

## Additions to the checklist of the Chrysomelidae (excluding Bruchinae) of Austria (II) (Coleoptera: Chrysomelidae)

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### Abstract

The checklist of the Chrysomelidae of Austria (GEISER 2004) is supplemented with four species. *Donacia malinovskyi* AHRENS, 1810 and *D. tomentosa* AHRENS, 1810, collected several decades ago, were found in the collections of the Natural History Museum Vienna and the State Museum of Upper Austria, Linz. *Lilioceris schneideri* (WEISE, 1910), which has been split from *L. merdigera* (L., 1758), is rather widely distributed in Austria. *Chrysolina pseudolurida* (ROUBAL, 1917) was recently collected in Styria by E. Holzer.

**Key words:** Coleoptera, Chrysomelidae, Austria, checklist, *Donacia malinovskyi*, *Donacia tomentosa*, *Lilioceris schneideri*, *Chrysolina pseudolurida*.

### Introduction

Since the last update of the checklist of the Chrysomelidae of Austria (GEISER 2016) four additional species could be identified. One was collected recently in Styria (HOLZER 2015), one has been split off from the common *Lilioceris merdigera* (L., 1758), and two species were detected in old museum collections.

In the checklist of the Chrysomelidae of Austria (GEISER 2004) the system used in MOHR (1966) was applied, because the standard work “Die Käfer Mitteleuropas” was for a long time the main reference for the systematics of Central European beetles. Meanwhile, the former Chrysomelidae subfamily Zeugophorinae is considered to be a part of Megalopodidae, which were split from Chrysomelidae as a family of their own. The former subfamily Orsodacninae was also elevated to family level (see GÓMEZ-ZURITA et al. 2008, and references therein). The former subfamily Alticinae is now considered a tribe (Alticini) of the subfamily Galerucinae. The former family Bruchidae is now regarded as a subfamily (Bruchinae) of the Chrysomelidae. Therefore, all Bruchinae species must be added to the Chrysomelidae checklist, while the species of the genera *Orsodacne* L., 1802 (Orsodacnidae) and *Zeugophora* KUNZE, 1818 (Megalopodidae) must be removed. However, the Bruchinae are not well studied in Austria, and therefore a reliable checklist of the Bruchinae cannot be provided at present.

The actual number of Chrysomelidae (excluding Bruchinae) species collected in Austria is 528.

### Abbreviations:

coll. Holzer	Collection Erwin Holzer, Anger bei Weiz, Austria
coll. Mitter	Collection Heinz Mitter, Steyr, Austria
NMW	Natural History Museum Vienna, Austria
OLML	State Museum of Upper Austria, Linz, Austria
ZSM	Zoological State Collection Munich, Germany

### *Donacia malinovskyi* AHRENS, 1810

#### MATERIAL EXAMINED:

VIENNA: Wien, Natterer (leg.?), without date, 2 exs., det. H. Goecke 1956, vid. E. Geiser, coll. NMW.

LOWER AUSTRIA: District Korneuburg: Bisamberg, 1925, 1 ex., det. F. Schubert, vid. E. Geiser, coll. NMW. District Krems: Krems an der Donau, collector unknown (probably E. Grundmann), without date, 2 exs., det. R. Mlejnek 2016, vid. E. Geiser, 2 exs. (ab. *arundinis*), det. E. Geiser 2018, coll. NMW (ex coll. Grundmann [the collection of Ernst Grundmann (Herzogenburg, Austria) was acquired by the NMW in 1971]).

BURGENLAND: District Neusiedl am See or Eisenstadt: Neusiedler See, 1 ex., coll. A. Wingelmüller, det. H. Goecke 1956, vid. E. Geiser 2018, coll. NMW.

#### DOUBTFUL MATERIAL EXAMINED:

SALZBURG: City of Salzburg: Hellbrunn, VI.1928, 4 exs., det. K. Witzgall, vid. E. Geiser, coll. ZSM (ex coll. Dall'Armi (in coll. Witzgall)).

Konrad Witzgall bought the beetle collection of Ferdinand von Dall'Armi (1900–1974). Witzgall had a profound knowledge of Central European beetles and soon found out that most specimens in the collection of Dall'Armi had false locality data. Therefore, there is no reliable evidence for the occurrence of *D. malinovskyi* in Salzburg.

LITERATURE RECORDS: MITTER (1980): Upper Austria, District Urfahr-Umgebung, Steyregg, Donau-Au, 5.VI.1942, leg. M. Priesner, coll. Mitter (ex coll. Böhme). Franz Böhme died 1992 and his comprehensive collection is now stored in coll. Mitter. No specimen of *Donacia malinovskyi* could be found in this collection. However, there is one rather dark specimen of *D. clavipes* (F., 1792) (vid. E. Geiser) with the locality data and date as specified above. Probably, this specimen had previously been misidentified as *D. malinovskyi*.

According to JAKOB (1979) *D. malinovskyi* is widely distributed in Austria [“allgemeine Verbreitung über ganz Österreich”]. This is certainly not correct. However, Hermann Jakob died before his manuscript was finished, and his partially handwritten notes may have caused some misinterpretations.

GENERAL REMARKS: *Donacia malinovskyi* is a very rare species. Its colouration is quite variable. Most of the specimens are dark green with metallic lustre, but bluish or violaceous reflections may occur as well. Some specimens are without metallic lustre, and their pronota and elytra are reddish-brown or testaceous. Several colour variations with some metallic patches in reddish-brown background exist. The non-metallic testaceous form can be misidentified as *D. fennica*, which looks very similar and can be best distinguished by the length/width ratio of the second tarsomere. However, *D. fennica* does not occur in Austria.

*Donacia malinovskyi* lives in swampy habitats near ponds and lakes. Adults are found from April until the end of June. The larvae feed on Floating Sweet-Grass (*Glyceria fluitans*, Poaceae). The adults preferably sit on the upper sides of the leaves, especially during bright weather. Each shadow and each sign of any approaching object (a bird, an entomologist) induces quick moves to the reverse side of the leaves under water. During cloudy, rainy or stormy weather they remain on the underside for hours. They usually do not like to fly, but when transferred to other plants they immediately fly away in search for *Glyceria fluitans* (GOECKE 1949).

*Donacia malinovskyi* is recorded from Central and East Europe, especially from the northern parts of this area. However, some of the literature records are doubtful and need to be verified.

### *Donacia tomentosa* AHRENS, 1810

#### MATERIAL EXAMINED:

VIENNA: Wien (without date), Schlereth (leg.?), 4 exs., det. H. Goecke 1956, vid. E. Geiser, coll. NMW; one of these four specimens was mentioned in BEZDĚK & MLEJNEK (2016).

LOWER AUSTRIA: District Mödling: Biedermannsdorf, collector unknown, 10.VII.1923, 1 ex., det. E. Geiser, coll. NMW.

UPPER AUSTRIA: “OÖ” [Upper Austria], Donauauen, no additional locality information, no date, 1 ex., leg. E. Munganast, det. J. Kloiber, vid. E. Geiser, coll. OLML. District Kirchdorf an der Krems: Schacherteich near Kremsmünster, collector unknown (probably Ludwig Redtenbacher (1814–1876), who was born in Kirchdorf an

der Krems), date unknown (see REDTENBACHER 1874, and FRANZ 1974); in the NMW (Redtenbacher collection) there are three unlabelled specimens of *D. tomentosa* (vid. E. Geiser) and it can be assumed that these are the ones on which the record by REDTENBACHER (1874) was based on.

ADDITIONAL LITERATURE RECORDS: BEZDĚK & MLEJNEK (2016): Wien, collector and date unknown, 1 ex., det. R. Mlejnek, in coll. Slovenské národné múzeum, Bratislava, Slovakia.

BRANCSIK (1871) listed *Donacia tomentosa* in his catalogue of the beetles of Styria: “Auf Wasserpflanzen selten (Gat. Sp.)” [On aquatic plants, rare (leg. Gatterer, leg. Spitzzy)]. In the 19<sup>th</sup> century “Styria” comprised large parts of Slovenia, and therefore records in this book either refer to Austria or to Slovenia. According to the notes in the introduction, F. Gatterer collected mainly in northern Styria (Austria), and J.N. Spitzzy collected mainly in the surroundings of “St. Leonhard bei Marburg” [Lenart v Slovenskih goricaah near Maribor] (Slovenia).

GENERAL REMARKS: Among the European species, *Donacia tomentosa* and *D. cinerea* are the only ones with pubescent pronota and elytra. It is sometimes very difficult to distinguish these two species. In fact, I found numerous specimens labelled “*Donacia tomentosa*”, which actually turned out to belong to *D. cinerea*.

The larvae of *Donacia tomentosa* feed on the roots of Flowering Rush (*Butomus umbellatus*). This plant is well adapted to dynamic hydrological conditions, where it can compete with other hydrophilic plants. *Butomus umbellatus* is recorded from Upper Austria, Lower Austria, Vienna, Burgenland, and from small spots near Radkersburg in south-eastern Styria. It occurs, respectively occurred, mainly in the south and south-east of Vienna (Niklfeld, pers. comm.). In the surroundings of Biedermannsdorf many ponds (from former clay pits for the production of bricks) existed until around 1950. Therefore this record of *D. tomentosa* seems quite reliable.

*Donacia tomentosa* is generally a rare species, although it occurs in large parts of the Palearctic Region: from France to southern Scandinavia to western Siberia (BOROWIEC 1984, SILFVERBERG 2010).

### ***Lilioceris schneideri* (WEISE, 1910)**

This species was previously thought to be a subspecies of the common *Lilioceris merdigera*.

There are several confirmed records of *L. schneideri* from several parts of Austria. SCHUH (2007) lists sites from Burgenland, Lower Austria, Upper Austria, Styria and Carinthia.

### ***Chrysolina (Taeniossticha) pseudolurida* (ROUBAL, 1917)** (Fig. 1)

HOLZER (2015) published the following record under the name *Chrysolina reitteri* (WEISE, 1884): Styria, District Weiz, Anger, Auersbachsiedlung, 47°16'N 15°41'E, 500 m a.s.l., riparian vegetation of a garden pond, 1 ex., 2.V.2013, leg. & coll. E. Holzer.

According to KIPPENBERG (2010) *Chrysolina reitteri* is restricted to Georgia. Therefore, this specimen obviously belongs in fact to *C. pseudolurida*, which has never been recorded from Austria so far. Altogether, there are eight subspecies of *C. pseudolurida* known (e.g. *C. p. saxonica* SILFVERBERG, 1977 from Germany, *C. p. pappi* BOURDONNE, 2008 from Hungary, Poland and Slovakia). Further studies will be necessary to find out to which subspecies the population from Styria belongs.



Fig. 1: *Chrysolina pseudolurida* from Anger near Weiz, Styria. Photograph: E. Holzer.

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#### Zusammenfassung

Die Checkliste der Chrysomelidae Österreichs wird hier um weitere vier Arten ergänzt.

Im Zuge der Revision der Donaciinae am NMW und OLML wurden etliche in Österreich gesammelte Exemplare von *Donacia malinovskyi* AHRENS, 1810 und *D. tomentosa* AHRENS, 1810 entdeckt. Einige zweifelhafte Literaturmeldungen für diese beiden Arten konnten ebenfalls geklärt werden. *Lilioceris schneideri* (WEISE, 1910) wurde von der häufigen *Lilioceris merdigera* (L., 1758) abgespalten und ist in Österreich in mehreren Bundesländern nachgewiesen. *Chrysolina pseudolurida* (ROUBAL, 1917) wurde kürzlich unter dem Namen *Chrysolina reitteri* (WEISE, 1884) erstmals für Österreich nachgewiesen (HOLZER 2015).

Nach Abzug der Arten der Gattungen *Orsodacne* L., 1802 (Orsodacnidae) und *Zeugophora* KUNZE, 1818 (Megalopodidae) umfasst die aktuelle Artenzahl der Chrysomelidae (exklusive Bruchinae) Österreichs nunmehr 528.

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## Buchbesprechung

**Löbl, I. & Löbl, D. (Hrsg.) 2017: Catalogue of Palaearctic Coleoptera, Vol. 1. Archostemata – Myxophaga – Adephaga. Revised and updated edition.** – Leiden: Brill, XXXIV + 1443 pp.

Am 18. Oktober 2017 erschien nun auch die Neuauflage des ersten Bandes der Serie "Catalogue of Palaearctic Coleoptera". Wie bei den beiden bisher erschienenen Neuauflagen (Band 2 (2015), siehe Koleopterologische Rundschau 2016, pp. 348–349; Band 3 (2016), siehe Koleopterologische Rundschau 2017, p. 204) ist der Umfang geradezu enorm angewachsen. Die Seitenzahl hat sich fast verdoppelt. Die Anzahl der inkludierten Namen wird in der neuen Auflage mit 33 914 beziffert. Gegenüber der 2003 erschienenen Erstauflage ist das ein Zuwachs von beinahe 5 000 Namen.

Die Reihenfolge der Familien wurde gegenüber der Erstauflage verändert. Die Dytiscidae bilden im neuen Band den Abschluss.

Die Untergattungen sind im Katalog generell alphabetisch gereiht. Bei *Pterostichus* finden sich jedoch zwei Subgenera an der falschen Position: *Iberocorax*, *Petrophilus*. Bei *Amara* ist die Untergattung *Pseudoleirides* falsch gereiht.

*Glycia (Merizomena) schoenmanni* (Carabidae) [Synonym von *Merizomena klapperichi*] ist irrtümlich als „schoenemanni“ gelistet.

Bei den Verbreitungsdaten herrscht noch ein gewisser Revisionsbedarf im Falle der Mongolei, da einerseits manche Nachweise (*Gyrinus natator*, *Orectochilus villosus*, *Acilius canaliculatus*) in schwer zugänglichen Zeitschriften veröffentlicht wurden (ENKHNASAN 2006: Species composition of predacious diving beetle[s] (Coleoptera, Dytiscidae) of Arctic Ocean Basin in Mongolia. – Proceedings of the Institute of Biology 26: 74–77; ENKHNASAN 2011: Species composition and distribution of whirligig beetles (Coleoptera, Gyrinidae Latreille, 1810) of Mongolia. – Proceedings of the Institute of Biology 28: 176–180). Andererseits wurden Arten aufgenommen, die von BRINCK (1943: Insecta, ex Sibiria meridionali et Mongolia, in itinere Orjan Olsen 1914 collecta. A. Coleoptera, a Fritz Jensen lecta. VIII. Haliplidae, Dytiscidae, Gyrinidae. – Norsk entomologisk Tidsskrift 6: 154–161) zwar für die Mongolei gemeldet, tatsächlich aber in Russland (Republik Tuwa) gesammelt wurden, z.B.: *Gyrinus minutus*, *G. opacus*, *Agabus confinis*, *Ilybius fuliginosus*, *Rhantus bistriatus*. Bei *Haliplus kotoshonis* ist die Eintragung „ORR“ zu streichen.

Leider ist die Taxonomie der Haliplidae nicht auf dem neuesten Stand. VONDEL & LITOVKIN (2017: Koleopterologische Rundschau 87: 31–35) haben fünf paläarktische *Haliplus*-Arten synonymisiert: *Haliplus abbreviatus* (= *H. kulleri*, *H. jaechi*, *H. ortali*); *H. diruptus* (= *H. davidi*); *H. sharpi* (= *H. holmeni*). Diese Synonyme wurden allerdings im vorliegenden Band nicht berücksichtigt.

Sehr erfreulich finde ich die Beibehaltung des Familiennamens Hygrobiidae anstelle von Paelobiidae. Diese unglückliche Namensänderung hat seither viel Verwirrung gestiftet (siehe Koleopterologische Rundschau 84 (2014): p. 365).

Weniger erfreulich finde ich hingegen, dass viele von Nilsson emendierte Artnamen (*Allopachria dieterlorum* [im Katalog irrtümlich als „dieterlorum“ bezeichnet], *A. hautmannorum*, *A. scholzorom*, *A. weinbergerorum*, *Deronectes gignouxorum*, *D. hebauerorum*, *Microdytes holzmannerum*) als „unjustified emendations“ bezeichnet werden. Hier ist das letzte Wort sicher noch nicht gesprochen. Die Nomenklaturregeln (siehe International Commission on Zoological Nomenclature 1999: Art. 31.1.2) sind in diesem Fall eindeutig. Diese Namen dürfen keinesfalls als „unjustified emendations“ gewertet werden.

Der Index zu den Namen der Artgruppe findet sich im Internet (<https://s3-eu-west-1.amazonaws.com/pstorage-brill-78784a5sas/9059731/IndexSpeciesvol.12017.pdf>).

Trotz kleiner Fehler handelt es sich um ein wirklich hervorragendes Werk!

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