

Acknowledgements

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Update of the Belgian list of *Empis* s.str. species (Diptera Empididae), with some new records for the Belgian fauna

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Abstract

An annotated check list is given for the Belgian *Empis* subgenus *Empis*. Twenty six species are reported, among them six are recorded for the first time in Belgium: *E. (s.str.) genualis* STROBL, *E. (s.str.) levis* LOEW, *E. (s.str.) melanotricha* LOEW, *E. (s.str.) pilosa* LOEW, *E. (s.str.) pseudonuntia* SYROVÁTKA and *E. (s.str.) syrovatkai* CHVÁLA.

Keywords: Diptera, Empididae, *Empis*, Belgium, checklist, new records.

Introduction

Eighteen species of the subgenus *Empis* are cited in the Belgian catalogue of the Empididae (GROOTAERT, 1991). However, in that time, we had to wait for CHVÁLA's (1994) well illustrated key and re-descriptions in his book in the series of "The Empidoidea (Diptera) of Fennoscandia" before we could identify our *Empis* fauna accurately and eventually recognize new species for our fauna.

Below we present an updated annotated check list of *Empis* s.str. and comment on new species

for the Belgian fauna. We provide also detailed distributional data for the species that were cited in the Red data book of the empidids (GROOTAERT *et al.*, 2001), but that were not yet included in the old catalogue (GROOTAERT, 1991).

Material and methods

Apart from some exceptions indicated in the text, all material is conserved in the collections of the RBINS. All data are kept in the database EMPISDAT and LOCDAT.

Annotated check list

Empis (s.str.) *acinerea* CHVÁLA, 1985

Material examined: 1 male, Binkom, Kapellenbos (Plot 12), 6.V.1997 (leg. L. DE BRUYN); 1 female, Wimmertingen, Oude Mombeek (Plot 25), 6.V.1997 (leg. L. DE BRUYN); 1 female, Kolmont, 20.IV.1999 (leg. D. DE BAKKER); 2 females, id. 5.V.1999; 1 female, Oud-Heverlee, Meerdaalwoud Drie Eiken, 2.V.1997 (leg. L. DE BRUYN); 1 female, id. 13.V.1997; 3 males, 9 females, Oud-Heverlee, Meerdaalwoud Level, 2.V.1997 (leg. L. DE BRUYN); 6 females, Altenbroek, St. Martens-Voeren, 1.V.2003 (leg. W. DEKONINCK); 1 female, id., 14.VI.2003; 1 male, Oud-Heverlee, Meerdaalwoud Lange Delle, 14.IV.2002 (coll. & det. J. MENTEN); 20 males, 23 females, Alserbos, St. Pieters-Voeren, 1.V.2003 (leg. W. DEKONINCK); 7 males, 8 females, id., 14.VI.2004; 3 males, 1 female, id. 30.V.2003.

Notes. *E. acinerea* is absent in the western part of Flanders. However, it is not uncommon in the old forests in Central Belgium. Also, this species is very common in the far East of Flanders (Voerstreek, Fourons), but it has not been reported yet from the South of Belgium. CHVÁLA (1994) reports *E. acinerea* from Finland, Sweden, Denmark, the Netherlands and central Europe.

Empis (s.str.) *aestiva* LOEW, 1867

Very common species (see table 1). Known from northern and central Europe, not from southern Europe. Not cited by CHVÁLA (1994) from France, but it is very common in Brittany (Paimpont, Rennes; DELETTRE *et al.*, 1998).

Empis (s.str.) *albopilosa* DE MEIJERE, 1935

A rare species in Belgium. Until now only known from the Netherlands and central Bohemia (CHVÁLA, 1994).

Empis (s.str.) *bicuspidata* COLLIN, 1927

Rather rare in Belgium. Reported to be a rather boreal species in distribution (CHVÁLA, 1994). Hence our records are the southernmost so far in Europe.

Empis (s.str.) *caudatula* LOEW, 1867

Rather rare in Belgium. A species occurring in southern Scandinavia, Great Britain, temperate

central Europe, known as far as northern France in the South.

Empis (s.str.) *chioptera* MEIGEN, 1804

Common species. Northern and central parts of Europe, absent from the South (CHVÁLA, 1994).

Empis (s.str.) *decora* MEIGEN, 1822

Very rare in Belgium. A southern European species. The records in Belgium and the Netherlands seem to be the northern most of its range.

Empis (s.str.) *genualis* STROBL, 1893

Empis genualis STROBL, 1893: 39.

CHVÁLA 1994: 93, figs 112, 149-152, re-description.

Material examined: 1 female, Houx, 22.VI.1943, leg. R. TOLLET.

Notes. Reported from the Netherlands, not rare from central Europe and common in the Mediterranean.

Empis (s.str.) *laminata* COLLIN, 1927

Empis laminata COLLIN, 1927: 22 (as subsp. of *Empis pennaria* FALLÉN).

CHVÁLA, 1994: 111, figs 181-185, re-description.

Material examined: 3 males, 1 female, with label in French: "Heusden-Etangs (Gand, Fl.-Or.)" i.e. Heusden vijvers (Gent, Oost-Vlaanderen), 8.V.1945, leg. J. VERBEKE (dry coll. RBINS); 1 male, Heusden Etangs, 18.V.1944 (leg. J. VERBEKE); 1 female, St. Amandsberg, 20.IV.1945 (leg. J. VERBEKE). 3 males: Hageven, 17.V.2000 (leg. P. GROOTAERT, DEKONINCK & V. VERSTEIRT; in alc. Coll. RBINS).

Notes. It is apparently a very rare species in Belgium. Its habitat is unknown, but the two sites where it was found in Belgium suggest that it is a species that lives in humid prairies. The site in Oost-Vlaanderen does not exist anymore. Known from Central Europe, Finland, Sweden, The Netherlands (CHVÁLA & WAGNER, 1989; CHVÁLA, 1994; SYROVÁTKA, 1991, 2000).

Empis (s.str.) *levis* LOEW, 1873

Empis levis LOEW, 1873: 40.

CHVÁLA 1994: 129, figs 130, 223-226, re-description.

Material examined: 1 male, Han-sur-Lesse, 27.VI.1955 (leg. M. BEQUAERT).

Notes. The distribution of this species is not

Table 1. List of the *Empis* s.str. in Belgium with the number of occurrences and their Red list status in Flanders.

Species	no. localities	no. UTM 10 km	no. specimens	Red List status Flanders
<i>acinerea</i>	7	6	88	Susceptible
<i>aestiva</i>	89	64	7969	Safe / Low risk
<i>albopilosa</i>	8	7	84	Susceptible
<i>bicuspidata</i>	12	11	415	Susceptible
<i>caudatula</i>	14	14	87	Susceptible
<i>chioptera</i>	75	64	2613	Safe / Low risk
<i>decora</i>	3	3	4	Data deficient
<i>genualis</i>	1	1	1	not present
<i>laminata</i>	3	2	9	Data deficient
<i>levis</i>	1	1	1	not present
<i>melanotricha</i>	4	4	4	Data deficient
<i>near acinerea</i>	1	1	1	Data deficient
<i>nigripes</i>	101	69	9114	Safe / Low risk
<i>nuntia</i>	31	26	478	Safe / Low risk
<i>pennipes</i>	8	7	92	Susceptible
<i>pilosa</i>	1	1	1	not present
<i>planetica</i>	28	23	1015	Safe / Low risk
<i>praevia</i>	85	58	237239	Safe / Low risk
<i>prodromus</i>	32	28	1116	Safe / Low risk
<i>pseudonuntia</i>	5	5	5	not present
<i>pusio</i>	1	1	1	Extinct
<i>rufiventris</i>	3	3	6	Susceptible
<i>serotina</i>	13	12	34	Endangered
<i>syrovatkai</i>	1	1	1	not present
<i>tanysphyra</i>	5	5	21	not present
<i>woodi</i>	4	4	10	Susceptible

well understood. It was described from the Carpathians and seems to be locally abundant in lowlands of central Europe according to CHVÁLA (1994). Known from the Netherlands, not reported from Great Britain.

Empis (s.str.) *melanotricha* LOEW, 1873
Empis melanotricha LOEW, 1873: 39.
 CHVÁLA, 1994: 102, Figs 118, 164-167.

Material examined : 1 female, Sint-Joris-Weert, Meerdaalwoud Steenberg, 6.IV.2002 (coll. & det. J. MENTEN); 1 female, Oud-Heverlee, Meerdaalwoud Lange Delle, 26.IV.2002 (coll. & det. J. MENTEN).

Notes. Known from the Netherlands, Germany, Poland, Czech, Yugoslavia and Romania (CHVÁLA & WAGNER, 1989).

Empis (s.str.) *prope acinerea*

This species was mentioned in the Red data book of Flanders (GROOTAERT et al., 2001). It resembles *E. acinerea* and it is still not clear if it represents a new species for science.

Empis (s.str.) *nigripes* FABRICIUS, 1794

Very common in Belgium. Known all over temperate Europe (North, Central and South) and probably commonest *Empis* species.

Empis (s.str.) *nuntia* MEIGEN, 1838

Common species in Belgium. A species with a southern distribution in Scandinavia, further known from Great Britain, Ireland, the Netherlands, Germany, Czech, Hungary and Switzerland (CHVÁLA & WAGNER, 1989).

Empis (s.str.) *pennipes* LINNÉ, 1758

Uncommon in Belgium. It has a very wide distribution in Europe: south of Scandinavia, very common in temperate central Europe, absent from the Mediterranean (CHVÁLA, 1994).

Empis (s.str.) *pilosa* LOEW, 1867

Empis pilosa LOEW, 1867: 9.

SYROVÁTKA, 1991a: 249, figs. 9A-D, re-description.

Material examined: 1 male, Nismes, Roche-à-l'Homme, 22.V.1958, leg. R. DELVIGNE (on pin, coll. RBINS).

Notes. A rare spring species known from Central Europe only (Germany, Czech Republic) (CHVÁLA & WAGNER, 1989; SYROVÁTKA, 1991a, 2000). The species is not cited by CHVÁLA (1994), but illustrations can be found in SYROVÁTKA (1991a).

Empis (s.str.) *planetica* COLLIN, 1927

Common in Belgium. Rare in southern Scandinavia, further only known from Great Britain, Ireland, the Netherlands and Germany.

Empis (s.str.) *praevia* COLLIN, 1927

Very common in Flanders (see table 1) and locally very abundant. Until now only known from in Great Britain (COLLIN, 1961) where it is uncommon; cited from France, but not yet reported from the Netherlands (CHVÁLA, 1994). Since the species was not reported in Flanders before 1980 and it is now very abundant, we conclude that it is a species that is in expansion.

Empis (s.str.) *prodromus* LOEW, 1867

Common species in Belgium. Widely distributed in Europe.

Empis (s.str.) *pseudonuntia* SYROVÁTKA, 1991

Empis pseudonuntia SYROVÁTKA, 1991b: 142, figs. 4-7.

Material examined: 1 male, Ozo (Izier), 6.VI.1958, leg. R. DELVIGNE; 1 male, Malmédy, Bois du Calvaire, 25.VI.1935, leg. A. COLLART; 1 male, Fringshaus, Sources de la Vesdre, 5-7.VI.1954, leg. E. JANSSENS; 1 male, Hotton (Lux.), 31.V.-3.VI.1986, leg. G. HAGHEBAERT; 1 male, Hockai, 1.VI.1929 (det. as *E. pseudomalleola* by OLDENBERG in coll. M. GOETGHEBUER).

Notes. Known only from Switzerland (Delémont) and Germany (Schwarzwald) (SYROVÁTKA, 1991a, 2000).

Empis (s.str.) *pusio* EGGER, 1860

Material examined: 1 male, Brussel, Rood Klooster (Rouge-Cloître), 10.VII.1916 (leg. & det. R. TOLLET; rev. M. CHVÁLA).

This species was quoted in GROOTAERT *et al.* (1991) with a question mark. M. CHVÁLA

confirmed the identification. According to the Palaearctic catalogue it is mainly known from Central Europe: Germany, Poland, Czech, Austria, Hungary and Yugoslavia.

Empis (s.str.) *rufiventris* MEIGEN, 1838

Very rare in Belgium, but probably overlooked. A species of northern and central Europe: Great Britain, Ireland, the Netherlands, southern Scandinavia, Germany, Czech, Austria and Yugoslavia.

Empis (s.str.) *serotina* LOEW, 1867

A rare species in Belgium. Known from southern Scandinavia, the Netherlands, France, Germany, Poland, Czech and Austria (CHVÁLA, 1994). Unknown from Great Britain.

Empis (s.str.) *syrovatkai* CHVÁLA, 1985

CHVÁLA, 1985: 389 (new name for *E. plumipes* ZETTERSTEDT, 1842, nec MEIGEN, 1804).
CHVÁLA, 1994: 91, figs. 111, 145-148.

Material examined : 1 male, Falaën, 16.VI.1921 (leg. M. GOETGHEBUER), was identified as *E. decora*.

Notes: Widely distributed in Scandinavia, Russian Carelia, The Netherlands and Germany, Austria and Slovenia. Rather a summer species.

Empis (s.str.) *tanysphyra* LOEW, 1873

LOEW, 1873: 38.
CHVÁLA, 1994: 91, figs. 118, 168-171.

Material examined: 1 male, 9 females, Villers-sur-Lesse, 14.V.1936 (leg. L. GILTAY); 2 females, Bois de Couvin, 8.V.1952 (leg. R. TOLLET); 2 females, Nismes, Roche à l'Homme, 22.V.1958 (leg. R. DELVIGNE); 1 female, Onoz-Spy, 14.V.1942 (leg. R. TOLLET); 2 males, 4 females, Olloy-le-Berceau, 26.V.1950 (leg. R. TOLLET).

Notes. Unknown from Great Britain and the Scandinavia, but not uncommon in the Netherlands, almost throughout Europe, including the Mediterranean (CHVÁLA, 1994).

Empis (s.str.) *woodi* COLLIN, 1927

A rare species in Belgium. A species with a rather southern distribution. Unknown from Scandinavia. Recorded from the extreme South of the Netherlands, Great Britain, Czech, Hungary and Italy (Sardinia).

Comments on the species mentioned with a question mark in the old Belgian empidid catalogue (GROOTAERT *et al.*, 1991)

In the old catalogue following species are quoted with a question mark since at that time CHVÁLA'S revision was not yet available: *E. pusio*, *E. simulium* (= *lamellicornis* BECKER, 1887) and *E. tarsata*.

E. pusio has been re-identified by CHVÁLA and was confirmed.

E. simulium NOWICKI, 1868 as *E. lamellicornis* BECKER, 1887 is removed from the Belgian list since the specimen in the collection of GOETGHEBUER was a *E. nuntia*.

E. tarsata FALLÉN is removed from the Belgian list since there is not such a species from FALLÉN and we did not find specimens under that name in GOETGHEBUER'S collection. The citation in GOETGHEBUER (1931) was probably a slip of the pen.

E. pseudomalleola STROBL is removed from the Belgian list since the male present in the collection GOETGHEBUER was a *E. pseudonuntia* SYROVÁTKA (see above).

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