



This work is licensed under a Creative Commons Attribution 3.0 License.

## Research article

[urn:lsid:zoobank.org/pub:5FB17A25-35E7-4EBA-BED6-EE58B363AABA](http://urn.lsid:zoobank.org/pub:5FB17A25-35E7-4EBA-BED6-EE58B363AABA)

# Catalogue of Danish Alysiinae (Hymenoptera: Braconidae), with the description of two new species of *Aspilota* Foerster, 1863

Francisco Javier PERIS-FELIPO<sup>1,\*</sup>, Sergey A. BELOKOBYSKIY<sup>2</sup>,  
Lars VILHELMOSEN<sup>3</sup> & Thorkild MUNK<sup>4</sup>

<sup>1</sup>Bleichstrasse 15, CH-4058 Basel, Switzerland.

<sup>2</sup>Zoological Institute of the Russian Academy of Sciences, St Petersburg, 199034, Russia; Museum and Institute of Zoology of the Polish Academy of Sciences, Wilcza 64, Warszawa 00-679, Poland.

<sup>3</sup>Zoological Museum, Natural History Museum of Denmark, SCIENCE, University of Copenhagen. Universitetsparken 15, Copenhagen Ø, DK-2100 Denmark.

<sup>4</sup>Deceased 24 Dec. 2013, former address: Natural History Museum Aarhus, Denmark.

\* Corresponding author: [peris.felipo@gmail.com](mailto:peris.felipo@gmail.com)

<sup>2</sup> Email: [doryctes@gmail.com](mailto:doryctes@gmail.com)

<sup>3</sup> Email: [lbvilhelmsen@snm.ku.dk](mailto:lbvilhelmsen@snm.ku.dk)

\* [urn:lsid:zoobank.org/author:C7B698F7-0A6A-4C4A-915F-8D5ACC380853](http://urn:lsid:zoobank.org/author:C7B698F7-0A6A-4C4A-915F-8D5ACC380853)

<sup>2</sup> [urn:lsid:zoobank.org/author:13EDEDEF-68BA-430B-8FC3-0096874859AB](http://urn:lsid:zoobank.org/author:13EDEDEF-68BA-430B-8FC3-0096874859AB)

<sup>3</sup> [urn:lsid:zoobank.org/author:96FC3783-9FA7-421E-B292-6718A3762D45](http://urn:lsid:zoobank.org/author:96FC3783-9FA7-421E-B292-6718A3762D45)

<sup>4</sup> [urn:lsid:zoobank.org/author:01C54836-6431-4292-8A9E-C75679E85C7C](http://urn:lsid:zoobank.org/author:01C54836-6431-4292-8A9E-C75679E85C7C)

**Abstract.** In the present study, a total of 153 species of Alysiinae (Hymenoptera: Braconidae) from Denmark are catalogued. Two species are described as new for science: *Aspilota leptarticulata* Munk & Peris-Felipo sp. nov. and *A. grandis* Munk & Peris-Felipo sp. nov. Additionally, 38 alysiine species are recorded for the first time for the Danish fauna. A faunistic list with distribution data and host records is provided.

**Keywords.** Parasitoids, Alysiinae, faunistic list, new species, Denmark.

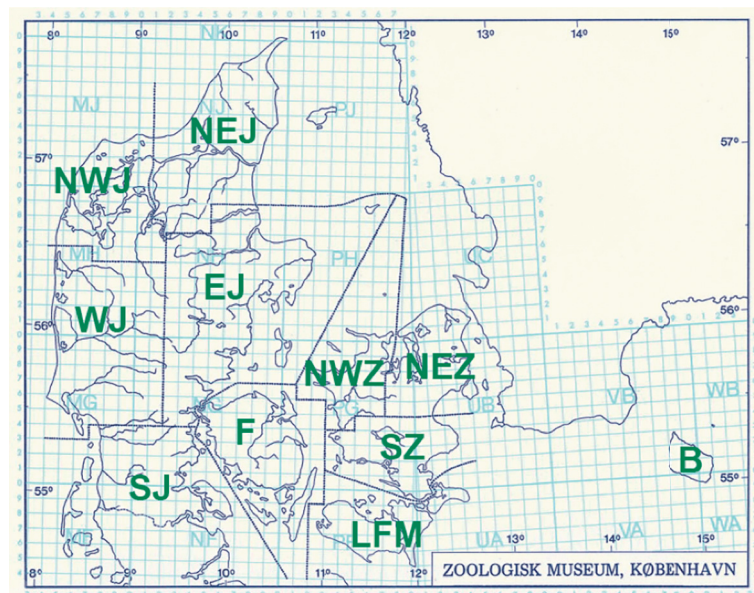
Peris-Felipo F.J., Belokobyskiy S.A., Vilhelmsen L. & Munk T. 2016. Catalogue of Danish Alysiinae (Hymenoptera: Braconidae), with the description of two new species of *Aspilota* Foerster, 1863. *European Journal of Taxonomy* 250: 1–48. <http://dx.doi.org/10.5852/ejt.2016.250>

## Introduction

The Alysiinae is a subfamily of Braconidae, comprising more than 100 genera and 2300 species worldwide (Yu *et al.* 2012). They are koinobiont endoparasitoids of Diptera-Cyclorhapha (Gimeno *et al.* 1997; Zaldivar-Riverón *et al.* 2006; Peris-Felipo *et al.* 2014a); records of some species of Hymenoptera and Lepidoptera as hosts (Yu *et al.* 2012) are most probably erroneous. Some alysiine species can be relevant from an economic point of view due to their potential role in pest control (González *et al.* 2000; Elpino-Campos *et al.* 2007). The monophyly of the Alysiinae is based on the following distinctive

apomorphic characters: the shape, increased number of teeth and position of the exodont mandibles and complete loss of the occipital and prepectal carinae. The subfamily is divided into two large and polymorphic tribes, the Alysiini and Dacnusi (Shenefelt 1974; Yu *et al.* 2012). Morphologically, these two tribes are mainly separated by the presence (Alysiini) or absence (Dacnusi) of the fore wing vein *cuq*<sub>2</sub> (r-m or second radiomedial); accordingly, Alysiini has two submarginal (radiomedial) cells while Dacnusi has only one cell (Shenefelt 1974; Yu *et al.* 2012; Peris-Felipo *et al.* 2014a). Members of the tribe Alysiini are common parasitoids of Diptera-Cyclorhapha, usually inhabiting humid and ephemeral substrates. Dacnusi are almost exclusively specialized on leaf and stem miners, mainly of the families Agromyzidae, Ephydriidae and Chloropidae (Belokobylskij 2005; Berry 2007; Fischer & Beyarslan 2012; Peris-Felipo *et al.* 2014a). Species of the Alysiini genera *Aphaereta* Foerster, 1863 and *Alysia* Latreille, 1804 have been used in biological control programs, among others of Calliphoridae and Muscidae, while some Dacnusi have been successfully employed to control pests of leaf-mining flies and Tephritidae (Wharton *et al.* 1997).

Several investigations of the Alysiinae fauna have been conducted for the territories of northern Europe: among them, Tobias (1962) – North-West of Russia; Königsmann (1969) – Denmark, Finland, Norway and Sweden; Hedqvist (1972, 1973) – Sweden; Gannota (1993), Koponen (1999, 2000), Koponen & Vikberg (2013) and van Achterberg & Vikberg (2014) – Finland; van Achterberg & Koponen (2003) – Finland, Estonia; Riedel *et al.* (2002) – Norway; Munk *et al.* (2013a, 2013b) – Denmark, Finland; Peris-Felipo *et al.* (2014a, 2014b) – Denmark, Finland, Norway, Sweden. No survey focused on the Danish fauna has been published until now, but the publications on the faunas of neighbouring countries serve as a starting point for an estimation of the Danish alysiine diversity. Adjacent countries, such as Germany (337 alysiine species), Poland (231) and Sweden (234) are better known (Yu *et al.* 2012). However, until now only 114 species of 20 genera were known in Denmark (Yu *et al.* 2012; van Achterberg 2013; Peris-Felipo *et al.* 2014a, 2014b). Thorkild Munk collected and identified specimens of Alysiinae during many years throughout the country, but the majority of this material remained unpublished at the time



**Fig. 1.** Map of Denmark (excluding Greenland and the Faroe Islands) showing the eleven faunistic districts. B = Bornholm; EJ = East Jutland (Jylland); F = Funen (Fyn); LFM = Lolland – Falster – Møn; NEJ = North East Jutland; NEZ = North East Zealand (Sjælland); NWJ = North West Jutland; NWZ = North West Zealand; SJ = South Jutland; SZ = South Zealand; WJ = West Jutland.

his death in December 2013. The current catalogue of Danish Alysiinae is mainly based on the results of the study of his extensive material.

## Material and methods

### Area of study

Denmark is located in northern Europe between the Baltic and the North Seas, comprising the southwestern part of Scandinavia. It is the smallest country of this region, having a total area of 43 094 km<sup>2</sup>. In contrast, Denmark has a comparatively long coastline, and no point of the country is more than 52 km from the sea. The main part (almost  $\frac{3}{4}$  of the territory) is the Jutland Peninsula (Fig. 1: NEJ, NWJ, EJ, WJ, SJ) attached to northern Germany. The remainder of the country is an archipelago comprising more than 1400 islands above 100 m<sup>2</sup>; of these, 443 are named and 72 inhabited (Geodatastyrelsen 2016). Denmark is generally flat with only low elevation, having an average height above sea level of 31 m; the highest natural point is Møllehøj at 170.86 m (Geodatastyrelsen 2016).

The climate is temperate and maritime, with mild winters (average temperature of 1.5°C) and cool summers (average temperature 17.2°C). Precipitation is fairly evenly distributed throughout the year, averaging 765 mm annually (Danish Meteorological Institute 2016). Denmark is the most densely populated country in Scandinavia, and it is one of the most intensively cultivated countries in the world, about 66% of the area being used for agricultural purposes (Den Store Danske 2016). Forests comprise about 16% of the area, commercially run evergreen tree plantations making up a substantial part. Habitats that are not at least moderately affected by human activities are virtually non-existent.

### Sampling and identification

Sampling was carried out by hand net and Malaise traps. Specimens were preserved in 75% alcohol until preparation. The criteria indicated by Tobias *et al.* (1986a, b), van Achterberg (1993), Sharkey & Wharton (1997), Belokobylskij & Tobias (2007) and Peris-Felipo *et al.* (2014a) were used for species identification. Classification follows Yu *et al.* (2012) and Peris-Felipo *et al.* (2014a). For the terminology of the morphological features, sculpture and measurements see Peris-Felipo *et al.* (2014a) and for wing venation nomenclature see Peris-Felipo *et al.* (2014a) and van Achterberg (1993). New records of species for the country are marked by an asterix (\*).

Most examined material and types of described species are deposited in the collection of the Natural History Museum of Denmark (Copenhagen, Denmark; NHMD), and some paratypes and additional material are housed in the Entomological Collection at the University of Valencia (Valencia, Spain; ENV), Naturhistorisk Museum Aarhus (Aarhus, Denmark; NMA), Zoological (Natural History) Museum, University of Helsinki (Helsinki, Finland; MZA); Naturhistorisches Museum Wien (Vienna, Austria; NHMW), Naturalis Biodiversity Center (Leiden, Netherlands; RMNH), Zoological Institute of the Russian Academy of Sciences (St Petersburg, Russia; ZISP) and Zoologische Staatssammlung München (Munich, Germany; ZSSM).

## Results

A total of 153 species belonging to 23 genera (13 from Alysiini and 10 from Dacnusiini), are recorded and catalogued for the Danish fauna.

Subfamily Alysiinae Leach, 1815  
Tribe Alysiini Leach, 1815

Genus *Adelphenaldis* Fischer, 2003

\**Adelphenaldis globipes* (Fischer, 1962)

**Material examined**

DENMARK: 1 ♀, Anholt, 56°40' N, 11°35' E, 7–9 Jul. 1992, Munk leg.; 1 ♀, N Jutland, Rold Skov, Madum Sø, 27 Jul. 1985, Munk leg.; 1 ♀, N Jutland, Uggerby Plantage, 57°35' N, 10°05' E, 24 Jul. 1985, Munk leg.; 1 ♀, E Jutland, Nørreris Skov, 10 km NW of Aarhus, 16 Jul. 1986, Munk leg.

**Distribution**

Palaeartic Region (Yu *et al.* 2012). Denmark (first record).

Genus *Alloea* Haliday, 1833

*Alloea contracta* Haliday, 1833

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

Genus *Alysia* Latreille, 1804

*Alysia (Alysia) incongrua* Nees, 1834

**Published material**

“Copenhagen” (Wharton 1986).

**Distribution**

Western Palaeartic (Yu *et al.* 2012).

*Alysia (Anarcha) subaperta* Thomson, 1895

**Published material**

“Denmark” (Wharton 1988).

**Distribution**

Nearctic and Western Palaeartic (Yu *et al.* 2012).

\**Alysia (Anarcha) sophia* Haliday, 1838

**Material examined**

DENMARK: 1 ♀, E Jutland, Elsegårde Skov, 56°10' N, 10°43' E, 4 Jul. 1994, Munk leg.; 1 ♀, E Jutland, Ibæk, 5 km SE of Vejle, 15 Jun. 1989, Munk leg.; 7 ♀♀, E Jutland, Højen Bæk, 5 km S of Vejle, 30 Jun. 1982, 3, 5–7, 23 Jul. 1984 and 16 Jun. 1986, Munk leg.; 4 ♀♀, E Jutland, Klattrup, 5–7 km S of Vejle, 12 Jun. and 12–15 Jul. 1983, Munk leg.; 2 ♀♀, E Jutland, Yding Skov, 56°00' N, 9°48' E, 28 Jun. 1985 and 27 Jun. 1987, Munk leg.; 3 ♀♀, N Jutland, Krogens Mølle, 15 km SW of Frederikshavn, 23 Jun. 1982 and 11–13 Aug. 1986, Munk leg.

### Distribution

Palearctic Region (Yu *et al.* 2012). Denmark (first record).

Genus *Aspilota* Forster, 1863

*\*Aspilota delicata* Fischer, 1973

### Material examined

DENMARK: 1 ♀, E Jutland, Grejsdal, N of Vejle, 9 Jul. 1987, Munk leg.; 1 ♀, E Jutland, Hørret Skov, 56°05' N, 10°12' E, 7 Aug. 1987, Munk leg.; 1 ♀, Funen, Hagenskov, 55°14' N, 10°00' E, 16 Jul. 1984, Munk leg.; 3 ♀♀, NE Zealand, Lystrup Skov, 1 Sep. 1984, Munk leg.; 1 ♀, E Jutland, Tirsbæk, 18 Aug. 1984, Munk leg.

### Distribution

Palearctic Region (Yu *et al.* 2012). Denmark (first record).

*\*Aspilota furtnerana* Fischer, 1973

### Material examined

DENMARK: 1 ♀, E Jutland, Ibæk, 5 km SE of Vejle, 15 Jun. 1989, Munk leg.; 2 ♀♀, E Jutland, Højen Bæk, 5 km S of Vejle, 20 Jun. 1978, Munk leg.; 1 ♀, E Jutland, Klattrup, 7 km S of Vejle, 12 Jun. 1983, Munk leg.; 2 ♀♀, E Jutland, Staksrode Skov, 55°41' N, 9°51' E, 11 Jun. 1984 and 17 Jul. 1987, Munk leg.

### Distribution

Western Palearctic (Yu *et al.* 2012). Denmark (first record).

*\*Aspilota fuscicornis* (Haliday, 1838)

### Material examined

DENMARK: 2 ♂♂, Funen, Smedsholm, 3 km W of Fjelsted, 4 Jun. 1982, swept on *Mercurialis* community, Munk leg.; 1 ♀, E Jutland, 12 km SW of Sillerup, 25 Aug. 1986, Munk leg.; 4 ♀♀, 6 ♂♂, E Jutland, Klattrup, 10 km S of Vejle, 4 Jun. 1978, 6 Jun., 12–15 Jul. and 29 Aug. 1982, swept on compost from the garden, 1 Aug. and 2 Sep. 1983, 24 Jul. 1984, Munk leg.; 1 ♀, E Jutland, NG 36, Viuf Skov, 21 Jun. 1986, Munk leg.; 1 ♀, E Jutland, NG 57, Rosenvold, N of Vejle Fjord, 9 Jun. 1985, Munk leg.; 2 ♀♀, 2 ♂♂, E Jutland, Sr Vissing, 17 km W of Skanderborg, 30 Jun. 1983, swept on old oak wood, Munk leg.; 1 ♂, E Jutland, Stubbe Sø reed swamp, 18 Jul. 1997, Munk leg.; 1 ♀, 2 ♂♂, E Jutland, Tirsbæk, 30 Jul. 1983 and 18 Aug. 1984, Munk leg.; 1 ♀, E Jutland, Yding Skov, SW of Skanderborg, 6 Sep. 1986, Munk leg.; 1 ♀, Mid-Jutland, Egtved Skov, 9 Aug. 1975, Munk leg.; 1 ♂, N Jutland, Måstrup Mose, 15 km NW of Frederikshavn, 21 Jun. 1982, Munk leg.; 2 ♀♀, 2 ♂♂, N Jutland, NJ 67, Slotved Skov, 20 Jun. 1982, 20 Jun. 1983, 18 Jun. and 7 Aug. 1984; 1 ♀, S Jutland, Arild, 1 Jul. 1986, Munk leg.; 1 ♂, W Jutland, Ammitsbøl Skov, 24 Jul. 1984, Munk leg.; 1 ♀, 2 ♂♂, W Jutland, Haslund, NE of Ribe, 1–2 Jul. 1984, Munk leg.; 2 ♂♂, E Jutland, Kjellerup, 56°18' N, 9°23' E, 18 Aug. 1989, Munk leg.; 1 ♀, N Jutland, Lindknud, oak shrub, 13 Jul. 1987, Munk leg.; 1 ♀, 1 ♂, E Jutland, Ammitsbøl Skov, 55°38' N, 9°26' E, 29 Jul. 1984 and 15 Jun. 1986, Munk leg.; 1 ♀, E Jutland, Børkop Skov, 12 Aug. 1982, swept on *Mercurialis* community, Munk leg.; 1 ♀, E Jutland, Dråby Skov, 11 Jun. 1997, Munk leg.; 1 ♀, E Jutland, Fuglslev Plantage, 56°16' N, 10°43' E, 10 Sep. 1988, Munk leg.; 1 ♀, E Jutland, Grejsdal, Lerbæk Mølle, 14 Jun. 1986, Munk leg.; 1 ♀, E Jutland, Grejsdal, N of Vejle, 24 Aug. 1987, Munk leg.; 3 ♀♀, 10 ♂♂, E Jutland, Højen Bæk, 5 km S of Vejle, 6 Jun. 1983, 4–5, 8 Jul., 17, 20, 30 Aug. 1984, 3 Jul. and 22 Aug. 1987, Munk leg.; 1 ♂, E Jutland, Mejlgård Skov, 17 May 2000, Munk leg.; 1 ♀, E Jutland, Nørreskov, 10 km E of Kolding, 18 Jul. 1982, Munk leg.; 1 ♀, E Jutland, Runkenbjerg, Vejle, 11 Jun. 1986, Munk leg.; 1 ♂, E Jutland, Rye, 56°06' N, 9°41' E, 7 Jul. 1987, Munk leg.; 1 ♀, E Jutland,

Staksrode Skov, 55°41' N, 9°51' E, 16 Jun. 1984, Munk leg.; 1 ♀, E Jutland, Stjær Skov, 56°07' N, 9°58' E, 2 Sep. 1984, Munk leg.; 1 ♂, E Jutland, Silkeborg, 56°10' N, 9°37' E, 22 Jun. 1987, Munk leg.; 1 ♂, E Jutland, Yding Skov, 56°00' N, 9°48' E, 6 Sep. 1986, Munk leg.; 1 ♀, N Jutland, Alfarvad Skov, 29 Jul. 1987, Munk leg.; 1 ♂, N Jutland, Børglumkloster Skov, 57°24' N, 10°13' E, 3 Aug. 1997, Munk leg.; 1 ♂, N Jutland, near Rold Skov, 25 km S of Aalborg, 29 May 1998, Munk leg.; 1 ♀, N Jutland, Sindal, 57°28' N, 10°12' E, 13 Aug. 1986, swept on compost, Munk leg.; 1 ♀, NW Jutland, Barnsø, Nors Sø, 57°03' N, 8°37' E, 18 Aug. 1989, Munk leg.; 1 ♀, NW Jutland, Hvidbjerg kirke, 16 Jun. 1985, Munk leg.; 2 ♀♀, NW Jutland, Morup Mølle, 56°51' N, 8°22' E, 15 Jun. 1985, Munk leg.; 1 ♀, S Jutland, Klelund Plantage, 55°34' N, 8°55' E, 22 Jun. 1986, Munk leg.; 1 ♂, N Jutland, Madum Sø, 16 Aug. 1985, Munk leg.; 1 ♀, W Jutland, Nørholm Skov, 8 Jul. 1984, Munk leg.; 1 ♀, 2 ♂♂, N Jutland, Råbjerg Mose, 21 Jun. 1984, Munk leg.; 1 ♂, N Jutland, Rold Skov, Mossø, 14 Aug. 1984, Munk leg.; 1 ♂, N Jutland, Slotved Skov, 13–14 Jun. 1982, Munk leg.; 1 ♂, E Jutland, Tirsbæk, 18 Aug. 1984, Munk leg.; 1 ♀, 2 ♂♂, E Jutland, Tiufkær Skov, 14 Jul. 1983 and 27 Aug. 1984, Munk leg.; 1 ♂, E Jutland, Viuf Skov, 21 Jun. 1986, Munk leg.; 1 ♀, E Jutland, Yding Skov, 19 Sep. 1985, Munk leg.

### Distribution

Palaeartic region (Yu *et al.* 2012). Denmark (first record).

### Remarks

Specimens of this species were sampled from different habitats such as *Mercurialis* community, oak wood or compost from gardens.

*Aspilota grandis* Munk & Peris-Felipo sp. nov.

[urn:lsid:zoobank.org:act:DA6C33A7-925A-4C5D-97C2-36EBD92D12F2](http://urn:lsid:zoobank.org:act:DA6C33A7-925A-4C5D-97C2-36EBD92D12F2)

Figs 2–3

### Comparative diagnosis

The new species is similar to *A. imparidens* Fischer, 1974 (Fischer 1974b) and *A. laevinota* Tobias, 1962 (Tobias 1962). *Aspilota grandis* sp. nov. differs from *A. imparidens* in having the first flagellar segment 3.3 times as long as its maximum width (7.0 times in *A. imparidens*), middle segments 1.3–1.5 times as long as their maximum width (3.0 times in *A. imparidens*), hind femur 4.0 times as long as its maximum width (4.3 times in *A. imparidens*), and precoxal suture not reaching anterior or posterior margins of mesopleuron (reaching anterior margin in *A. imparidens*). Also, the new species differs from *A. laevinota* in having the face 1.8 times as wide as high (1.5 times in *A. laevinota*), the first flagellar segment 3.3 times as long as its maximum width (7.0 times in *A. laevinota*), middle segments 1.3–1.5 times as long as their maximum width (3.0 times in *A. laevinota*), and vein r2 (3-SR) 1.7 times as long as vein cuq1 (2-SR) (1.5 times *A. laevinota*).

### Etymology

The name is derived from Latin “grandis”, meaning “big”, referring to the size of the species.

### Type material

#### Holotype

DENMARK: ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 14 Jul. 1987, Munk leg. (NHMD).

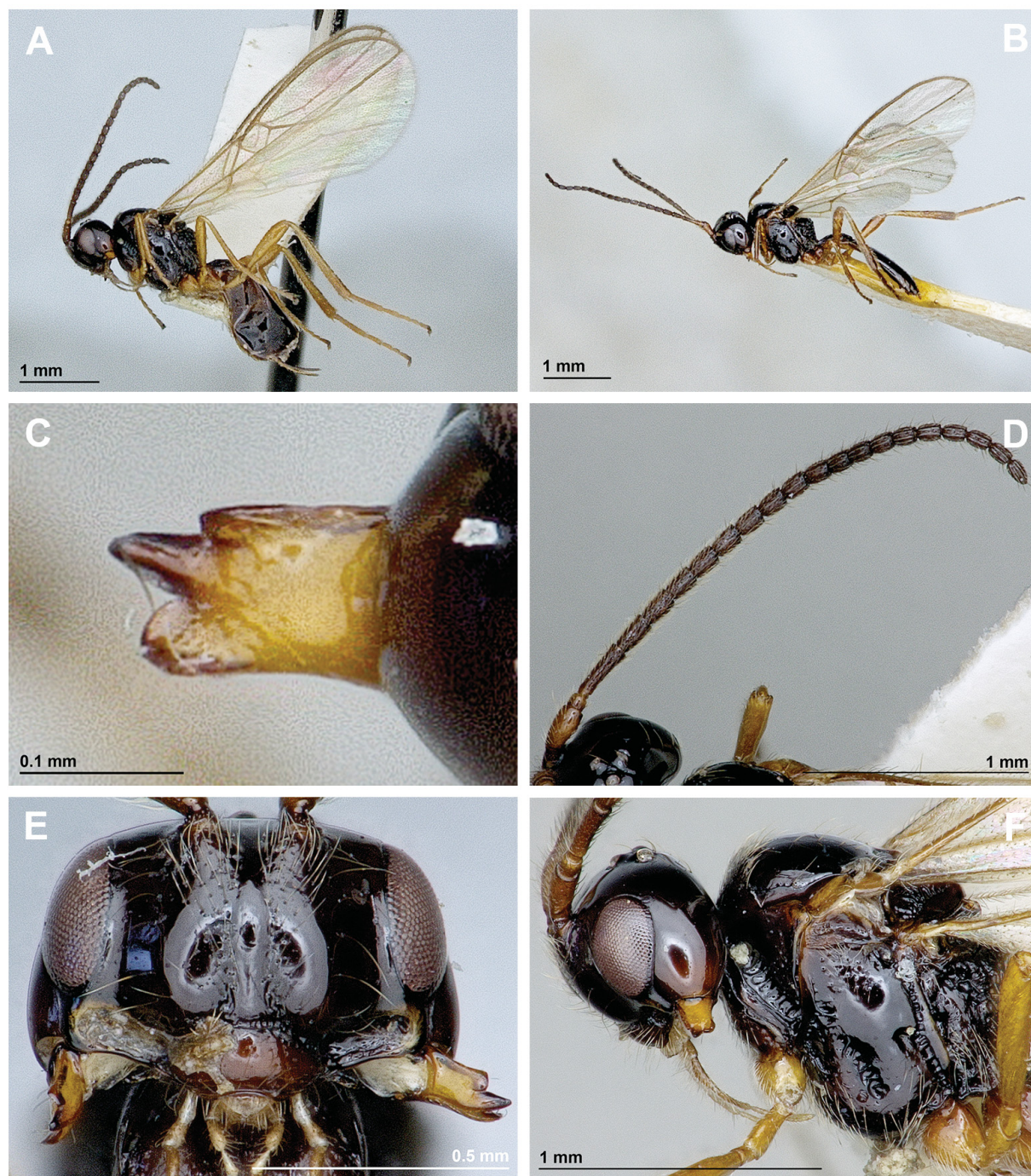
#### Paratype

GERMANY: 1 ♂, Lippoldshausen, 20 May 1967, Haeselbarth leg. (ZSSM).

## Description

### Female (holotype)

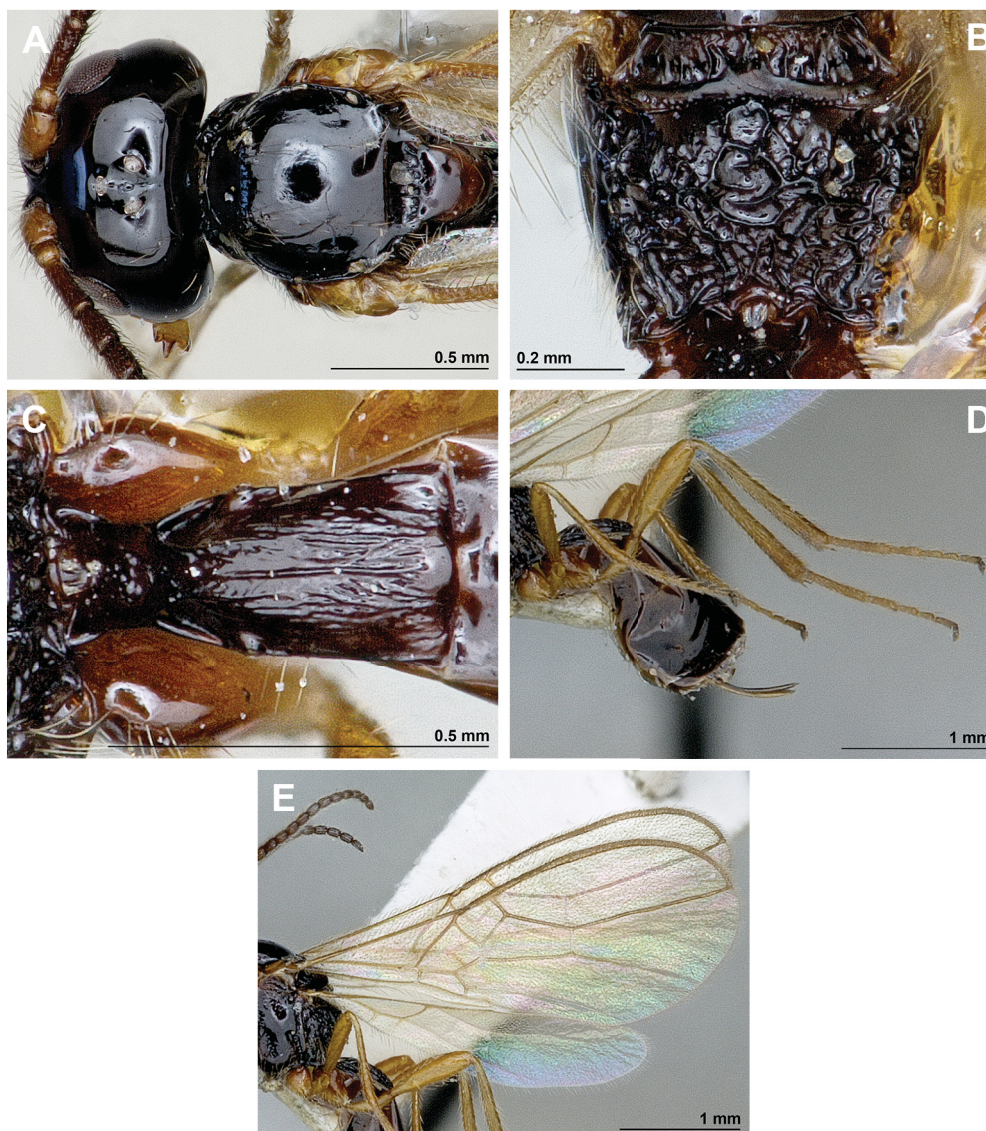
HEAD. In dorsal view twice as wide as its median length, 1.4 times as wide as mesoscutum, with rounded temples behind eyes. Maximum width of head at level of temple (dorsal view) larger than width at level of eyes. Eye in lateral view 1.6 times as high as wide and 0.9 times as wide as temple medially. POL 1.3 times OD; OOL 3.6 times OD. Face 1.8 times as wide as high; inner margins of eyes subparallel.



**Fig. 2.** *Aspilota grandis* Munk & Peris-Felipo sp. nov. (A, C–F ♀; B ♂). A–B. Habitus, lateral view. C. Mandible. D. Antenna. E. Head, frontal view. F. Head and mesosoma, lateral view.

Clypeus slightly curved ventrally, 2.4 times as wide as high. Mandible widened towards apex, 1.7 times as long as maximum width. Upper tooth of mandible distinctly shorter than middle and lower teeth; middle tooth long and pointed; lower tooth longer than upper tooth, rounded apically. Antenna thick, 21-segmented. Scape 3.0 times as long as pedicel. First flagellar segment 3.3 times as long as its apical width, 1.6 times as long as second segment; 2<sup>nd</sup> segment 2.0 times as long as its maximum width, 3<sup>rd</sup> segment 1.8 times, 4<sup>th</sup> to 8<sup>th</sup> 1.5–1.6 times, 9<sup>th</sup> to 18<sup>th</sup> 1.3–1.4 times, and 19<sup>th</sup> (apical) 1.8 times as long as their maximum width, respectively.

MESOSOMA. In lateral view 1.2 times as long as high. Mesoscutum 1.1 times as long as maximum width. Notauli mainly absent on horizontal surface of mesoscutum. Mesoscutal pit absent. Prescutellar depression smooth, with median and lateral carinae. Precoxal suture present, reaching anterior margin of mesopleuron. Posterior mesopleural furrow crenulate. Propodeum sculptured, without areola. Propodeal spiracle small.



**Fig. 3.** *Aspilota grandis* Munk & Peris-Felipo sp. nov. (♀). **A.** Head and mesonotum, dorsal view. **B.** Propodeum, dorsal view. **C.** First metasomal tergite, dorsal view. **D.** Hind leg, metasoma and ovipositor. **E.** Fore and hind wings.



LEGS. Hind femur 4.0 times as long as its maximum width. Hind tibia slightly widened towards apex, 9.2 times as long as its maximum subapical width, about as long as hind tarsus. First segment of hind tarsus twice as long as second segment.

WINGS. Length of fore wing 2.5 times its maximum width. Radial (marginal) cell ending at apex of wing, 3.5 times as long as its maximum width. Vein cu<sub>1</sub> (2-SR) present and sclerotized. Vein r<sub>2</sub> (3-SR) 1.7 times as long as vein cu<sub>1</sub> (2-SR); vein r<sub>3</sub> (SR1) 2.5 times as long as vein r<sub>2</sub> (3-SR). Nervulus (cu-a) distinctly postfurcal. Brachial (subdiscal) cell closed distally, 3.0 times as long as its maximum width. Hind wing 4.8 times as long as its maximum width.

METASOMA. Distinctly compressed. First tergite striate, slightly widened towards apex, twice as long as its apical width. Ovipositor as long as first tergite, distinctly shorter than metasoma, 0.8 times as long as hind femur.

COLOUR. Body, antenna and pterostigma dark brown. Mandible and legs brown. Wings hyaline.

LENGTH. Body 3.1 mm; fore wing 3.6 mm; hind wing 2.8 mm.

#### Male (paratype)

Body length 3.2 mm. Fore wing length 3.6 mm; hind wing length 2.7 mm. Antenna 22-segmented. First flagellar segment 3.3 times as long as its maximum width. Hind femur 4.2 times as long as its maximum width. Otherwise similar to female.

#### Distribution

Denmark, Germany.

*\*Aspilota hirticornis* (Thomson, 1895)

#### Material examined

DENMARK: 2 ♀♀, E Jutland, Fårup Sø, oak forest, 25 Jun. 1983, Munk leg.; 1 ♀, E Jutland, NG36, Børkop Skov, 1 Jul. 1982, Munk leg.; 1 ♀, S Jutland, Fovslet Skov, 55°26' N, 9°24' E, 13 Jul. 1985, Munk leg.; 1 ♀, E Jutland, Klattrup Bygade, FB. HP., 24–25 Aug. 1982, Munk leg.; 1 ♀, E Jutland, Tiufkær Skov, 14 Jul. 1983, Munk leg.

#### Distribution

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

*\*Aspilota imparidens* Fischer, 1974

#### Material examined

DENMARK: 1 ♂, E Jutland, Haraldskær, 26 Aug. 1984, Munk leg.; 1 ♀, 1 ♂, E Jutland, NG36, Børkop Skov, 1 Jul. and 12 Aug. 1982, Munk leg.; 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 30 Jul. 1983, Munk leg.; 1 ♂, E Jutland, Jelling, Fårup Sø, 28 Jun. 1983, swept on oak wood, Munk leg.; 2 ♀♀, 1 ♂, E Jutland, Klattrup, 10 km S of Vejle, 11 Aug. 1982, swept on compost, 12 Jun. and 16 Sep. 1984, Munk leg.; 1 ♀, E Jutland, Kielstrup Sø, 56°40' N, 9°56' E, 7 Aug. 1986, Munk leg.; 1 ♀, 1 ♂, E Jutland, Tirsbæk, 5 km E of Vejle, 20 Jul. and 2 Aug. 1985, Munk leg.; 1 ♂, N Jutland, NJ67, Åstrup Skov, 21 Jun. 1983, in oak plantation, Munk leg.; 1 ♂, N Jutland, Måstrup Mose, NW of Frederikshavn, 21 Jun. 1982, Munk leg.; 1 ♂, E Jutland, Klattrup, S of Vejle, 22 Jun. 1973, Munk leg.; 1 ♀, E Jutland, Amaliegård Skov, 15 km N of Aarhus, 14 Jul. 1986, Munk leg.; 1 ♂, E Jutland, Ammitsbøl Skov, 55°38' N, 9°26' E, 16 Jul. 1982, Munk leg.; 1 ♀, E Jutland, Grejsdal, Lerbæk, N of Vejle, 9 Aug. 1985, Munk leg.; 2 ♀♀, E Jutland, Højen Bæk, 5 km S of Vejle, 15 Jul. 1982 and 17 Aug. 1984, Munk leg.; 2 ♂♂, E Jutland, Højkol Skov, 56°05' N, 9°38' E, 7 Jul. 1986 and 21 Jul. 1988, Munk leg.; 1 ♀, E Jutland, Ibæk, 5 km

SE of Vejle, 15 Jun. 1989, Munk leg.; 4 ♀♀, 1 ♂, E Jutland, Klattrup, 7 km S of Vejle, 10, 12 and 26 Jul., 1 Aug. 1982, Munk leg.; 1 ♀, E Jutland, Nørreris Skov, NW of Aarhus, 4 Sep. 1986, Munk leg.; 1 ♀, 1 ♂, E Jutland, Vinkel, E of Viborg, 56°26' N, 9°29' E, 12 Jul. 1986, Munk leg.; 1 ♀, N Jutland, Villestrup, 56°46' N, 9°56' E, 26 Jun. 1984, Munk leg.; 1 ♀, NW Jutland, Barnsø, Nors Sø, 57°03' N, 8°37' E, 18 Aug. 1989, Munk leg.; 1 ♀, NW Jutland, Vilsbøl Plantage, 57°02' N, 8°34' E, 20 Aug. 1989, Munk leg.; 1 ♀, W Jutland, 55°34' N, 8°55' E, Klelund Plantage, 30 Jun. 1986, Munk leg.; 2 ♀♀, Funen, Smedsholm Skov, 3 km W of Fjelsted, 4 Jun. 1982, swept on *Mercurialis* community, Munk leg.; 1 ♀, N Jutland, Vegger, 6 Aug. 1984, Munk leg.

### **Distribution**

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

### **Remarks**

Specimens were sampled from habitats such as oak wood and compost in gardens.

#### *\*Aspilota insolita* (Tobias, 1962)

### **Material examined**

DENMARK: 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 15 Jul. 1982, Munk leg.

### **Distribution**

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

#### *\*Aspilota intermediana* Fischer, 1975

### **Material examined**

DENMARK: 1 ♀, W Jutland, Horsted, S of Vejle, 18 Oct. 1975, swept on champignon, Munk leg.; 1 ♀, NE Zealand, Skibby, 21 May 1989 (P. Neerup Buhl leg.).

### **Distribution**

Palaearctic Region (Yu *et al.* 2012). Denmark (first record).

### **Remarks**

One specimen of this species was collected on *Agaricus* sp. (Fungi).

#### *\*Aspilota iocosipecta* Fischer, 1974

### **Material examined**

DENMARK: 1 ♀, E Jutland, Børskop Skov, SE of Vejle, 12 Jun. 1982, Munk leg.; 1 ♂, E Jutland, Kielstrup Sø, 56°40' N, 9°56' E, 29 May 1986, Munk leg.; 1 ♂, E Jutland, Vingsted, SW of Vejle, 31 May 1982, Munk leg.; 2 ♂♂, E Jutland, Hessel, S of Grenå, 56°23' N, 10°52' E, 13 Aug. 1989, Munk leg.; 4 ♀♀, 10 ♂♂, E Jutland, Højen Bæk, 5 km S of Vejle, 21 May, 1 and 27 Jun., 4 and 17 Jul., 30 Aug. 1983, 13 and 19 Jul., 23 and 30 Aug. 1984, 4 Jun. 1985, 9 and 21 Jun. 1986, Munk leg.; 1 ♀, E Jutland, Rugård Sønderkov, 56°16' N, 10°49' E, 10 Jun. 1988, Munk leg.; 1 ♀, N Jutland, near Rold Skov, 25 km S of Aalborg, 14 May 2000, Munk leg.; 1 ♀, NW Jutland, Mønsted Skov, 17 Jun. 1984, Munk leg.

### **Distribution**

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

*\*Aspilota iuxtanaeviam* Fischer, 1980

**Material examined**

DENMARK: 1 ♀, E Jutland, Klattrup, 7 km S of Vejle, 4 Aug. 1983, Munk leg.

**Distribution**

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

*\*Aspilota laevinota* Tobias, 1962

**Material examined**

DENMARK: 1 ♂, N Jutland, NJ67, Åstrup Skov, 19 Jun. 1984, Munk leg.

**Distribution**

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

*Aspilota leptoarticulata* Munk & Peris-Felipo sp. nov.

[urn:lsid:zoobank.org:act:10CD8348-1EAF-41B8-B062-8BCB18B045DC](http://urn:lsid:zoobank.org:act:10CD8348-1EAF-41B8-B062-8BCB18B045DC)

Figs 4–5

**Comparative diagnosis**

*Apsilota leptoarticulata* sp. nov. is similar to *A. deserta* Papp, 1967 (Fischer 1974a), *A. makita* Papp, 2008 (Papp 2008), and *A. ventasa* Belokobylskij, 2007. The new species differs from *A. deserta* in having the first flagellar segment 4.5 times as long as its maximum width (6.0 times in *A. deserta*), hind femur 4.5 times as long as its maximum width (3.6 times in *A. deserta*), precoxal suture present, not reaching anterior or posterior margins of mesopleuron (reaching anterior margin in *A. deserta*), and vein r2 (3-SR) 2.8 times as long as vein cuq1 (2-SR) (1.5 times in *A. deserta*). On the other hand, *A. leptoarticulata* sp. nov. differs from *A. makita* (see Papp 2008) in having the first flagellar segment 4.5 times as long as its maximum width (4.0 times in *A. makita*), eye in lateral view 1.1 times as wide as temple medially (0.9 times in *A. makita*), hind femur 4.5 times as long as its maximum width (3.8 times in *A. makita*), and vein r2 (3-SR) 2.8 times as long as vein cuq1 (2-SR) (1.7 times in *A. makita*). Finally, the new species differs from *A. ventasa* in having the first flagellar segment 4.5 times as long as its maximum width (3.7–3.8 times in *A. ventasa*), first metasomal tergite 2.0 times as long as its apical width (2.3 times in *A. ventasa*), eye in lateral view 1.1 times as wide as temple medially (0.9 times in *A. ventasa*), face 1.5 times as wide as high (1.8 times in *A. ventasa*), precoxal suture not reaching anterior margin of mesopleuron (reaching in *A. ventasa*), and vein r2 (3-SR) 2.8 times as long as vein cuq1 (2-SR) (1.7 times in *A. ventasa*).

**Etymology**

The name refers to the long, thin flagellar segments.

**Type material**

**Holotype**

DENMARK: ♀, S Jutland, Klelund Plantage, 55°34' N, 8°55' E, 17 Jun. 1986, Munk leg. (NHMD).

**Paratypes**

DENMARK: 1 ♂, E Jutland, Dråby Strand, 5 Jun. 1997, Munk leg. (NHMD); 1 ♂, E Jutland, 2 km E of Visborg, 28 Jul. 1997, Munk leg. (NHMD).

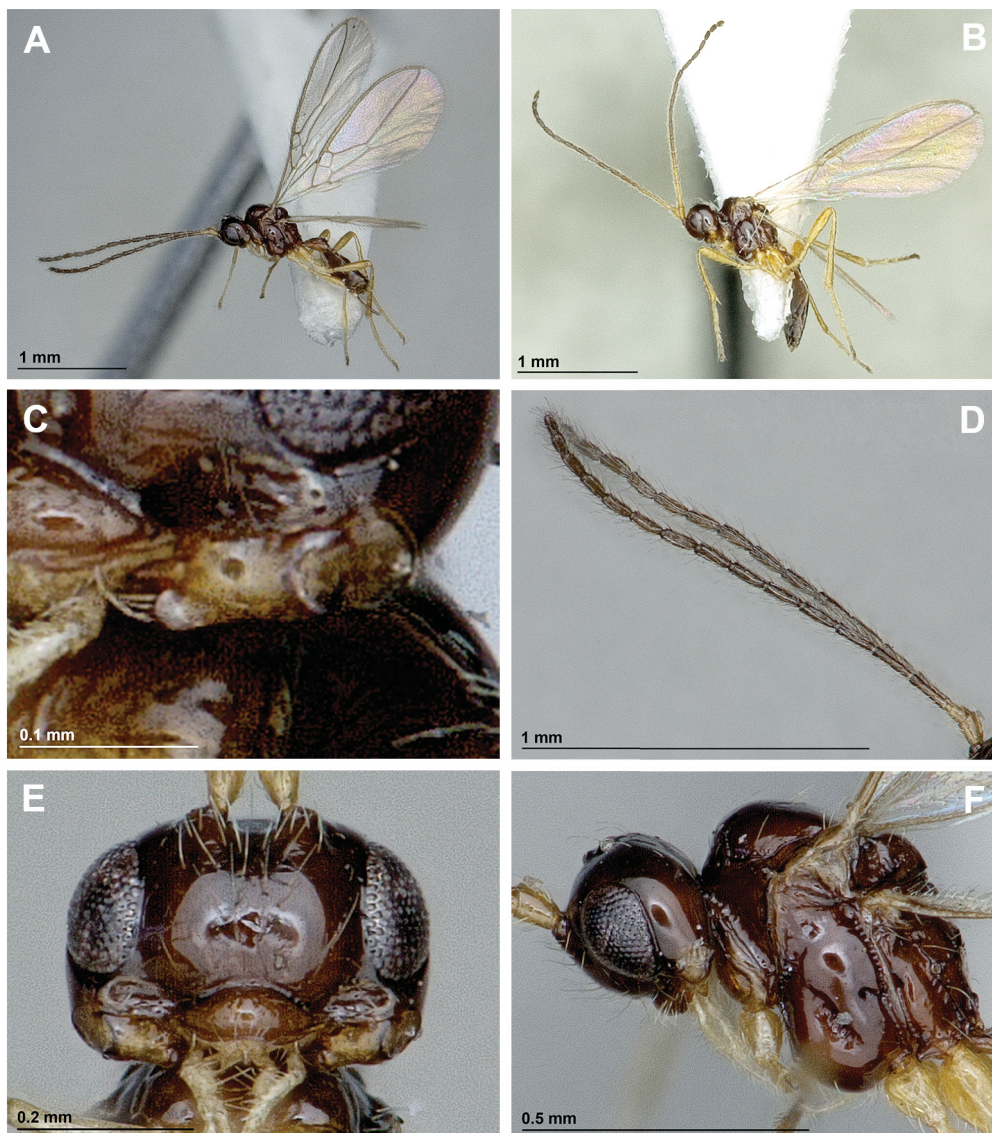
FINLAND: 1 ♀, ES Mikkelin mlk., 6859: 573, 23 Aug. 1975, Koponen leg. (MZA); 1 ♀, U. Nurmijärvi, 6715: 776, 4 Sep. 1976, Koponen leg. (MZA).

## Description

### Female (holotype)

LENGTH. Body 1.5 mm; fore wing 2.0 mm; hind wing 1.4 mm.

HEAD. In dorsal view 1.8 times as wide as its median length, 1.4 times as wide as mesoscutum, with rounded temples behind eyes. Maximum width of head at level of temple (dorsal view) not larger than width at level of eyes. Eye in lateral view 1.6 times as high as wide and 1.1 times as wide as temple medially. POL 1.5 times OD; OOL 4.5 times OD. Face 1.5 times as wide as high; inner margins of eyes subparallel. Clypeus slightly curved ventrally, 2.5 times as wide as high. Mandible widened towards apex, 1.8 times as long as maximum width. Upper tooth of mandible distinctly shorter than middle and lower teeth; middle tooth long and pointed; lower tooth longer than upper tooth, rounded apically. Antenna slender, 16-segmented. Scape 1.5 times as long as pedicel. First flagellar segment 4.5 times as long as its apical width, 1.1 times as long as second segment; 2<sup>nd</sup> and 3<sup>rd</sup> segments 4.2 times as long as

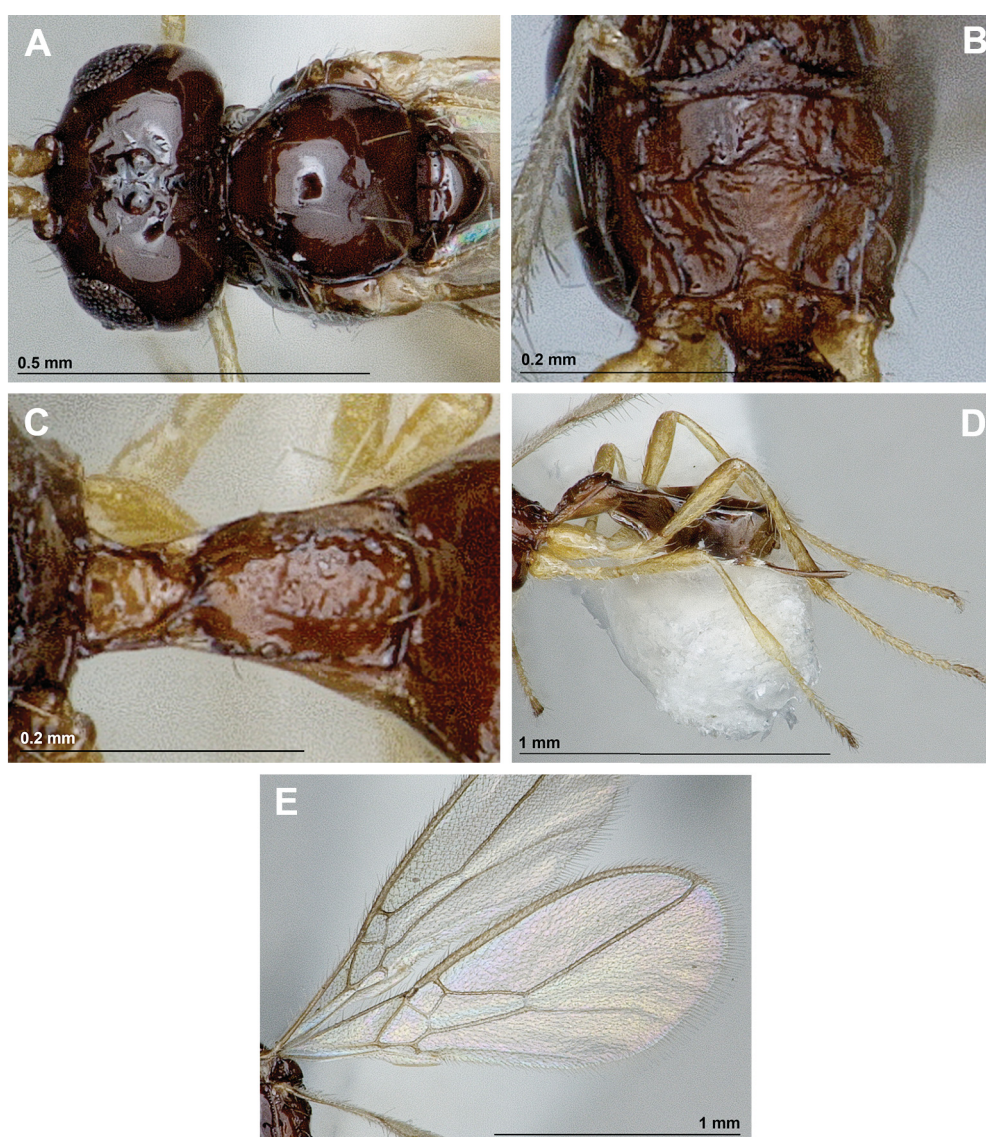


**Fig. 4.** *Aspilota leptoarticulata* Munk & Peris-Felipo sp. nov. (A, C–F ♀; B ♂). A–B. Habitus, lateral view. C. Mandible. D. Antennae. E. Head, frontal view. F. Head and mesosoma, lateral view.

maximum width, 4<sup>th</sup> and 5<sup>th</sup> segments 3.8 times, 6<sup>th</sup> to 9<sup>th</sup> segments 3.3 times, 10<sup>th</sup> segment 2.7 times, 11<sup>th</sup> and 12<sup>th</sup> segments 2.3 times, 13<sup>th</sup> segment 2.0 times, and 14<sup>th</sup> (apical) segment 2.2 times as long as their maximum widths.

MESOSOMA. In lateral view 1.3 times as long as high. Mesoscutum as long as maximum width. Notauli mainly absent on horizontal surface of mesoscutum. Mesoscutal pit absent. Prescutellar depression smooth, without lateral carinae. Precoxal suture present, not reaching anterior or posterior margins of mesopleuron. Posterior mesopleural furrow crenulate. Propodeum sculptured, with large areola. Propodeal spiracle small.

LEGS. Hind femur 4.5 times as long as its maximum width. Hind tibia slightly widened towards apex, about 8.0 times as long as its maximum subapical width, as long as hind tarsus. First segment of hind tarsus 1.9 times as long as second segment.



**Fig. 5.** *Aspilota leptarticulata* Munk & Peris-Felipo sp. nov. (♀). **A.** Head and mesonotum, dorsal view. **B.** Propodeum, dorsal view. **C.** First metasomal tergite, dorsal view. **D.** Hind leg, metasoma and ovipositor. **E.** Fore wings.

**WINGS.** Length of fore wing 2.4 times its maximum width. Radial (marginal) cell ending at apex of wing, 4.1 times as long as its maximum width. Vein cu<sub>1</sub> (2-SR) present and sclerotized. Vein r<sub>2</sub> (3-SR) 2.8 times as long as vein cu<sub>1</sub> (2-SR); vein r<sub>3</sub> (SR1) 2.6 times as long as vein r<sub>2</sub> (3-SR). Nervulus (cu-a) distinctly postfurcal. Brachial (subdiscal) cell closed distally, 2.8 times as long as its maximum width. Hind wing 6.0 times as long as its maximum width.

**METASOMA.** Distinctly compressed. First tergite finely rugose, slightly widened towards apex, twice as long as its apical width. Ovipositor 1.1 times as long as first tergite, distinctly shorter than metasoma, 0.8 times as long as hind femur.

**COLOUR.** Body, antenna and pterostigma brown to dark brown. Scape, pedicel, first flagellar segment, mandible and legs yellow. Wings hyaline.

**VARIATION.** Body length 1.4–1.6 mm.

#### **Male**

Body length 1.6 mm. Fore wing length 2.0 mm; hind wing length 1.5 mm. Antenna 17-segmented. First flagellar segment 5.0 times as long as its maximum width; middle segments 3.0 times as long as their maximum widths. Otherwise similar to female.

#### **Distribution**

Denmark, Finland.

*\*Aspilota nidicola* Hedqvist, 1972

#### **Material examined**

DENMARK: 2 ♀♀, N Jutland, Funen, Brahesborg, 55°17' N, 9°57' E, 9 Sep. 1982 and 17 Jul. 1984, Munk leg.; 1 ♀, N Jutland, Frederikshavn Vandværksskoven, 2 Aug. 1987, Munk leg.

#### **Distribution**

Northern Palaearctic (Yu *et al.* 2012). Denmark (first record).

*\*Aspilota pillerensis* Fischer, 1973

#### **Material examined**

DENMARK: 1 ♀, E Jutland, Egå, 10 km NE of Aarhus, 13–19 Sep. 1984, Munk leg.; 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 6 Jun. 1983, Munk leg.

#### **Distribution**

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

*Aspilota ruficornis* (Nees, 1834)

#### **Published material**

“Als af Oberlehrer Wüstnei” (Thomson 1895).

#### **Material examined**

DENMARK: 9 ♀♀, 4 ♂♂, E Jutland, Egå, 10 km NE of Aarhus, 19–25 Sep. 1984, Munk leg.; 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 1 Aug. 1977, Munk leg.; 1 ♀, E Jutland, Hjelm, 56°08' N, 10°48' E, 3–5 Aug. 1992, Munk leg.; 1 ♂, E Jutland, Mols, Skovbjerg, 56°13' N, 10°33' E, 11 Sep. 1997, Munk leg.

### Distribution

Palearctic region (Yu *et al.* 2012).

#### *Aspilota spiricula* Munk & Peris-Felipo, 2014

### Published material

DENMARK: 1 ♀ (holotype), 10 ♀♀ and 2 ♂♂ (paratypes), E Jutland, Mols, Strandkær, 56°14' N, 10°25' E, 30 Sep. 1982, Munk leg. (ENV, NMA, ZISP); 3 ♀♀ (paratypes), same locality, but 29 Sep. 1986 and 2–3 Oct. 1991, Munk leg. (ENV, ZISP); 3 ♀♀ and 1 ♂ (paratypes), E Jutland, Højkol Skov, 56°05' N, 9°38' E, 28 Sep. 1987, Munk leg. (NMA); 13 ♀♀ and 3 ♂♂ (paratypes), E Jutland, Palsgård Skov, 56°01' N, 9°25' E, 28 Sep. 1987, Munk leg. (NMA, RMNH, ZISP); 4 ♀♀ and 5 ♂♂ (paratypes), E Jutland, Fuglslev, 56°16' N, 10°43' E, 9 Sep. and 2 Oct. 1988, Munk leg. (NMA); 4 ♀♀ and 3 ♂♂ (paratypes), S Jutland, Stensbæk Plantage, 55°17' N, 8°56' E, 1 Oct. 1983, Munk leg. (NMA); 1 ♀ (paratype), S Jutland, Draved Skov, 1 Oct. 1983, Munk leg. (NMA); 3 ♀♀ and 2 ♂♂ (paratypes), SW Jutland, Skallingen, near the field laboratory, 2 Oct. 1983, Munk leg. (NMA) (Peris-Felipo *et al.* 2014b).

### Distribution

Western Palearctic (Peris-Felipo *et al.* 2014b). Only known from Denmark.

#### \**Aspilota stenogaster* Stelfox & Graham, 1951

### Material examined

DENMARK: 1 ♀, E Jutland, Kjellerud, 57°36' N, 9°59' E, 16 Aug. 1986, Munk leg.; 2 ♀♀, 1 ♂, E Jutland, Højkol Skov, 56°05' N, 9°38' E, 21 Jul. 1988, Munk leg.; 1 ♂, W Jutland, Højmoose, 11 Oct. 1986, Munk leg.

### Distribution

Palearctic Region (Yu *et al.* 2012). Denmark (first record).

#### \**Aspilota styriaca* Fischer, 1973

### Material examined

DENMARK: 1 ♀, E Jutland, Skramsø Plantage, Langsø W, 6 Jun. 2003, Munk leg.; 1 ♀, N Jutland, Bøgsted Plantage, 57°28' N, 10°07' E, 25 Jun. 1982, Munk leg.; 4 ♀♀, N Jutland, Tværsted Plantage, 57°36' N, 10°43' E, 17 and 20 Jun. 1982, Munk leg.

### Distribution

Western Palearctic (Yu *et al.* 2012). Denmark (first record).

#### \**Aspilota tetragona* Fischer, 1976

### Material examined

DENMARK: 1 ♀, Funen, Smedsholm, Ejby, 55°26' N, 9°58' E, 8 Jun. 1982, Munk leg.; 2 ♀♀, 1 ♂, E Jutland, Klattrup, 10 km S of Vejle, 4 Aug. 1982 (1♀), swept on wet meadow, 12–13 Jul. 1983, swept on wood, Munk leg.; 1 ♂, E Jutland, NH74, Mygind Skov, 19 Jul. 1989, Munk leg.; 1 ♂, E Jutland, Palsgård, N of Juelsminde, 8 Jul. 1983, swept on wood, Munk leg.; 1 ♂, E Jutland, 17 km W of Skanderborg, 30 Jun. 1983, swept on old oak wood, Munk leg.; 3 ♀♀, 2 ♂♂, E Jutland, Højen Bæk, 5 km S of Vejle, 15 and 17 Jul. 1982, 7 Jul. and 25 Aug. 1984, 3 Jul. 1987, Munk leg.; 1 ♀, E Jutland, Kjeldkær, 11 km W of Vejle, 8 Jun. 1983, Munk leg.; 1 ♀, E Jutland, Nim Skov, 55°56' N, 9°43' E, 26 Aug. 1984, Munk leg.; 1 ♀, E Jutland, Smidstrup Skov, 55°36' N, 9°35' E, 28 Jun. 1984, Munk leg.; 1 ♀, E Jutland, Vingsted, W of Vejle, 8 Jun. 1983, Munk leg.; 1 ♀, N Jutland, Rævdal, 57°23' N, 10°24' E, 16 Jun. 1984, Munk leg.; 1 ♀, NW Jutland, Morup Mølle, 56°51' N, 8°22' E, 15 Jun. 1985, Munk leg.

### Distribution

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

### Remarks

One specimen was sampled from wet meadow and two specimens from oak wood.

*\*Aspilota ventasa* Belokobylskij, 2007

### Material examined

DENMARK: 1 ♀, Lolland, Errindlev, 25 May 1990, Munk leg. (NHMD); 1 ♂, E Jutland, Ammitsbøl Skov, 55°38' N, 9°26' E, 16 Jul. 1982, Munk leg. (ZISP); 1 ♂, E Jutland, Højen Bæk, 5 km S of Vejle, 22 Jul. 1983, Munk leg. (NHMD); 1 ♂, E Jutland, Nørreskov, 10 km E of Kolding, 18 Jul. 1982, Munk leg. (NHMD); 1 ♀, E Jutland, Staksrode Skov, 55°41' N, 9°51' E, 30 Jun. 1987, Munk leg. (ZISP); 2 ♂♂, E Jutland, Tiufkær Skov, 22 Aug. 1978, Munk leg. (NHMD, ZISP); 1 ♂, N Jutland, Terpet, S of Tårs, 16 Jun. 1988, Munk leg. (NHMD); 1 ♀, S Zealand, Svinø, 55°07' N, 11°43' E, 9 Jun. 1987, Munk leg. (NHMD).

FINLAND: 1 ♀, EH. Lammi, 6772: 391, 15 Jul. 1976, Koponen leg. (NHMD).

GERMANY: 1 ♂, Dransfeld, 15 May 1966, Haeselbarth leg. (ZSSM); 2 ♀♀, 1 ♂, Glonn, 18 Aug. 1970, swept on blueberry, Haeselbarth leg. (ZSSM).

ITALY: 1 ♂, South Tyrol, Kaltern, 500 m, 22 Sep. 1978, Haeselbarth leg. (ZSSM); 1 ♂, South Tyrol, Merano, 700 m, 22 Jul. 1966, Haeselbarth leg. (ZSSM); 2 ♀♀, South Tyrol, Parcines, 850 m, 13 Jul. 1966 and 1 Sep. 1967, Haeselbarth leg. (ZSSM, ZISP); 1 ♀, South Tyrol, Riva Rocchetta, 400–800 m, 20 May 1982, Haeselbarth leg. (ZSSM).

### Distribution

Palaearctic Region: Denmark (first record), Finland (first record), Germany (first record), Italy (first record), and Russia (Yu *et al.* 2012).

*\*Aspilota vernalis* Stelfox & Graham, 1951

### Material examined

DENMARK: 2 ♀♀, 2 ♂♂, E Jutland, Mols, Strandkær, 56°14' N, 10°25' E, 14, 25 and 29 May 1991, Munk leg.

### Distribution

Western Palaearctic (Yu *et al.* 2012). Denmark (first record).

Genus *Chasmodon* Haliday, 1838

*Chasmodon apterus* (Nees, 1812)

### Published material

“Resengaard and Laasby (E Jutland)” (Nielsen 1994).

### Distribution

Palaearctic region (Yu *et al.* 2012).



Genus *Dinotrema* Forster, 1863

*Dinotrema acompressum* Munk & Peris-Felipo, 2014

**Published material**

DENMARK: 1 ♀ (holotype), N Jutland, Tornby Plantage, 57°32' N, 9°55' E, 11 Aug. 1984, Munk leg. (NHMW); 1 ♀ (paratype), E Jutland, Klattrup, S of Vejle, 2 Jun. 1983, Munk leg. (NHMW); 1 ♀ (paratype), E Jutland, Højen Bæk, 5 km S of Vejle, 9 Jun. 1986, Munk leg. (NHMW); 1 ♀ (paratype), E Jutland, Frisenborg, 56°16' N, 9°54' E, 28 Aug. 1986, Munk leg. (ENV); 2 ♀♀ (paratypes), N Jutland, Villestrup, 56°46' N, 9°56' E, 14 Jun. 1984, Munk leg. (ENV, ZISP); 1 ♀ (paratype), N Jutland, Børglumkloster Skov, 57°24' N, 10°13' E, 18 Jun. 1984, Munk leg. (NHMW); 1 ♀ (paratype), NW Jutland, Morup Mølle, 56°51' N, 8°22' E, 15 Jun. 1985, Munk leg. (NHMW) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a). Only known from Denmark.

*Dinotrema agaricophagum* Munk & Peris-Felipo, 2013

**Published material**

DENMARK: 3 ♀♀ (holotype and paratypes), E Jutland, Mols Strandkær, 56°14' N, 10°25' E, 4 Oct. 1983, Munk leg. (ENV, NMA); 1 ♀ (paratype), N Jutland, Åstrup Skov, NJ67, 16 Sep. 1982, Munk leg. (NHMW); 1 ♀ (paratype), N Jutland, NJ77, 20 Aug. 1985, Munk leg. (NHMW) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a).

**Remarks**

Specimens were collected from *Agaricus* sp. (Fungi).

*Dinotrema alysiae* Munk & Peris-Felipo, 2013

**Published material**

DENMARK: 3 ♀♀ (holotype and paratypes), E Jutland, Mols Strandkær, 56°14' N, 10°25' E, 30 Jul. and 2 Sep. 1991, Munk leg. (NMA); 2 ♀♀ (paratypes), E Jutland, Yding Skov, SW of Skanderborg, 6 Sep. 1986, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Højkol Skov, 56°05' N, 9°38' E, 11 Sep. 2000, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Munk *et al.* 2013a; Peris-Felipo *et al.* 2014a).

*Dinotrema amoenidens* (Fischer, 1973)

**Published material**

DENMARK: 5 ♀♀, E Jutland, Klattrup, S of Vejle, NG36, 26–27 Sep. 1982, Munk leg. (NHMW); 7 ♀♀, N Jutland, NJ67, Slotved Skov, 21 Jun. 1982, Munk leg. (NHMW) (Peris-Felipo *et al.* 2014a).

**Distribution**

Palaearctic Region (Peris-Felipo *et al.* 2014a).

***Dinotrema areolatum* (Stelfox & Graham, 1950)**

**Published material**

DENMARK: 1 ♀, E Jutland, Vingsted, W of Vejle, 8 Jun. 1983, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

**Material examined.**

DENMARK: 1 ♀, E Jutland, Løverodde, 31 Jul. 1984, Munk leg.; 1 ♂, N Jutland, NJ67, Åstrup Skov, 25 Jun. 1982, swept in young oak wood, Munk leg.; 2 ♀♀, 2 ♂♂, E Jutland, Højen Bæk, 5 km S of Vejle, 4 Jul. 1983, 6 Jul., 2 and 25 Aug. 1984, Munk leg.; 1 ♀, E Jutland, Nørreris Skov, 10 km of Aarhus, 16 Jul. 1986, Munk leg.; 1 ♀, N Jutland, Ågård, Fjerritslev, 57°05' N, 9°15' E, 28 May 1989, Munk leg.; 1 ♀, E Jutland, Tirsbæk, 17 Jul. 1983, Munk leg.

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a).

**Remarks**

One specimen was collected in oak wood.

***Dinotrema cahitum* Munk & Peris-Felipo, 2014**

**Published material**

DENMARK: 1 ♀ (holotype), E Jutland, Klattrup, 7 km S of Vejle, 19 Jul. 1983, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Klattrup, S of Vejle, 29 Jul. 1978, Munk leg. (NHMW); 1 ♀ (paratype), E Jutland, Tirsbæk E of Vejle, 20 Jul. 1983, Munk leg. (ENV); 1 ♀ (paratype), W Jutland, Ammitsbøl Skov, 24 Jul. 1984, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Højen Bæk, 5 km S of Vejle, 18 Jul. 1984, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a). Only known from Denmark.

***Dinotrema collybiae* Munk & Peris-Felipo, 2014**

**Published material**

DENMARK: 2 ♀♀ (holotype and paratype), E Jutland, Højen Bæk, 5 km S of Vejle, 15 Jun. 1989, Munk leg. (ENV, NMA) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a). Only known from Denmark.

***Dinotrema compressum* (Haliday, 1838)**

**Published material**

DENMARK: 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 21 Jun. 1986, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

**Additional material examined**

DENMARK: 1 ♀, N Jutland, Åstrup Skov, 18 Jun. 1984, Munk leg.; 1 ♀, E Jutland, Klattrup Bygade., FB KP, 24–25 Aug. 1982, Munk leg.; 1 ♀, Funen, Smedsholm Skov, 3 km W of Fjelsted, 4 Jun. 1982, Munk leg.; 1 ♀, E Jutland, Højen Bæk, 24 May 1984, Munk leg.; 2 ♀♀, E Jutland, Højkol Skov, 56°05' N, 9°38' E, 15 Jul. 1987, Munk leg.; 3 ♀♀, 2 ♂♂, E Jutland, Horsted, 7 km S of Vejle, 9–13 Jul. 1977, Munk leg.; 1 ♀, E Jutland, Nørreris Skov, 10 km NW of Aarhus, 20 Jun. 1985, Munk leg.; 1 ♀,

E Jutland, Tinskær Skov, S of Vejle, 20 Aug. 1998, Munk leg.; 3 ♀♀, E Jutland, Yding Skov, 56°00' N, 9°48' E, 24 Jun. 1984 and 1 Jul. 1985, Munk leg.

### Distribution

Western Palaearctic (Peris-Felipo *et al.* 2014a).

*\*Dinotrema concinnum* (Haliday, 1838)

### Material examined

DENMARK: 1 ♀, 1 ♂, E Jutland, Højen Bæk, 5 km S of Vejle, 1 Jul. 1983, and 7 Jul. 1984, Munk leg.

### Distribution

Palaearctic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).

*\*Dinotrema contracticorne* (Fischer, 1974)

### Material examined

DENMARK: 1 ♀, E Jutland, Staksrode Skov, 10 Jun. 1984, Munk leg.

### Distribution

Western Palaearctic (Peris-Felipo *et al.* 2014a). Denmark (first record).

*Dinotrema costulatum* (Thomson, 1895)

### Published material

“Sondbg [=Søndeberg in South Jutland]” (Fischer 1972).

### Material examined

DENMARK: 1 ♀, E Jutland, NG36, Børkop Skov, 1 Jul. 1982, Munk leg.; 1 ♀, E Jutland, Tirsbæk, E of Vejle, 20 Jul. 1983, Munk leg.; 2 ♀♀, E Jutland, Horsted, S of Vejle, 27–28 Aug. 1976, Munk leg.; 1 ♂, E Jutland, Assens at Mariager Fjord, 20 Aug. 1986, Munk leg.; 1 ♀, E Jutland, Elsegårde Skov, 56°10' N, 10°43' E, 4 Jul. 1994, Munk leg.; 1 ♀, Funen, Helnæs, 55°08' N, 10°02' E, 17 Jul. 1984, Munk leg.; 3 ♀♀, 1 ♂, E Jutland, Klattrup, 7 km S of Vejle, 4 and 24–25 Aug. 1982 and 3 Jul. 1983, Munk leg.; 1 ♀, 1 ♂, E Jutland, Højen Bæk, 1 Jul. 1982 and 4 Aug.–7 Sep. 1986, Munk leg.; 1 ♀, E Jutland, Rohden, 12 km E of Vejle, 2 Jul. 2000, swept in wet deciduous wood, Munk leg.; 2 ♀♀, E Jutland, Nim Skov, 26 Apr. and 26 Aug. 1984, Munk leg.; 1 ♀, 1 ♂, E Jutland, Skanderborg, Modervejen, 21 Sep. 1984, Munk leg.

### Distribution

Western Palaearctic (Peris-Felipo *et al.* 2014a).

### Remarks

One specimen was collected in wet deciduous wood.

*\*Dinotrema cratocera* (Thomson, 1895)

### Material examined

DENMARK: 1 ♀, N Jutland, Åstrup Skov, 19 Jun. 1984, Munk leg.; 1 ♀, N Jutland, Måstrup Mose, 15 km NW of Frederikshavn, 21 Jun. 1982, Munk leg.; 1 ♀, E Jutland, Ammitsbøl Skov, 55°38' N, 9°26' E, 16 Jul. 1982, Munk leg.; 2 ♀♀, E Jutland, Bjørnholm Skov, 56°20' N, 10°43' E, 7 Jul. 1989, Munk leg.; 1 ♀, E Jutland, Elsegårde Skov, 56°10' N, 10°43' E, 22 Jul. 1989, Munk leg.; 1 ♀, E Jutland, Ferup Skov, 55°33' N, 9°22' E, 5 Jul. 1983, Munk leg.; 1 ♂, E Jutland, Grejsdal, N of Vejle, 21 Aug.

1984, Munk leg.; 2 ♀♀, E Jutland, Hessel, S of Grenå, 56°23' N, 10°52' E, 9 and 13 Aug. 1989, Munk leg.; 1 ♀, E Jutland, Hjelm, 56°08' N, 10°48' E, 3–5 Aug. 1992, Munk leg.; 7 ♀♀, 1 ♂, E Jutland, Højen Bæk, S of Vejle, Sep. 1981, 17 Jul. 1982, 1 Jun., 5, 20 and 30 Jul. 1984, 16 Jun. 1986, Munk leg.; 1 ♀, E Jutland, Hørret Skov, 56°05' N, 10°12' E, 13 Aug. 1987, Munk leg.; 8 ♀♀, E Jutland, Ibæk, 5 km SE of Vejle, 15 Jun. 1989, Munk leg.; 3 ♀♀, 1 ♂, E Jutland, Klattrup, 7 km S of Vejle, 15 Jul. 1982, 28 Jun. and 13 Jul. 1983, Munk leg.; 3 ♀♀, E Jutland, Pedersholms Allé, Vejle, 1 Jul. 1982, Munk leg.; 1 ♀, E Jutland, Rosenvold, 28 Jul. 1984, Munk leg.; 2 ♀♀, E Jutland, Rugård Sønderskov, 56°16' N, 10°49' E, 20 Jul. 1986, Munk leg.; 3 ♀♀, E Jutland, Yding Skov, 56°00' N, 9°48' E, 4 Jul. and 24 Jun. 1985, Munk leg.; 2 ♂, N Jutland, Bøgsted Plantage, 57°28' N, 10°07' E, 18 Jun. 1984, Munk leg.; 2 ♀♀, N Jutland, Frederikshavn, Vandværksskoven, 2 Aug. 1987, Munk leg.; 2 ♀♀, N Jutland, Tornby Plantage, 57°32' N, 9°55' E, 11 Aug. 1984, Munk leg.; 1 ♀, NW Jutland, Barnsø, Nors Sø, 57°03' N, 8°37' E, 18 Aug. 1989, Munk leg.; 1 ♀, NW Jutland, Mønsted Skov, 17 Jun. 1984, Munk leg.; 1 ♀, N Jutland, St. Vildmose, 6 Aug. 1984, Munk leg.; 1 ♀, N Jutland, St. Vildmose, 6 Aug. 1984, Munk leg.; 1 ♀, 1 ♂, E Jutland, Viuf Skov, 21 Jun. 1986, Munk leg.

### **Distribution**

Palearctic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).

*\*Dinotrema cruciatum* (Fischer, 1973)

### **Material examined**

DENMARK: 1 ♀, E Jutland, Højen Bæk, 10 Jul. 1984, Munk leg.

### **Distribution**

Palearctic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).

*Dinotrema cruciforme* (Fischer, 1973)

### **Published material**

DENMARK: 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 23 Aug. 1984, Munk leg. (NMA) (Peris-Felipo *et al.* 2014a).

### **Additional material examined**

DENMARK: 3 ♀♀, 1 ♂, E Jutland, Klattrup, 10 km S of Vejle, 12 Jul. 1981, 26 Jul. 1982, 22 and 31 Aug. 1982, Munk leg.; 1 ♀, E Jutland, Horsted, S of Vejle, 2 Nov. 1978, Munk leg.; 1 ♀, E Jutland, Randbøldal, W of Vejle, 7 Jun. 1983, Munk leg.; 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 23 Aug. 1984, Munk leg.

### **Distribution**

Palearctic Region (Peris-Felipo *et al.* 2014a).

*Dinotrema curtisetum* Munk & Peris-Felipo, 2013

### **Published material**

DENMARK: 1 ♀ (holotype), 1 ♀ (paratype), E Jutland, Hessel, S of Grenå, 56°23' N, 10°52' E, 9 Aug. and 13 Aug. 1989, Munk leg. (ENV, NMA); 1 ♀ (paratype), S Jutland, Klelund Plantage, 23 Aug. 1986, Munk leg. (NMA) (Peris-Felipo *et al.* 2014a).

### **Distribution**

Western Palearctic (Munk *et al.* 2013b; Peris-Felipo *et al.* 2014a). Only known from Denmark.

**\**Dinotrema denticulatum*** (Stelfox & Graham, 1951)

**Material examined**

DENMARK: 1 ♀, E Jutland, Klattrup Skov, S of Vejle, 10 Sep. 1982, Munk leg.; 1 ♀, E Jutland, Yding Skov, SW of Skanderborg, 6 Sep. 1986, Munk leg.; 1 ♀, E Jutland, Højkol Skov, 56°05' N, 9°38' E, 14 Sep. 1987, Munk leg.; 1 ♀, E Jutland, Mols, Strandkær, 56°14' N, 10°25' E, 2 Sep. 1991, Munk leg.

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a). Denmark (first record).

**\**Dinotrema (Leptotrema) dentifemur*** (Stelfox, 1943)

**Material examined**

DENMARK: 1 ♀, E Jutland, Klattrup, S of Vejle, NG 36, 10 Sep. 1982, Munk leg.; 1 ♂, SW Jutland, outside of the sea dike, 1 km S of the Rømø Dam, 31 May 1982, Munk leg.; 1 ♀, E Jutland, Egå, 10 km NE of Aarhus, 13–19 Sep. 1984, Munk leg.; 1 ♀, E Jutland, Frisenborg, 56°16' N, 9°54' E, 28 Jul. 1986, Munk leg.; 2 ♀♀, E Jutland, Fuglslev, 56°16' N, 10°43' E, 6 Jun. 1990, swept on *Pinus picea* plantation, and 10 Nov. 2000, Munk leg.; 1 ♀, E Jutland, Højkol Skov, 56°05' N, 9°38' E, 7 Jul. 1986, Munk leg.; 1 ♀, E Jutland, Vingsted, 55°41' N, 9°23' E, 26 Jul. 1984, Munk leg.; 1 ♀, 1 ♂, N Jutland, near Rold Skov, 25 km S of Aalborg, 25 Jun. 1984, Munk leg.; 1 ♂, NW Jutland, Barnsø, Nors Sø, 57°03' N, 8°37' E, 18 Aug. 1989, Munk leg.

**Distribution**

Palaearctic Region (Yu *et al.* 2012). Denmark (first record).

**Remarks**

One specimen was swept in a *Pinus picea* L. plantation.

***Dinotrema deprane*** Munk & Peris-Felipo, 2013

**Published material**

DENMARK: 1 ♀ (holotype), 13 ♀♀ (paratypes), E Jutland, Højen Bæk, 1 Jul. 1982, 6 Jun. 1983, 12 Jun., 7 Jul. and 19 Sep. 1984, 16 Jun. 1986 (NMA) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Munk *et al.* 2013b; Peris-Felipo *et al.* 2014a). Only known from Denmark.

***Dinotrema digitatum*** Munk & Peris-Felipo, 2014

**Published material**

DENMARK: 1 ♀ (holotype), N Jutland, Baggessvogn Skov, 57°30' N, 10°09' E, 9 Aug. 1986, Munk leg. (NMA); 2 ♀♀ (paratypes), E Jutland, Højen Bæk, 5 km S of Vejle, 6 Jul. 1984, Munk leg. (NHMW); 6 ♀♀ (paratypes), N Jutland, Villestrup, 56°46' N, 9°56' E, 25–26 Jun. 1984, Munk leg. (NHMW, ZISP); 1 ♀ (paratype), E Jutland, Yding Skov, 56°00' N, 9°48' E, 1 Jun. 1990, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Straksrode Skov, 55°41' N, 9°51' E, 30 Jun. 1987, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Tirsbæk, 5 km E of Vejle, 29 Jul. 1984, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Klattrup, S of Vejle, 27 Aug. 1982, Munk leg. (ENV); 1 ♀ (paratype), N Jutland, Villestrup, 56°46' N, 9°56' E, 18 Jun. 1984, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a). Only known from Denmark.

***Dinotrema dimidiatum* (Thomson, 1895)**

**Published material**

“Oberlehrer Wüstnei” (Thomson 1895), “Ile d’Alsen, trouvé par Wüstnei” (Marshall 1900).

**Additional material examined**

DENMARK: 1 ♀, E Jutland, Bindeballe, 20 May 1984, Munk leg.; 1 ♀, E Jutland, Sillerup, 12 km SW of Silkeborg, 29 Apr. 1987, Munk leg.; 3 ♀♀, 4 ♂♂, E Jutland, Klattrup Skov, 10 km S of Vejle, 2 May 1977, 15, 17 and 20 May 1982, 14 May 1984, Munk leg.; 1 ♀, 1 ♂, E Jutland, Fuglslev, 56°16′ N, 10°43′ E, 3 May 2000, Munk leg.; 8 ♀♀, 4 ♂♂, E Jutland, Højen Bæk, 6 May 1981, 24 May 1982, 6–7 and 20 May 1983, 6, 10 and 21 May 1984, 19 May 1985, and 9 May 1987, Munk leg.; 1 ♀, E Jutland, Nørreris Skov, W of Aarhus, 8 May 1985, Munk leg.; 1 ♀, E Jutland, Skærsø, PH03, Kælderskov, 25 May 1996 and 30 Apr. 1997, Munk leg.; 1 ♂, E Jutland, Volstrup Skov, 56°20′ N, 9°58′ E, 11 May 1985, Munk leg.; 1 ♀, N Jutland, Ågård, Fjerritslev, 57°05′ N, 9°15′ E, 28 May 1989, Munk leg.; 3 ♀♀, N Jutland, Tornby Plantage, 57°32′ N, 9°55′ E, 31 Jul. 1990, Munk leg.; 1 ♀, 1 ♂, E Jutland, Frisenborg, 17 May 1984, Munk leg.; 1 ♂, E Jutland, Kjellerup, 15 May 1986, Munk leg.; 1 ♀, NE Zealand, Hareskoven v. Frederiksdal, 7 May 1976, Munk leg.

**Distribution**

Palearctic Region (Peris-Felipo *et al.* 2014a).

**\**Dinotrema divisum* (Stelfox & Graham, 1950)**

**Material examined**

DENMARK: 1 ♀, E Jutland, Yding Skov, SW of Skanderborg, 6 Sep. 1986, Munk leg.; 1 ♂, N Jutland, Skårupgård Skov, 22 Jun. 1982, swept in *Pinus* wood, Munk leg.; 1 ♀, S Jutland, Arild, 1 Jul. 1986, Munk leg.; 1 ♀, N Jutland, Rold Skov, Mossø, 14 Aug. 1984, Munk leg.; 1 ♀, N Jutland, Slotved Skov, 13–14 Jun. 1982, Munk leg.; 1 ♀, Funen, Uggerslev Plantage, 24 Jul. 1985, Munk leg.; 1 ♀, E Jutland, Bindeballe, 55°40′ N, 9°16′ E, 7 Jul. 1997, Munk leg.; 1 ♀, E Jutland, Egtved, Skærsø, 55°35′ N, 9°17′ E, 13 Jul. 1985, Munk leg.; 1 ♀, E Jutland, Nørreris Skov, 10 km NW of Aarhus, 16 Jul. 1986, Munk leg.; 2 ♀♀, E Jutland, Vinkel, E of Viborg, 56°26′ N, 9°29′ E, 12 Jul. 1986, Munk leg.; 1 ♀, S Jutland, Klelund Plantage, 55°34′ N, 8°55′ E, 17 Jul. 1986, Munk leg.

**Distribution**

Palearctic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).

**Remarks**

One specimen was swept in a *Pinus* wood.

***Dinotrema erythropum* Forster, 1863**

**Published material**

DENMARK: 1 ♀, E Jutland, Frisenborg, 28 Jul. 1986, Munk leg. (NMA) (Peris-Felipo *et al.* 2014a).

**Additional material examined**

DENMARK: 1 ♂, NE Zealand, Copenhagen, Utterslev Mose, 8 Jun. 1976, Munk leg.; 1 ♀, E Jutland, Frisenborg, 28 Jul. 1986, Munk leg.; 1 ♀, E Jutland, Ammitsbøl Skov, 55°38′ N, 9°26′ E, 16 Jul. 1982, Munk leg.; 1 ♀, E Jutland, Mols, Skovbjerg, 56°13′ N, 10°33′ E, 19 Sep. 1997, Munk leg.; 1 ♂, E Jutland, Yding Skov, 56°00′ N, 9°48′ E, 9 Aug. 1985, Munk leg.

### Distribution

Western Palaearctic (Peris-Felipo *et al.* 2014a).

#### *Dinotrema falsificum* (Stelfox & Graham, 1950)

### Published material

DENMARK: 1 ♀, N Jutland, NJ 67, Baggesvogn Skov, 24 Jun. 1994, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### Additional material examined

DENMARK: 1 ♀, E Jutland, Aarhus, Trondhjemsgade, 6 Sep. 1986, Munk leg.; 1 ♀, N Jutland, Tvilho, 23 Aug. 1986, Munk leg.; 2 ♀♀, E Jutland, Assens at Mariager Fjord, 20 Aug. 1986, Munk leg.

### Distribution

Western Palaearctic (Peris-Felipo *et al.* 2014a).

#### *Dinotrema fulvicorne* (Haliday, 1838)

### Published material

DENMARK: 1 ♀, N Jutland, Højen Bæk, 5 km S of Vejle, 4 Jun. 1989, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### Additional material examined

DENMARK: 3 ♂♂, N Jutland, NJ85, Sæbygård Skov, 12 Aug. 1984, Munk leg.; 1 ♂, W Jutland, Nørholm Skov, 8 Jul. 1984, Munk leg.; 1 ♂, E Jutland, Djursland, Jun. 1984, Munk leg.; 1 ♂, E Jutland, Femmøller, 100 m N of Kjærris Mølle, 29 Jul. 1991, Munk leg.; 4 ♂♂, E Jutland, Hessel, S of Grenå, 56°23' N, 10°52' E, 13 Aug. 1989, Munk leg.; 15 ♂♂, E Jutland, Højen Bæk, 5 km S of Vejle, 8 and 15 Jul. 1982, 22 and 30 Jul. 1983, 6, 13–14, 18, 23, 30 Jul., 2, 18, 20, 23–24 Aug. 1984, Munk leg.; 1 ♀, E Jutland, Klattrup, S of Vejle, 13 Jul. 1982, Munk leg.; 1 ♂, E Jutland, Nørreskov, 10 km E of Kolding, 18 Jul. 1982, Munk leg.; 2 ♂♂, E Jutland, Rugård Sønderskov, 56°16' N, 10°49' E, 22 Jun. 1990, Munk leg.; 2 ♂♂, E Jutland, Yding skov, SW of Skanderborg, 6 Sep. 1986, Munk leg.

### Distribution

Western Palaearctic (Peris-Felipo *et al.* 2014a).

#### *Dinotrema glabrideum* Munk & Peris-Felipo, 2014

### Published material

DENMARK: 1 ♀ (holotype), E Jutland, Mols, Strandkær, 55°14' N, 10°25' E, 29 May 1991, Munk leg. (NMHW); 1 ♀ (paratype), E Jutland, Højen Bæk, 5 km S of Vejle, 18 Jul. 1984, Munk leg. (ENV); 2 ♀♀ (paratypes), E Jutland, Højen Bæk, 24 May 1984, Munk leg. (ENV; NMA) (Peris-Felipo *et al.* 2014a).

### Distribution

Western Palaearctic (Peris-Felipo *et al.* 2014a). Only known from Denmark.

#### *Dinotrema glabrum* (Stelfox & Graham 1951)

### Published material

DENMARK: 2 ♀♀, E Jutland, Højkol Skov, 56°05' N, 9°38' E, 16 Jul. and 22 Aug. 1987, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### **Additional material examined**

DENMARK: 1 ♀, W Jutland, Bredsgårde, 10 km W of Viborg, 12 Jul. 1986, Munk leg.; 1 ♀, N Jutland, Baggessvogn, 20 Jun. 1984, Munk leg.; 1 ♀, W Jutland, Haslund, 2 Jul. 1984, Munk leg.; 2 ♀♀, E Jutland, Salten Skov, SE of Silkeborg, 7 Jul. 1986, Munk leg.; 3 ♀♀, E Jutland, Højen Bæk, 5 km S of Vejle, 15 Jul. 1982 and 2 Aug. 1984, Munk leg.; 2 ♀♀, E Jutland, Hørret Skov, 56°05' N, 10°12' E, 7 Jul. 1986 and 7 Aug. 1987, Munk leg.; 1 ♀, E Jutland, Klattrup, 7 km S of Vejle, 4 Aug. 1983, Munk leg.; 1 ♀, E Jutland, Mols, Skovbjerg, 56°13' N, 10°33' E, 11 Sep. 1997, Munk leg.; 3 ♀♀, E Jutland, Nørre-eris Skov, 10 km NW of Aarhus, 20 Jun. and 14 Jul. 1985, 5 Jul. 1987, Munk leg.; 1 ♂, E Jutland, Nørreskov, 10 km E of Kolding, 31 Jul. 1984, Munk leg.; 1 ♀, E Jutland, Staksrode Skov, 55°41' N, 9°51' E, 30 Jun. 1987, Munk leg.; 2 ♀♀, E Jutland, Yding Skov, 56°00' N, 9°48' E, 2 Oct. 1985, Munk leg.; 1 ♂, W Jutland, Bredsgårde, 56°27' N, 9°16' E, 12 Jul. 1986, Munk leg.; 1 ♀, Lolland, Frejlev Skov, 54°42' N, 11°51' E, 9 Jun. 1987, Munk leg.

### **Distribution**

Palaeartic Region (Peris-Felipo *et al.* 2014a).

#### *Dinotrema haeselbarthi* Munk & Peris-Felipo, 2013

### **Published material**

DENMARK: 1 ♀ (paratype), E Jutland, Yding Skov, 56°00' N, 9°48' E, 24 May 1985, Munk leg. (NMA); 2 ♀♀ (paratypes), Funen, Fjeldstedskov, 55°27' N, 9°59' E, 8 Jun. 1982 and 24 Jun. 1985, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Højen Bæk, 5 km S of Vejle, 7 Jul. 1984, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### **Distribution**

Western Palaeartic (Munk *et al.* 2013b; Peris-Felipo *et al.* 2014a).

#### *Dinotrema helote* Munk & Peris-Felipo, 2014

### **Published material**

DENMARK: 1 ♀ (holotype), N Jutland, Krogens Mølle, 57°21' N, 10°19' E, 3 Jun. 1986, Munk leg. (NHMW); 1 ♀ (paratype), E Jutland, Elsegårde Skov, 56°20' N, 10°43' E, 7 Jul. 1988, Munk leg. (ENV); 1 ♀ (paratype), N Jutland, Øster Vrå, 30 km SW Frederikshavn, swept on *Paludella* sp., 30 May 1986, Munk leg. (NHMW); 1 ♀ (paratype), N Jutland, Sæbygård Skov, 57°20' N, 10°29' E, 12 Aug. 1984, Munk leg. (ZISP); 2 ♀♀ (paratypes), N Jutland, Bøgsted Plantage, 57°28' N, 10°07' E, 13 Aug. 1984, Munk leg. (ENV, NMA) (Peris-Felipo *et al.* 2014a).

### **Distribution**

Western Palaeartic (Munk *et al.* 2013b; Peris-Felipo *et al.* 2014a). Only known from Denmark.

### **Remarks**

One specimen swept from moss, *Paludella* sp.

#### *\*Dinotrema hodiense* (Fischer, 1976)

### **Material examined**

DENMARK: 1 ♀, S Jutland, Askelund, 15 Aug. 1991, Munk leg.; 1 ♀, E Jutland, Krattet, 19 Aug. 1991, Munk leg. (Peris-Felipo *et al.* 2014a).

### **Distribution**

Palaeartic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).



*Dinotrema jaculans* (Haliday, 1838)

**Published material**

DENMARK: 1 ♀, E Jutland, Rugård, Sønderskov, 56°16' N, 10°49' E, 22 Jun. 1990, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

**Additional material examined**

DENMARK: 1 ♀, N Jutland, Åsted, 16 Jun. 1984, Munk leg.; 1 ♀, N Jutland, Åstrup, 18 Jun. 1984, Munk leg.; 1 ♀, E Jutland, Grejsdal, N of Vejle, 23 Aug. 1987, Munk leg.; 5 ♀♀, E Jutland, Højen Bæk, 5 km S of Vejle, 27 Jun., 5–6, 11 and 23 Jul. 1984, Munk leg.; 1 ♀, E Jutland, Klattrup, 19 Jun. 1984, Munk leg.; 1 ♂, E Jutland, Rugård, Sønderskov, 56°16' N, 10°49' E, 22 Jun. 1990, Munk leg.; 1 ♀, E Jutland, Staksrode Skov, 55°41' N, 9°51' E, 10 Jun. 1984, Munk leg.; 1 ♀, 1 ♂, E Jutland, Yding Skov, 56°00' N, 9°48' E, 1 Jun. 1990, Munk leg.; 1 ♀, NE Zealand, Copenhagen, Uterslev Mose, 8 Jun. 1976, Munk leg.; 1 ♀, 1 ♂, Madum, 25 Jun. 1984, Munk leg.; 1 ♂, N Jutland, Rold Skov, 15 Jun. 1984, Munk leg.; 1 ♀, N Jutland, Sindal, 22 Jul. 1985, Munk leg.

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a).

*\*Dinotrema latifemur* (Fischer, 1975)

**Material examined**

DENMARK: 1 ♀, E Jutland, Klattrup, 12 Jun. 1983, Munk leg.

**Distribution**

Palaearctic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).

*Dinotrema lepiotae* Munk & Peris-Felipo, 2014

**Published material**

DENMARK: 1 ♀ (holotype), N Jutland, NJ 67, Åstrup Skov, swept on *Lepiota rhacodes*, 16 Sep. 1982, Munk leg. (NHMW); 2 ♀♀ (paratypes), N Jutland, NJ 77, Sindal, swept on *Lepiota procera*, 19 Aug. 1985, Munk leg. (NHMW); 1 ♀ (paratype), E Jutland, Klattrup, S of Vejle, 29 Aug. 1982, Munk leg. (ENV); 4 ♀♀ (paratypes), E Jutland, Mols Strandkær, 56°14' N, 10°25' E, 4 Oct. 1983, Munk leg. (ENV; ZISP; NMA) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a). Only known from Denmark.

**Remarks**

One specimen swept from *Chlorophyllum rhacodes* (Vittad.) Vellinga and two specimens from *Macrolepiota procera* (Scop.) Singer (Fungi).

*Dinotrema lobatum* Munk & Peris-Felipo, 2013

**Published material**

DENMARK: 1 ♀ (holotype), E Jutland, Højen Bæk, 5 km S of Vejle, 23 Jul. 1984, Munk leg. (NHMW); 2 ♀♀ (paratypes), N Jutland, NJ77, Sindal, 22 Jul. 1985, Munk leg. (NHMW, NMA); 1 ♀ (paratype), N Jutland, near Rold Skov, 25 km S of Aalborg, 27 Jul. 1985, Munk leg. (NHMW) (Peris-Felipo *et al.* 2014a).

### Distribution

Western Palaearctic (Munk *et al.* 2013b; Peris-Felipo *et al.* 2014a).

#### *Dinotrema longicarinatum* (Fischer, 1976)

### Published material

DENMARK: 1 ♀, E Jutland, Molslaboratoriet, 56°14' N, 10°25' E, Munk leg. (NHMW) (Peris-Felipo *et al.* 2014a).

### Distribution

Western Palaearctic (Peris-Felipo *et al.* 2014a).

#### *Dinotrema macrocera* (Thomson, 1895)

### Published material

DENMARK: 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 23 Aug. 1984, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### Additional material examined

DENMARK: 2 ♀♀, N Jutland, Åstrup Skov, 19 Jun. 1984, Munk leg.; 1 ♀, E Jutland, Børkop, 1 Jul. 1982, Munk leg.; 1 ♀, Funen, Helnæs, 55°08' N, 10°02' E, 17 Jul. 1984, Munk leg.; 3 ♀♀, N Jutland, Haraldskær, 26 Aug. 1984, Munk leg.; 1 ♀, E Jutland, Jelling Skov, 25 Sep. 1983, Munk leg.; 1 ♂, E Jutland, Mols, Strandkær, 29 Sep. 1986, Munk leg.; 1 ♀, E Jutland, Rosenvold, N of Vejle, NG 57, 28 Jul. 1984, Munk leg.; 12 ♀♀, E Jutland, Tirsbæk, 5 km E of Vejle, 18 Aug. 1984 and 16 Jun. 1986, Munk leg.; 1 ♀, E Jutland, Tiufkær Skov, 30 Jun. 1983, Munk leg.; 1 ♀, 2 ♂♂, E Jutland, Viuf Skov, S of Vejle, 24 and 29 Aug. 1984, Munk leg.; 1 ♀, E Jutland, Randbøldal, W of Vejle, 7 Jun. 1983, Munk leg.; 3 ♀♀, N Jutland, Sæbygård Skov, 12 Aug. 1984, Munk leg.; 1 ♀, N Jutland, Sæbygård Skov, NJ 85, 12 Aug. 1984, Munk leg.; 2 ♀♀, N Jutland, Tværsted Plantage, NJ 78, 17 and 20 Jun. 1982, Munk leg.; 6 ♀♀, N Jutland, Uggerby Plantage, 57°35' N, 10°05' E, 22 Jun. 1983, 10 Aug. 1984 and 24 Jul. 1985, Munk leg.; 1 ♀, W Jutland, Grene, S of Billund, 3 Jul. 1984, Munk leg.; 3 ♀♀, W Jutland, Haslung, NE of Ribe, 2 Jul. 1984, Munk leg.; 1 ♀, W Jutland, Tvilho, 30 km NE of Esbjerg, 17 Jul. 1986, Munk leg.; 1 ♀, E Jutland, Ammitsbøl Skov, 55°38' N, 9°26' E, 16 Jul. 1982, Munk leg.; 2 ♀♀, E Jutland, Boes Skov, 56°03' N, 9°50' E, 24 Jun. 1985, Munk leg.; 2 ♀♀, 1 ♂, E Jutland, Elsted Skov, 10 km N of Aarhus, 1 Sep. 1984, Munk leg.; 1 ♀, E Jutland, Ferup Skov, 55°33' N, 9°22' E, 5 Jul. 1983, Munk leg.; 2 ♀♀, E Jutland, Fuglslev Plantage, 56°16' N, 10°43' E, 2 Oct. 1988, Munk leg.; 1 ♀, E Jutland, Grejsdal, N of Vejle, 9 Jun. 1986, Munk leg.; 1 ♀, E Jutland, Grejsdal, 1 km NE of Lerbæk Mølle, 21 Aug. 1984, Munk leg.; 1 ♀, E Jutland, Hadsund, 56°44' N, 10°05' E, 26 Jun. 1984, Munk leg.; 1 ♀, E Jutland, Hessel, S of Grenå, 56°23' N, 10°52' E, 9 Aug. 1989, Munk leg.; 43 ♀♀, 2 ♂♂, E Jutland, Højen Bæk, 5 km S of Vejle, 8 Jul. 1982, 22 May and 12 Sep. 1983, 27 Jun., 5, 6 and 23 Jul., 17, 20, 23–25 and 30 Aug., 16 Sep. 1984, 9 Apr., 21 Jun., 24 Aug. and 7 Sep. 1986, 3 and 10 Jul. 1987, 4 Jun. 1989, Munk leg.; 4 ♀♀, E Jutland, Højkol Skov, 56°05' N, 9°38' E, 7 Jul. 1986, 16 and 22 Aug. and 17 Sep. 1987, 21 Jul. 1988, Munk leg.; 3 ♀♀, E Jutland, Klattrup, 7 km S of Vejle, 2 Sep. 1983 and 16 Sep. 1984, Munk leg.; 15 ♀♀, E Jutland, Nørreris Skov, 10 km NW of Aarhus, 14 Jul., 28 Aug., 5 and 11 Sep., 22 Oct. 1985, 16 Jul. and 4 Sep. 1986, Munk leg.; 1 ♀, E Jutland, Nørreris, 10 km E of Kolding, 18 Jul. 1982, Munk leg.; 1 ♀, E Jutland, Palsgård Skov, 56°01' N, 9°25' E, 28 Sep. 1987, Munk leg.; 2 ♀♀, E Jutland, Rugård Sønderkov, 56°16' N, 10°49' E, 22 Jun. 1990, Munk leg.; 1 ♀, E Jutland, Skibet, W of Vejle, 21 Jun. 1988, Munk leg.; 4 ♀♀, E Jutland, Smidstrup Skov, 55°36' N, 9°35' E, 28 Jun. 1984, Munk leg.; 1 ♀, E Jutland, Staksrode Skov, 55°41' N, 9°51' E, 10 Jun. 1984, Munk leg.; 3 ♀♀, E Jutland, Tornby Plantage, 57°32' N, 9°55' E, 11 Aug. 1984, Munk leg.; 9 ♀♀, 1 ♂, E Jutland, Yding Skov, 56°00' N, 9°48' E, 24 Jun. 1984, 24 and 28 Jun., 1 Jul., 19 Sep. and 2 Oct. 1985, 1 Jun. 1990, Munk leg.; 1 ♀, N Jutland, Børglumkloster Skov, 57°24' N, 10°13' E, 19 Jun. 1984, Munk leg.; 1 ♀, N Jutland, near Rold

Skov, 25 km S of Alborg, 27 Jul. 1985, Munk leg.; 1 ♀, N Jutland, Sæbygård Skov, 57°20' N, 10°29' E, 3 Jun. 1986, Munk leg.; 1 ♀, N Jutland, Villestrup, 56°46' N, 9°56' E, 26 Jun. 1984, Munk leg.; 3 ♀♀, NW Jutland, Vilsbøl Plantage, 57°02' N, 8°34' E, 20 Aug. 1989, Munk leg.; 1 ♀, S Jutland, Als Nørreskov, 55°01' N, 9°54' E, 28 Jun. 1987, Munk leg.; 1 ♀, W Jutland, Dollerup, 56°22' N, 9°20' E, 31 Aug. 1986, Munk leg.; 1 ♀, W Jutland, Nørholm Skov, 55°41' N, 8°35' E, 8 Jul. 1984, Munk leg.; 1 ♀, Lolland, Errindlev, 25 May 1990, Munk leg.; 1 ♀, Lolland, Frejlev Skov, 54°42' N, 11°51' E, 9 Jun. 1987, Munk leg.; 1 ♂, N Jutland, Madum, 16 Aug. 1985, Munk leg.; 1 ♀, N Jutland, Rold, Mossø, 14 Aug. 1984, Munk leg.; 4 ♀♀, E Jutland, Smidstrup Skov, 28 Jun. 1984, Munk leg.; 1 ♂, N Jutland, St. Vildmose, 6 Aug. 1984, Munk leg.

### Distribution

Palaeartic Region (Peris-Felipo *et al.* 2014a).

*\*Dinotrema mesocaudatum* van Achterberg, 1988

### Material examined

DENMARK: 2 ♀♀, Klattrup, 19 Aug. 1991, Munk leg.

### Distribution

Palaeartic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).

*\*Dinotrema microcera* (Thomson, 1895)

### Material examined

DENMARK: 1 ♀, E Jutland, Grejsdal, Verbæk, 9 Aug. 1985, Munk leg.; 5 ♀♀, E Jutland, Egå Skov, 13–25 Sep. 1984, Munk leg.; 1 ♀, E Jutland, Fuglslev Plantage, 56°16' N, 10°43' E, 10 Sep. 1988, Munk leg.; 4 ♀♀, 4 ♂♂, E Jutland, Højen Bæk, 20 Jun. 1978, 30 Jun. 1982, 29 and 31 Aug. 1983, 6 Jul. and 23 Aug. 1984, 10–11 Aug. 1985, Munk leg.; 2 ♀♀, E Jutland, Nørreris Skov, 10 km NW of Aarhus, 5 Oct. 1985, Munk leg.; 1 ♀, E Jutland, Staksrode Skov, 55°41' N, 9°51' E, 30 Jun. 1987, Munk leg.; 1 ♀, N Jutland, Frederikshavn, Vandværksskoven, 2 Aug. 1987, Munk leg.; 1 ♂, W Jutland, Klelund Plantage, 55°34' N, 8°55' E, 22 Jun. 1986, Munk leg.; 3 ♀♀, 1 ♂, E Jutland, Klattrup, 7 km S of Vejle, 10 Jul. and 27 Aug. 1982, 4 Aug. 1983, and 1 Sep. 1984, Munk leg.; 1 ♀, N Jutland, Måstrup Mose, 15 km NW of Frederikshavn, 21 Jun. 1982, Munk leg.; 1 ♀, 1 ♂, W Jutland, Ammitsbøl Skov, 24 Jul. 1984 and 14 Aug. 1997, Munk leg.; 1 ♂, E Jutland, Monstrup, 21 Jun. 1982, Munk leg.; 1 ♀, E Jutland, Nim Skov, 26 Aug. 1984, Munk leg.; 1 ♀, E Jutland, Skanderborg, highway, 21 Sep. 1984, Munk leg.; 1 ♂, E Jutland, Smidstrup Skov, 28 Jun. 1984, Munk leg.; 1 ♀, E Jutland, Strandkær Mols, 3 Oct. 1984, Munk leg.; 5 ♀♀, 1 ♂, N Jutland, Tirsbæk, 18 Aug. 1984, 2 and 18 Aug. 1985, Munk leg.; 1 ♀, 1 ♂, E Jutland, Tiufkær Skov, 20 Jul. 1984, Munk leg.; 1 ♀, E Jutland, Viuf Skov, 29 Aug. 1984, Munk leg.

### Distribution

Western Palaeartic (Peris-Felipo *et al.* 2014a). Denmark (first record).

*Dinotrema necrophilum* (Hedqvist, 1972)

### Published material

DENMARK: 3 ♀♀, E Jutland, Fuglslev, 56°16' N, 10°43' E, 26 May 1999, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### Additional material examined

DENMARK: 1 ♀, 2 ♂♂, E Jutland, Klattrup, 7 km S of Vejle, 12 Aug. 1982, 25 and 31 May 1983, Munk leg.; 10 ♀♀, E Jutland, Fuglslev, Stokbæk, 56°16' N, 10°43' E, 26 May 1999, Munk leg.

### **Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a).

### ***Dinotrema nervosum*** (Haliday, 1833)

#### **Published material**

Denmark (Yu *et al.* 2012).

### **Distribution**

Palaearctic Region (Peris-Felipo *et al.* 2014a).

### **Remarks**

According to Yu *et al.* (2012), *D. nervosum* was recorded from Denmark by Fischer (1972: 422). However, in Fischer's paper only a single nation (Ireland) is listed and, therefore, the presence of *D. nervosum* in Denmark is not confirmed.

### **\**Dinotrema nigricorne*** (Thomson, 1985)

#### **Material examined**

DENMARK: 1 ♀, E Jutland, Klattrup, S of Vejle, 13 Jul. 1982, Munk leg.

### **Distribution**

Palaearctic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).

### **\**Dinotrema oleraceum*** (Tobias, 1962)

#### **Material examined**

DENMARK: 5 ♀♀, 4 ♂♂, E Jutland, Højen Bæk, 17 Aug. and 17–26 Sep. 1980, ex *Amanita subescens* (Pers. ex Fr.) Gray, Munk leg.

### **Distribution**

Palaearctic Region (Peris-Felipo *et al.* 2014a). Denmark (first record).

### **Remarks**

Collected from *Amanita subescens* (Pers. ex Fr.) Gray (Fungi).

### ***Dinotrema occipitale*** (Fischer, 1973)

#### **Published material**

DENMARK: 1 ♀, N Jutland, Tornby Klitplantage, 57°32' N, 9°55' E, 31 Jul. 1990, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

#### **Additional material examined**

DENMARK: 1 ♀, E Jutland, Albæk, NE of Hemmed, 5 Oct. 1997, Munk leg.; 1 ♀, E Jutland, Hessel near Grenå, 9 Aug. 1989, Munk leg.; 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 30 Aug. 1983, Munk leg.; 1 ♀, E Jutland, Højlund Skov, 56°03' N, 9°42' E, 22 Aug. 1987, Munk leg.; 1 ♀, E Jutland, Nørreris Skov, 10 km NW of Aarhus, 28 Aug. 1985, Munk leg.; 1 ♀, E Jutland, Yding Skov, 56°00' N, 9°48' E, 19 Sep. 1985, Munk leg.; 2 ♀♀, E Jutland, Sillerup, 12 km SW of Silkeborg, 15 Sep. 1986 and 11 Sep. 2000, Munk leg.; 1 ♀, W Jutland, Nørholm Skov, 8 Jul. 1984, Munk leg.; 1 ♀, N Jutland, Rebild, 15 Sep. 1982, Munk leg.

### Distribution

Palearctic Region (Peris-Felipo *et al.* 2014a).

#### *Dinotrema oxybelum* Munk & Peris-Felipo, 2014

### Published material

DENMARK: 1 ♀ (paratype), W Jutland, Ammitsbøl Skov, 24 Jul. 1984, Munk leg. (NMA); 1 ♀, E Jutland, Klattrup, 7 km S of Vejle, 19 Jul. 1983, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Hørbylunde, 56°08' N, 9°24' E, 22 Jun. 1987, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### Distribution

Western Palearctic (Peris-Felipo *et al.* 2014a). Only known from Denmark.

#### *Dinotrema paludellae* Munk & Peris-Felipo, 2013

### Published material

DENMARK: 1 ♀ (holotype), 2 ♀♀ (paratypes), E Jutland, Sillerup, 12 km SW of Silkeborg, 19 and 24 May 1986, Munk leg. (NMA); 1 ♀ (paratype), W Jutland, Bredsgårde, 56°27' N, 9°16' E, 30 May 1985, Munk leg. (NMA); 1 ♀, E Jutland, Klattrup, 7 km S of Vejle, 27 Aug. 1982, Munk leg. (ENV); 1 ♀, N Jutland, Villestrup, 56°46' N, 9°56' E, 15 Jun. 1984, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### Distribution

Western Palearctic (Munk *et al.* 2013b; Peris-Felipo *et al.* 2014a). Only known from Denmark.

#### *Dinotrema paramicum* Munk & Peris-Felipo, 2013

### Published material

DENMARK: 1 ♀ (holotype), 3 ♀♀ (paratypes), E Jutland, Mols, Strandkær 56°14' N, 10°25' E, 30 Sep. 1982, Munk leg. (ENV, NMA) (Peris-Felipo *et al.* 2014a).

### Distribution

Palearctic Region (Munk *et al.* 2013a; Peris-Felipo *et al.* 2014a).

#### *Dinotrema pratense* van Achterberg, 1988

### Published material

DENMARK: 1 ♀, E Jutland, Skramsø Plantage, 56°17' N, 10°40' E, 4 Sep. 1989, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

### Additional material examined

DENMARK: 1 ♂, N Jutland, Åstrup, 16 May 1982, Munk leg.; 1 ♀, E Jutland, Klattrup, 4 Aug. 1984, Munk leg.; 1 ♂, N Jutland, NJ 67, Slotved Skov, 20 Sep. 1982, swept on *Lepiota* sp., Munk leg.; 1 ♀, E Jutland, Skramsø Plantage, 56°17' N, 10°40' E, 4 Sep. 1989, Munk leg.

### Distribution

Palearctic Region (Peris-Felipo *et al.* 2014a).

### Remarks

One specimen was collected from *Lepiota* sp. (Fungi).

*Dinotrema propodeale* (Tobias, 1962)

**Published material**

DENMARK: 4 ♀♀, N Jutland, NJ77, Sindal, 25 Jul. 1985, Munk leg. (NHMW); 2 ♀♀, E Jutland, Grejsdal, 1 km NE of Lerbæk Mølle, 9 Aug. 1985, Munk leg. (NHMW) (Peris-Felipo *et al.* 2014a).

**Distribution**

Palearctic Region (Peris-Felipo *et al.* 2014a).

*\*Dinotrema pulvinatum* (Stelfox & Graham, 1949)

**Material examined**

DENMARK: 1 ♀, Falster, Vålse Vesterskov, 54°58' N, 11°46' E, 9 Jun. 1987, Munk leg.; 1 ♀, E Jutland, Hjelm, 3–5 Aug. 1992, Munk leg.; 1 ♀, E Jutland, Fuglslev, 56°16' N, 10°43' E, 9 Aug. 1998, Munk leg.; 1 ♀, E Jutland, Elsegårde Skov, 56°10' N, 10°43' E, 7 Jul. 1988, Munk leg.; 2 ♀♀, 1 ♂, E Jutland, Glatved, 56°17' N, 10°50' E, 15 Aug. 1992 and 18 Aug. 1997, Munk leg.; 1 ♀, E Jutland, Lykkesholm, 56°20' N, 10°48' E, 16 Jul. 1988, Munk leg.; 1 ♂, E Jutland, Rugård Sønderskov, 56°16' N, 10°49' E, 20 Jul. 1996, Munk leg.; 1 ♂, E Jutland, Trelde Skov, N of Fredericia, 11 Jul. 1977, swept in old beech wood, Munk leg.; 1 ♀, N Jutland, 3 km SW of Gerum, 21 Aug. 1997, swept on moor/edge of pond in Guldbækskær, Munk leg.; 1 ♂, N Jutland, Sæbygård Skov, 57°20' N, 10°29' E, 29 Aug. 1996, Munk leg.; 1 ♀, N Jutland, Vrangbæk, 5 km SW of Frederikshavn, 30 Aug. 1996, swept on wood-edge, Munk leg.

**Distribution**

Palearctic Region (Yu *et al.* 2012). Denmark (first record).

**Remarks**

Some specimens were sampled from old beech wood and moor edge.

*Dinotrema semicompressum* (Stelfox & Graham, 1949)

**Published material**

DENMARK: 1 ♀, E Jutland, Rugård Sønderskov, 56°16' N, 10°49' E, 15 Sep. 1996, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

**Distribution**

Palearctic Region (Peris-Felipo *et al.* 2014a).

*Dinotrema significarium* (Fischer, 1973)

**Published material**

DENMARK: 6 ♀♀, E Jutland, Højen Bæk, 5 km S of Vejle, 1 and 4 Jun. 1984, Munk leg. (NHMW) (Peris-Felipo *et al.* 2014a).

**Material examined**

DENMARK: 1 ♀, E Jutland, Egå, 10 km NE Aarhus, 13–19 Sep. 1984, Munk leg.; 1 ♀, E Jutland, Grejsdalen, Vejle, 1 km NE Lerbæk, 9 Aug. 1985, Munk leg.

**Distribution**

Palearctic Region (Peris-Felipo *et al.* 2014a).

*Dinotrema tergitale* (Fischer, 1973)

**Published material**

DENMARK: 2 ♀♀, E Jutland, Hestehave, S of Rønde, 20 Jul. 2000, Munk leg. (ENV) (Peris-Felipo *et al.* 2014a).

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a).

*Dinotrema thurnense* (Fischer, 1977)

**Published material**

DENMARK: 1 ♀, E Jutland, Hestet, S of Grenå, 55°23' N, 10°52' E, 13 Aug. 1989, Munk leg. (HNHM); 2 ♀♀, E Jutland, Højen Bæk, 5 km S of Vejle, 14 Jul. 1984 and 16 Jun. 1986, Munk leg. (NHMW); 1 ♀, W Jutland, Klelund Plantage, 55°34' N, 08°55' E, 30 Jun. 1986, Munk leg. (NHMW) (Peris-Felipo *et al.* 2014a).

**Material examined**

DENMARK: 1 ♀, E Jutland, Højen Bæk, 5 km S of Vejle, 15 Jun. 1989, Munk leg.

**Distribution**

Western Palaearctic (Peris-Felipo *et al.* 2014a).

*Dinotrema valvulatum* Munk & Peris-Felipo, 2013

**Published material**

DENMARK: 1 ♀ (holotype), 1 ♀ (paratype), E Jutland, Højen Bæk, 5 km S of Vejle, 7 Jul. 1984, Munk leg. (NMA) (Peris-Felipo *et al.* 2014a).

**Distribution**

Palaearctic Region (Peris-Felipo *et al.* 2014a).

**Remarks**

Both specimens were collected in a moist wood with *Alnus*, *Fraxinus* and *Fagus*.

Genus *Eudinostigma* Tobias, 1986

\**Eudinostigma latistigma* (Fischer, 1962)

**Material examined**

DENMARK: 9 ♀♀, 3 ♂♂, E Jutland, Horsted, 7 km of Vejle, 31 May–2 Jun., 26 Jun., 5–9 Jul., and 2–4 Aug. 1976, Munk leg.; 1 ♂, N Jutland, Børglumkloster Skov, 57°24' N, 10°13' E, 3 Aug. 1997, Munk leg.

**Distribution**

Palaearctic Region (Yu *et al.* 2012). Denmark (first record).

Genus *Orthostigma* Ratzeburg, 1844

*Orthostigma cratospilum* (Thomson, 1895)

**Published material**

“Kb. [Dyrehaven, Zealand]” (Königsmann 1969).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Orthostigma laticeps* (Thomson, 1895)

**Published material**

“Aasø, Langeland; Rudehegn, Zealand” (Königsmann 1969).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Orthostigma longicubitale* Königsmann, 1969

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Oriental and Palaeartic Regions (Yu *et al.* 2012).

*Orthostigma pumilum* (Nees, 1834)

**Published material**

“Dänemark; Geelsskov, Zealand; Furesøen, Zealand; Dyrehaven, Zealand; Aasø, Langeland;” (Königsmann 1969).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Orthostigma sordipes* (Thomson, 1895)

**Published material**

“Als af Oberlehrer Wüstnei”, “NS [Geelsskov, Zealand]” (Thomson 1895; Marshall 1900; Königsmann 1969).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

Genus *Pentapleura* Forster, 1863

*Pentapleura angustula* (Haliday, 1838)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Pentapleura pumilo* (Nees, 1812)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Nearctic, Oceanic and Palaeartic Regions (Yu *et al.* 2012).



Genus *Phaenocarpa* Forster, 1863

*Phaenocarpa conspurcator* (Haliday, 1838)

**Published material**

“Dänemark” (Fischer 1970).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Phaenocarpa impugnata* Papp, 1972

**Published material**

”Stenholt Indelukke, Suserup Skov, and Frederikslund Skov” (Papp 1972).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Phaenocarpa ruficeps* (Nees, 1812)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Afrotropical, Nearctic, Oriental and Palaeartic Regions (Yu *et al.* 2012).

Genus *Symphanes* Foerster, 1863

*Symphanes (Neosymphanes) striolata* (Thomson, 1895)

**Published material**

“Denmark” (Koponen 2000).

**Distribution**

Western Palaeartic (Yu *et al.* 2012).

Genus *Synaldis* Foerster, 1863

\**Synaldis acutidentata* Fischer, 1970

**Material examined**

DENMARK: 2 ♀♀, E Jutland, Højkøl Skov, 56°05' N, 9°38' E, 7 Jul. 1986 and 21 Jul. 1988, Munk leg.; 1 ♀, E Jutland, Ramten Skov, 17 Aug. 1997, Munk leg.; 1 ♀, S Jutland, Arild, 1 Jul. 1986, Munk leg.

**Distribution**

Palaeartic Region (Yu *et al.* 2012). Denmark (first record).

*Synaldis agaricae* Munk & Peris-Felipo, 2014

**Published material**

DENMARK: 9 ♀♀ (paratypes), N Jutland, Slotved Skov, 20 Sep. 1982, Munk leg. (NHMW, NMA. ZISP); 1 ♀, 1 ♂, N Jutland, Bøgsted Plantage, 16 Sep. 1982, Munk leg. (NMA); 1 ♀, W Jutland, Høgild, 24 Aug. 1985, Munk leg. (NMA); 9 ♀♀, 1 ♂, E Jutland, Mols, Strandkær, 4 Oct. 1983 and 3 Oct. 1984, Munk leg. (ENV, NMA); 4 ♀♀, Nørreris Skov, 10 km NW of Aarhus, 18 Sep. 1988, collected

*European Journal of Taxonomy* 250: 1–48 (2016)

---

on *Chlorophyllum rhacodes* (V. Mahler) (NHMW, NMA); 4 ♀♀, N Jutland, Højen Bæk, 27 Sep. 1982, Munk leg. (NHMW, NMA) (Peris-Felipo *et al.* 2014b).

#### **Additional Material examined**

1 ♀, E Jutland, Klattrup, 27 Sep. 1982, Munk leg.

#### **Distribution**

Palaeartic Region (Peris-Felipo *et al.* 2014b).

#### **Remarks**

One specimen was collected from *Agaricus nivescens* (Fungi) and another one from *Chlorophyllum rhacodes* (Fungi).

#### **\**Synaldis cultrigaster* Fischer, 1970**

#### **Material examined**

DENMARK: 1 ♀, NE Zealand, Allindelille Skov, 14 Jul. 1986, Munk leg.; 2 ♀♀, E Jutland, Nørreskov, 10 km E of Kolding, 18 Sep. 1982 and 5 Jul. 1987, Munk leg.

#### **Distribution**

Palaeartic Region (Yu *et al.* 2012). Denmark (first record).

#### ***Synaldis machiarum* Munk & Peris-Felipo, 2014**

#### **Published material**

DENMARK: 1 ♀ (holotype), 5 ♀♀ (paratypes), E Jutland, Højen Bæk 5 km S of Vejle, 17 Jul. 1983, 5–6, 21, 30 Jul. 1984, and 18 Aug. 1984, Munk leg. (ENV, NMA. ZISP); 1 ♀ (paratype), E Jutland, Vingsted, 10 km SW of Vejle, 8 Jun. 1983, Munk leg. (NMA); 1 ♀ (paratype), E Jutland, Tirsbæk, 5 km E of Vejle, 18 Aug. 1984, Munk leg. (NMA); 1 ♀ (paratype), N Jutland, Børglumkloster Skov, 57°24' N, 10°13' E, 1984, Munk leg. (NMA) (Peris-Felipo *et al.* 2014b).

#### **Distribution**

Palaeartic Region (Yu *et al.* 2012). Only known from Denmark.

#### **\**Synaldis maxima* Fischer, 1962**

#### **Material examined**

DENMARK: 1 ♀, E Jutland, 56°15' N, 10°42' E, N of Stubbe Sø, 19 Aug. 1982, Munk leg.; 2 ♂♂, N Jutland, Nørlund, near Rold Skov, 25 km S of Ålborg, 14 May 2000, Munk leg.; 2 ♀♀, E Jutland, Sillerup, 24 Jun. 1986 and 27 Jun. 1986, Munk leg.

#### **Distribution**

Palaeartic Region (Yu *et al.* 2012). Denmark (first record).

#### **\**Synaldis megastigma* Fischer, 1967**

#### **Material examined**

DENMARK: 1 ♀, E Jutland, Højkøl Skov, 56°05' N, 9°38' E, 15 Jul. 1987, Munk leg.

#### **Distribution**

Western Palaeartic (Yu *et al.* 2012). Denmark (first record).

Genus *Tanycarpa* Forster, 1863

*Tanycarpa gracilicornis* (Nees, 1812)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Oriental and Palaearctic Regions (Yu *et al.* 2012).

Tribe Dacnusiini Foerster, 1863

Genus *Antrusa* Nixon, 1943

*Antrusa flavicoxa* (Thomson, 1895)

**Published material**

“Randers (Jutland), Donse and Damhusmose (Zealand) and Copenhagen” (Griffiths 1967a).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

Genus *Chaenusa* Haliday, 1839

*Chaenusa conjungens* (Nees, 1811)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

Genus *Chorebus* Haliday, 1833

*Chorebus (Phaenolexis) abaris* (Nixon, 1943)

**Published material**

“Utterslev Mose, Zealand” (Griffiths 1967b).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) affinis* (Nees, 1811)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Chorebus (Stiphrocera) albipes* (Haliday, 1839)

**Published material**

“Damhusmose, Utterslevmose, Køge (Zealand), Tranekær Hestehave, Langeland” (Griffiths 1967b).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Chorebus (Stiphrocera) aphantus* (Marshall, 1896)

**Published material**

“Køge, Zealand; Damhusmose, Zealand; Aarhus, Jutland; Randers, Jutland” (Griffiths 1967b).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Chorebus (Chorebus) bensoni* (Nixon, 1943)

**Published material**

“Randers, Jutland; Damhusmose, Zealand” (Griffiths 1967b).

**Distribution**

Western Palaeartic (Yu *et al.* 2012).

*Chorebus (Stiphrocera) calthae* Griffiths, 1967

**Published material**

“Randers, Jutland” (Griffiths 1967b).

**Distribution**

Western Palaeartic (Yu *et al.* 2012).

*Chorebus (Stiphrocera) cinctus* (Haliday, 1839)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Chorebus (Chorebus) crassipes* (Stelfox, 1954)

**Published material**

“Randers, Jutland” (Griffiths 1967b).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Chorebus (Stiphrocera) fallaciosae* Griffiths, 1967

**Published material**

“Randers, Jutland” (Griffiths 1967b).

**Distribution**

Western Palaeartic (Yu *et al.* 2012).

*Chorebus (Chorebus) flavipes* (Goureau, 1851)

**Published material**

“Copenhagen district, Zealand” (Griffiths 1968a).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) hilaris* Griffiths, 1967

**Published material**

“Denmark” (Griffiths 1967a).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) humeralis* Griffiths, 1968

**Published material**

“Rudehegn, Køge, Damhusmose, Zealand” (Griffiths 1968a).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) kama* (Nixon, 1945)

**Published material**

“Køge, Rudehegn, Damhusmose and Utterslev Mose (Zealand); Randers (Jutland)” (Griffiths 1967b).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) lanigerus* (Stelfox, 1957)

**Published material**

“Randers, Jutland” (Griffiths 1968a).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Stiphrocera) misellus* (Marshall, 1895)

**Published material**

Hoptrup (Kolding, Jutland) (Drea *et al.* 1982).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Chorebus (Chorebus) nigriscapus* (Nixon, 1949)

**Published material**

“Randers and Aarhus, Jutland” (Griffiths 1968a).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) nydia* (Nixon, 1937)

**Published material**

“Damhusmose, Donse and Utterslev Mose (Zealand) and Copenhagen” (Griffiths 1967a).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Chorebus (Chorebus) poemyzae* Griffiths, 1968

**Published material**

“Donse, Zealand; Randers, Jutland; Damhusmose, Zealand; Utterslevmose, Zealand; Taastrup, Zealand; Koge, Zealand” (Griffiths 1968a).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) rufipes* (Nees, 1812)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Chorebus (Stiphrocera) rotundiventris* (Thomson, 1895)

**Published material**

“Donse, Zealand” (Griffiths 1967a).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Stiphrocera) schlicki* Griffiths, 1968

**Published material**

“Damhusmose, Zealand; Donse, Zealand; Utterslevmose, Zealand; Præstevangen, Frederiksborg, Zealand; Randers, Jutland” (Griffiths 1968b).

**Distribution**

Western Palaearctic (Yu *et al.* 2012). Only known from Denmark.

*Chorebus (Chorebus) tamiris* (Nixon, 1943)

**Published material**

“Randers, Jutland” (Griffiths 1967b).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) tenellae* Griffiths, 1967

**Published material**

“Randers, Jutland; Praestevangen, Zealand” (Griffiths 1967b).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Chorebus (Chorebus) uliginosus* (Haliday, 1839)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Chorebus (Stiphrocera) xanthaspidae* Griffiths, 1968

**Published material**

“Rudehegn, Præstevangen, Frederiksborg, Zealand” (Griffiths 1968b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

Genus *Coelinus* Nees, 1819

*Coelinus parvulus* (Nees, 1811)

**Published material**

“Dyrehaven (Copenhagen)” (Maréchal 1938).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

Genus *Coloneura* Forster, 1863

*Coloneura ate* (Nixon, 1943)

**Published material**

“Danish specimen” (Griffiths 1968b; Fischer 1997; Lozan *et al.* 2010).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Coloneura danica* Griffiths, 1968

**Published material**

“Utterslev Mose, Damhusmose, Zealand” (Griffiths 1968b; Fischer 1997; Lozan *et al.* 2010).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Coloneura major* Griffiths, 1967

**Published material**

“Damhusmose, Zealand” (Griffiths 1967b; Fischer 1997).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

Genus *Dacnusa* Haliday, 1833

*Dacnusa (Agonia) adducta* (Haliday, 1839)

**Published material**

“Præstevangen, Frederiksborg, Zealand” (Griffiths 1968b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Dacnusa) confinis* Ruthe, 1859

**Published material**

“Køge and Utterslev Mose, Zealand” (Griffiths 1967b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Pachysema) discolor* (Foerster, 1862)

**Published material**

“Vester Fælled, Copenhagen” (Griffiths 1968b).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Dacnusa (Dacnusa) dryas* (Nixon, 1948)

**Published material**

“Hoptrup (Kolding, Jutland)” (Drea *et al.* 1982).

**Distribution**

Nearctic and Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Pachysema) ergeteles* (Nixon, 1954)

**Published material**

“Randers, Jutland” (Griffiths 1967b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Pachysema) fasciata* Stelfox, 1954

**Published material**

“Damhusmose, Zealand and Randers, Jutland” (Griffiths 1967b).



**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Dacnusa (Aphanta) hospita* (Foerster, 1862)

**Published material**

“Randers, Jutland” (Griffiths 1967b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Dacnusa) lugens* (Haliday, 1839)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Pachysema) macrospila* (Haliday, 1839)

**Published material**

“Randers and Aalborg (Jutland), Køge, Damhusmose and Upperslev Mose (Zealand)” (Griffiths 1967b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Dacnusa) maculipes* Thomson, 1895

**Published material**

Hoptrup (Kolding, Jutland) (Drea *et al.* 1982).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Pachysema) monticola* (Foerster, 1862)

**Published material**

“Præstevangen, Zealand; Randers, Jutland” (Griffiths 1967b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Pachysema) nigrella* Griffiths, 1967

**Published material**

“Randers, Jutland; Præstevangen, Zealand; Copenhagen” (Griffiths 1967b).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Dacnusa (Pachysema) obesa* Stelfox, 1954

**Published material**

“Utterslev Mose, Darnhusmose, Køge and Donse, Zealand; Randers, Jutland” (Griffiths 1968b).

**Distribution**

Western Palaearctic (Yu *et al.* 2012).

*Dacnusa (Pachysema) sibirica* Telenga, 1935

**Published material**

“Vester Fælled, Copenhagen” (Griffiths 1967b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Dacnusa) stramineipes* (Haliday, 1839)

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Dacnusa) sulcata* (Tobias, 1962)

**Published material**

“Randers, Jutland” (Griffiths 1967b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

*Dacnusa (Dacnusa) tarsalis* Thomson, 1895

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Western Palaearctic Region (Yu *et al.* 2012).

Genus *Exotela* Forster, 1863

*Exotela gilvipes* (Haliday, 1839)

**Published material**

“Randers, Jutland; Darnhusmose and Køge, Zealand” (Griffiths 1967b).

**Distribution**

Palaearctic Region (Yu *et al.* 2012).

Genus *Polemochartus* Schulz, 1911

*Polemochartus liparae* (Giraud, 1863)

**Published material**

“Sønderborg af Oberlehrer Wüstnei” (Thomson 1895).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

Genus *Protodacnusa* Griffiths, 1964

*Protodacnusa litoralis* Griffiths, 1964

**Published material**

Data obtained from Fauna Europea (van Achterberg 2013).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

Genus *Trachionus* Haliday, 1833

*Trachionus (Planiricus) hians* (Nees, 1816)

**Published material**

“Denmark” (Zaykov 1982).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Trachionus (Trachionus) mandibularis* (Nees, 1816)

**Published material**

“Denmark” (Zaykov 1982).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

*Trachionus (Planiricus) ringens* (Haliday, 1839)

**Published material**

“Denmark” (Zaykov 1982).

**Distribution**

Palaeartic Region (Yu *et al.* 2012).

**Discussion**

Alysiinae is one of the largest subfamilies within Braconidae and numerous species remain to be described around the World (Peris-Felipo *et al.* 2014a). Recently, several Alysiinae revisions and catalogues have been published for different genera (Peris-Felipo *et al.* 2012, 2014a, c; 2015, 2016; Khajeh *et al.* 2014; Gadallah *et al.* 2015; Peris-Felipo 2015; Peris-Felipo & Belokobylskij 2016a, b). However, few studies of Alysiinae from the Nordic countries have been carried out (Munk *et al.* 2013a, b): only 29 species are known from Iceland, 45 species from Finland and Norway, and 234 from Sweden (Yu *et al.* 2012).

In the present study, a total of 153 alysiine species have been catalogued from Denmark (excluding the Faroe Islands and Greenland) with two species described as new for science, *Adelphenaldis leptarticulata* sp. nov. and *A. grandis* sp. nov. However, this number of species is still far from the numbers of better studied adjacent countries: Germany (337), Poland (231), Sweden (234) or the Netherlands (203) (Yu *et al.* 2012; van Achterberg 2013).

Additionally, 38 species are recorded from Denmark for the first time: *Adelphenaldis globipes* (Fischer, 1962), *Alysia (Anarcha) sophia* Haliday, 1838, *Aspilota delicata* Fischer, 1973, *A. furtnerana* Fischer, 1973, *A. fuscicornis* (Haliday, 1838), *A. hirticornis* (Thomson, 1895), *A. imparidens* Fischer, 1974, *A. insolita* (Tobias, 1962), *A. intermediana* Fischer, 1975, *A. iocospecta* Fischer, 1974, *A. iuxtanaeviam* Fischer, 1980, *A. laevinota* Tobias, 1962, *A. nidicola* Hedqvist, 1972, *A. pillerensis* Fischer, 1973, *A. stenogaster* Stelfox & Graham, 1951, *A. styriaca* Fischer, 1973, *A. tetragona* Fischer, 1976, *A. ventasa* Belokobylskij, 2007, *A. vernalis* Stelfox & Graham, 1951, *Dinotrema concinnum* (Haliday, 1838), *D. contracticorne* (Fischer, 1974), *D. cratocera* (Thomson, 1895), *D. cruciatum* (Fischer, 1973), *D. cruciforme* (Fischer, 1973), *D. denticulatum* (Stelfox & Graham, 1951), *D. (Leptotrema) dentifemur* (Stelfox, 1943), *D. divisum* (Stelfox & Graham, 1950), *D. hodiense* (Fischer, 1976), *D. latifemur* (Fischer, 1975), *D. mesocaudatum* van Achterberg, 1988, *D. microcera* (Thomson, 1895), *D. nigricorne* (Thomson, 1895), *D. oleraceum* (Tobias, 1962), *D. pulvinatum* (Stelfox & Graham, 1949), *Eudinostigma latistigma* (Fischer, 1962), *Synaldis acutidentata* Fischer, 1970, *S. cultrigaster* Fischer, 1970, *S. maxima* Fischer, 1962 and *S. megastigma* Fischer, 1967.

In general, the limited number of known Alysiinae from Denmark reflects the paucity of research on this group. Further investigations both on the faunal composition and mainly host associations of Alysiinae are necessary to evaluate their role as biological control of dipterous pests in agricultural and urban landscapes.

## Acknowledgements

The authors are very grateful to Thorkild Munk's family for donating Munk's material to the Natural History Museum of Denmark (Copenhagen, Denmark; NHMD). This work was partly supported for the second author by the Russian Foundation for Basic Research (projects Nos 15–29–02466 and 16–04–00197) and the Russian State Research Project No. 01201351189.

## References

- Belokobylskij S.A. 2005. On the systematic and distribution of three rare alysiine genera (Hymenoptera: Braconidae: Alysiinae). *Genus (Wrocław)* 16 (3): 431–444.
- Belokobylskij S.A. & Tobias V.I. 2007. Alysiinae [in Russian]. In: Lelej A.S. (ed.) *Key to the Insects of the Russian Far East. Vol. Apr. Neuropteroidea, Mecoptera, Hymenoptera. Pt 5*: 9–133. Dalnauka, Vladivostok.
- Berry J.A. 2007. Alysiinae (Insecta: Hymenoptera: Braconidae). *Fauna of New Zealand* 58: 3–94.
- Danish Meteorological Institute 2016. Available from <http://www.dmi.dk/en/vejlr/> [accessed 10 Nov. 2016]
- Den Store Danske 2016. Available from [http://denstoredanske.dk/Danmarks\\_geografi\\_og\\_historie/Danmarks\\_geografi/Danmark\\_generelt/Danmark](http://denstoredanske.dk/Danmarks_geografi_og_historie/Danmarks_geografi/Danmark_generelt/Danmark) [accessed 28 Feb. 2016].
- Drea J.J., Jeandel D. & Gruber F. 1982. Parasites of agromyzid leafminers (Diptera: Agromyzidae) on alfalfa in Europe. *Annals of the Entomological Society of America* 75 (3): 297–310.
- Elpino-Campos A., Del-Claro K. & Prezoto F. 2007. Diversity of social wasps (Hymenoptera: Vespidae) in Cerrado fragments of Uberlandia, Minas Gerais state, Brazil. *Neotropical Entomology* 36: 685–692.

- Fischer M. 1970. Zur Kenntnis der europäischen *Phaenocarpa*-Arten mit besonderer Berücksichtigung der Fauna Niederösterreichs (Hymenoptera, Braconidae, Alysiinae). *Zeitschrift für Angewandte Zoologie* 57: 409–498.
- Fischer M. 1972. Erste Gliederung der paläarktischen *Aspilota*-Arten (Hymenoptera, Braconidae, Alysiinae). *Polskie Pismo Entomologiczne* 42: 323–459.
- Fischer M. 1974a. Studien an Alysiinen-Typen (Hymenoptera, Braconidae, Alysiinae). *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen* 25: 47–51.
- Fischer M. 1974b. Einige neue *Aspilota*-Arten aus Niederösterreich (Hymenoptera: Braconidae: Alysiinae). *Folia Entomologica Hungarica* 27: 59–71.
- Fischer M. 1997. Taxonomische Untersuchungen über Kieferwespen (Insecta: Hymenoptera: Braconidae: Alysiinae) der Alten Welt. *Annalen des Naturhistorischen Museums in Wien, Serie B, Botanik und Zoologie* 99B: 97–143.
- Fischer M. & Beyarslan A. 2012. New species of *Synaldis* Foerster and *Idiasta* Foerster, and further records of Turkish Alysiini (Hymenoptera: Braconidae: Alysiinae). *Zoology in the Middle East* 55: 55–64. <http://dx.doi.org/10.1080/09397140.2012.10648918>
- Gadallah N., Ghahari H., Peris-Felipo F.J. & Fischer M. 2015. A. annotated catalogue of the Iranian Alysiinae (Hymenoptera: Braconidae). *Zootaxa* 3974 (1): 1–28. <http://dx.doi.org/10.11646/zootaxa.3974.1.1>
- Gannota E. 1993. Five species of *Chorebus* (Hymenoptera, Braconidae, Alysiinae, Dacnusiini) new to Finland. *Entomologica Fennica* 4 (1): 13.
- Geodatastyrelsen 2016. Danish Geodata Agency [online]. Available from <http://gst.dk/> [accessed 29 Jan. 2016].
- Gimeno C., Belshaw R. & Quicke D.L.J. 1997. Phylogenetic relationships of the Alysiinae/Opiinae (Hymenoptera: Braconidae) and the utility of cytochrome b, 16S and 28S D2 rRNA. *Insect Molecular Biology* 6 (3): 273–284. <http://dx.doi.org/10.1046/j.1365-2583.1997.00181.x>
- González J.A., Tomé M.A.M., Gayubo S.F. & Torres F. 2000. Himenópteros aculeados capturados mediante trampas Malaise en un sector arenoso de la Submeseta Norte (España) (Hymenoptera, Aculeata). *Nouvelle Revue d'Entomologie* 17: 337–353.
- Griffiths G.C.D. 1967a. The Alysiinae (Hym. Braconidae) parasites of the Agromyzidae (Diptera) II. The parasites of *Agromyza* Fallén. *Beiträge zur Entomologie* 16 (5/6): 551–605.
- Griffiths G.C.D. 1967b. The Alysiinae (Hym. Braconidae) parasites of the Agromyzidae (Diptera) III. The parasites of *Paraphythyomyza* Enderlein, *Phytomyza* Hendel and *Phythyomyza* Fallén. *Beiträge zur Entomologie* 16 (7/8): 775–951.
- Griffiths G.C.D. 1968a. The Alysiinae (Hym. Braconidae) parasites of the Agromyzidae (Diptera) VI. The parasites of *Cerodontha* Rondani s.l. *Beiträge zur Entomologie* 18 (1/2): 63–152.
- Griffiths G.C.D. 1968b. The Alysiinae (Hym. Braconidae) parasites of the Agromyzidae (Diptera) V. The parasites of *Liriomyza* Mik and certain small genera of Phytomyzinae. *Beiträge zur Entomologie* 18 (1/2): 5–62.
- Hedqvist K.J. 1972. Two new species of *Aspilota* Först. (Hym., Ichneumonoidea, Braconidae). *Entomologisk Tidskrift* 93: 216–219.
- Hedqvist K.J. 1973. Two new species of Alysiinae Först. from north Sweden (Hym., Ichneumonoidea, Braconidae). *Entomologisk Tidskrift* 94: 91–93.

- Khajeh N., Yari Z., Rakhshani E. & Peris-Felipo F.J. 2014. A regional checklist of Alysiinae (Hymenoptera: Braconidae) from Iran. *Journal of Crop Protection* 3 (3): 413–423.
- Königsmann E. 1969. Beitrag zur Revision der Gattung *Orthostigma* (Hymenoptera, Braconidae). *Deutsche Entomologische Zeitschrift* 16 (I/III): 1–53.
- Koponen M. 1999. Two species of *Trachyusa* Ruthe, 1854 (Hymenoptera, Braconidae, Alysiinae) in Finland. *Entomologica Fennica* 10: 199–200.
- Koponen M. 2000. Five Alysiinae species new to Finland (Hymenoptera: Braconidae: Alysiinae). *Entomologica Fennica* 11: 239–243.
- Koponen M. & Vikberg V. 2013. Suomen Dacnusiini-lajien luettelo [Check list of the species of Dacnusiini in Finland] (Hymenoptera, Braconidae, Alysiinae). *Sahlbergia* 20: 2–27.
- Lozan A., Belokobylskij S., van Achterberg C. & Monaghan M.T. 2010. Diversity and distribution of Braconidae, a family of parasitoid wasps in the Central European peatbogs of South Bohemia, Czech Republic. *Journal of Insect Science* 10 (16): 1–21.
- Maréchal P. 1938. Sur trois *Coelinius* de la collection Thomson (Hymén., Braconidae, Dacnusiinae). *Bulletin et Annales de la Société entomologique de Belgique* 78 : 201–229.
- Marshall T.A. 1900. Les Braconides (Supplément). In: André E. (ed.) *Espèces des Hyménoptères d'Europe et d'Algérie*. Tome 5 bis, V. Dubosclard, Paris.
- Munk T., Peris-Felipo F.J. & Jiménez-Peydró R. 2013a. New western Palaearctic *Dinotrema* species with mesoscutal pit and only medially sculptured propodeum (Hymenoptera, Braconidae, Alysiinae). *Zookeys* 260: 61–76. <http://dx.doi.org/10.3897/zookeys.260.4084>
- Munk T., Peris-Felipo F.J. & Jiménez-Peydró R. 2013b. New western Palaearctic species of the genus *Dinotrema* Foerster, 1862 with widely sculptured propodeum (Hymenoptera: Braconidae: Alysiinae). *Annales Zoologici* 63 (1): 123–141. <http://dx.doi.org/10.3161/000345413x666174>
- Nielsen L.B. 1994. Distribution and population densities of stem-boring fly larvae (Diptera) and their parasitoids in Danish farmland. *Journal of Applied Entomology* 117 (4): 321–331.
- Papp J. 2008. Seven new species of *Aspilota* Foerster from the Palaearctic Region (Hymenoptera: Braconidae: Alysiinae). *Annales Historico-Naturales Musei Nationalis Hungarici* 100: 245–269.
- Peris-Felipo F.J. 2015. Review of the genus *Aphaereta* Förster, 1863 (Hymenoptera, Braconidae, Alysiinae) from the Afrotropical region, with description of three new species. *Journal of Hymenoptera Research* 42: 1–20. <http://dx.doi.org/10.3897/JHR.42.9135>
- Peris-Felipo F.J. & Belokobylskij S.A. 2016a. First record of the genus *Dinotrema* Foerster, 1862 (Hymenoptera, Braconidae, Alysiinae) from the Neotropical region, with description of four new species and a key to the New World taxa. *European Journal of Taxonomy* 179: 1–23. <http://dx.doi.org/10.5852/ejt.2016.179>
- Peris-Felipo F.J. & Belokobylskij S.A. 2016b. Afrotropical species of the genus *Dinotrema* Foerster, 1862 (Hymenoptera, Braconidae, Alysiinae) with the description of three new taxa and a key for determination. *Bulletin of Insectology* 69 (1): 93–106.
- Peris-Felipo F.J., Belokobylskij S.A. & Jiménez-Peydró R. 2012. Genus *Adelphenaldis* Fischer, 2003 (Hymenoptera: Braconidae: Alysiinae) in Spain, with a key to the World species. *Annales Zoologici* 62 (2): 287–296.
- Peris-Felipo F.J., Belokobylskij S.A. & Jiménez-Peydró R. 2014a. Revision of the western Palaearctic species of the genus *Dinotrema* Foerster, 1862 (Hymenoptera, Braconidae, Alysiinae). *Zootaxa* 3885 (1): 1–483. <http://dx.doi.org/10.11646/zootaxa.3885.1.1>

- Peris-Felipo F.J., Belokobylskij S. & Munk T. 2014b. Three new species of the genera *Aspilota* Foerster and *Synaldis* Foerster from North Europe (Hymenoptera: Braconidae: Alysiinae). *Annales Zoologici* 64 (4): 683–692.
- Peris-Felipo F.J., Belokobylskij S.A., Falcó-Garí J. & Jiménez-Peydró R. 2014c. *Aspilota*-group (Hymenoptera: Braconidae: Alysiinae) diversity in Mediterranean Natural Parks of Spain. *Biodiversity Data Journal* 2: e1112. <http://dx.doi.org/10.3897/BDJ.2.e1112>
- Peris-Felipo F.J., Ameri A., Talebi A.A. & Belokobylskij S.A. 2015. Review of the genus *Aristelix* Nixon, 1943 (Hymenoptera, Braconidae, Alysiinae), with description of a new species from Iran and clarification of the status of *Antrusa chrysogastra* (Tobias, 1986). *Journal of Hymenoptera Research* 45: 97–111. <http://dx.doi.org/10.3897/JHR.45.5313>
- Peris-Felipo F.J., Yari Z., van Achterberg C., Rakhshani E. & Belokobylskij S.A. 2016. Review of species of the genus *Adeluroloa* Strand, 1928, with a key to the species (Hymenoptera, Braconidae, Alysiinae). *Zookeys* 566: 13–30. <http://dx.doi.org/10.3897/zookeys.566.6684>
- Riedel M., Hansen L.O. & Berg Ø. 2002. Braconidae (Hymenoptera) of Norway, Part 1. *Norwegian Journal of Entomology* 49: 97–108.
- Sharkey M.J. & Wharton R.A. 1997. Morphology and terminology. In: Wharton R.A., Marsh P.M. & Sharkey M.J. (eds) *Manual of the New World Genera of the Family Braconidae (Hymenoptera)*: 19–37. International Society of Hymenopterists, Washington DC.
- Shenefelt R.D. 1974. *Braconidae 7: Alysiinae-Hymenopterorum Catalogus* (new edition), Part II: 937–1113. W. Junk, The Hague.
- Thomson C.G. 1895. LII. Bidrag till Braconidernas Kännedom. *Opuscula Entomologica* 20: 2141–2339.
- Tobias V.I. 1962. The material to alysiine fauna (Hymenoptera, Braconidae, Alysiinae) of the Leningrad Province. *Proceedings of Zoological Institute of the USSR Academy of Sciences* 31: 81–137.
- Tobias V.I. 1986a. Order Hymenoptera, family Braconidae (2). Key to the insects of the European part of the USSR, III/5: 1–309.
- Tobias V.I. 1986b. Keys to the insects of the European part of the USSR, Vol. III. Hymenoptera. Part V. Nauka, Leningrad.
- van Achterberg C. 1993. Illustrated key to the subfamilies of the Braconidae (Hymenoptera: Ichneumonoidea). *Zoologische Verhandelingen* 283: 1–189.
- van Achterberg C. 2013. Fauna Europaea: Alysiinae. In: Karsholt O. & Nieuwerkerken E.J. van. 2013. Fauna Europaea: Hymenoptera, Braconidae. Fauna Europaea version 2.6.2. Available from <http://www.faunaeur.org> [accessed 10 Nov. 2016].
- van Achterberg C. & Koponen M. 2003. *Phaenocarpa unguuloetosa* spec. nov. from Finland and *Elasmosoma depressum* spec. nov. from Estonia (Hymenoptera: Braconidae: Alysiinae: Alysiini, Euphorinae: Neoneurini). *Zoologische Mededelingen* 77 (16): 291–299.
- van Achterberg C. & Vikberg V. 2014. *Dinotrema brevis* spec. nov. (Hymenoptera: Braconidae: Alysiinae), a new brachypterous species from Finland. *Zoologische Mededelingen* 88 (1): 1–7.
- Wharton R.A. 1986. The braconid genus *Alysia* (Hymenoptera): a description of the subgenera and a revision of the subgenus *Alysia*. *Systematic Entomology* 11: 453–504.
- Wharton R.A. 1988. The braconid genus *Alysia* (Hymenoptera): a revision of the subgenus *Anarcha*. *Contributions of the American Entomology Institute* 25 (2): 1–69.

Wharton R.A., Marsh P.M. & Sharkey M.J. 1997. *Manual of the New World Genera of the Family Braconidae (Hymenoptera)*. Special Publication 1, International Society of Hymenopterists, Washington DC.

Yu D.S., van Achterberg C. & Horstman K. 2012. Taxapad 2012, Ichneumonoidea 2011. Database on flash-drive. Ottawa, Ontario, Canada.

Zaldivar-Riverón A., Mori M. & Quicke D.L.J. 2006. Systematics of the cyclostome subfamilies of braconid parasitic wasps (Hymenoptera: Ichneumonoidea): a simultaneous molecular and morphological Bayesian approach. *Molecular Phylogenetics and Evolution* 38 (1): 130–145. <http://dx.doi.org/10.1016/j.ympev.2005.08.006>

Zaykov A.N. 1982. The European species of *Symphyta* Förster (Hymenoptera: Braconidae). *Acta Zoologica Hungarica* 28: 171–179.

*Manuscript received: 19 April 2016*

*Manuscript accepted: 8 June 2016*

*Published on: 12 December 2016*

*Topic editor: Gavin Broad*

*Desk editors: Jeroen Venderickx and Laurence Bénichou*

Printed versions of all papers are also deposited in the libraries of the institutes that are members of the *EJT* consortium: Muséum national d'Histoire naturelle, Paris, France; Botanic Garden Meise, Belgium; Royal Museum for Central Africa, Tervuren, Belgium; Natural History Museum, London, United Kingdom; Royal Belgian Institute of Natural Sciences, Brussels, Belgium; Natural History Museum of Denmark, Copenhagen, Denmark; Naturalis Biodiversity Center, Leiden, the Netherlands.



# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [European Journal of Taxonomy](#)

Jahr/Year: 2016

Band/Volume: [0250](#)

Autor(en)/Author(s): Peris-Felipo Ferancisco Javier, Belokobylskij Sergey A.,  
Vilhelmsen Lars, Munk Thorkild

Artikel/Article: [Catalogue of Danish Alysiinae \(Hymenoptera: Braconidae\), with the description of two new species of Aspilota Foerster, 1863 1-58](#)