

# Gall midges (Diptera, Cecidomyiidae) in the collection of the Zoological Museum, Copenhagen

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## Steenstrupia



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The collection of the family Cecidomyiidae in the Zoological Museum, Copenhagen, contains specimens of 86 species of which 65 belong to the subfamily Cecidomyiinae, 15 to the subfamily Porricondylinae and 6 to the subfamily Lestremiinae. All gall midge species in the collection of the Zoological Museum are listed together with important data found on labels and with explanatory notes. The oldest part of the collection includes dry specimens collected by R. C. Stæger during the period 1838–1850 (the Stæger Collection) which consists of 10 species interpreted here under their present valid names, viz. *Campylomyza flavipes* Meigen, *Lestremia cinerea* Macquart, *L. leucophaea* (Meigen), *Monardia (Xylopriona) atra* (Meigen), *Porricondyla flava* (Meigen), *Lestodiplosis variegata* (Macquart), *Planetella grandis* (Meigen), *Xylodiplosis nigratarsis* (Zetterstedt), *Cecidomyia griseola* Meigen and *C. griseicollis* Meigen. Three other species belonging to the Stæger Collection are mounted on microscope slides, viz. *Asynapta* sp., *Claspettomomyia niveitarsis* (Zetterstedt) and *Tetraneuromyia hirticornis* (Zetterstedt). Nine species newly identified in the collection are new records for Denmark, viz. *Brachyneurina peniophorae* Harris, *Jaapiella hypochoeridis* Sylvén, *Lestodiplosis gammae* Barnes, *L. holstei* Kieffer, *L. liviae* Rübsaamen, *L. miki* Barnes, *L. polypori* (Loew), *Macrolabis incolens* Rübsaamen and *Resseliella skuhravoyorum* Skrzypczynska. Specimens of three undescribed species of the genus *Lestodiplosis* were discovered in the collection; larvae developed in leaves rolled by *Deporaus betulae* L. (*Rhynchites betuleti* L.) (Coleoptera, Attelabidae), in galls of *Wachtliella persicariae* (Linné) and in fruits of *Sorbus aucuparia* L. The type material of *Pero fasciata* Meinert, now *Brephometra fasciata* (Meinert), which has been considered lost, was found in the collection.

Keywords: Diptera, Cecidomyiidae, Denmark, Zoological Museum

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## INTRODUCTION

Although Cecidomyiidae are one of the largest families of Diptera, there has never been a Danish specialist that has specifically studied this group. The collection of gall midges is relatively small and incomplete and does not fully represent the Danish gall midge fauna. In 1948 S. L. Tuxen sent a small number of gall midge specimens, which had been collected by various workers in the first half of the 20th century and were kept in the alcohol collection of the Zoological Museum, to the excellent gall midge specialist, H. F. Barnes (Rothamsted Experimental Station, Harpenden, Herts, England), together with a request that he mount microscope slides and identify specimens for the Danish collection. Barnes mounted 150 microscope slides but identified only a part

of them. Since that time the other slides have remained unidentified.

In 2001, in the course of preparing a manuscript on the family Cecidomyiidae for “A Preliminary list of the Diptera of Denmark” (Petersen & Meier 2001), Dr. R. Meier sent me specimens from the Danish alcohol collection for identification and invited me to visit the Zoological Museum in Copenhagen (ZMUC) to try to identify unsorted and otherwise unidentified material of gall midges. I spent three weeks in July 2002 examining the specimens deposited in that collection, the results of which are published here.

The identification of gall midge larvae is based on Möhn (1955), and that of adults on Skuhrová (1997). The nomenclature of gall midge species is based on Skuhrová (1986,

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1989), Jaschhof (1998) and Gagné (2004). I reviewed all the material in the collection, for which I provided valid names; the lists in the present paper are organized according to these names, regardless of the original labels (previous identifications are mentioned where appropriate). Synonyms are given only when relevant to the material in the ZMUC collection. Complete biological data for each gall midge species mentioned here may be found in Skuhravá, Skuhravý & Jørgensen (2005).

This paper is divided into two parts. The first is a description of the arrangement and content of the ZMUC collection of Cecidomyiidae and the second is a list of the gall midge species found there.

The collection of Cecidomyiidae is divided into three parts according to the method used for preservation. The first includes specimens which were prepared in dry condition, speared by pins or glued to small cards, the second contains specimens which are mounted on microscope slides and the third includes gall midge specimens preserved in vials with 75 % alcohol.

## RESULTS

### Description of the collections

**A. Dry collection:** Specimens preserved in dry condition are speared by fine pins or glued to small cards and are placed in four wooden drawers each of which is closed by a removable top framing a glass cover. The size of drawers is 42 x 42 x 6.5 cm. In each drawer there are several small boxes made from plexiglass, either 8 x 6 x 4.8 cm or 123 x 8 x 4.8 cm, where the specimens are preserved in small series.

The oldest part of the collection, specimens found in Denmark before 1840 by R. C. Stæger, is situated in one drawer (without label on the front side). It includes the following 10 species which have mainly historical value. Label names are given in quotation marks and details are provided under the present species name in the list of species below.

- "*Diplosis* Loew *flava* Meig.?" = *Porricondyla flava* (Meigen, 1818)

- "*fusca* Macq." = *Lestremia cinerea* Macquart, 1826
- "*Cecidomyia* Meig. *griseola* Mg?" = *Cecidomyia griseola* Meigen, 1818
- "*griseicollis* Meig." = *Cecidomyia griseicollis* Meigen, 1818
- "*aceris* Meig." = *Campylomyza flavipes* Meigen, 1818
- "*Hormomyia* Loew *fasciata* Meig." = *Planetella grandis* (Meigen, 1804)
- "*variegata* Macq." = *Lestodiplosis variegata* (Macquart, 1826)
- "*Campylomyza* Meig. *atra* Meig." = *Monardia (Xylopriona) atra* (Meigen, 1804)
- "*Lestremia* Macq. *leucophaea* Meig." = *Lestremia leucophaea* (Meigen, 1818)
- "*nigritarsis* Zett." = *Xylodiplosis nigritarsis* (Zetterstedt, 1850)

Only a few specimens of the Stæger Collection are in good condition, the majority of them being heavily damaged. All except one have no labels with any further data. The pin with the specimen of *Hormomyia fasciata* bears a small label: "Schjødte 1838". This is the oldest find of a gall midge species in Denmark.

Three species in the Stæger Collection, viz., *Asynapta* sp., *Claspettomomyia niveitarsis* and *Te-traneuromyia hirticornis*, were transferred by S. Panelius from the dry collection to microscope slides. They have the following numbers: 41-53; 41-54, 41-55; 41-56, respectively.

Dry specimens preserved in the other three drawers were collected not only in Denmark but also in adjacent European countries and in other parts of the world. Small series of dry specimens originate from the following countries: Cameroon, 1949-1950, coll. J.B.S., J.D.; Philippines, September 1961, Noona Dan Expedition; Bismark Island, 1962, Noona Dan Expedition; Tanzania, 1980; Malta, 1992, leg. B. Petersen.

Gall midge specimens collected by various researchers in Denmark, prepared on pins or glued to labels. The following series are present:

- 1902-1923, coll. W. Lundbeck (37 specimens)
- Bagsværd, 1957-1960, coll. L. Lyneborg (27 specimens)
- Dyrehaven, 1879? (illegible), coll. R. W. Schlick (29 specimens)
- Ravnholts Hegn, without data, coll. R. W. Schlick (68 specimens)

- 1960, coll. L. Lyneborg and A. Michaelsen (22 specimens)
- Jylland, Hausted Reservatet, Tved Plantage, 1960, coll. Zoological Museum Expedition
- Jylland, 1964, coll. V. Kock
- Bornholm, 1964, coll. O. Martin and B. V. Petersen
- Lolland, July 1964, coll. N. M. Andersen

In general, dry specimens are not suitable for identification because of their poor condition. Some specimens lack wings, legs, antennae, or even the head or abdomen. It would be necessary to re-prepare the specimens by removing them from pins or cards, transferring them through 75 % alcohol and xylene to Canada Balsam and mounting them on microscope slides. This is a very time-consuming method that usually yields poor results.

During the course of his stay at the Zoological Museum in Copenhagen (1960-1962), S. Panellius transferred several dry specimens to microscope slides using Berlese's chloralhydrate as the medium. In 2002, 40 years after this procedure had been carried out, the medium of his slides had changed to a brown mass of drops and the structure of important morphological characters is indistinct.

In the dry collection I was able to identify 20 gall midge species of which one, *Brachyneurina peniophorae* Harris, 1979, is a new record for Denmark. Notably, the collection contains two females of *Xylodiplosis nigratarsis* (Zetterstedt, 1850) which were probably used for the original description of this species.

**B. Slide collection:** Specimens mounted on microscope slides are deposited in three black microscope slide boxes. Each box is marked by a number (40, 41 and 42, respectively). In boxes nos. 40 and 41 there are 200 microscope slides with gall midge specimens collected in Denmark. In box no. 42 there are only two slides with specimens belonging to the subfamily Lestremiinae, each with label stating only "Island" (= Iceland). Each microscope slide has a label with a hand-written number in red ink, which relates to the number collection system of the ZMUC.

It is possible to reconstruct how the collection was established from data written on the slides. S. L. Tuxen, the former curator of entomological

collections at the ZMUC, wanted to built up the modern collection of Cecidomyiidae mounted on microscope slides. In a letter dated 11 October 1948, Tuxen asked the famous English taxonomist H. F. Barnes (Rothamsted Experimental Station, Harpenden, Herts) to help him in this effort. Barnes mounted 149 slides in the course of six weeks, from 20 January to 4 March 1949. These slides are marked in red ink with numbers from 40-1 to 41-49. Specimens for preparation were chosen from the Danish alcohol collection.

Barnes identified 10 gall midge species mounted on 70 microscope slides and the other specimens remained unidentified. Barnes evidently did not have time to complete the identifications because he was fully absorbed in writing a series of books (*Gall Midges of Economic Importance*, Vols. 1-7, 1948-1956). The microscope slides numbered from 41-50 to 41-98 (49 slides), were mounted by various other researchers. Some of these were identified, whereas others were still unidentified in 2002.

Microscope slides deposited in this collection were prepared using the conventional method with Canada Balsam as the medium. Each gall midge specimen is situated in the centre of the slide, mounted in the medium and covered by a round or square cover glass. The head and hypopygium of the specimen are usually separated from the body and situated in a dorsoventral position under the same cover glass. Usually on the right side of the slide, or on both sides, there are glued labels with pertinent data. Labels on the slides mounted by H. F. Barnes display "Cecid." above and "H. F. Barnes" below, which means that they were mounted directly by H. F. Barnes or his assistants. These slides have written numbers (in Barnes' hand) which refer to the collection system of the Barnes Collection, now deposited in the Natural History Museum, London.

Specimens mounted on microscope slides 41-50 to 41-72 were prepared by S. Panellius during 1960-1962 by the method used and recommended by E. Sylvé (Panellius 1965). Specimens were mounted between two cover glasses supported in a frame of aluminium plate and cardboard. This method makes an examination from both sides possible. Berlese's chloralhydrate was used as a medium (after Panellius 1965: 5). The specimens used by Panellius were either

from the alcohol collection or from the collection of dry specimens.

In 2002 I examined the specimens mounted using this method. The medium of most slides was dark and crystallized, had changed into a mass of dark drops, or was turbid and the morphological structures of the specimens were translucent or on the point of vanishing. Thus, this method does not seem to be appropriate for the long-term preservation of gall midge specimens. On the other hand, microscope slides mounted by Barnes with Canada Balsam in 1948–1949 were in very good condition in 2002, i.e., 55 years after preparation, and the morphological structures of the specimens are still clearly visible.

I examined all the specimens in the slide collection and identified 16 species (7 of them are new records for Denmark), either at the species level or at the generic level (specimens of *Lestodiplosis* which had been reared from various galls). The microscope slides also includes material originally from Stæger Collection belonging to *Asynapta* sp., *Claspettomomyia niveitarsis* and *Tetraneuromomyia hirticornis*.

I did not find the type material of *Miastor metraloas* Meinert, 1864, which should be preserved in this collection; it has probably been lost. The collection does contain three microscope slides, all labelled “*Miastor metraloas* M”, including one male (41–84), three males (41–82) and 4 larvae (41–81), all dated April 1866 and mounted by Meinert; one of these could be designated as the neotype of this species.

I did not find specimens of another two species, *Asynapta pectoralis* (Winnertz, 1853) and *Camptomomyia abnormis* Mamaev, 1961, which Panelius (1965) reported that he had examined at the ZMUC.

At present the collection of microscope slides contains 37 gall midge species.

**C. Alcohol collection:** Specimens in this collection are preserved in small glass vials placed in 18 bottles of various sizes: 6 large, 6 smaller and 6 small. In July 2001, R. Meier sent me a part of this collection for identification and inclusion in Petersen & Meier (2001). Gall midge specimens in 189 vials were examined, indicated by a new label (written in pencil) with the valid name, the

number of specimens and the name of the identifier (M. Skuhrová). All the older labels were retained. Some of the material appears to be very old and lacks information on locality or collector. Most adults are heavily damaged, with broken antennae and legs, and some specimens even lack wings. Some specimens seem to have been put into the alcohol as dried specimens; their bodies are highly damaged and deformed.

E. Hoffmeyer collected gall midge galls during the years 1926–1933 and from these he reared many adults which are now deposited in this alcohol collection. In 1933 he rearranged all the material in alcohol which has been gathered by previous researchers (S. Rostrup, F. Meinert). In each vial with alcohol he placed a label with the following data: “E. Hoffmeyer, 23/8/33” (= 23 Aug 1933). The material sent to H. F. Barnes by S. L. Tuxen in 1948 (see above) included some of the specimens reared by E. Hoffmeyer. Other researchers that have contributed to the alcohol collection are J. P. Kryger, H. P.S. Sønderup, S. L. Tuxen, O. Bakkendorf, T. Christensen and L. Lyneborg.

In 2002 the alcohol collection contained about 2900 specimens of 52 gall midge species, including males, females, larvae and pupae. Specimens in some samples remain unidentified because of their poor condition. In this collection I found the type material of *Pero fasciata* Meinert, 1870 (now *Brephometra fasciata* Meinert), which was believed to have been lost. However, I was unable to find the type material of *Rabdophaga nielsenii* (Kieffer et Nielsen, 1906), *Miastor metraloas* Meinert, 1864 or *Oligarces paradoxus* Meinert, 1865, which were described based on material collected in Denmark. The type material of these species has probably been lost.

A highly valuable material of gall midges bred from galls on various host plants from the island of Læsø during 1998–2002 was presented to the Zoological Museum by J. Jørgensen in May, 2002. It includes more than 20 gall midge species, including several species new to science. Information on this material will be published elsewhere (Skuhrová, Skuhrová & Jørgensen 2005).

**List of gall midge species in the collection**

In the list below the following data are given for each species: abbreviation of the collection in which the species is deposited (dry, slides or alcohol, see above), the number of specimens (males and females, respectively), the locality or localities where the species has been found, the date of finding and the name of the collector. In some cases, mainly for specimens collected by researchers during the second half of the 19th Century, some or all data are missing. Quotation marks indicate information from original labels. In several cases the name of the locality or other data were written in pencil and are now illegible; some names may thus have been inaccurately interpreted by the present author. Explanatory notes are provided as appropriate. An asterisk (\*) before the species name indicates a new record for Denmark.

For material from the microscope slide collection the numbers of the slides are given in parentheses; the first number refers to the collection system of the ZMUC and the second one to the collection system of the Barnes Collection (Natural History Museum, London).

Subfamily **CECIDOMYIINAE*****Arnoldiola gemmae* (Giraud, 1868)**

Slides: 1 slide (41-12; 5569), 1 female, Lange-land, 1928, leg. E. Hoffmeyer.  
Alcohol: 1 male, locality illegible, 1928/1929, leg. E. Hoffmeyer. – 1 female: locality illegible, 4 Sept 1926, leg. E. Hoffmeyer.

***Asphondylia melanopus* Kieffer, 1890**

Dry: 1 male, Knuthenborg, 21 Aug 1938, leg. H. P. S. Sønderup.  
Slides: 1 slide (40-1; 5444), 1 male, Lyngby, 21 Aug 1938, collector not given.  
Alcohol: 1 male + 5 females, Lyngby, 21 Aug 1938, collector not given.

***Asphondylia sarothamni* Loew, 1850**

Dry: 1 female, locality not given, 24 May 1934, leg. H. P. S. Sønderup.  
Alcohol: 4 pupae, Maltrup, 10 Sept 1938, leg. H. P. S. Sønderup.

**\* *Brachyneurina peniophorae* Harris, 1979**

Dry: 3 males + 6 females, Kørsor Skov [Forest], Oct 1978, leg. T. Hanerslev, det. M. Skuhravá 2002.

***Cecidomyia griseicollis* Meigen, 1818**

Dry: 2 males + 2 females, Stæger Collection, without further data. [Note: Specimens heavily damaged, some without antennae, legs or abdominal parts. Skuhravá (1986) regarded the generic placement of this species as dubious.]

***Cecidomyia griseola* Meigen, 1818**

Dry: 1 male, Stæger Collection, without further data. [Note: Specimen damaged, without antennae or abdomen. Skuhravá (1986) regarded the generic placement of this species as dubious.]

***Cecidomyia pini* (De Geer, 1776)**

Dry: 2 females, each with a very old small label, Utterslev mose, 4/84, 5/84, leg. R. W. Schlick, det. M. Skuhravá 2002. [Note: It is not clear from the labels during which century these specimens were collected, but according to Prof. J. Jørgensen it was in April and May 1884.]

***Contarinia campanulae* (Kieffer, 1895)**

Alcohol: 20 larvae, Boserup, 8 July 1937, leg. J. P. Kryger, det. M. Skuhravá 2002.

***Contarinia jacobaeae* (Loew, 1850)**

Alcohol: 20 larvae, Basnæs, 1 Aug 1928, leg. E. Hoffmeyer.

***Contarinia pyrivora* (Riley, 1886)**

Alcohol: larvae and attacked pears, Svalöf (Sweden), 3 July 1909, leg. S. Rostrup.

***Contarinia tiliarum* (Kieffer, 1890)**

Alcohol: 20 larvae, without locality, 1926, leg. J. P. Kryger.

***Contarinia tragopogonis* Kieffer, 1909**

Slides: 1 slide (41-39; 5596), 1 female, Vemmelev, 1926, leg. E. Hoffmeyer.  
Alcohol: 1 female, Vemmelev, 1926, leg. E. Hoffmeyer, det. H. F. Barnes 1951.

***Contarinia tritici* (Kirby, 1798)**

Alcohol: about 100 females, without locality or

collector, 28 July 1932, det. Wahlgren. – 50 larvae, Falster, without date or collector.

***Cystiphora sonchi* (Vallot, 1827)**

Alcohol: 1 female, Knuthenborg, reared, 15 May 1939, leg. H. P. S. Sønderup.

***Dasineura acrophila* (Winnertz, 1853)**

Alcohol: 25 larvae, Eriksholm, 12 June 1895, leg. Meinert. – 10 larvae, Sipperup Skov [Forest], 9 July 1930, leg. E. Hoffmeyer.

***Dasineura affinis* (Kieffer, 1886)**

Slides: 10 slides (40-43 to 40-50; 5491-5499), 7 males + 1 female (in poor condition), Feddet, Præstø, 20 July 1935, leg. E. Hoffmeyer.

***Dasineura alopecuri* (Reuter, 1895)**

Alcohol: about 100 larvae, Glostrup, 1882, leg. Rosvang, det. E. Rostrup.

***Dasineura engstfeldi* (Rübsaamen, 1889)**

Alcohol: 2 larvae, Ejby Plantage, Glostrup, 29 July 1928, leg. E. Hoffmeyer.

***Dasineura lathyricola* (Rübsaamen, 1890)**

Alcohol: 1 female, Boeslunde, 4 Sept 1926, leg. E. Hoffmeyer. – 3 males + 1 female (debris), Vemmelev, 17 Aug 1926, leg. E. Hoffmeyer.

***Dasineura napi* (Loew, 1850)**

*Cecidomyia brassicae* (Winnertz, 1853)

Alcohol: 20 larvae, Lemvig, 6 Sept 1952, leg. H. P. S. Sønderup.

***Dasineura ranunculi* Bremi, 1847)**

Alcohol: 1 female, Egeslevmagle, 4 Sept 1926, leg. E. Hoffmeyer.

***Dasineura rosae* (Bremi, 1847)**

*Wachtliella rosarum* (Hardy, 1850)

Slides: 1 slide (41-88), 1 male + 1 female, Halskov, 1926, leg. E. Hoffmeyer.

Alcohol: 4 males + 2 females, Halskov, 1926, leg. E. Hoffmeyer.

***Dasineura spadicea* Rübsaamen, 1917**

Alcohol: 1 larva, Lemvig, 26 Aug 1950, leg. H. P. S. Sønderup.

***Dasineura tiliae* (Schrank, 1803)**

Alcohol: 19 larvae, Lejre, 21 June 1928, leg. E. Hoffmeyer.

***Dasineura trifolii* (F. Löw, 1874)**

Slides: 1 slide (41-87), 1 male + 1 female, Dalmose, 1926, leg. E. Hoffmeyer.

Alcohol: 6 males + 36 females, Allindelille Skov, July 1919, leg. E. Hoffmeyer. – 1 male + 3 females, Glim, August 1926, leg. E. Hoffmeyer. – 3 males + 2 females, Fledskov, August 1928, leg. E. Hoffmeyer. – 1 female, Espe, Korsør, 5 Aug 1926, leg. E. Hoffmeyer. – 1 male + 12 females, Dalmose, 4 Sept 1926, leg. E. Hoffmeyer.

***Dasineura ulmaria* (Bremi, 1847)**

Alcohol: 2 males + 6 females, Ejby Mose, Glostrup, 15-17 Aug 1928, leg. E. Hoffmeyer.

***Giraudiella inclusa* (Frauenfeld, 1862)**

Dry: galls on *Phragmites australis*, Utterslev Mose, 1903, leg. R. H. Stamm.

Slides: 15 slides (40-20 to 40-26; 5463-5469), 3 males + 4 females, Kørsør, 1926, collector not given. – 6 slides (40-58 to 40-63; 5507-5512), 3 males + 3 females, Denmark, 22 May 1930, leg. E. Hoffmeyer. – 1 slide (40-85; 5541), 1 female, Koster [?], 1931, leg. E. Hoffmeyer. – 1 slide (41-94), 1 male + 1 female, Espe, Korsør, 1926, leg. E. Hoffmeyer.

Alcohol: 8 males + 7 females, locality illegible, 22 May 1930, leg. E. Hoffmeyer. – 1 female, reared, 1 Feb 1931, leg. E. Hoffmeyer. – 13 males + 7 females + 5 pupal skins, reared, 25 Jan 1931, leg. E. Hoffmeyer. – 6 females + 3 pupal skins, Espe, Korsør, 1927, leg. E. Hoffmeyer. – 3 males + 5 females + 1 pupal skin, Espe, Korsør, 1926, leg. E. Hoffmeyer. – 18 larvae, Gripso, Jan + Feb 1910, collector not given. – 26 pupal skins, Gripso, 1910, collector not given. – 17 males + 8 females, Gripso, reared, 1910, collector not given. – 11 pupae, Gripso, 1910, collector not given. – 12 males + 31 females, Sandkroen, 1930 + 1931, leg. E. Hoffmeyer.

***Hartigiola annulipes* (Hartig, 1839)**

Alcohol: 2 larvae, locality illegible, 27 Aug 1941, leg. S. L. Tuxen.

**\* *Jaapiella hypochoeridis* Sylvén, 1998**

Slides: 1 slide (41-86), 1 male + 1 female, Frølundede Fed, 1926, leg. E. Hoffmeyer (incorrectly det. as *Stictodiplosis hypochoeridis* (Rübsaamen, 1891)), det. M. Skuhrová 2002.

Alcohol: 10 males + 60 females, Frølundede Fed, 15 Aug 1926, leg. E. Hoffmeyer (incorrectly det. as *Stictodiplosis hypochoeridis* (Rübsaamen, 1891)), det. M. Skuhrová 2001.

***Jaapiella veronicae* (Vallot, 1827)**

Slides: 9 slides (40-11 to 40-19; 5454–5462), 4 males + 5 females, Lejre, 1928, leg. E. Hoffmeyer. – 1 slide (41-74), 1 male + 12 females + 2 larvae, Fort. Vejerbod, 1928, leg. O. Bakkendorf. – 1 slide (41-85), 1 male + 1 female, Klarskov near Korsør, 1926, leg. E. Hoffmeyer.

Alcohol: 152 males + 134 females + 16 larvae, Espe, 1926, Lejre, 1928, Halsskov, 1926, Dueodde, 1927, Rude Skov, 1928, leg. E. Hoffmeyer.

***Janetiella thymi* (Kieffer, 1888)**

Slides: 10 slides (40-28 to 40-37; 5470–5477), 6 males + 4 females, Dalmose, 1926, leg. E. Hoffmeyer. – 1 slide (41-92), 1 male + 1 female, Dalmose, 1926, leg. E. Hoffmeyer.

Alcohol: 20 males + 6 females, Dalmose, July 1926, leg. E. Hoffmeyer.

***Kaltenbachiola strobi* (Winnertz, 1853)**

Slides: 12 slides (40-64 to 40-75; 5513–5524), 6 males + 6 females, Lellinge, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 9 slides (40-93 to 40-100 + 41-1; 5550–5558), 6 males + 3 females, Lellinge, Mejlgaard, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 9 slides (41-3 to 41-11; 5559–5567), 3 males + 6 females, Mejlgaard, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 1 slide (41-25; 5583), 1 male, Mosekovgaard, 1930, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 7 slides (41-47 to 41-53; 5581, 5584–5586, 5588–5590), 4 males + 3 females, Mosekogaard, Strodam, 1928 + 1930, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 1 slide (41-49; 5606), 1 female, Almindingen, 1928, leg. E. Hoffmeyer, det. M. Skuhrová 2002.

Alcohol: 13 males + 15 females, Lellinge Overdrev, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2001. – 20 males + 70 females, Lellinge Skov, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2001.

– 50 males + 100 females (highly damaged), Lellinge, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2001. – 2 males + 4 females, locality illegible, 1930, leg. E. Hoffmeyer, det. M. Skuhrová 2001. – 3 males, locality illegible, leg. E. Hoffmeyer, det. M. Skuhrová 2001. – 2 females, Almindingen, 1928, leg. E. Hoffmeyer, det. M. Skuhrová 2001.

***Lasioptera carophila* F. Löw, 1874**

Alcohol: 15 larvae, Maribo, 28 Sept 1946, leg. H. P. S. Sønderup.

***Lasioptera hungarica* Möhn, 1968**

Dry: 2 females, Lolland, Maltrup, 29 July 1936, leg. H. P. S. Sønderup (det. as *Thomasiella flexuosa* Winnertz, 1853), det. M. Skuhrová 2002.

**\* *Lestodiplosis gammae* Barnes, 1928**

Alcohol: 5 males + 6 females, Farum, 1927, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 2 males + 1 female, Holmegaards Mose, 1930, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 1 female, Hareskov, 2 July 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002.

**\* *Lestodiplosis holstei* Kieffer, 1920**

Slides: 3 slides (41-46 to 41-48; 5603–5605), 1 male + 2 females, Lellinge Skov, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002.

**\* *Lestodiplosis liviae* Rübsaamen, 1901**

Slides: 1 slide (41-76), several larvae, Achflade Vand, 1926, leg. O. Bakkendorf, det. M. Skuhrová 2002. – 1 slide (41-98), several larvae, Gullerup, Mors, 1940, leg. T. Christiansen, det. M. Skuhrová 2002.

Alcohol: 8 larvae, Svaleklit, Mors, 27 Aug 1941, leg. T. Christensen, det. M. Skuhrová 2001.

**\* *Lestodiplosis miki* Barnes, 1928**

Slides: 6 slides (41-13 to 41-18; 5570–5575), 3 males + 3 females, Spanager, 1930, leg. E. Hoffmeyer, det. M. Skuhrová 2002.

Alcohol: 7 adults (damaged), Spanager, 1930, leg. E. Hoffmeyer, det. M. Skuhrová 2002.

**\* *Lestodiplosis polypori* (Loew, 1850)**

Slides: 1 slide (41-77), several small larvae, in glycerine, now dried, "*Cecidomyia* in *Polyporus*

*versicolor*. Rostrup d.", det. M. Skuhrová 2002. Alcohol: a number of very small larvae, Bornholm, 16 Feb 1896, leg. E. Rostrup, det. M. Skuhrová 2002.

***Lestodiplosis variegata* (Macquart, 1826)**

Dry: 2 males + 4 females, "male, St." and "female, St.". [Note: These specimens were collected by Stæger. They are highly damaged, the majority of them without abdomen, but they are identifiable. Zetterstedt (1850: 3691) mentioned that he had obtained specimens from Stæger, who informed him that adults occurred in May on cut wood in forests.]

***Lestodiplosis* sp.**

Slides: 1 slide (41-73), 1 male + 1 female, "Dipt. Kl. 250. Klækket af Rynchites betulæ. Blattruller. O. Bakkendorf" [= reared from rolled leaf caused by *Rynchites betulæ* L. (*Deporaus betulæ* L.) (Coleoptera, Attelabidae)]. det. M. Skuhrová 2002. [Note: The medium on the slide has changed into small drops and crystals.]

***Lestodiplosis* sp.**

Alcohol: 6 males + 11 females, bred from galls of *Wachtliella persicariae*, Sødring, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2001.

***Lestodiplosis* sp.**

Slides: 5 slides (40-88 to 40-92; 5544-5545, 5547-5549), 2 males + 3 females, Havdrup, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 1 slide (41-2; 5546), 1 male, Havdrup, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 5 slides (41-34 to 41-38; 5591-5595), 2 males + 3 females, Lellinge, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 4 slides (41-42 to 41-45; 5599-5602), 2 males + 2 females, Basnæs, 1928, leg. E. Hoffmeyer, det. M. Skuhrová 2002.

Alcohol: 5 males + 20 females (highly damaged), Basnæs, May-June 1929, det. M. Skuhrová 2002. – 5 males + 20 females, Lellinge, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002.

Note: The specimens referred to this species, as well as the two preceding unidentified species of *Leptodiplosis*, do not appear to belong to any of the six named species of this genus listed above. Thus, they probably represent new records for Denmark. The specimens of the present species

were bred from fruits of *Sorbus aucuparia* L. (probably damaged by insects).

***Macrodiplosis pustularis* (Brems, 1847)**

*Diplosis dryobia* (F. Löw, 1877)

Alcohol: 3 larvae, Lejre, 21 June 1928, leg. E. Hoffmeyer.

***Macrodiplosis roboris* (Hardy, 1854)**

*Macrodiplosis volvens* Kieffer, 1895

Alcohol: 5 larvae, Lejre, 21 June 1928, leg. E. Hoffmeyer.

\* ***Macrolabis incolens* Rübbsaamen, 1895**

Alcohol: 5 males + 1 female, Halskov, July 1926, leg. E. Hoffmeyer, det. M. Skuhrová 2001.

***Mayetiola lanceolatae* (Rübbsaamen, 1895)**

Slides: 1 slide (41-90), 2 females, Haslov Orned, 1931, leg. E. Hoffmeyer (incorrectly det. as *Poomyia helwigii*), det. M. Skuhrová 2002.

***Microlasioptera flexuosa* (Winnertz, 1853)**

Dry: 2 females, Maltrup, 29 July 1936, leg. H. P. S. Sønderup.

***Mikiola fagi* (Hartig, 1839)**

Dry: galls + pupae + several adults, locality not given, 27 July 1920, leg. S. Larssen. – 2 males, Bagsværd, 18 May 1960, leg. L. Lyneborg, det. M. Skuhrová 2002.

Alcohol: 40 galls + 40 larvae, Dyrehaven, no further data. – 1 male + 5 females + 1 gall + 1 pupal skin, Gribskov, reared, 1929, leg. J. P. Kryger. – 40 young larvae, on *Fagus sylvatica*, Folehaveskov, 1941, leg. S. L. Tuxen. – 7 parasitised larvae, no further data. – 1 gall + 1 larva, locality illegible, 9 Mar 85, collector not given [probably collected in 1885 by E. Rostrup].

***Oligotrophus juniperinus* (Linnaeus, 1758)**

Alcohol: about 100 larvae, N Sjælland, on Juniper, date not given, leg. M. S.

***Phegomyia fagicola* (Kieffer, 1901)**

Alcohol: 7 larvae, Rude Skov [Forest], 14 June 1928, leg. E. Hoffmeyer.

***Planetella grandis* (Meigen, 1804)**

*Cecidomyia (Hormomyia) fasciata* Meigen, 1818

Dry: 1 female, “*Hormomyia* Loew”, “*fasciata* Meig.,” “*Schiødte*, 1838”. [Note: This is the oldest specimen of the family Cecidomyiidae known to occur on Danish territory.]

***Rabdophaga jaapi* Rübisaamen, 1915**

Alcohol: 1 female, Tisvilde, 27 Oct 1929, leg. J. P. Kryger, det. M. Skuhravá 2001.

***Rabdophaga rosaria* (Loew, 1850)**

Slides: 7 slides (40-51 to 40-57; 5500–5506), 3 males + 4 females, Bromme, 1927, leg. E. Hoffmeyer.

Alcohol: 2 larvae, locality illegible, 21 Oct 1894, leg. S. Rostrup. – 53 males + 64 females, Bromme, 1927, leg. E. Hoffmeyer. – 20 larvae, locality illegible, Oct 1941, leg. J. P. Kryger. – 1 female, Geels Skov [Forest], 14 Apr 1948, leg. C. Krausé.

***Rabdophaga saliciperda* (Dufour, 1841)**

Alcohol: 2 larvae + 23 pupae, Krøjerup, 30 May 1888, leg. Knudsen.

***Rabdophaga salicis* (Schrank, 1803)**

Slides: 7 slides (40-2 to 40-10; 5445–5453), 2 males + 5 females, Bromme, 1927, collector not given.

Alcohol: 28 males + 168 females, Bromme, 1927, leg. E. Hoffmeyer. – 17 males + 163 females, Bromme, 1927, leg. E. Hoffmeyer. – 9 males + 4 females, Slagelse, 1927, leg. E. Hoffmeyer. – 2 males + 1 female, Holmegaards Mose, 1930, leg. E. Hoffmeyer.

***Rabdophaga terminalis* (Loew, 1850)**

Slides: 1 slide (41-93), 2 females, Korsør Skov [Forest], 1926, leg. E. Hoffmeyer.

Alcohol: 3 males + 28 females (highly damaged), locality illegible, 1926, leg. E. Hoffmeyer.

**\* *Resseliella skuhravyorum* Skrzypczynska, 1975**

Slides: 3 slides (40-76 to 40-78; 5526–5527), 2 males + 1 female, Klosterskov, 1929, leg. E. Hoffmeyer, det. M. Skuhravá 2002.

Alcohol: 10 males + 10 females (highly damaged), Klosterskov, 1929, leg. E. Hoffmeyer, det. M. Skuhravá 2002.

***Rhopalomyia artemisiae* (Bouché, 1834)**

Slides: 2 slides (41-40, 41-41; 5597, 5598), 2 females, Tibirke, 1913, leg. J. P. Kryger.

Alcohol: 2 females, Tibirke Bakker, 24 May 1912, leg. W. Lundbeck, det. M. Skuhravá 2001. – 5 females, Tibirke, 7 June 1913, leg. J. P. Kryger.

***Rhopalomyia millefolii* (Loew, 1850)**

Slides: 2 slides (40-4, 40-5; 5448, 5452), 1 male + 1 female, Rørvig, 15–22 Sept 1928, leg. E. Hoffmeyer.

Alcohol: 4 males + 3 females, Rørvig, 15–22 Sept 1928, leg. E. Hoffmeyer.

***Rhopalomyia tubifex* (Bouché, 1847)**

Slides: 1 slide (41-91), 1 male + 1 female, Tibirke, 1913, leg. J. P. Kryger, det. E. Hoffmeyer.

Alcohol: 1 male, Rørvig, 1929, leg. E. Hoffmeyer.

***Semudobia betulae* (Winnertz, 1853)**

Slides: 2 slides (40-86, 40-87; 5542, 5543), 1 male + 1 female, Klosterskov, 1929, leg. E. Hoffmeyer.

Alcohol: 2 males + 3 females, Klosterskov, 1929, leg. E. Hoffmeyer.

***Sitodiplosis mosellana* (Géhin, 1856)**

Alcohol: 10 females, locality illegible, 31 June 1936, leg. S. Rostrup.

***Wachtliella persicariae* (Linnaeus, 1767)**

Slides: 6 slides (40-38 to 40-42; 5478–5480, 5490), 1 male + 4 females, Korsør, 1926, leg. E. Hoffmeyer. – 3 slides (41-21 to 41-23; 5578–5580), 3 males, Lejre, 1928, leg. E. Hoffmeyer, det. M. Skuhravá 2002. – 1 slide (41-26; 5581), 1 female, Lejre, 1928, leg. E. Hoffmeyer, det. M. Skuhravá 2002. – 1 slide (41-89), 1 male + 1 female, Halsskov, 1926, leg. E. Hoffmeyer.

Alcohol: 27 males + 37 females, locality illegible, 1926, leg. E. Hoffmeyer. – 6 males + 1 female, Basnæs, 1926, leg. E. Hoffmeyer. – 5 males + 60 females, Basnæs, 1928, leg. E. Hoffmeyer. – 8 males + 2 females, Lejre, 1928, leg. E. Hoffmeyer, det. M. Skuhravá 2002. – 5 larvae, Rude Skov [Forest], 14 June 1928, leg. E. Hoffmeyer, det. M. Skuhravá 2002. – 13 males + 33 females, Sødring, 1929, leg. E. Hoffmeyer. – 1

female, Rørvig, 1929, leg. E. Hoffmeyer, det. M. Skuhrová 2002.

***Xylodiplosis nigratarsis* (Zetterstedt, 1850)**

Dry: 2 females, “nigratarsis Zett.”, “sign for female, St.”. [Note: Both females are damaged and have lost the abdomen, but legs are present and bear black tarsi (for which the species is named). According to the smaller label, these specimens were collected by Stæger. This is probably the material that was used by Zetterstedt (1850: 3683) in the original description of the species, as witnessed by the following statement: “Hab. in Dania, D. Stæger, qui 2 specimina mecum communicavit.”.]

Subfamily **PORRICONDYLIINAE**

***Asynapta palustris* (Linnaeus, 1758)**

Zetterstedt (1850: 3682) mentioned that Stæger had informed him about one male caught in Denmark. Panelius (1965: 74) listed this species under the genus *Asynapta* Loew, 1850. I was unable to find Stæger’s specimen in the collection.

***Asynapta pectoralis* (Winnertz, 1853)**

Panelius (1965) mentioned that he had examined 1 male from the collection of the ZMUC. I was unable to find it.

***Asynapta strobi* (Kieffer, 1920)**

Slides: 6 slides (40-79 to 40-84; 5528–5533), 3 males + 3 females, Lellinge, 1928, leg. E. Hoffmeyer, det. M. Skuhrová 2002. – 3 slides (41-50 to 41-52), 1 male + 3 females, Lellinge Skov, 1928, leg. E. Hoffmeyer. – Note: These slides have been mounted in an aluminium frame, the Berlese’s medium is dark and partially clouded and the morphological structures of the specimens are indistinct.

Alcohol: 1 male + 1 female, locality not given, 23 Aug 1933, leg. E. Hoffmeyer, det. M. Skuhrová 2001.

***Asynapta* sp.**

Slides: 1 slide (41-53), “female, det. Stæger”, “679 Thureby, Løwendal”; date not given. [Note: Panelius evidently remounted the old dry female onto this slide in an aluminium frame with Berlese’s medium. Prof. J. Jørgensen added the in-

formation that Thureby (now: Tureby) is the locality and Løwendal is the person who found this specimen.]

***Brephometra fasciata* (Meinert, 1870)**

*Pero fasciata* Meinert, 1870

*Meinertomyia fasciata* (Meinert, 1870)

Alcohol: A large bottle in the collection contains a large old green label with “*Pero fasciata* Mein., Westrabysgaard, Skåne, und. Bark, paa donbog, 13.5.1870, Meinert” written in black ink and a small white label stating “TYPE”. Inside the vial is a smaller one which includes 10 adults (5 males + 5 females) and 5 larvae preserved in alcohol. This is evidently the type material of the obscure (poorly known) species *Pero fasciata*, which had been considered to be lost. Skuhrová (1986) placed this species in the subfamily Porricondyliinae among genera of the category “uncertain systematic position”. At that time little was known about this species other than what was stated in the very short original description, which did not include a type locality. Therefore, Skuhrová (1986) gave the type locality as “Denmark”, according to the nationality of the author. We now have more exact information about this species from the above-mentioned label (translation and note by J. Jørgensen): “Westrabysgaard, Skåne” is in southern Sweden; “paa anvbøg” means on *Carpinus betulus* L. Thus, larvae of this species developed under the bark of *Carpinus betulus* and were found in southern Sweden by Meinert in 1870. Since nothing is known about the occurrence of this species in Denmark, it must be excluded from the Danish fauna.

Gagné (2004) placed this species in the genus *Brephometra* Strand, 1910, which has priority over *Meinertomyia* Felt, 1910, and in the supertribe Cecidomyiidi in agreement with Edwards (1941).

***Camptomyia abnormis* Mamaev, 1961**

Panelius (1965) mentioned having studied 3 males, 6 females and larvae of this species from Denmark in the collection of the ZMUC. I was unable to find this material.

***Camptomyia juglandis* Panelius, 1965**

Slides: 1 slide (41-66), 1 male, Bagsværd, 7 Apr 1957, leg. L. Lyneborg. [Note: During his stay at

the ZMUC in 1962 Panelius identified this specimen to the generic level only. I compared its morphological characters with the original description of *C. juglandis* (Panelius, 1965: 91, fig. 26d) and have labelled it as the holotype.]

***Camptomyia piceae* Panelius, 1965**

Slides: 1 slide (41-67), 1 male, Bagsværd, 16 May 1960, leg. L. Lyneborg. [Note: During his stay at the ZMUC in 1962 Panelius identified this specimen to the generic level only. I compared its morphological characters with the description of *C. piceae* (Panelius, 1965: 91, fig. 26b) and have labelled it as the holotype.]

***Camptomyia* sp.**

Slides: 16 slides (41-57 to 41-72), 5 males + 6 females + 4 larvae + 1 pupa, Bagsværd, 1957-1960, leg. L. Lyneborg. [Note: All specimens were mounted by S. Panelius in Berlese's medium on aluminium frames. He identified them to the generic level only and did not mark the holotypes of the two new species which he found in this series, *C. juglandis* and *C. piceae* (see above).]

***Claspettomya niveitarsis* (Zetterstedt, 1850)**

Slides: 2 slides (Nr. 41-54, 41-55), 2 males, "male, St.", det. S. Panelius. [Note: Panelius evidently tried to mount these two dry specimens from the Stæger Collection in an aluminium frame onto a microscope slide using Berlese's gum-chloral medium. In 2002, 40 years after Panelius's preparation, the medium was dark and had changed into small round drops; the morphological structures of the body were indistinct.]

***Dicerura iridis* (Kaltenbach, 1874)**

*Iridomyza kaltenbachi* Rübisaamen, 1899

Alcohol: 1 male, Refshale Mose, Maribo, 20 May 1936, leg. H. P. S. Sønderup. – 2 males + 1 female + 3 larvae + 3 pupae, Maribo, 14 June 1940, leg. H. P. S. Sønderup, det. P. Nielsen. – 4 larvae, Refshale Mose, Maribo, Mar 1939, leg. H. P. S. Sønderup.

***Heteropeza pygmaea* Winnertz, 1846**

*Oligarces paradoxus* Meinert, 1865

Edwards (1937) regarded *Oligarces paradoxus* Meinert, 1865, originally described based on ma-

terial collected in Denmark, as a junior synonym of *Heteropeza pygmaea* Winnertz, 1846. I was unable to find this material in the collection.

***Miastor metraloas* Meinert, 1864**

Slides: 1 slide (41-84), 1 male, "*Miastor metraloas*, male. 7 April 1866". [Note: This is a very old slide, originally mounted in glycerine which is now dry, and probably mounted by Meinert himself. The glass of the slide seems to be very old, cut by hand. No details of the morphological characters of the specimen are visible.] – 1 slide (41-82), 3 males, "*Miastor metraloas*, M, 7. April 1866". [Note: This slide was probably mounted by Meinert. The specimens were mounted whole in glycerine under one cover glass and the medium is partially dried.] – 1 slide (41-81), 4 larvae, "*Miastor metraloas*. Larve. 23. April 1866". [Note: This slide was probably mounted by Meinert. Whole specimens under one cover glass.] – 1 slide (41-83), 1 larva, "*Miastor metraloas*. Larve. M." [Note: Specimen dissected into a series of histological sections.] – 6 slides (41-78), 1 larva, "*Miastor metraloas*, Larve. M." [Note: Specimen dissected into a series of histological sections.] – 1 slide (41-80), 1 larva, "*Miastor metraloas*, Larve. M." [Note: Specimen dissected into a series of histological sections.]

Alcohol: about 500 larvae, Ryget Skov, under birch bark, 5 May 1938, leg. J. P. Kryger, det. M. Skuhrová 2002. – About 100 pupae + several larvae, Askeby, Møn, rotten stub of pear tree, 23 May 1948, leg. H. Hansen. – About 100 larvae and pupae, Askeby, 31 May 1948, leg. H. Hansen. – 10 males + 90 females, Askeby, 31 May 1948, leg. H. Hansen.

***Porricondyla flava* (Meigen, 1818)**

Dry: 1 male + 1 female, "Diplosis Loew", "flava Meig.?" [Note: These specimens are highly damaged, with broken antennae; they were collected by Stæger.]

***Porricondyla pallida* (Meigen, 1830)**

Zetterstedt (1850: 3681) mentioned that Stæger had informed him of the occurrence of adults of *Cecidomyza pallida* (1 male + 1 female) in Denmark. I was unable to find these specimens in the collection.

***Tetraneuromyia hirticornis* (Zetterstedt, 1850)**

Slides: 1 slide (41-56), male, "Male, St.". "Det. Panelius". [Note: This material was collected by Stæger around 1840. In 1960 S. Panelius transferred this originally dry specimen onto a microscope slide using Berlese's medium. In 2002 the medium was brown, with small dark drops; the morphological structures were translucent and hardly visible.]

Subfamily **LESTREMIINAE*****Campylomyza bicolor* Meigen, 1818**

Stæger (1840: 287) reported that a female of this species was found in October in Denmark. Zetterstedt (1850: 3671) mentioned that two females were deposited in the Stæger Collection. I was unable to find these specimens in the collection.

***Campylomyza flavipes* Meigen, 1818**

*Campylomyza aceris* Meigen, 1818

Dry: 2 females, "aceris Meig.", "female St.". [Note: These specimens were collected and identified by Stæger as *Campylomyza aceris* Meigen (Stæger 1840: 287). Zetterstedt (1850: 3672) mentioned that Stæger had captured 3 females of *C. aceris* on 16 September (without providing a year).]

***Lestremia cinerea* Macquart, 1826**

*Lestremia fusca* Meigen, 1830

Dry: 7 males, "Lestremia", "fusca", "Ordr. St.", "Silkeborg St.". [Note: This pinned material was collected by Stæger. The correct name of the locality is Ordrup, Silkeborg. Two specimens of this series lack abdominal parts.]

***Lestremia leucophaea* (Meigen, 1818)**

Dry: 4 males + 6 females, "Lestremia Macq.", "leucophaea Meig.", "Male, St.", "Female, St.". [Note: This material was collected by Stæger. These specimens are in poor condition but identifiable.]

***Monardia (Xylopriona) atra* (Meigen, 1804)**

Dry: 2 males + 1 female, "Campylomyza Meig.", "atra Meig.", "Male, St.", "female, St.", without further data. [Note: These pinned specimens were collected and identified by Stæger (Stæger, 1840: 287; Zetterstedt, 1850: pp. 3670-3671). They are well preserved.]

***Mycophila speyeri* (Barnes, 1926)**

Slides: 2 slides (41-96, 41-97; 3671, 3673), 5 females, Gentofte, from decaying mushrooms, 12 Apr 1929, leg. M. Thomsen.

**SUMMARY**

In 2002 I examined all specimens preserved in the collection of Cecidomyiidae at the Zoological Museum, Copenhagen. At present the collection of microscope slides includes a total of 35 gall midge species mounted on 198 microscope slides. Barnes identified 10 species mounted on 70 microscope slides during the years 1948-1949. Nine other species have been identified by various other authors. In 2002 I identified 16 further species and labelled the holotypes of *Camptomyia juglandis* Panelius, 1965 and *Camptomyia piceae* Panelius, 1965.

The alcohol collection includes 55 gall midge species, most of which had been reared from various galls by E. Hoffmeyer during the years 1926-1933. In this collection I found the type material of *Pero fasciata* Meinert, 1870 (now correctly: *Brephometra fasciata* (Meinert, 1870)), which was believed to have been lost. I was unable to find the types of *Rabdophaga nielsenii* (Kieffer & Nielsen, 1906), *Miastor metraloas* Meinert, 1864, or *Oligarces paradoxus* Meinert, 1865, all of which were described based on material collected in Denmark. It appears that the original material of these species is lost.

The collection of dry specimens includes the oldest contribution to the gall midge collection of the ZMUC, i.e., specimens of 10 species collected in Denmark by R. C. Stæger before 1840. The oldest specimen is that of *Planetella grandis* (Meigen, 1804), which was collected in Denmark in 1838 by Schiødte. In the Stæger Collection I found the specimens of *Xyloprionis nigritarsis* (Zetterstedt, 1850) that were probably used in the original description of the species. In this part of the collection I identified 20 gall midge species of which one, *Brachyneurina peniophorae* Harris, 1979, is a new record for Denmark.

I was unable to find specimens of five species that have been reported from Denmark: *Campylomyza bicolor* Meigen, 1818 (by Stæger 1840); *Asynapta palustris* (Linnaeus, 1758) and *Por-*

*ricondyla pallida* (Meigen, 1830) (by Zetterstedt 1850); *Asynapta pectoralis* (Winnertz, 1853) and *Camptomyia abnormis* Mamaev, 1961 (by Panellius 1965).

Two species, viz., *Cecidomyia griseicollis* Meigen, 1818 and *C. griseicola* Meigen, 1818, are placed in the category “species incertae sedis” in agreement with Skuhravá (1986).

Most of the gall midge specimens preserved in the dry collection, including material from several expeditions organized by the ZMUC to various parts of the world, are not suitable for identification. In general, specimens have been extensively damaged during the process of preparation, their bodies are deformed, and antennae, wings and legs have often broken off. The method usually used for large dipteran specimens, i.e., spearing them on pins as dry preparations, is not suitable for gall midges because they are usually small to very small (the body of many species is less than 1 mm long) and very fragile. It is preferable to mount gall midge specimens on microscope slides with Canada Balsam as the medium. The ZMUC material demonstrates that microscope slides with Berlese’s medium are not suitable for permanent slides of gall midges, as the medium becomes dark and crystallized or changes into dark drops and the morphological structures of the specimens become translucent or vanish.

The entire collection of the family Cecidomyiidae preserved at the ZMUC presently represents 86 gall midge species of which nine are new

records for Denmark. Of these, 65 species belong to the subfamily Cecidomyiinae, 15 to Porricondyliinae, and 6 to Lestremiinae.

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