohaska, 1923) - 58  
*Macropsis prasina* (Boheman, 1852) - 58  
*Macrosteles fieberi* (Edwards, 1889) - 58; 61; 69; 72; 85  
*Macrosteles frontalis* (Scott, 1875) - 87; 271  
*Macrosteles laevis* (Ribaut, 1927) - 58; 66; 91; 270; 271  
*Macrosteles quadripunctulatus* (Kirschbaum, 1868) - 271  
*Macrosteles sexnotatus* (Fallén, 1806) - H1897 (no new occurrence)  
*Macrosteles viridigriseus* (Edwards, 1922) - 82; 92; 94  
*Megophthalmus scanicus* (Fallén, 1806) - 72; 74  
*Metalimnus formosus* Boheman, 1845 - 264; 270  
*Metalimnus steini* (Fieber, 1869) - 57; 58; 59; 74; 78; 90; 91; 93; 260  
*Mocuellus collinus* (Boheman, 1850) - 58; 59; 96  
*Mocuellus metrius* (Flor, 1861) - 69  
*Mocuellus quadricornis* Dlabola, 1949 - 60; 88  
*Mocydia crocea* (Herrich-Schäffer, 1837) - 82; 85; 88  
*Mocydiopsis intermedia* Remane, 1961 - 86; 88; 90; 92  
*Neocaliturus fenestratus* (Herrich-Schäffer, 1834) - 76; 78  
*Neocaliturus guttulatus* (Kirschbaum, 1868) - 78; 270  
*Notus flavipennis* (Zetterstedt, 1828) - 264  
*Oncopsis appendiculata* Wagner, 1944 - 61; 66; 69; 72  
*Oncopsis flavicollis* (Linnaeus, 1761) - 61; 66; 67; 69; 105  
*Ophiola decumana* (Kontkanen, 1949) - 262; 270  
*Pediopsis tiliae* (Germar, 1831) - 60; 72  
*Penthimia nigra* (Goeze, 1778) - 57; 166; 184; H1897  
*Phlepsius intricatus* (Herrich-Schäffer, 1838) - 267  
*Pithyotettix abietinus* (Fallén, 1806) - H1897 (no new occurrence)  
*Platymetopius curvatus* Dlabola, 1974 - 260; 274  
*Platymetopius major* (Kirschbaum, 1868) - 85  
*Platymetopius undatus* (De Geer, 1773) - 86; 88; 260  
*Psammotettix alienus* (Dahlbom, 1850) - 257  
*Psammotettix cephalotes* (Herrich-Schäffer, 1834) - 66  
*Psammotettix confinis* (Dahlbom, 1850) - 58; 59; 62; 66; 72; 76; 80; 81; 89; 92; 270  
*Psammotettix helvolus* (Kirschbaum, 1868) - 88  
*Psammotettix remanei* Orosz, 1999 - 61; 62; 92  
*Recilia coronifera* (Marshall, 1866) - 107; 270; 271  
*Recilia schmidtgeni* (Wagner, 1939) - 91  
*Ribautiana tenerrima* (Herrich-Schäffer, 1834) - 61; 66  
*Scaphoideus titanus* Ball, 1932 - 85  
*Selenocephalus obsoletus* (Germar, 1817) - 257  
*Speudotettix subfuscus* (Fallén, 1806) - 69; 184  
*Stictocoris picturatus* (C. Sahlberg, 1842) - H1897 (no new occurrence)  
*Streptanus sordidus* (Zetterstedt, 1828) - 113  
*Thamnotettix exemtus* (Melichar, 1896) - 60; 66; 69

*Turrutus socialis* (Flor, 1861) - 59; 60; 76; 78; 88; 90; 96; 267; 274  
*Typhlocyba quercus* (Fabricius, 1777) - 57; 61  
*Utecha trivialis* (Germar, 1821) - 57  
*Verdanus abdominalis* (Fabricius, 1803) - 66; 68; 69  
*Zyginidia pullula* (Boheman, 1845) - 61; 66; 72; 78; 85; 87; 88; 89; 92; 94; 264; 267

## Cicadidae

*Cicada orni* (Linnaeus, 1758) - H1897 (no new occurrence)  
*Cicadetta podolica* (Eichwald, 1830) - H1897 (no new occurrence)  
*Cicadivetta tibialis* (Panzer, 1788) - H1897 (no new occurrence)

## Cixiidae

*Cixius stigmaticus* (Germar, 1818) - H1897 (no new occurrence)  
*Hyalesthes scotti* Ferrari, 1882 - 85  
*Reptalus cuspidatus* (Fieber, 1876) - 74; 76  
*Reptalus panzeri* (Löw, 1883) - 72  
*Tachycixius pilosus* (Olivier, 1791) - H1897 (no new occurrence)

## Delphacidae

*Acanthodelphax spinosa* (Fieber, 1866) - 86; 113  
*Anakelisia perspicillata* (Boheman, 1845) - 86; 267; 270; 271  
*Anakelisia* sp. (n.sp.!) - 61  
*Asiraca clavicornis* (Fabricius, 1794) - 78; 85; 86; 87; 161; 162; 267  
*Chloriona smaragdula* (Stål, 1853) - 57  
*Conomelus anceps* (Germar, 1821) - 264; 271  
*Delphacodes capnodes* (Scott, 1870) - 105  
*Delphacodes venosus* (Germar, 1830) - 93  
*Delphax crassicornis* (Panzer, 1796) - H1897 (no new occurrence)  
*Dicranotropis hamata* (Boheman, 1847) - 57; 62; 80; 81; 86; 90; 92  
*Ditropis pteridis* (Spinola, 1839) - 61; 62  
*Euconomelus lepidus* (Boheman, 1847) - H1897 (no new occurrence)  
*Eurysa lineata* (Perris, 1857) - 72  
*Falcotoya minuscula* (Horváth, 1897) - 91  
*Hyledelphax elegantulus* (Boheman, 1847) - 86; 161  
*Jassidaeus lugubris* (Signoret, 1865) - 263  
*Javesella dubia* (Kirschbaum, 1868) - 62; 92; 93; 161  
*Javesella forcipata* (Boheman, 1847) - 93  
*Javesella obscurella* (Boheman, 1847) - 91  
*Kelisia melanops* (Fieber, 1878) - 107  
*Kelisia monoceros* Ribaut, 1934 - 260; 267; 271  
*Kelisia pallidula* (Boheman, 1847) - 261  
*Kosswigianella exigua* (Boheman, 1847) - 61  
*Laodelphax striatellus* (Fallén, 1826) - 66; 82; 86; 87; 88; 93; 96  
*Megadelphax sordidula* (Stål, 1853) - 86  
*Megamelus notula* (Germar, 1830) - 86  
*Muellerianella brevipennis* (Boheman, 1847) - 264  
*Muellerianella extrusa* (Scott, 1871) - 105  
*Oncodelphax pullula* (Boheman, 1852) - 264  
*Ribautodelphax albostriata* (Fieber, 1866) - 86; 94; 263; 271

*Ribautodelphax collina* (Boheman, 1847) - 66; 80; 86; 90  
*Ribautodelphax imitans* (Ribaut, 1953) - 96  
*Stenocranus fuscovittatus* (Stål, 1858) - 264  
*Stenocranus minutus* (Fabricius, 1787) - 86  
*Toya propinqua* (Fieber, 1866) - 91; 93; 94  
*Xanthodelphax flaveola* (Flor, 1861) - 69

## Dictyopharidae

*Dictyophara europaea* (Linnaeus, 1767) - 78; 85; 90; 271  
*Dictyophara pannonica* (Germar, 1830) - 88

## Issidae

*Issus muscaeformis* (Schrank, 1781) - 72; H1897  
*Kervillea conspurcata* (Spinola, 1939) - 88; H1897  
*Mycterodus confusus* Stål, 1861 - 57; 60; 72; 169

## Membracidae

*Centrotus cornutus* (Linnaeus, 1758) - 162; 264; 267  
*Gargara genistae* (Fabricius, 1775) - 88  
*Stictocephala bisonia* Kopp & Yonke, 1977 - 77; 78; 85; 271

## Tettigometridae

*Tettigometra atra* Hagenbach, 1825 - 66; 78  
*Tettigometra impressopunctata* Dufour, 1846 - 80; 81; 116  
*Tettigometra leucophaea* (Preysler, 1792) - 260  
*Tettigometra macrocephala* Fieber, 1865 - 271  
*Tettigometra sulphurea* Mulsant et Rey, 1855 - 169  
*Tettigometra virescens* (Panzer, 1799) - 263

## Tropiduchidae

*Trypetimorpha occidentalis* Huang et Bourgoin, 1993 - 90; 270

## DISCUSSION:

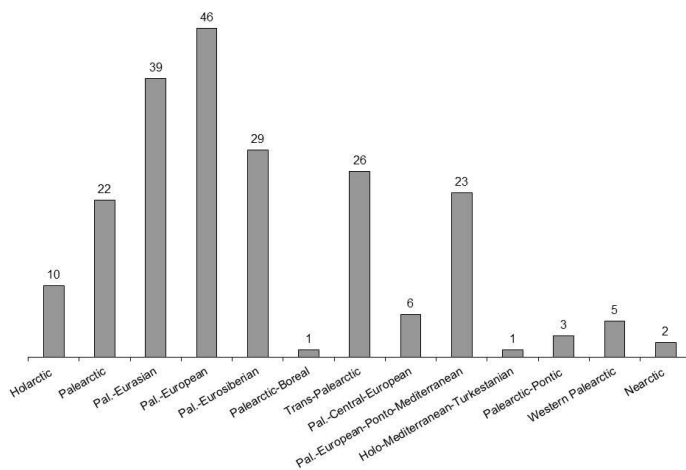
Altogether 215 species belonging to 136 genera of 11 families were found by Horváth (1897) and during the field work in 2014–2015. From the 30 species recorded by Horváth (1897), only 7 have not been captured during the present survey. The species recorded by Horváth (1897) are common all over the Carpathian Basin, their occurrence in Şalaj County can be taken for certain, therefore there is no reason to question most of these records even in lack of voucher specimens. However, *Anoplotettix fuscovenosus*

(Ferrari, 1882) listed by Horváth (1897) is certainly a misidentification, as *A. horvathi* is the only species of *Anoplotettix* living in the Carpathian basin.

The most valuable and diverse areas were the open and closed swards on gypsum at Sfăraş (Farnas); the limestone hill and meadow at Dealurile Boiului (Szamoszug) and Vălişoara (Dióspatak); and the oak forest on the top of the hill and the semi-natural steppe at Dealurile Sălajului (Szilágymenti-dombság) and Zalău-Ortelec (Zilah-Vártelek).

Most of the species are common, but the relatively high number of species indicate the good quality of the habitats in contrast with their small area and fragmented distribution among anthropogenic environment. One of the rarest species was *Errhomenus brachypterus* (Fieber, 1869); it is a flightless species typical in mountain oak forests and was collected in Munţii Plopiş (Réz-hegység), Iaz (Krasznajáz), by pitfall trap (No 61). *Oncopsis appendiculata* Wagner, 1944 is new to the Romanian fauna; it was captured at localities 61, 66, 69 and 72. Two invasive pests were collected, both native in North America. The *Scaphoideus titanus* Ball, 1932, is a polyphagous species spreading quickly and causing a serious problem as vector of Grapevine flavescence dorée phytoplasma, “Candidatus Phytoplasma vitis”. It was found out in the area of Dealurile Crasnei (Krasznamenti-dombság), W of Aghireş (Egrespatak) (No 85), but it requires intensive monitoring in order to prevent an epidemic of Flavescence dorée, a serious disease for European vine. The *Stictocephala bisonia* Kopp & Yonke, 1977, was more frequent and it was collected at localities 77, 78, 85 and 271. One species belonging to genus *Anakelisia* requires further studies and probably is an undescribed species.

Most of the collected species are widely distributed Palearctic elements (Fig. 1).

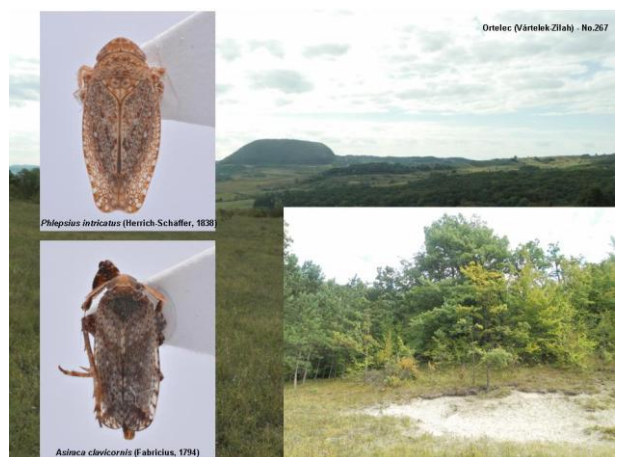
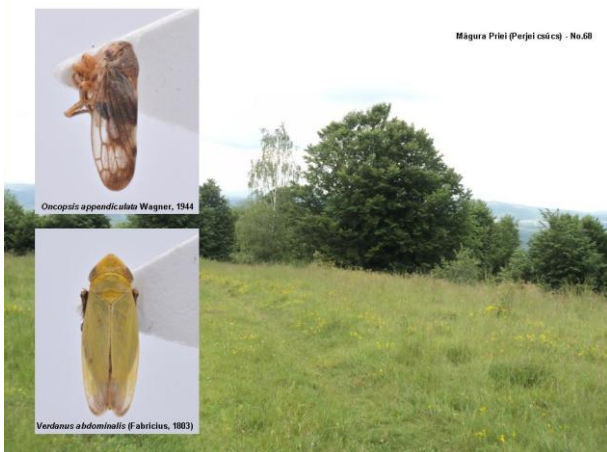
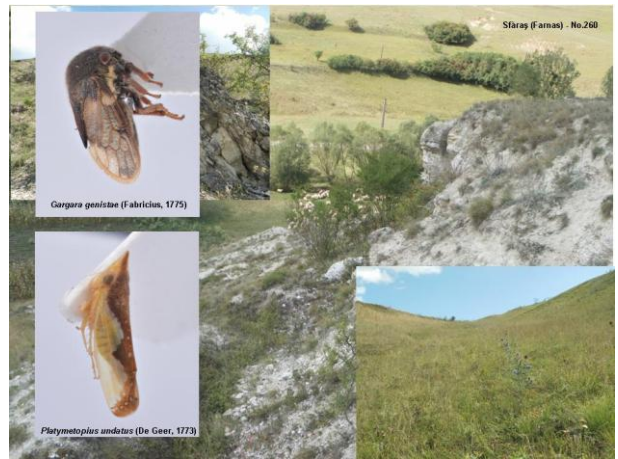


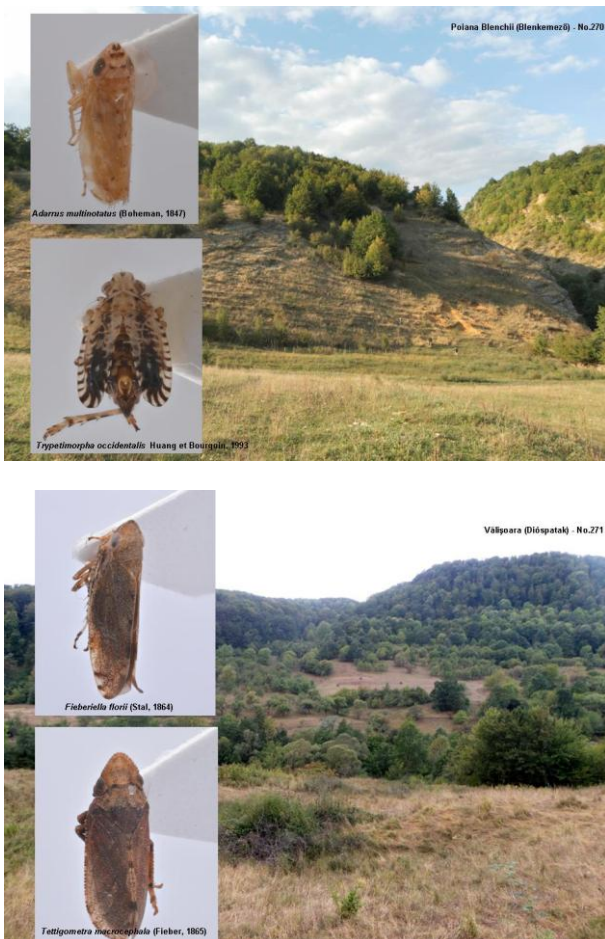
**Fig. 1.** The types of distribution areas of the 215 Homoptera species recorded in Şalaj County



**Fig 2.** Collecting methods (Photos: M. Tóth)







**Figs. 3-15.** The most important collecting sites of Auchenorrhyncha and a few typical species of these habitats (Photos of habitats: M. Tóth; Photos of mounted specimens: Z. Soltész, A. Orosz & M. Tóth)

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