

New records and host plants of Symphyta (Hymenoptera) for Germany, Berlin and Brandenburg

With 10 figures

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Summary

24 species of sawflies are recorded for the first time in Brandenburg and / or Berlin. Four of these are new records for Germany: *Dineura parcivalvis* (KONOW, 1901), *Euura plicadaphnoides* (KOPELKE, 2007), *Pristiphora angulata* LINDQVIST, 1974 and *Tenthredo semicolon* MOL, 2013. It is not clear whether *P. angulata* is established in Germany. *Empria hungarica* (KONOW, 1895) is new for Rhineland-Palatinate. The presence of *Calameuta punctata* in Brandenburg is confirmed. *Dineura testaceipes* is removed from the list of Berlin-Brandenburg species. *Linum usitatissimum* is a new host plant for *Rhogogaster chambersi* BENSON, 1947 and *Salix daphnoides* for *Ametastegia perla* (KLUG, 1818).

Key words

Tenthredinoidea, Pamphiliidae, Cephidae, Xiphydriidae, distribution, host plants

Zusammenfassung

Erstnachweise von 24 Arten Pflanzenwespen aus Brandenburg und / oder Berlin werden gemeldet. Vier von diesen Arten sind Erstnachweise für Deutschland: *Dineura parcivalvis* (KONOW, 1901), *Euura plicadaphnoides* (KOPELKE, 2007), *Pristiphora angulata* LINDQVIST, 1974 und *Tenthredo semicolon* MOL, 2013. Es ist nicht klar, ob *P. angulata* in Deutschland etabliert ist. *Empria hungarica* (KONOW, 1895) ist neu für Rheinland-Pfalz. Ein Vorkommen von *Calameuta punctata* in Brandenburg wird bestätigt. *Dineura testaceipes* wird aus der Fauna von Brandenburg / Berlin gestrichen. *Linum usitatissimum* ist eine neue Larvenwirtspflanze für *Rhogogaster chambersi* BENSON, 1947 und *Salix daphnoides* für *Ametastegia perla* (KLUG, 1818).

Introduction

During the 19th Century, several entomologists resident in what are now the German federal states of Berlin and Brandenburg laid the foundations for studies on the sawfly fauna of these territories. Most prominent among such pioneers were FRIEDRICH KLUG (1775–1856) and THEODOR HARTIG (1805–1880), whose taxonomic work was based partly on material obtained in the region.

Although he published little about Symphyta occurring in or around Berlin, JOHANN P. E. F. STEIN (ca. 1816–1882, exact dates unclear) continued this tradition by building up and curating the collection at the Museum of Natural History in Berlin. The collection of FRIEDRICH WILHELM KONOW (1842–1908), deposited at the Senckenberg Deutsches Entomologisches Institut, Müncheberg, also

contains many specimens from Brandenburg. By contrast, after the publication of the important work by CARL SCHIRMER (1855–ca. 1919) (SCHIRMER 1901), investigation of the regional fauna was comparatively neglected during much of the 20th Century. Species lists for Berlin-Brandenburg by BLANK et al. (1998) and BLANK et al. (2001) drew attention to deficits in the inventory of the fauna. It was accordingly not surprising, that LISTON (2006b) was able to present data for 112 species not previously recorded in these German federal states. Since the publication of that work, a number of records of further species new to the regional fauna have accumulated. These are presented here, together with data on species previously unconfirmed, that are only known from very old specimens, or for which new observations on host plants have been made. Notes on larval host plants are included when these were not summarised by TAEGER et al. (1998) or LISTON et al. (2012).

Material and methods

If not stated otherwise, specimens were collected and determined by the author and are deposited in the Senckenberg Deutsches Entomologisches Institut, Müncheberg (SDEI). Where other specialists are named as having determined specimens, I checked the identity of these, to the best of my ability. The responsibility for any inaccuracies naturally remains my own.

All coordinates (decimal system) are for a central point. The coordinates of localities whose position is fairly precisely known (such as sites of Malaise traps, small private gardens, and main stems of individual trees or bushes), are given to the fifth decimal place after the degrees, with an accuracy of ± 20 m. Coordinates of localities named on data labels are more approximate and given either to three decimal places with an accuracy of ± 2 km (mostly own records), or to two decimal places with a notional accuracy of ± 5 km (mostly older label data).

Photos were taken with a Leica DFC295 camera attached to an Olympus SZX12 microscope. Composite images with an extended depth of field were created using the software CombineZ5. Contrast and brightness of images was adjusted using the software PhotoImpact XL (Ulead Systems Inc.).

Barcoding of the mitochondrial CO1 gene of *Dineura* species was undertaken by the Canadian Centre for DNA Barcoding (CCDB). DNA extraction from a single leg of each adult specimen was followed by PCR amplification and sequencing using standardised high-throughput protocols (IVANOVA et al. 2006, DEWAARD et al. 2008). The DNA extracts are stored at the CCDB, the vouchers at the SDEI. Sequences were aligned using the BOLD (Barcoding of Life Data Systems) Aligner. Genetic distances were calculated using analytical tools in BOLD, applying the

Kimura 2-parameter model, and the interspecific divergence given as the minimum pair-wise distance.

Results

The order of families follows BLANK et al. (2001). Genera and species are listed alphabetically. Nomenclature is after LISTON et al. (2012), modified for the Nematinae following PROUS et al. (2014). Names of species recorded for the first time from Berlin-Brandenburg are preceded by an asterisk (*).

Argidae

**Arge metallica* (KLUG, 1834)

Brandenburg: 1 ♀, Landkreis Oberhavel, Schildow, 52.64°N 13.37°E, 24.07.1941, leg. Hedicke, determined in 1976 as *A. clavicornis expansa* by W. H. Mücke.

This species occurs very locally in Central Europe and is generally rarely recorded. SCHEDL & ALTENHOFER (2013) presented valuable new data on its larva.

Tenthredinidae

**Allantus melanarius* (KLUG, 1818)

Berlin: 1 ♀, Berlin, „28/4“, leg. Schirmer (in coll. Swedish Museum of Natural History, Stockholm). Brandenburg: 1 ♀, Landkreis Märkisch-Oderland, Buckow, 52.56°N 14.08°E, „[?] 25/5“, leg. Schirmer (in coll. Swedish Museum of Natural History, Stockholm). 1 ♀, Landkreis Märkisch-Oderland, Müncheberg, ZALF Gelände, 52.51499°N 14.11548°E, Malaise trap, 25.07.–01.08.2011. Only *Cornus sanguinea* is so far recorded as a larval host, but because *A. melanarius* is found not just in semi-natural habitats in which this shrub occurs, but also in parks and gardens where several other *Cornus* spp. are planted, it would be interesting to know whether some of these are used as hosts.

**Ametastegia perla* (KLUG, 1818)

Brandenburg: 1 ♀, Müncheberg, ZALF Gelände, 52.515°N 14.115°E, reared from *Salix daphnoides*, larva collected 29.06.2014, leg. M. Prous.

S. daphnoides is a new host plant record for this species.

**Apethymus apicalis* (KLUG, 1818)

Brandenburg: 1 ♂, Landkreis Märkisch-Oderland, Müncheberg, 52.50556°N 14.12648°E, Hausgarten, 11.10.2013, leg. S. M. Blank. 5 ♂, Landkreis Frankfurt (?),

„Frankfurt / O.“, 52.35°N 14.55°E, 04.10.1857, leg. Zeller (in coll. National Museums of Scotland, Edinburgh).

The specimens collected by Zeller may either be from Germany, or from the part of former Frankfurt (now Slubice), east of the River Oder, that is now in Poland.

**Apethymus serotinus* (O. F. MÜLLER, 1776)

Brandenburg: 1 ♀, Landkreis Märkisch-Oderland, Waldsiewersdorf, Lindenplatz, 52.539°N 14.054°E, 26.09.2011, leg. S. M. Blank; 1 ♀, 28.09.2011.

**Caliroa cothurnata* (SERVILLE, 1823)

Brandenburg: 1 ♀, Landkreis Barnim, Eberswalde, Waldstraße, garden and woodland edge, 52.82620°N 13.84100°E, Malaise trap, 03–10.08.2002, leg. A. Taeger.

**Dineura parcivalvis* (KONOW, 1901)

Brandenburg: 2 ♀, Landkreis Märkisch-Oderland, Waldsiewersdorf, 52.548°N 14.065°E, 19/25.05.2006, swept from *Prunus padus*.

First record from Germany.

These specimens were identified by LISTON (2006b) as *D. testaceipes* (KLUG). MUCHE (1968) also recorded *D. testaceipes* from Brandenburg. Although it is highly probable that *D. testaceipes* does occur here, no voucher specimens have so far been examined. Accordingly, *D. testaceipes* is deleted from the faunal list of Berlin-Brandenburg. *D. parcivalvis* und *D. testaceipes* are morphologically very similar, although LINDQVIST (1955, 1972) noted conspicuous differences in the structure of the male penis valves. I had no males of *D. parcivalvis* available for examination. The most reliable single external character for distinguishing females seems to be the length of the antenna and proportions of the flagellomeres, at least in European specimens. However, two females in the SDEI from the Russian Far East, with characters that otherwise fit *D. testaceipes*, have more slender flagellomeres, like *D. parcivalvis*. The body colour of *D. parcivalvis* females is always relatively pale, with the abdomen underside extensively pale (yellow). The coloration of *D. testaceipes* varies much more than in *D. parcivalvis*, but most specimens of the former are darker than the latter. Most *D. testaceipes* imagines from northern Europe can be identified using only colour characters: the underside of the abdomen is usually nearly entirely dark (black / dark brown). On the other hand, some Austrian individuals reared from *Sorbus aucuparia* have been examined, that are just as pale as *D. parcivalvis*. Other characters mentioned by LINDQVIST seem less useful. The presence or absence of vein 2r-rs in the fore wing is certainly not a good character: this varies in both species. There is indeed a slight difference in the sculpture of the upper head, particularly on the temples,

but this is difficult to judge without direct comparison of both species. The colour of the pterostigma, as mentioned by LINDQVIST (1955), seems to be of help in identification, but this needs to be checked in a greater number of specimens. Provisionally, females can be distinguished as follows:

- Apical flagellomeres at least 5x as long as greatest width (Fig. 1). Abdominal sterna always mostly pale (Fig. 2). Pterostigma and costa brown (Fig. 2). Upper head more densely punctate, thus less shiny. *D. parcivalvis*
- Apical flagellomeres at most 4.5x as long as greatest width (Fig. 3). Abdominal sterna entirely black except around hypopygium (Fig. 4), or more or less pale. Pterostigma (at least in middle) and costa yellowish (Fig. 4). Upper head less densely punctate, thus more shiny. *D. testaceipes*

The identification of the *D. parcivalvis* specimens from Brandenburg is further supported by two non-morphological characters: a significant divergence in CO1 barcoding (4.4 %) from *D. testaceipes* and the fact that both females were collected from *Prunus padus*. KONTUNEMI (1960) established that *Prunus padus* is the larval host of *D. parcivalvis*. On the other hand, *D. testaceipes* has generally been regarded as monophagous on *Sorbus aucuparia* (e.g. BENSON 1958). Previously, *D. parcivalvis* has been definitely recorded only from Finland, Estonia and Latvia, but possibly also occurs in Moravia, Czech Republic (see LINDQVIST 1955). Its global range reaches to the Russian Far East: 1 ♀, Khabarovskiy Kray, Bikin N 20 km, Boitsovo, Bolshoi Sontsepyok Hill, 47.033°N 134.350°E, 26.05.1993, leg. A. Taeger (SDEI); 1 ♀, Primorskij Kray, Partisan, 13 km S Ussuriysk, 43.691°N 131.957°E, 15.06.1993, leg. A. Taeger (SDEI).

**Dolerus brevicornis* ZADDACH, 1859

Brandenburg: 1 ♀, Landkreis Havelland, Falkensee [„Berlin-Finkenkrug“, 52.55°N 13.08°E, 29.04.1918, leg. [unknown], det. M. Heidemaa. 1 ♀, Landkreis Märkisch-Oderland, Hennickendorf, Torfhaus, 52.517°N 13.844°E, 25.04.2010. 3 ♀, Müncheberg, NSG Gumnitz, 52.509°N 14.080°E, 30.04.2010.

Distinguished from *Dolerus asper* ZADDACH, 1859 by HEIDEMAA et al. (2004), but still very under-recorded in Germany. The only published record is from Bavaria (LISTON 2011). The following specimens from other German provinces were examined:

Mecklenburg-Vorpommern: 1 ♀, Landkreis Vorpommern-Rügen, Prerow, 04.05.1988, leg. Wrase, det. M. Heidemaa. Sachsen: 1 ♂, Leipzig, 22.03.1896, leg. Krieger, det. M. Heidemaa. Sachsen-Anhalt: 1 ♀, Dessau, Beckerbruch, 22.04.1975, leg. A. Taeger, det. M. Heidemaa. Thüringen: 1 ♀, Oberhof, Veilchenbrunnen, 26.05.1989, leg. A. Taeger, det. M. Heidemaa.

**Dolerus harwoodi* BENSON, 1947

Brandenburg: 1 ♀, Landkreis Havelland, Falkensee [„Berlin-Finkenkrug“], 52.55°N 13.08°E, 29.04.1918, leg. [unknown], det. M. Heidema. 2 ♂, Landkreis Barnim, Eberswalde S, Paschenberg, 52.83°N 13.83°E, 14/17.04.1982, leg. [unknown], det. M. Heidema. 1 ♀, Umg. Eberswalde, Biesenthal, 52.76°N 13.64°E, 08.05.1971, leg. J. Oehlke, det. A. Taeger / M. Heidema.

**Dolerus uliginosus* (KLUG, 1818)

Brandenburg: 1 ♀, Landkreis Barnim, Ziethen, Grumsiner Forst, Langer Berg, Malaisefalle M4, 52.97500°N 13.91667°E, 11.–13.05.1993, leg. DEI; 1 ♂, 26.04.–04.05.1994, leg. DEI; 2 ♂, 1 ♀, 11.–18.05.1994, leg. DEI.

**Empria basalis* LINDQVIST, 1968

Brandenburg: 3 ♀, Landkreis Märkisch-Oderland, Trebnitzer Schloßpark, 52.533°N 14.222°E, 09.05.2010, det. M. Prous. Netted from *Geum urbanum*, a probable host plant (PROUS et al. 2011).

Probably a widespread species in Germany, but here hitherto not distinguished from related taxa (see PROUS et al. 2011) and so far only recorded in Hesse (LÖHR 2015).

**Empria hungarica* (KONOW, 1895)

Brandenburg: 1 ♀, 3 ♂, Landkreis Märkisch-Oderland, Oderhänge bei Dolgeln, 52.499°N 14.436°E, 25.04.2010; 2 ♀, 6 ♂, 02.05.2010. Landkreis Märkisch-Oderland, Oderhängen bei Mallnow, 52.466°N 14.500°E, 1 ♀, 2 ♂, 08.05.2010; 1 ♀, 01.05.2011.

Until now, the only recent German records of the species were from a single locality in Lower Bavaria (LISTON et al. 2012). In addition to a historical record from Anhalt-Saxony (LISTON 2006a), I have also seen a specimen from the Rhine-Palatinate: 1 ♂, Naturschutzgebiet Dannstadt, 03.05.1949, leg. Zirngiebl, Zoologische Staatssammlung München. First record from Rhine-Palatinate.

**Euura ampla* (KONOW, 1895) comb. nov.
[= *Amauronematus amplus* KONOW, 1895]

Brandenburg: 1 ♀, Landkreis Barnim, Ziethen, Grumsiner Forst, Langer Berg, Malaisefalle M4, 52.97500°N 13.91667°E, 08.05.1996, leg. DEI.

**Euura ferruginea* (FÖRSTER, 1854) comb. nov.
[= *Nematus ferrugineus* FÖRSTER, 1854]

Brandenburg: 1 ♀, Landkreis Barnim, Ziethen, Grumsiner Forst, Langer Berg, 52.97500°N 13.91667°E, Malaisefalle M4, 12.06.1996, leg. DEI.

**Euura longiserra* (THOMSON, 1863) comb. nov.
[= *Nematus longiserra* THOMSON, 1863]

Brandenburg: 1 ♀, Landkreis Märkisch-Oderland, Müncheberg, Waldsiefersdorf, 52.548°N 14.103°E, 24.04.2005.

**Euura miltonota* (ZADDACH, 1863) comb. nov.
[= *Nematus miltonotus* ZADDACH, 1863]

Brandenburg: 1 ♀, Landkreis Märkisch-Oderland, Müncheberg, 52.50843°N 14.13896°E, 20.04.2009. 1 ♀, Landkreis Märkisch-Oderland, Prädikow, 52.633°N 14.008°E, 01.05.2011. Both swept from *Salix viminalis*.

**Euura plicadaphnoides* (KOPELKE, 2007) comb. nov.
[= *Phyllocolpa plicadaphnoides* KOPELKE, 2007]

Brandenburg: 5 ♀, 2 ♂, Landkreis Märkisch-Oderland, Müncheberg, ZALF Gelände, 52.515°N 14.115°E, 20–26.04.2009; 1 ♀, 30.04.2010. All specimens swept from *Salix daphnoides*. Numerous larvae and leaf-folds (Figs 5–6) on *S. daphnoides*, Müncheberg, Seelower Str., 52.50150°N 14.15320°E, June 2013.

First records from Germany.

This species was described from the Alpine regions of Austria and Switzerland (KOPELKE 2007), and is monophagous on *Salix daphnoides*, which in Germany is native only to the Alps and the associated river systems. However, it has been widely planted outside its natural range because of its attractive appearance and utility as a food source for honeybees. BENEŠ (2015) recorded *E. plicadaphnoides* from the Czech Republic. In contrast to *Euura acutifoliae* (ZINOVJEV, 1985), another gall-making sawfly on *S. daphnoides*, that is widespread throughout Germany, galls of *E. plicadaphnoides* have in Germany so far only been found in Müncheberg.

**Euura salicispurpureae* KOPELKE, 2014
[= *Euura purpureae* KOPELKE, 1996: secondary homonym]

Brandenburg: 2 ♀, Landkreis Märkisch-Oderland, Müncheberg, ZALF Gelände, 52.515°N 14.115°E, 30.04.2010. Swept from *Salix purpurea*.

Macrophya rufipes (LINNAEUS, 1758)

Brandenburg: 1 ♂, Landkreis Märkisch-Oderland, Müncheberg, ZALF Gelände, 52.515°N 14.115°E, 10.07.2011.

The species had only once been recorded from Berlin-Brandenburg, in the 19th Century in Berlin (LISTON 2006b).

**Pristiphora angulata* LINDQVIST, 1974

Brandenburg: 1 ♀, Landkreis Barnim, Eberswalde, Ammon Park, 52.832°N 13.816°E, 27.04.1989, leg. A. Taeger, det. M. Prous & A. Liston.

First record from Germany.

The recorded global distribution of *Pristiphora angulata* comprises only Norway (LØNNVE 2009), Finland (type locality: southern Finland), Estonia and north-west Russia (TAEGER et al. 2006). Host plants are *Spiraea* species, *S. chamaedryfolia* being a main host (LØNNVE 2009; A. Liston, personal observations). No *Spiraea* species is native in Fennoscandia or Germany, and the geographic origin of the neozoon *P. angulata* is unclear.

Pristiphora parva (HARTIG, 1837)

Brandenburg: 1 ♀, Landkreis Märkisch-Oderland, Münchehofe, Gr. Klobichsee, 52.555°N 14.128°E, 10.05.2014.

Not found in Berlin-Brandenburg since the type series was collected.

Pristiphora wesmaeli (TISCHBEIN, 1853)

Brandenburg: 1 ♀, Landkreis Barnim, Ziethen, Grum-siner Forst, Langer Berg, 52.97500°N 13.91667°E, Malaisefalle M4, 24.05.1995, leg. DEI.

Confirmed as present in Brandenburg.

LISTON (2006b) recorded *P. glauca* BENSON, 1954, in Brandenburg, but not *P. wesmaeli*. The species are biologically and morphologically similar. The occurrence of *P. wesmaeli* in Brandenburg had however already been indicated by ADAM (1973).

Rhogogaster chambersi BENSON, 1947

Brandenburg: 7 larvae, 10–15 mm long, Landkreis Märkisch-Oderland, Müncheberg, Trebnitz, Schlag Dachsberge, 52.526°N 14.241°E, 28.06.2015 feeding on oilseed flax, *Linum usitatissimum* subsp. *usitatissimum* L. variety “Lirina”.

The larvae were observed in hot, sunny conditions during the early afternoon. They are solitary. Some were found at rest, coiled on the leaf underside; smaller ones fed on leaf margins, whereas larger ones (Figs 7–8), probably in their final feeding instar, moved around a lot and mainly

consumed leaves from the tip, but seldom ate more than about a quarter of the leaf. Because only seven larvae were found during a slightly more than two hour-long visual search of plants in a small area at the corner of the field (total area planted with *Linum*: 62.1 ha), *R. chambersi* cannot be stated to have been causing any significant damage to the part of the crop in which it was found. The larva and its behaviour have already been described in considerable detail by CHAMBERS (1951). However, he recorded only *Linum catharticum* as a host: *L. usitatissimum* is apparently a new host plant record.

**Tenthredo ignobilis* KLUG, 1817

Brandenburg: numerous larvae, Landkreis Märkisch-Oderland, Jahnsfelde, 52.50961°N 14.24234°E, field path, on *S. telephium*, 15.05.2010. 1 ♀, Müncheberg, Trebnitz, 52.53143°N 14.21674°E, garden, flying around *Sedum* sp. cf. *telephium*, 21.05.2012; 1 larva (Fig. 9) on *S. sp. cf. telephium*, 23.06.2013. 1 larva, Landkreis Barnim, Friedrichswalde, Parlow, 53.02617°N 13.76203°E, 25.06.2015, garden, on *S. sp. cf. telephium*.

Since 2012 I have seen larvae every year, in greater or lesser numbers, on *Sedum* sp. cf. *telephium* in my garden at Trebnitz. Some plants were approximately 50 % defoliated by the time the larvae stopped feeding.

**Tenthredo semicolon* MOL, 2013

Brandenburg: 1 ♀, Landkreis Barnim, Eberswalde, 52.84°N 13.80°E, 06.06.1965, leg. J. Oehlke; 1 ♀, 14.08.1985, leg. A. Taeger. 1 ♀, Eberswalde-Finow, 52.84°N 13.74°E, Teich, 27.05.1986, leg. A. Taeger. 1 ♂, Sandkrug b. Eberswalde, 52.88°N 13.87°E, 28.07.1971, leg. J. Oehlke (in coll. United States National Museum, Washington DC).

First records from Germany.

Tenthredo punctulata KONOW, 1887 (primary homonym) was only recently removed from synonymy with *Tenthredo colon* KLUG, 1817, recognised to be a separate species, and re-named *T. semicolon* by A. MOL (in TAEGER 2013). Previously published information under the name *T. colon* on the larva, hosts and distribution may refer to either species. *T. colon* also occurs in Brandenburg: several specimens have been collected at Langer Berg, north of Eberswalde, in the Biosphere Reserve Schorfheide-Chorin, leg. DEI.

Diprionidae

Microdiprion pallipes (FALLÉN, 1808)

Brandenburg: 1 ♀, Landkreis Märkisch-Oderland, Müncheberg, NSG Gumnitz, 52.51°N 14.08°E, 30.04.2006.

Previously only known in Berlin-Brandenburg from old records (LISTON 2006b).

Pamphiliidae

**Cephalcia erythrogaster* (HARTIG, 1837)

Brandenburg: 1 ♂, Landkreis Havelland, Falkensee [„Berlin-Finkenkrug“], 15.05.1938, 52.55°N 13.08°E, leg. Zwick & Roehl, det. L. Zombori / Liston (in coll. Hungarian Natural History Museum, Budapest).

**Cephalcia abietis* (LINNAEUS, 1758)

Berlin, 1 ♂, Marzahn, 52.545°N 13.548°E, garden, 08.06.2013, leg. A. Köhler. Brandenburg: 2 ♂, Landkreis Märkisch-Oderland, Müncheberg, Trebnitz, 52.53143°N 14.21674°E, garden, 08/09.05.2010; 1 ♂, 17.05.2013.

Pamphilius inanitus (VILLERS, 1789)

Brandenburg: 4 Larven in leaf-rolls on *Rosa* (Fig. 10), Landkreis Märkisch-Oderland, Müncheberg, Trebnitz, 52.53143°N 14.21674°E, garden, 05.07.2013. The last record from Brandenburg was from before 1900 (BLANK et al. 2001).

**Pamphilius pallipes* (ZETTERSTEDT, 1838)

Brandenburg: 1 ♀, Landkreis Barnim, Eberswalde, Finow, 52.84°N 13.74°E, 25.05.1986, leg. A. Taeger (in coll. South Central Forestry University, Changsha, China).

Cephiidae

Calameuta punctata (KLUG, 1803)

Brandenburg: 1 ♂, Landkreis Barnim, Niederfinow 1 km S, 52.828°N 13.937°E, 09.05.2015. 2 ♀, Landkreis Märkisch-Oderland, Müncheberg, Trebnitz, 52.535°N 14.204°E, damp meadow, 16.05.2015. The females were swept from *Alopecurus pratensis* agg.; one of them while in the net still ovipositing in a portion of broken stem. *Calameuta punctata* was mentioned as occurring in Germany by LISTON et al. (2012), without any further details, based on specimens collected in recent years by Mr EWALD JANSEN in Saxony. Although the type locality of the species is Germany, probably Berlin-Brandenburg (KLUG 1803), the taxon was not mentioned in the check-lists by BLANK et al. (1998) and BLANK et al. (2001). *Alopecurus pratensis* is the only recorded host (VIKBERG 1978: as *Calameuta filum* (GUSSAKOVSKIJ, 1935)). The worldwide distribution extends westwards from Irkutsk in southern Siberia (VIITASAARI 1975), through Uzbekistan, Kasachstan (ZHELOCHOVTSEV & ZINOVJEV 1996), the Caucasus (VIITASAARI 1975), Turkey (ÇALMASUR & ÖZBEK 2010), and sporadically through much of central

and eastern Europe (TAEGER et al. 2006), reaching the Lake Ladoga Region of Russia (HUMALA & POLEVOI 2011) and southern Finland (VIITASAARI 1984) in the North. TAEGER et al. (2006) listed *C. punctata* from Spain, citing the records by LLORENTE & GAYUBO (1990) under the name *C. pravei* (DOVNAR-ZAPOLSKIJ, 1926). *C. pravei* was treated as a synonym of *C. punctata* by ZOMBORI (1978), but this status requires confirmation. North of the Alps, the German localities seem to be the most westerly so far recorded. Males of *C. punctata* are much rarer than females in the northern parts of its range, and have for example not been found in Finland at all (VIITASAARI 1984).

Xiphydriidae

Xiphydria megapolitana (BRAUNS, 1884)

Brandenburg: 1 ♀, Landkreis Märkisch-Oderland, Müncheberg, NSG Gumnitz, 52.509°N 14.080°E, 20.05.2011.

X. megapolitana was not listed from Berlin-Brandenburg by BLANK et al. (2001). However, a record of a female collected in 1900 by Oldenburg in “Berlin (Finkenkrug)” [now Brandenburg, Kreis Havelland, Falkensee] has already been published by JANSEN (1987).

Discussion and conclusions

It remains to be seen, whether *Pristiphora angulata* is actually established in Germany. Attempts to find the species on planted *Spiraea* in Berlin-Brandenburg during early 2015 did not yield any specimens. At present, I consider it premature to formally add *P. angulata* to the list of sawflies occurring in Germany. If found to be established, *P. angulata* would be one of only six neozoon sawfly species recorded in the country (four species so characterised by LISTON et al. (2012), and *Aproceros leucopoda* subsequently added by BLANK et al. (2014)). In analogy with *Coleophora spiraeella* (REBEL, 1916) (Lepidoptera), which also has *Spiraea chamaedryfolia* as a main host, it would be worthwhile searching for *P. angulata* in and near the Oberlausitz (Saxony), where *C. spiraeella* has been recorded (LEUTSCH 2001).

BLANK et al. (2001) and LISTON (2006b) recorded a total of 467 species of Symphyta in Berlin-Brandenburg. BLANK et al. (2014) added *Aproceros leucopoda* TAKEUCHI, 1939. With the addition here of 24 species newly recorded (excluding *Pristiphora angulata*) and three confirmed, and the deletion of *Dineura testaceipes*, 494 species are now recorded in these provinces. This represents approximately 65 % of the total of 758 species currently recorded in Germany.

Of the species newly recorded in Brandenburg, or here confirmed, *Calameuta punctata* is noteworthy because it is one of the small number of sawfly species which have

a mainly eastern distribution in Europe, and in Germany are so far only recorded from the extreme East of the country. Other such species which occur in Brandenburg are *Caenocephus lunulatus* (STROBL, 1895), *Corynis amoena* (KLUG, 1834) and *Nematus lucens* (ENSLIN, 1918). *Dineura parcivalvis* may have a similar distribution, based on what is so far known, or could have been overlooked in territories further west because it has been confused with *D. testaceipes*.

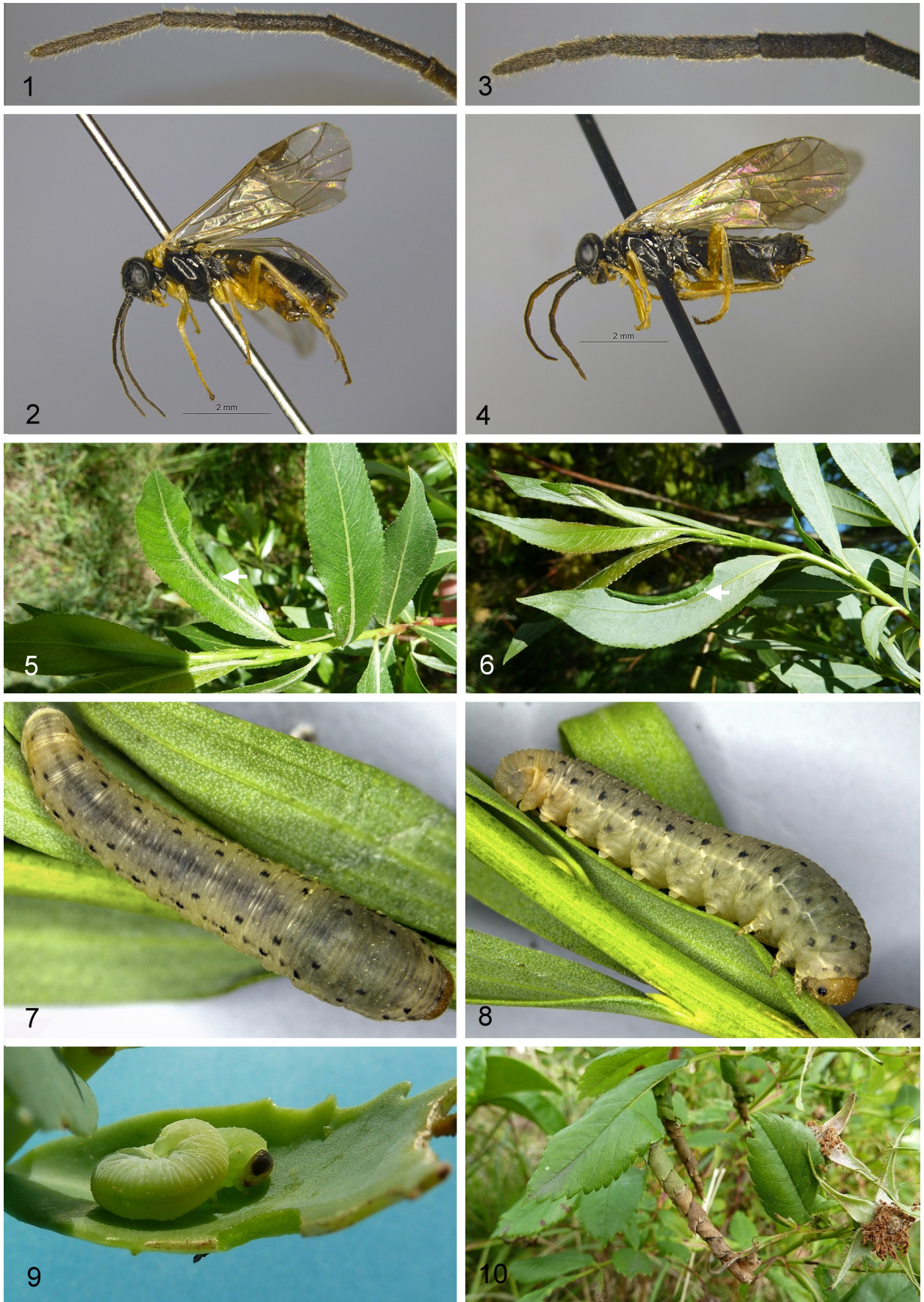
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References

- ADAM, H. 1973: Beitrag zur Populationsdynamik einheimischer Blattwespen am Beispiel der Gattung *Pristiphora* LATREILLE, 1810. – Beiträge zur Entomologie, Berlin 23 (1–4): 219–239.
- BENEŠ, K. 2015: Czech species of the gall-making sawflies of the genera *Phyllocolpa*, *Tubpontania* and *Pontania* (Hymenoptera, Nematinae). – Acta Musei Moraviae, Scientiae biologicae, Brno 100 (1): 137–156.
- BENSON, R. B. 1958: Hymenoptera, Symphyta. – Handbooks for the Identification of British Insects, London 6 (2c): 139–258.
- BLANK, S. M.; BOEVÉ, J.-L.; HEITLAND, W.; JÄNICKE, M.; JANSEN, E.; KOCH, F.; KOPELKE, J.-P.; KRAUS, M.; LISTON, A. D. & RITZAU, C. 1998: Checkliste der Pflanzenwespen Deutschlands (Hymenoptera: Symphyta): pp. 13–34. – In: TAEGER, A. & BLANK, S. M. (eds) Pflanzenwespen Deutschlands (Hymenoptera, Symphyta). Kommentierte Bestandsaufnahme. – Goecke & Evers, Keltern.
- BLANK, S. M.; DETERS, S.; DREES, M.; JÄNICKE, M.; JANSEN, E.; KRAUS, M.; LISTON, A. D.; RITZAU, C. & TAEGER, A. 2001: Symphyta. – In: DATHE, H. H.; TAEGER, A. & BLANK, S. M. (Eds): Verzeichnis der Hautflügler Deutschlands (Fauna Germanica 4). – Entomologische Nachrichten und Berichte, Dresden Beiheft 7: 8–27.
- BLANK, S. M.; KÖHLER, T.; PFANNENSTILL, T.; NEUENFELDT, N.; ZIMMER, B.; JANSEN, E.; TAEGER, A. & LISTON, A. D. 2014: Zig-zagging across Central Europe: recent range extension, dispersal speed and larval hosts of *Aproceros leucopoda* (Hymenoptera, Argidae) in Germany. – Journal of Hymenoptera Research, Sofia 41: 57–74.
- ÇALMASUR, Ö. & ÖZBEK, H. 2010: Distribution data on the Cephidae (Hymenoptera: Symphyta) fauna of Turkey. – Zoology in the Middle East, Heidelberg 50: 144–146.
- CHAMBERS, V. H. 1951: The larva and foodplant of *Rhogogaster chambersi* BENSON (Hym., Tenthredinidae). – The Entomologist's Monthly Magazine, Fourth Series, London 87 (12): 202–205.
- DEWAARD, J.; IVANOVA, N.; HAJIBABAEI, M. & HEBERT, P. 2008: Assembling DNA barcodes. Analytical protocols. Pp. 275–293. – In: MARTIN, C. (Ed.) Methods in Molecular Biology: Environmental Genetics. Humana Press Inc., Totowa.
- HEIDEMAA, M.; NUORTEVA, M.; HANTULA, J. & SAARMA, U. 2004: *Dolerus asper* ZADDACH, 1859 and *Dolerus brevicornis* ZADDACH, 1859 (Hymenoptera: Tenthredinidae), with notes on their phylogeny. – European Journal of Entomology, České Budejovice 101 (4): 637–650.
- HUMALA, A. E. & POLEVOI, A. V. 2011: [Records of new and remarkable insect species (Insecta) in northern Ladoga area.]. – Trudy Karel'skogo nauchnogo centra RAN 2: 142–144.
- IVANOVA, N. V.; DEWAARD, J. R. & HEBERT, P. D. N. 2006: An inexpensive, automation-friendly protocol for recovering high-quality DNA. – Molecular Ecology Notes 6 (4): 998–1002.
- JANSEN, E. 1987: Die europäischen Arten der Gattung *Konowia* BRAUNS (Hymenoptera: Xiphydriidae). – Stuttgarter Beiträge zur Naturkunde. Serie A (Biologie), Stuttgart 4: 1–12.
- KLUG, F. 1803: Monographia Siricum Germaniae atque generum illis adnumeratum. – Berolini, F. Schüppel: i–xii, 1–64, 7 unpag.
- KONTUNIEMI, T. 1960: [*Dineura parcivalvis* (Knw) lajin (Hym., Tenthredinidae) bionomiasta]. (Zur Bionomie von *Dineura parcivalvis* Knw.) – Annales Entomologici Fennici, Helsinki 26 (4): 296, 303.
- KOPELKE, J.-P. 2007: The European species of the genus *Phyllocolpa*, part I: the *leucosticta*-group (Insecta, Hymenoptera, Tenthredinidae, Nematinae). – Senckenbergiana Biologica, Frankfurt/M. 87 (1): 75–109.

- LEUTSCH, H. 2001: Neufunde, Bemerkungen und Korrekturen zur Fauna der Coleophoridae in der Oberlausitz (Lep.). – Entomologische Nachrichten und Berichte, Dresden 45 (2): 115–118.
- LINDQVIST, E. 1955: Beitrag zur Kenntnis einiger nordischen Blattwespen (Hym., Tenthredinoidea). – Notulae Entomologicae, Helsinki 35: 137–144.
- LINDQVIST, E. 1972: Zur Nomenklatur und Taxonomie einiger Blattwespen (Hymenoptera, Symphyta). – Notulae Entomologicae, Helsinki 52: 65–77.
- LISTON, A. D. 2006a: Notes on *Empria hungarica* (KONOW, 1895), an addition to the German sawfly fauna (Hymenoptera, Tenthredinidae). – Nachrichtenblatt der Bayerischen Entomologen, München 55 (1/2): 7–10.
- LISTON, A. D. 2006b: Beitrag zur Pflanzenwespenfauna von Brandenburg und Berlin (Hymenoptera, Symphyta). – Nachrichtenblatt der Bayerischen Entomologen, München 55 (3/4): 65–76.
- LISTON, A. D. 2011: Pflanzenwespen. – In: Nationalparkverwaltung Bayerischer Wald (Hrsg.): Biologische Vielfalt im Nationalpark Bayerischer Wald. – Sonderband der Wissenschaftlichen Schriftenreihe des Nationalparks Bayerischer Wald, Grafenau: 184–187.
- LISTON, A. D.; JANSEN, E.; BLANK, S. M.; KRAUS, M. & TAEGER, A. 2012: Rote Liste und Gesamtartenliste der Pflanzenwespen (Hymenoptera: Symphyta) Deutschlands. Stand März 2011: pp. 489–556. – In: BINOT-HAFKE, M.; BALZER, S.; BECKER, N.; GRUTTKE, H.; HAUPT, H.; HOFBAUER, N.; LUDWIG, G. & STRAUCH, M. (Eds): Rote Liste gefährdeter Tiere, Pflanzen und Pilze Deutschlands. Wirbellose Tiere Teil 1. – Naturschutz und Biologische Vielfalt, Bonn-Bad Godesberg 70 (3): 1–716.
- LLORENTE, G. & GAYUBO, S. F. 1990: Estudio sobre la sinfitofauna del oeste español. I (Hymenoptera, Symphyta). – EOS. Revista Espanola de Entomología, Madrid 65 (2): 23–29.
- LÖHR, P.-W. 2015: Die Pflanzenwespen-Fauna (Hymenoptera: Symphyta) eines xerothermen Hanges bei Lorch im Oberen Mittelrheintal. – Hessische Faunistische Briefe, Darmstadt 34 (1/2): 29–35.
- LØNNVE, O. J. 2009: Notes on Norwegian sawflies (Hymenoptera, Symphyta) II. 13 species new to the Norwegian Fauna. – Norwegian Journal of Entomology, Oslo 56: 50–56.
- MUCHE, W. H. 1968: Beitrag zur Blattwespenfauna der Umgebung von Eberswalde (Hymenoptera, Tenthredinoidea). – Faunistische Abhandlungen Staatliches Museum für Tierkunde Dresden, Leipzig 2 (15): 107–108.
- PROUS, M.; BLANK, S. M.; GOULET, H.; HEIBO, E.; LISTON, A.; MALM, T.; NYMAN, T.; SCHMIDT, S.; SMITH, D. R.; VARDAL, H.; VIITASAARI, M.; VIKBERG, V. & TAEGER, A. 2014: The genera of Nematinae (Hymenoptera, Tenthredinidae). – Journal of Hymenoptera Research, Sofia 40: 1–69.
- PROUS, M.; HEIDEMAA, M. & SOON, V. 2011: *Empria longicornis* species group: taxonomic revision with notes on phylogeny and ecology (Hymenoptera, Tenthredinidae). – Zootaxa, Auckland 2756: 1–39.
- SCHEDL, W. & ALTENHOFER, E. 2013: Zur Morphologie, Biologie und Verbreitung von *Spinarge metallica* (KLUG 1834) in Österreich (Hymenoptera: Argidae). – Linzer biologische Beiträge, Linz 45 (1): 663–669.
- SCHIRMER, C. 1901: Verzeichnis der in der Umgebung Berlins beobachteten Tenthrediniden (Blatt- und Holzwespen). – Allgemeine Zeitschrift für Entomologie, Neudamm 6: 279–282, 293–296.
- TAEGER, A. 2013: The type specimens of *Tenthredo* LINNAEUS, 1758 (Hymenoptera: Tenthredinidae) deposited in the Hungarian Natural History Museum. – Zootaxa, Auckland 3626 (2): 201–244.
- TAEGER, A.; ALTENHOFER, E.; BLANK, S. M.; JANSEN, E.; KRAUS, M.; PSCHORN-WALCHER, H. & RITZAU, C. 1998: Kommentare zur Biologie, Verbreitung und Gefährdung der Pflanzenwespen Deutschlands (Hymenoptera, Symphyta). pp. 49–135. – In: TAEGER, A. & BLANK, S. M. (Eds): Pflanzenwespen Deutschlands (Hymenoptera, Symphyta). Kommentierte Bestandsaufnahme. – Goecke & Evers, Keltern.
- TAEGER, A.; BLANK, S. M. & LISTON, A. D. 2006: European Sawflies (Hymenoptera: Symphyta) – A Species Checklist for the Countries. pp. 399–504. – In: BLANK, S. M.; SCHMIDT, S. & TAEGER, A. (Eds) 2006: Recent Sawfly Research: Synthesis and Prospects. – Goecke & Evers, Keltern.
- VIITASAARI, M. 1975: On the genera *Janus* LEPELETIER and *Calameuta* KONOW (Hym., Cephidae) in Eastern Fennoscandia. – Annales Entomologici Fennici, Helsinki 41 (4): 113–120.
- VIITASAARI, M. 1984: Sahapistiäiset 3. Siricoidea, Orussoidea and Cephoida. – Reports, University of Helsinki, Department of Agricultural and Forest Zoology, Helsinki 6: 1–66.
- VIKBERG, V. 1978: [*Calameuta filum* (GUSSAKOVSKIJ) (Hymenoptera, Cephidae) found in South Häme] (In Finnish). – Notulae Entomologicae, Helsinki 58 (4): 176–177.
- ZHELOCHOVTSEV, A. N. & ZINOVJEV, A. G. 1996: Spisok pilil'shhikov i roghovostov (Hymenoptera, Symphyta) fauny Rossii i sopredel'nyh territorij. II. [A list of the sawflies and horntails (Hymenoptera, Symphyta) of the fauna of Russia and adjacent territories. II.] (In Russian, abstract in English). – Entomologicheskoe obozrenie, St. Petersburg 75 (2): 357–379.
- ZOMBORI, L. 1978: New Sawfly Species in the Hungarian Fauna (Hymenoptera, Symphyta), IV. – Annales historico-naturales Musei Nationalis Hungarici, Budapest 70: 259–264.



Figs 1–2: *Dineura parvalvis*, ♀. 1: apical flagellomeres. 2: coloration. – Figs 3–4: *Dineura testaceipes*, ♀. 3: apical flagellomeres. 4: coloration. – Figs 5–6: *Euura plicadaphnoides*, galls (arrowed) on leaves of *Salix daphnoides*. – Figs 7–8: *Rhogogaster chambersi*, larva on *Linum usitatissimum*. – Fig. 9: *Tenthredo ignobilis*, larva on *Sedum telephium*. – Fig. 10: *Pamphilius inanitus*, leaf rolls on *Rosa* sp.