

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/315492777>

# Hemiptera records from Lake Spechtensee and from Southern Styria (Austria)

Article · March 2017

CITATIONS

0

READS

347

28 authors, including:



**Thierry Bourgoïn**

Muséum National d'Histoire Naturelle

149 PUBLICATIONS 1,365 CITATIONS

SEE PROFILE



**Wolfgang Rabitsch**

Umweltbundesamt, Austria

157 PUBLICATIONS 3,283 CITATIONS

SEE PROFILE



**Rimantas Rakauskas**

Vilnius University

45 PUBLICATIONS 180 CITATIONS

SEE PROFILE



**Gabrijel Seljak**

Agricultural and Forestry Institute Nova Gori...

64 PUBLICATIONS 355 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Biological Control of Weeds [View project](#)



SAFFIE [View project](#)

All content following this page was uploaded by [Werner E. Holzinger](#) on 22 March 2017.

The user has requested enhancement of the downloaded file.



## Hemiptera records from Lake Spechtensee and from Southern Styria (Austria)

WERNER E. HOLZINGER, BEREND AUKEMA, KEES F.M. DEN BIEMAN, THIERRY BOURGOIN, DANIEL BURCKHARDT, ATTILIO CARAPEZZA, FABIO CIANFERONI, PING-PING CHEN, FRANCO FARACI, MARTA GOULA, ALVIN J. HELDEN, VLADIMÍR HEMALA, ELISABETH HUBER, DUŠANKA JERINIC-PRODANOVIĆ, PETR KMENT, GERNOT KUNZ, HERBERT NICKEL, CARSTEN MORKEL, WOLFGANG RABITSCH, ALEX J. RAMSAY, RIMANTAS RAKAUSKAS, MARCO ROCA-CUSACHS, LYDIA SCHLOSSER, GABRIJEL SELJAK, LILIYA SERBINA, ADELINE SOULIER-PERKINS, MALKIE SPODEK & THOMAS FRIESS

**Abstract:** Hemiptera records gained in July 2015 in course of the 7<sup>th</sup> European Hemiptera Congress in Styria are presented. In total, 144 Auchenorrhyncha, 143 Heteroptera, 13 Psylloidea and 2 Aphididae species were collected. *Ribautodelphax imitans* (Delphacidae), *Eurhadina saageri* (Cicadellidae), *Notonecta maculata* (Notonectidae), *Notonecta meridionalis* (Notonectidae) and *Polymerus cognatus* (Miridae) are new records for Styria.

**Key words:** Auchenorrhyncha, Heteroptera, Sternorrhyncha, Psylloidea, Styria, new records, fauna Austria

**Citation:** HOLZINGER W.E., AUKEMA B., DEN BIEMAN C.F.M., BOURGOIN T., BURCKHARDT D., CARAPEZZA A., CIANFERONI F., CHEN P.-P., FARACI F., GOULA M., HELDEN A., HEMALA V., HUBER E., JERINIC-PRODANOVIĆ D., KMENT P., KUNZ G., NICKEL H., MORKEL C., RABITSCH W., RAMSAY A.J., RAKAUSKAS R., ROCA-CUSACHS M., SCHLOSSER L., SELJAK G., SERBINA L., SOULIER-PERKINS A., SPODEK M. & FRIESS T. 2017: Hemiptera records from Lake Spechtensee and from Southern Styria (Austria). – Entomologica Austriaca 24: 67–82.

### Introduction

In course of the 7th European Hemiptera Congress (EHC 7; see HOLZINGER 2017), field trips led to interesting Auchenorrhyncha, Heteroptera and Sternorrhyncha records.

### Material and methods

The authors collected Hemiptera in course of field trips from 19th until 24th July, 2015 in Northern Styria (Ennstal, Lake Spechtensee) and Southern Styria (Seggau, Gosdorf, Glanz). Short descriptions of the sampling sites and information on sampling methods and dates are given in table 1. The material is stored in the collections of the authors.

**Tab. 1:** Sampling sites and dates.

Code	Site description	Sampling date/s & methods
Seg	Leibnitzer Feld: Seggau Castle, N46°46'54"/E15°31'27", 356m, and surrounding, incl. dry meadows around the castle, forests and riverbanks of Sulm	20–24.07.2015, light trap, sweepnet, suction sampler
Wör	Trail from Wörschach via Wörschachklamm to lake Spechtensee; N47°33'16"/E14°08'58", 655m, to N47°33'36"/E14°05'54", 1050m	22.07.2015 sweepnet, suction sampler
Lei	Trail from Stainach via Leistenalm and Leistensattel to lake Spechtensee; N47°32'04"/E14°06'30", 668m, to N47°33'36"/E14°05'54", 1050m; highest point 1260m	22.07.2015 sweepnet, suction sampler
Spe	Ennstal: Lake Spechtensee; N47°33'36"/E14°05'54", 1050m	22.07.2015 sweepnet, suction sampler
Gos	Murtal: Gosdorf E Mureck; N46°43'12"/E15°49'06", 225m	25.07.2015 sweepnet, suction sampler
Gla	Poßbruck: dry meadows and orchard near Glanz No. 74; N46°39'19"/E15°31'18", 380m	25.07.2015 sweepnet, suction sampler

Names of taxa refer to the checklists of Austria (Auchenorrhyncha: HOLZINGER 2009b, Heteroptera: RABITSCH 2005) and to the world checklist of Psylloidea (OUVRARD 2016).

## Results and discussion

### General survey

A total of 144 Auchenorrhyncha species was recorded, which represents 22 % of the Austrian fauna. One planthopper (*Ribautodelphax imitans*) and one leafhopper species (*Eurhadina saageri*) were recorded from Styria for the first time. Furthermore, 143 Heteroptera species (=15 % of the Austrian fauna) were found. Three species, namely *Notonecta maculata*, *N. meridionalis* and *Polymerus cognatus*, are new records for Styria. In addition, 13 Psyllidae and 2 Aphididae were found.

**Tab. 2:** Species numbers of Auchenorrhyncha and Heteroptera recorded, grouped by Red List categories. Red List status refers to HOLZINGER 2009a (Auchenorrhyncha) and FRIESS & RABITSCH 2015 (Heteroptera).

Red List Category	Auchenorrhyncha	Heteroptera
LC = least concern	91	119
NT = near threatened	13	8
VU = vulnerable	14	3
EN = endangered	12	4
CR = critically endangered	1	3
DD = data deficient	9	4
NE = not evaluated	4	2
<b>total</b>	<b>144</b>	<b>143</b>

### Auchenorrhyncha

144 species were recorded, including 4 alien species, one critically endangered peat bog specialist (*Sorboanus xanthoneurus*; numerous at Lake Spechtensee) and several other rare and threatened taxa. Remarkable findings are:

*Ribautodelphax imitans* (RIBAUT, 1953): one male, collected at the organic farm “Gunczy” in Glanz an der Weinstraße, is the first record of this planthopper from Styria.

*Eupteryx lelievrei* (LETHIERRY, 1874) was recorded from Styria for the second time (along the trail from Wörschach via Leistensee to Spechtensee). The first record was published from Lafnitztal (KUNZ et al. 2017).

*Eurhadina kirschbaumi* WAGNER, 1937: One male was collected in Seggau Castle at a light trap; it is the second record from Styria.

*Eurhadina saageri* WAGNER, 1937: At the same light trap as the previous species, it is new to Styria. The only previous record from Austria dates from 1933, it was collected in Feldkirch (Vorarlberg) and published by MOOSBRUGGER (1946). This species is a rare arboricolous leafhopper feeding only on *Quercus*.

*Phlogotettix cyclops* (MULSANT & REY, 1855): This invasive species originates from Asia and began to spread throughout southern and central Europe in the late 1990’s. The species is polyphagous and might be hazardous to grapes and other cultivated plants (e. g. CHUCHE et al. 2010). The first record in Austria was published by RIEDLE-BAUER et al. (2006). It was collected in Styria in 2009 for the first time (KUNZ et al. 2017). In course of the congress, it was found in larger numbers on *Hedera helix* in the surroundings of Seggau Castle.

**Tab. 3:** List of Auchenorrhyncha species collected in course of the EHC 7 field trips. Figures = numbers of specimens collected. Abbreviations of collecting sites see Table 1, collecting Red List (=RL) categories see Table 2.

Auchenorrhyncha list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<b>Cixiidae</b>							
<i>Hyalesthes obsoletus</i> SIGNORET, 1865	1						EN
<i>Reptalus cuspidatus</i> (FIEBER, 1876)						2	VU
<b>Delphacidae</b>							
<i>Acanthodelphax spinosa</i> (FIEBER, 1866)		2			13		LC
<i>Anakelisia perspicillata</i> (BOHEMAN, 1845)					6		VU
<i>Asiraca clavicornis</i> (FABRICIUS, 1794)	2						NT
<i>Conomelus anceps</i> (GERMAR, 1821)		2		1			LC
<i>Conomelus lorifer</i> RIBAUT, 1948	9						NT
<i>Dicranotropis divergens</i> KIRSCHBAUM, 1868		1					LC
<i>Dicranotropis hamata</i> (BOHEMAN, 1847)	32	1			25	2	LC
<i>Ditropsis flavipes</i> (SIGNORET, 1865)					18	14	EN

<b>Auchenorrhyncha list</b>	<b>Seg</b>	<b>Wör</b>	<b>Lei</b>	<b>Spe</b>	<b>Gos</b>	<b>Gla</b>	<b>RL</b>
<i>Eurysula lurida</i> (FIEBER, 1866)					23		LC
<i>Hyledelphax elegantula</i> (BOHEMAN, 1847)	8				11		LC
<i>Javesella dubia</i> (KIRSCHBAUM, 1868)	9	2			6		LC
<i>Javesella obscurella</i> (BOHEMAN, 1847)	1	1		1			LC
<i>Kelisia ribauti</i> WAGNER, 1938				1			EN
<i>Kelisia vittipennis</i> (J. SAHLBERG, 1868)				1			VU
<i>Laodelphax striatella</i> (FALLÉN, 1826)	7						LC
<i>Megadelphax sordidula</i> (STÅL, 1853)	6				10		LC
<i>Megamelus notula</i> (GERMAR, 1830)				5			NT
<i>Muellerianella brevipennis</i> (BOHEMAN, 1847)		2					LC
<i>Muellerianella extrusa</i> (SCOTT, 1871)	1	1		3			DD
<i>Paraliburnia adela</i> (FLOR, 1861)					1		EN
<i>Ribautodelphax albostrata</i> (FIEBER, 1866)	2						LC
<i>Ribautodelphax imitans</i> (RIBAUT, 1953)						1	VU
<i>Ribautodelphax pungens</i> (RIBAUT, 1953)					3		LC
<i>Stiroma affinis</i> FIEBER, 1866		2					LC
<i>Stiroma bicarinata</i> (HERRICH-SCHÄFFER, 1835)		3					LC
<i>Xanthodelphax flaveola</i> (FLOR, 1861)		2					EN
<b>Dictyopharidae</b>							
<i>Dictyophara europaea</i> (LINNAEUS, 1767)						1	VU
<b>Issidae</b>							
<i>Issus coleopratus</i> (FABRICIUS, 1781)		7					LC
<i>Issus muscaeformis</i> (SCHRANK, 1781)		2					NT
<b>Aphrophoridae</b>							
<i>Aphrophora alni</i> (FALLÉN, 1805)	3	7		1	3		LC
<i>Aphrophora salicina</i> (GOEZE, 1778)						1	LC
<i>Lepyronia coleoprata</i> (LINNAEUS, 1758)	1					1	NT
<i>Neophilaenus lineatus</i> (LINNAEUS, 1758)		2		7			LC
<i>Philaenus spumarius</i> (LINNAEUS, 1758)	4	13		2	2		LC
<b>Membracidae</b>							
<i>Centrotus cornutus</i> (LINNAEUS, 1758)		2		1			LC
<i>Stictocephala bisonia</i> KOPP & YONKE, 1977	1				2		NE
<b>Cicadellidae</b>							
<i>Adarrus multinotatus</i> (BOHEMAN, 1847)		4			3		LC
<i>Agallia brachyptera</i> (BOHEMAN, 1847)		3					LC

Auchenorrhyncha list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<i>Aguriahana stellulata</i> (BURMEISTER, 1841)					1		LC
<i>Alebra albostrigata</i> (FALLÉN, 1826)	2				1		LC
<i>Allygidius atomarius</i> (FABRICIUS, 1794)	2						NT
<i>Allygidius furcatus</i> (FERRARI, 1882)					8	1	EN
<i>Allygus mixtus</i> (FABRICIUS, 1794)	1						LC
<i>Anaceratagallia ribauti</i> (OSSIANNILSSON, 1938)					2		LC
<i>Anoscopus albifrons</i> (LINNAEUS, 1758)		1					LC
<i>Anoscopus flavostriatus</i> (DONOVAN, 1799)		3			7		LC
<i>Aphrodes diminuta</i> RIBAUT, 1952		1					DD
<i>Aphrodes makarovi</i> ZACHVATKIN, 1948	3	3				7	DD
<i>Arboridia parvula</i> (BOHEMAN, 1845)	1						VU
<i>Arboridia velata</i> (RIBAUT, 1952)	8						VU
<i>Arthaldeus pascuellus</i> (FALLÉN, 1826)		2		1			LC
<i>Balclutha punctata</i> (FABRICIUS, 1775) sensu WAGNER, 1939		5					LC
<i>Cicadella viridis</i> (LINNAEUS, 1758)	3	4		7		1	LC
<i>Cicadula persimilis</i> (EDWARDS, 1920)		4					LC
<i>Cicadula quadrinotata</i> (FABRICIUS, 1794)		1					LC
<i>Deltocephalus pulicaris</i> (FALLÉN, 1806)		5		1			LC
<i>Diplocolenus bohemani</i> (ZETTERSTEDT, 1840)		1					LC
<i>Doratara cf stylata</i> (BOHEMAN, 1847)					1		LC
<i>Dryodurgades reticulatus</i> (HERRICH-SCHÄFFER, 1834)				1			EN
<i>Edwardsiana ampliata</i> (WAGNER, 1947)	2						VU
<i>Edwardsiana crataegi</i> (DOUGLAS, 1876)	5						LC
<i>Edwardsiana flavescens</i> (FABRICIUS, 1794)	8						LC
<i>Edwardsiana lamellaris</i> (RIBAUT, 1931)	2						DD
<i>Edwardsiana lethierryi</i> (EDWARDS, 1881)	2						LC
<i>Edwardsiana plebeja</i> (EDWARDS, 1914)	1						VU
<i>Edwardsiana rosae</i> (LINNAEUS, 1758)	5						LC
<i>Elymana sulphurella</i> (ZETTERSTEDT, 1828)		2					LC
<i>Empoasca vitis</i> (GÖTTE, 1875)	1						LC
<i>Errastunus ocellaris</i> (FALLÉN, 1806)	3				3		LC
<i>Errhomenus brachypterus</i> FIEBER, 1866		1					LC
<i>Erythria manderstjernii</i> (KIRSCHBAUM, 1868)		2					LC
<i>Erzaleus metrius</i> (FLOR, 1861)					2		LC
<i>Eupelix cuspidata</i> (FABRICIUS, 1775)						1	NT

Auchenorrhyncha list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<i>Eupteryx aurata</i> (LINNAEUS, 1758)		2					LC
<i>Eupteryx austriaca</i> (METCALF, 1968)		3		2			LC
<i>Eupteryx cyclops</i> MATSUMURA, 1906		1					LC
<i>Eupteryx heydenii</i> (KIRSCHBAUM, 1868)		13		1			LC
<i>Eupteryx lelievrei</i> (LETHIERRY, 1874)		1					DD
<i>Eupteryx vittata</i> (LINNAEUS, 1758)		6			1		LC
<i>Eurhadina concinna</i> (GERMAR, 1831)	4						LC
<i>Eurhadina kirschbaumi</i> WAGNER, 1937	1						DD
<i>Eurhadina pulchella</i> (FALLÉN, 1806)	2				1		LC
<i>Eurhadina saageri</i> WAGNER, 1937	1						DD
<i>Euscelis incisus</i> (KIRSCHBAUM, 1858)	1			1	2	1	LC
<i>Evacanthus acuminatus</i> (FABRICIUS, 1794)		2		1		1	LC
<i>Evacanthus interruptus</i> (LINNAEUS, 1758)		6					LC
<i>Idiocerus herrichii</i> KIRSCHBAUM, 1868	1						LC
<i>Japananus hyalinus</i> (OSBORN, 1900)	5				4		NE
<i>Jassargus alpinus</i> (THEN, 1896)		1					LC
<i>Jassargus flori</i> (FIEBER, 1869)		2			3	1	LC
<i>Jassargus sursumflexus</i> (THEN, 1902)		1		8			LC
<i>Kybos populi</i> (EDWARDS, 1908)	1						LC
<i>Kybos virgator</i> (RIBAUT, 1933)	3				1		LC
<i>Lamprotettix nitidulus</i> (FABRICIUS, 1787)	3						NT
<i>Ledra aurita</i> (LINNAEUS, 1758)	3						LC
<i>Limotettix striola</i> (FALLÉN, 1806)	2			1			VU
<i>Macropsis fuscula</i> (ZETTERSTEDT, 1828)		5					LC
<i>Macropsis impura</i> (BOHEMAN, 1847)				3			EN
<i>Macropsis infuscata</i> (J. SAHLBERG, 1871)	1						LC
<i>Macropsis notata</i> (PROHASKA, 1923)	1						EN
<i>Macropsis vicina</i> (HORVÁTH, 1897)	2						DD
<i>Macrosteles cristatus</i> (RIBAUT, 1927)	2						LC
<i>Macrosteles frontalis</i> (SCOTT, 1875)	1						NT
<i>Macrosteles laevis</i> (RIBAUT, 1927)	4						LC
<i>Macrosteles septemnotatus</i> (FALLÉN, 1806)				8			LC
<i>Macrosteles viridigriseus</i> (EDWARDS, 1922)	1						LC
<i>Megophthalmus scanicus</i> (FALLÉN, 1806)		2		2	1		LC
<i>Metalimnus formosus</i> (BOHEMAN, 1845)				15			VU

Auchenorrhyncha list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<i>Metalimnus steini</i> (FIEBER, 1869) sensu ANUFRIEV & EMELJANOV 1988	4						LC
<i>Metidiocerus elegans</i> (FLOR, 1861)				2			NT
<i>Notus flavipennis</i> (ZETTERSTEDT, 1828)				1			NT
<i>Oncopsis flavicollis</i> (LINNAEUS, 1761) – Gr.		1					LC
<i>Ophiola russeola</i> (FALLÉN, 1826)				3			NT
<i>Orientus ishidae</i> (MATSUMURA, 1902)	16						NE
<i>Phlogotettix cyclops</i> (MULSANT & REY, 1855)	11						NE
<i>Pithytettix abietinus</i> (FALLÉN, 1806)		5					LC
<i>Planaphrodes nigrita</i> (KIRSCHBAUM, 1868)		3					LC
<i>Populicerus confusus</i> (FLOR, 1861)		1					LC
<i>Psammotettix confinis</i> (DAHLBOM, 1850)	2	5					LC
<i>Rhytidodus decimusquartus</i> (SCHRANK, 1776)	1						LC
<i>Ribautiana tenerrima</i> (HERRICH-SCHÄFFER, 1834)	1						LC
<i>Ribautiana ulmi</i> (LINNAEUS, 1758)	5						VU
<i>Scaphoideus titanus</i> BALL, 1932	3						NE
<i>Sorhoanus assimilis</i> (FALLÉN, 1806)				3			VU
<i>Sorhoanus schmidtii</i> WAGNER, 1939				3			EN
<i>Sorhoanus xanthoneurus</i> (FIEBER, 1869)				27			CR
<i>Sotanus thenii</i> (LÖW, 1885)		1					LC
<i>Speudotettix subfuscus</i> (FALLÉN, 1806)		3					LC
<i>Stenidiocerus poecilus</i> (HERRICH-SCHÄFFER, 1835)					1		NT
<i>Streptanus confinis</i> (REUTER, 1880)		2					EN
<i>Stroggylocephalus agrestis</i> (FALLÉN, 1806)				1			EN
<i>Thamnotettix confinis</i> ZETTERSTEDT, 1840		4					LC
<i>Thamnotettix exemtus</i> MELICHAR, 1896					2		LC
<i>Turrutus socialis</i> (FLOR, 1861)					3	5	LC
<i>Utecha trivialis</i> GERMAR, 1821						1	VU
<i>Verdanus abdominalis</i> (FABRICIUS, 1803)		2		4			LC
<i>Viridicerus ustulatus</i> (MULSANT & REY, 1855)	4						LC
<i>Zonocyba bifasciata</i> (BOHEMAN, 1851)	2						LC
<i>Zygina angusta</i> LETHIERRY, 1874	1						LC
<i>Zygina flammigera</i> (GEOFFROY, 1785)	1						LC
<i>Zyginella pulchra</i> LÖW, 1885	4						LC
<i>Zyginidia pullula</i> (BOHEMAN, 1845)	1				1		LC



## Heteroptera

143 species of true bugs were collected. The peat bog area of lake Spechtensee hosts a remarkable tyrphophilous Heteroptera fauna, with several threatened species as *Pachycoleus waltli*, *Gerris lateralis*, *Micracanthia fennica*, *Salda henschii*, *Coranus aethiops* and *Ligyrocoris sylvestris* present.

Other interesting records concern the Saldidae fauna of the restored gravel banks along the river Mur in Gosdorf: *Macrosaldula variabilis*, *Saldula arenicola arenicola*, *S. melanoscela*, *S. opacula*, *S. pallipes* and *S. saltatoria* were found.

In addition, two aquatic bugs (*Notonecta maculata*, *N. meridionalis*) from a pond in Glanz are new for the fauna of Styria.

The mediterranean species *Notonecta meridionalis* POISSON, 1926 was found in Gosdorf and Glanz, the only previous Austrian record was published by RABITSCH & ZETTEL (2000) from Lower Austria.

*Macrosaldula variabilis* (HERRICH-SCHÄFFER, 1835) is a very rare species living on riverine gravel banks and is close to extinction because of habitat loss. At present, only two populations are known from Styria (FRIESS & RABITSCH 2015, FRIESS & BRANDNER 2016).

*Micracanthia fennica* (REUTER, 1884) is a tyrphobiotic ice age relict species with only five locations known from Central Europe (FRIESS & BRANDNER 2014, GÜNTHER & STRAUSS 2006), which includes a comparatively large population at Lake Spechtensee.

*Salda henschii* (REUTER, 1891): Third record from Styria; it is a very rare peat bog specialist living in *Sphagnum* tussocks in montane and alpine regions (FRIESS & BRANDNER 2016).

*Polymerus cognatus* (FIEBER, 1858) was previously known only from Lower Austria and Burgenland, with new records originating from Leistenalm and Seggauberg.

*Coranus aethiops* JAKOVLEV, 1893: Styria is at the southern margin of the range of this rare boreal species. Only four localities from Austrian peat bogs are known (FRIESS et al. 2013, FRIESS & BRANDNER 2014).

**Tab. 4:** List of Heteroptera species collected in course of the EHC 7 field trips. Figures= numbers of specimens collected. com = common. Abbreviations of collecting sites see Table 1, collecting Red List (=RL) categories see Table 2. \* = new records are categorised as „DD“.

Heteroptera list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<b>Dipsocoridae</b>							
<i>Pachycoleus waltli</i> FIEBER, 1860			1	6			VU
<b>Nepidae</b>							
<i>Nepa cinerea</i> LINNAEUS, 1758					4		LC
<i>Ranatra linearis</i> (LINNAEUS, 1758)						1	LC
<b>Corixidae</b>							
<i>Hesperocorixa linnaei</i> (FIEBER, 1848)					2		LC
<i>Hesperocorixa sahlbergi</i> (FIEBER, 1848)					1		LC
<i>Sigara striata</i> (LINNAEUS, 1758)					4		LC

Heteroptera list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<b>Notonectidae</b>							
<i>Notonecta glauca glauca</i> LINNAEUS, 1758					10		LC
<i>Notonecta maculata</i> FABRICIUS, 1794						3	DD*
<i>Notonecta meridionalis</i> POISSON, 1926					1	5	DD*
<i>Notonecta obliqua</i> THUNBERG, 1787						6	NT
<b>Hebridae</b>							
<i>Hebrus ruficeps</i> THOMSON, 1871			3	com			VU
<b>Gerridae</b>							
<i>Aquarius paludum paludum</i> (FABRICIUS, 1794)					8		LC
<i>Gerris argentatus</i> SCHUMMEL, 1832						4	LC
<i>Gerris lacustris</i> (LINNAEUS, 1758)		4		18	4	1	LC
<i>Gerris lateralis</i> SCHUMMEL, 1832				1			EN
<b>Saldidae</b>							
<i>Macrosaldula variabilis</i> (HERRICH-SCHÄFFER, 1835)					1		CR
<i>Micracantha fennica</i> (REUTER, 1884)				38			CR
<i>Saldula arenicola arenicola</i> (SCHOLTZ, 1847)					5		VU
<i>Saldula c-album</i> (FIEBER, 1859)		2					NT
<i>Saldula melanoscela</i> (FIEBER, 1859)					1		NT
<i>Saldula opacula</i> (ZETTERSTEDT, 1838)			2		11		NT
<i>Saldula pallipes</i> (FABRICIUS, 1794)					5		LC
<i>Saldula saltatoria</i> (LINNAEUS, 1758)					5		LC
<i>Salda henschii</i> (REUTER, 1891)				3			EN
<b>Tingidae</b>							
<i>Dictyla echii</i> (SCHRANK, 1782)					23		LC
<i>Dictyla lupuli</i> (HERRICH-SCHÄFFER, 1837)				1			EN
<i>Lasiacantha capucina capucina</i> (GERMAR, 1837)						1	LC
<i>Oncochila scapularis</i> (FIEBER, 1844)					3		LC
<b>Microphysidae</b>							
<i>Loricula distinguenda</i> (REUTER, 1884)				1			DD
<b>Miridae</b>							
<i>Bryocoris pteridis</i> (FALLÉN, 1807)			11	1			LC
<i>Monalocoris filicis</i> (LINNAEUS, 1758)	1		8	1			LC
<i>Dicyphus errans</i> (WOLFF, 1804)	1		7	1			LC
<i>Dicyphus hyalinipennis</i> (BURMEISTER, 1835)				8			LC
<i>Macrolophus pygmaeus</i> (RAMBUR, 1839)			1				LC

Heteroptera list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<i>Deraeocoris ruber</i> (LINNAEUS, 1758)					4		LC
<i>Deraeocoris lutescens</i> (SCHILLING, 1837)	1						LC
<i>Adelphocoris lineolatus</i> (GOEZE, 1778)	8				18		LC
<i>Adelphocoris seticornis</i> (FABRICIUS, 1775)	4			9	1		LC
<i>Agnocoris rubicundus</i> (FALLÉN, 1807)	1				1		LC
<i>Apolygus spinolae</i> (MEYER-DÜR, 1841)					2		LC
<i>Calocoris affinis</i> (HERRICH-SCHÄFFER, 1835)				39			LC
<i>Calocoris alpestris</i> (MEYER-DÜR, 1843)			8				LC
<i>Calocoris r. roseomaculatus</i> (DE GEER, 1773)			2	3			LC
<i>Capsus ater</i> (LINNAEUS, 1758)				2			LC
<i>Charagochilus gyllenhalii</i> (FALLÉN, 1807)	2						LC
<i>Closterotomus b. biclavatus</i> (HERRICH-SCHÄFFER, 1835)			1	1			LC
<i>Closterotomus fulvomaculatus</i> (DE GEER, 1773)				2			LC
<i>Dichroscytus intermedius</i> REUTER, 1885				2			LC
<i>Lygocoris pabulinus</i> (LINNAEUS, 1761)				12			LC
<i>Lygus pratensis</i> (LINNAEUS, 1758)	2	1			5		LC
<i>Lygus rugulipennis</i> POPPIUS, 1911	14			4	2		LC
<i>Lygus wagneri</i> (REMANE, 1955)				11			LC
<i>Orthops basalıs</i> (A. COSTA, 1853)		1		35			LC
<i>Orthops campestris</i> (LINNAEUS, 1758)	1		2				LC
<i>Orthops kalmii</i> (LINNAEUS, 1758)			3	4			LC
<i>Phytocoris longipennis</i> FLOR, 1861	3						LC
<i>Pinalitus rubricatus</i> (FALLÉN, 1807)				6			LC
<i>Polymerus cognatus</i> (FIEBER, 1858)	1		1				DD*
<i>Polymerus microphthalmus</i> (WAGNER, 1951)					1		LC
<i>Polymerus unifasciatus</i> (FABRICIUS, 1794)	1						LC
<i>Polymerus holosericeus</i> HAHN, 1831					6		LC
<i>Polymerus nigrita</i> (FALLÉN, 1807)			1	2			LC
<i>Stenotus binotatus</i> (FABRICIUS, 1794)		8	3	31			LC
<i>Leptopterna dolabrata</i> (LINNAEUS, 1758)				21			LC
<i>Megaloceroea recticornis</i> (GEOFFROY, 1785)			1	5			LC
<i>Notostira elongata</i> (GEOFFROY, 1785)				1			LC
<i>Pithanus maerkelii</i> (HERRICH-SCHÄFFER, 1838)			1				NT
<i>Stenodema holsata</i> (FABRICIUS, 1787)			4	8			LC

Heteroptera list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<i>Stenodema laevigata</i> (LINNAEUS, 1758)					4		LC
<i>Stenodema sericans</i> (FIEBER, 1861)		1					LC
<i>Stenodema virens</i> (LINNAEUS, 1767)					6		LC
<i>Trigonotylus caelestialium</i> (KIRKALDY, 1902)	16				10		LC
<i>Halticus apterus apterus</i> (Linnaeus, 1758)			3	40	8		LC
<i>Halticus luteicollis</i> (PANZER, 1804)					1		LC
<i>Blepharidopterus angulatus</i> (FALLÉN, 1807)	1						LC
<i>Globiceps flavomaculatus</i> (FABRICIUS, 1794)				2			LC
<i>Mecomma ambulans ambulans</i> (FALLÉN, 1807)				2			LC
<i>Pilophorus clavatus</i> (LINNAEUS, 1767)				2			LC
<i>Cremnocephalus albolineatus</i> REUTER, 1875				1			NT
<i>Cremnocephalus alpestris</i> WAGNER, 1941				2			LC
<i>Atractotomus magnicornis</i> (FALLÉN, 1807)				15			LC
<i>Chlamydatus pulicarius</i> (FALLÉN, 1807)					2		LC
<i>Chlamydatus pullus</i> (REUTER, 1870)					4		LC
<i>Criocoris crassicornis</i> (HAHN, 1834)				18			LC
<i>Europiella alpina</i> (REUTER, 1875)				4			LC
<i>Plagiognathus a. arbustorum</i> (FABRICIUS, 1794)		2	4	23			LC
<i>Plagiognathus chrysanthemi</i> (WOLFF, 1804)				33			LC
<i>Psallus ambiguus</i> (FALLÉN, 1807)				1			LC
<i>Psallus haematodes</i> (GMELIN, 1790)				1			LC
<b>Nabidae</b>							
<i>Himacerus mirmicoides</i> (O. COSTA, 1834)					5		LC
<i>Himacerus apterus</i> (FABRICIUS, 1798)	1				12		LC
<i>Nabis limbatus</i> DAHLBOM, 1851		3		12			LC
<i>Nabis flavomarginatus</i> SCHOLTZ, 1847				2			LC
<i>Nabis pseudoferus pseudoferus</i> REMANE, 1949					2		LC
<i>Nabis rugosus</i> (LINNAEUS, 1758)			5	10	28		LC
<b>Anthocoridae</b>							
<i>Anthocoris nemorum</i> (LINNAEUS, 1758)			1	4	2		Lc
<i>Temnostethus gracilis</i> HORVÁTH, 1907			1				LC
<i>Orius minutus</i> (LINNAEUS, 1758)	1				4		LC
<b>Reduviidae</b>							
<i>Coranus aethiops</i> JAKOVLEV, 1893				1			CR
<i>Rhynocoris iracundus</i> (PODA, 1761)					4		LC

Heteroptera list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<b>Lygaeidae s. l.</b>							
<i>Spilostethus saxatilis</i> (SCOPOLI, 1763)					3		LC
<i>Nithecus jacobaeae</i> (SCHILLING, 1829)		1	1	17			LC
<i>Nysius senecionis senecionis</i> (SCHILLING, 1829)					8		LC
<i>Belonochilus numenius</i> (SAY, 1832)	1						NE
<i>Kleidocerys resedae resedae</i> (PANZER, 1797)	3						LC
<i>Cymus aurescens</i> DISTANT, 1883				21			LC
<i>Cymus glandicolor</i> HAHN 1832		1	18	12			LC
<i>Metopoplax origani</i> KOLENATI 1845					5		LC
<i>Oxycarenus lavatae</i> (FABRICIUS, 1787)	1				1		NE
<i>Scolopostethus pictus</i> (SCHILLING, 1829)					1		LC
<i>Scolopostethus thomsoni</i> REUTER, 1875				1			LC
<i>Ligyrocorys sylvestris</i> (LINNAEUS, 1758)			1	1			EN
<i>Graptopeltus lynceus</i> (FABRICIUS, 1775)					4		NT
<i>Peritrechus geniculatus</i> (HAHN, 1832)					2		LC
<i>Rhyparochromus pini</i> (LINNAEUS, 1758)			2		3		LC
<i>Rhyparochromus vulgaris</i> (SCHILLING, 1829)					4		LC
<i>Stygnocoris sabulosus</i> (SCHILLING, 1829)					1		LC
<b>Berytidae</b>							
<i>Berytinus clavipes</i> (FABRICIUS, 1775)			2				LC
<i>Berytinus crassipes</i> (HERRICH-SCHÄFFER, 1835)					1		LC
<b>Pyrrhocoridae</b>							
<i>Pyrrhocoris apterus</i> (LINNAEUS, 1758)	4						LC
<b>Coreidae</b>							
<i>Coreus marginatus marginatus</i> (LINNAEUS, 1758)					1		LC
<i>Gonocerus acuteangulatus</i> (GOEZE, 1778)					2		LC
<i>Syromastus rhombeus</i> (LINNAEUS, 1767)					1		LC
<b>Rhopalidae</b>							
<i>Rhopalus maculatus</i> (FIEBER, 1837)		1		3			NT
<i>Rhopalus parumpunctatus</i> (SCHILLING, 1829)					10		LC
<i>Rhopalus subrufus</i> (GMELIN, 1790)					4		LC
<i>Stictopleurus abutilon abutilon</i> (ROSSI, 1790)					1		LC
<i>Stictopleurus punctatonervosus</i> (GOEZE, 1778)					19		LC
<b>Plataspidae</b>							
<i>Coptosoma scutellatum</i> (GEOFFROY, 1785)					3		LC

Heteroptera list	Seg	Wör	Lei	Spe	Gos	Gla	RL
<b>Scutelleridae</b>							
<i>Eurygaster t. testudinaria</i> (GEOFFROY, 1785)	1	1		4	34		LC
<b>Pentatomidae</b>							
<i>Graphosoma lineatum</i> (LINNAEUS, 1758)	1						LC
<i>Aelia acuminata</i> (LINNAEUS, 1758)					8		LC
<i>Eysarcoris aeneus</i> (SCOPOLI, 1763)					10		LC
<i>Carpocoris purpureipennis</i> (DE GEER, 1773)					1		LC
<i>Dolycoris baccarum</i> (LINNAEUS, 1758)					4		LC
<i>Palomena prasina</i> (LINNAEUS, 1761)					2		LC
<i>Peribalus strictus</i> (FABRICIUS, 1803)					2		LC
<i>Rubiconia intermedia</i> (WOLFF, 1811)					12		LC
<i>Eurydema oleracea</i> (LINNAEUS, 1758)					2		LC
<i>Eurydema dominulus dominulus</i> (SCOPOLI, 1763)				5	6		LC
<i>Pentatoma rufipes</i> (LINNAEUS, 1758)	12	1		1			LC
<i>Piezodorus lituratus</i> (FABRICIUS, 1794)					2		LC
<i>Picromerus bidens bidens</i> (LINNAEUS, 1758)		2		1	4		LC

## Sternorrhyncha

Sternorrhyncha species were collected only in the first four locations. In total, 13 Psylloidea and 2 Aphididae species were found (see table below).

**Tab. 5:** List of Aphidoidea and Psylloidea species collected in course of the EHC 7 field trips. Figures= numbers of specimens. Abbreviations of collecting sites see Table 1.

	Seg	Wör	Lei	Spe
<b>Aphidoidea</b>				
<b>Aphididae</b>				
<i>Brachycaudus (Prunaphis) cardui</i> (LINNAEUS, 1758)				some
<i>Macrosiphum (Macrosiphum) knautiae</i> HOLMAN, 1972			some	
<b>Psylloidea</b>				
<b>Liviidae</b>				
<i>Livia junci</i> (SCHRANK, 1789)				1
<i>Psyllopsis fraxini</i> (LINNAEUS, 1758)				1
<i>Psyllopsis fraxinicola</i> (FOERSTER, 1848)		6		
<b>Psyllidae</b>				
<i>Cacopsylla pyricola</i> (FOERSTER, 1848)	4			
<i>Cacopsylla sorbi</i> (LINNAEUS, 1758)				10

	Seg	Wör	Lei	Spe
<i>Psylla alni</i> (LINNAEUS, 1758)				1
<i>Psylla alpina</i> FOERSTER, 1848		6		
<b>Triozidae</b>				
<i>Bactericera acutipennis</i> (ZETTERSTEDT, 1828)				5
<i>Bactericera bohemia</i> (ŠULC, 1913) / <i>Bactericera harrisoni</i> (WAGNER, 1955)		1		
<i>Bactericera femoralis</i> (FOERSTER, 1848)				1
<i>Trioza anthrisci</i> BURCKHARDT, 1986		3		2
<i>Trioza cirsii</i> Löw, 1881		1	1	
<i>Trioza urticae</i> (LINNAEUS, 1758)	1	29		15

## Zusammenfassung

Im Rahmen des 7. Europäischen Hemiptera-Kongresses (EHC 7) wurden im Juli 2015 in der Steiermark insgesamt 144 Zikaden-, 143 Wanzen-, 13 Blattfloh- und 2 Röhrenlausarten nachgewiesen. Mit den Funden von *Ribautodelphax imitans* (Delphacidae), *Eurhadina saageri* (Cicadellidae), *Notonecta maculata* (Notonectidae), *Notonecta meridionalis* (Notonectidae) und *Polymerus cognatus* (Miridae) gelangen 5 Erstnachweise für die Steiermark.

## References

- CHUCHE J., DANET J.-L. & THIERY D. 2010: First description of the occurrence of the leafhopper *Phlogotettix cyclops* in a Bordeaux vineyard. – Journal International des Sciences de la Vigne et du Vin 44(3): 161–165.
- FRIESS, T. & BRANDNER J. 2014: Interessante Wanzenfunde aus Österreich und Bayern (Insecta: Heteroptera). – Joanea Zoologie 13: 13–127.
- FRIESS T. & BRANDNER J. 2016: Interessante Wanzenfunde aus Österreich (Insecta: Heteroptera). – Joanea Zoologie 15 (2016): 105–127.
- FRIESS T. & RABITSCH W. 2015: Checkliste und Rote Liste der Wanzen der Steiermark (Insecta: Heteroptera). – Mitteilungen des Naturwissenschaftlichen Vereins für Steiermark 144: 15–90.
- FRIESS T., SCHLOSSER L. & HOLZINGER W.E. 2013: Wanzen (Insecta: Heteroptera) aus Mooren des Böhmerwaldes (Österreich). – Linzer biologische Beiträge 45/1: 307–320.
- GÜNTHER H. & STRAUSS G. 2006: *Micracanthia fennica* (REUTER 1848) (Heteroptera, Saldidae), ein Eiszeitrelikt in Mitteleuropa. – In: RABITSCH W. (ed.): Hug the bug - For love of true bugs. Festschrift zum 70. Geburtstag von Ernst Heiss. Denisia 19: 875–878.
- HOLZINGER W.E. 2009a: Rote Liste gefährdeter Zikaden (Auchenorrhyncha) Österreichs. – In: WALLNER R. & ZULKA K. P. (Red.): Rote Liste gefährdeter Tiere Österreichs. – Grüne Reihe des Lebensministeriums, Band 14/3, Böhlau, Wien, 41–317.
- HOLZINGER W.E. 2009b: Auchenorrhyncha (Insecta). – Checklisten der Fauna Österreichs, Heft 4, Biosystematics and Ecology Series 26: 41–100.
- HOLZINGER W.E. 2017: Report on the 7<sup>th</sup> European Hemiptera Congress (EHC 7). – Entomologica Austriaca 24: 203–208.

- KUNZ G., HOLZINGER W. E. & NICKEL H. 2017: *Emeljanovianus medius* neu für Österreich und weitere bemerkenswerte Zikadenfunde aus der Steiermark (Hemiptera, Auchenorrhyncha). – *Joanna Zoologie* 15: 161–179.
- MOOSBRUGGER J. 1946: Die Zikadenfauna von Vorarlberg. – *Zentralblatt für das Gesamtgebiet der Entomologie (Klagenfurt)* 1–3: 65–75.
- OUVRARD D. 2016: Psyllist – The World Psylloidea Database. – <http://www.hemiptera-databases.com/psyllist> - searched on 22 November 2016 doi:10.5519/0029634
- RABITSCH W. 2005: Heteroptera (Insecta). – *Checklisten der Fauna Österreichs, Heft 2, Biosystematics and Ecology Series* 23: 1–64.
- RABITSCH W. & ZETTEL H. 2000: Zur Wasserwanzenfauna (Heteroptera: Gerromorpha und Nepomorpha) des nördlichen Österreich. – *Linzer biologische Beiträge* 32/2: 1257–1268.
- RIEDLE-BAUER M., TIEFENBRUNNER A. & TIEFENBRUNNER M. 2006: Untersuchungen zur Zikadenfauna (Hemiptera, Auchenorrhyncha) einiger Weingärten Ostösterreichs und ihrer nahen Umgebung. – *Linzer Biologische Beiträge* 38(2): 1637–1654.

### Authors' addresses

Werner E. Holzinger, Thomas Frieß, Lydia Schlosser, Ökoteam – Institut für Tierökologie und Naturreisplanung, Bergmannsgasse 22, 8010 Graz, Austria.

E-Mail: holzinger@oekoteam.at; friess@oekoteam.at, schlosser@oekoteam.at

Berend Aukema, Nobelweg 54, 6706 GD Wageningen, Netherlands.

E-Mail: baukema@hetnet.nl

Kees F.M. den Bieman, 't Hofflandt 48, 4851TC Ulvenhout, Netherlands.

E-Mail: cdbieman@planet.nl

Thierry Bourgoin, Adeline Soulier-Perkins: Museum National d'Histoire Naturelle, Sorbonne Universités, 45 rue Buffon, 75005 Paris, France.

E-Mail: bourgoin@mnhn.fr, soulier@mnhn.fr

Daniel Burckhardt, Naturhistorisches Museum Basel, Augustinergasse 2, 4051 Basel, Switzerland. E-Mail: daniel.burckhardt@bs.ch

Attilio Carapezza, University of Palermo, via Sandro Botticelli 15, 90144 Palermo, Italy.

E-Mail: attilio.carapezza@unipa.it

Fabio Cianferoni, Natural History Museum of the University of Florence, Via Romana 17, 50125 Florence, Italy. E-Mail: fabio.cianferoni@unifi.it

Ping-Ping Chen, NVWA - NRC - Plagen, Geertjesweg 15, 6700 HC Wageningen, Netherlands. E-Mail: p.chen@nvwa.nl, pingping.chen@naturalis.nl

Franco Faraci, Via Vasco de Gama 33, 37011 Bardolino VR, Italy. E-Mail: heteropt@libero.it

Marta Goula, University of Barcelona, Avda Diagonal 645, 08028 Barcelona, Spain.

E-Mail: mgoula@ub.edu

Alvin J. Helden, Animal & Environment Research Group, Department of Life Sciences, Anglia Ruskin University, CB1 1PT Cambridge, UK. E-Mail: alvin.helden@anglia.ac.uk

Vladimír Hemala, Department of Botany and Entomology, Faculty of Science, Masaryk University, Kotlářská 2, 61137 Brno, Czech Republic. E-Mail: vladimir.hemala@gmail.com

Elisabeth Huber, Gernot Kunz, Karl-Franzens University Graz, Inst. of Zoology, Universitätsplatz 2, A-8010 Graz, Austria. E-Mail: el.huber@gmx.at, gernot.kunz@gmail.com



Dušanka Jerinić-Prodanović, University of Belgrade, Faculty of Agriculture, Nemanjina 6, 11080 Zemun, Belgrade, Serbia. E-Mail: dusanka@agrif.bg.ac.rs

Petr Kment, Department of Entomology, National Museum, Kunratic 1, CZ-148 00 Praha, Czech Republic. E-Mail: sigara@post.cz

Carsten Morkel, Institute of Applied Entomology, Bartholomäusstr. 24, 37688 Beverungen, Germany. E-Mail: cmorkel@applied-entomology.de

Herbert Nickel, Ehrengard-Schramm-Weg 2, D-37085 Goettingen, Germany. E-Mail: herbertnickel@gmx.de

Wolfgang Rabitsch, Lorystraße 79, 1110 Wien, Austria. E-Mail: wolfgang.rabitsch@umweltbundesamt.at

Rimantas Rakauskas, Vilnius University, Saulėtekio al. 7, LT-10257 Vilnius, Lithuania. E-Mail: rimantas.rakauskas@gf.vu.lt

Alex J. Ramsay, Jacobs, 5 First Street, Manchester M15 4GU, United Kingdom. E-Mail: alexramsay6@yahoo.com

Marco Roca-Cusachs, University of Barcelona, PL. Emili mira i López 3. Bxos, 08022 Barcelona, Spain. E-Mail: marcosrocacusachs@gmail.com

Gabrijel Seljak, Kromberska cesta 8, SI-5000 Nova Gorica, Slovenia. E-Mail: gabrijel.seljak@t-2.net

Liliya Serbina, Malkie Spodek, Naturhistorisches Museum Basel, Augustinergasse 2, 4051 Basel, Switzerland. E-Mail: liliya\_serbina@mail.ru, malkiespodek@gmail.com