

Notes on Fanniidae (Diptera) of Finland, with a description of the female of *Fannia stigi* Rognes, 1982

Jere Kahanpää & Antti Haarto

Kahanpää, J. & Haarto, A. 2013: Notes on Fanniidae (Diptera) of Finland, with a description of the female of *Fannia stigi* Rognes, 1982. — Entomol. Fennica 24: 179–185.

This paper documents the presence of 20 species of Fanniidae in Finland. *Fannia alpina* Pont, 1970 and *F. slovaca* Gregor & Rozkošný, 2005 are new to North Europe. *Fannia barbata* (Stein, 1892), *F. lineata* (Stein, 1892) and *F. nigra* Malloch, 1910 are removed from the Finnish checklist. The female of *Fannia stigi* Rognes, 1982 is described from a Finnish specimen caught together with a male. The total number of fanniid flies known from Finland is now 61.

J. Kahanpää, Finnish Museum of Natural History, Zoology, P.O. Box 17, FI-00014 University of Helsinki, Finland; E-mail: jere.kahanpaa@helsinki.fi

A. Haarto, Zoological Museum, Section of Biodiversity and Environmental Science, University of Turku, FI-20014 Turku, Finland

Received 17 January 2013, accepted 5 March 2013

1. Introduction

The dipterous family Fanniidae is a smallish family of mostly black, rather inconspicuous flies. About 85 species are known from Europe (Pont 2012). The larvae are saprophagous and feed on a range of decaying organic tissues like rotting wood, old fungi, cadavers, faeces and bird or mammal nests. A few species are pests or known to cause myiasis in severely weakened hosts.

Fanniids have attracted relatively little attention in Finland. Lauri Tiensuu (1906–1980) studied them in the 1930s as a part of a larger project on muscoid flies. He returned to the family in the sixties and seventies, but did not publish any new papers during the latter period.

This is reflected by the slow increase in the number of species known from Finland: 37 species were listed in 1941 (Tiensuu 1941). Only two had been added by 1980 for a total of 39 species (Hackman 1980). The latest decade has seen a surge of interest in brachyceran flies in Finland,

and many new species have been recorded in the country. Rozkošný *et al.* (1997) list 46 fanniids from Finland. *Fannia atra* (Stein, 1895) has recently been reported from Finland by Haarto (2009). The additional records presented in this paper raise the total number of Fanniidae known from Finland to 61.

2. Material and methods

Finnish biogeographical provinces are abbreviated using the standard Latinate forms. Complete province names in a map are presented in all volumes of *Fauna Entomologica Scandinavica*. Coordinates are given in Finnish National Coordinate System (yhtenäiskoordinaatisto, YKJ) (Heikinheimo & Raatikainen 1971). The discussed material is deposited in the Finnish Museum of Natural History (MZ) and the private collections of the authors, Kaj Winqvist, Jari Flinck, and Iiro Kakko.

3. New records of Fanniidae from Finland

Fannia aethiops Malloch, 1913

New to Finland. A Holarctic species that is widespread in North America, but previously recorded only from Norway and Sweden in Europe (Pont 1986, 2012).

Material examined. FINLAND 1 ♂ Ks: Kuusamo, Paahtojarvi (7347004:3614371), 20.VI.–3.VIII.2005, leg. J. Salmela, malaise trap, a small stream. 2 ♂ Ks: Taivalkoski, Pahkaoja (7281402:3560358), 30.V.–3.VII.2006, leg. J. Salmela, malaise trap, a wet north boreal forest with spruce and willows.

Fannia alpina Pont, 1970

New to North Europe. One of the most surprising finds was a male of this very rarely collected species from Finland. The locality is a highway verge cutting through small-scale farming land and it harbours a strong (if fluctuating) population of the greater knapweed (*Centaurea scabiosa*).

Fannia alpina was described from the Austrian Alps (Pont 1970). It has also been found in Japan (Nishida 1974) and Nepal (Nishida 1994). The Finnish site is far from any mountains and repre-

sents rather typical south boreal lowland landscape dominating the southern half of Finland.

Material examined. FINLAND 1 ♂ Ta: Heinola, Lusi, Vanha-Sipilä (67983:34500), 26.VII.2009, leg. J. Kahanpää (id jka09-06049). Illustrated in Fig. 1.

Fannia carbonella (Stein 1895)

Previously listed from Finland by Pont (2012).

Material examined. FINLAND 1 ♂ Ka: Hamina, 18.VI.1963, leg. L. Tiensuu, id <http://id.luomus.fi/HT.793>. RUSSIA 1 ♂ Republic of Karelia, Sortavala, leg. L. Tiensuu, id <http://id.luomus.fi/HT.772>.

Fannia fuscitibia Stein, 1920

New to Finland.

Material examined. FINLAND 1 ♂ Li: Enontekiö, Kilpisjärvi, Annjalonji, 13.VII.2010, leg. Iiro Kakko.

Fannia gotlandica Ringdahl, 1926

New to Finland. A rare species hitherto known only from Sweden and the British Isles (Pont 2012).

Material examined. FINLAND 1 ♀ Ab: Turku, Satava (67047:32310), 25.VIII.2002, leg. K. Winqvist, caught at light at night.



Fig. 1. *Fannia alpina* Pont, 1970, male. Tip of abdomen detached.

***Fannia immutica* Collin, 1939**

Listed from Finland by Pont (2012), but we have been unable to locate any correctly identified museum specimens.

Material examined. FINLAND 1 ♂ Ok: Puolanka, Kurikkavaara (71868:35379), 12.VII.2002, leg. J. Kahanpää, id jka06-0340. 1 ♂ Al: Finström, Bergö Husö (6706:3103), 8.–9.IX.2012, leg. Haarto, Jokinen & Virta, id AHa12-002184. 1 ♀ Sb: Kuopio, Puijo (6978: 3533), 31.VII.2012, leg. A. Haarto, id AHa12-002420. 2 ♀ Sb: Kuopio, Kolmisoppi (6974: 3530), 1.VIII.2012, leg. A. Haarto, id AHa12-002341 & -002342.

***Fannia latipalpis* (Stein, 1892)**

New to Finland.

Material examined. FINLAND 1 ♂ N: Helsinki, Vuosaari (6679:3397), 2.VIII.2002, leg. J. Kahanpää.

***Fannia leucosticta* (Meigen, 1838)**

The species is first mentioned in Tiensuu (1946a) from Finland, although his collecting locality is now in the Russian territory. Pont (1986) and Rozkošný *et al.* (1997) record this species from Finland. Pont (2012) lists the occurrence as doubtful. There are four male specimens under this name in Finnish collections (all in MZH). Two males belonging to *F. leucosticta* were found in the MZH Diptera Fennica collection. A pair from Vieljärvi (Russia) identified as *Azelia gibberoides* by Tiensuu belong to *Azelia triquetra* (Wiedemann, 1817) (Muscidae).

Material examined. FINLAND 1 ♂ Ab: Bromary, 20.–22.VII.1960, leg. S. Laurema, id <http://id.luomus.fi/HT.779>. RUSSIA 1 ♂ Leningrad Oblast, Vaaseni, 11.VI.1942, leg. L. Tiensuu, id <http://id.luomus.fi/HT.781>.

***Fannia metallipennis* (Zetterstedt, 1838)**

Previously listed from Finland by Rozkošný *et al.* (1997) and Pont (2012).

Material examined. FINLAND 1 ♂ Ka: Hamina, Lankamalmi, larva found 24.III.1973 in leaf litter, leg. L. Tiensuu, adult mounted with puparium), id jka07-01447. 1 ♂ Ka: Hamina, Hietakylä, 2.VI.1972, leg. L. Tiensuu, id <http://id.luomus.fi/HT.785>. 4 ♂ Ab: Korppoo, Utö (6643:3184), 1.I.–26.VI.2006, leg. J. Joki-

nen. 1 ♂ same locality, 26.VI.–2.VII.2006, leg. J. Jokinen.

***Fannia pauli* Pont, 1997**

New to Finland within borders after World War II. Hennig (1955): "Finland (Sortavala: Tiensuu 1935)". Sortavala is in Russian Karelia.

Material examined. FINLAND 1 ♂ Ab: Korppoo, Utö (6643:3184), 15.–17.VII.1999, leg. Blomster & Elo. 1 ♂ Ab: Korppoo, Utö (6643:3184), 1.I.–26.VI.2006, leg. J. Jokinen. Same locality and leg: 2 ♂ 26.VI.–2.VII.2006. 6 ♂ 2.–8.VII.2006. 2 ♂ 8.–22.VII.2006.

***Fannia slovaca* Gregor & Rozkošný, 2005**

New to North Europe. This recently described species was previously confused with *F. umbratica* (Gregor & Rozkošný 2005); the male genitalia figures in Rozkošný *et al.* (1997) belong to this species. Pre-war collecting localities of Rolf Krogerus in Kuusamo are spread on both sides of the current border between Finland and Russia. The exact collecting locality, and thus, the country of the second specimen remains unknown.

Material examined. FINLAND 1 ♂ Ab: Karja, Nordlingsberget (66653:33240), 17.V.2006, leg. J. Kahanpää, id jka06-00217, reared from a pupa found within soft heart rot of a spruce (*Picea abies*) stump on a clearcut. Illustrated in Fig. 2. FINLAND or RUSSIA: 1 ♂ Ks: Kuusamo, 'Ti', 28.VI.1935, leg. R. Krogerus, id <http://id.luomus.fi/HT.797>.

***Fannia stigi* Rognes, 1982**

New to Finland. A Palaearctic species, previously known from Sweden, Norway (Rognes 1982) and China (Wang *et al.* 2007).

Description of the female. See Fig. 3.

Head. Frons broad, distance between eye margins about as wide as one third of head width. Eyes bare. Parafacials bare and densely grey dusted. Fronto-orbital plates entirely grey dusted but much less than grey parafacials. Fronto-orbital plates as broad as frontal vitta at narrowest part. Upper postocular setulae uniserial. Palpi distinctly spathulate and about as broad as three fourth of antennal flagellomere. Theca of proboscis shining and moderately long, not transversely broadened.



Fig. 2. *Fannia slovaca*
Gregor & Rozkošný,
2005, male. Middle legs
missing.

Thorax. Shining black but distinctly grey dusted. Mesonotum without darker longitudinal stripes. Acrostichal setulae triserial. Two prealar setae, length of anterior one about one fourth of posterior notopleural setae. Calypters white and with white fringe. Lower calypter almost as broad as upper calypter.

Legs. Dark, base of femora translucent brownish. Fore femora with complete rows of short posterodorsal, posterior and postoventral setae. Fore tibia only with preapical setae. Mid femora apically with 3 posterior setae and with complete row of short anterior setae. Mid tibia slightly thickened in apical half. Mid tibia with 1 anterodorsal and 1 posterodorsal setae and without anteroventral setae. Hind femora apically with 2 anterodorsal and 2 anteroventral setae and with complete row of short anterior setae. Hind tibia with 1 anterodorsal and 1 anteroventral setae. Inner posterior margin of hind coxa bare.

Abdomen. Shining black but slightly grey dusted.

The female of *Fannia stigi* runs to the couple 63 in the key in “The European Fanniidae (Diptera).” (Rozkošný *et al.* 1997) and it does not key out.

Material examined. FINLAND 1 ♂ Li: Utsjoki, Outakoski, 13.VI.1948, leg. E. Thuneberg (id <http://id.luomus.fi/HT.796>). 1 ♂ Ka: Hamina, Potsila, 28.VI.1971, leg. L. Tiensuu (id HT.801). 1 ♂ 1 ♀ Le: Enontekiö, Lossujärvi (76908: 32632), 9.–15.VII.2009, leg. R. Jussila, malaise trap.

Fannia subatipes d'Assis-Fonseca 1967

Listed from Finland by Pont (2012).

Material examined. FINLAND 1 ♂ Lkoc: Kolari, Ylläs (750016:337977), 1.–7.VII.2012, leg. A. Haarto, meat bait trap. 1 ♂ as previous but caught with a malaise trap. Both traps were near a subarctic forest spring near the treeline.

Fannia subpubescens Collin, 1958

Previously mentioned by Hedström (1968) and



Fig. 3. *Fannia stigi*
Rognes, 1982, female.

by Tiensuu (1940) as *F. pubescens* [auct, nec. Stein].

Material examined. FINLAND 10 ♂ N: Helsinki, Koskela 8.VII.1940, leg. L. Tiensuu. 1 ♂ as previous but 28.VI.1940. 1 ♂ as previous but 30.VI.1940. 1 ♀ Ab: Turku, Satava (67047: 32310), 7.VI.2001, leg. Hertta Winqvist, garden. 1 ♂ N: Helsinki, Viikki Arboretum (668029: 338967), 5.VI.2006, leg. Jari Flinck, id JF06-4316. 1 ♀ N: Loviisa, Harmaakallio (670413: 345667), 25.VI.2006, leg. Jari Flinck, id JF06-0653. 1 ♀ N: Vantaa, Vehkalanmäki (66881: 33799), 8.V.2008, leg. J. Kahanpää.

Fannia umbratica Collin, 1939

New to Finland.

Material examined. FINLAND 1 ♂ Li: Utsjoki, Outakoski, 13.VI.1948, leg. E. Thuneberg, id <http://id.luomus.fi/HT.798>. 1 ♂ Sb: Kuopio, Kuvemäki (6960:3528), 23.–25.V.2003, leg. Eino Räsänen. 1 ♂ Lkoc: Muonio, Olos (75415: 33676), 5.VII.2012, leg. A. Haarto, det. A. C. Pont, id AHa12-002039. RUSSIA 1 ♂ Murmansk district, Petsamo, Yläluostari, north of the tourist hotel, 21.VI.1928, leg. W. Hellén, river-side meadows and bogs, id <http://id.luomus.fi/HT.799>.

Fannia umbrosa (Stein, 1895)

New to Finland within borders after World War II. Hennig (1955): “Sünfinnland [sic] (Tiensuu 1940)”. The localities listed by Tiensuu (1940) are Terijoki and Sortavala Rytty (both now in

Russia). The Russian male from Sortavala, 17.VII.1934, leg. L. Tiensuu, “*F. umbrosa* Stein”, id <http://id.luomus.fi/HT.794>) turned out to be *F. ringdahliana* Collin, 1939.

Material examined. FINLAND 1 ♂ Ab: Turku, Satava (67043:32307), 5.VII.2003, leg. K. Winqvist, black alder forest. 1 ♀ Ab: Mynämäki, Perkko (6733:3222), 25.VI.2010, leg. A. Haarto, id AHa10-001094. 1 ♂ Ta: Hämeenlinna (6762: 3359), 25.VI.2007, leg. T. Järveläinen. RUSSIA 2 ♂ Leningrad Oblast, Terijoki, 11.VI.1939 (id <http://id.luomus.fi/HT.801>) and 13.VI.1939 (id HT.800), leg. L. Tiensuu.

Fannia verrallii (Stein, 1895)

New to Finland.

Material examined. FINL AND 1 ♀ Ab: Sammatti, 16.VI.1936, leg. R. Krogerus, id <http://id.luomus.fi/HT.778>. 1 ♀ Ab: Pukkila, Venunmetsä (67284:34159) 11.VI.2011, leg. J. Kahanpää, old growth forest, id Jka11-00130, iBOL DNA fingerprint voucher specimen. 1 ♀ Sa: Mikkeli, Kärmessuo (68575:35126) 30.VI.2010, leg. J. Kahanpää, bog+old boreal forest, id jka10-02786. 1 ♀ Oa: Kristiinankaupunki, Nedermossen (68984: 32108) 27.VII.2012, leg. K. Winqvist, peat bog. 1 ♀ Ok: Suomussalmi, Hossa (726392:361918) 27.VI.–1.VII.2011, leg. Reijo Jussila, malaise trap, id AHa11-004538. 1 ♀ Ks: Kuusamo, Oravisuo (73513:36162) 11.VII.2010, leg. J. Kahanpää, peat bog, id jka10-00989. 1 ♀ Ks: Kuusamo, Rinteenlammit (73639:36114) 13.VII.2010, leg. J. Kahanpää, a fen with springs, id jka10-01494.

***Fannia vesparia* (Meade, 1891)**

New to Finland within borders after World War II. Hennig (1955): "Südfinnland (Salmi nach Tiensuu 1935; var. fumigera aus Sortavala)". No specimens were found at MZH, where Tiensuu's collections are deposited. Both Salmi and Sortavala are in Russia.

Material examined. FINLAND 1 ♂ Sb: Kuopio, Puijo (6978:3533), 31.VII.2012, leg. A. Haarto, id AHa12-002416.

***Fannia vespertilionis* Ringdahl, 1934**

New to Finland.

Material examined. FINLAND 1 ♂ N: Raasepori, Tammisaari, Dragsvik (6657:3303), 8.–14.VII.2011, leg. H. Jalava & H. Tanner, coastal deciduous forest.

***Piezura graminicola* (Zetterstedt, 1846)**

New to Finland.

Material examined. 1 ♂ Al: Lemland, Granboda, 16–21.VII.2004, leg. Gunilla Ståhls, malaise trap. 1 ♂ Ab: Korppoo, Utö (6643:3184), 22.VII.–4.VIII.2006, leg. J. Jokinen, id AHa09-000506. 1 ♀ N: Loviisa, Harmaakallio (670413: 345667), 12.VII.2006, leg. Jari Flinck, malaise, id JF06-1842. 10 exx N: Helsinki, Herttoniemi Fastholma (66787:33905), 1.VIII–3.IX.2006, leg. J. Flinck, malaise.

***Piezura pardalina* (Rondani, 1866)**

Locally rather common in coastal alder forests on the south coast.

Material examined. FINLAND 1 ♂ Ab: Kemiö, Sjöläx kartano (66774:32689), 3.VIII. 2009, leg. A. Haarto, id AHa09-001401. 1 ♂ Ab: Kemiö, Söglö Norrgård (66729:32478), 5.VIII. 2009, leg. J. Kahnpää, id jka09-05660. 1 ♀ Al: Finström, Bergö Husö (6706:3103), 8.–9.IX. 2012, leg. Anssi Teräs, id AHa12-002212. 1 ♀ N: Loviisa, Harmaakallion multavarasto (670132: 845656), 2.–3.VII.2010, leg. Jari Flinck, id JF10-5929. 355 exx from N: Loviisa, Hagalundin jalopualehto (67061:34578), 15.VII.–31.VII. 2010, leg. J. Flinck, beer bait traps. 1 ♀ N: Helsinki, Herttoniemi Fastholma (667876: 339050), 11.–12.IX.2010, leg. J. Flinck, beer trap, id JF10-10004.

4. Deletions from the Finnish checklist***Fannia barbata* (Stein, 1892)**

Hennig (1955) "Finnland (Ostkarelien: Kolatselkä nach Tiensuu, 1946)", Pont (1986, 2012) and Rozkošný *et al.* (1997) record this species from Finland. The source for all these is probably Tiensuu (1946a): "2 ♂ in Ostkarelien, AK: Kolatselkä, 18.V.1943". Kolatselkä belongs to the Russian Republic of Karelia. No specimens were found in Finnish collections, but there is a male *F. spathiphora* Malloch, 1918 collected from Kolatselkä on 18.VI.1943 (id <http://id.luomus.fi/HT.782>) which may be one of the specimens referred to by Tiensuu. It is possible that the Palaearctic Catalogue record from North European Russia (NET) is also based on Tiensuu's missing specimens. It should probably also be considered doubtful until the specimens are found and identifications confirmed.

***Fannia lineata* (Stein, 1892)**

The only published record of this species in Finland is by Tiensuu (1938): "1 ♂ in V: Naantali, 23.VI. 1935, on flowers of *Anthriscus silvester* (L.) Hoffm.". The only fanniid in MZH collections matching the published data is a male of male *Fannia similis* (Stein, 1895) labeled "Naantali/L. Tiensuu/*Anthriscus silv.*/23.VI. 1935" (id <http://id.luomus.fi/HT.780>).

***Fannia nigra* Malloch, 1910**

Hennig (1955) "aus S.O.-Finnland (Tiensuu 1940)", Pont (1986, 2012) and Rozkošný *et al.* (1997) note the species from Finland. Tiensuu (1940) mentions only specimens from Terijoki = Zelenogorsk (now in Leningrad Oblast, Russia) and Sortavala (Republic of Karelia, Russia). The notebooks of Lauri Tiensuu mention a Finnish specimen (Ka: Hamina, Kannusjärvi, 14.VI. 1971, leg. LT), but no such specimen has been found in collections. We are not aware of any confirmed records from within the current borders of Finland.

Material examined. RUSSIA 1 ♂ Leningrad Oblast, Terijoki, 16.VII.1938, leg. L. Tiensuu, id <http://id.luomus.fi/HT.770>.

5. Other notes

Fannia latifrontalis (Stein, 1892)

Tiensuu (1946b) originally added this species (as *Fanniosoma latifrons* Ringdahl, 1932) to the Finnish fauna on the basis of a single male specimen collected by sifting a *Lasius fuliginosus* ant nest (N: Vantaa, Tammisto, 21.V.1946., leg. E. Kangas, det. L. Tiensuu). He described the male as having "... Behaarung der Augen und die Beborstung der Wangen" [hairy eyes and setose parafacitalia]. Unfortunately Tiensuu never published the description he intended to write, and we could not find this specimen in MZH. The record could not be confirmed without specimens. Nonetheless, we accept it for now.

Fannia rabbionata Karl, 1940

The type locality of this species was given as "Finnland (Magala am Luirojoki)" by Karl (1940). We did not find any material in MZH. It has recently been redescribed from Chinese material (Wang *et al.* 2007). While 'Magala' could not be found on any maps we consulted, the type locality is definitely within the current borders of Finland.

Acknowledgements. We would like to thank Dr. Adrian C. Pont of the Oxford University Museum of Natural History for valuable advice on identifying female *Fannia*, Pekka Malinen (MZH) for taking the first two photographs, and all the Diptera enthusiasts who allowed us to examine their collections.

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