

# New findings and an overall assessment of Norwegian biting midges (Diptera, Ceratopogonidae)

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Faunistic studies on biting midges conducted mostly in South Norway between 2006 and 2020, as well as a revision of available literature, resulted in a new comprehensive checklist of the species known from mainland Norway. In total, 21 genera and 216 species of Ceratopogonidae have been registered, of which as many as 165 are with Linnaean names. For the remaining 51 species interim names are given as no existing nominal species could be assigned. Four genera, namely *Ceratoculicoides* Wirth & Ratanaworabhan, 1971, *Monohelea* Kieffer, 1917b, *Phaenobezzia* Haeselbarth, 1965 and *Probezzia* Kieffer, 1906, and 58 species are reported from Norway for the first time. Records of nine biting midge species previously mentioned from the country turned out to be uncertain and are currently treated as doubtful. In Norway, the most species-rich genera of Ceratopogonidae are: *Culicoides* Latreille, 1809 with 34, *Forcipomyia* Meigen, 1818 with 29, *Dasyhelea* Kieffer, 1911a with 22, *Atrichopogon* Kieffer, 1906 with 16, *Bezzia* Kieffer, 1899 with 15, and *Palpomyia* Meigen, 1818 with 15 reported species.

Key words: Diptera, Ceratopogonidae, Norway, new records, doubtful records, checklist, DNA barcoding.

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## Introduction

Ceratopogonidae is a family of nematocerous flies, distributed nearly worldwide, and represented by species with very diverse morphology, biology, and ecology. They are present in various habitats ranging from coastal areas to high mountains (up to 4.651 m a.s.l.) (Borkent & Spinelli 2007, Tapia *et al.* 2018, Borkent & Dominiak 2020), are common in tropics, but have been reported also from cold regions, such as subantarctic islands and within 150 km of permanent polar ice in Canada (Gressitt 1962, Downes 1978, Sublette & Wirth 1980, Borkent & Grogan 1995). The immatures of ceratopogonids live in a wide range of aquatic, semiaquatic and true terrestrial habitats. Their larvae inhabit puddles, lakes,

springs, rivers, swamps, peat bogs, phytotelmata and moist soil. Some species breed in sap oozing from trees, rotting plants and ephemeral rock pools, while others are reported from saline soil or water of inland saline habitats and intertidal zone of seas (Waugh & Wirth 1976, Mullen & Hribar 1988, Szadziewski *et al.* 1997, Borkent & Dominiak 2020). Larvae feed on algae, fungi, and detritus, but some species are also predators and prey on protozoans, rotifers, nematodes, annelids, caddisfly-, chironomid-, mosquito-, and other biting midge larvae (Mullen & Hribar 1988, Szadziewski *et al.* 1997). Feeding habits of adults are diverse. Males of all biting midge species feed solely on sugar and water from nectar and honeydew. The same applies to females of all *Dasyhelea* Kieffer, 1911a and some *Forcipomyia*

Meigen, 1818. Females of other biting midges sometimes supplement their diet with nectar, but normally they need a protein-rich meal for egg maturation (Szadziewski *et al.* 1997). Few species are known to be pollinivorous and obtain protein from pollen. All members of the subfamily Ceratopogoninae, except for the genus *Culicoides* Latreille, 1809 are predators on small, soft-bodied insects and prey mainly on chironomids, ceratopogonids and mayflies (Downes 1978). Species of the genus *Atrichopogon* Kieffer, 1906 and some species of *Forcipomyia* are ectoparasitic on larger insects, and take hemolymph from butterflies, dragonflies, beetles, and net-winged insects. Females of *Austroconops* Wirth and Lee, 1958, *Leptoconops* Skuse, 1889, *Culicoides* and *Forcipomyia* (*Lasiohelea* Kieffer, 1921a) suck vertebrate blood, mainly of mammals and birds, but there are also species that are parasites on amphibians and reptiles (Debenham 1989, Szadziewski *et al.* 1997, Borkent & Dominiak 2020). Bloodsucking ceratopogonids are annoying biters of humans and other vertebrates, and are often considered serious pests, especially in coastal habitats and montane regions (Wirth 1952, Wirth & Hubert 1989, Szadziewski *et al.* 1997, Borkent & Dominiak 2020). Haematophagous biting midges are reported as vectors of 66 viruses, 15 species of parasitic protozoans and 26 species of filarial nematodes (Borkent & Spinelli 2007), e.g., bluetongue and Akabane viruses, protozoans causing avian malaria and leishmaniasis, and *Onchocerca filariae* (Linley 1985, Wirth & Hubert 1989, Dougall *et al.* 2011).

Worldwide, 6,276 extant species and 121 extant genera of biting midges are known (Borkent & Dominiak 2020, Borkent *et al.* 2022) with about 590 species within 27 genera occurring in Europe (Szadziewski *et al.* 2013, Szadziewski & Dominiak 2016, Borkent & Dominiak 2020, Borkent *et al.* 2022). The best studied European countries are Germany (256 spp.), France (241 spp.), Poland (220 spp.), Estonia (184 spp.) and Czech Republic (175 spp.) (Szadziewski *et al.* 2013, Szadziewski & Dominiak 2016). Determining how many Ceratopogonidae species that are reported from Norway is not easy, since the numbers provided by various authors are

inconsistent. Differences can be due to overlooked records from older publications, also causing some species to be reported as new to Norway more than once. According to the most recent publications (e.g. Stur & Borkent 2014), the family is represented by approximately 120 species in the Norwegian fauna, a number of species similar to those known from Sweden and Finland (Huldén & Huldén 2014, Salmela *et al.* 2015, Strandberg 2016, Dominiak *et al.* 2020).

The literature on Ceratopogonidae from Norway is rather rich, and the first note on biting midges can be found in “Resa genom Sweriges och Norrignes Lappmarker” by Zetterstedt (1822, p. 41). Another brief observation of a “*Ceratopogon*” specimen from Finnmark region was published just a few years later by Christy (1837, p. 464). Further publications from the 19<sup>th</sup> and 20<sup>th</sup> centuries provide more scientific content, including descriptions of species new to science and more detailed faunistic data. A compilation of the literature on Norwegian Diptera up to the year 1940 (Soot-Ryen 1943b) proved to be very useful when looking for older publications where Ceratopogonidae were mentioned. A list of the scientific literature we were able to find (except catalogs, databases, checklists) that report species from Norway is shown in Table 1. The most important articles dealing with the diversity of Norwegian biting midges are those by Hagan *et al.* (2000) with 56 species records, including 44 species new to Norway and by Stur & Borkent (2014) with 54 recorded morphospecies, including 16 species new to Norway. It is noteworthy that many, or in some cases even all Ceratopogonidae records from Zetterstedt (1855), Siebke (1877), Soot-Ryen (1943a), and Thunes *et al.* (2003, 2004, 2008) are just repetitions of older records (Table 1). For example, all records in Thunes *et al.* 2003, 2004, and most probably also the ones in Thunes *et al.* 2008, were published earlier by Hagan *et al.* (2000). The dates and localities of the material in Thunes *et al.* (2008, pp. 218–219) (collected between 19 June and 17 July, 1999, from pine canopies in Sigdal) correspond with those published in Hagan *et al.* (2000, pp. 469–471), even though there are some differences between the recorded species and specimen numbers.

Information about the presence of particular biting midge species in Norway can be found also in printed catalogs and checklists, e.g. Havelka 1978, Remm 1988, Krzywiński 1996 (tribe Palpomyiini Enderlein, 1936), Szadziewski *et al.* 1997, Mathieu *et al.* 2012 (genus *Culicoides*), as well as in online databases (e.g. Szadziewski *et al.* 2013, Artsdatabanken 2015).

A lot has changed in the taxonomy of Ceratopogonidae since Carl von Linné described the first biting midge species, *Culicoides pulicaris* (Linnaeus, 1758), originally placed in the genus *Culex* Linnaeus, 1758. Thenceforth, the most proliferous European biting midge workers, like J.W. Meigen, J. Winnertz, J.J. Kieffer, M. Goetghebuer, J. Clastrier and H. Remm, have described numerous Ceratopogonidae as new to science. However, many of these new names later appeared to be synonyms of previously described taxa. An extreme case is J.J. Kieffer who authored nearly twice as many names currently regarded as junior synonyms compared to valid names (Borkent & Dominiak 2020). Although the old descriptions and records of biting midges are of huge value, it is not surprising that our current knowledge about the family is much deeper and more accurate than it was in the 18<sup>th</sup>, 19<sup>th</sup> or at the beginning of 20<sup>th</sup> century. We consider most of the information on species occurrences in Norway found in older literature as doubtful, or at least less reliable until voucher specimens from the original collections are re-examined. This concerns mostly minute species, which are difficult to identify, and species treated as junior synonyms in addition to cases where the authors used synonymic names in other combinations than they are currently accepted. Considering that thorough studies of old museum material was far beyond the scope of this paper, we have added short discussions on these issues as a comment under the treatment of the relevant species in the below faunistic overview.

## Material and methods

The adult and immature biting midges were collected using Malaise traps, kick nets and sweep nets or were hand-picked from dead blister beetles

(bait trap) during surveys conducted in Agder (2019–2020), Innlandet (2008, 2015, 2016), Trøndelag (2006, 2010, 2013–2015, 2017–2020), Vestfold and Telemark (2020), and Viken (2020) counties and in Finnmark region (2010). The specimens examined were cleared in 10% KOH and subsequently slide mounted in Euparal or a mixture of Canada balsam and orange oil. The remaining material is stored in 80% ethanol for further studies. All specimens from our study are deposited in the NTNU University Museum insect collection, Trondheim, Norway (Table 2). Additionally, some specimens collected and identified by Jonas Strandberg (Strandberg 2016) deposited at the Swedish Museum of Natural History (NHRS), Department of Entomology, were re-examined.

Tissue (one or two legs) from selected specimens were sampled and sent to the Canadian Centre for DNA Barcoding (CCDB), University of Guelph, Canada for molecular analyses. Upon DNA extraction using standard protocols, the barcode fragment of cytochrome c oxidase subunit 1 (COI) was amplified using the C\_LepFolF and C\_LepFolR primer cocktail (Hernández-Triana *et al.* 2014) and bi-directionally sequenced using Sanger technology. DNA barcodes and associated metadata are available in the dataset “DS-NOCER, Norwegian Ceratopogonidae” in the Barcode of Life Data System (BOLD) and the DOI for the dataset is: [dx.doi.org/10.5883/DS-NOCER](https://dx.doi.org/10.5883/DS-NOCER). Genbank accession numbers of the COI sequences are ON341717 - ON342617.

For each species, in the paragraph “Material examined”, the county, coordinates, date, specimen code for the barcoded or museum ID number for the not-barcoded specimens are given. More information about the records can be retrieved via the published BOLD dataset.

Information about geographical distribution of species is based mainly on data from the Fauna Europaea database (Szadziewski *et al.* 2013, accessed 19 March 2022).

Distribution data from BOLD was assembled on 05 December 2021. Besides of Norway, all other countries of occurrence are listed in alphabetical order.

The classification of biting midges follows

Borkent & Dominiak (2020) and Borkent *et al.* (2022). In a few cases, for the genera *Atrichopogon* Kieffer, 1906, *Dasyhelea* Kieffer, 1911a and *Bezzia* Kieffer, 1899, a subgeneric division traditionally used in Europe (see e.g. Remm 1988, Szadziewski *et al.* 1996, Dominiak 2012) is mentioned in the comments. Hopefully, this will make it easier for the readers to navigate among various species groups of Ceratopogonidae, search for identification keys and taxonomic literature.

Several species mentioned in older papers have been synonymized. We follow the currently accepted synonymizations in Borkent & Dominiak (2020) and the records in Table 1 are listed by their senior synonyms (see comments under relevant species). The junior synonyms are as follows: *Atrichopogon fuscipes* (Zetterstedt, 1850) (= *A. fuscus* (Meigen, 1804)), *Bezzia circumdata* (Stæger, 1839) (= *B. annulipes* (Meigen, 1830)), *Brachypogon lapiae* (Clastrier, 1961) (= *B. incompletus* (Kieffer, 1925b)), *Ceratopogon crassinervis* (Goetghebuer, 1920) (= *C. naccinervis* Borkent, in Borkent & Wirth 1997), *Culicoides arcuatus* (Winnertz, 1852) (= *C. pictipennis* (Stæger, 1839)), *C. heliophilus* Kieffer, 1924a (= *C. newsteadi* Austen, 1921), *C. pictidorsum* Kieffer, 1924a (= *C. circumscriptus* Kieffer, 1918), *C. salicornis* Kieffer, 1924a (= *C. circumscriptus* Kieffer, 1918), *Dasyhelea luteiventris* Goetghebuer, 1934 (= *D. bilobata* Kieffer, 1915), *D. obscura* (Winnertz, 1852) (= *D. flavifrons* (Guérin-Méneville, 1833)), *D. scutellata* (Meigen, 1830) (= *D. corinneae* Gosseries, 1991), *Palpomyia hortulana* (Meigen, 1818) (= *P. flavipes* (Meigen, 1804)), *P. laticollis* Goetghebuer, 1922 (= *P. tibialis* (Meigen, 1818)), *P. rufipecta* (Winnertz, 1852) (= *P. armipes* (Meigen, 1838)), *Schizohelia xanthopeza* (Clastrier, 1963) (= *S. leucopeza* (Meigen, 1804)), *Serromyia europaea* Clastrier, 1963 (= *S. ledicola* Kieffer, 1925b), and *Sphaeromyias procerus* (Zetterstedt, 1855) (= *S. fasciatus* (Meigen, 1804)).

Immature biting midges (larvae, pupae) were associated with identified adult specimens by DNA barcodes belonging to the same Barcode Index Number (BIN) in BOLD.

Both, previously published and new records of Ceratopogonidae species are compiled in Table 1

(genera and species given in alphabetical order). Old literature records provided by Zetterstedt (1822, p. 141), Christy (1837, p. 464) and Storm (1907, p. 10), where biting midges are identified only to generic level or locality data are not precise, are not included in Table 1.

## Results

### Comments on previous records of biting midges from Norway

A study of the literature on biting midges from Norway and re-examination of specimens from Finnmark region housed in the NTNU collection, have led us to some interesting findings and conclusions. Firstly, loci typici of three of Kieffer's species are in Germany, not in Norway. This concerns *Culicoides salicola* Kieffer, 1924a, *C. pictidorsum* Kieffer, 1924a (both are junior synonyms of *C. circumscriptus* Kieffer, 1918) and *C. halophilus* Kieffer, 1924a (junior synonym of *C. newsteadi* Austen, 1921) which were mistakenly stated as described from Norway (Kieffer 1924a). Their locus typicus, misspelled as "Oldesbac" and "Oldesloc", respectively, refers to Bad Oldesloe in Schleswig-Holstein in northern Germany (see Thienemann 1926, Mehl 1996, Dau & Martin 2013). Thus, these three old records from Norway, and subsequent records of *C. circumscriptus* and *C. newsteadi*, are treated by us as invalid. Secondly, the occurrence of various other species from Norway is erroneous because records have been based on incorrectly identified specimens or wrong interpretation of species. We thus regard the following literature records as invalid and do not include them in Table 1:

*Atrichopogon fuscus* (Meigen, 1804), as *A. fuscipes* (Zetterstedt, 1850) in Zetterstedt (1850). *Atrichopogon fuscipes*, currently a junior synonym of *A. fuscus*, was described from specimens from Denmark and Norway. However, Szadziewski (1986, p. 30) proved that the specimen from Thynås in Norway (a paralectotype of *A. fuscus*) belongs to *A. griseolus* (Zetterstedt, 1855). Zetterstedt's record of *A. fuscipes* was repeated by Siebke (1877) and Soot-Ryen (1943a).

*Atrichopogon hirtidorsum* Remm, 1961b, in Stur & Borkent (2014). The female specimens from Finnmark region reported in Stur & Borkent (2014) have been re-examined and they are re-identified as *A. cf. hirtidorsum*. They belong to BIN BOLD:ABZ8851, members of which are characterized by presence of hair partially covering eyes in male, and well-visible neck of seminal capsule in female. According to the original Remm (1961b) description, eyes in the male of *A. hirtidorsum* are naked and female seminal capsule is without neck.

*Atrichopogon infuscus* Goetghebuer, 1929, in Stur & Borkent (2014). We have re-examined the male specimen from Finnmark region identified as *A. infuscus* by Stur & Borkent (2014) and without any doubts it belongs to *A. longicalcar* Remm, 1961b.

*Atrichopogon minutus* (Meigen, 1830), in Stur & Borkent (2014). The male and female specimens from Finnmark region mentioned in Stur & Borkent (2014) have been re-examined and are identified as *A. cf. minutus*. Although, in general the specimens fit the available descriptions of the species, the middle part of the eyes in both sexes is covered with hair while in *A. minutus* eyes should be naked.

*Bezzia annulipes* (Meigen, 1830), in Stur & Borkent (2014). The species was listed from Finnmark region (Stur & Borkent 2014) where a single male was collected near a lake in Sør-Varanger municipality. However, the specimen belongs to the BIN: BOLD:ABW3936, which is rather distant from other *B. annulipes* clusters, and we therefore chose to give this species an interim name, *Bezzia* sp. 3ES. More adult specimens are needed to correctly identify members of the BIN to species level.

*Bezzia circumdata* (Stæger, 1939), in Stur & Borkent (2014). When Stur & Borkent (2014) published their paper, *B. circumdata* was believed to be a senior synonym of *B. solstitialis* (Winnertz, 1852). However, *B. circumdata* is now regarded as a junior synonym of *B. annulipes* (Meigen, 1830) (see Dominiak & Szadziewski 2018). The single female specimen from Finnmark region identified as *B. circumdata* (Stur & Borkent 2014) has been re-examined and it belongs to *B. solstitialis*.

*Bezzia solstitialis* (Winnertz, 1852), in Soot-Ryen (1943a). The first time the name appeared as known from Norway was due to an erroneous synonymization. Soot-Ryen (1943a) incorrectly synonymized this name with *B. circumdata* (Stæger, 1839) and attributed locality data provided originally by Siebke (1877, p. 205) to the wrong species.

*Brachypogon* sp. 1ES, in Stur & Borkent (2014). The name is used for a single male specimen from Finnmark region belonging to BIN: BOLD:ACA2830. We re-identified members of this BIN as *B. incompletus* (Kieffer, 1925b).

*Brachypogon* sp. 2ES, in Stur & Borkent (2014). The name is used for male and female specimens from Finnmark region belonging to BIN: BOLD:ABW3956. We re-identified members of this BIN as *B. incompletus* (Kieffer, 1925b).

*Ceratopogon niveipennis* Meigen, 1818, in Zetterstedt (1852). *Ceratopogon niveipennis* was reported from Norway by Zetterstedt (1852) as Siebke's observation of a male specimen from Tøyen (Oslo). Later, Zetterstedt (1855, p. 4855) stated that there is no difference between this male, as well as a female specimen (-s) from Sweden, identified by him as *C. niveipennis* and *Schizohalea copiosa* (Winnertz, 1852) (currently a junior synonym of *S. leucopeza* (Meigen, 1804)). Borkent & Grogan (1995, pp. 60, 62) proved that Zetterstedt's (1850) description of *C. niveipennis* was based on specimens of *Schizohalea* Kieffer, 1917 and that the records of this species from Scandinavia were based on misidentifications. The record of the male specimen from Tøyen was later repeated by Siebke (1877) and Soot-Ryen (1943a), in both cases still as *C. niveipennis*.

*Culicoides circumscriptus* Kieffer, 1918, as *C. salicola* Kieffer, 1924a and *C. pictidorsum* Kieffer, 1924a in Kieffer (1924a). The record is a consequence of an incorrectly stated locus typicus (not Norway) for *C. salicola* and *C. pictidorsum* (both names are junior synonyms of *C. circumscriptus*). Besides Kieffer (1924a), these two names were mentioned as described from Norway by Remm (1988), and *C. circumscriptus* is listed also by other authors as known from the country.

*Culicoides minutissimus* (Zetterstedt, 1855), in Stur & Borkent (2014). The female specimen from Finnmark region reported by Stur & Borkent (2014) has been re-examined and it belongs to *C. lenae* Glushchenko & Mirzaeva, 1970.

*Culicoides newsteadi* Austen, 1921, as *C. halophilus* Kieffer, 1924a in Kieffer (1924a). The record is a consequence of an incorrectly stated locus typicus (not Norway) for *C. halophilus* (a junior synonym of *C. newsteadi*). Besides of Kieffer (1924a), the name was listed as known/described from Norway by Havelka (1978) and Remm (1988), and subsequently *C. newsteadi* is also reported by other authors as known from the country.

*Culicoides pictipennis* (Stæger, 1839), in Zetterstedt (1850). The name was reported by Zetterstedt (1850), who published a record of a female specimen from Oslo (specimen from Siebke's collection). Later however, Zetterstedt (1855, p. 4862) corrected this identification and stated that the record of the Norwegian specimen concerns *C. fascipennis* (Stæger, 1839) (see also Soot-Ryen 1943a). Siebke (1877) has most probably omitted the Zetterstedt's corrections and repeated the observation of *C. pictipennis* in his own publication.

*Culicoides pictipennis* (Stæger, 1839), as *C. arcuatus* (Winnertz, 1852) in Soot-Ryen (1943a). The name *C. arcuatus*, which is currently treated as a junior synonym of *C. pictipennis*, was mentioned with a question mark in Soot-Ryen's paper (1943a, p. 7) for a specimen from the Dovre mountains reported by Siebke. *Culicoides obsoletus* (Meigen, 1818), which was incorrectly synonymized with *C. arcuatus* by Zetterstedt (1855, p. 4856), was reported by Siebke (1877) from several localities in Norway, including Drivdalen (Dovre). Siebke (1877) did not clarify if any of the records of *C. obsoletus* mentioned by him should be *C. arcuatus*.

*Culicoides reconditus* Campbell and Pelham-Clinton, 1960, in Stur & Borkent (2014). We have re-examined two specimens from Finnmark region identified by Stur & Borkent (2014) as *C. reconditus* and they belong to *C. riouxi* Callot & Kremer, 1961.

*Dasyhelea corinneae* Gosseries, 1991, as *D.*

*scutellata* (Meigen, 1830) in Soot-Ryen (1943a). Soot-Ryen (1943a, p. 6) mentioned this name as known from Norway and claimed to repeat Walker's record from Alta (Walker 1848, p. 13). However, the species reported by Walker is not *D. scutellata* (a junior synonym of *D. corinneae*) but *Chironomus scutellatus* (Chironomidae), a species described by Meigen in 1818. The latter name is currently treated as a junior synonym of *Prodiamesa olivacea* (Meigen, 1818).

*Dasyhelea* sp. 3ES, in Stur & Borkent (2014). The name was used by Stur & Borkent (2014) for three females collected in Finnmark region. The specimens belong to BIN BOLD:ABZ8984, members of which have been re-identified by us as *D. europaea* Remm, 1962a.

*Dasyhelea* sp. 4ES, in Stur & Borkent (2014). The name was used by Stur & Borkent (2014) for one male and three females collected in Finnmark region. We have re-examined the specimens and they appear to belong to *D. baltica* Remm, 1966.

*Forcipomyia alacris* (Winnertz, 1852), in Stur & Borkent (2014). We have re-examined the specimens from Finnmark region identified as *F. alacris* by Stur & Borkent (2014) and they all belong to *F. titillans* (Winnertz, 1852).

*Forcipomyia knockensis* Goetghebuer, 1938, in Stur & Borkent (2014). All specimens from Finnmark region belonging to BIN: BOLD:ABW3996 turned out to be *F. acidicola* (Tokunaga, 1937). The misidentification has been made due to an incorrect interpretation of the species given by Remm 1962b (see Szadziewski 1986, p. 22).

*Forcipomyia nigrans* Remm, 1962b, in Stur & Borkent (2014). We have re-examined the specimens from Finnmark region identified as *F. nigrans* by Stur & Borkent (2014) and they turned out to belong to *F. sphagnophila* Kieffer, 1925a.

*Forcipomyia palustris* (Meigen, 1804), in Zetterstedt (1850). A misidentification corrected later by Zetterstedt (1855, p. 4854). The female specimen from Thynås identified first as a not typical form of *F. palustris* appeared to belong to *Atrichopogon brunnipes* (Meigen, 1804).

*Forcipomyia* sp. 1ES, in Stur & Borkent (2014). The name was used by Stur & Borkent (2014) for a single female collected in Finnmark

region. Currently, we have identified this specimen as *F. hygrophila* Kieffer, 1925a.

*Forcipomyia* sp. 2ES, in Stur & Borkent (2014). The name was used by Stur & Borkent (2014) for two females from Finnmark region belonging to BIN BOLD:AAN5156. Currently, we have identified members of this BIN as *F. ciliata* (Winnertz, 1852).

*Forcipomyia* sp. 4ES, in Stur & Borkent (2014). The name was used by Stur & Borkent (2014) for a single female specimen from Finnmark region, which we have currently identified as *F. monilicornis* (Coquillett, 1905).

*Forcipomyia* sp. 5ES, in Stur & Borkent (2014). The name was used by Stur & Borkent (2014) for two females collected in Finnmark region, which we have re-identified as *F. monilicornis* (Coquillett, 1905).

*Forcipomyia* sp. 6ES, in Stur & Borkent (2014). We have re-examined the specimens from Finnmark region identified as *F. sp. 6ES* nr. *palustris* and they all belong to *F. titillans* (Winnertz, 1852).

*Palpomyia aterrima* Goetghebuer, 1921, in various catalogs, online databases and checklists. We have been unable to find any published observation of this species from Norway that provides locality. The name seems to be mentioned for the first time as present in the country in the Catalogue of Palaearctic Diptera (Remm 1988), however, without any details regarding locality or specimens examined. It looks like Krzywiński (1996) and Szadziewski *et al.* (1997, 2013) repeated the information from Remm's catalog (Remm 1988).

*Palpomyia lineata* (Meigen, 1804), in Soot-Ryen (1943a). The name was listed as known from Norway due to an incorrect synonymization with *P. binotata* (Stæger, 1839). The locality data provided originally by Zetterstedt (1850, p. 3657) for *P. binotata* and repeated by Soot-Ryen (1943a, p. 9) were attributed by the latter author to the wrong species.

*Palpomyia puberula* Remm, 1976, in Stur & Borkent (2014). We have re-examined the single female specimen from Finnmark region identified as *P. puberula* and it does not fit the original description of the species. Here, this and other

specimens from BIN BOLD:ABZ9646 are given the interim name *Palpomyia* sp. 5ES.

*Palpomyia serripes* (Meigen, 1818), in Stur & Borkent (2014). We have re-examined the specimens from Finnmark region identified as *P. serripes* by Stur & Borkent (2014) and they belong to *P. pubescens* Kieffer, 1919a.

*Probezzia* Kieffer, 1906, in Stur & Borkent (2014). The pupa from Finnmark region mentioned in Stur & Borkent (2014) as *Probezzia* sp. belongs to an unidentified species of the genus *Mallochohelea* Wirth, 1962.

*Serromyia ledicola* Kieffer, 1925b, as *S. europaea* Clastrier, 1963 in Clastrier (1963). Borkent & Bissett (1990) explained a complicated situation with misidentification of *Serromyia* species, occurring mostly in older papers like the ones by Zetterstedt. Borkent & Bissett (1990, pp. 194, 197, 199) re-examined a paratype male of *S. europaea* (a name treated currently as a junior synonym of *S. ledicola*) from Norway and discovered that it belongs to *S. femorata* (Meigen, 1804). The incorrect record of *S. ledicola* from Norway was repeated by Remm (1988).

The presence of the following species in Norway has not been confirmed in recent publications and we consider these records doubtful until the voucher specimens from the original collections are re-examined. The species are marked with a star (★) symbol in Table 1 (this does not apply to species originally described from Norway):

*Atrichopogon fuscus* (Meigen, 1804). The species was reported from Norway by Zetterstedt (1850) from Møre og Romsdal and Trøndelag (both records were listed again by Siebke in 1877) and by Soot-Ryen (1943a) from Troms region. Many species of the genus *Atrichopogon* Kieffer, 1906 look very much alike, and it is not likely that the specimens recorded by Zetterstedt and Soot-Ryen have been correctly identified. In addition, the syntypes of *A. fuscipes* (Zetterstedt, 1850), a junior synonym of *A. fuscus*, were re-examined by Szadziewski (1986) who designated a Danish specimen as lectotype and proved that the specimen from Norway (Thynås) belongs to *A. griseolus* (Zetterstedt, 1855) (Szadziewski 1986, p. 30).

*Atrichopogon rostratus* Winnertz, 1852. This *Atrichopogon* species was reported from Norway by Lundström (1913). Due to the previously mentioned problems with identification of species of this genus, we follow Szadziewski's *et al.* (1996, p. 307) suggestion to treat all old records of *A. rostratus* as uncertain.

*Ceratopogon communis* Meigen, 1804. This name was listed as present in Norway by Siebke (1877). Unfortunately, Borkent & Grogan (1995) did not study specimens from Siebke's collection, so they could not confirm his identifications. However, without checking details of male genitalia and taking precise measurements it is often impossible to correctly identify species of the genus *Ceratopogon* Meigen, 1803. We consider Siebke's records doubtful until the voucher specimens are re-examined.

*Ceratopogon naccinervis* Borkent, in Borkent & Wirth 1997. The species was mentioned by Soot-Ryen (1943a) as *C. crassinervis* (Goetghebuer, 1920) (a name treated currently as a junior synonym of *C. naccinervis*). The record is based on a single female specimen and females of this species are practically indistinguishable from few other *Ceratopogon* species.

*Ceratopogon niveipennis* Meigen, 1818. *Ceratopogon niveipennis* was reported from Kongshavn (Oslo) by Siebke (1877), who most probably based his identifications on the description of the species provided by Zetterstedt (1850). The description is not reliable though. Borkent & Grogan (1995) have re-examined specimens from Zetterstedt's collection which he has identified as *C. niveipennis* (Zetterstedt 1850, p. 3647) and all of them appeared to be members of the genus *Schizohalea* Kieffer, 1917. The voucher specimen (-s) from Siebke's collection should be re-examined in order to rule out a probable misidentification.

*Culicoides nubeculosus* (Meigen, 1830). The name was mentioned from Norway twice, by Zetterstedt (1850, 1852), and in both cases the records were based on Siebke's observations (who repeated them in his own paper from 1877). Old descriptions of *C. nubeculosus* were not detailed enough to correctly identify this species, and it is unlikely that Zetterstedt's records (1850, 1852)

are accurate.

*Palpomyia armipes* (Meigen, 1838). It seems that at least some of the specimens from Senja (N Norway) identified by Zetterstedt (1838) as *P. hortulana* (Meigen, 1818) supposedly belong to *P. armipes* (see Zetterstedt 1850, Soot-Ryen 1943a). Zetterstedt 1850 mentioned this name also from Tøyen (Oslo) based on Siebke's observations (this record was repeated in Siebke 1877). Later the species was listed from two localities in Agder county as *P. rufipecta* (Winnertz, 1852) by Lundström (1913). Many species of the genus can be difficult to discriminate, therefore all the voucher specimens from the original collection should be re-examined to confirm identification.

*Palpomyia binotata* (Stæger, 1939). The name was mentioned from Norway only once, by Zetterstedt (1850) from Verdal in Trøndelag county. The record was repeated by Siebke (1877) and later by Soot-Ryen (1943a) who however attributed it to *P. lineata* (Meigen, 1804) (due to incorrect synonymization). Even if a body coloration of *P. binotata* is rather characteristic, the voucher female specimen from Zetterstedt's collection should be re-examined to confirm identification.

*Sphaeromyias fasciatus* (Meigen, 1804). The species, mentioned from Norway also as "*C. procerus* Fries" (currently *S. procerus* (Zetterstedt, 1855), a junior synonym of *S. fasciatus*), was reported only from Oslo by Zetterstedt (1850, record based on Siebke's collection), Zetterstedt (1855, repeated record but as *S. procerus*), Siebke (1877, new record of *S. fasciatus*, repeated record for *S. procerus*) and Soot-Ryen (1943a, repeated records). Because this biting midge can be easily confused with *S. pictus* (Meigen, 1818), another common species in Europe, the best solution is to treat Zetterstedt's and Siebke's records as doubtful until the voucher specimens from the original collection are re-examined.

It is worth noting that *Serromyia gelida* Kieffer, 1925a, a name being currently a junior synonym of *S. rufitarsis* (Meigen, 1818), was originally described from Norway. However, after Borkent & Bissett (1990) designated a neotype for *S. gelida*, its locus typicus was changed to Latvia. According to Kieffer (1925a), a male specimen

(-s) of this species was collected in Røsvik north of Tromsø, but most probably the locality he mentioned is Røsvik in Nordland. Naturally, in the Limnofauna Europaea (Havelka 1978) and the Catalogue of Palaearctic Diptera (Remm 1988) which were published before the revision of the genus *Serromyia* by Borkent & Bissett (1990), *S. gelida* is stated as present in Norway.

*Dasyhelea flavoscutellata* (Zetterstedt, 1850) was described from a single female specimen collected by Siebke in Christiania (present-day Oslo) (no information about collecting date was provided; see also Szadziewski 1986, p. 53). Siebke (1877) published an observation of this species from the same place, but it is not clear if this record refers to the type specimen or not. Siebke (1877) stated that the collection date was 13 July 1852, so evidently later than the description year of *D. flavoscutellata*, and therefore we treat his record as a new one (but still doubtful, marked with star symbol in Table 1). However, one cannot rule out the possibility that the collection date from Siebke's paper (1877) is incorrect and that the record concerns actually the type specimen.

*Ceratopogon pusio* Zetterstedt, 1850 (p. 3647), a species described from Norway (Oslo) and considered earlier to be a biting midge, is a member of the family Chironomidae (Diptera, Nematocera) (Borkent & Dominiak 2020).

## New records of biting midges from Norway

### Subfamily Forcipomyiinae Lenz, 1934

#### Tribe Dasyheleini Lenz, 1934

#### Genus *Dasyhelea* Kieffer, 1911a

##### *Dasyhelea acuminata* Kieffer, 1919a

**Literature for identification:** Szadziewski (1986).

**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 1 female (MM-Cer192).

**Distribution.** *Dasyhelea acuminata* is widely distributed in Europe (Dominiak & Szadziewski 2010), and in Scandinavia it is known from Sweden (Strandberg & Johanson 2015). The

species is new to Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACX3324: Norway, Sweden.

**Comments.** The single specimen was collected with sweep net near a shallow brackish pond in Hamresanden, and its DNA matches with an examined Swedish male specimen (NHRS) belonging to the same BIN and identified as *D. acuminata*.

##### *Dasyhelea arenivaga* Macfie, 1943

**Literature for identification:** Szadziewski (1986), Dominiak (2012).

**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 2 males (MM-Cer196, NTNU-VM227035), 2 females (MM-Cer193, MM-Cer194). Tolga, N 62.38703°, E 11.11886°, 19.IX.2016, 1 male (HED-Cer170).

**Distribution.** *Dasyhelea arenivaga* is known from the southern part of Europe, North Africa, and the Near East (Dominiak & Szadziewski 2010, Szadziewski *et al.* 2013), but was also reported from Sweden (Strandberg & Johanson 2015) and Finland (Salmela *et al.* 2015). The species is new to Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACX3059: Sweden, Norway; BOLD:ACX2767: Sweden, France, Norway; BOLD:ADG4457: Norway.

**Comments.** The examined specimens belong to three different BINs. DNA of female MM-Cer194 is matching with DNA of a Swedish male specimen (NHRS) of *D. arenivaga*.

##### *Dasyhelea baltica* Remm, 1966

**Literature for identification.** Remm (1966).

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 1 male (MM-Cer202). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 2 females (HED-Cer59, HED-Cer309). Stor-Elvdal, N 61.37841°, E 11.19175°, 31.V.2016, 1 male (HED-Cer157). Trondheim, N 63.36169°, E 10.24103°, 13.VI.2017, 2 pupae (MM-Cer342, MM-Cer343). Trondheim, N 63.36169°, E 10.24103°, 16.VI.2015, 2 pupae (TRD-Cer313, TRD-Cer314). Trondheim, N 63.38272°, E 10.60776°, 20.VI.2010, 1 male (NO 105).

**Distribution.** *Dasyhelea baltica* is known from Belarus, Estonia, Lithuania, and Romania (Dominiak & Szadziewski 2010). The species in new to the Norwegian fauna (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ABW3983: Norway; BOLD:AAV5200: Norway, Canada.

**Comments.** *Dasyhelea baltica* resembles *D. pallidiventris* Goetghebuer, 1931 but differs i.a. in the shape of the male gonostylus and female subgenital plate. The examined specimens belong to two BINs, and they were collected on a mire and near a stream, in both cases not far from lakes. The pupae were found in a lake in Trøndelag county. Stur & Borkent (2014) listed the species from Finnmark region as *D. sp.* 4ES.

### *Dasyhelea bensoni* Edwards, 1933

**Literature for identification.** Szadziewski (1986).

**Material examined.** Stor-Elvdal, N 61.37842°, E 11.19175°, 11.–21.VII.2016, 1 female (HED-Cer81). Tynset, N 62.25544°, E 10.90725°, 9.–23.VI.2016, 1 female (HED-Cer40).

**Distribution.** This species is known from a few localities in Europe and eastern part of Russia (Dominiak & Szadziewski 2010, Huldén & Huldén 2014, Strandberg & Johanson 2015). *Dasyhelea bensoni* was reported from Norway for the first time by Hagan *et al.* (2000) from Viken and Vestland counties, and later also found in Finnmark region (Stur & Borkent 2014).

**Distribution of BIN members in BOLD System.** BOLD:AAG6449: Norway, Canada, Finland, Sweden.

**Comments.** DNA barcodes of two females collected with a Malaise trap on mires in Innlandet county matches with barcodes of a re-examined Swedish male specimen (NHRS).

### *Dasyhelea bilineata* Goetghebuer, 1920

**Literature for identification.** Dominiak (2012).

**Material examined.** Kristiansand, N 58.110290°, E 07.934234°, 16.V.2019, 1 male (MM-Cer30), 1 female (MM-Cer31). Kristiansand, N 58.18333°, E 08.02867°, 29.VIII.2019,

1 female (MM-Cer15). Trondheim, N 63.42927°, E 10.37856°, 28.VIII.–11.IX.2014, 1 male (TRD-Cer134).

**Distribution.** *Dasyhelea bilineata* is a rather widely distributed Palaearctic species (Szadziewski *et al.* 2013, Strandberg & Johanson 2015). It was reported from Norway for the first time from Vestland county by Dominiak & Szadziewski (2010).

**Distribution of BIN members in BOLD System.** BOLD:AAN5169: Norway, Argentina, Belarus, Bulgaria, Canada, China, Egypt, France, Israel, Indonesia, Germany, Lebanon, Montenegro, New Zealand, Pakistan, Sweden, United States.

**Comments.** Most members of the BIN: BOLD:AAN5169 in BOLD are identified as *Dasyhelea incisurata* Remm, 1962a. However, the examined male specimens from Norway do not fit to the original description of the species, which is characterized by a presence of a well visible notch at apices of the gonostyli.

### *Dasyhelea biunguis* Kieffer, 1925a

**Literature for identification.** Boorman & Ismay (2003).

**Material examined.** Drangedal, N 59.04388°, E 09.30952°, 17.VI.2020, 1 male (MM-Cer169). Stor-Elvdal, N 61.37842°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer49).

**Distribution.** The species is known from Great Britain, Estonia, Russia (Dominiak & Szadziewski 2010), Sweden (Strandberg & Johanson 2015), and was reported from Norway (Viken county) for the first time by Hagan *et al.* (2000).

**Distribution of BIN members in BOLD System.** BOLD:ACX2425: Norway, Finland, Sweden.

### *Dasyhelea caesia* Remm, 1993

**Literature for identification.** Remm (1993), Brodskaya (1995), Dominiak (2012).

**Material examined.** Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 2 males (TRD-Cer52, TRD-Cer53), 1 female (TRD-Cer64). Trondheim, N 63.39730°, E 10.55451°, 31.VII.–14.VIII.2014, 2 males (TRD-Cer225, TRD-

Cer226). Melhus, N 63.21712°, E 10.30765°, 28.VIII.–11.IX.2014, 1 female (TRD-Cer182). Stor-Elvdal, N 61.37842°, E 11.19175°, 11.–21.VII.2016, 1 male (HED-Cer80), 1 female (HED-Cer82). Kristiansand, N 58.22176°, E 08.02128°, 18.VI.2020, 1 male (NTNU-VM 227055), 1 female (MM-Cer182). Kristiansand, N 58.20112°, E 07.98589°, 26.VI.2020, 1 female (MM-Cer163). Kristiansand, N 58.16920°, E 08.00007°, 6.VIII.2020, 1 male (MM-Cer72). Kristiansand, N 58.16920°, E 08.00007°, 6.–21.VIII.2019, 1 male (MM-Cer75). Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 1 female (MM-Cer122). Drangedal, N 59.03572°, E 09.29243°, 17.VI.2020, 1 male (MM-Cer115).

**Distribution.** This species was previously known from Russia, Poland (Dominiak 2012), Sweden (Strandberg & Johanson 2015), Finland (Salmela *et al.* 2015), and it is currently reported from Norway for the first time.

**Distribution of BIN members in BOLD System.** BOLD:AEC1756: Norway; BOLD:ACJ3180: Norway, Germany, Sweden.

### *Dasyhelea dampfi* Kieffer, 1925b

**Literature for identification.** Remm (1962a), Dominiak (2012).

**Material examined.** Kristiansand, N 58.20850°, E 08.00650°, 26.VI.2020, 2 males (MM-Cer307, NTNU-VM 227047). Lillesand, N 58.20460°, E 08.23188°, 22.VI.2020, 1 male (MM-Cer132).

**Distribution.** The species was previously recorded only from few European countries (Dominiak & Szadziewski 2010, Strandberg & Johanson 2015), and is new to Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACX2966: Norway, Sweden.

### *Dasyhelea europaea* Remm, 1962a

**Literature for identification.** Remm (1962a).

**Material examined.** Rendalen, N 61.55606°, E 11.16856°, 9.–23.VI.2016, 1 male (HED-Cer267). Rendalen, N 61.77456°, E 11.59347°, 11.–21.VII.2016, 1 male (HED-Cer147). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 2 females (TRD-Cer265, TRD-Cer266). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.

VI.2016, 1 female (HED-Cer63). Tolga, N 62.38703°, E 11.11886°, 26.V.–9.VI.2016, 1 male (HED-Cer242). Tolga, N 62.38703°, E 11.11886°, 9.–23.VI.2016, 1 male (HED-Cer199). Tynset, N 62.25544°, E 10.90725°, 9.–23.VI.2016, 1 male (HED-Cer42). Tynset, N 62.25544°, E 10.90725°, 23.VI.–11.VII.2016, 1 male (HED-Cer179). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer249), 1 female (HED-Cer252).

**Distribution.** *Dasyhelea europaea* was described from Estonia (Remm 1962a), and later reported also from France, Czech Republic (Dominiak & Szadziewski 2010), Sweden (Strandberg & Johanson 2015), Finland (Salmela *et al.* 2015), and from Vestlandet region in Norway (Hagan *et al.* 2000).

**Distribution of BIN members in BOLD System.** BOLD:ABZ8984: Norway, Finland, Sweden.

**Comments.** In Stur & Borkent (2014) this species is reported from Finnmark region as *D. sp.* 3ES (the specimens examined are listed only in the Taxon ID-tree and Appendix).

### *Dasyhelea flavifrons* (Guérin-Méneville, 1833)

**Literature for identification.** Dominiak (2012).

**Material examined.** Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 1 female (HED-Cer293). Kristiansand, N 58.20112°, E 07.98589°, 26.VI.2020, 1 female (MM-Cer188). Stor-Elvdal, N 61.74614°, E 10.74618°, 7.VII.2008, 1 female (AT-Cer13). Trondheim, N 63.33958°, E 10.44285°, 5.–19.VI.2014, 1 female (TRD-Cer93). Trondheim, N 63.33958°, E 10.44285°, 17.–31.VII.2014, 1 female (TRD-Cer199). Trondheim, N 63.42927°, E 10.37856°, 22.V.–5.VI.2014, 1 male (TRD-Cer111).

**Distribution.** *Dasyhelea flavifrons* is a widely distributed species, known also from the Nearctic Region (Dominiak & Szadziewski 2010) and Neotropics (Diaz *et al.* 2019). In Scandinavia it was previously reported from Sweden (Strandberg & Johanson 2015). The species is new to Norway (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:AEF4343: Norway; BOLD:ACS7525: Norway, Austria, Bulgaria,

France, Germany, Ukraine; BOLD:ADI0494: Norway.

**Comments.** *Dasyhelea flavifrons* belongs to a group of very similar species within subgenus *Dasyhelea* s. str. which needs revision. One of its synonyms, *D. obscura* (Winnertz, 1852), was listed from Norway by Soot-Ryen (1943a), but because of a complicated situation within the species group, this first record should be treated as doubtful. The currently examined specimens belong to three BINs and they were collected on wetlands with streams and lakes, and near bigger rivers.

### *Dasyhelea holosericea* (Meigen, 1804)

**Literature for identification.** Dominiak (2012).

**Material examined.** Tynset, N 62.25544°, E 10.90725°, 9.–23.VI.2016, 1 male (HED-Cer37).

**Distribution.** Records of this species are known from Estonia, Finland, France, Lithuania, Poland, and European part of Russia (Dominiak & Szadziewski 2010). *Dasyhelea holosericea* has not been reported from Norway before.

**Distribution of BIN members in BOLD System.** BOLD:ADF5686: Norway.

### *Dasyhelea lucida* Remm, in Remm & Zhogolev 1968

**Literature for identification.** Remm & Zhogolev (1968), Chandler *et al.* (2008), Dominiak (2012) (mostly for identification of males).

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 1 female (MM-Cer201). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer62). Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 1 male (MM-Cer152). Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 female (HED-Cer107).

**Distribution.** *Dasyhelea lucida* is known from many countries in Europe, Asia, and Africa (Dominiak & Szadziewski 2010). The species is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACX2712: Norway, Bulgaria, Sweden; BOLD:ADE5000: Norway, Sweden.

**Comments.** The specimens examined belong to two close BINs and were collected in the vicinity of a mire, a stream, and a lake. Identification of females was based on DNA match with the male.

### *Dasyhelea malleola* Remm, 1962a

**Literature for identification.** Remm (1962a), Dominiak (2012).

**Material examined.** Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-Cer231), 1 female (HED-Cer232). Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 1 female (HED-Cer294). Kristiansand, N 58.11861°, E 07.92679°, 24.VI.2020, 1 male (MM-Cer295). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 2 males (HED-Cer254, HED-Cer255), 1 female (HED-Cer250) (DNA barcoding failed). Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 female (HED-Cer108).

**Distribution.** The species is known from many localities in the Western Palaearctic (Dominiak & Szadziewski 2010), including Finland (Salmela *et al.* 2015) and Sweden (Strandberg & Johanson 2015). The first record of *Dasyhelea malleola* from Norway was given by Stur & Borkent (2014), but the authors, by mistake, listed this species as already known from Norway.

**Distribution of BIN members in BOLD System.** BOLD:ABW3962: Norway, Finland, Germany, Sweden; BOLD:ADG5071: Norway; BOLD:ABW3991: Norway.

**Comments.** The specimens from Norway belong to three BINs. Barcoding of the female HED-Cer250 failed (250 bp long sequence), but the specimen fits best in the cluster with the BIN BOLD:ABW3991 together with two *D. malleola* specimens from Finnmark region (Stur & Borkent 2014, as *D. cf. malleola*); the distance to the nearest cluster is 4.65% (p-dist).

### *Dasyhelea modesta* (Winnertz, 1852)

**Literature for identification.** Szadziewski (1986), Dominiak (2012).

**Material examined.** Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 2 males (HED-Cer291, HED-Cer292). Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 female (HED-Cer234). Farsund, N 58.06315°, E 06.78672°,

25.VIII.2019, 1 male (MM-Cer24) (DNA barcoding failed). Kristiansand, N 58.11951°, E 07.92543°, 4.–21.VI.2019, 1 male (MM-Cer90). Kristiansand, N 58.20850°, E 08.00650°, 26.VI.2020, 1 pupa (MM-Cer208). Nissedal, N 59.01079°, E 08.51505°, 21.VIII.2019, 1 female (MM-Cer23) (DNA barcoding failed). Rendalen, N 61.77455°, E 11.59357°, 8.XI.2016, 1 male (HED-Cer113). Røros, N 62.6889°, E 11.8316°, 11.–22.VI.2006, 1 male (TRD-Cer233), 1 female (TRD-Cer235). Røros, N 62.6889°, E 11.8316°, 22.VI.–6.VII.2006, 2 males (TRD-Cer276, TRD-Cer281) (DNA barcoding of the latter specimen failed), 1 female (TRD-Cer284). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 2 males (TRD-Cer258, TRD-Cer262). Røros, N 62.6910°, E 11.8330°, 22.VI.–6.VII.2006, 1 female (TRD-Cer270). Stor-Elvdal, N 61.37842°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer50), 3 females (HED-Cer60, HED-Cer307, HED-Cer308). Stor-Elvdal, N 61.37842°, E 11.19175°, 11.–21.VII.2016, 1 female (HED-Cer78). Tolga, N 62.38703°, E 11.11886°, 26.V.–9.VI.2016, 1 male (HED-Cer243). Tolga, N 62.38703°, E 11.11886°, 23.VI.–11.VII.2016, 1 female (HED-Cer131). Tolga, N 62.38703°, E 11.11886°, 19.IX.2016, 1 male (HED-Cer171). Trondheim, N 63.40615°, E 10.34135°, 1.VI.2015, 1 pupa (TRD-Cer299). Trondheim, N 63.40742°, E 10.33766°, 1.VI.2015, 2 pupae (TRD-Cer300, TRD-Cer301). Trondheim, N 63.36169°, E 10.24103°, 16.VI.2015, 2 pupae (TRD-Cer315, TRD-Cer316). Trondheim, N 63.38056°, E 10.61062°, 20.VI.2010, 1 male (TRD-Cer7). Trondheim, N 63.42927°, E 10.37856°, 31.VII.–14.VIII.2014, 1 female (TRD-Cer130). Trondheim, N 63.42927°, E 10.37856°, 1.–14.VIII.2014, 1 female (TRD-Cer220). Tynset, N 62.25544°, E 10.90725°, 9.–23.VI.2016, 1 male (HED-Cer43). Tynset, N 62.25544°, E 10.90725°, 23.VI.–11.VII.2016, 1 male (HED-Cer180). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer253).

**Distribution.** It is a widely distributed species (Dominiak & Szadziewski 2010), known also from Norway where it was reported for the first time from Innlandet county (Hagan *et al.* 2000).

**Distribution of BIN members in BOLD System.** BOLD:ACX2419: Norway, Sweden;

BOLD:ACY4183: Norway; BOLD:AAG6542: Norway, Canada, Sweden; BOLD:ACN8781: Norway, Canada; BOLD:ABW3955: Norway, Finland, Sweden; BOLD:ABW3954: Norway; BOLD:ACM5978: Norway, Finland; BOLD:ACS7831: Norway, Sweden; BOLD:ACY5045: Norway.

**Comments.** The specimens examined and the ones from Stur & Borkent (2014) paper belong to ten different BINs, and it is possible that they represent more than one species.

The pupae of *Dasyhelea modesta* were found in lakes and mires in Agder and Trøndelag counties.

### *Dasyhelea notata* Goetghebuer, 1920

**Literature for identification.** Szadziewski (1986), Dominiak (2012).

**Material examined.** Kristiansand, N 58.19875°, E 07.99710°, 23.VI.2020, 1 male (MM-Cer297). Kristiansand, N 58.11951°, E 07.92543°, 21.VI.–8.VII.2019, 1 male (MM-Cer82). Kristiansand, N 58.20850°, E 08.00650°, 23.VI.2020, 1 male (NTNU-VM 227065). Kristiansand, N 58.20850°, E 08.00650°, 26.VI.2020, 1 male (NTNU-VM 227045). Røros, N 62.6910°, E 11.8330°, 11.–22.VI.2006, 1 male (TRD-Cer228).

**Distribution.** This species is known from many countries in Europe, and it was reported also from Asia and Africa (Dominiak & Szadziewski 2010). *Dasyhelea notata* is a new species to Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACY5046: Norway; BOLD:ACX2450: Norway, Sweden.

**Comments.** The barcoded specimens were collected in vicinity of lakes and mires and belong to two distant BINs. The male from Trøndelag county (Røros) fits well to the description of the species. The only difference, which can be a visual artifact, is stouter third palpal segment (PRIII 4.2 instead of 4.9 and higher as stated by Dominiak 2012).

### *Dasyhelea parallela* Remm, 1962a

**Literature for identification.** Remm (1962a), Szadziewski (1985).

**Material examined.** Røros, N 62.6889°, E 11.8316°, 11.–22.VI.2006, 1 female (TRD-Cer244). Røros, N 62.6889°, E 11.8316°, 6.–20.VII.2006, 1 male (TRD-Cer285).

**Distribution.** The species has been reported from Estonia, Iceland, and Norway (Dominiak & Szadziewski 2010), where it was collected for the first time in western Norway (Hagan *et al.* 2000).

**Distribution of BIN members in BOLD System.** BOLD:ACU5328: Norway, Russia.

### *Dasyhelea stackelbergi* Remm, 1993

**Literature for identification.** Remm (1993), Dominiak (2012).

**Material examined.** Kristiansand, N 58.11861°, E 07.92679°, 24.VI.2020, 1 male (MM-Cer254).

**Distribution.** The species is known from Finland (Salmela *et al.* 2015), Poland and Russia (Dominiak & Szadziewski 2010). It is a new record of *Dasyhelea stackelbergi* to Norway.

**Distribution of BIN members in BOLD System.** BOLD:AEH1076: Norway.

Unidentified species of *Dasyhelea*

### *Dasyhelea* sp. 1ES

**Material examined.** Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 1 female (HED-Cer295). Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 female (HED-Cer233). Stor-Elvdal, N 61.37842°, E 11.19175°, 11.–21.VII.2016, 1 female (HED-Cer79). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 3 females (HED-Cer251, HED-Cer269, HED-Cer275).

**Distribution of BIN members in BOLD System.** BOLD:ABW3976: Norway, Canada, Finland.

**Comments.** According to Stur & Borkent (2014) the species belongs to the subgenus *Prokempia* Kieffer, 1913a. Male specimens are needed to identify it to species level.

### *Dasyhelea* sp. 2ES

**Material examined.** Stor-Elvdal, N 61.37842°, E 11.19175°, 11.–21.VII.2016, 1 female (HED-Cer83). Åmot, N 61.17878°, E 11.40217°, 9.–23.

VI.2016, 1 female (HED-Cer268).

**Distribution of BIN members in BOLD System.** BOLD:ABW3986: Norway, Sweden.

**Comments.** The species was reported from Finnmark region (Stur & Borkent 2014) and it belongs to the subgenus *Pseudoculicoides* Malloch, 1915. A male specimen from Sweden (NHRS) from the same BIN was not available for study.

### *Dasyhelea* sp. 5ES

**Material examined.** Orkland, 26.VI.2018, N 63.39124°, E 10.31449°, 1 pupa (MM-Cer340), 1 larva (MM-Cer341). Trondheim, N 63.39730°, E 10.55451°, 17.VII.2014, 1 female (TRD-Cer19). Trondheim, N 63.425°, E 10.282°, 26.V.2014, 1 female (TRD-Cer10).

**Distribution of BIN members in BOLD System.** BOLD:AAV5098: Norway, Belarus, Bulgaria, Canada, France, Germany, Montenegro, New Zealand, Sweden.

**Comments.** Only females and immature stages are among the examined specimens. All our specimens belong to the same BIN as the Swedish ones (NHRS, only females) identified as *Dasyhelea turficola* Kieffer, 1925b. Male specimens are necessary to confirm this identification. The immature stages of *D.* sp. 5ES were collected from a lake in Trøndelag county.

### *Dasyhelea* sp. 7ES

**Material examined.** Røros, N 62.6889°, E 11.8316°, 11.–22.VI.2006, 1 male (TRD-Cer242).

**Distribution of BIN members in BOLD System.** BOLD:ACY5044: Norway.

**Comments.** *Dasyhelea* sp. 7ES belongs to the subgenus *Dicryptoscena* Enderlein, 1936 and is similar to *D. stellata* Remm, in Remm & Zhogolev 1968. However, our specimen does not belong to the same BIN as Swedish specimens (NHRS) identified as *Dasyhelea stellata*. We were able to re-examine a Swedish male specimen and can confirm the identification.

### *Dasyhelea* sp. 14ES

**Material examined.** Stor-Elvdal, N 61.37842°, E 11.19175°, 23.VI.–11.VII.2016, 1 male (HED-Cer306).

**Distribution of BIN members in BOLD System.** BOLD:ADI0897: Norway.

**Comments.** The single male belongs to a group of *Dasyhelea* s. str. with nearly symmetrical parameres and either it represents a species new to science or it is *D. unicolor* Remm, 1962a. Our specimen differs from the latter species in having longer middle arm of parameres and a bit different shape of aedeagus.

***Dasyhelea* sp. 15ES**

**Material examined.** Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer61).

**Distribution of BIN members in BOLD System.** BOLD:ADG4455: Norway.

**Comments.** The darkly coloured female specimen of the subgenus *Pseudoculicoides* Malloch, 1915 was collected on a mire near Nabbtjønnna lake in Innlandet county.

***Dasyhelea* sp. 16ES**

**Material examined.** Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 female (HED-Cer106).

**Distribution of BIN members in BOLD System.** BOLD:ADG7338: Norway, Bulgaria.

**Comments.** The female of the subgenus *Prokempia* Kieffer, 1913a was collected on a mire in Innlandet county.

***Dasyhelea* sp. 17ES**

**Material examined.** Rendalen, N 61.77455°, E 11.59347°, 17.IX.2016, 1 female (HED-Cer117).

**Distribution of BIN members in BOLD System.** BOLD:ADG7458: Norway.

**Comments.** The single examined female of the subgenus *Sebessia* Remm, 1979 was collected on a mire.

***Dasyhelea* sp. 18ES**

**Material examined.** Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 female (HED-Cer109).

**Distribution of BIN members in BOLD System.** BOLD:ADG7459: Norway.

**Comments.** This dark coloured female with

yellow scutellum was collected on a mire and it is the only specimen in the BIN.

***Dasyhelea* sp. 19ES**

**Material examined.** Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer310).

**Distribution of BIN members in BOLD System.** BOLD:ADI0495: Norway.

**Comments.** The single female belongs to the subgenus *Pseudoculicoides* Malloch, 1915 and it was collected on a mire with a stream and a lake.

***Dasyhelea* sp. 20ES**

**Material examined.** Tolga, N 62.38703°, E 11.11886°, 23.VI.–11.VII.2016, 1 female (HED-Cer130).

**Distribution of BIN members in BOLD System.** BOLD:AAG6439: Norway, Canada.

**Comments.** The examined female belongs to the subgenus *Pseudoculicoides* Malloch, 1915, and it was collected nearby a fen with a small stream.

***Dasyhelea* sp. 22ES**

**Material examined.** Tynset, N 62.25544°, E 10.90725°, 11.–21.VII.2016, 1 female (HED-Cer90).

**Distribution of BIN members in BOLD System.** BOLD:ADG4456: Norway.

**Comments.** The female of the subgenus *Pseudoculicoides* Malloch, 1915 could not be identified to species level. Only one specimen was collected in the Innlandet county.

***Dasyhelea* sp. 24ES**

**Material examined.** Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-Cer224). Kristiansand, N 58.20020°, E 07.98943°, 26.VI.2020, 1 female (MM-Cer200). Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 3 males (MM-Cer143, MM-Cer144, MM-Cer299), 1 female (MM-Cer300). Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 2 males (MM-Cer195, NTNU-VM 227039). Lillesand, N 58.20460°, E 08.23188°, 22.VI.2020, 1 female (MM-Cer131). Lister, N 58.06315°, E 06.678672°, 4.VI.2019, 1 female (MM-Cer33). Tolga, N 62.38703°,

E 11.11896°, 9.–23.VI.2016, 1 male (HED-Cer200). Tolga, N 62.38703°, E 11.11896°, 26.V.–9.VI.2016, 1 male (HED-Cer240), 1 female (HED-Cer241). Tolga, N 62.38703°, E 11.11896°, 23.VI.–11.VII.2016, 1 male (HED-Cer122), 1 female (HED-Cer123).

**Distribution of BIN members in BOLD System.** BOLD:AEF1566: Norway; BOLD:ACX2689: Norway, Finland, Sweden; BOLD:ADE4834: Norway, Sweden.

**Comments.** The examined males resemble those of *Dasyhelea fuscocincta* Remm, 1967 or *D. punctosa* Remm, 1993 but differ from the original descriptions and figures provided by Remm (1967, 1993) by some details of male genitalia armature. Specimens of both sexes were collected in various habitats, including areas near a brackish pond, a stream, a small river, a lake, and mires.

#### *Dasyhelea* sp. 25ES

**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 26.VIII.2019, 1 female (MM-Cer38). Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 female (MM-Cer141).

**Distribution of BIN members in BOLD System.** BOLD:AEH4464: Norway, Canada, Sweden.

**Comments.** The Swedish specimens (NHRS) from this BIN are identified as *Dasyhelea turficola* Kieffer, 1925b. We were able to re-examine only one of them, *Dasyhelea turficola*|SCER-NHRS-7AU-0640, which supposed to be a male but turned out to be a female. Male specimens are necessary to confirm this identification. The two females from Agder county were collected with a sweep net near a brackish pond.

#### Tribe Forcipomyiini Lenz, 1934

#### Genus *Atrichopogon* Kieffer, 1906

##### *Atrichopogon brunnipes* (Meigen, 1804)

**Literature for identification.** Remm (1961b).

**Material examined.** Drangedal, N 59.04388°, E 09.30952°, 19.VIII.2019, 1 male (MM-Cer51). Flekkefjord, N 58.35775°, E 06.62518°, 22.VIII.2019, 1 male (MM-Cer16). Flekkefjord, N 58.41314°, E 06.65363°, 24.VIII.2019, 1 male

(MM-Cer05). Melhus, N 63.21712°, E 10.30765°, 17.–31.VII.2014, 1 male (TRD-Cer291), 1 female (TRD-Cer292). Melhus, N 63.21712°, E 10.30765°, 19.VI.–3.VII.2014, 1 female (TRD-Cer204). Melhus, N 63.21712°, E 10.30765°, 3.–17.VII.2014, 1 male (TRD-Cer26). Melhus, N 63.21712°, E 10.30765°, 3.–17.VII.2014, 2 males (TRD-Cer24, TRD-Cer29), 2 females (TRD-Cer25, TRD-Cer27). Stor-Elvdal, N 61.4248°, E 11.1052°, 15.VII.2016, 1 female (HED-Cer176). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 male (HED-Cer26), 1 female (HED-Cer25). Stor-Elvdal, N 61.42422°, E 11.10112°, 16.IX.–5.XI.2016, 1 male (HED-Cer153). Trondheim, N 63.3973°, E 10.5545°, 3.–17.VII.2014, 1 female (TRD-Cer62). Trondheim, N 63.33958°, E 10.44285°, 28.VIII.–11.IX.2014, 1 female (TRD-Cer43). Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 1 female (TRD-Cer63). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 2 males (TRD-Cer125, TRD-Cer127), 1 female (TRD-Cer122). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 1 female (TRD-Cer118). Trondheim, N 63.38129°, E 10.60988°, 6.VI.2010, 1 female (TRD-Cer2). Trondheim, N 63.42927°, E 10.37856°, 5.–19.VI.2014, 1 female (TRD-Cer148). Åmot, N 61.17878°, E 11.40217°, 16.–29.IX.2016, 1 male (HED-Cer183), 1 female (HED-Cer184).

**Distribution.** The species is known from midwestern Europe, most of the Nordic countries (Szadziewski *et al.* 2013), and from Siberia (Remm 1972). *Atrichopogon brunnipes* is new to Norway (see comment below).

**Distribution of BIN members in BOLD System.** BOLD:ACI3427: Norway, Germany, Sweden; BOLD:ACC1669: Norway, Finland, Germany.

**Comments.** The species was mentioned for the first time from Norway by Zetterstedt (1838, p. 821) from Senja (N Norway), and later by Zetterstedt (1850, 1855 – pp. 4854 and 4857, identified earlier as *F. palustris* (Meigen, 1804)) and Siebke (1877). However, these records should be treated as doubtful until the specimens from the original collections are re-examined.

***Atrichopogon forcipatus* (Winnertz, 1852)**

**Literature for identification.** Szadziewski (2001).

**Material examined.** Arendal, N 58.45981°, E 08.69339°, 19.VI.2020, 1 male (MM-Cer118). Farsund, N 58.06315°, E 06.78672°, 25.VI.2020, 1 male (MM-Cer244), 2 females (MM-Cer245, MM-Cer246). Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 female (MM-Cer142). Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 1 female (NTNU-VM 227037). Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 2 males (MM-Cer124, MM-Cer125). Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 1 female (MM-Cer315) (DNA barcoding failed). Røros, N 62.6910°, E 11.8330°, 22.VI.–6.VII.2006, 1 female (TRD-Cer268).

**Distribution.** *Atrichopogon forcipatus* is a species widely distributed in Europe, known also from Fennoscandia (Szadziewski *et al.* 2013). Currently, it is reported from Norway for the first time.

**Distribution of BIN members in BOLD System.** BOLD:ACX3268: Norway, Sweden; BOLD:ACX2897: Norway, Sweden; BOLD:AEF1704: Norway.

***Atrichopogon fuscus* (Coquillett, 1901)**

**Literature for identification.** Szadziewski *et al.* (1996).

**Material examined.** Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 1 male (HED-Cer284). Engerdal, N 61.8859°, E 11.7828°, 23.VI.–11.VII.2016, 2 males (HED-Cer219, HED-Cer226). Engerdal, N 61.8859°, E 11.7828°, 11.–21.VII.2016, 1 male (HED-Cer135). Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 1 male (MM-Cer104). Kristiansand, N 58.16920°, E 08.00007°, 4.–21.VI.2019, 1 male (MM-Cer280), 1 female (MM-Cer282). Kristiansand, N 58.16920°, E 08.00007°, 6.–21.VIII.2019, 1 male (MM-Cer76). Rendalen, N 61.7745°, E 11.5935°, 17.IX.2016, 1 female (HED-Cer116). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 1 male (TRD-Cer273). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 1 male (TRD-Cer254). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer332), 2 females (HED-

Cer327, HED-Cer328).

**Distribution.** It is a widely distributed species known also from localities outside the Palaearctic Region (Szadziewski *et al.* 2013, Stur & Borkent 2014). *Atrichopogon fuscus* is present in Fennoscandia (Salmela *et al.* 2015), including Norway, where the first record comes from Finnmark region (Stur & Borkent 2014).

**Distribution of BIN members in BOLD System.** BOLD:ADH7716: Norway, Montenegro; BOLD:ACC9717: Norway, Sweden.

***Atrichopogon griseolus* (Zetterstedt, 1855)**

**Literature for identification.** Szadziewski (1986).

**Material examined.** Marnadal, N 58.26750°, E 07.45603°, 1.–15.VII.2019, 1 female (MM-Cer91). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 2 males (HED-Cer210, HED-Cer331), 1 female (HED-Cer329). Stor-Elvdal, N 61.3784°, E 11.1917°, 11.–21.VII.2016, 1 female (HED-Cer73). Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 1 male (MM-Cer156).

**Distribution.** *Atrichopogon griseolus* is known from Europe and the East Palaearctic (Szadziewski *et al.* 2013) and it was reported from Norway for the first time by Szadziewski (1986) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ADG7248: Norway.

**Comments.** Szadziewski (1986) re-examined some specimens from Zetterstedt's collection and discovered that one of the paralectotypes of *A. fuscipes* (Zetterstedt, 1850) from Thynås in Norway actually belongs to *A. griseolus*.

***Atrichopogon cf. hirtidorsum* Remm, 1961b**

**Material examined.** Melhus, N 63.21712°, E 10.30765°, 3.–17.VII.2014, 1 male (TRD-Cer28). Kristiansand, N 58.22176°, E 08.02128°, 18.VI.2020, 1 male (MM-Cer184). Kristiansand, N 58.19211°, E 08.07525°, 18.VI.2020, 1 male (NTNU-VM 227068). Røros, N 62.6889°, E 11.8316°, 22.VI.–6.VII.2006, 1 male (TRD-Cer277). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 1 male (TRD-Cer256). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer330). Trondheim, N 63.42927°,

E 10.37856°, 31.VII.–14.VIII.2014, 1 male (TRD-Cer133). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 2 males (TRD-Cer123, TRD-Cer129). Trondheim, N 63.3973°, E 10.5545°, 3.–17.VII.2014, 2 females (TRD-Cer66, TRD-Cer69). Trondheim, N 63.42927°, E 10.37856°, 3.–17.VII.2014, 1 male (TRD-Cer222), 1 female (TRD-Cer223). Trondheim, N 63.42927°, E 10.37856°, 28.VIII.–11.IX.2014, 1 male (TRD-Cer135), 1 female (TRD-Cer136). Trondheim, N 63.40742°, E 10.33766°, 3.VI.2019, 1 larva (MM-Cer335). Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 1 female (MM-Cer151).

**Distribution of BIN members in BOLD System.** BOLD:ABZ8851: Norway, Sweden; BOLD:AEF2586: Norway.

**Comments.** The examined specimens belong to two BINs and in general they fit to *Atrichopogon hirtidorsum* Remm, 1961b except for female seminal capsule with neck and middle part of eyes in males covered with hair. Stur & Borkent (2014) reported this species from Finnmark region as *A. hirtidorsum*.

Currently, a single larva of *A. cf. hirtidorsum* was found in a lake in Trøndelag county, while adults were collected near various types of still and running water bodies and on mires.

#### *Atrichopogon longicalcar* Remm, 1961b

**Literature for identification.** Remm (1961b), Dominiak *et al.* (2007).

**Material examined.** Melhus, N 63.22042°, E 10.29148°, 17.–31.VII.2014, 1 female (TRD-Cer110). Melhus, N 63.22042°, E 10.29148°, 14.–28.VIII.2014, 1 female (TRD-Cer174). Trondheim, N 63.33958°, E 10.44285°, 17.–31.VII.2014, 1 female (TRD-Cer196).

**Distribution.** So far, *Atrichopogon longicalcar* has been reported from Belgium, Estonia, Finland, Germany, Lithuania, Poland (Dominiak *et al.* 2007). In the Catalogue of Palaearctic Diptera (Remm 1988) it is mentioned also from Russia, Ukraine, Siberia and Far East but without any additional locality data. This species is new to the Norwegian fauna (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ABZ8855: Norway, Canada.

**Comments.** This species was misidentified

and reported by Stur & Borkent (2014) from Finnmark region as *A. infuscus* Goetghebuer, 1929. Pale legs, long tibial spur of hind legs, shape of antenna and armature of male genitalia (specimen FiCer201, NTNU collection) indicate that all the examined specimens from this BIN belong to *A. longicalcar*.

#### *Atrichopogon lucorum* (Meigen, 1818)

**Literature for identification.** Szadziewski *et al.* (2007a).

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 1 female (MM-Cer310) (DNA barcoding failed).

**Distribution.** It is a widely distributed species known from both the Palaearctic and Nearctic Regions (Szadziewski *et al.* 2013). *Atrichopogon lucorum* was reported for the first time from Norway by Hagan *et al.* (2000).

#### *Atrichopogon maculatus* (Lundström, 1910)

**Literature for identification.** Szadziewski *et al.* (1996).

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 4 males (MM-Cer203, MM-Cer317, MM-Cer318, NTNU-VM 227052), 2 females (MM-Cer316, NTNU-VM 227051). Kristiansand, N 58.16920°, E 08.00007°, 21.VII.2020, 1 female (MM-Cer325). Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 1 female (MM-Cer123). Kristiansand, N 58.24831°, E 08.15696°, 18.VI.2020, 1 female (MM-Cer168). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer333).

**Distribution.** The species, originally described from Finland, has been reported from only few countries in Europe (Szadziewski *et al.* 2013) and from Primorsky Krai in Russia (Remm 1971). The current record of *Atrichopogon maculatus* is the first one from Norway.

**Distribution of BIN members in BOLD System.** BOLD:ADH7715: Norway.

**Comments.** According to Szadziewski (2001) males of this species are not very often collected.

#### *Atrichopogon meloesugans* Kieffer, 1922a

**Literature for identification.** Szadziewski *et*

al. (2007a).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, July 2019, 1 female (MM-Cer286). Kristiansand, N 58.19211°, E 08.07525°, 18.VI.2020, 1 male (NTNU-VM 227070).

**Distribution.** The species is known from Algeria, Poland (Szadziewski *et al.* 2007a) and Finland (Huldén & Huldén 2014), and it is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:AEH1314: Norway.

#### *Atrichopogon cf. minutus* (Meigen, 1830)

**Material examined.** Drangedal, N 59.04388°, E 09.30952°, 19.VIII.2019, 1 female (MM-Cer50). Kristiansand, N 58.19202°, E 08.07420°, 26.VIII.2019, 1 female (MM-Cer37). Kristiansand, N 58.26845°, E 08.16259°, 26.VIII.2019, 1 male (MM-Cer26), 1 female (MM-Cer27). Melhus, N 63.21712°, E 10.30765°, 17.–31.VII.2014, 1 female (TRD-Cer294). Melhus, N 63.21712°, E 10.30765°, 28.VIII.–11.IX. 2014, 1 male (TRD-Cer184). Melhus, N 63.21712°, E 10.30765°, 19.VI.–3.VII.2014, 1 female (TRD-Cer205). Melhus, N 63.22042°, E 10.29148°, 14.–28.VIII.2014, 3 males (TRD-Cer179, TRD-Cer180, TRD-Cer181), 3 females (TRD-Cer175, TRD-Cer176, TRD-Cer177). Melhus, N 63.21712°, E 10.30765°, 3.–17.VII.2014, 1 male (TRD-Cer23), 1 female (TRD-Cer30). Songdalen, N 58.15703°, E 07.82569°, 30.VIII.2019, 1 male (MM-Cer48). Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 2 females (TRD-Cer67, TRD-Cer70). Trondheim, N 63.27444°, E 10.56131°, 14.–18.VIII.2014, 1 male (TRD-Cer102), 2 females (TRD-Cer107, TRD-Cer109). Trondheim, N 63.33958°, E 10.44285°, 5.–19.VI.2014, 4 females (TRD-Cer95, TRD-Cer96, TRD-Cer97, TRD-Cer98). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 1 male (TRD-Cer128), 1 female (TRD-Cer116). Trondheim, N 63.42927°, E 10.37856°, 28.VIII.–11.IX.2014, 1 female (TRD-Cer137). Trondheim, N 63.44887°, E 10.45362°, 20.–30.VIII.2013, 1 male (TRD-Cer161), 1 female (TRD-Cer162). Trondheim, N 63.39730°, E 10.55451°, 31.VII.–14.VIII.2014, 1 female (TRD-Cer227). Trondheim, N 63.42927°, E 10.37856°, 5.–19.VI.2014, 2 females (TRD-Cer142, TRD-Cer144).

Trondheim, N 63.33958°, E 10.44285°, 17.–31.VII.2014, 1 male (TRD-Cer191), 6 females (TRD-Cer188, TRD-Cer194, TRD-Cer197, TRD-Cer198, TRD-Cer201, TRD-Cer202). Trondheim, N 63.42927°, E 10.37856°, 31.VII.–14.VIII.2014, 1 male (TRD-Cer132), 1 female (TRD-Cer131). Trondheim, N 63.33958°, E 10.44285°, 28.VIII.–11.IX.2014, 1 female (TRD-Cer44). Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 1 female (TRD-Cer80). Trondheim, N 63.33958°, E 10.44285°, 31.VII.–14.VIII.2014, 2 males (TRD-Cer45, TRD-Cer47), 1 female (TRD-Cer46). Trondheim, N 63.44887°, E 10.45362°, 24.VI.–1.VII.2013, 1 female (TRD-Cer166). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 1 female (TRD-Cer114). Trondheim, N 63.33958°, E 10.44285°, 17.VII.2014, 1 male (TRD-Cer18). Trondheim, N 63.44887°, E 10.45362°, 2.–9.VIII.2013, 4 males (TRD-Cer151, TRD-Cer152, TRD-Cer153, TRD-Cer154), 1 female (TRD-Cer156). Trondheim, N 63.33958°, E 10.44285°, 31.VII.–14.VIII.2014, 1 female (TRD-Cer306).

**Distribution of BIN members in BOLD System.** BOLD:ACA4348: Norway, Israel, Sweden; BOLD:ACA3626: Norway, Belarus, Canada, France, Georgia, Germany, Montenegro, New Zealand, Russia, Sweden.

**Comments.** The species has been listed by Stur & Borkent (2014) from Finnmark region as *Atrichopogon minutus* (Meigen, 1830). All the examined specimens are small, have only two setae on scutellum and simple hair on empodium like *A. minutus*, however, in both sexes the middle part of eyes is covered with hair.

#### *Atrichopogon muelleri* (Kieffer, in Müller 1905)

**Literature for identification.** Szadziewski *et al.* (1996).

**Material examined.** Kristiansand, N 58.16420°, E 08.00735°, 23.VI.2020, 1 male (NTNU-VM 227064), 1 female (MM-Cer251).

**Distribution.** *Atrichopogon muelleri* was described from Sweden and it is known from few European countries (Szadziewski *et al.* 2013), including Norway, where it was found in Vestfold and Telemark county (Thunes *et al.* 2021).

**Distribution of BIN members in BOLD System.** BOLD:ACX1975: Norway, Germany,

Sweden.

**Comments.** The female's DNA is matching with the Swedish materials (NHRS) from the same BIN identified as *A. flavolineatus* (Strobl, 1880). One male specimen from Sweden was available for our studies, and it fits better to *A. muelleri* than to *A. flavolineatus*.

### *Atrichopogon oedemerarum* Storå, 1939

**Literature for identification.** Szadziewski *et al.* (2007a).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, August 2019, 1 female (MM-Cer277) (DNA barcoding failed). Kristiansand, N 58.06957°, E 07.98101°, 29.VIII.2019, 1 female (MM-Cer53) (DNA barcoding failed). Kristiansand, N 58.19819°, E 07.99590°, 23.VI.2020, 1 female (MM-Cer150). Kristiansand, N 58.11861°, E 07.92679°, 24.VI.2020, 1 male (NTNU-VM 227084). Nissedal, N 59.03878°, E 08.46326°, 21.VIII.2019, 1 male (MM-Cer20), 1 female (MM-Cer21). Stor-Elvdal N 61.74614°, E 10.74618°, 7.VII.2008, 1 female (AT-Cer8). Sogndalen, N 58.15703°, E 07.82569°, 21.VI.2020, 1 female (NTNU-VM 227033). Trondheim, N 63.42927°, E 10.37856°, 5.–19.VI.2014, 1 female (TRD-Cer147).

**Distribution.** This *Atrichopogon* species is known to occur in the middle and northern part of Europe and in the Nearctic Region (Szadziewski *et al.* 2013). It was for the first time reported from Norway (Finnmark region) by Stur & Borkent (2014).

**Distribution of BIN members in BOLD System.** BOLD:ABZ9243: Norway, Bulgaria, France, Germany, Sweden.

**Comments.** Two of the examined females were collected on a dead blister beetle.

### *Atrichopogon paulus* Remm, 1961b

**Literature for identification.** Szadziewski (2001).

**Material examined.** Røros, N 62.6910°, E 11.8330°, 11.–22.VI.2006, 1 female (TRD-Cer229). Åmot, N 61.2094°, E 11.4467°, 6.VI.2016, 1 female (HED-Cer175).

**Distribution.** The only valid records of this species come from Estonia (Szadziewski *et al.*

2013) and Finland (Salmela *et al.* 2015). The current record of *Atrichopogon paulus* is the first one for Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACY5307: Norway.

**Comments.** It is worth noting that the female from Trøndelag county has one seta on paratergite and only 4 spine-like branches of the appendage of the 7<sup>th</sup> abdominal sternite.

### *Atrichopogon pavidus* (Winnertz, 1852)

**Literature for identification.** Szadziewski *et al.* (2001).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, July 2019, 1 male (MM-Cer287). Kristiansand, N 58.06956°, E 07.98100°, 24.VI.2020, 1 female (MM-Cer255). Kristiansand, N 58.20112°, E 07.98589°, 26.VI.2020, 1 male (NTNU-VM 227058).

**Distribution.** The species is known from many localities in Europe but in Fennoscandia it has been reported only from Finland (Szadziewski *et al.* 2013). *Atrichopogon pavidus* is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACX2517: Norway, Sweden. BOLD:ACX0617: Norway, Germany, Sweden.

### *Atrichopogon winnertzi* Goetghebuer, 1922

**Literature for identification.** Szadziewski *et al.* (2007a).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, July 2019, 1 female (MM-Cer285). Kristiansand, N 58.11861°, E 07.92679°, 24.VI.2020, 2 females (NTNU-VM 227082, NTNU-VM 227083). Lillesand, N 58.20626°, E 08.23249°, 22.VI.2020, 1 female (MM-Cer148). Sogndalen, N 58.15703°, E 07.82569°, 21.VI.2020, 1 female (NTNU-VM 227034).

**Distribution.** *Atrichopogon winnertzi* is a species which is widely distributed in the Palaearctic Region. From the Nordic countries it has been previously reported from Denmark, Sweden, and Finland (Szadziewski *et al.* 2013). The species is new to Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACF7706: Norway, Bulgaria, Germany.

**Comments.** The barcoded specimens from Norway belong to a separate BIN which is distant from a re-examined Swedish specimen (NHRS) correctly identified as *A. winnertzi*.

Unidentified species of *Atrichopogon*

*Atrichopogon* sp. 5ES

**Material examined.** Trondheim, N 63.33958°, E 10.44285°, 17.–31.VII.2014, 1 male (TRD-Cer200).

**Distribution of BIN members in BOLD System.** BOLD:ACS7801: Norway.

**Comments.** The examined male looks similar to the specimens identified here as *Atrichopogon* cf. *minutus*, but it is smaller (wing length 0.98 mm) and has gonostylus with rounded apex.

*Atrichopogon* sp. 7ES

**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 1 female (MM-Cer197).

**Distribution of BIN members in BOLD System.** BOLD:AEF3295: Norway, Montenegro.

**Comments.** Female of *Atrichopogon* s. str., with wing length 1.3 mm, 4 setae on scutellum and rather big single spermatheca.

*Atrichopogon* sp. 8ES

**Material examined.** Trondheim, N 63.42579°, E 10.28714°, 6.VI.2019, 1 larva (MM-Cer336).

**Distribution of BIN members in BOLD System.** BOLD:AEH9327: Norway.

**Comments.** The single larva was found in a lake in Trøndelag county.

*Atrichopogon* sp. 9ES

**Material examined.** Kristiansand, N 58.16420°, E 08.07735°, 23.VI.2020, 1 male (MM-Cer309) (no BIN number available).

**Comments.** The examined male has middle part of eyes covered with hair and dark legs, and it is in general similar to *Atrichopogon fuscus* (Meigen, 1804). However, in contrast to the latter species, its scutellum bears only two strong setae in the middle and two slightly bigger setae in submedian position.

**Genus *Forcipomyia* Meigen, 1818**

**Subgenus *Caloformipomyia* Saunders, 1957**

***Forcipomyia glauca* Macfie, 1934**

**Literature for identification.** Remm (1962b).

**Material examined.** Engerdal, N 61.8859°, E 11.7828°, 4.–17.VIII.2016, 1 female (HED-Cer237). Kristiansand, N 58.16920°, E 08.00007°, 8.–21.VII.2019, 1 male (MM-Cer324), 1 female (MM-Cer322). Rendalen, N 61.55606°, E 11.16856°, 9.–23.VI.2016, 1 female (HED-Cer282). Rendalen, N 61.5561°, E 11.1686°, 17.VIII.–2.IX.2016, 1 male (HED-Cer205). Åmot, N 61.1788°, E 11.4022°, 11.–21.VII.2016, 2 males (HED-Cer91, HED-Cer92). Åmot, N 61.1788°, E 11.4022°, 4.–17.VIII.2016, 1 male (HED-Cer186).

**Distribution.** This *Forcipomyia* species is known from both the Holarctic and Neotropical Regions (Szadziewski *et al.* 2013), but so far from Nordic countries it was reported only from Finland (Huldén & Huldén 2014). The species is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACI7668: Norway, Germany, Sweden.

**Subgenus *Euprojoannisia* Brèthes, 1914**

***Forcipomyia alacris* (Winnertz, 1852)**

**Literature for identification.** Remm (1962b).

**Material examined.** Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer322). Stor-Elvdal, N 61.3784°, E 11.1917°, 4.–17.VIII.2016, 1 male (HED-Cer214). Tynset, N 62.2554°, E 10.9073°, 23.VI.–11.VII.2016, 1 male (HED-Cer182).

**Distribution.** *Forcipomyia alacris* is reported from few countries in Western Palaearctic, but there are no previous records from Fennoscandia (Szadziewski *et al.* 2013). The species is new to Norway (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACP4569: Norway, Belarus, Bulgaria, Germany, Montenegro, Pakistan, Russia, Sweden.

**Comments.** The record of the species by Stur

& Borkent (2014) was based on a misidentification and thus it is invalid.

### *Forcipomyia palustris* (Meigen, 1804)

**Literature for identification.** Remm (1962b).

**Material examined.** Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 1 male (HED-Cer286). Engerdal, N 61.88586°, E 11.78283°, 11.–21.VII.2016, 1 male (HED-Cer137).

**Distribution.** The species is known from the Holarctic Region (Szadziewski *et al.* 2013, Salmela *et al.* 2015), and from Norway it was reported for the first time by Hagan *et al.* (2000) (see comments below). Stur & Borkent (2014) published records of this species also from Finnmark region.

**Distribution of BIN members in BOLD System.** BOLD:ABW3953: Norway, Finland, Sweden.

**Comments.** The name was mentioned by Zetterstedt (1850) from Thynås, but the record was based on a misidentification corrected later by Zetterstedt (1855, p. 4854). The female specimen from Thynås, identified first as a not typical form of *Forcipomyia palustris*, appeared to belong to *Atrichopogon brunnipes* (Meigen, 1804).

### *Forcipomyia phlebotomides* Bangerter, 1933

**Literature for identification.** Remm (1961a).

**Material examined.** Tynset, N 62.2554°, E 10.9073°, 23.VI.–11.VII.2016, 1 male (HED-Cer181). Engerdal, N 61.8859°, E 11.7828°, 11.–21.VII.2016, 1 female (HED-Cer139). Åmot, N 61.1788°, E 11.4022°, 11.–21.VII.2016, 1 female (HED-Cer103).

**Distribution.** So far, *Forcipomyia phlebotomides* has been reported from few countries in Europe, the Near East and North Africa (Szadziewski *et al.* 2013). It is the first record of the species from Norway as well as from the Nordic countries.

**Distribution of BIN members in BOLD System.** BOLD:ADG4098: Norway.

### *Forcipomyia titillans* (Winnertz, 1852)

**Literature for identification.** Remm (1962b).

**Material examined.** Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-

Cer228). Flekkefjord, N 58.41314°, E 06.65363°, 24.VIII.2019, 1 male (MM-Cer04). Kristiansand, N 58.19889°, E 07.99237°, 26.VI.2020, 1 female (MM-Cer296). Kristiansand, N 58.11939°, E 07.92635°, 27.VIII.2019, 1 female (MM-Cer02). Kristiansand, N 58.11939°, E 07.92635°, 27.VIII.2019, 1 male (MM-Cer03). Kristiansand, N 58.20020°, E 07.98943°, 26.VI.2020, 1 male (MM-Cer198), 1 female (MM-Cer199). Kristiansand, N 58.22176°, E 08.02128°, 18.VI.2020, 1 female (MM-Cer185). Lillesand, N 58.20626°, E 08.23249°, 22.VI.2020, 1 female (MM-Cer149). Marnardal, N 58.26750°, E 07.45603°, 16.VI.–1.VII.2019, 1 female (MM-Cer266). Melhus, N 63.21712°, E 10.30765°, 3.–17.VII.2014, 1 female (TRD-Cer31). Melhus, N 63.21712°, E 10.30765°, 3.–17.VII.2014, 1 female (TRD-Cer22). Rendalen, N 61.55606°, E 11.16856°, 17.VIII.–2.IX.2016, 1 male (HED-Cer204). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 male (HED-Cer15). Stor-Elvdal, N 61.74614°, E 10.74618°, 7.VII.2008, 1 male (AT-Cer12), 1 female (AT-Cer15). Trondheim, N 63.42927°, E 10.37856°, 28.VIII.–11.IX.2014, 1 female (TRD-Cer139). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 1 female (TRD-Cer119). Trondheim, N 63.3973°, E 10.5545°, 3.–17.VII.2014, 1 female (TRD-Cer82). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer259). Åmot, N 61.17878°, E 11.40217°, 4.–17.VIII.2016, 1 male (HED-Cer188).

**Distribution.** *Forcipomyia titillans* is another species of the subgenus *Euprojoannisia* Brèthes, 1914 with a Holarctic distribution (Szadziewski *et al.* 2013, Salmela *et al.* 2015). It was reported from Norway for the first time by Hagan *et al.* (2000) from Vestland county, and later also by Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:AAG6501: Norway, Belarus, Canada, Finland, Germany, Sweden, United States; BOLD:ABW3964: Norway, Belarus, Bulgaria, China, Finland, Georgia, Germany, Russia, Sweden.

**Comments.** Stur & Borkent (2014) reported the species from Finnmark region as *F. sp.* 6ES nr. *palustris* and as *F. alacris* (Winnertz, 1852).

## Subgenus *Forcipomyia* Meigen, 1818

### *Forcipomyia altaica* Remm, 1972

**Literature for identification.** Remm (1972), Dominiak *et al.* (2015).

**Material examined.** Folldal, N 61.98115°, E 10.02373°, 30.VI.2008, 2 males (AT-Cer4, AT-Cer5). Trondheim, N 63.27444°, E 10.56131°, 22.V.–5.VI.2014, 1 female (TRD-Cer12).

**Distribution.** This boreo-montane species is known from Czech Republic, Germany, Italy, Poland, and Russia (Altai Mountains) (Dominiak *et al.* 2015). From Fennoscandia it was reported before only from Finland (Salmela *et al.* 2015). It is the first record of *Forcipomyia altaica* from Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACO5584: Norway, Sweden.

### *Forcipomyia bipunctata* (Linnaeus, 1767)

**Literature for identification.** Szadziewski *et al.* (2007b).

**Material examined.** Melhus, N 63.22042°, E 10.29148°, 14.–28.VIII.2014, 1 male (TRD-Cer178). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 male (HED-Cer17), 2 females (HED-Cer21, HED-Cer23). Trondheim, N 63.429°, E 10.379°, 3.–17.VII.2014, 1 male (TRD-Cer221). Trondheim, N 63.33958°, E 10.44285°, 25.IX.–9.X.2014, 1 female (TRD-Cer185).

**Distribution.** This very widely distributed species has been reported from nearly all European countries and it is known also from the Near East, North Africa, the East Palaearctic, and the Nearctic Region (Szadziewski *et al.* 2013). The first valid record of *Forcipomyia bipunctata* from Norway was given by Hagan *et al.* (2000) from Vestland county. The species is known also from Finnmark region (Stur & Borkent 2014) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:AAN5148: Norway, Bulgaria, Belarus, Canada, Egypt, Georgia, Germany, Lebanon, Montenegro, Russia, Sweden, United States.

**Comments.** The name *F. bipunctata* was mentioned from Norway for the first time

by Zetterstedt (1850), and later the species was reported from numerous localities in the country by Siebke (1853, 1863, 1866, 1877). Unfortunately, all these old records should be treated as doubtful until the specimens from the original collections are re-examined. Stur & Borkent (2014) mistakenly listed this species as a new to Norway.

### *Forcipomyia ciliata* (Winnertz, 1852)

**Literature for identification.** Szadziewski *et al.* (2007b).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, 30.VII.2019, 1 male (MM-Cer291). Kristiansand, N 58.110290°, E 07.934234°, 5.VIII.2019, 1 male (MM-Cer263). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 2 females (HED-Cer20, HED-Cer22). Trondheim, N 63.44887°, E 10.45362°, 2.–9.VIII.2013, 1 female (TRD-Cer155). Trondheim, N 63.42927°, E 10.37856°, 5.–19.VI.2014, 1 female (TRD-Cer141). Trondheim, N 63.429°, E 10.379°, 22.V.–5.VI.2014, 1 female (TRD-Cer50). Åmot, N 61.1788°, E 11.4022°, 16.–29.IX.2016, 1 male (HED-Cer185).

**Distribution.** This widely distributed species, known from both the Palaearctic and Nearctic Regions, is reported also from whole Fennoscandia except Sweden (Szadziewski *et al.* 2013). The first record from Norway comes from Hagan's *et al.* (2000) paper.

**Distribution of BIN members in BOLD System.** BOLD:AAN5156: Norway, Belarus, Bulgaria, Canada, Finland, Georgia, Germany, Sweden, United States.

**Comments.** DNA of two females reported from Finnmark region as *F. sp. 2ES bipunctata* group (Stur & Borkent 2014) matches *F. ciliata*.

### *Forcipomyia crassipes* (Winnertz, 1852)

**Literature for identification.** Remm (1962b).

**Material examined.** Engerdal, N 61.8859°, E 11.7828°, 23.VI.–11.VII.2016, 1 male (HED-Cer227).

**Distribution.** *Forcipomyia crassipes* is known from localities in various parts of Eurasia and North Africa (Szadziewski *et al.* 2013), but from the Nordic countries it was reported only

from Finland (Salmela *et al.* 2015). The species is new to Norway.

**Distribution of BIN members in BOLD System.** BOLD:AAP6911: Norway, Canada, Sweden.

### *Forcipomyia hygrophila* Kieffer, 1925b

**Literature for identification.** Remm (1962b).

**Material examined.** Kristiansand, N 58.110290°, E 07.934234°, June 2019, 1 male (MM-Cer13) (DNA barcoding failed). Trondheim, N 63.2744°, E 10.5613°, 14.–18.VIII.2014, 1 female (TRD-Cer106). Trondheim, N 63.274°, E 10.561°, 25.IX.–9.X.2014, 2 males (TRD-Cer168, TRD-Cer169), 1 female (TRD-Cer172). Trondheim, N 63.42927°, E 10.37856°, 22.V.–5.VI.2014, 1 female (TRD-Cer112). Trondheim, N 63.33958°, E 10.44285°, 31.VII.–14.VIII.2014, 1 female (TRD-Cer49). Trondheim, N 63.33958°, E 10.44285°, 28.VIII.–11.IX.2014, 1 male (TRD-Cer41). Åmot, N 61.1788°, E 11.4022°, 28.IV.–11.V.2016, 1 male (HED-Cer30).

**Distribution.** This *Forcipomyia* species has been reported from few European countries, the East Palaearctic, and the Nearctic Region (Szadziewski *et al.* 2013). In Fennoscandia it is known from Norway (Hagan *et al.* 2000, the first country record; Stur & Borkent 2014) and Finland (Salmela *et al.* 2015).

**Distribution of BIN members in BOLD System.** BOLD:ACC1681: Norway, Belarus, Finland, Sweden.

**Comments.** The species was reported from Finnmark region (Stur & Borkent 2014) as *F. hygrophila* and *F. sp.* 1ES. It is worth mentioning that these specimens belong to other BINs (BOLD:ACB8284, BOLD:ACB8279) that the ones from Trøndelag and Innlandet counties. Moreover, males from all the BINs fit well to the original description of *F. hygrophila* while females show some variations in shape of palpus, seminal capsules and subgenital plate. It is thus possible that the examined specimens represent more than one species.

### *Forcipomyia nigra* (Winnertz, 1852)

**Literature for identification.** Remm (1962b).

**Material examined.** Birkeland, N 58.33339°,

E 08.23990°, June–July 2019, 1 male (MM-Cer110). Drangedal, N 59.05694°, E 08.71673°, 20.VIII.2019, 1 male (MM-Cer19). Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 1 male (HED-Cer285). Melhus, N 63.22042°, E 10.29148°, 31.VII.–14.VIII.2014, 1 female (TRD-Cer207). Rendalen, N 61.5561°, E 11.1686°, 26.V.–9.VI.2016, 1 male (HED-Cer202). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer319), 1 female (HED-Cer65). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 2 males (HED-Cer13, HED-Cer16), 2 females (HED-Cer18, HED-Cer24). Tolga, N 62.387028°, E 11.118861°, 23.VI.–11.VII.2016, 1 female (HED-Cer134). Trondheim, N 63.2744°, E 10.5613°, 14.–18.VIII.2014, 1 male (TRD-Cer100), 1 female (TRD-Cer103). Trondheim, N 63.274°, E 10.561°, 11.–25.IX.2014, 1 female (TRD-Cer40). Trondheim, N 63.33958°, E 10.44285°, 5.–19.VI.2014, 1 female (TRD-Cer91). Trondheim, N 63.33958°, E 10.44285°, 17.–31.VII.2014, 3 females (TRD-Cer187, TRD-Cer190, TRD-Cer192). Trondheim, N 63.33958°, E 10.44285°, 31.VII.–14.VIII.2014, 1 female (TRD-Cer48).

**Distribution.** The species is widely distributed in Europe, and it has also been reported from North Africa. From Nordic countries it is known from Denmark, Finland, and Norway (Szadziewski *et al.* 2013) where the first country record comes from Hagan's *et al.* 2000 paper. *Forcipomyia nigra* was listed later also from Finnmark region (Stur & Borkent 2014).

**Distribution of BIN members in BOLD System.** BOLD:ABW3942: Norway, Belarus, Bulgaria, Finland, France, Georgia, Germany, Sweden.

### *Forcipomyia nigrans* Remm, 1962b

**Literature for identification.** Remm (1962b).

**Material examined.** Rendalen, N 61.5561°, E 11.1686°, 17.VIII.–2.IX.2016, 1 female (HED-Cer203). Stor-Elvdal, N 61.3784°, E 11.1917°, 14.–26.V.2016, 1 male (HED-Cer152). Stor-Elvdal, N 61.3784°, E 11.1917°, 26.V.–9.VI.2016, 3 males (HED-Cer51, HED-Cer64, HED-Cer320), 1 female (HED-Cer69). Stor-Elvdal, N 61.3784°, E 11.1917°, 4.–17.VIII.2016, 1

male (HED-Cer213). Trondheim, N 63.3813°, E 10.6099°, 6.VI.2010, 1 male (TRD-Cer3). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer273). Åmot, N 61.1788°, E 11.4022°, 4.–17.VIII.2016, 1 male (HED-Cer187).

**Distribution.** So far, *Forcipomyia nigrans* is known only from Estonia, Germany, Great Britain, Lithuania, Norway, Poland, and the East Palaearctic (Szadziewski *et al.* 2013). From Norway it was reported for the first time by Hagan *et al.* (2000).

**Distribution of BIN members in BOLD System.** BOLD:ACM5599: Norway, Canada, Finland, Sweden.

**Comments.** We have re-examined the specimens from Finnmark region identified as *F. nigrans* (Stur & Borkent 2014) and they turned out to belong to *F. sphagnophila* Kieffer, 1925a.

#### *Forcipomyia pallida* (Winnertz, 1852)

**Literature for identification.** Remm (1962b) (for identification of males only).

**Material examined.** Melhus, N 63.21712°, E 10.30765°, 17.–31.VII.2014, 1 female (TRD-Cer298). Stor-Elvdal, N 61.74614°, E 10.74618°, 7.VII.2008, 1 female (AT-Cer11). Trondheim, N 63.27444°, E 10.56131°, 14.–18.VIII.2014, 1 female (TRD-Cer104). Trondheim, N 63.27444°, E 10.56131°, 11.–25.IX.2014, 1 female (TRD-Cer39).

**Distribution.** The species is occurring in the Holarctic Region (Szadziewski *et al.* 2013), but it has not been reported from Norway before (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACR2789: Norway, Bulgaria, Germany, Sweden.

**Comments.** Although the first information about *Forcipomyia pallida* in Norway (Austad in Agder county) come from Lundström's paper (1913), this record is rather not reliable.

DNA from the examined female specimens matches Swedish specimens (NHRS) correctly identified as *F. pallida* (one male specimen was available for our studies).

#### *Forcipomyia pulchrithorax* Edwards, in Saunders 1924

**Literature for identification.** Szadziewski *et al.* (2007b).

**Material examined.** Folldal, N 61.98115°, E 10.02373°, 22.IX.2008, 1 male (AT-Cer16). Melhus, N 63.22042°, E 10.29148°, 28.VIII.–11.IX.2014, 1 male (TRD-Cer211). Melhus, N 63.21712°, E 10.30765°, 25.IX.–9.X.2014, 1 male (TRD-Cer173). Søgne, N 58.08952°, E 07.83998°, 30.VIII.2019, 1 female (MM-Cer39). Trondheim, N 63.33958°, E 10.44258°, 28.VIII.–11.IX.2014, 1 female (TRD-Cer42). Trondheim, N 63.429°, E 10.379°, 23.IV.2014, 1 male (TRD-Cer11).

**Distribution.** Although the species is known from several countries in Eurasia, it has not been reported from any of the Nordic countries before (Szadziewski *et al.* 2013). *Forcipomyia pulchrithorax* is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACO9087: Norway, Bulgaria, Sweden; BOLD:ACO5698: Norway, Belarus, Bulgaria, Egypt, Germany, Sweden, Switzerland.

#### *Forcipomyia sphagnophila* Kieffer, 1925a

**Literature for identification.** Remm (1972) (mostly for identification of males).

**Material examined.** Kristiansand, N 58.19819°, E 07.99590°, 26.VI.2020, 1 female (MM-Cer173). Stor-Elvdal, N 61.3784°, E 11.1917°, 4.–17.VIII.2016, 1 female (HED-Cer212). Trondheim, N 63.33958°, E 10.44285°, 17.–31.VII.2014, 1 female (TRD-Cer189). Trondheim, N 63.44887°, E 10.45362°, 2.–9.VIII.2013, 1 female (TRD-Cer157). Åmot, N 61.1788°, E 11.4022°, 11.–21.VII.2016, 1 female (HED-Cer104). Stor-Elvdal, N 61.3784°, E 11.1917°, 11.–21.VII.2016, 1 female (HED-Cer74).

**Distribution.** *Forcipomyia sphagnophila* is not very often reported even if it is known from both the Palaearctic and Nearctic Regions (Szadziewski *et al.* 2013). It is the first record of the species from Norway and the Nordic countries (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ABW3952: Norway, Belarus, Bulgaria, Canada, Finland, Germany, Sweden.

United States.

**Comments.** The species was reported from Finnmark region by Stur & Borkent (2014) as *F. nigrans* Remm, 1962b.

Identification of the currently examined females was based chiefly on DNA match with male specimens from Finnmark region (NTNU) belonging to the same BIN.

### ***Forcipomyia squamigera* Kieffer, in Thienemann & Kieffer 1916**

**Literature for identification.** Szadziewski *et al.* (2007b).

**Material examined.** Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 3 males (HED-Cer52, HED-Cer53, HED-Cer56) (DNA barcoding failed for HED-Cer52, HED-Cer56), 3 females (HED-Cer66, HED-Cer68, HED-Cer324). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 2 females (HED-Cer260, HED-Cer261). Åmot, N 61.1788°, E 11.4022°, 11.–21.VII.2016, 1 female (HED-Cer101).

**Distribution.** This *Forcipomyia* species is known only from few European countries (Szadziewski *et al.* 2013), but nonetheless it has been reported from Finland (Salmela *et al.* 2015), Norway (Szadziewski *et al.* 2007b, the first country record) and Sweden (Thienemann & Kieffer 1916). A second record from Norway, from Finnmark region, was provided by Stur & Borkent (2014).

**Distribution of BIN members in BOLD System.** BOLD:ACF8504: Norway, Germany, Sweden.

**Comments.** *Forcipomyia squamigera* was reported from Finnmark region (Stur & Borkent 2014), but the single male belongs to another BIN (BOLD:ACA4431) than the currently examined specimens.

### ***Forcipomyia tenuis* (Winnertz, 1852)**

**Literature for identification.** Remm (1962b) (for identification of males only).

**Material examined.** Kristiansand, N 58.11939°, E 07.92635°, 27.VIII.2019, 1 female (MM-Cer01). Trondheim, N 63.44887°, E 10.45362°, 24.VI.–1.VII.2013, 1 female (TRD-Cer167). Trondheim, N 63.44887°, E 10.45362°,

2.–9.VIII.2013, 1 female (TRD-Cer158).

**Distribution.** *Forcipomyia tenuis* is known from few European countries and from the Near East (Szadziewski *et al.* 2013). The first record of this species from Norway was given by Stur & Borkent (2014).

**Distribution of BIN members in BOLD System.** BOLD:ABW3987: Norway, Belarus, Bulgaria, France, Germany, Sweden.

**Comments.** DNA of the examined females matches with male specimens of *F. tenuis* from Finnmark region belonging to the same BIN (Stur & Borkent 2014).

### **Subgenus *Microhelea* Kieffer, 1917b**

#### ***Forcipomyia fuliginosa* (Meigen, 1818)**

**Literature for identification.** Remm (1962b).

**Material examined.** Kristiansand, N 58.20850°, E 08.00650°, 26.VI.2020, 1 male (NTNU-VM 227044). Kristiansand, N 58.16920°, E 08.00007°, 21.VII.–6.VIII.2019, 1 female (MM-Cer70). Nissedal, N 59.03878°, E 08.46326°, 21.VIII.2019, 1 male (MM-Cer22). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 male (HED-Cer14), 1 female (HED-Cer19).

**Distribution.** *Forcipomyia fuliginosa* is a worldwide distributed species (Szadziewski *et al.* 2013), which was reported from Norway for the first time by Hagan *et al.* (2000).

**Distribution of BIN members in BOLD System.** BOLD:AEC3440: Norway; BOLD:AEC6077: Norway, Sweden; BOLD:AEC6078: Norway, Sweden; BOLD:AEC3819: Norway.

### **Subgenus *Panhelea* Remm, 1980**

#### ***Forcipomyia aristolochiae* (Rondani, 1860)**

**Literature for identification.** Remm & Zhogolev (1968) (as *pontica*).

**Material examined.** Kristiansand, N 58.06956°, E 07.98100°, 29.VIII.2019, 1 male (MM-Cer52).

**Distribution.** Records of *Forcipomyia aristolochiae* originate mostly from western and southern parts of Europe. From Nordic countries it has been listed so far only from Iceland (Szadziewski *et al.* 2013). The species is new to

Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACO6858: Norway, Bulgaria, France, Georgia, Germany, Kenya, Lebanon, Sweden.

### Subgenus *Synthyridomyia* Saunders, 1957

#### *Forcipomyia acidicola* (Tokunaga, 1937)

**Literature for identification.** Szadziewski (1986), Alwin-Kownacka *et al.* (2016a).

**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 1 male (NTNU-VM 227040).

**Distribution.** This widely distributed species, known from Eurasia and North America (Alwin-Kownacka *et al.* 2016a), was reported from Norway (Viken county) for the first time by Hagan *et al.* (2000). Stur & Borkent (2014) noted presence of *Forcipomyia acidicola* also in Finnmark region (see comments below).

**Comments.** All specimens of BIN: BOLD: ABW3996 identified by Stur & Borkent (2014) as *Forcipomyia knockensis* Goetghebuer, 1938 also belong to *F. acidicola*.

### Subgenus *Thyridomyia* Saunders, 1925

#### *Forcipomyia monilicornis* (Coquillett, 1905)

**Literature for identification.** Remm (1962b).  
**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 26.VIII.2019, 1 male (MM-Cer36). Kristiansand, N 58.19118°, E 08.07106°, 26.VIII.2019, 1 male (MM-Cer41), 1 female (MM-Cer42). Engerdal, N 61.8859°, E 11.7828°, 11.–21.VII.2016, 1 male (HED-Cer136), 1 female (HED-Cer138). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer325). Trondheim, N 63.42927°, E 10.37856°, 5.–19.VI.2014, 1 female (TRD-Cer146). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 1 male (TRD-Cer126). Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 2 females (MM-Cer154, MM-Cer155).

**Distribution.** *Forcipomyia monilicornis* is a widely distributed species known from the Palearctic, Nearctic, Afrotropical, and Australasian Regions (Szadziewski *et al.* 2013,

Borkent & Dominiak 2020). In the Nordic countries it has been reported from Denmark, Finland, and Norway (Szadziewski *et al.* 2013). From Norway the species is known from Vestland and Viken counties (Hagan *et al.* 2000, the first country record) and from Finnmark region (Stur & Borkent 2014) (see comments below).

**Distribution of BIN members in BOLD System** BOLD:ACQ8860: Norway, Belarus, Bulgaria, Canada, Germany, Sweden; BOLD: ADG6930: Norway, Canada; BOLD:ACG5153: Norway, Canada, Sweden; BOLD:ACN2557: Norway, Russia, Sweden; BOLD:ACZ5332: Norway, Georgia, Germany, Sweden.

**Comments.** The species was reported from Finnmark region (Stur & Borkent 2014) as *F. monilicornis*, *F.* sp. 4ES and *F.* sp. 5ES. It is worth noting that all these specimens belong to other BINs (BOLD:AAM6200, BOLD:ABZ8719, BOLD:AAG6538) than the ones from Trøndelag, Innlandet, and Agder counties.

### Subgenus *Trichohelea* Goetghebuer, 1920

#### *Forcipomyia chaetoptera* Remm, 1962b

**Literature for identification.** Alwin & Szadziewski (2013).

**Material examined.** Stor-Elvdal, N 61.3784°, E 11.1917°, 11.–21.VII.2016, 1 female (HED-Cer75).

**Distribution.** *Forcipomyia chaetoptera* is reported from Estonia, Lithuania, Poland (Alwin & Szadziewski 2013), Finland (Salmela *et al.* 2015), and from Finnmark region in Norway (Stur & Borkent 2014, the first country record).

**Distribution of BIN members in BOLD System.** BOLD:ABZ8720: Norway, Finland, Germany, Georgia, Sweden.

**Comments.** Like other members of the subgenus *Trichohelea* Goetghebuer, 1920, females of this species are most probably ectoparasites on other insects.

#### *Forcipomyia eques* (Johannsen, 1908)

**Literature for identification.** Alwin & Szadziewski (2013).

**Material examined.** Åmot, N 61.1788°, E 11.4022°, 11.–21.VII.2016, 1 female (HED-

Cer102).

**Distribution.** The species is known from many localities in Europe, Asia, and North America (Alwin & Szadziewski 2013), and from Norway it was reported for the first time by Tjeder (1944).

**Distribution of BIN members in BOLD System.** BOLD:ACP8376: Norway.

**Comments.** *Forcipomyia eques* is an ectoparasite of various species of net-winged insects (Alwin & Szadziewski 2013).

***Forcipomyia tonnoiri* (Goetghebuer, 1920)**

**Literature for identification.** Alwin & Szadziewski (2013).

**Material examined.** Arendal, N 58.46155°, E 08.69623°, 19.VI.2020, 1 male (MM-Cer159). Kristiansand, N 58.16920°, E 08.00007°, 4.–21.VI.2019, 1 female (MM-Cer283). Stor-Elvdal, N 61.3784°, E 11.1917°, 11.–21.VII.2016, 1 female (HED-Cer77).

**Distribution.** Up to now, *Forcipomyia tonnoiri* has been reported from many European countries, the Far East and North America (Alwin & Szadziewski 2013). The species is new to Norway.

**Distribution of BIN members in BOLD System.** BOLD:AEF4583: Norway. BOLD:ACN5590: Norway, Russia.

**Comments.** Females of this species are known to suck hemolymph from wings of lepidopterans (Alwin & Szadziewski 2013).

Unidentified species of *Forcipomyia*

***Forcipomyia* sp. 8ES**

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 6.–21.VIII.2019, 1 female (MM-Cer77). Stor-Elvdal, N 61.74614°, E 10.74618°, 7.VII.2008, 1 female (AT-Cer14). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer323). Tolga, N 62.387028°, E 11.118861°, 26.V.–9.VI.2016, 1 male (HED-Cer239). Tolga, N 62.387028°, E 11.118861°, 23.VI.–11.VII.2016, 1 female (HED-Cer132). Tynset, N 62.2554°, E 10.9073°, 9.–23.VI.2016, 1 female (HED-Cer41).

**Distribution of BIN members in BOLD**

**System.** BOLD:ACX1616: Norway, Sweden.

**Comments.** *Forcipomyia* sp. 8ES is a darkly coloured species, very similar to *Forcipomyia squamigera* Kieffer, in Thienemann & Kieffer 1916 (see Szadziewski *et al.* 2007b) but parameres in male genitalia are not so widely separated at base (like in *F. tenuisquama* sensu Remm 1962b). Females have lanceolate setae on all legs.

***Forcipomyia* sp. 12ES**

**Material examined.** Stor-Elvdal, N 61.3784°, E 11.1917°, 26.V.–9.VI.2016, 1 female (HED-Cer70).

**Distribution of BIN members in BOLD System.** BOLD:ADG5672: Norway.

**Comments.** The single examined female of the subgenus *Forcipomyia* s. str. Meigen, 1818 has slender flattened scales on tibiae, two seminal capsules and stout third palpal segment.

***Forcipomyia* sp. 13ES**

**Material examined.** Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer67).

**Distribution of BIN members in BOLD System.** BOLD:ADG5670: Norway.

**Comments.** This female of the subgenus *Forcipomyia* s. str. Meigen, 1818 has slender flattened scales on tibiae, two seminal capsules and moderately swollen third palpal segment.

***Forcipomyia* sp. 14ES**

**Material examined.** Engerdal, N 61.8859°, E 11.7828°, 17.VIII.–2.IX.2016, 1 female (HED-Cer236). Rendalen, N 61.55606°, E 11.16856°, 9.–23.VI.2016, 1 male (HED-Cer283).

**Distribution of BIN members in BOLD System.** BOLD:AAG6429: Norway, Canada, Finland, Sweden, United States.

**Comments.** It is a darkly pigmented species with wing 2.0 mm long and narrow 3<sup>rd</sup> palpal segment bearing small sensory pit. Antennal flagellomeres are not confluent. In general, male genitalia are very similar to those in *Forcipomyia nigra* (Winnertz, 1852), but parameres seem to be slightly shorter and evenly tapering towards apex.

***Forcipomyia* sp. 15ES**

**Material examined.** Trondheim, N 63.44887°, E 10.45362°, 20.–30.VIII.2013, 1 female (TRD-Cer159).

**Distribution of BIN members in BOLD System.** BOLD:ACS7557: Norway, Germany, Sweden.

**Comments.** The female of the subgenus *Forcipomyia* s. str. Meigen, 1818 has 3<sup>rd</sup> palpal segment enlarged at base and bearing a deep sensory pit, wing length 1.4 mm, and two slightly uneven seminal capsules with short necks.

***Forcipomyia* sp. 16ES**

**Material examined.** Songdalen, N 58.15703°, E 07.82569°, 30.VIII.2019, 1 female (MM-Cer46).

**Distribution of BIN members in BOLD System.** BOLD:ABY0553: Norway, Canada.

**Comments.** The single female *Forcipomyia* s. str. Meigen, 1818 with a pale spot on wing and an enlarged 3<sup>rd</sup> palpal segment bearing deep sensory pit was collected near an oxbow lake in Agder county.

***Forcipomyia* sp. 17ES**

**Material examined.** Sogndalen, N 58.15703°, E 07.82569°, 30.VIII.2019, 1 female (MM-Cer47).

**Distribution of BIN members in BOLD System.** BOLD:AAG6433: Norway, Belarus, Bulgaria, Canada, China, Germany, Malaysia, Russia, Sweden, United States.

**Comments.** The single, dark coloured female of the subgenus *Forcipomyia* s. str. Meigen, 1818 has a pale spot on wings and stout base of 3<sup>rd</sup> palpal segment.

***Forcipomyia* sp. 18ES**

**Material examined.** Kristiansand, N 58.11951°, E 07.92543°, 21.VI.–8.VII.2019, 1 female (MM-Cer85).

**Distribution of BIN members in BOLD System.** BOLD:AEC3718: Norway.

**Comments.** The specimen examined with stout basal part of 3<sup>rd</sup> palpal segment belongs to the subgenus *Forcipomyia* s. str. Meigen, 1818.

***Forcipomyia* sp. 19ES**

**Material examined.** Stor-Elvdal, N 61.74614°, E 10.74618°, 7.VII.2008, 1 female (AT-Cer10).

**Distribution of BIN members in BOLD System.** BOLD:AAL7406: Norway, Canada.

**Comments.** The single female examined belongs to the subgenus *Forcipomyia* s. str. Meigen, 1818, it has an enlarged base of 3<sup>rd</sup> palpal segment, and two uneven seminal capsules. The specimen was collected with a Malaise trap at a riverbank of the Atna river in Innlandet county.

***Forcipomyia* sp. 20ES**

**Material examined.** Trondheim, N 63.33958°, E 10.44285°, 5.–19.VI.2014, 1 female (TRD-Cer94).

**Distribution of BIN members in BOLD System.** BOLD:ACS2566: Norway.

**Comments.** This female of *Forcipomyia* s. str. Meigen, 1818 has only slightly enlarged base of 3<sup>rd</sup> palpal segment, and a single, retort shaped spermatheca.

***Forcipomyia* sp. 22ES**

**Material examined.** Tolga, N 62.387028°, E 11.118861°, 23.VI.–11.VII.2016, 1 female (HED-Cer133). Røros, N 62.6889°, E 11.8316°, 22.VI.–6.VII.2006, 1 female (TRD-Cer283) (DNA barcoding failed).

**Distribution of BIN members in BOLD System.** BOLD:ADG5110: Norway.

**Comments.** The two examined females are close to the Swedish specimens identified as *Forcipomyia litoraurea* (Ingram & Macfie, 1924) (NHRS). However, they belong to another cluster and shape of their antennal flagellomeres differs slightly from the description of female *F. litoraurea* given by Remm (1961a). Male specimens are needed to correctly identify specimens from this BIN.

**Subfamily Ceratopogoninae Newman, 1834**

**Tribe Culicoidini Kieffer, 1911a, c**

**Genus *Culicoides* Latreille, 1809**

### Subgenus *Avaritia* Fox, 1955

#### *Culicoides chiopterus* (Meigen, 1830)

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Trondheim, N 63.3957°, E 10.5537°, 28.IX.2015, 1 female (TRD-Cer308).

**Distribution.** It is a widely distributed and commonly reported species, in Nordic countries known from Denmark, Finland, Norway, Sweden (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). The first country record for Norway was given by Mehl (1996), and later the species was mentioned also from other localities by Mraz (1997) and Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:AEH0796: Norway.

#### *Culicoides dewulfi* Goetghebuer, 1936

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Marnadal, N 58.26750°, E 07.45603, 26.–31.VIII.2019, 1 female (MM-Cer93) (DNA barcoding failed).

**Distribution.** *Culicoides dewulfi* has been reported from many European countries, including Finland, Norway and Sweden, the Near East and the East Palaearctic (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). Mehl (1996) was the first author who mentioned the species from Norway.

#### *Culicoides gornostaevae* Mirzaeva, 1984

**Literature for identification.** Kirkeby & Dominiak (2014).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, July 2019, 1 female (MM-Cer327). Trondheim, N 63.3827°, E 10.60781°, 20.VI.2010, 1 male (NO 106).

**Distribution.** So far, the species is known only from localities in Norway, Poland, Russia (Siberia) and Sweden (Kirkeby & Dominiak 2014). The first record from Norway comes from Vestland county (Kirkeby & Dominiak 2014).

**Distribution of BIN members in BOLD System.** BOLD:ACF1108: Norway, Austria, Denmark, Finland, France, Italy, Germany, Latvia, Lithuania, Netherlands, Sweden, Switzerland.

#### *Culicoides obsoletus* (Meigen, 1818)

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, August 2019, 1 female (MM-Cer276). Kristiansand, N 58.110290°, E 07.934234°, June 2019, 1 female (MM-Cer12). Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 female (MM-Cer136). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer58). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 female (HED-Cer09). Trondheim, N 63.33958°, E 10.44285°, 5.–19.VI.2014, 2 females (TRD-Cer86, TRD-Cer87). Trondheim, N 63.2744°, E 10.5613°, 14.–18.VIII.2014, 1 male (TRD-Cer101). Åmot, N 61.1788°, E 11.4022°, 11.–21.VII.2016, 1 female (HED-Cer97).

**Distribution.** Another species of the subgenus which is known from many localities in Europe, the East Palaearctic, the Near East, North Africa and the Nearctic Region (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). We consider the information about *Culicoides obsoletus* provided by Mehl (1996) as the first valid record from Norway (see comments below). The species was reported also by Hagan *et al.* (2000) and Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:AAM6198: Norway, Austria, Bulgaria, Canada, Denmark, Finland, France, Georgia, Germany, Greece, Israel, Italy, Latvia, Lithuania, Macedonia, Morocco, Netherlands, Poland, Portugal, Serbia, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States; BOLD:ACF9576: Norway, Austria, Denmark, Finland, France, Germany, Italy, Latvia, Lithuania, Poland, Sweden, Switzerland.

**Comments.** The name was mentioned from Norway already by Zetterstedt (1850) and later also by Siebke (1863, 1877) and Storm (1907). However, we treat these records as doubtful until the voucher specimens from the original collections are re-examined.

#### *Culicoides scoticus* Downes & Kettle, 1952

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, August 2019, 1 male (MM-Cer272), 1 female (MM-Cer274) (DNA barcoding failed for both specimens). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 3 males (HED-Cer03, HED-Cer05, HED-Cer06), 2 females (HED-Cer10, HED-Cer11). Trondheim, N 63.274°, E 10.561°, 11.–25.IX.2014, 1 female (TRD-Cer37).

**Distribution.** *Culicoides scoticus* is known from many European countries, North Africa, and the Near East (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). The species was reported from Norway for the first time by Mehl (1996), and later also by Hagan *et al.* (2000) and Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:AAZ3985: Norway, Austria, Bulgaria, Denmark, Finland, France, Germany, Greece, Italy, Latvia, Lithuania, Macedonia, Morocco, Netherlands, Poland, Portugal, Serbia, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom.

### Subgenus *Beltranmyia* Vargas, 1953

#### *Culicoides circumscriptus* Kieffer, 1918

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Kristiansand, N 58.110290°, E 07.934234°, June 2019, 1 male (MM-Cer07), 1 female (MM-Cer06). Kristiansand, N 58.110290°, E 07.934234°, 27.VII.2019, 3 females (MM-Cer268, MM-Cer270, MM-Cer271). Kristiansand, N 58.110290°, E 07.934234°, 21.VIII.2019, 1 female (MM-Cer320).

**Distribution.** *Culicoides circumscriptus* occurs in the Palaearctic, Afrotropical and Oriental Regions and it has been reported from many localities in Europe, including the Fennoscandian Peninsula (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). The species is new to the Norwegian fauna (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACO3870: Norway, Egypt, Montenegro, Turkey; BOLD:ABX3077: Norway, Egypt, Israel, Montenegro. BOLD:AAV9748:

Norway, Egypt, France, Israel, Morocco, Sweden.

**Comments.** In various catalogs and checklists (e.g. Remm 1988, Szadziewski *et al.* 1997, Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Borkent & Dominiak 2020, Borkent *et al.* 2022) the species is listed as known from Norway, because two of its junior synonyms, namely *Culicoides salicola* Kieffer, 1924a and *C. pictidorsum* Kieffer, 1924a, are believed to have their locus typicus in the country. However, we are convinced that the type locality “Oldesbac” is a misspelled form of “Oldesloe”, and that it refers to Bad Oldesloe in Schleswig-Holstein (Germany) where August Thienemann was collecting materials from saline habitats at the beginning of 1920s (Thienemann 1926, Mehl 1996, Dau & Martin 2013). Another record from Norway given by Kieffer (1924a), which also should be considered invalid, concerns *C. newsteadi* Austen, 1921 or precisely its junior synonym *C. halophilus* Kieffer, 1924a. In this case, Bad Oldesloe was misspelled as “Oldesloc”.

#### *Culicoides manchuriensis* Tokunaga, 1941

**Literature for identification.** Tokunaga (1941).

**Material examined.** Sør-Varanger, N 69.44497°, E 29.89904°, 24.VI.2010, 1 male (FiCer2).

**Distribution.** The species is widely distributed in Europe, and it is known also from the Near East, the East Palaearctic, and the Nearctic Region (Szadziewski *et al.* 2013). According to Mathieu *et al.* (2012), in the Nordic countries it has been previously reported only from Denmark and Sweden. *Culicoides manchuriensis* is new to the Norwegian fauna (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:AAP9051: Norway, Canada, France, Slovakia, South Korea, Sweden, Switzerland.

**Comments.** The single male examined has been previously mentioned from Finnmark region as *Culicoides salinarius* Kieffer, 1914 (Stur & Borkent 2014).

#### *Culicoides salinarius* Kieffer, 1914

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Tolga, N 62.387028°, E 11.118861°, 23.VI.–11.VII.2016, 1 male (HED-Cer126). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 1 male (TRD-Cer124).

**Distribution.** *Culicoides salinarius* has been reported from several European countries as well as from the East Palaearctic and the Near East (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). The first record from Norway was given by Mehl (1996) and later it was listed also by Stur & Borkent (2014) from Finnmark region.

**Distribution of BIN members in BOLD System.** BOLD:ADS6479: Norway, Bulgaria, Sweden.

### *Culicoides sphagnumensis* Williams, 1955

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Engerdal, N 61.8859°, E 11.7828°, 23.VI.–11.VII.2016, 1 female (HED-Cer220).

**Distribution.** Although not mentioned from many countries, the species occurs in both the Palaearctic and Nearctic Regions (Szadziewski *et al.* 2013). *Culicoides sphagnumensis* has been reported from nearly all the Nordic countries (except Faroe Islands, Greenland, and Iceland) (Mathieu *et al.* 2012, Huldén & Huldén 2014) including Norway (Mehl 1996, the first country record; Hagan *et al.* 2000; Stur & Borkent 2014)

**Distribution of BIN members in BOLD System.** BOLD:ABW3965: Norway, Lithuania, Sweden.

### Subgenus *Culicoides* Latreille, 1809

#### *Culicoides boyi* Nielsen, Kristensen & Pape, 2015

**Literature for identification.** Nielsen *et al.* (2015).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, July 2019, 1 female (MM-Cer284) (DNA barcoding failed).

**Distribution.** The species was described from Denmark (Kristensen & Pape 2015) and it is new to the Norwegian fauna.

#### *Culicoides grisescens* Edwards, in Edwards *et al.* 1939

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, July 2019, 1 female (MM-Cer329). Birkenes, N 58.33339°, E 08.23990°, August 2019, 2 females (MM-Cer273, MM-Cer330) (DNA barcoding of the latter specimen failed). Folldal, N 61.98115°, E 10.02373°, 24.VIII.2008, 1 male (AT-Cer2), 1 female (AT-Cer3). Folldal, N 61.98115°, E 10.02373°, 22.IX.2008, 1 female (AT-Cer17). Folldal, N 61.98115°, E 10.02373°, 29.IX.2008, 1 male (AT-Cer18), 1 female (AT-Cer19). Kristiansand, N 58.110290°, E 07.934234°, 27.VII.2019, 1 female (MM-Cer269). Melhus, N 63.21712°, E 10.30765°, 11.–25.IX.2014, 1 female (TRD-Cer51). Melhus, N 63.21712°, E 10.30765°, 17.–31.VII.2014, 1 female (TRD-Cer290). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 male (HED-Cer04), 2 females (HED-Cer08, HED-Cer12). Tolga, N 62.387028°, E 11.118861°, 19.IX.2016, 1 female (HED-Cer167). Trondheim, N 63.39730°, E 10.55451°, 25.IX.–9.X.2014, 1 female (TRD-Cer215). Trondheim, N 63.27444°, E 10.56131°, 14.–18.VIII.2014, 1 male (TRD-Cer99). Trondheim, N 63.27444°, E 10.56131°, 25.IX.–9.X.2014, 2 females (TRD-Cer170, TRD-Cer171). Trondheim, N 63.39730°, E 10.55451°, 31.VII.–14.VIII.2014, 1 female (TRD-Cer224). Trondheim, N 63.27444°, E 10.56131°, 11.–25.IX.2014, 1 female (TRD-Cer38).

**Distribution.** The species is known from most of the countries from Eastern, Western and Northern Europe, and it has been reported also from the East Palaearctic and the Near East (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). From Norway, *Culicoides grisescens* was mentioned for the first time by Mehl (1996) from Sørlandet and Østlandet regions. Later Hagan *et al.* (2000) reported it again from Østlandet and Stur & Borkent (2014) from Finnmark region.

**Distribution of BIN members in BOLD System.** BOLD:AAR4918: Norway, Algeria, Austria, Denmark, Finland, Lithuania, Sweden, Switzerland, United Kingdom; BOLD:AEI3120: Norway.

**Comments.** The specimens examined belong to two distant clusters, and even if they are morphologically very similar, it is possible that they represent two different species.

### ***Culicoides impunctatus* Goetghebuer, 1920**

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Dovre, N 61.99347°, E 9.80343°, 10.VIII.2015, 1 female (EBAI-Dip001). Engerdal, N 61.88586°, E 11.78283°, 11.–21.VII.2016, 1 female (HED-Cer142). Flekkefjord, N 58.35775°, E 06.62518°, 22.VIII.2019, 1 female (MM-Cer17). Flekkefjord, N 58.40630°, E 06.62017°, 24.VIII.2019 female (MM-Cer49). Marnardal, N 58.26750°, E 07.45603°, 16.VI.–1.VII.2019, 1 female (MM-Cer267). Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 2 females (MM-Cer135, MM-Cer137). Kristiansand, N 58.110290°, E 07.934234°, 5.VIII.2019, 1 female (MM-Cer260). Kristiansand, N 58.22176°, E 08.02128°, 18.VI.2020, 1 female (MM-Cer249). Kristiansand, N 58.06956°, E 07.98100°, 24.VI.2020, 1 female (MM-Cer256). Kristiansand, N 58.110290°, E 07.934234°, June 2019, 1 female (MM-Cer10). Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 female (MM-Cer319).

**Distribution.** *Culicoides impunctatus* is widely distributed in Europe and it has been reported also from the East Palearctic and the Near East (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). The first record from Norway comes from Mehl's (1996) paper, and later this species was also listed by Mraz (1997), Hagan *et al.* (2000), and Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:ACG4335: Norway, Denmark, Germany, Lithuania, Russia, Sweden, United Kingdom.

### ***Culicoides pulicaris* (Linnaeus, 1758)**

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Kristiansand, N 58.110290°, E 07.934234°, 16.V.2019, 1 female (MM-Cer28). Kristiansand, N 58.19211°, E 08.07525°, 5.IX.2019, 1 female (MM-Cer58)

(DNA barcoding failed). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 male (HED-Cer07).

**Distribution.** This *Culicoides* species occurs in both the Palearctic and Afrotropical Regions, and it is known from all Nordic countries but Faroe Islands, Greenland, and Iceland (Mathieu *et al.* 2012, Szadziewski *et al.* 2013). From Norway it was reported for the first time by Mehl (1996) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:AEC5818: Norway, Austria, Czech Republic, Denmark, France, Lithuania, Portugal, Slovakia, Sweden, Switzerland, United Kingdom.

**Comments.** The early records of this species by Siebke (1877) and Storm (1907) cannot be treated as reliable until the voucher specimens are re-examined.

### ***Culicoides punctatus* (Meigen, 1804)**

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, August 2019, 1 female (MM-Cer275). Kristiansand, N 58.110290°, E 07.934234°, 5.VIII.2019, 1 male (MM-Cer262). Kristiansand, N 58.110290°, E 07.934234°, 16.V.2019, 1 male (MM-Cer29). Kristiansand, N 58.06956°, E 07.98100°, 29.VIII.2019, 1 male (MM-Cer54). Stor-Elvdal, N 61.42422°, E 11.10112°, 16.IX.–5.XI.2016, 1 male (HED-Cer154).

**Distribution.** *Culicoides punctatus* is known from numerous localities in Europe, North Africa, the East Palearctic, the Near East and the Afrotropical Region (Mathieu *et al.* 2012, Szadziewski *et al.* 2013). The species was also reported from Norway (Mehl 1996, the first country record; Mraz 1997).

**Distribution of BIN members in BOLD System.** BOLD:ACX2603: Norway, Austria, Bulgaria, Czech Republic, Denmark, France, Lithuania, Montenegro, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom.

### **Subgenus *Oecacta* Poey, 1853**

***Culicoides albicans* (Winnertz, 1852)**

**Literature for identification.** Gutsevich (1973), Glukhova (1995), Mathieu *et al.* (2012).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, July 2019, 3 males (MM-Cer288, MM-Cer289, MM-Cer290) (DNA barcoding failed for the latter specimen). Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-Cer225). Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 1 male (HED-Cer288). Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 1 female (MM-Cer121). Kristiansand, N 58.11951°, E 07.92543°, 20.V.–4.VI.2019, 1 female (MM-Cer253). Kristiansand, N 58.11951°, E 07.92543°, 4.VI.–21.VI.2019, 1 female (MM-Cer89) (DNA barcoding failed). Kristiansand, N 58.11951°, E 07.92543°, 21.VI.–8.VII.2019, 1 female (MM-Cer84). Kristiansand, N 58.11861°, E 07.92679°, 24.VI.2020, 1 male (MM-Cer311). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 3 males (HED-Cer54, HED-Cer55, HED-Cer311), 3 females (HED-Cer57, HED-Cer312, HED-Cer313). Trondheim, N 63.38056°, E 10.61062°, 20.VI.2010, 1 male (TRD-Cer5). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer276).

**Distribution.** Except for southern part of the continent, *Culicoides albicans* is rather widely distributed in Europe, and it is known also from the East Palaearctic (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). The first country record for Norway was given by Hagan *et al.* (2000) from Viken and Vestland counties, and later the species was listed also from Finnmark region by Stur & Borkent (2014).

**Distribution of BIN members in BOLD System.** BOLD:ABW3940: Norway, Lithuania, Sweden; BOLD:ADF8422: Norway.

***Culicoides clintoni* Boorman, 1984**

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Kristiansand, N 58.20112°, E 07.98589°, 26.VI.2020, 1 male (MM-Cer312). Lillesand, N 58.20460°, E 08.23188°, 22.VI.2020, 1 male (MM-Cer130). Trondheim, N 63.40256°, E 10.31742°, 4.VI.2019, 1 pupa (MM-Cer339).

**Distribution.** The species has been reported from few European countries (including Denmark, Finland, Norway) and the East Palaearctic (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Salmela *et al.* 2015, Szadziewski & Dominiak 2016). The previous records from Norway were provided by Hagan *et al.* (2000, the first country record) and Thunes *et al.* 2021.

**Distribution of BIN members in BOLD System.** BOLD:ACG3274: Norway, Germany, Sweden.

**Comments.** The adult males were collected on mires while the single examined pupa was found in the north part of Haukvatnet lake in Trøndelag county.

***Culicoides furcillatus* Callot, Kremer & Paradis, 1962**

**Literature for identification.** Callot *et al.* (1962), Mathieu *et al.* (2012).

**Material examined.** Engerdal, N 61.93559°, E 12.01148°, 7.VI.2016, 1 female (HED-Cer160).

**Distribution.** This species is known from the Iberian Peninsula, British Isles, France, Belgium, Switzerland, Germany, Denmark, Poland, Slovakia, and Greece (Mathieu *et al.* 2012, Szadziewski *et al.* 2013). Current record is the first one for Norway and Fennoscandia.

**Distribution of BIN members in BOLD System.** BOLD:ADG5653: Norway.

**Comments.** The examined female has eyes separated by a slightly wider distance than a typical *Culicoides furcillatus*, but other characters fit well to the original description of this species.

***Culicoides lenae* Glushchenko & Mirzaeva, 1970**

**Literature for identification.** Glushchenko & Mirzaeva (1970).

**Material examined.** Rendalen, N 61.77455°, E 11.59347°, 17.IX.2016, 1 male (HED-Cer119).

**Distribution.** So far, *Culicoides lenae* has been reported only from Russia (Remm 1988, Szadziewski *et al.* 2013). The species is new to both, the Norwegian fauna and the Nordic countries (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ABZ9443: Norway, Finland.

**Comments.** *Culicoides lenae* was misidentified and reported from Finnmark region as *C. minutissimus* (Zetterstedt, 1855) (female specimen FiCer180) (Stur & Borkent 2014).

The specimens of that BIN were compared with the type specimens of *Culicoides lenae* by Andrey Przhiboro (St. Petersburg).

#### Subgenus *Sensiculicoides* Shevchenko, 1977

#### *Culicoides festvipennis* Kieffer, 1914

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Farsund, N 58.06847°, E 06.79388°, 26.VI.2020, 1 female (NTNU-VM 227078).

**Distribution.** This *Culicoides* species is known from many localities in the Palaearctic Region (including North Africa and the Near East) (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). The species is new to the Norwegian fauna (see comments below).

**Comments.** According to the information from the Fauna Europaea database (Szadziewski *et al.* 2013) and the IIC (Mathieu *et al.* 2012), *Culicoides festvipennis* has been previously reported from Norway. We found the species record from Norway only in these databases and in Artsnavnebase (2015) without being published otherwise.

#### *Culicoides heliophilus* Edwards, 1921

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Kristiansand, N 58.110290°, E 07.934234°, June 2019, 1 male (MM-Cer14). Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 1 male (MM-Cer100).

**Distribution.** Known localities of *Culicoides heliophilus* are spread throughout Europe, the East Palaearctic, and the Near East, but so far in the Nordic countries it has been reported only from Denmark and Norway (Mathieu *et al.* 2012, Szadziewski *et al.* 2013). Mehl (1996) was the first to list this species from Norway, and later it was mentioned also by Hagan *et al.* (2000).

#### Distribution of BIN members in BOLD

**System.** BOLD:ACF7867: Norway, Germany, Sweden.

#### *Culicoides kibunensis* Tokunaga, 1937

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Drangedal, N 59.03572°, E 09.29243°, 17.VI.2020, 1 female (MM-Cer117). Engerdal, N 61.88586°, E 11.78283°, 11.–21.VII.2016, 1 male (HED-Cer140), 1 female (HED-Cer141). Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-Cer222), 1 female (HED-Cer221). Kristiansand, N 58.16324°, E 08.10116°, 8.–21.VII.2019, 1 female (MM-Cer78). Melhus, N 63.21712°, E 10.30765°, 3.–17.VII.2014, 1 male (TRD-Cer21), 3 females (TRD-Cer32, TRD-Cer34, TRD-Cer36). Røros, N 62.6910°, E 11.8330°, 11.–22.VI.2006, 1 male (TRD-Cer230). Røros, N 62.6910°, E 11.8330°, 22.VI.–6.VII.2006, 1 female (TRD-Cer272). Røros, N 62.6889°, E 11.8316°, 22.VI.–6.VII.2006, 1 male (SOE424), 1 female (TRD-Cer280). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer257), 1 female (HED-Cer258). Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 female (HED-Cer98).

**Distribution.** *Culicoides kibunensis* is a widely distributed species in the Holarctic Region (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014), known also from Norway, where it was reported for the first time by Hagan *et al.* (2000).

#### Distribution of BIN members in BOLD

**System.** BOLD:ACG4460: Norway, Austria, Belarus, Bulgaria, Germany, Lithuania, Romania, Slovakia, Spain, Sweden; BOLD:AAG6430: Norway, Austria, Bulgaria, France, Germany, Lithuania, Spain; BOLD:ACP1255: Norway, Bulgaria; BOLD:ACR6993: Norway.

**Comments.** The specimens examined belong to four different BINs, including one (BOLD:ACR6993) rather distant from the remaining three. The single male and females from this BIN look like typical *C. kibunensis* except for a bit more irregular shape of the sensory pit on third palpal segment and slightly shorter neck of seminal capsules.

***Culicoides comosiculatus* Tokunaga, 1956**

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 male (HED-Cer29), 1 female (HED-Cer28).

**Distribution.** The species is known from many localities in the Palaearctic Region (Mathieu *et al.* 2012, Szadziewski *et al.* 2013), and it was reported also from Norway (Hagan *et al.* 2000).

**Distribution of BIN members in BOLD System.** BOLD:ADF6075: Norway, Switzerland.

***Culicoides maritimus* Kieffer, 1924b**

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 female (MM-Cer134). Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 1 male (NTNU-VM 227038). Kristiansand, N 58.11029°, E 07.93423°, June 2019, 1 male (MM-Cer08).

**Distribution.** The species is known from many European countries, Asia, and North Africa (Mathieu *et al.* 2012, Szadziewski *et al.* 2013), but it has not been reported previously neither from Norway nor Fennoscandia.

**Distribution of BIN members in BOLD System.** BOLD:AEG3671: Norway.

***Culicoides pictipennis* (Stæger, 1839)**

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Kristiansand, N 58.110290°, E 07.934234°, June 2019, 1 female (MM-Cer09). Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 1 female (TRD-Cer68).

**Distribution.** *Culicoides pictipennis* is known from many localities in the Palaearctic Region (including North Africa and the Near East) (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014), and from Norway it was reported for the first time by Thunes *et al.* (2021) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:AAZ3959: Norway, Austria, Belarus, Bulgaria, France, Lithuania, Russia,

Sweden.

**Comments.** The name *C. pictipennis* appeared for the first time in Zetterstedt (1850) and further the same record was repeated by Siebke (1877). However, in his paper, Soot-Ryen (1943a) explains that the record concerns *C. fascipennis* (Stæger, 1839), what was also corrected by Zetterstedt himself (Zetterstedt 1855, p. 4862). One of the currently accepted junior synonyms of *C. pictipennis*, namely *C. arcuatus* (Winnertz, 1852), was mentioned by Soot-Ryen (1943a, p. 7). He treated it as a valid (?) name and claimed that a specimen from Dovre was collected and identified/reported by Siebke. Soot-Ryen (1943a) referred most probably to one of Siebke's specimens from this locality identified as *C. obsoletus* (Meigen, 1818) (shown as a doubtful record in Table 1). The latter name was incorrectly synonymized with *C. arcuatus* by Zetterstedt (1855, p. 4856). In our opinion this potential record of *C. pictipennis* from Soot-Ryen (1943a) should be treated as invalid.

**Subgenus *Silvaticulicoides* Glukhova, 1977**

***Culicoides fascipennis* (Stæger, 1839)**

**Literature for identification.** Mathieu *et al.* 2012.

**Material examined.** Drangedal, N 59.05694°, E 08.71673°, 20.VIII.2019, 1 female (MM-Cer18). Engerdal, N 61.88586°, E 11.78283°, 17.VIII.–2.IX.2016, 1 female (HED-Cer235). Kristiansand, N 58.110290°, E 07.934234°, 5.VIII.2019, 1 male (MM-Cer261).

**Distribution.** The species is known from most of the European countries, the East Palaearctic, the Near East and North Africa (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014). It has been reported from all mainland Nordic countries, including Norway, where the first country record was given by Mehl (1996) (see comments below). *Culicoides fascipennis* was later mentioned from other localities in the country by Mraz (1997) and Stur & Borkent (2014).

**Distribution of BIN members in BOLD System.** BOLD:AAZ4055: Norway, Austria, France, Lithuania, Montenegro, Russia, Slovakia, Sweden, Switzerland.

**Comments.** Soot-Ryen (1943a) stressed that records of *C. pictipennis* (Stæger, 1839) from papers by Zetterstedt (1850) and Siebke (1877) concern *C. fascipennis*. Actually, the correction was made by Zetterstedt himself (Zetterstedt 1855, p. 4862), what Siebke (1877) has clearly overlooked. This first record of *C. fascipennis* from Norway is treated by us as doubtful.

### Subgenus *Wirthomyia* Vargas, 1973

#### *Culicoides riouxi* Callot & Kremer, 1961

**Literature for identification.** Mathieu *et al.* 2012.

**Material examined.** Melhus, N 63.21712°, E 10.30765°, 3.–7.VII.2014, 1 male (TRD-Cer20). Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 female (MM-Cer138). Kristiansand, N 58.110290°, E 07.934234°, June 2019, 1 female (MM-Cer11). Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 female (HED-Cer27). Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 1 female (TRD-Cer65).

**Distribution.** According to Mathieu *et al.* (2012) the species has a limited distribution (France, Great Britain, Germany, Belgium) and it has not been previously reported from Scandinavia. However, it is known from Finland (Huldén & Huldén 2014). *Culicoides riouxi* is a new species to the Norwegian fauna (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ABW3966: Norway, Austria, Belarus, Lithuania, Sweden.

**Comments.** This species was misidentified and listed from Finnmark region as *C. reconditus* Campbell and Pelham-Clinton, 1960 (specimens FiCer86 and FiCer206) (Stur & Borkent 2014).

#### *Culicoides segnis* Campbell & Pelham-Clinton, 1960

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, July 2019, 1 female (MM-Cer328). Farsund, 26.VI.2020, N 58.06847°, E 06.79388°, 1 female (MM-Cer305). Melhus, N 63.21712°, E 10.30765°, 17.–31.VII.2014, 1 female (TRD-Cer297). Melhus, N 63.21712°, E 10.30765°,

19.VI.–3.VII.2014, 1 male (TRD-Cer203). Melhus, N 63.21712°, E 10.30765°, 3.–17.VII.2014, 1 male (TRD-Cer35), 1 female (TRD-Cer33). Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 7 males (TRD-Cer55, TRD-Cer56, TRD-Cer57, TRD-Cer58, TRD-Cer59, TRD-Cer60, TRD-Cer61), 9 females (TRD-Cer71, TRD-Cer72, TRD-Cer74, TRD-Cer75, TRD-Cer76, TRD-Cer79, TRD-Cer83, TRD-Cer84, TRD-Cer85).

**Distribution.** *Culicoides segnis* is rather widely distributed in Europe (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014), and from Norway the species was reported for the first time by Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:AAY9630: Norway, France, Lithuania, Slovakia, Sweden.

### *Culicoides, stonei* group

#### *Culicoides pallidicornis* Kieffer, 1919a

**Literature for identification.** Mathieu *et al.* (2012).

**Material examined.** Farsund, 26.VI.2020, N 58.06847°, E 06.79388°, 1 male (MM-Cer306). Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 female (HED-Cer100).

**Distribution.** The species is known from both the Palaearctic and Nearctic Regions (Mathieu *et al.* 2012, Szadziewski *et al.* 2013, Huldén & Huldén 2014) but from Norway it was reported for the first time just recently, by Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:ACP1727: Norway, Austria, Bulgaria, France, Germany, Lithuania, Slovakia, Sweden, Switzerland.

### Tribe Ceratopogonini Newman, 1834

#### Genus *Alluaudomyia* Kieffer, 1913b

#### *Alluaudomyia quadripunctata* (Goetghebuer, 1934b)

**Literature for identification.** Knoz & Ratajský (1987), Szadziewski *et al.* (2015).

**Material examined.** Rendalen, N 61.77455°,

E 11.59347°, 11.–21.VII.2016, 1 male (HED-Cer145), 1 female (HED-Cer144). Rendalen, N 61.77455°, E 11.59347°, 17.IX.2016, 1 male (HED-Cer115). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 2 males (HED-Cer299, HED-Cer300), 1 female (HED-Cer298).

**Distribution.** So far, *Alluaudomyia quadripunctata* has been reported from only few localities in Europe and the East Palaearctic (Szadziewski *et al.* 2013), and the first record from Norway was given by Hagan *et al.* (2000) from Viken county.

**Distribution of BIN members in BOLD System.** BOLD:ACX1443: Norway, Sweden.

Unidentified species of *Alluaudomyia*

#### *Alluaudomyia* sp. 1ES

**Material examined.** Drangedal, N 59.04432°, E 09.30909°, 17.VI.2020, 1 larva (MM-Cer225). Trondheim, N 63.39730°, E 10.55451°, 25.IX.–9.X.2014, 1 female (TRD-Cer216)

**Distribution of BIN members in BOLD System.** BOLD:ACT7539: Norway.

**Comments.** The specimens of this BIN most probably belong to *Alluaudomyia riparia* Clastrier, 1978, but in this genus, identification based on females is uncertain. However, wing patterns and coloration of the legs of the examined female specimen fit well to the original drawings by Clastrier (1978) and figures in Knoz & Ratajský (1987).

### Genus *Brachypogon* Kieffer, 1899

#### Subgenus *Brachypogon* Kieffer, 1899

#### *Brachypogon beaufortanensis* Delécolle & Rieb, 1992

**Literature for identification.** Delécolle & Rieb (1992).

**Material examined.** Tolga, N 62.387028°, E 11.118861°, 23.VI.–11.VII.2016, 1 female (HED-Cer124).

**Distribution.** The species is known from French Alps (Delécolle & Rieb 1992) and from Poland (Szadziewski 2001), and it has not been reported from Norway before.

**Distribution of BIN members in BOLD System.** BOLD:ACX0614: Norway, Germany.

**Comments.** The examined specimen has 4<sup>th</sup> palpomere with one seta, wing length 0.75 mm, katapisternum with 1 seta, single big spermatheca, characteristic hooked setae on distal half of hind basitarsus, and pale wings. Although this single female fits rather well to the original description of *Brachypogon beaufortanensis*, male specimens are needed to confirm the identification and presence of the species in Norway since *B. fagicola* Delécolle and Schiegg, 1999 has a similar combination of characters. The latter biting midge species was described from Switzerland and is known from males only.

#### *Brachypogon* cf. *nieves* (Havelka, 1976)

**Material examined.** Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer303).

**Distribution of BIN members in BOLD System.** BOLD:ADH8226: Norway.

**Comments.** The single female specimen from Hedmark is keying to *Brachypogon nieves* (known from Germany, Spain, and France) in the paper by Szadziewski & Havelka (1984). However, it has smaller spermatheca (dimension 34 x 48 µm) compared to females examined by the authors (Szadziewski & Havelka 1984). Male specimens are needed to confirm the identification and presence of the species in Norway.

#### *Brachypogon vitiosus* (Winnertz, 1852)

**Literature for identification.** Szadziewski & Havelka (1984).

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 2 males (MM-Cer106, MM-Cer264). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer304), 1 female (HED-Cer301). Stor-Elvdal, N 61.37841°, E 11.19175°, 11.–21.VII.2016, 1 female (HED-Cer84).

**Distribution.** The species is rather widely distributed in the Palaearctic Region (Salmela *et al.* 2015, Alwin-Kownacka *et al.* 2016b) and it was Hagan *et al.* (2000) who reported *Brachypogon vitiosus* from Norway for the first time.

**Distribution of BIN members in BOLD**

**System.** BOLD:ACJ1070: Norway, Germany; BOLD:ACN4299: Norway, Russia, Sweden.

**Comments.** In our materials, the specimens identified as *Brachypogon vitiosus* belong to two, rather distant BINs (BOLD:ACJ1070, BOLD:ACN4299). Although genital armature of the examined males seems to be nearly identical, there is a chance they represent more than one species. There are two names treated as junior synonyms of *B. vitiosus* (see Borkent & Dominiak 2020) but, unfortunately, their descriptions are based on female specimens only.

### Subgenus *Isohelea* Kieffer, 1917b

#### *Brachypogon alpinus* (Clastrier, 1961)

**Literature for identification.** Clastrier (1961).

**Material examined.** Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 male (HED-Cer111), 1 female (HED-Cer112).

**Distribution.** The species was described from Austria and is known also from Albania, Germany, and Switzerland (Szadziewski *et al.* 2013). It is a new record of *Brachypogon alpinus* to Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACU5326: Norway, Germany, Russia.

#### *Brachypogon incompletus* (Kieffer, 1925b)

**Literature for identification.** Szadziewski *et al.* (1994).

**Material examined.** Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-Cer229). Flekkefjord, N 58.34622°, E 06.63663°, 23.VIII.2019, 1 female (MM-Cer44). Kristiansand, N 58.11951°, E 07.92543°, 20.V.–4.VI.2019, 1 male (NTNU-VM 227080). Kristiansand, N 58.11951°, E 07.92543°, 21.VI.–8.VII.2019, 1 male (MM-Cer83). Midtre Gauldal, N 63.36169°, E 10.24103°, 19.VI.2017, 1 pupa (MM-Cer344). Rendalen, N 61.77455°, E 11.59347°, 17.IX.2016, 1 male (HED-Cer118). Stor-Elvdal, N 61.37842°, E 11.19175°, 11.–21.VII.2016, 1 male (HED-Cer86).

**Distribution.** *Brachypogon incompletus* has been reported from several European countries (including Finland, Norway, and Sweden) and

from the East Palaearctic (Szadziewski *et al.* 2013). The first country record from Norway was provided by Clastrier (1961, as *B. lapiae* (Clastrier, 1961)), and later Hagan *et al.* (2000) mentioned the species from Viken and Vestland counties (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ABW3956: Norway, Finland, Russia, Sweden; BOLD:ACA2830: Norway, Finland, Sweden.

**Comments.** The specimens from Finnmark region mentioned by Stur & Borkent (2014) as *Brachypogon* sp. 1ES (BIN: BOLD:ACA2830) and *B.* sp. 2ES. (BIN: BOLD:ABW3956) (specimens FiCer97, FiCer103, FiCer139 are listed only in the Taxon ID-tree and Appendix) turned out to be *B. incompletus*.

The examined specimens belong to two quite distant clusters and even if they look similar, it is possible that they represent more than one species. The single pupa of *B. incompletus* was collected from a lake in Trøndelag county.

#### *Brachypogon nitidulus* (Edwards, 1921)

**Literature for identification.** Szadziewski *et al.* (1994).

**Material examined.** Dovre, N 61.99347°, E 9.80343°, 16.VI.2008, 1 male (AT-Cer1). Engerdal, N 61.83656°, E 11.79125°, 23.VI.–11.VII.2016, 1 male (HED-Cer290). Flekkefjord, N 58.34622°, E 06.63663°, 23.VIII.2019, 1 female (MM-Cer43). Kristiansand, N 58.11951°, E 07.92543°, 20.V.–4.VI.2019, 1 male (MM-Cer252). Kristiansand, N 58.22296°, E 08.02237°, 5.IX.2019, 1 male (MM-Cer304). Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 1 male (MM-Cer120). Kristiansand, N 58.11951°, E 07.92543°, 20.V.–4.VI.2019, 1 male (MM-Cer66). Rendalen, N 61.77456°, E 11.59347°, 11.–21.VII.2016, 1 female (HED-Cer150). Trondheim, N 63.42502°, E 10.28173°, 26.V.2014, 1 female (TRD-Cer9). Tynset, N 62.25544°, E 10.90725°, 9.–23.VI.2016, 1 male (HED-Cer38). Åmot, N 61.17878°, E 11.40218°, 11.–21.VII.2016, 1 female (HED-Cer110).

**Distribution.** The species is rather widely distributed in the Palaearctic Region, and in Nordic countries it is known from Faroe Islands, Finland, and Norway. According to the Fauna

Europaea database a presence of this midge in Denmark is considered doubtful (Szadziewski *et al.* 2013). *Brachypogon nitidulus* was reported from Norway for the first time from Viken and Vestland counties (Hagan *et al.* 2000), and Stur & Borkent (2014) listed it later also from Finnmark region.

**Distribution of BIN members in BOLD System.** BOLD:ABW3943: Norway, Finland, Sweden.

**Comments.** It is worth noting that some of the specimens from Finnmark region (Stur & Borkent 2014) belong to another BIN (BOLD:ABW3935) than the currently examined specimens from South Norway.

### *Brachypogon norvegicus* Szadziewski & Hagan, 2000

**Literature for identification.** Szadziewski & Hagan (2000).

**Material examined.** Kristiansand, N 58.11951°, E 07.92543°, 20.V.–4.VI.2019, 1 male (NTNU-VM 227081).

**Distribution.** *Brachypogon norvegicus* is currently known only from Finland (Salmela *et al.* 2015), Great Britain, Norway, and Poland (Szadziewski *et al.* 2013). The species was described from Norway and until now it was reported only from Viken and Vestland counties (Szadziewski & Hagan 2000).

### *Brachypogon perpusillus* (Edwards, 1921)

**Literature for identification.** Chandler *et al.* (2008).

**Material examined.** Kristiansand, N 58.22176°, E 08.02128°, 18.VI.2020, 1 male (MM-Cer183). Kristiansand, N 58.11951°, E 07.92543°, 21.VI.–8.VII.2019, 1 female (MM-Cer81).

**Distribution.** It is not a very often collected species, with confirmed records coming from five European countries only (Szadziewski *et al.* 2013), including Norway, where it was reported for the first time by Hagan *et al.* (2000) (see comments below). The newest observation from the country was given by Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:AEC3093: Norway.

**Comments.** The name was mentioned as known from Norway in Remm (1988) most probably due to an invalid synonymization of *Brachypogon perpusillus* and *B. lapiae* (Clastrier, 1961).

### *Brachypogon sociabilis* (Goetghebuer, 1920)

**Literature for identification.** Szadziewski *et al.* (1994).

**Material examined.** Drangedal, N 59.03572°, E 09.29243°, 17.VI.2020, 1 female (MM-Cer116). Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-Cer230). Follidal, N 61.98115°, E 10.02373°, 30.VI.2008, 1 male (AT-Cer6). Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 1 male (MM-Cer294). Kristiansand, N 58.19819°, E 07.99590°, 26.VI.2020, 1 female (MM-Cer172). Kristiansand, N 58.16920°, E 08.00007°, 4.–21.VI.2019, 1 male (MM-Cer281). Marnadal, N 58.26750°, E 07.45603°, 19.V.–2.VI.2019, 1 male (MM-Cer61). Melhus, N 63.21712°, E 10.30765°, 19.VI.–3.VII.2014, 1 female (TRD-Cer219). Melhus, N 63.21712°, E 10.30765°, 19.VI.–3.VII.2014, 1 female (TRD-Cer206). Rendalen, N 61.77456°, E 11.59347°, 11.–21.VII.2016, 1 female (HED-Cer151). Trondheim, N 63.27444°, E 10.56131°, 22.V.–5.VI.2014, 1 male (TRD-Cer16), 2 females (TRD-Cer13, TRD-Cer14). Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 3 females (TRD-Cer73, TRD-Cer77, TRD-Cer78). Trondheim, N 63.33958°, E 10.44285°, 5.–19.VI.2014, 2 females (TRD-Cer89, TRD-Cer90). Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 1 male (MM-Cer153).

**Distribution.** *Brachypogon sociabilis* is rather widely distributed in Europe (Szadziewski *et al.* 2013), and the first record of this midge from Norway was given by Clastrier (1961). The species was mentioned later from North Norway also by Stur & Borkent (2014), and from South Norway by Hagan *et al.* (2000) and Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:ABW4001: Norway, Sweden; BOLD:ABW3958: Norway, Canada, Finland, Germany, Sweden; BOLD:ACE8195: Norway, Canada, Finland, Germany, Sweden.

Unidentified species of *Brachypogon*

***Brachypogon* sp. 3ES**

**Material examined.** Tolga, N 62.387028°, E 11.118861°, 9.–23.VI.2016, 1 male (HED-Cer201).

**Distribution of BIN members in BOLD System.** BOLD:ADG4684: Norway.

**Comments.** The single examined male shows some similarities to *Brachypogon incompletus* (Kieffer, 1925b) and *B. magnipalpis* (Clastrier, 1961) but differs from both these species by the shape of aedeagus and gonostyles.

***Brachypogon* sp. 4ES**

**Material examined.** Melhus, N 63.21712°, E 10.30765°, 17.–31.VII.2014, 1 female (TRD-Cer296).

**Distribution of BIN members in BOLD System.** BOLD:ACY4182: Norway.

**Comments.** It is a small species of the subgenus *Isohelea* Kieffer, 1917b characterized by having two setae on katapisternum, two seminal capsules without well-defined necks, and abdominal sternite 8 with deep narrow median notch and two distinct strongly sclerotized lateral rods.

***Brachypogon* sp. 5ES**

**Material examined.** Trondheim, N 63.3973°, E 10.5545°, 3.–17.VII.2014, 1 female (TRD-Cer81).

**Distribution of BIN members in BOLD System.** BOLD:ACS1815: Norway.

**Comments.** It is a species of the subgenus *Isohelea* Kieffer, 1917b, which in Szadziewski *et al.* (1994) is keying to *Brachypogon incompletus* (Kieffer, 1925b). Male specimens are needed to identify members of this BIN to species level.

***Brachypogon* sp. 6ES**

**Material examined.** Trondheim, N 63.27444°, E 10.56131°, 22.V.–5.VI.2014, 1 female (TRD-Cer15).

**Distribution of BIN members in BOLD System.** BOLD:ACO4024: Norway.

**Comments.** The examined female specimen belongs to the subgenus *Isohelea* Kieffer, 1917b.

It has long, slightly uneven claws with inner tooth and two seminal capsules with moderately long necks.

***Brachypogon* sp. 7ES**

**Material examined.** Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer264), 2 females (HED-Cer266, HED-Cer280).

**Distribution of BIN members in BOLD System.** BOLD:ADI0996: Norway; BOLD:ADH9057: Norway.

**Comments.** The examined specimens belong to two close clusters. The male resembles *Brachypogon hyperboreus* (Clastrier, 1961) in shape of gonostyles (slender, pointed at top), but differs in aedeagus details.

**Genus *Ceratoculicoides* Wirth & Ratanaworabhan, 1971**

Unidentified species of *Ceratoculicoides*

***Ceratoculicoides* sp. 1ES**

**Material examined.** Kristiansand, N 58.19875°, E 07.99710°, 23.VI.2020, 1 female (MM-Cer298).

**Distribution of BIN members in BOLD System.** BOLD:ACX0816: Norway, Germany, Montenegro, Sweden.

**Comments.** There are two species of *Ceratoculicoides* known to occur in Europe and none of them have been reported from Norway before. Male specimens are needed to correctly identify members of this genus to species level.

**Genus *Ceratopogon* Meigen, 1803**

***Ceratopogon abstrusus* Borkent & Grogan, 1995**

**Literature for identification.** Borkent & Grogan (1995).

**Material examined.** Røros, N 62.6889°, E 11.8316°, 11.–22.VI.2006, 1 female (TRD-Cer243) (short CO1 sequence). Tolga, N 62.387028°, E 11.118861°, 26.V.–9.VI.2016, 1 male (HED-Cer238).

**Distribution.** This Nearctic species (Borkent & Grogan 1995) was reported for the first time

from both the Palaearctic Region and Norway by Stur & Borkent (2014).

**Distribution of BIN members in BOLD System.** BOLD:AAP6905: Norway, Canada, Finland, Sweden.

***Ceratopogon grandiforceps* (Kieffer, 1913c)**

**Literature for identification.** Borkent & Grogan (1995).

**Material examined.** Tolga, N 62.387028°, E 11.118861°, 19.IX.2016, 1 female (HED-Cer172).

**Distribution.** According to Fauna Europaea database, *Ceratopogon grandiforceps* is known from British Isles, Czech Republic, Estonia, Germany, Poland, Russia (Szadziewski *et al.* 2013) (see comments below). Information about presence of this species in Norway (Finmark region) was published for the first time by Stur & Borkent (2014).

**Distribution of BIN members in BOLD System.** BOLD:ABW3984: Norway, Germany.

**Comments.** Borkent & Grogan (1995) do not confirm the records from Czechia, Germany and Russia. Moreover, they (Borkent & Grogan 1995) designated a neotype for *C. parvula* (Kieffer, 1925a), a junior synonym of *C. grandiforceps*, changing its locus typicus from Russia to Great Britain.

***Ceratopogon cf. inverecundus* Borkent & Grogan, 1995**

**Material examined.** Røros, N 62.6903°, E 11.8415°, 11.–22.VI.2006, 1 female (TRD-Cer236). Stor-Elvdal, N 61.74614°, E 10.74618°, 7.VII.2008, 1 female (AT-Cer9). Tolga, N 62.387028°, E 11.118861°, 19.IX.2016, 1 male (HED-Cer164).

**Distribution of BIN members in BOLD System.** BOLD:ACX5097: Norway.

**Comments.** *Ceratopogon inverecundus* was described from Canada (British Columbia) by Borkent & Grogan (1995). Among the currently examined specimens there was only one male, which in general fits to the original description of the species. However, more male specimens are needed to confirm the identification.

***Ceratopogon lacteipennis* Zetterstedt, 1838**

**Literature for identification.** Borkent & Grogan (1995).

**Material examined.** Kristiansand, N 58.11951°, E 07.92543°, 20.V.–4.VI.2019, 2 males (MM-Cer65, NTNU-VM 227079). Kristiansand, N 58.16920°, E 08.00007°, 6.–20.V.2019, 1 male (MM-Cer279). Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 3 males (MM-Cer98, MM-Cer99, MM-Cer265) (DNA barcoding failed for MM-Cer99). Lillesand, N 58.20460°, E 08.23188°, 22.VI.2020, 1 male (MM-Cer129). Lillesand, N 58.20626°, E 08.23249°, 22.VI.2020, 2 males (MM-Cer147, NTNU-VM 227061). Tolga, N 62.387028°, E 11.118861°, 16.VII.2016, 1 female (HED-Cer156). Tynset, N 62.2554°, E 10.9073°, 9.–23.VI.2016, 1 male (HED-Cer39). Tynset, N 62.25544°, E 10.90725°, 11.–21.VII.2016, 1 male (HED-Cer88). Tynset, N 62.25544°, E 10.90725°, 23.VI.–11.VII.2016, 1 female (HED-Cer178).

**Distribution.** Except southern regions, the species is known from several countries in Europe (Szadziewski *et al.* 2013, Huldén & Huldén 2014; for more details see Borkent & Grogan 1995, pp. 71, 72). *Ceratopogon lacteipennis* was described from Senja (Finmark region) by Zetterstedt (1838), and later it was reported also from other localities in the country (Hagan *et al.* 2000, Stur & Borkent 2014) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACA4516: Norway, Finland, Sweden.

**Comments.** Following Borkent & Grogan's suggestion (1995, p. 16) to treat as doubtful records of *Ceratopogon* Meigen, 1803 based on specimens which should be re-identified, we consider an information about occurrence of this species in Filefjell mountains in Innlandet county (Siebke 1877) as questionable.

One of the paralectotypes of *C. lacteipennis* belong in fact to *Palpomyia spinipes* (Meigen, in Panzer 1806) (Szadziewski 1986).

**Genus *Monohelea* Kieffer, 1917b**

***Monohelea estonica* Remm, 1965**

**Literature for identification.** Remm (1965),

Dominiak & Michalczuk (2009).

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 21.VII.–6.VIII.2019, 1 female (MM-Cer67). Kristiansand, N 58.20850°, E 08.00650°, 23.VI.2020, 1 male (NTNU-VM 227066).

**Distribution.** The valid records of this species come from Czech Republic, Estonia, France, Poland, and Russia (Szadziewski *et al.* 2013). *Monohelea estonica* in new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACX1539: Norway, Sweden.

**Comments.** We have been able to re-examine a Swedish specimen of *M. estonica* (NHRS) belonging to the same BIN. It was correctly identified to the species level, but the wrong gender was stated for this specimen in the BOLD System (it should be female not male).

### Genus *Schizohela* Kieffer, 1917b

#### *Schizohela leucopeza* (Meigen, 1804)

**Literature for identification.** Clastrier (1963) (as *xanthopeza*), Wirth & Grogan (1988).

**Material examined.** Arendal, N 58.45981°, E 08.69339°, 19.VI.2020, 1 female (MM-Cer119). Flekkefjord, N 58.37324°, E 06.63159°, 24.VIII.2019, 1 female (MM-Cer55). Marnadal, N 58.26750°, E 07.45603°, 1.–15.VII.2019, 1 female (MM-Cer92). Marnadal, N 58.26750°, E 07.45603°, 15.–31.VII.2019, 1 female (MM-Cer63). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 1 male (TRD-Cer260), 1 female (TRD-Cer261). Trondheim, N 63.42927°, E 10.37856°, 5.–19.VI.2014, 2 females (TRD-Cer143, TRD-Cer145). Trondheim, N 63.42927°, E 10.37856°, 17.–31.VII.2014, 3 females (TRD-Cer115, TRD-Cer120, TRD-Cer121). Trondheim, N 63.42927°, E 10.37856°, 28.VIII.–11.IX.2014, 1 female (TRD-Cer138). Tynset, N 62.25544°, E 10.90725°, 23.VI.–11.VII.2016, 1 male (HED-Cer177).

**Distribution.** *Schizohela leucopeza* has a Holarctic distribution (Szadziewski *et al.* 2013) and from Norway it was reported for the first time by Clastrier (1963) as *Monohelea xanthopeza* Clastrier, 1963 (see comments below). Another

country record comes from Hagan's *at al.* (2000) paper who listed it from Viken county.

**Distribution of BIN members in BOLD System.** BOLD:ACY5060: Norway; BOLD:ACL4093: Norway, Canada, Germany, Sweden, United States.

**Comments.** We are not entirely sure how to treat a short note by Zetterstedt (1855, p. 4855) stating that there is no difference between his specimens of *Ceratopogon niveipennis* Meigen, 1818 and *Schizohela copiosa* (Winnertz, 1852) (currently a junior synonym of *S. leucopeza*). However, we added this information as a doubtful record of *S. leucopeza* from Norway in the Table 1, even if it comes from a paragraph in Zetterstedt's paper (1855) concerning *C. niveipennis*. There are two reasons in favor of such decision. First, from the revision of the genus *Ceratopogon* Meigen, 1803 (Borkent & Grogan 1995, p. 62) it is known that Zetterstedt's (1850) description of *C. niveipennis* was in fact based on specimens of *Schizohela* Kieffer, 1917. Second, in the literature cited, Zetterstedt (1855) listed his previous publication with Norwegian record of a male specimen collected by Siebke in Tøyen (Oslo) (Zetterstedt 1852, p. 4350). This male from Norway and a female from Sweden were the only specimens from Scandinavia available for his studies, and it means that exactly these particular specimens look like *S. copiosa*. The record from Tøyen (obviously still as *C. niveipennis*) was repeated by Siebke (1877) and Soot-Ryen (1943a).

It is worth noting that the sequences of the two BINs are very distant and it is possible that the examined specimens, although identified as *S. leucopeza*, belong to two different species.

Identification of the examined males were based on DNA match with females from the same BINs and a description and drawings given by Wirth & Grogan (1988).

### Genus *Serromyia* Meigen, 1818

#### *Serromyia atra* (Meigen, 1818)

**Literature for identification.** Borkent & Bissett (1990).

**Material examined.** Åmot, N 61.17878°, E 11.40217°, 23.VI.–11.VII.2016, 1 female (HED-

Cer195).

**Distribution.** *Serromyia atra* has been reported from several European countries, and in Fennoscandia it was known until now from Finland and Sweden (Borkent & Bissett 1990, Szadziewski *et al.* 2013, Huldén & Huldén 2014). The species is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ADG4871: Norway.

### *Serromyia femorata* (Meigen, 1804)

**Literature for identification.** Borkent & Bissett (1990).

**Material examined.** Folldal, N 62.18118°, E 09.77518°, 27.VI.2016, 1 female (HED-Cer174). Lister, N 58.068486°, E 06.6781623°, 04.VI.2019, 1 male (MM-Cer32). Os, N 62.53101°, E 11.15145°, 30.VI.2016, 1 male (HED-Cer163). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 1 female (TRD-Cer245). Tolga, N 62.387028°, E 11.118861°, 9.–23.VI.2016, 1 male (HED-Cer196). Tolga, N 62.387028°, E 11.118861°, 23.VI.–11.VII.2016, 1 male (HED-Cer121). Tynset, N 62.25544°, E 10.90725°, 9.–23.VI.2016, 1 male (HED-Cer34), 1 female (HED-Cer33). Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 female (HED-Cer93).

**Distribution.** In Western Palaearctic it is a very widely distributed species (Borkent & Bissett 1990, Szadziewski *et al.* 2013). The first reliable record of *Serromyia femorata* from Norway was given by Zetterstedt (1850) (specimens re-examined by Borkent & Bissett 1990 and locality shown on a map). Further records, which can be considered valid, come from papers by Borkent & Bissett (1990), Hagan *et al.* (2000), Håland (2011), Stur & Borkent (2014) and Thunes *et al.* (2021) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACA4694: Norway, Finland, Germany, Sweden. BOLD:ACX2455: Norway, Sweden; BOLD:ACY6482: Norway.

**Comments.** The name *S. femorata* was mentioned in old literature from Norway few times by Zetterstedt (1838, 1850, 1855), Siebke (1853, 1863, 1877) and Strand (1903). According to Borkent & Bissett (1990), only part of the specimens examined by Zetterstedt (1838,

1850) really belong to *S. femorata*. The authors do not give more details about localities of the reidentified specimens, but on the distribution maps for this species (Borkent & Bissett 1990, p. 182, Fig. 19A), there are marked two localities only – in Alta (Clastrier 1963) and in Verdal (Zetterstedt 1850). It can mean that the specimens from Senja (Zetterstedt 1838) were misidentified, but there is no guarantee that this assumption is correct. Thus, we kept this record in Table 1 (marked with star symbol). Borkent & Bissett (1990) do not comment on Siebke's collection from various localities in Norway, nor records by Zetterstedt (1855, based on Siebke's collection) and Strand (1903). Therefore, we decided to treat these observations as doubtful until the original material is re-examined.

Borkent & Bissett (1990, pp. 194, 197, 199) stated that a paratype male of *Serromyia europaea* Clastrier, 1963 (a name being now a junior synonym of *S. ledicola* Kieffer, 1925b) from Norway (Clastrier 1963, p. 67) belongs to *S. femorata*.

In the revision of the genus by Borkent & Bissett (1990) there are many examples of mistakes in identifications and/or incorrect interpretation of various *Serromyia* species. Some of the Scandinavian specimens identified by Zetterstedt (1838, 1850) as *S. femorata* belong to *S. ledicola* Kieffer, 1925b and *S. subinermis* Kieffer, 1919a, and the ones identified as *S. morio* (Fabricius, 1775) are *S. femorata*.

### *Serromyia ledicola* Kieffer, 1925b

**Literature for identification.** Borkent & Bissett (1990).

**Material examined.** Stor-Elvdal, N 61.42422°, E 11.10112°, 20.VIII.–16.IX.2016, 1 male (HED-Cer01), 1 female (HED-Cer02). Trondheim, N 63.34°, E 10.443°, 17.–31.VII.2014, 1 male (TRD-Cer186). Trondheim, N 63.44887°, E 10.45362°, 20.–30.VIII.2013, 1 female (TRD-Cer160). Trondheim, N 63.44887°, E 10.45362°, 2.–9.VIII.2013, 1 male (TRD-Cer149), 1 female (TRD-Cer150).

**Distribution.** *Serromyia ledicola* is a widely distributed species, known from both the Palaearctic and Nearctic Regions, but

records from Nordic countries come only from Denmark and Sweden (Borkent & Bissett 1990, Szadziewski *et al.* 2013). Although it is listed in Fauna Europaea database as present in Norway, none of the literature records of this species can be treated as valid, thus *S. ledicola* is considered by us as new to the Norwegian fauna (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACQ9613: Norway; BOLD:ACS7502: Norway, Germany.

**Comments.** The species was mentioned from Norway as *Serromyia europaea* Clastrier, 1963 (Clastrier 1963) but Borkent & Bissett (1990, pp. 194, 197, 199) have examined the male paratype from Norway and proved a misidentification. In fact, Clastrier's specimen belongs to *S. femorata* (Meigen, 1804). Borkent & Bissett (1990) stated also that at least some of the specimens listed by Zetterstedt (1838, 1850) as *S. femorata* belong to *S. ledicola*. They do not specify which country in Scandinavia the material originated but on the distribution maps for *S. ledicola* (Borkent & Bissett 1990, p. 181, Fig. 18A) there are no records shown from Norway.

The currently examined male TRD-Cer149 belonging to the BIN: BOLD:ACS7502 has a rather rounded distal end of the gonostyles, in contrast to the normally pointed ends in *S. ledicola*.

### *Serromyia morio* (Fabricius, 1775)

**Literature for identification.** Borkent & Bissett (1990).

**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 male (MM-Cer140), 1 female (MM-Cer139). Trondheim, N 63.44887°, E 10.45362°, 19.–24.VI.2013, 1 male (TRD-Cer213).

**Distribution.** This *Serromyia* species is known from several countries in Europe (Szadziewski *et al.* 2013; for more details see Borkent & Bissett 1990), but from Norway there are only unconfirmed records from Oslo (Tøyen, Sofienberg) (Zetterstedt 1852, Siebke 1877) which should be considered doubtful. Thus, we decided here to treat *S. morio* as species new to the Norwegian fauna (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:AEF4425: Norway. BOLD:ACT6684: Norway.

**Comments.** Even if the species is rather easily recognizable, the early observations from Oslo (Zetterstedt 1852 – based on Siebke's observations, Siebke 1877) are not totally reliable and for now the best solution is to treat them as doubtful. Unfortunately, it looks like Borkent & Bissett (1990) were not aware of Siebke's collection from Norway, so they do not comment on his materials and do not show any localities from the country on their distribution maps (Borkent & Bissett 1990, p. 182, Fig. 19B). Most probably Siebke has based his identifications of *Serromyia morio* on a rather brief description by Zetterstedt (1850), and as stated in Borkent & Bissett (1990), the latter author (as well as and many others) made mistakes when identifying members of the genus *Serromyia* Meigen, 1818. Some of the Scandinavian specimens identified by Zetterstedt (1850) as *S. morio* belong to *S. femorata* (Meigen, 1804), and those identified as "*C. flavicornis*" (a name being currently in the genus *Bezzia* Kieffer, 1899) are *S. morio*. The specimens from Siebke's collection should be re-examined to rule out a possible misidentification.

### Genus *Stilobezzia* Kieffer, 1911b

#### Subgenus *Acanthohelea* Kieffer, 1917a

### *Stilobezzia gracilis* (Haliday, 1833)

**Literature for identification.** Alwin & Szadziewski (2012).

**Material examined.** Farsund, N 58.06847°, E 06.79388°, 26.VI.2020, 1 female (NTNU-VM 227077). Kristiansand, N 58.24831°, E 08.15696°, 18.VI.2020, 1 male (MM-Cer167). Kristiansand, N 58.19819°, E 07.99590°, 26.VI.2020, 1 male (MM-Cer174). Kristiansand, N 58.11951°, E 07.92543°, 21.VI.–8.VII.2019, 1 male (MM-Cer80) (DNA barcoding failed), 1 female (MM-Cer79). Søgne, N 58.08952°, E 07.83998°, 21.VI.2020, 1 female (MM-Cer189).

**Distribution.** Although *Stilobezzia gracilis* is widely distributed in Europe, from Nordic countries it has been reported until now only from

Sweden (Szadziewski *et al.* 2013). The species is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ADV1401: Norway, Bulgaria.

### *Stilobezzia ochracea* (Winnertz, 1852)

**Literature for identification.** Alwin & Szadziewski (2012).

**Material examined.** Froland, N 58.59694°, E 08.71825°, 19.VI.2020, 1 male (MM-Cer161). Kristiansand, N 58.16920°, E 08.00007°, 8.–21.VII.2019, 1 female (MM-Cer94). Kristiansand, N 58.16420°, E 08.00735°, 23.VI.2020, 2 pupae (MM-Cer233, MM-Cer234). Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 1 male (MM-Cer105). Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 1 female (NTNU-VM 227050). Kristiansand, N 58.19819°, E 07.99590°, 26.VI.2020, 1 female (MM-Cer175). Kristiansand, N 58.15703°, E 07.82569°, 21.VI.2020, 1 female (MM-Cer250) (DNA barcoding failed). Kristiansand, N 58.19211°, E 08.07525°, 18.VI.2020, 1 male (NTNU-VM 227071).

**Distribution.** This species is known from several countries in Europe and from the Near East (Szadziewski *et al.* 2013). The first record of *Stilobezzia ochracea* from Norway was given by Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:ACG4212: Norway, Germany, Sweden; BOLD:AEG0574: Norway.

### Tribe Heteromyiini Wirth, 1962

#### Genus *Clinohelea* Kieffer, 1917b

#### Subgenus *Clinohelea* Kieffer, 1917b

### *Clinohelea unimaculata* (Macquart, 1826)

**Literature for identification.** Grogan & Wirth (1975), Szadziewski *et al.* (1997).

**Material examined.** Kristiansand, N 58.22176°, E 08.02128°, 18.VI.2020, 2 males (MM-Cer177, NTNU-VM 227054), 3 females (MM-Cer178, MM-Cer179, NTNU-VM 227053). Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 2 males (MM-Cer157, NTNU-VM

227062).

**Distribution.** So far, this *Clinohelea* species has been reported from several localities in Europe (including Denmark, Finland, and Norway) and from the Near East (Szadziewski *et al.* 2013). The first record from Norway was given by Zetterstedt (1850) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACX3725: Norway, Montenegro, Sweden.

**Comments.** Because of its considerable size and rather well-visible dark pigmentation of wing membrane around the radial cells, the species is quite easily recognizable. Interestingly, neither Macquart (1826) nor Meigen (1838) and Zetterstedt (1850) mentioned the peculiar shape of the fourth tarsomeres of mid and hindlegs and coloration of the fifth tarsomere of fore legs. These characters are for the first time described by Winnertz (1852) in his detailed diagnoses of both sexes of *Clinohelea variegata* (Winnertz, 1852), a name being currently treated as a junior synonym of *C. unimaculata*. Zetterstedt (1855, p. 4852), stated that there is no difference between *C. unimaculata* from Scandinavia and *C. variegata* described from Germany, therefore one can assume that the specimens from Thynås (Zetterstedt 1850) have been correctly identified.

### Tribe Johannsenomyiini Crampton, 1925

#### Genus *Mallochohelea* Wirth, 1962

### *Mallochohelea nitida* (Macquart, 1826)

**Literature for identification.** Zilahi-Sebess (1940) (for identification of adults only).

**Material examined.** Drammen, N 59.75880°, E 10.07014°, 16.VI.2020, 1 pupa (MM-Cer223). Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 1 pupa (MM-Cer239).

**Distribution.** Records of *Mallochohelea nitida* come from many European countries, including Norway (Szadziewski *et al.* 2013), where the species was reported for the first time by Håland (2011) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACX3683: Norway, Sweden.

**Comments.** The records of this species

by Zetterstedt (1852) and Siebke (1877) are considered doubtful until the voucher specimens are re-examined.

Identification of the two pupae, collected from a river and a lake, is based on DNA match with a re-examined by us Swedish female specimen (NHRS) of *M. nitida* from the same BIN.

Unidentified species of *Mallochohelea*

### *Mallochohelea* sp. 1ES

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 1 female (MM-Cer97). Sør-Varanger, N 69.40509°, E 29.79536°, 20.VI.2010, 1 pupa (Finnmark813).

**Distribution of BIN members in BOLD System.** BOLD:ACD2005: Norway, Slovakia.

**Comments.** The female specimen is in poor condition, and it is impossible to see all important characters and thus identify it to species level. There are two pupae belonging to the same BIN. One of them, collected in a drift sample from Steinbekken, was reported by Stur & Borkent (2014) as *Probezzia* sp. (Finnmark792). The second pupa (Finnmark813) was found in a sample taken from Melkefossen (Pasvikdalen).

### *Mallochohelea* sp. 2ES

**Material examined.** Sømådalen, N 62.14634°, E 11.61871°, 25.VII.2016, 1 female (HED-Cer161).

**Distribution of BIN members in BOLD System.** BOLD:ADG6464: Norway.

**Comments.** The single female examined belongs to BOLD:ADG6464 and does not fit to any known *Mallochohelea* species from the Palaearctic nor Nearctic Region. It represents most probably a new species for science, but more materials, including males, are needed for description. The female is similar to *M. vernalis* Remm, 1965 (big distance between eyes) but differs i.e., in leg coloration and the presence of strong setae on scutellum.

## Genus *Probezzia* Kieffer, 1906

### *Probezzia seminigra* (Panzer, 1798)

**Literature for identification.** Edwards

(1926), Clastrier (1962b), Wirth (1971).

**Material examined.** Drangedal, N 59.04432°, E 09.30909°, 17.VI.2020, 1 pupa (MM-Cer226). Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 1 male (MM-Cer204), 1 female (MM-Cer205). Kristiansand, N 58.11951°, E 07.92543°, 21.VI.–8.VII.2019, 1 male (MM-Cer87) (DNA barcoding failed), 1 female (MM-Cer86). Trondheim, N 63.33958°, E 10.44285°, 17.VII.2014, 1 pupa (TRD-Cer17).

**Distribution.** The species is occurring in the Western Palaearctic, and it is known also from Finland and Sweden (Szadziewski *et al.* 2013). Current record of *Probezzia seminigra* is the first one from Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACX3166: Norway, Sweden; BOLD:AEC3341: Norway, Montenegro; BOLD:ACR2669: Norway, Sweden.

## Tribe Palpomyiini Enderlein, 1936

### Genus *Bezzia* Kieffer, 1899

#### *Bezzia albicornis* (Meigen, 1818)

**Literature for identification.** Remm (1974a) (as *strobli*), Krzywiński (1996), Kownacka-Alwin *et al.* (2017).

**Material examined.** Farsund, N 58.06315°, E 06.78672°, 25.VI.2020, 1 male (NTNU-VM 227072). Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 1 male (MM-Cer191), 1 female (MM-Cer190).

**Distribution.** The species is known from the Palaearctic and Afrotropical Regions, but in the Nordic countries it has been reported only from Sweden (Szadziewski *et al.* 2013, Kownacka-Alwin *et al.* 2017). *Bezzia albicornis* is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACX2583: Norway, Sweden.

#### *Bezzia annulipes* (Meigen, 1830)

**Literature for identification.** Remm (1974a).

**Material examined.** Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 1 larva (MM-Cer215). Kristiansand, N 58.19118°, E 08.07106°, 26.VIII.2019, 1 larva (MM-Cer213).

Kristiansand, N 58.11951°, E 07.92543°, 20.V.–4.VI.2019, 1 female (MM-Cer64). Melhus, N 63.21712°, E 10.30765°, 17.–31.VII.2014, 1 male (TRD-Cer289), 1 female (TRD-Cer293). Melhus, N 63.21712°, E 10.30765°, 28.VIII.–11.IX. 2014, 1 female (TRD-Cer183). Orkland, N 63,21712°, E 10,30765°, 26.VII.2018, 1 pupa (MM-Cer334). Songdalen, N 58.15703°, E 07.82569°, 30.VIII.2019, 1 female (MM-Cer45) (DNA barcoding failed). Trondheim, N 63.44887°, E 10.45362°, 19.–24.VI.2013, 1 female (TRD-Cer214). Trondheim, N 63.44887°, E 10.45362°, 24.VI.–1.VII.2013, 1 female (TRD-Cer164). Trondheim, N 63.39730°, E 10.55451°, 21.V.2014, 1 larva (TRD-Cer8). Trondheim, N 63.40331°, E 10.34176°, 1.VI.2015, 1 larva (TRD-Cer302).

**Distribution.** This biting midge species is occurring in the Holarctic Region (Wirth *et al.* 1984). The current record of *Bezzia annulipes* is considered as the first valid one from Norway (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACO5271: Norway, Sweden. BOLD:ACX2190: Norway, Montenegro, Sweden.

**Comments.** *Bezzia circumdata* Stæger, 1839, a name which is currently treated as a junior synonym of *B. annulipes*, was mentioned from Norway already by Siebke (1877). However, we treat this early record as doubtful. Siebke's observation from Oslo was repeated by Soot-Ryen (1943a) who incorrectly treated *B. circumdata* as a synonym of *B. solstitialis* (Winnertz, 1852). The single female specimen from Finnmark region (Stur & Borkent 2014) identified as *B. circumdata* has been re-examined and it belongs to *B. solstitialis* (Winnertz, 1852).

Distribution data for *B. annulipes* available in Fauna Europaea (Szadziewski *et al.* 2013) should be reviewed due to recent changes concerning synonymy of this name (see Dominiak & Szadziewski 2018).

The immature stages available for our studies were found in a pond and in various lakes in South Norway.

### *Bezzia bicolor* (Meigen, 1804)

**Literature for identification.** Remm (1974a).

**Material examined.** Birkeland, N 58.33339°, E 08.23990°, June–July 2019, 1 female (MM-Cer107). Flekkefjord, N 58.40630°, E 06.62017°, 17.VI.2020, 2 pupae (MM-Cer230, MM-Cer231). Rendalen, N 61.77455°, E 11.59347°, 17.IX.2016, 1 male (HED-Cer120). Stor-Elvdal, N 61.37842°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer46). Stor-Elvdal, N 61.37842°, E 11.19175°, 11.–21.VII.2016, 1 male (HED-Cer71).

**Distribution.** *Bezzia bicolor* occurs both in the Palaearctic and Nearctic Regions, and in Europe it has been reported from many localities including Finland, Norway, and Sweden (Szadziewski *et al.* 2013). The first Norwegian record of this species comes from the paper by Hagan *et al.* (2000).

**Distribution of BIN members in BOLD System.** BOLD:ACX3378: Norway, Sweden. The first record from Norway was provided by Hagan *et al.* (2000).

**Comments.** The immature stages available for our studies were found in a lake.

### *Bezzia fascispinosa* Clastrier, 1962b

**Literature for identification.** Clastrier (1962b).

**Material examined.** Drangedal, N 59.04432°, E 09.30909°, 19.VIII.2019, 1 female (MM-Cer35). Kristiansand, N 58.24968°, E 08.16349°, 18.VI.2020, 1 larva (MM-Cer240). Kristiansand, N 58.16920°, E 08.00007°, 8.–21.VII.2019, 2 males (MM-Cer95, MM-Cer321). Kristiansand, N 58.15703°, E 07.82569°, 21.VI.2020, 1 larva (MM-Cer235). Kristiansand, N 58.16920°, E 08.00007°, 21.VII.–6.VIII.2019, 1 male (MM-Cer71), 2 females (MM-Cer68, MM-Cer73).

**Distribution.** Although records of *Bezzia fascispinosa* are rather scanty, the species is known from both the Palaearctic and Nearctic Regions (Szadziewski *et al.* 2013). In Fennoscandia it was reported from Finland by Huldén & Huldén (2014) and currently we are providing a new record to Norway.

**Distribution of BIN members in BOLD System.** BOLD:AEC2002: Norway.

**Comments.** The two examined larvae were found in samples taken from an oxbow lake and a swamp.

***Bezzia flavicornis* (Stæger, 1839)**

**Literature for identification.** Clastrier (1962b) (as *spinosula*), Remm (1974b), Kownacka-Alwin *et al.* (2017).

**Material examined.** Kristiansand, N 58.16920°, E 08.00007°, 8.–21.VII.2019, 1 male (MM-Cer323). Kristiansand, N 58.20850°, E 08.00650°, 23.VI.2020, 1 female (NTNU-VM 227067).

**Distribution.** The species is rather widely distributed in the Palaearctic Region (also in the Near East region) (Szadziewski *et al.* 2013, Huldén & Huldén 2014, Kownacka-Alwin *et al.* 2017), and from Norway it was reported for the first time by Thunes *et al.* (2021).

**Distribution of BIN members in BOLD System.** BOLD:AEI1206: Norway.

***Bezzia fuliginata* Clastrier, 1962b**

**Literature for identification.** Clastrier (1962b), Remm (1974a), Kownacka-Alwin *et al.* (2017).

**Material examined.** Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 female (MM-Cer146). Kristiansand, N 58.19202°, E 08.07420°, 27.VI.2020, 1 male (NTNU-VM 227036).

**Distribution.** The valid records of *Bezzia fuliginata* come from only few European countries (France, Hungary, Poland, Serbia, Spain, Ukraine), the Near East and other localities in Central and South Asia (Szadziewski *et al.* 2013, Kownacka-Alwin *et al.* 2017). The species is currently reported for the first time from Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACX2584: Norway, Sweden.

**Comments.** DNA of the barcoded female matches a re-examined Swedish male specimen (NHRS) from the same BIN.

***Bezzia kazlauskasi* Remm, 1966**

**Literature for identification.** Remm (1974b).

**Material examined.** Birkeland, N 58.33339°, E 08.23990°, June–July 2019, 1 male (MM-Cer108).

**Distribution.** The species was described from Lithuania and since then reported from few other European countries, but not from Scandinavia

(Szadziewski *et al.* 2013). *Bezzia kazlauskasi* is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:AEC1889: Norway, Montenegro.

**Comments.** The single examined male was collected at light.

***Bezzia nigrifula* (Zetterstedt, 1838)**

**Literature for identification.** Remm (1974b).

**Material examined.** Os, N 62.53101°, E 11.15145°, 30.VI.2016, 1 male (HED-Cer162). Stor-Elvdal, N 61.37842°, E 11.19175°, 26.V.–9.VI.2016, 3 males (HED-Cer44, HED-Cer45, HED-Cer209). Tolga, N 62.387028°, E 11.118861°, 23.VI.–11.VII.2016, 1 male (HED-Cer125). Tynset, N 62.255444°, E 10.907250°, 9.–23.VI.2016, 1 male (HED-Cer35). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer270).

**Distribution.** *Bezzia nigrifula* is known from a number of European countries including Norway (Szadziewski *et al.* 2013), where the species has its locus typicus in Senja (Zetterstedt 1838). Other country records of this species were given by Zetterstedt (1850), Siebke (1863) and Hagan *et al.* (2000) (see comments below)

**Distribution of BIN members in BOLD System.** BOLD:ADF7283: Norway; BOLD:ADD8546: Norway, Finland.

**Comments.** The species is rather easily recognizable due to darkly colored legs and lack of spines on fore femora, therefore we decided to treat the records from Norway by Zetterstedt (1850) and Siebke (1863) as valid.

***Bezzia nobilis* (Winnertz, 1852)**

**Literature for identification.** Remm (1974b), Krzywiński (1996) (for identification of adults only).

**Material examined.** Drammen, N 59.75880°, E 10.64961°, 16.VI.2020, 1 larva (MM-Cer222). Trondheim, N 63.33993°, E 10.34176°, 27.V.2020, 1 larva (MM-Cer332).

**Distribution.** This widely distributed species, known from the Holarctic and Neotropical Regions, in Nordic countries has been reported so far only from Finland and Sweden (Szadziewski *et al.* 2013, Huldén & Huldén 2014). *Bezzia nobilis*

is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACX1844: Norway, Canada, Montenegro, Sweden, United Kingdom.

**Comments.** The identification of our immature specimens is based on a DNA match with a re-examined Swedish male specimen (NHRS) of *B. nobilis* belonging to the same BIN.

The examined larvae were collected from a lake and a stagnant intercepted section of a river.

### *Bezzia ornata* (Meigen, 1830)

**Literature for identification.** Remm (1974b).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, August 2019, 1 male (MM-Cer278).

**Distribution.** *Bezzia ornata* has been reported from many countries in Europe, including Sweden (Szadziewski *et al.* 2013) and Norway (Thunes *et al.* 2021, the first country record).

**Distribution of BIN members in BOLD System.** BOLD:ACP8436: Norway, Montenegro, Sweden.

### *Bezzia rhynchostylata* Remm, 1974b

**Literature for identification.** Remm (1974b).

**Material examined.** Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-Cer215). Stor-Elvdal, N 61.37842°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer208). Trondheim, N 63.38056°, E 10.61062°, 20.VI.2010, 1 male (TRD-Cer6).

**Distribution.** It is a rarely reported species, known so far only from Norway, Poland, and Russia (Siberia) (Remm 1974b, Szadziewski *et al.* 2013). The observations from Norway were published by Hagan *et al.* (2000, the first country record) and Stur & Borkent (2014).

**Distribution of BIN members in BOLD System.** BOLD:ACM6383: Norway; BOLD:ADG4592: Norway.

**Comments.** The species is known from Finnmark region (Stur & Borkent 2014), and both, the specimens from this region and the newly examined specimens belong to in total five BINs (besides the abovementioned ones these are BOLD:ABW3959, BOLD:ABW3985 and BOLD:ACM6384).

### *Bezzia signata* (Meigen, 1804)

**Literature for identification.** Remm (1974b).

**Material examined.** Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 male (HED-Cer216). Kristiansand, N 58.19202°, E 08.07420°, 18.VI.2020, 1 male (MM-Cer145). Tolga, N 62.3387028°, E 11.118861°, 19.IX.2016, 1 male (HED-Cer173). Tynset, N 62.25544°, E 10.90725°, 9.–23.VI.2016, 1 male (HED-Cer32).

**Distribution.** In the Palaearctic Region the species is rather widely distributed and from the Nordic countries it was reported from Denmark and Sweden (Szadziewski *et al.* 2013). *Bezzia signata* is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACU5144: Norway, Finland.

### *Bezzia solstitialis* (Winnertz, 1852)

**Literature for identification.** Dominiak & Szadziewski (2018).

**Material examined.** Birkeland, N 58.33339°, E 08.23990°, June–July 2019, 1 female (MM-Cer109). Marnadal, N 58.26750°, E 07.45603°, 15.–31.VII.2019, 1 female (MM-Cer62). Kristiansand, N 58.06956°, E 07.98100°, 24.VI.2020, 2 females (MM-Cer257, NTNU-VM 227073). Kristiansand, N 58.15703°, E 07.82569°, 21.VI.2020, 1 larva (MM-Cer236), 2 pupae (MM-Cer237, MM-Cer238), 1 male (NTNU-VM 227056). Kristiansand, N 58.20112°, E 07.98589°, 26.VI.2020, 1 male (MM-Cer165) (DNA barcoding failed), 1 female (MM-Cer186). Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 1 female (NTNU-VM 227049). Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 female (HED-Cer315). Trondheim, N 63.40742°, E 10.33766°, 1.VI.2015, 1 larva (TRD-Cer304). Trondheim, N 63.36169°, E 10.24103°, 16.VI.2015, 1 larva (TRD-Cer311). Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 4 larvae (MM-Cer217, MM-Cer218, MM-Cer219, MM-Cer220).

**Distribution.** *Bezzia solstitialis* has a Holarctic distribution (Wirth *et al.* 1984), and the first valid record of this species from Norway was published by Hagan *et al.* (2000) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ABW3990: Norway, Sweden.

**Comments.** Although the name *B. solstitialis* was mentioned from Norway for the first time by Soot-Ryen (1943a) (to avoid confusion the information is not included in the Table 1), this record is based on a misinterpretation of the species. Soot-Ryen (1943a) treated *B. solstitialis* and *B. circumdata* (Stæger, 1839) as synonyms but in fact these two names are not conspecific (see Dominiak & Szadziewski 2018). The locality data for *B. circumdata* provided by Siebke (1877) were incorrectly attributed by Soot-Ryen (1943a) to *B. solstitialis*.

A single female specimen from Finnmark region identified as *B. circumdata* in Stur & Borkent (2014) and re-examined by us for purposes of this paper, turned out to be *B. solstitialis*.

Distribution data for *B. solstitialis* available in Fauna Europaea (Szadziewski et al. 2013) should be reviewed due to recent changes concerning synonymy of the name (see Dominiak & Szadziewski 2018).

The currently examined immature stages of this species were found in samples taken from lakes.

Unidentified species of *Bezzia*

### ***Bezzia* sp. 2ES**

**Material examined.** Kristiansand, N 58.20112°, E 07.98589°, 26.VI.2020, 1 male (MM-Cer166). Rendalen, N 61.77456°, E 11.59347°, 11.–21.VII.2016, 1 female (HED-Cer146). Trondheim, N 63.36169°, E 10.24103°, 16.VI.2015, 1 pupa (TRD-Cer312). Tynset, N 62.25544°, E 10.90735°, 9.–23.VI.2016, 1 male (HED-Cer36).

**Distribution of BIN members in BOLD System.** BOLD:ACX2988: Norway, Sweden.

**Comments.** The examined males fit well to *Bezzia annulipes* (Meigen, 1830), however, a single female available for our studies differs from that species by slightly shorter necks of the seminal capsules and an almost completely dark hind femur.

The single pupa of this species was collected from a lake.

### ***Bezzia* sp. 3ES**

**Material examined.** Flekkefjord, N 58.40630°, E 06.62017°, 17.VI.2020, 1 pupa (MM-Cer232). Trondheim, N 63.44085°, E 10.28800°, 16.VI.2015, 1 pupa (TRD-Cer317).

**Distribution of BIN members in BOLD System.** BOLD:ABW3936: Norway, Sweden.

**Comments.** The species was listed as *Bezzia annulipes* (Meigen, 1830) from Finnmark region (Stur & Borkent 2014) where a single male was collected near a lake in Sør-Varanger municipality. However, the BIN: BOLD:ABW3936 is rather distant from other *B. annulipes* clusters. More adult specimens are needed to correctly identify its members to species level.

The currently collected immatures we found in samples taken from lakes.

### ***Bezzia* sp. 4ES**

**Material examined.** Rendalen, N 61.77455°, E 11.59347°, 17.IX.2016, 1 female (HED-Cer114). Trondheim, N 63.38177°, E 10.28275°, 18.VI.2015, 1 pupa (TRD-Cer310).

**Distribution of BIN members in BOLD System.** BOLD:ADC1577: Norway.

**Comments.** The single adult specimen belongs to the subgenus *Homobezzia* Macfie, 1932 and has no spines on femora. Besides of unicolor legs it resembles *Bezzia bicolor* (Meigen, 1804). More specimens are needed to correctly identify members of that BIN to species level. The single examined pupa was collected from a lake.

### ***Bezzia* sp. 6ES**

**Material examined.** Tynset, N 62.25544°, E 10.90725°, 9.–23.VI.2016, 1 male (HED-Cer31).

**Distribution of BIN members in BOLD System.** BOLD:ADF6138: Norway.

**Comments.** The single examined male is similar to *Bezzia coracina* (Zetterstedt, 1850) regarding leg coloration and to *B. winnertziana* Kieffer, 1919a in the armature of genitalia.

### ***Bezzia* sp. 8ES**

**Material examined.** Froland, N 58.51004°, E 08.64806°, 28.VIII.2019, 1 larva (MM-Cer212). Tolga, N 62.387028°, E 11.118861°, 9.–23.

VI.2016, 1 female (HED-Cer197). Trondheim, N 63.40742°, E 10.33766°, 1.VI.2015, 1 larva (TRD-Cer303). Trondheim, N 63.40615°, E 10.34135°, 1.VI.2015, 1 larva (TRD-Cer305).

**Distribution of BIN members in BOLD System.** BOLD:AAG6456: Norway, Canada.

**Comments.** The single examined adult female looks like *Bezzia bicolor* (Meigen, 1804) except for totally dark hind femur.

The larvae were collected from a lake in Trøndelag county and a river in Agder county.

### *Bezzia* sp. 10ES

**Material examined.** Kristiansand, N 58.19819°, E 07.99590°, 26.VI.2020, 1 male (MM-Cer187).

**Distribution of BIN members in BOLD System.** BOLD:AEF5127: Norway.

**Comments.** The examined male resembles *Bezzia kazlauskasi* Remm, 1966 in coloration of legs but differs from the latter species by details of its genitalia.

## Genus *Palpomyia* Meigen, 1818

### *Palpomyia citrinipes* Kieffer, 1922b

**Literature for identification.** Kieffer (1922b).

**Material examined.** Kristiansand, N 58.19118°, E 08.07106°, 26.VIII.2019, 1 female (MM-Cer40).

**Distribution.** The species has been reported before only from the Czech Republic (Szadziewski *et al.* 2013) and it is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:AEA9570: Norway.

### *Palpomyia distincta* (Haliday, 1833)

**Literature for identification.** Remm (1976).

**Material examined.** Drangedal, N 59.03572°, E 09.29243°, 17.VI.2020, 2 males (MM-Cer113, MM-Cer114), 1 female (MM-Cer111). Kristiansand, N 58.20112°, E 07.98589°, 26.VI.2020, 2 males (MM-Cer164, MM-Cer313), 1 female (NTNU-VM 227057). Kristiansand, N 58.19819°, E 07.99590°, 26.VI.2020, 1 male (MM-Cer171). Kristiansand, N 58.092719°, E 07.970283°, 26.V.2019, 1 male (MM-Cer34). Lillesand, N 58.20626°, E 08.23249°, 22.VI.2020,

2 females (MM-Cer301, MM-Cer303). Lillesand, N 58.20460°, E 08.23188°, 22.VI.2020, 1 female (MM-Cer308). Stor-Elvdal, N 61.54494°, E 10.99803°, 27.VII.2016, 1 female (HED-Cer159). Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 2 females (HED-Cer95, HED-Cer96). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer244), 1 female (HED-Cer245). Åmot, N 61.17878°, E 11.40217°, 23.VI.–11.VII.2016, 1 male (HED-Cer191), 2 females (HED-Cer190, HED-Cer192).

**Distribution.** According to the Fauna Europaea database, *Palpomyia distincta* is known from many European countries, and in Fennoscandia it has been reported from Finland, Norway, and Sweden (Szadziewski *et al.* 2013). However, we treat the first and the only previous observation of the species from Norway by Soot-Ryen (1943a) as doubtful and consider the current one as a new country record (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACX2908: Norway, Sweden; BOLD:ADG6917: Norway; BOLD:AEF5430: Norway.

**Comments.** The record from Soot-Ryen (1943a) was based on a single male specimen collected in N Norway. However, males of *P. distincta* can be easily confused with other closely related species, and the specimen from Soot-Ryen's collection should be re-examined to confirm the identification.

We had a chance to re-examine Swedish specimens (NHRS) of the BIN: BOLD:ACX2908 identified as *P. armipes* (Meigen, 1838). All of them are males and fit rather well to the description of *P. distincta* given by Remm (1976).

### *Palpomyia flavipes* (Meigen, 1804)

**Literature for identification.** Remm (1976), Alwin-Kownacka *et al.* (2017).

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, 30.VII.2019, 1 female (MM-Cer292). Drangedal, N 59.04789°, E 08.70282°, 20.VIII.2019, 1 female (MM-Cer74). Flekkefjord, N 58.35775°, E 06.62518°, 23.–24.VIII.2019, 1 larva (MM-Cer57). Kristiansand, N 58.22176°, E 08.02128°, 18.VI.2020, 1 female (MM-Cer180).

Røros, N 62.6889°, E 11.8316°, 06. - 20.VII.2006, 2 males (TRD-Cer287, TRD-Cer288). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 2 males (TRD-Cer246, TRD-Cer250). Trondheim, N 63.39730°, E 10.55451°, 3.–17.VII.2014, 1 male (TRD-Cer54).

**Distribution.** The species occurs in all Europe, and it is known also from the East Palaearctic and the Near East (Szadziewski *et al.* 2013, Alwin-Kownacka *et al.* 2017). We consider the current record of *Palpomyia flavipes* as a new to Norway (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACS1169: Norway, Germany; BOLD:AEA8665: Norway, Sweden.

**Comments.** The earlier records of *P. flavipes* (also as *P. hortulana* (Meigen, 1818)) from Norway come from publications by Zetterstedt (1838, 1852), Siebke (1866, 1873, 1877) and Lundström (1913), but we treat them here as doubtful until the specimens from the original collections are re-examined.

Among the barcoded specimens from South Norway there was also one larva. It was collected in a stream flowing into Lundevatnet.

### *Palpomyia lineata* (Meigen, 1804)

**Literature for identification.** Remm (1976).

**Material examined.** Drangedal, N 59.06071°, E 08.68420°, 20.VIII.2019, 1 larva (MM-Cer56). Farsund, N 58.06315°, E 06.78672°, 25.VI.2020, 1 larva (MM-Cer247). Farsund, N 58.06315°, E 06.78672°, 26.VI.2020, 1 larva (MM-Cer221). Flekkefjord, N 58.40630°, E 06.62017°, 17.VI.2020, 2 larvae (MM-Cer228, MM-Cer229). Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 1 male (MM-Cer102). Kristiansand, N 58.06956°, E 07.98100°, 24.VI.2020, 1 larva (MM-Cer241), 1 male (NTNU-VM 227075), 1 female (MM-Cer259). Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 1 larva (MM-Cer216). Kristiansand, N 58.11861°, E 07.92679°, 27.VIII.2019, 1 larva (MM-Cer207). Songdalen, N 58.15703°, E 07.82569°, 21.VI.2020, 1 female (MM-Cer176). Søgne, N 58.08952°, E 07.83998°, 30.VIII.2019, 3 larvae (MM-Cer209, MM-Cer210, MM-Cer211). Trondheim, N 63.39730°, E 10.55451°, 19.VI.–3.VII.2014, 1 male (TRD-

Cer309). Trondheim, N 63.44887°, E 10.45362°, 24.VI.–1.VII.2013, 1 male (TRD-Cer163), 1 female (TRD-Cer165). Trondheim, N 63.33993°, E 10.34176°, 27.V.2020, 2 larvae (MM-Cer331, MM-Cer333).

**Distribution.** *Palpomyia lineata* is a widely distributed species, known from numerous localities in Europe, and it is present also in the East Palaearctic, the Near East and the Nearctic Region (Szadziewski *et al.* 2013). The species is new to the Norwegian fauna (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACX1556: Norway, Sweden; BOLD:ACS7887: Norway; BOLD:AEH2394: Norway; BOLD:AAP9060: Norway, Canada, Finland, Sweden, United Kingdom.

**Comments.** The name was mentioned from Norway for the first time by Soot-Ryen (1943a) (to avoid confusion the information is not included in the Table 1), who attributed locality data for *P. binotata* (Stæger, 1839) from Zetterstedt's paper (1850) to *P. lineata*. Although no further explanations were provided, it seems that Soot-Ryen treated these two names as synonyms. Currently, it is known that *P. binotata* and *P. lineata* are not conspecific, thus the notes on the latter species by Soot-Ryen (1943a) should be treated as misinterpretation.

Female and males from the BINs BOLD:ACX1556 and BOLD:ACS7887 have dark legs like North American specimens of *P. lineata* (see Grogan & Wirth 1979).

The larvae of this species were found in various kinds of freshwater habitats (river, lake, pond).

### *Palpomyia luteifemorata* Edwards, 1926

**Literature for identification.** Edwards (1926), Remm (1976), Krzywiński (1996).

**Material examined.** Drangedal, N 59.03855°, E 09.28759°, 17.VI.2020, 1 larva (MM-Cer227). Kristiansand, N 58.16920°, E 08.00007°, 20.V.–4.VI.2019, 2 males (MM-Cer96, MM-Cer101), 1 female (MM-Cer103). Kristiansand, N 58.16920°, E 08.00007°, 8.–21.VII.2019, 1 female (MM-Cer326). Kristiansand, N 58.16920°, E 08.00007°, 21.VII.–6.VIII.2019, 1 female (MM-Cer69).

**Distribution.** So far, this *Palpomyia* species has been reported from Belgium, British Isles, Czech Republic, Estonia, Germany, Sweden and Ukraine (Szadziewski *et al.* 2013). It is the first record of the species from Norway.

**Distribution of BIN members in BOLD System.** BOLD:ACX1378: Norway, Sweden.

**Comments.** The single larva of *Palpomyia luteifemorata* was found in a sample collected from a stream in Vestfold and Telemark county.

### *Palpomyia nigripes* (Meigen, 1830)

**Literature for identification.** Remm (1976), Krzywiński (1996).

**Material examined.** Drangedal, N 59.04388°, E 09.30952°, 17.VI.2020, 1 male (MM-Cer170). Engerdal, N 61.88586°, E 11.78283°, 23.VI.–11.VII.2016, 1 female (HED-Cer218). Kristiansand, N 58.11951°, E 07.92543°, 4.–21.VI.2019, 1 female (MM-Cer88). Kristiansand, N 58.09107°, E 07.96776°, 26.V.2019, 1 male (MM-Cer25). Lillesand, N 58.20626°, E 08.23249°, 22.VI.2020, 2 females (MM-Cer302, NTNU-VM 227060). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 2 males (TRD-Cer248, TRD-Cer252), 3 females (TRD-Cer247, TRD-Cer249, TRD-Cer253). Åmot, N 61.17878°, E 11.40217°, 23.VI.–11.VII.2016, 1 female (HED-Cer189).

**Distribution.** *Palpomyia nigripes* is known from several countries in Europe, but until now in Fennoscandia it has been reported only from Sweden (Szadziewski *et al.* 2013). The species is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACX1412: Norway, Sweden.

### *Palpomyia pubescens* Kieffer, 1919a

**Literature for identification.** Remm (1976) (as *spinipes*), Krzywiński 1996.

**Material examined.** Birkenes, N 58.33339°, E 08.23990°, 30.VII.2019, 1 female (MM-Cer293). Lillesand, N 58.20460°, E 08.23188°, 22.VI.2020, 1 male (MM-Cer133). Stor-Elvdal, N 61.37842°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer48), 1 female (HED-Cer47). Stor-Elvdal, N 61.37842°, E 11.19175°, 11.–21.VII.2016, 1 female (HED-Cer85). Stor-Elvdal, N 61.37842°, E 11.19175°, 23.VI.–11.VII.2016, 1

female (HED-Cer317).

**Distribution.** The species has been reported from several localities in the Palaearctic Region, and in Nordic countries it is known from Finland, Norway, and Sweden (Szadziewski *et al.* 2013). The first valid country record of this species was given by Krzywiński (1996), and later it was reported also by Hagan *et al.* (2000) and Thunes *et al.* (2021) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ABW3938: Norway, Finland, Sweden; BOLD:ADF7741: Norway, Sweden; BOLD:AEF5429: Norway.

**Comments.** Although *Palpomyia pubescens* was mentioned from Norway already by Soot-Ryen (1943a), a female specimen from his collection should be re-examined to confirm the identification.

Stur & Borkent (2014) misidentified this species and listed it from Finnmark region as *P. serripes* (Meigen, 1818).

We have been able to re-examine a specimen from Sweden (NHRS) from BIN: BOLD:ABW3938 originally identified as male *P. serripes*. That specimen appeared to be a female and all of its morphological characters fit well within *P. pubescens*.

The specimens examined belong to three BINs, with BIN BOLD:AEF5429 being quite distant from the remaining two clusters.

### *Palpomyia remmi* Havelka, 1974

**Literature for identification.** Havelka (1974), Krzywiński (1997).

**Material examined.** Marnadal, N 58.26750°, E 07.45603°, 31.VIII.2019, 1 larva (MM-Cer59). Os, N 62.36553°, E 11.45471°, 30.VI.2016, 1 male (HED-Cer158).

**Distribution.** *Palpomyia remmi* is known from Estonia, France, Germany, and Norway (Szadziewski *et al.* 2013). The first country record, based on a single specimen from Nordland, was given by Krzywiński (1997). Later the species was reported also from Finnmark region (Stur & Borkent 2014).

**Distribution of BIN members in BOLD System.** BOLD:ABW3963: Norway, Finland, Germany.

**Comments.** Currently, the single larva of *P. remmi* was found in a stream.

### *Palpomyia rufipes* (Meigen, 1818)

**Literature for identification.** Remm (1976).

**Material examined.** Stor-Elvdal, N 61.37841°, E 11.19175°, 26.V.–9.VI.2016, 1 male (HED-Cer316), 1 female (HED-Cer318).

**Distribution.** There are numerous observations of this *Palpomyia* species from Europe and the East Palaearctic (Szadziewski *et al.* 2013), and the name was mentioned for the first time from Norway by Soot-Ryen (1943a) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ADH8757: Norway.

**Comments.** The female specimens Soot-Ryen (1943a) collected in Troms region have been identified by M. Goetghebuer. We believe that this record is valid because females of *P. rufipes* are rather easily recognizable due to their large size and characteristic body coloration.

### *Palpomyia serripes* (Meigen, 1818)

**Literature for identification.** Remm (1976), Alwin-Kownacka *et al.* (2017).

**Material examined.** Arendal, N 58.46155°, E 08.69623°, 19.VI.2020, 1 female (MM-Cer160). Kristiansand, N 58.20850°, E 08.00650°, 26.VI.2020, 1 female (NTNU-VM 227043). Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 1 male (MM-Cer126), 1 female (MM-Cer127). Kristiansand, N 58.22176°, E 08.02128°, 18.VI.2020, 1 female (MM-Cer248), 1 male (MM-Cer181). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 2 males (HED-Cer271, HED-Cer272). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 female (HED-Cer248). Åmot, N 61.17878°, E 11.40217°, 23.VI.–11.VII.2016, 1 male (HED-Cer193).

**Distribution.** *Palpomyia serripes* is a widely distributed species known from Europe, the East Palaearctic, the Near East, and North Africa (Szadziewski *et al.* 2013, Alwin-Kownacka *et al.* 2017). The first record of this species from Norway was given by Hagan *et al.* (2000).

**Distribution of BIN members in BOLD System.** BOLD:ACX1684: Norway, Finland,

Sweden; BOLD:ACX2304: Norway, Sweden.

**Comments.** The specimens from Finnmark region identified as *P. serripes* by Stur & Borkent (2014) belong to *P. pubescens* Kieffer, 1919a.

### *Palpomyia spinipes* (Meigen, in Panzer 1806)

**Literature for identification.** Remm (1976) (as *fulva*), Krzywiński (1996).

**Material examined.** Kristiansand, N 58.06956°, E 07.98100°, 24.VI.2020, 2 females (MM-Cer258, NTNU-VM 227074).

**Distribution.** Another species of the genus which is rather widely distributed and occurs in Europe, the East Palaearctic, and the Near East (Szadziewski *et al.* 2013). *Palpomyia spinipes* was reported from Norway for the first time by Szadziewski (1986) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:ACX3286: Norway, Montenegro, Sweden.

**Comments.** According to Szadziewski (1986) who redescribed *Ceratopogon lacteipennis* Zetterstedt, 1838, one of the paralectotypes of the latter species turned out to belong to *P. spinipes*. The records of this species from N Norway by Soot-Ryen (1943a) are treated by us as doubtful until the voucher specimens from the original collection are re-examined.

### *Palpomyia tibialis* (Meigen, 1818)

**Literature for identification.** Remm (1976), Alwin-Kownacka *et al.* (2017).

**Material examined.** Tvedestrand, N 58.54531°, E 08.81223°, 19.VI.2020, 1 male (MM-Cer158).

**Distribution.** *Palpomyia tibialis* has been reported from several localities in the West and the East Palaearctic, the Near East, and the Nearctic Region (Szadziewski *et al.* 2013, Alwin-Kownacka *et al.* 2017). The first observation of this species from Norway come from Soot-Ryen's paper (1943a) (see comments below).

**Distribution of BIN members in BOLD System.** BOLD:AEF5428: Norway.

**Comments.** The species was reported from the country as *P. laticollis* Goetghebuer, 1922 (a name treated currently as a junior synonym of *P. tibialis*). A single (?) specimen was collected in

N Norway by T. Soot-Ryen and identified by M. Goetghebuer. *Palpomyia tibialis* is rather easily recognizable, and therefore we treat this early record of the species as valid.

Unidentified species of *Palpomyia*

### *Palpomyia* sp. 5ES

**Material examined.** Drangedal, N 59.03572°, E 09.29243°, 17.VI.2020, 1 female (MM-Cer112). Engerdal, N 61.8859°, E 11.7828°, 23.VI.–11.VII.2016, 1 male (HED-Cer217). Røros, N 62.6889°, E 11.8316°, 11.–22.VI.2006, 1 male (TRD-Cer231). Røros, N 62.6889°, E 11.8316°, 6.–20.VII.2006, 1 female (TRD-Cer286). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 2 females (TRD-Cer251, TRD-Cer255). Røros, N 62.6889°, E 11.8316°, 11.–22.VI.2006, 1 male (TRD-Cer240), 1 female (TRD-Cer241). Røros, N 62.6903°, E 11.8415°, 22.VI.–6.VII.2006, 1 female (TRD-Cer257). Røros, N 62.6889°, E 11.8316°, 22.VI.–6.VII.2006, 2 males (TRD-Cer278, TRD-Cer279). Tynset, N 62.25544°, E 10.90725°, 11.–21.VII.2016, 1 female (HED-Cer87). Åmot, N 61.17878°, E 11.40217°, 9.–23.VI.2016, 1 male (HED-Cer246), 1 female (HED-Cer247). Åmot, N 61.17878°, E 11.40217°, 23.VI.–11.VII.2016, 1 female (HED-Cer194). Åmot, N 61.17878°, E 11.40217°, 11.–21.VII.2016, 1 female (HED-Cer94).

**Distribution of BIN members in BOLD System.** BOLD:ABZ9646: Norway, Finland, Germany.

**Comments.** The species was reported as *Palpomyia puberula* Remm, 1976 from Finnmark region (Stur & Borkent 2014). However, the leg coloration of the currently examined specimens from the same BIN does not fit the original description of the species by Remm (1976).

### *Palpomyia* sp. 6ES

**Material examined.** Froland, N 58.59694°, E 08.71825°, 19.VI.2020, 1 female (MM-Cer162).

**Distribution of BIN members in BOLD System.** BOLD:ACX3818: Norway, Sweden.

**Comments.** The single female resembles *Palpomyia rufipes* (Meigen, 1818) but differs in some details which are characteristic for other

species of this genus, e.g., presence of stronger setae on 5<sup>th</sup> tarsomere. A Swedish specimen (NHRS) belonging to the same BIN has not been available for our studies.

## Genus *Phaenobezzia* Haeselbarth, 1965

### *Phaenobezzia rubiginosa* (Winnertz, 1852)

**Literature for identification.** Remm (1974a), Krzywiński (1996).

**Material examined.** Kristiansand, N 58.24831°, E 08.15696°, 18.VI.2020, 2 pupae (MM-Cer242, MM-Cer243). Kristiansand, N 58.22296°, E 08.02237°, 18.VI.2020, 1 female (MM-Cer128). Kristiansand, N 58.16920°, E 08.00007°, 23.VI.2020, 1 female (NTNU-VM 227048). Kristiansand, N 58.19211°, E 08.07525°, 18.VI.2020, 1 male (NTNU-VM 227069).

**Distribution.** *Phaenobezzia rubiginosa* is known from several countries in Europe and from the East Palaearctic (Szadziewski *et al.* 2013). In Scandinavia it was reported previously only from Sweden (Krzywiński 1996). The species is new to the Norwegian fauna.

**Distribution of BIN members in BOLD System.** BOLD:ACX2151: Norway, Sweden.

**Comments.** The two pupae of *P. rubiginosa* available for our studies were collected from a partial oxbow lake in Agder county.

## Conclusions

We provide a first comprehensive list of Ceratopogonidae known to occur in mainland Norway (summarized in Table 1). The checklist is based on both newly collected specimens and revised literature records. Linnaean names are provided for 165 out of a total of 216 recorded biting midge species. We consider 58 of them as species new to the Norwegian fauna. In our opinion, records of a further 9 species previously mentioned from Norway should be treated as doubtful until the voucher specimens from the original collections are re-examined or new specimens of these species are collected and identified with certainty. The remaining 51 of total 216 are species given interim names (names with

**TABLE 1.** List of biting midges species reported from Norway with literature records overview. Legend: **1.** Zetterstedt 1838; **2.** Zetterstedt 1850; **3.** Zetterstedt 1852; **4.** Siebke 1853; **5.** Zetterstedt 1855; **6.** Siebke 1863; **7.** Siebke 1866; **8.** Siebke 1873; **9.** Siebke 1877; **10.** Strand 1903; **11.** Storm 1907; **12.** Lundström 1913; **13.** Kieffer 1919b; **14.** Kieffer 1919a; **15.** Soot-Ryen 1943a; **16.** Tjeder 1944; **17.** Clastrier 1961; **18.** Clastrier 1962a; **19.** Clastrier 1962b; **20.** Clastrier 1963; **21.** Greve 1968; **22.** Greve 1969; **23.** Mehl 1996; **24.** Krzywiński 1996; **25.** Krzywiński 1997; **26.** Mraz 1997; **27.** Szadziewski 1986; **28.** Borkent & Bissett 1990; **29.** Szadziewski & Hagan 2000; **30.** Hagan *et al.* 2000; **31.** Thunes *et al.* 2004; **32.** Szadziewski *et al.* 2007a; **33.** Szadziewski *et al.* 2007b; **34.** Thunes *et al.* 2008; **35.** Dominiak & Szadziewski 2010; **36.** Håland 2011; **37.** Kirkeby & Dominiak 2014; **38.** Stur & Borkent 2014; **39.** Thunes *et al.* 2021; **40.** present work. ● - species record; ○ - repeated record without new locality data; ★ - doubtful records; ◆ - species new to Norway

Genus/species	Literature
<b>Alluaudomyia Kieffer, 1913b</b>	
<i>quadripunctata</i> (Goetghebuer, 1934b)	30(●),31(○),34(○),40(●)
<i>Alluaudomyia</i> sp. 1ES	40(●)
<b>Atrichopogon Kieffer, 1906</b>	
<i>brunnipes</i> (Meigen, 1804) ◆	1(★),2(★○),5(★),9(★○), 15(○),40(●)
<i>forcipatus</i> (Winnertz, 1852) ◆	40(●)
<i>fuscus</i> (Coquillett, 1901)	38(●),40(●)
<i>fuscus</i> (Meigen, 1804) ★	2(★),9(○),15(★○)
<i>griseolus</i> (Zetterstedt, 1855)	27(●),39(●),40(●)
cf. <i>hirtidorsum</i> Remm, 1961b	40(●)
<i>longicalcar</i> Remm, 1961b ◆	40(●)
<i>lucorum</i> (Meigen, 1818)	30(●),31(○),32(●),34(○),40(●)
<i>maculatus</i> (Lundström, 1910) ◆	40(●)
<i>meloesusugans</i> Kieffer, 1922a ◆	40(●)
<i>minutus</i> (Meigen, 1830)	30(●),31(○),39(●)
cf. <i>minutus</i> (Meigen, 1830)	40(●)
<i>muelleri</i> (Kieffer, in Müller 1905)	39(●),40(●)
<i>oedemerarum</i> Storå, 1939	38(●),40(●)
<i>paulus</i> Remm, 1961b ◆	40(●)
<i>pavidus</i> (Winnertz, 1852) ◆	40(●)
<i>rostratus</i> (Winnertz, 1852) ★	12(★),15(○)
<i>winnertzi</i> Goetghebuer, 1922 ◆	40(●)
<i>Atrichopogon</i> sp. 5ES	40(●)
<i>Atrichopogon</i> sp. 7ES	40(●)
<i>Atrichopogon</i> sp. 8ES	40(●)
<i>Atrichopogon</i> sp. 9ES	40(●)
<b>Bezzia Kieffer, 1899</b>	
<i>affinis</i> (Stæger, 1839)	30(●),31(○),34(○)
<i>albicornis</i> (Meigen, 1818) ◆	40(●)

TABLE 1. *continued.*

Genus/species	Literature
<i>annulipes</i> (Meigen, 1830) ◆	9(★),15(○),40(●)
<i>bicolor</i> (Meigen, 1804)	30(●),31(○),34(○),40(●)
<i>fascispinosa</i> Clastrier, 1962b ◆	40(●)
<i>flavicornis</i> (Stæger, 1839)	39(●),40(●)
<i>fuliginata</i> Clastrier, 1962b ◆	40(●)
<i>kazlauskasi</i> Remm, 1966 ◆	40(●)
<i>nigrita</i> Clastrier, 1962b	18(●)
<i>nigritula</i> (Zetterstedt, 1838)	1(●),2(●○),6(●),9(○),15(○),30(●),31(○),40(●)
<i>nobilis</i> (Winnertz, 1852) ◆	40(●)
<i>ornata</i> (Meigen, 1830)	39(●),40(●)
<i>rhynchostylata</i> Remm, 1974b	30(●),31(○),34(○),38(●),40(●)
<i>signata</i> (Meigen, 1804) ◆	40(●)
<i>solstitialis</i> (Winnertz, 1852)	30(●),31(○),40(●)
<i>Bezzia</i> sp. 2ES	40(●)
<i>Bezzia</i> sp. 3ES	40(●)
<i>Bezzia</i> sp. 4ES	40(●)
<i>Bezzia</i> sp. 6ES	40(●)
<i>Bezzia</i> sp. 8ES	40(●)
<i>Bezzia</i> sp. 10ES	40(●)
<b><i>Brachypogon</i> Kieffer, 1899</b>	
<i>alpinus</i> (Clastrier, 1961) ◆	40(●)
<i>beaufortanensis</i> Delecolle & Rieb, 1992 ◆	40(●)
<i>bialoviesicus</i> Krzywiński, in Szadziewski <i>et al.</i> 1994	30(●),31(○)
<i>borealis</i> (Kieffer, 1919b)	13(●),14(○),15(○)
<i>hyperboreus</i> (Clastrier, 1961)	17(●)
<i>incompletus</i> (Kieffer, 1925b)	17(●),30(●),31(○),40(●)
cf. <i>nieves</i> (Havelka, 1976)	40(●)
<i>nitidulus</i> (Edwards, 1921)	30(●),31(○),34(○),38(●),40(●)
<i>norvegicus</i> Szadziewski & Hagan, 2000	29(●),30(●),31(○),34(○),40(●)
<i>perpusillus</i> (Edwards, 1921)	30(●),31(○),34(○),39(●),40(●)
<i>sociabilis</i> (Goetghebuer, 1920)	17(●),30(●),31(○),38(●),39(●),40(●)
<i>vitiosus</i> (Winnertz, 1852)	30(●),31(○),34(○),40(●)
<i>Brachypogon</i> sp. 3ES	40(●)
<i>Brachypogon</i> sp. 4ES	40(●)
<i>Brachypogon</i> sp. 5ES	40(●)
<i>Brachypogon</i> sp. 6ES	40(●)
<i>Brachypogon</i> sp. 7ES	40(●)
<b><i>Ceratoculicoides</i> Wirth &amp; Ratanaworabhan, 1971</b>	

TABLE 1. continued.

Genus/species	Literature
<i>Ceratoculicoides</i> sp. 1ES	40(●)
<b><i>Ceratopogon</i> Meigen, 1803</b>	
<i>abstrusus</i> Borkent & Grogan, 1995	38(●),40(●)
<i>naccinervis</i> Borkent, in Borkent & Wirth 1997 ★	15(★)
<i>communis</i> Meigen, 1804 ★	6(★),9(○),15(○)
<i>grandiforceps</i> (Kieffer, 1913c)	38(●),40(●)
cf. <i>inverecundus</i> Borkent & Grogan, 1995	40(●)
<i>lacteipennis</i> Zetterstedt, 1838	1(●),2(○),9(★○),15(○),30(●),31(○),38(●),40(●)
<i>niveipennis</i> Meigen, 1818 ★	9(★),15(○)
<b><i>Clinohelea</i> Kieffer, 1917b</b>	
<i>unimaculata</i> (Macquart, 1826)	2(●),9(○),15(○),36(●),40(●)
<b><i>Culicoides</i> Latreille, 1809</b>	
<i>alaticus</i> Smatov & Isimbekov, 1971	30(●),31(○)
<i>albicans</i> Winnertz, 1852	30(●),31(○),34(○),38(●),40(●)
<i>boyi</i> Nielsen, Kristensen & Pape, 2015 ◆	40(●)
<i>chioteris</i> (Meigen, 1830)	23(●),26(●),30(●),31(○),39(●),40(●)
<i>circumscriptus</i> Kieffer, 1918 ◆	40(●)
<i>clintoni</i> Boorman, 1984	30(●),31(○),34(○),39(●),40(●)
<i>comosioculatus</i> Tokunaga, 1956	30(●),31(○),34(○),40(●)
<i>dewulfi</i> Goetghebuer, 1936	23(●),30(●),31(○),40(●)
<i>fascipennis</i> (Stæger, 1839)	5(★),15(○),23(●),26(●),38(●),40(●)
<i>festivipennis</i> Kieffer, 1914 ◆	40(●)
<i>furcillatus</i> Callot, Kremer & Paradis, 1962 ◆	40(●)
<i>gornostaevae</i> Mirzaeva, 1984	37(●),40(●)
<i>griscens</i> Edwards, in Edwards <i>et al.</i> 1939	23(●),30(●),31(○),34(○),38(●),40(●)
<i>heliophilus</i> Edwards, 1921	23(●),30(●),31(○),40(●)
<i>impunctatus</i> Goetghebuer, 1920	23(●),26(●),30(●),31(○),39(●),40(●)
<i>kibunensis</i> Tokunaga, 1937	30(●),31(○),39(●),40(●)
<i>lenae</i> Glushchenko & Mirzaeva, 1970 ◆	40(●)
<i>manchuriensis</i> Tokunaga, 1941 ◆	40(●)
<i>maritimus</i> Kieffer, 1924b ◆	40(●)
<i>nubeculosus</i> (Meigen, 1830) ★	2(★),3(★),9(○),15(○)
<i>obsoletus</i> (Meigen, 1818)	2(★),6(★),9(★○),11(★),15(○),23(●),30(●),31(○), 39(●),40(●)
<i>pallidicornis</i> Kieffer, 1919a	39(●),40(●)
<i>pictipennis</i> (Stæger, 1839)	39(●),40(●)
<i>pulicaris</i> (Linnaeus, 1758)	9(★),11(★),15(○),23(●),40(●)
<i>punctatus</i> (Meigen, 1804)	23(●),26(●),40(●)

TABLE 1. continued.

Genus/species	Literature
<i>reconditus</i> Campbell & Pelham-Clinton, 1960	23(●)
<i>riethi</i> Kieffer, 1914	23(●)
<i>riouxi</i> Callot & Kremer, 1961 ◆	40(●)
<i>salinarius</i> Kieffer, 1914	23(●),38(●),40(●)
<i>scoticus</i> Downes & Kettle, 1952	23(●),30(●),31(○),34(○),39(●),40(●)
<i>sphagnumensis</i> Williams, 1955	23(●),30(●),31(○),34(○),38(●),40(●)
<i>segnis</i> Campbell & Pelham-Clinton, 1960	39(●),40(●)
<i>stigma</i> (Meigen, 1818)	23(●)
<i>vexans</i> (Stæger, 1839)	30(●),31(○),34(○)
<b><i>Dasyhelea</i> Kieffer, 1911a</b>	
<i>acuminata</i> Kieffer, 1919a ◆	40(●)
<i>arenivaga</i> Macfie, 1943 ◆	40(●)
<i>baltica</i> Remm, 1966 ◆	40(●)
<i>bensoni</i> Edwards, 1933	30(●),31(○),38(●),40(●)
<i>bifida</i> Zilahi-Sebess, 1936	38(●)
<i>bilineata</i> Goetghebuer, 1920	35(●),40(●)
<i>bilobata</i> Kieffer, 1915	30(●),31(○)
<i>biunguis</i> Kieffer, 1925a	30(●),31(○),34(○),40(●)
<i>caesia</i> Remm, 1993 ◆	40(●)
<i>dampfi</i> Kieffer, 1925b ◆	40(●)
<i>europaea</i> Remm, 1962a	30(●),31(○),40(●)
<i>flavifrons</i> (Guérin-Méneville, 1833) ◆	15(★),40(●)
<i>flavoscutellata</i> (Zetterstedt, 1850)	2(●),9(★),15(○)
<i>holosericea</i> (Meigen, 1804) ◆	40(●)
<i>ledi</i> Remm, 1993	30(●),31(○),34(○)
<i>lucida</i> Remm, in Remm & Zhogolev 1968 ◆	40(●)
<i>malleola</i> Remm, 1962a	38(●),40(●)
<i>modesta</i> (Winnertz, 1852)	30(●),31(○),38(●),40(●)
<i>norvegica</i> Szadziewski & Hagan, 2000	29(●),30(●),31(○)
<i>notata</i> Goetghebuer, 1920 ◆	40(●)
<i>parallela</i> Remm, 1962a	30(●),31(○),40(●)
<i>stackelbergi</i> Remm, 1993 ◆	40(●)
<i>Dasyhelea</i> sp. 1ES	38(●),40(●)
<i>Dasyhelea</i> sp. 2ES	38(●),40(●)
<i>Dasyhelea</i> sp. 5ES	40(●)
<i>Dasyhelea</i> sp. 7ES	40(●)
<i>Dasyhelea</i> sp. 14ES	40(●)
<i>Dasyhelea</i> sp. 15ES	40(●)

TABLE 1. continued.

Genus/species	Literature
<i>Dasyhelea</i> sp. 16ES	40(●)
<i>Dasyhelea</i> sp. 17ES	40(●)
<i>Dasyhelea</i> sp. 18ES	40(●)
<i>Dasyhelea</i> sp. 19ES	40(●)
<i>Dasyhelea</i> sp. 20ES	40(●)
<i>Dasyhelea</i> sp. 22ES	40(●)
<i>Dasyhelea</i> sp. 24ES	40(●)
<i>Dasyhelea</i> sp. 25ES	40(●)
<b><i>Forcipomyia</i> Meigen, 1818</b>	
<i>acidicola</i> (Tokunaga, 1937)	30(●),31(○),34(○),38(●),40(●)
<i>alacris</i> (Winnertz, 1852) ◆	40(●)
<i>albstyla</i> Remm, 1979	30(●),31(○),34(○)
<i>altaica</i> Remm, 1972 ◆	40(●)
<i>aristolochiae</i> (Rondani, 1860) ◆	40(●)
<i>bipunctata</i> (Linneus, 1767)	2(★),4(★),5(○),6(★),7(★),9(★○),15(○),30(●),31(○), 38(●),40(●)
<i>brevipennis</i> (Macquart, 1826)	30(●),31(○)
<i>chaetoptera</i> Remm, 1962b	38(●),40(●)
<i>ciliata</i> (Winnertz, 1852)	30(●),31(○),34(○),40(●)
<i>crassipes</i> (Winnertz, 1852) ◆	40(●)
<i>dichromata</i> Remm, in Remm & Zhogolev 1968	39(●)
<i>eques</i> (Johannsen, 1908)	16(●),21(●),22(●),40(●)
<i>fuliginosa</i> (Meigen, 1818)	30(●),31(○),34(○),40(●)
<i>glauca</i> Macfie, 1934 ◆	40(●)
<i>hygrophila</i> Kieffer, 1925b	30(●),31(○),34(○),38(●),40(●)
<i>kaltenbachi</i> (Winnertz, 1852)	30(●),31(○),34(○)
<i>monilicornis</i> (Coquillett, 1905)	30(●),31(○),34(○),38(●),40(●)
<i>nigra</i> (Winnertz, 1852)	30(●),31(○),34(○),38(●),40(●)
<i>nigrans</i> Remm, 1962b	30(●),31(○),34(○),40(●)
<i>pallida</i> (Winnertz, 1852) ◆	12(★),15(○),40(●)
<i>palustris</i> (Meigen, 1804)	30(●),31(○),34(○),38(●),40(●)
<i>phlebotomides</i> Bangerter, 1933 ◆	40(●)
<i>pulchrithorax</i> Edwards, in Saunders 1924 ◆	40(●)
<i>sphagnophila</i> Kieffer, 1925a ◆	40(●)
<i>squamigera</i> Kieffer, in Thienemann & Kieffer 1916	33(●),38(●),40(●)
<i>tenuis</i> (Winnertz, 1852)	38(●),40(●)
<i>tibialis</i> Remm, 1961a	39(●)
<i>titillans</i> (Winnertz, 1852)	30(●),31(○),34(○),39(●),40(●)

TABLE 1. *continued.*

Genus/species	Literature
<i>tonnoiri</i> (Goetghebuer, 1920) ◆	40(●)
<i>Forcipomyia</i> sp. 3ES	38(●)
<i>Forcipomyia</i> sp. 8ES	40(●)
<i>Forcipomyia</i> sp. 12ES	40(●)
<i>Forcipomyia</i> sp. 13ES	40(●)
<i>Forcipomyia</i> sp. 14ES	40(●)
<i>Forcipomyia</i> sp. 15ES	40(●)
<i>Forcipomyia</i> sp. 16ES	40(●)
<i>Forcipomyia</i> sp. 17ES	40(●)
<i>Forcipomyia</i> sp. 18ES	40(●)
<i>Forcipomyia</i> sp. 19ES	40(●)
<i>Forcipomyia</i> sp. 20ES	40(●)
<i>Forcipomyia</i> sp. 22ES	40(●)
<b><i>Kolenohelea</i> de Meillon &amp; Wirth, 1981</b>	
<i>calcarata</i> (Goetghebuer, 1920)	39(●)
<b><i>Mallochohelea</i> Wirth, 1962</b>	
<i>nitida</i> (Macquart, 1826)	3(★),9(★○),15(○),36(●),40(●)
<i>scandinaviae</i> (Clastrier, 1962a)	19(●)
<i>Mallochohelea</i> sp. 1ES	40(●)
<i>Mallochohelea</i> sp. 2ES	40(●)
<b><i>Monohelea</i> Kieffer, 1917b</b>	
<i>estonica</i> Remm, 1965 ◆	40(●)
<b><i>Nilobezzia</i> Kieffer, 1921</b>	
<i>posticata</i> (Zetterstedt, 1850)	2(●),8(●○),9(○),15(○)
<b><i>Palpomyia</i> Meigen, 1818</b>	
<i>armipes</i> (Meigen, 1838) ★	2(★),9(○),12(★),15(○)
<i>binotata</i> Stæger, 1839 ★	2(★),9(○),15(○)
<i>citripes</i> Kieffer, 1922b ◆	40(●)
<i>concoloripes</i> Clastrier, 1962a	19(●)
<i>distincta</i> (Halliday, 1833) ◆	15(★),40(●)
<i>flavipes</i> (Meigen, 1804) ◆	1(★),2(○),3(★),7(★),8(★),9(★○),12(★),15(○),40(●)
<i>lineata</i> (Meigen, 1804) ◆	40(●)
<i>luteifemorata</i> Edwards, 1926 ◆	40(●)
<i>nigripes</i> (Meigen, 1830) ◆	40(●)
<i>pubescens</i> Kieffer, 1919a	15(★),24(●),30(●),31(○),39(●),40(●)
<i>remmi</i> Havelka, 1974	25(●),38(●),40(●)
<i>rufipes</i> (Meigen, 1818)	15(●),40(●)
<i>serripes</i> (Meigen, 1818)	30(●),31(○),40(●)

TABLE 1. continued.

Genus/species	Literature
<i>spinipes</i> (Meigen, 1818)	15(★),27(●),40(●)
<i>tibialis</i> (Meigen, 1818)	15(●),40(●)
<i>Palpomyia</i> sp. 5ES	40(●)
<i>Palpomyia</i> sp. 6ES	40(●)
<b><i>Phaenobezzia</i> Haeselbarth, 1965</b>	
<i>rubiginosa</i> (Winnertz, 1852) ◆	40(●)
<b><i>Probezzia</i> Kieffer, 1906</b>	
<i>seminigra</i> (Panzer, 1798) ◆	40(●)
<b><i>Schizohelea</i> Kieffer, 1917b</b>	
<i>leucopeza</i> (Meigen, 1804)	5(★),20(●),30(●),31(○),34(○),40(●)
<b><i>Serromyia</i> Meigen, 1818</b>	
<i>atra</i> (Meigen, 1818) ◆	40(●)
<i>femorata</i> (Meigen, 1804)	1(★),2(●○),4(★),5(★○),6(★),9(★○),10(★),15(○), 28(●),30(●),31(○),36(●),38(●),39(●),40(●)
<i>ledicola</i> Kieffer, 1925b ◆	40(●)
<i>morio</i> (Fabricius, 1775) ◆	3(★),9(★○),15(○),40(●)
<b><i>Sphaeromyias</i> Curtis, 1829</b>	
<i>fasciatus</i> (Meigen, 1804) ★	2(★),5(○),9(★○),15(○)
<b><i>Stilobezzia</i> Kieffer, 1911b</b>	
<i>gracilis</i> (Haliday, 1833) ◆	40(●)
<i>ochracea</i> (Winnertz, 1852)	39(●),40(●)

“cf.” are treated as interim names) as nominal species could not be assigned. In the case of *Atrichopogon* cf. *hirtidorsum* Remm, 1961b, *A. cf. minutus* (Meigen, 1830), *Brachypogon* cf. *nieves* (Havelka, 1976) and *Ceratopogon* cf. *inverecundus* Borkent & Grogan, 1995, a comparison with type materials or simply more specimens available for studies are needed to verify the identifications. All other Ceratopogonidae assigned to interim names were mostly separated based on differences in their DNA barcodes (COI sequences). We were unable to correctly classify them, either because they did not fit to any known species description, or because the examined specimens were represented by a life stage or sex with little or no diagnostic features.

The biting midges reported from Norway belong to the following 21 genera, each represented by the number of recorded species given in parentheses (Linnaean name + interim name): *Alluaudomyia*

Kieffer, 1913b (1+1), *Atrichopogon* Kieffer, 1906 (16+6), *Bezzia* Kieffer, 1899 (15+6), *Brachypogon* Kieffer, 1899 (11+6), *Ceratoculicoides* Wirth and Ratanaworabhan, 1971 (0+1), *Ceratopogon* Meigen, 1803 (6+1), *Clinohelea* Kieffer, 1917b (1+0), *Culicoides* Latreille, 1809 (34+0), *Dasyhelea* Kieffer, 1911a (22+14), *Forcipomyia* Meigen, 1818 (29+12), *Kolenohelea* de Meillon and Wirth, 1981 (1+0), *Mallochohelea* Wirth, 1962 (2+2), *Monohelea* Kieffer, 1917b (1+0), *Nilobezzia* Kieffer, 1921b (1+0), *Palpomyia* Meigen, 1818 (15+2), *Phaenobezzia* Haeselbarth, 1965 (1+0), *Probezzia* Kieffer, 1906 (1+0), *Schizohelea* Kieffer, 1917b (1+0), *Serromyia* Meigen, 1818 (4+0), *Sphaeromyias* Curtis, 1829 (1+0), *Stilobezzia* Kieffer, 1911b (2+0). Four genera, namely *Ceratoculicoides*, *Monohelea*, *Phaenobezzia* and *Probezzia*, are here recorded from Norway for the first time.

**TABLE 2.** Specimen data of recently recorded Ceratopogonidae (own records, material deposited at the NTNU University Museum)

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
HED-Cer115	BOLD:ACX1443	200980	<i>Alluaudomyia quadripunctata</i>	adult	M	17 September 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
HED-Cer144	BOLD:ACX1443	201009	<i>Alluaudomyia quadripunctata</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
HED-Cer145	BOLD:ACX1443	201010	<i>Alluaudomyia quadripunctata</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
HED-Cer298	BOLD:ACX1443	201163	<i>Alluaudomyia quadripunctata</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer299	BOLD:ACX1443	201164	<i>Alluaudomyia quadripunctata</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer300	BOLD:ACX1443	201165	<i>Alluaudomyia quadripunctata</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer225	BOLD:ACT7539	226915	<i>Alluaudomyia</i> sp. 1ES	larva		17 June 2020	G. Kjærstad	Drangedal	Sannes-Langen
TRD-Cer216	BOLD:ACT7539	200665	<i>Alluaudomyia</i> sp. 1ES	adult	F	9 October 2014	E. Stur	Trondheim	Jonsvatn
HED-Cer25	BOLD:ACI3427	200890	<i>Atrichopogon brunripes</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer26	BOLD:ACI3427	200891	<i>Atrichopogon brunripes</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer153	BOLD:ACI3427	201018	<i>Atrichopogon brunripes</i>	adult	M	5 November 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer176	BOLD:ACC1669	201041	<i>Atrichopogon brunripes</i>	adult	F	15 August 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer183	BOLD:ACI3427	201048	<i>Atrichopogon brunripes</i>	adult	M	29 September 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer184	BOLD:ACI3427	201049	<i>Atrichopogon brunripes</i>	adult	F	29 September 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer05	BOLD:ACI3427	226695	<i>Atrichopogon brunripes</i>	adult	M	24 August 2019	P. Dominiak & E. Stur	Flekkefjord	River Sira
MM-Cer16	BOLD:ACC1669	226706	<i>Atrichopogon brunripes</i>	adult	M	22 August 2019	P. Dominiak & E. Stur	Flekkefjord	Flikkeid
MM-Cer51	BOLD:ACI3427	226741	<i>Atrichopogon brunripes</i>	adult	M	19 August 2019	P. Dominiak & E. Stur	Drangedal	Sannes-Langen
TRD-Cer2	BOLD:ACC1669	201761	<i>Atrichopogon brunripes</i>	adult	F	6 June 2010	J. K. Skei	Trondheim	Gjeddtjørna outlet
TRD-Cer24	BOLD:ACC1669	200473	<i>Atrichopogon brunripes</i>	adult	M	17 July 2014	E. Stur	Melhus	Gammelleva naturreservat
TRD-Cer25	BOLD:ACC1669	200474	<i>Atrichopogon brunripes</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelleva naturreservat
TRD-Cer26	BOLD:ACC1669	200475	<i>Atrichopogon brunripes</i>	adult	M	17 July 2014	E. Stur	Melhus	Gammelleva naturreservat
TRD-Cer27	BOLD:ACC1669	200476	<i>Atrichopogon brunripes</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelleva naturreservat
TRD-Cer29	BOLD:ACC1669	200478	<i>Atrichopogon brunripes</i>	adult	M	17 July 2014	E. Stur	Melhus	Gammelleva naturreservat
TRD-Cer43	BOLD:ACC1669	200492	<i>Atrichopogon brunripes</i>	adult	F	11 September 2014	E. Stur	Melhus	Gammelleva naturreservat
TRD-Cer62	BOLD:ACC1669	200511	<i>Atrichopogon brunripes</i>	adult	F	17 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer63	BOLD:ACC1669	200512	<i>Atrichopogon brunripes</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer118	BOLD:ACC1669	200567	<i>Atrichopogon brunripes</i>	adult	F	31 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer122	BOLD:ACC1669	200571	<i>Atrichopogon brunripes</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva

TABLE 2. *continued.*

<b>BOLD</b> Sample ID	<b>BIN</b>	<b>NTNU</b> -VM	<b>Taxon</b>	<b>Life Stage</b>	<b>Sex</b>	<b>Collection Date</b>	<b>Collectors</b>	<b>Region</b>	<b>Sector</b>
TRD-Cer125	BOLD:ACCI1669	200574	<i>Atrichopogon brunnipus</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer127	BOLD:ACCI1669	200576	<i>Atrichopogon brunnipus</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer148	BOLD:ACCI1669	200597	<i>Atrichopogon brunnipus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer204	BOLD:ACCI1669	200653	<i>Atrichopogon brunnipus</i>	adult	F	3 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer291	BOLD:ACCI1669	200740	<i>Atrichopogon brunnipus</i>	adult	M	31 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer292	BOLD:ACCI1669	200741	<i>Atrichopogon brunnipus</i>	adult	F	31 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
MM-Cer118	BOLD:ACX2897	226808	<i>Atrichopogon forcipatus</i>	adult	M	19 June 2020	P. Dominiak & E. Stur	Arendal	Midtre Sagvann
MM-Cer124	BOLD:ACX2897	226814	<i>Atrichopogon forcipatus</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kostøljønn
MM-Cer125	BOLD:AEF1704	226815	<i>Atrichopogon forcipatus</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kostøljønn
MM-Cer142	BOLD:ACX2897	226832	<i>Atrichopogon forcipatus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer244	BOLD:AEF1704	226934	<i>Atrichopogon forcipatus</i>	adult	M	25 June 2020	P. Dominiak & E. Stur	Farsund	Einarsneset
MM-Cer245	BOLD:AEF1704	226935	<i>Atrichopogon forcipatus</i>	adult	F	25 June 2020	P. Dominiak & E. Stur	Farsund	Einarsneset
MM-Cer246	BOLD:AEF1704	226936	<i>Atrichopogon forcipatus</i>	adult	F	25 June 2020	P. Dominiak & E. Stur	Farsund	Einarsneset
MM-Cer315		227005	<i>Atrichopogon forcipatus</i>	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
TRD-Cer268	BOLD:ACX3268	200717	<i>Atrichopogon forcipatus</i>	adult	F	6 July 2006	O. Hanssen	Roros	Sølendet
		227037	<i>Atrichopogon forcipatus</i>	adult	F	25 June 2020	P. Dominiak	Kristiansand	Hamresanden
HED-Cer116	BOLD:ACC9717	200981	<i>Atrichopogon fuscus</i>	adult	F	17 September 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
HED-Cer135	BOLD:ACC9717	201000	<i>Atrichopogon fuscus</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer219	BOLD:ACC9717	201084	<i>Atrichopogon fuscus</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer226	BOLD:ACC9717	201091	<i>Atrichopogon fuscus</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer284	BOLD:ACC9717	201149	<i>Atrichopogon fuscus</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Ulvkjølen-Sundsetra
HED-Cer327	BOLD:ADH7716	201753	<i>Atrichopogon fuscus</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjørn
HED-Cer328	BOLD:ACC9717	201754	<i>Atrichopogon fuscus</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjørn
HED-Cer332	BOLD:ADH7716	201758	<i>Atrichopogon fuscus</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjørn
MM-Cer76	BOLD:ACC9717	226766	<i>Atrichopogon fuscus</i>	adult	M	21 August 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer104	BOLD:ACC9717	226794	<i>Atrichopogon fuscus</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer280	BOLD:ACC9717	226970	<i>Atrichopogon fuscus</i>	adult	M	21 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer282	BOLD:ACC9717	226972	<i>Atrichopogon fuscus</i>	adult	F	21 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer254	BOLD:ACC9717	200703	<i>Atrichopogon fuscus</i>	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer273	BOLD:ACC9717	200722	<i>Atrichopogon fuscus</i>	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
HED-Cer73	BOLD:ADG7248	200938	<i>Atrichopogon griseolus</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer91	BOLD:ADG7248	226781	<i>Atrichopogon griseolus</i>	adult	F	15 July 2019	E. Langedgard & Ø. Ekrem	Marnadal	Lågåna øvre Landal
HED-Cer210	BOLD:ADG7248	201075	<i>Atrichopogon griseolus</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer329	BOLD:ADG7248	201755	<i>Atrichopogon griseolus</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer331	BOLD:ADG7248	201757	<i>Atrichopogon griseolus</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer156	BOLD:ADG7248	226846	<i>Atrichopogon griseolus</i>	adult	M	19 June 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
HED-Cer330	BOLD:ABZ8851	201756	<i>Atrichopogon cf. hirtidorsum</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer151	BOLD:ABZ8851	226841	<i>Atrichopogon cf. hirtidorsum</i>	adult	F	19 June 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
MM-Cer184	BOLD:AEF2586	226874	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordejonn
MM-Cer335	BOLD:ABZ8851	227025	<i>Atrichopogon cf. hirtidorsum</i>	larva		3 June 2019	G. Kjørstad	Trondheim	Langlovatnet
TRD-Cer123	BOLD:ABZ8851	200572	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer129	BOLD:ABZ8851	200578	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer133	BOLD:ABZ8851	200582	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer135	BOLD:ABZ8851	200584	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	11 September 2014	E. Stur	Trondheim	Nidelva
TRD-Cer136	BOLD:ABZ8851	200585	<i>Atrichopogon cf. hirtidorsum</i>	adult	F	11 September 2014	E. Stur	Trondheim	Nidelva
TRD-Cer222	BOLD:ABZ8851	200671	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	17 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer223	BOLD:ABZ8851	200672	<i>Atrichopogon cf. hirtidorsum</i>	adult	F	17 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer256	BOLD:ABZ8851	200705	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer277	BOLD:ABZ8851	200726	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer28	BOLD:ABZ8851	200477	<i>Atrichopogon cf. hirtidorsum</i>	adult	M	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer66	BOLD:ABZ8851	200515	<i>Atrichopogon cf. hirtidorsum</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer69	BOLD:ABZ8851	200518	<i>Atrichopogon cf. hirtidorsum</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer110	BOLD:ABZ8855	200559	<i>Atrichopogon longicalcar</i>	adult	M	21 July 2020	P. Dominiak & E. Stur	Kristiansand	Hammesanden, Fugløyna
TRD-Cer174	BOLD:ACS7862	200623	<i>Atrichopogon longicalcar</i>	adult	F	13 July 2014	E. Stur <i>et al.</i>	Melhus	Gaula river
				adult	F	28 August 2014	E. Stur <i>et al.</i>	Melhus	Gaula river

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer196	BOLD:ACS7862	200645	<i>Atrichopogon longicalcar</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
MM-Cer310		227000	<i>Atrichopogon lucorum</i>	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
HED-Cer333	BOLD:ADH7715	201759	<i>Atrichopogon maculatus</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjenn
MM-Cer123	BOLD:ADH7715	226813	<i>Atrichopogon maculatus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kosteltjønn
MM-Cer168	BOLD:ADH7715	226858	<i>Atrichopogon maculatus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Drangsholt
MM-Cer203	BOLD:ADH7715	226893	<i>Atrichopogon maculatus</i>	adult	M	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
MM-Cer316	BOLD:ADH7715	227006	<i>Atrichopogon maculatus</i>	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
MM-Cer317	BOLD:ADH7715	227007	<i>Atrichopogon maculatus</i>	adult	M	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
MM-Cer318	BOLD:ADH7715	227008	<i>Atrichopogon maculatus</i>	adult	M	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
MM-Cer325	BOLD:ADH7715	227015	<i>Atrichopogon maculatus</i>	adult	F	21 July 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
		227051	<i>Atrichopogon maculatus</i>	adult	F	6 July 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
MM-Cer286	BOLD:AEH1314	227052	<i>Atrichopogon maculatus</i>	adult	M	7 July 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
		226976	<i>Atrichopogon meloesugans</i>	adult	F	1 July 2019	S. Svendsen	Birkenes	Birkeland
		227070	<i>Atrichopogon meloesugans</i>	adult	M	23 July 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden, Fugløyna
MM-Cer26	BOLD:ACA4348	226716	<i>Atrichopogon cf. minutus</i>	adult	M	26 August 2019	P. Dominiak & E. Stur	Kristiansand	Foss
MM-Cer27	BOLD:ACA3626	226717	<i>Atrichopogon cf. minutus</i>	adult	F	26 August 2019	P. Dominiak & E. Stur	Kristiansand	Foss
MM-Cer37	BOLD:ACA3626	226727	<i>Atrichopogon cf. minutus</i>	adult	F	26 August 2019	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer48	BOLD:ACA4348	226738	<i>Atrichopogon cf. minutus</i>	adult	M	30 August 2019	P. Dominiak & E. Stur	Songdalen	Kroksjø
MM-Cer50	BOLD:ACA3626	226740	<i>Atrichopogon cf. minutus</i>	adult	F	19 August 2019	P. Dominiak & E. Stur	Drangedal	Sannes-Langen
TRD-Cer18	BOLD:ACA4348	200467	<i>Atrichopogon cf. minutus</i>	adult	M	17 July 2014	E. Stur & T. Ekrem	Trondheim	Nidelva
TRD-Cer23	BOLD:ACA4348	200472	<i>Atrichopogon cf. minutus</i>	adult	M	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer30	BOLD:ACA4348	200479	<i>Atrichopogon cf. minutus</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer44	BOLD:ACA4348	200493	<i>Atrichopogon cf. minutus</i>	adult	F	11 September 2014	E. Stur	Trondheim	Nidelva
TRD-Cer45	BOLD:ACA4348	200494	<i>Atrichopogon cf. minutus</i>	adult	M	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer46	BOLD:ACA4348	200495	<i>Atrichopogon cf. minutus</i>	adult	F	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer47	BOLD:ACA4348	200496	<i>Atrichopogon cf. minutus</i>	adult	M	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer67	BOLD:ACA4348	200516	<i>Atrichopogon cf. minutus</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer70	BOLD:ACA4348	200519	<i>Atrichopogon cf. minutus</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer80	BOLD:ACA4348	200529	<i>Atrichopogon cf. minutus</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer95	BOLD:ACA4348	200544	<i>Atrichopogon cf. minutus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer96	BOLD:ACA4348	200545	<i>Atrichopogon cf. minutus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer97	BOLD:ACA4348	200546	<i>Atrichopogon cf. minutus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer98	BOLD:ACA4348	200547	<i>Atrichopogon cf. minutus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer102	BOLD:ACA4348	200551	<i>Atrichopogon cf. minutus</i>	adult	M	28 August 2014	E. Stur <i>et al.</i>	Kliebu	Selbusjøen
TRD-Cer107	BOLD:ACA4348	200556	<i>Atrichopogon cf. minutus</i>	adult	F	28 August 2014	E. Stur <i>et al.</i>	Kliebu	Selbusjøen
TRD-Cer109	BOLD:ACA4348	200558	<i>Atrichopogon cf. minutus</i>	adult	F	28 August 2014	E. Stur <i>et al.</i>	Kliebu	Selbusjøen
TRD-Cer114	BOLD:ACA4348	200563	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer116	BOLD:ACA4348	200565	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer128	BOLD:ACA4348	200577	<i>Atrichopogon cf. minutus</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer131	BOLD:ACA4348	200580	<i>Atrichopogon cf. minutus</i>	adult	F	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer132	BOLD:ACA4348	200581	<i>Atrichopogon cf. minutus</i>	adult	M	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer137	BOLD:ACA4348	200586	<i>Atrichopogon cf. minutus</i>	adult	F	11 September 2014	E. Stur	Trondheim	Nidelva
TRD-Cer142	BOLD:ACA4348	200591	<i>Atrichopogon cf. minutus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer144	BOLD:ACA4348	200593	<i>Atrichopogon cf. minutus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer151	BOLD:ACA4348	200600	<i>Atrichopogon cf. minutus</i>	adult	M	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer152	BOLD:ACA4348	200601	<i>Atrichopogon cf. minutus</i>	adult	M	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer153	BOLD:ACA4348	200602	<i>Atrichopogon cf. minutus</i>	adult	M	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer154	BOLD:ACA4348	200603	<i>Atrichopogon cf. minutus</i>	adult	M	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer156	BOLD:ACA4348	200605	<i>Atrichopogon cf. minutus</i>	adult	F	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer161	BOLD:ACA4348	200610	<i>Atrichopogon cf. minutus</i>	adult	M	30 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer162	BOLD:ACA4348	200611	<i>Atrichopogon cf. minutus</i>	adult	F	30 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer166	BOLD:ACA4348	200615	<i>Atrichopogon cf. minutus</i>	adult	F	1 July 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer175	BOLD:ACA4348	200624	<i>Atrichopogon cf. minutus</i>	adult	F	28 August 2014	E. Stur <i>et al.</i>	Melhus	Gaula river
TRD-Cer176	BOLD:ACA4348	200625	<i>Atrichopogon cf. minutus</i>	adult	F	28 August 2014	E. Stur <i>et al.</i>	Melhus	Gaula river
TRD-Cer177	BOLD:ACA4348	200626	<i>Atrichopogon cf. minutus</i>	adult	F	28 August 2014	E. Stur <i>et al.</i>	Melhus	Gaula river
TRD-Cer179	BOLD:ACA4348	200628	<i>Atrichopogon cf. minutus</i>	adult	M	28 August 2014	E. Stur <i>et al.</i>	Melhus	Gaula river

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer180	BOLD:ACA4348	200629	<i>Atrichopogon cf. minutus</i>	adult	M	28 August 2014	E. Stur <i>et al.</i>	Melhus	Gaula river
TRD-Cer181	BOLD:ACA4348	200630	<i>Atrichopogon cf. minutus</i>	adult	M	28 August 2014	E. Stur <i>et al.</i>	Melhus	Gaula river
TRD-Cer184	BOLD:ACA4348	200633	<i>Atrichopogon cf. minutus</i>	adult	M	11 September 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer188	BOLD:ACA4348	200637	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer191	BOLD:ACA4348	200640	<i>Atrichopogon cf. minutus</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer194	BOLD:ACA4348	200643	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer197	BOLD:ACA4348	200646	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer198	BOLD:ACA4348	200647	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer201	BOLD:ACA4348	200650	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer202	BOLD:ACA4348	200651	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer205	BOLD:ACA4348	200654	<i>Atrichopogon cf. minutus</i>	adult	F	3 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer227	BOLD:ACA4348	200676	<i>Atrichopogon cf. minutus</i>	adult	F	14 August 2014	E. Stur <i>et al.</i>	Trondheim	Jonsvatn
TRD-Cer294	BOLD:ACA4348	200743	<i>Atrichopogon cf. minutus</i>	adult	F	31 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer306	BOLD:ACA4348	200755	<i>Atrichopogon cf. minutus</i>	adult	F	14 August 2014	E. Stur <i>et al.</i>	Trondheim	Nidelva
MM-Cer251	BOLD:ACX1975	226941	<i>Atrichopogon muelleri</i>	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Prestebekken
AT-Cer8	BOLD:ABZ9243	227064	<i>Atrichopogon muelleri</i>	adult	M	17 July 2020	P. Dominiak & E. Stur	Kristiansand	Prestebekken
MM-Cer150	BOLD:ABZ9243	226840	<i>Atrichopogon oedemerarum</i>	adult	F	7 July 2008	T. Hoffstad	Stor-Elvdal	Solbakken
MM-Cer20	BOLD:ABZ9243	226710	<i>Atrichopogon oedemerarum</i>	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
MM-Cer21	BOLD:ABZ9243	226711	<i>Atrichopogon oedemerarum</i>	adult	M	21 August 2019	P. Dominiak & E. Stur	Nissedal	Nisser
MM-Cer277	BOLD:ABZ9243	226967	<i>Atrichopogon oedemerarum</i>	adult	F	21 August 2019	P. Dominiak & E. Stur	Nissedal	Nisser
MM-Cer53	BOLD:ABZ9243	226743	<i>Atrichopogon oedemerarum</i>	adult	F	1 August 2019	S. Svendsen	Birkenes	Birkeland
TRD-Cer147	BOLD:ABZ9243	200596	<i>Atrichopogon oedemerarum</i>	adult	F	29 August 2019	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
HED-Cer175	BOLD:ACY5307	227033	<i>Atrichopogon oedemerarum</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer229	BOLD:ACY5307	200678	<i>Atrichopogon paulus</i>	adult	F	21 June 2020	P. Dominiak & E. Stur	Songdalen	Kroksjø
MM-Cer255	BOLD:ACX2517	226945	<i>Atrichopogon pavidus</i>	adult	F	5 August 2020	P. Dominiak & E. Stur	Kristiansand	Storevann
				adult	F	6 June 2016	G. M. Kvitte	Åmot	Nord for Stavlia II
				adult	F	22 June 2006	O. Hanssen	Røros	Sølenet
				adult	F	24 June 2020	P. Dominiak & E. Stur	Kristiansand	Flekkerøy

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer287	BOLD:ACX0617	226977	<i>Atrichopogon pavidus</i>	adult	M	1 July 2019	S. Svendsen	Birkenes	Birkeland
		227058	<i>Atrichopogon pavidus</i>	adult	M	13 July 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer148	BOLD:ACF7706	226838	<i>Atrichopogon winnerzi</i>	adult	F	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstulalen naturreservat
MM-Cer285	BOLD:ACF7706	226975	<i>Atrichopogon winnerzi</i>	adult	F	1 July 2019	S. Svendsen	Birkenes	Birkeland
		227034	<i>Atrichopogon winnerzi</i>	adult	F	22 June 2020	P. Dominiak & E. Stur	Songdalen	Kroksjø
		227082	<i>Atrichopogon winnerzi</i>	adult	F	3 August 2020	P. Dominiak & E. Stur	Kristiansand	Storevann
		227083	<i>Atrichopogon winnerzi</i>	adult	F	4 August 2020	P. Dominiak & E. Stur	Kristiansand	Storevann
TRD-Cer200	BOLD:ACS7801	200649	<i>Atrichopogon</i> sp. 5ES	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
MM-Cer197	BOLD:AEF3295	226887	<i>Atrichopogon</i> sp. 7ES	adult	F	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
MM-Cer336	BOLD:AEH9327	227026	<i>Atrichopogon</i> sp. 8ES	larva	M	6 June 2019	G. Kjaerstad	Trondheim	Kobberdammen
MM-Cer309	BOLD:ACX2583	226999	<i>Atrichopogon</i> sp. 9ES	adult	M	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Prestebekken
MM-Cer190	BOLD:ACX2583	226880	<i>Bezzia albicornis</i>	adult	F	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
MM-Cer191	BOLD:ACX2583	226881	<i>Bezzia albicornis</i>	adult	M	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
		227072	<i>Bezzia albicornis</i>	adult	M	25 July 2020	P. Dominiak & E. Stur	Farsund	Einarsneset
MM-Cer213	BOLD:ACX2190	226903	<i>Bezzia annulipes</i>	larva	M	26 August 2019	G. Kjaerstad	Kristiansand	Hamresanden
MM-Cer215	BOLD:ACX2190	226905	<i>Bezzia annulipes</i>	larva	M	18 June 2020	G. Kjaerstad	Kristiansand	Kostoljønn
MM-Cer334	BOLD:ACOS271	227024	<i>Bezzia annulipes</i>	pupa	F	26 July 2018	G. Kjaerstad	Ørkland	Lake Gjosjon
MM-Cer45	BOLD:ACX2190	226735	<i>Bezzia annulipes</i>	adult	F	30 August 2019	P. Dominiak & E. Stur	Songdalen	Kroksjø
MM-Cer64	BOLD:ACX2190	226754	<i>Bezzia annulipes</i>	adult	F	4 June 2019	K. Berggren	Kristiansand	Storevann
TRD-Cer164	BOLD:ACOS271	200613	<i>Bezzia annulipes</i>	adult	F	1 July 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer183	BOLD:ACOS271	200632	<i>Bezzia annulipes</i>	adult	F	11 September 2014	E. Stur <i>et al.</i>	Melhus	Gammelelva naturreservat
TRD-Cer214	BOLD:ACOS271	200663	<i>Bezzia annulipes</i>	adult	F	24 June 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer289	BOLD:ACOS271	200738	<i>Bezzia annulipes</i>	adult	M	31 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelelva naturreservat
TRD-Cer293	BOLD:ACOS271	200742	<i>Bezzia annulipes</i>	adult	F	31 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelelva naturreservat
TRD-Cer302	BOLD:ACOS271	200751	<i>Bezzia annulipes</i>	larva	F	1 June 2015	G. Kjaerstad	Trondheim	Gammelelva naturreservat
TRD-Cer8	BOLD:ACOS271	200457	<i>Bezzia annulipes</i>	larva	M	21 May 2014	E. Stur & K. Haarsaker	Trondheim	Kyvatnet
HED-Cer120	BOLD:ACX3378	200985	<i>Bezzia bicolor</i>	adult	M	17 September 2016	T. Andersen <i>et al.</i>	Rendalen	Jøgåsmyra
HED-Cer46	BOLD:ACX3378	200911	<i>Bezzia bicolor</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
HED-Cer71	BOLD:ACX3378	200936	<i>Bezzia bicolor</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
MM-Cer107	BOLD:ACX3378	226797	<i>Bezzia bicolor</i>	adult	F	1 July 2019	S. Svendsen	Birkeland	Nordåsvegen
MM-Cer230	BOLD:ACX3378	226920	<i>Bezzia bicolor</i>	pupa		24 August 2019	G. Kjærstad	Flekkefjord	Lundevatn at Sira
MM-Cer231	BOLD:ACX3378	226921	<i>Bezzia bicolor</i>	pupa		24 August 2019	G. Kjærstad	Flekkefjord	Lundevatn at Sira
MM-Cer235	BOLD:AEC2002	226925	<i>Bezzia fascispinosa</i>	larva		21 June 2020	G. Kjærstad	Kristiansand	Songdalen
MM-Cer240	BOLD:AEC2002	226930	<i>Bezzia fascispinosa</i>	larva		18 June 2020	G. Kjærstad	Kristiansand	Drangsholt
MM-Cer321	BOLD:AEC2002	227011	<i>Bezzia fascispinosa</i>	adult	M	21 July 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer35	BOLD:AEC2002	226725	<i>Bezzia fascispinosa</i>	adult	F	19 August 2019	P. Dominiak & E. Stur	Drangedal	Sannes-Langen
MM-Cer68	BOLD:AEC2002	226758	<i>Bezzia fascispinosa</i>	adult	F	6 August 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer71	BOLD:AEC2002	226761	<i>Bezzia fascispinosa</i>	adult	M	6 August 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer73	BOLD:AEC2002	226763	<i>Bezzia fascispinosa</i>	adult	F	6 August 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer95	BOLD:AEC2002	226785	<i>Bezzia fascispinosa</i>	adult	M	21 July 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer323	BOLD:AEl1206	227013	<i>Bezzia flavicornis</i>	adult	M	21 July 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
		227067	<i>Bezzia flavicornis</i>	adult	F	20 July 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer146	BOLD:ACX2584	226836	<i>Bezzia fuliginata</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
		227036	<i>Bezzia fuliginata</i>	adult	M	24 June 2020	P. Dominiak	Kristiansand	Hamresanden
MM-Cer108	BOLD:AEC1889	226798	<i>Bezzia kazlauskasi</i>	adult	M	1 July 2019	S. Svendsen	Birkeland	Nordåsvegen
HED-Cer125	BOLD:ADF7283	200990	<i>Bezzia nigrirufa</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
HED-Cer162	BOLD:ADD8546	201027	<i>Bezzia nigrirufa</i>	adult	M	30 June 2016	G. M. Kvifte	Os	Røst nord
HED-Cer209	BOLD:ADD8546	201074	<i>Bezzia nigrirufa</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer270	BOLD:ADD8546	201135	<i>Bezzia nigrirufa</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
HED-Cer35	BOLD:ADF7283	200900	<i>Bezzia nigrirufa</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer44	BOLD:ADD8546	200909	<i>Bezzia nigrirufa</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer45	BOLD:ADD8546	200910	<i>Bezzia nigrirufa</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
MM-Cer222	BOLD:ACX1844	226912	<i>Bezzia nobilis</i>	larva		16 June 2020	G. Kjærstad	Drammen	Haerstrom
MM-Cer332	BOLD:ACX1844	227022	<i>Bezzia nobilis</i>	larva		27 May 2020	G. Kjærstad	Trondheim	Jonsvatnet
MM-Cer278	BOLD:ACP8436	226968	<i>Bezzia ornata</i>	adult	M	1 August 2019	S. Svendsen	Birkenes	Birkeland
HED-Cer208	BOLD:ACM6383	201073	<i>Bezzia rhynchospilata</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
HED-Cer215	BOLD:ADG4592	201080	<i>Bezzia rhynchosylata</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
TRD-Cer6	BOLD:ACM6383	200455	<i>Bezzia rhynchosylata</i>	adult	M	20 June 2010	J. K. Skei	Trondheim	Gjeddejordma inlet
HED-Cer173	BOLD:ACU5144	201038	<i>Bezzia signata</i>	adult	M	19 September 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
HED-Cer216	BOLD:ACU5144	201081	<i>Bezzia signata</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer32	BOLD:ACU5144	200897	<i>Bezzia signata</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
MM-Cer145	BOLD:ACU5144	226835	<i>Bezzia signata</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
HED-Cer315	BOLD:ABW3990	201180	<i>Bezzia solstitialis</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer62	BOLD:ABW3990	226752	<i>Bezzia solstitialis</i>	adult	F	31 July 2019	E. Langegard & Ø. Ekrem	Marnadal	Lågåna øvre Laudal
MM-Cer109	BOLD:ABW3990	226799	<i>Bezzia solstitialis</i>	adult	F	1 July 2019	S. Svendsen	Birkeland	Nordåsvegen
MM-Cer165	BOLD:ABW3990	226855	<i>Bezzia solstitialis</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer186	BOLD:ABW3990	226876	<i>Bezzia solstitialis</i>	adult	F	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer217	BOLD:ABW3990	226907	<i>Bezzia solstitialis</i>	larva		19 June 2020	G. Kjaerstad	Tvedestrand	Molandsvannet
MM-Cer218	BOLD:ABW3990	226908	<i>Bezzia solstitialis</i>	larva		19 June 2020	G. Kjaerstad	Tvedestrand	Molandsvannet
MM-Cer219	BOLD:ABW3990	226909	<i>Bezzia solstitialis</i>	larva		19 June 2020	G. Kjaerstad	Tvedestrand	Molandsvannet
MM-Cer220	BOLD:ABW3990	226910	<i>Bezzia solstitialis</i>	larva		19 June 2020	G. Kjaerstad	Tvedestrand	Molandsvannet
MM-Cer236	BOLD:ABW3990	226926	<i>Bezzia solstitialis</i>	larva		21 June 2020	G. Kjaerstad	Kristiansand	Songdalen
MM-Cer237	BOLD:ABW3990	226927	<i>Bezzia solstitialis</i>	pupa		21 June 2020	G. Kjaerstad	Kristiansand	Songdalen
MM-Cer238	BOLD:ABW3990	226928	<i>Bezzia solstitialis</i>	pupa		21 June 2020	G. Kjaerstad	Kristiansand	Songdalen
MM-Cer257	BOLD:ABW3990	226947	<i>Bezzia solstitialis</i>	adult	F	24 June 2020	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
TRD-Cer304	BOLD:ABW3990	200753	<i>Bezzia solstitialis</i>	larva		1 June 2015	G. Kjaerstad	Trondheim	Kyvatnet
TRD-Cer311	BOLD:ABW3990	200760	<i>Bezzia solstitialis</i>	larva		16 June 2015	G. Kjaerstad	Trondheim	Lauglovatnet
		227049	<i>Bezzia solstitialis</i>	adult	F	4 July 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergsvann
		227056	<i>Bezzia solstitialis</i>	adult	M	11 July 2020	P. Dominiak & E. Stur	Kristiansand	Sogndalen
		227073	<i>Bezzia solstitialis</i>	adult	F	26 July 2020	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
MM-Cer187	BOLD:AEF5127	226877	<i>Bezzia</i> sp. 10ES	adult	M	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
HED-Cer146	BOLD:ACX2988	201011	<i>Bezzia</i> sp. 2ES	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Rendalen	Jøgåsmyra
HED-Cer36	BOLD:ACX2988	200901	<i>Bezzia</i> sp. 2ES	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer166	BOLD:ACX2988	226856	<i>Bezzia</i> sp. 2ES	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
TRD-Cer312	BOLD:ACX2988	200761	<i>Bezzia</i> sp. 2ES	pupa		16 June 2015	G. Kjaerstad	Trondheim	Lauglovatnet
MM-Cer232	BOLD:ABW3936	226922	<i>Bezzia</i> sp. 3ES	pupa		24 August 2019	G. Kjaerstad	Flekkefjord	Lundevatn at Sira
TRD-Cer317	BOLD:ABW3936	200766	<i>Bezzia</i> sp. 3ES	pupa		16 June 2015	G. Kjaerstad	Trondheim	Holstdammen
HED-Cer114	BOLD:ADC1577	200979	<i>Bezzia</i> sp. 4ES	adult	F	17 September 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
TRD-Cer310	BOLD:ADC1577	200759	<i>Bezzia</i> sp. 4ES	pupa		18 June 2015	G. Kjaerstad	Trondheim	Sølvskakkefjønna
HED-Cer31	BOLD:ADF6138	200896	<i>Bezzia</i> sp. 6ES	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer197	BOLD:AAG6456	201062	<i>Bezzia</i> sp. 8ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
MM-Cer212	BOLD:AAG6456	226902	<i>Bezzia</i> sp. 8ES	larva		28 August 2019	G. Kjaerstad	Froland	Nidelva
TRD-Cer303	BOLD:AAG6456	200752	<i>Bezzia</i> sp. 8ES	larva		1 June 2015	G. Kjaerstad	Trondheim	Kyvatnet
TRD-Cer305	BOLD:AAG6456	200754	<i>Bezzia</i> sp. 8ES	larva		1 June 2015	G. Kjaerstad	Trondheim	Kyvatnet
HED-Cer111	BOLD:ACU5326	200976	<i>Brachypogon alpinus</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer112	BOLD:ACU5326	200977	<i>Brachypogon alpinus</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer124	BOLD:ACX0614	200989	<i>Brachypogon beaufortanensis</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
HED-Cer86	BOLD:ACA2830	200951	<i>Brachypogon incompletus</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer118	BOLD:ACA2830	200983	<i>Brachypogon incompletus</i>	adult	M	17 September 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
HED-Cer229	BOLD:ABW3956	201094	<i>Brachypogon incompletus</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Enderdal	Åsen
MM-Cer44	BOLD:ACA2830	226734	<i>Brachypogon incompletus</i>	adult	F	23 August 2019	P. Dominiak & E. Stur	Flekkefjord	Tjern ved Lafjell
MM-Cer83	BOLD:ACA2830	226773	<i>Brachypogon incompletus</i>	adult	M	8 July 2019	K. Bergegn	Kristiansand	Storevann
MM-Cer344	BOLD:ABW3956	227032	<i>Brachypogon incompletus</i>	pupa		19 June 2017	G. Kjaerstad	Midtre	Samsjon
								Gauldal	
HED-Cer303	BOLD:ADH8226	227080	<i>Brachypogon incompletus</i>	adult	M	1 August 2020	K. Bergegn	Kristiansand	Storevann
AT-Cer1	BOLD:ABW3943	201168	<i>Brachypogon cf. nieves</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer38	BOLD:ABW3943	238674	<i>Brachypogon nitidulus</i>	adult	M	16 June 2008	T. Hoffstad	Dovre	Rondane nasjonalpark
HED-Cer110	BOLD:ABW3943	200903	<i>Brachypogon nitidulus</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer150	BOLD:ABW3943	200975	<i>Brachypogon nitidulus</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer290	BOLD:ABW3943	201015	<i>Brachypogon nitidulus</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
								Enderdal	Ulvåkjølen-Sundsetra

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer43	BOLD:ABW3943	226733	<i>Brachypogon nitidulus</i>	adult	F	23 August 2019	P. Dominiak & E. Stur	Flekkefjord	Tjern ved Lafjell
MM-Cer66	BOLD:ABW3943	226756	<i>Brachypogon nitidulus</i>	adult	M	4 June 2019	K. Bergren	Kristiansand	Storevann
MM-Cer120	BOLD:ABW3943	226810	<i>Brachypogon nitidulus</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kostøljønn
MM-Cer252	BOLD:ABW3943	226942	<i>Brachypogon nitidulus</i>	adult	M	4 June 2019	K. Bergren	Kristiansand	Storevann
MM-Cer304	BOLD:ABW3943	226994	<i>Brachypogon nitidulus</i>	adult	M	5 September 2019	P. Dominiak & E. Stur	Kristiansand	Kostøljønn
TRD-Cer9	BOLD:ABW3943	200458	<i>Brachypogon nitidulus</i>	adult	F	26 May 2014	E. Stur	Trondheim	Bymarka
		227081	<i>Brachypogon norvegicus</i>	adult	M	2 August 2020	K. Bergren	Kristiansand	Storevann
MM-Cer183	BOLD:AEC3093	226873	<i>Brachypogon perpusillus</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordeljønn
MM-Cer81	BOLD:AEC3093	226771	<i>Brachypogon perpusillus</i>	adult	F	8 July 2019	K. Bergren	Kristiansand	Storevann
AT-Cer6	BOLD:ABW3958	238679	<i>Brachypogon sociabilis</i>	adult	M	30 June 2008	T. Hoffstad	Folldal	Vollen
HED-Cer151	BOLD:ABW3958	201016	<i>Brachypogon sociabilis</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Rendalen	Jøgåsmyra
HED-Cer230	BOLD:ACE8195	201095	<i>Brachypogon sociabilis</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Enderdal	Åsen
MM-Cer61	BOLD:ABW3958	226751	<i>Brachypogon sociabilis</i>	adult	M	2 June 2019	E. Langedgard & Ø. Ekrem	Marnadal	Lågåna øvre Laudal
MM-Cer116	BOLD:ABW3958	226806	<i>Brachypogon sociabilis</i>	adult	F	17 June 2020	E. Stur	Drangedal	Engåa
MM-Cer153	BOLD:ACE8195	226843	<i>Brachypogon sociabilis</i>	adult	M	19 June 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
MM-Cer172	BOLD:ABW3958	226862	<i>Brachypogon sociabilis</i>	adult	F	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstådheia naturreservat
MM-Cer281	BOLD:ABW4001	226971	<i>Brachypogon sociabilis</i>	adult	M	21 June 2019	K. Bergren	Kristiansand	Nedre Jegersbergvann
MM-Cer294	BOLD:ABW3958	226984	<i>Brachypogon sociabilis</i>	adult	M	4 June 2019	K. Bergren	Kristiansand	Nedre Jegersbergvann
TRD-Cer13	BOLD:ACE8195	200462	<i>Brachypogon sociabilis</i>	adult	F	4 June 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
TRD-Cer14	BOLD:ACE8195	200463	<i>Brachypogon sociabilis</i>	adult	F	4 June 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
TRD-Cer16	BOLD:ACE8195	200465	<i>Brachypogon sociabilis</i>	adult	F	4 June 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
TRD-Cer73	BOLD:ABW3958	200522	<i>Brachypogon sociabilis</i>	adult	M	4 June 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer77	BOLD:ABW3958	200526	<i>Brachypogon sociabilis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer78	BOLD:ABW3958	200527	<i>Brachypogon sociabilis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer89	BOLD:ABW4001	200538	<i>Brachypogon sociabilis</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer90	BOLD:ABW3958	200539	<i>Brachypogon sociabilis</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer206	BOLD:ACE8195	200655	<i>Brachypogon sociabilis</i>	adult	F	3 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer219	BOLD:ACE8195	200668	<i>Brachypogon sociabilis</i>	adult	F	3 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
HED-Cer84	BOLD:ACN4299	200949	<i>Brachypogon vitiosus</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer301	BOLD:ACN4299	201166	<i>Brachypogon vitiosus</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer304	BOLD:ACN4299	201169	<i>Brachypogon vitiosus</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
MM-Cer106	BOLD:ACJ1070	226796	<i>Brachypogon vitiosus</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer264	BOLD:ACJ1070	226954	<i>Brachypogon vitiosus</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
HED-Cer201	BOLD:ADG4684	201066	<i>Brachypogon</i> sp. 3ES	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
TRD-Cer296	BOLD:ACY4182	200745	<i>Brachypogon</i> sp. 4ES	adult	F	31 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer81	BOLD:ACS1815	200530	<i>Brachypogon</i> sp. 5ES	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer15	BOLD:ACO4024	200464	<i>Brachypogon</i> sp. 6ES	adult	F	4 June 2014	E. Stur <i>et al.</i>	Klæbu	Selbusjøen
HED-Cer264	BOLD:ADI0996	201129	<i>Brachypogon</i> sp. 7ES	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
HED-Cer266	BOLD:ADI0996	201131	<i>Brachypogon</i> sp. 7ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
HED-Cer280	BOLD:ADH9057	201145	<i>Brachypogon</i> sp. 7ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
MM-Cer298	BOLD:ACX0816	226988	<i>Ceratopogon</i> sp. 1ES	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
HED-Cer238	BOLD:AAP6905	201103	<i>Ceratopogon abstrusus</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
TRD-Cer243		200692	<i>Ceratopogon abstrusus</i>	adult	F	22 June 2006	O. Hanssen	Roros	Sølandet
HED-Cer172	BOLD:ABW3984	201037	<i>Ceratopogon grandiforceps</i>	adult	F	19 September 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
AT-Cer9	BOLD:ACX5097	238682	<i>Ceratopogon</i> cf. <i>inverecundus</i>	adult	F	7 July 2008	T. Hoffstad	Stor-Elvdal	Solbakken
HED-Cer164	BOLD:ACX5097	201029	<i>Ceratopogon</i> cf. <i>inverecundus</i>	adult	M	19 September 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
TRD-Cer236	BOLD:ACX5097	200685	<i>Ceratopogon</i> cf. <i>inverecundus</i>	adult	F	22 June 2006	O. Hanssen	Roros	Sølandet
HED-Cer39	BOLD:ACA4516	200904	<i>Ceratopogon lacteipennis</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer88	BOLD:ACA4516	200953	<i>Ceratopogon lacteipennis</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer156	BOLD:ACA4516	201021	<i>Ceratopogon lacteipennis</i>	adult	F	16 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
HED-Cer178	BOLD:ACA4516	201043	<i>Ceratopogon lacteipennis</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
MM-Cer65	BOLD:ACA4516	226755	<i>Ceratopogon lacteipennis</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Storevann
MM-Cer98	BOLD:ACA4516	226788	<i>Ceratopogon lacteipennis</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer99		226789	<i>Ceratopogon lacteipennis</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer129	BOLD:ACA4516	226819	<i>Ceratopogon lacteipennis</i>	adult	M	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstudalen naturreservat

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer147	BOLD:ACA4516	226837	<i>Ceratopogon lacteipennis</i>	adult	M	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstulalen naturreservat
MM-Cer265	BOLD:ACA4516	226955	<i>Ceratopogon lacteipennis</i>	adult	M	4 June 2019	K. Bergren	Kristiansand	Nedre Jegersbergvann
MM-Cer279	BOLD:ACA4516	226969	<i>Ceratopogon lacteipennis</i>	adult	M	20 May 2019	K. Bergren	Kristiansand	Nedre Jegersbergvann
		227061	<i>Ceratopogon lacteipennis</i>	adult	M	15 July 2020	P. Dominiak & E. Stur	Lillesand	Badstulalen naturreservat
MM-Cer157	BOLD:ACX3725	227079	<i>Ceratopogon lacteipennis</i>	adult	M	31 July 2020	K. Bergren	Kristiansand	Storevann
MM-Cer177	BOLD:ACX3725	226847	<i>Clinohoelea unimaculata</i>	adult	M	19 June 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
MM-Cer178	BOLD:ACX3725	226867	<i>Clinohoelea unimaculata</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordefjonn
MM-Cer179	BOLD:ACX3725	226868	<i>Clinohoelea unimaculata</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordefjonn
		226869	<i>Clinohoelea unimaculata</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordefjonn
		227053	<i>Clinohoelea unimaculata</i>	adult	F	8 July 2020	P. Dominiak & E. Stur	Kristiansand	creek between Kostolfjonn and Jordefjonn
		227054	<i>Clinohoelea unimaculata</i>	adult	M	9 July 2020	P. Dominiak & E. Stur	Kristiansand	creek between Kostolfjonn and Jordefjonn
HED-Cer54	BOLD:ABW3940	227062	<i>Clinohoelea unimaculata</i>	adult	M	16 July 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
HED-Cer55	BOLD:ABW3940	200919	<i>Culicoides albicans</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer57	BOLD:ADF8422	200920	<i>Culicoides albicans</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer225	BOLD:ABW3940	200922	<i>Culicoides albicans</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer276	BOLD:ABW3940	201090	<i>Culicoides albicans</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer288	BOLD:ABW3940	201141	<i>Culicoides albicans</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
HED-Cer311	BOLD:ABW3940	201153	<i>Culicoides albicans</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Ulvkjølen-Sundsetra
HED-Cer312	BOLD:ADF8422	201176	<i>Culicoides albicans</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer313	BOLD:ABW3940	201177	<i>Culicoides albicans</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer84	BOLD:ABW3940	201178	<i>Culicoides albicans</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer89	BOLD:ABW3940	226774	<i>Culicoides albicans</i>	adult	F	8 July 2019	K. Bergren	Kristiansand	Storevann
MM-Cer121	BOLD:ABW3940	226779	<i>Culicoides albicans</i>	adult	F	21 June 2019	K. Bergren	Kristiansand	Storevann
MM-Cer253	BOLD:ABW3940	226811	<i>Culicoides albicans</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kostolfjonn
MM-Cer288	BOLD:ABW3940	226943	<i>Culicoides albicans</i>	adult	F	4 June 2019	K. Bergren	Kristiansand	Storevann
		226978	<i>Culicoides albicans</i>	adult	M	1 July 2019	S. Svendsen	Birkenes	Birkeland

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer289	BOLD:ABW3940	226979	<i>Culicoides albicans</i>	adult	M	1 July 2019	S. Svendsen	Birkenes	Birkeland
MM-Cer290	BOLD:ABW3940	226980	<i>Culicoides albicans</i>	adult	M	1 July 2019	S. Svendsen	Birkenes	Birkeland
MM-Cer311	BOLD:ABW3940	227001	<i>Culicoides albicans</i>	adult	M	24 June 2020	P. Dominiak & E. Stur	Kristiansand	Storevann
TRD-Cer5	BOLD:ABW3940	200454	<i>Culicoides albicans</i>	adult	M	20 June 2010	J. K. Skei	Trondheim	Gjeddtjørna inlet
MM-Cer284	BOLD:AEH0796	226974	<i>Culicoides boyi</i>	adult	F	1 July 2019	S. Svendsen	Birkenes	Birkeland
TRD-Cer308	BOLD:ACO3870	200757	<i>Culicoides chiopterus</i>	adult	F	28 September 2015	E. Stur	Trondheim	Jonsvatn
MM-Cer06	BOLD:ABX3077	226696	<i>Culicoides circumscriptus</i>	adult	F	19 June 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer07	BOLD:ABX3077	226697	<i>Culicoides circumscriptus</i>	adult	M	19 June 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer268	BOLD:AAV9748	226958	<i>Culicoides circumscriptus</i>	adult	F	27 July 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer270	BOLD:ABX3077	226960	<i>Culicoides circumscriptus</i>	adult	F	27 July 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer271	BOLD:ACO3870	226961	<i>Culicoides circumscriptus</i>	adult	F	27 July 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer320	BOLD:AAV9748	227010	<i>Culicoides circumscriptus</i>	adult	F	21 August 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer130	BOLD:ACG3274	226820	<i>Culicoides clintoni</i>	adult	M	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstudalen naturreservat
MM-Cer312	BOLD:ACG3274	227002	<i>Culicoides clintoni</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer339	BOLD:ACG3274	227027	<i>Culicoides clintoni</i>	pupa		4 June 2019	G. Kjaerstad	Trondheim	Haukvatnet
HED-Cer28	BOLD:ADF6075	200893	<i>Culicoides comosoculatus</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer29	BOLD:ADF6075	200894	<i>Culicoides comosoculatus</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
MM-Cer93	BOLD:AAZ4055	226783	<i>Culicoides devulfi</i>	adult	F	31 August 2019	E. Langedgard & Ø. Ekrem	Marnadal	Lågåna øvre Landal
HED-Cer235	BOLD:AAZ4055	201100	<i>Culicoides fuscipennis</i>	adult	F	2 September 2016	T. Andersen et al.	Engerdal	Åsen
MM-Cer18	BOLD:AAZ4055	226708	<i>Culicoides fuscipennis</i>	adult	F	20 August 2019	P. Dominiak & E. Stur	Drangedal	Langmyr
MM-Cer261	BOLD:AAZ4055	226951	<i>Culicoides fuscipennis</i>	adult	M	5 August 2019	K. Berggren	Kristiansand	Kristiansand
HED-Cer160	BOLD:ADG5653	227078	<i>Culicoides festivipennis</i>	adult	F	30 July 2020	P. Dominiak & E. Stur	Farsund	near Lista a luminium plant
MM-Cer327	BOLD:ACF1108	201025	<i>Culicoides fureillatus</i>	adult	F	7 June 2016	G. M. Kvifte	Engerdal	Kvemskjøla-Sorken
NO 106	BOLD:ACF1108	227017	<i>Culicoides gormostaeva</i>	adult	F	1 July 2019	S. Svendsen	Birkenes	Birkeland
AT-Cer2	BOLD:AAR4918	238675	<i>Culicoides gormostaeva</i>	adult	M	20 June 2010	J. K. Skei	Trondheim	Gjeddvatnet
AT-Cer3	BOLD:AAR4918	238676	<i>Culicoides grisevens</i>	adult	M	24 August 2008	T. Hoffstad	Folldal	Vollen
	BOLD:AAR4918	238676	<i>Culicoides grisevens</i>	adult	F	24 August 2008	T. Hoffstad	Folldal	Vollen

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
AT-Cer17	BOLD:AAR4918	238690	<i>Culicoides griseescens</i>	adult	F	22 September 2008	T. Hoffstad	Folldal	Atna river
AT-Cer18	BOLD:AAR4918	238691	<i>Culicoides griseescens</i>	adult	M	29 September 2008	T. Hoffstad	Folldal	Atna river
AT-Cer19	BOLD:AAR4918	238692	<i>Culicoides griseescens</i>	adult	F	29 August 2008	T. Hoffstad	Folldal	Atna river
HED-Cer04	BOLD:AAR4918	200869	<i>Culicoides griseescens</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer08	BOLD:AAR4918	200873	<i>Culicoides griseescens</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer12	BOLD:AAR4918	200877	<i>Culicoides griseescens</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer167	BOLD:AAR4918	201032	<i>Culicoides griseescens</i>	adult	F	19 September 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
MM-Cer269	BOLD:AAR4918	226959	<i>Culicoides griseescens</i>	adult	F	27 July 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer273	BOLD:AAR4918	226963	<i>Culicoides griseescens</i>	adult	F	1 August 2019	S. Svendsen	Birkenes	Birkeland
MM-Cer329	BOLD:AEI3120	227019	<i>Culicoides griseescens</i>	adult	F	1 July 2019	S. Svendsen	Birkenes	Birkeland
MM-Cer330	BOLD:AAR4918	227020	<i>Culicoides griseescens</i>	adult	F	1 August 2019	S. Svendsen	Birkenes	Birkeland
TRD-Cer38	BOLD:AAR4918	200487	<i>Culicoides griseescens</i>	adult	F	25 September 2014	E. Stur	Klebu	Selbusjøen
TRD-Cer51	BOLD:AAR4918	200500	<i>Culicoides griseescens</i>	adult	F	25 September 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer99	BOLD:AAR4918	200548	<i>Culicoides griseescens</i>	adult	F	28 August 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
TRD-Cer170	BOLD:AAR4918	200619	<i>Culicoides griseescens</i>	adult	F	9 September 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
TRD-Cer171	BOLD:AAR4918	200620	<i>Culicoides griseescens</i>	adult	F	9 September 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
TRD-Cer215	BOLD:AAR4918	200664	<i>Culicoides griseescens</i>	adult	F	9 October 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
TRD-Cer224	BOLD:AAR4918	200673	<i>Culicoides griseescens</i>	adult	F	14 August 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer290	BOLD:AAR4918	200739	<i>Culicoides griseescens</i>	adult	F	31 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
MM-Cer14	BOLD:ACF7867	226704	<i>Culicoides heliophilus</i>	adult	M	19 June 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer100	BOLD:ACF7867	226790	<i>Culicoides heliophilus</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
EBAI-Dip001	BOLD:ACG4335	238530	<i>Culicoides impunctatus</i>	adult	F	10 August 2015	K. Haarsaker <i>et al.</i>	Dovre	Rondane nasjonalpark
HED-Cer142	BOLD:ACG4335	201007	<i>Culicoides impunctatus</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
MM-Cer10	BOLD:ACG4335	226700	<i>Culicoides impunctatus</i>	adult	F	19 June 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer17	BOLD:ACG4335	226707	<i>Culicoides impunctatus</i>	adult	F	22 August 2019	P. Dominiak & E. Stur	Flekkefjord	Flikkeid
MM-Cer49	BOLD:ACG4335	226739	<i>Culicoides impunctatus</i>	adult	F	24 August 2019	P. Dominiak & E. Stur	Flekkefjord	Lundevatn
MM-Cer135	BOLD:ACG4335	226825	<i>Culicoides impunctatus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer137	BOLD:ACG4335	226827	<i>Culicoides impunctatus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer249	BOLD:ACG4335	226939	<i>Culicoides impunctatus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordeljønn
MM-Cer256	BOLD:ACG4335	226946	<i>Culicoides impunctatus</i>	adult	F	24 June 2020	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
MM-Cer260	BOLD:ACG4335	226950	<i>Culicoides impunctatus</i>	adult	F	5 August 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer267	BOLD:ACG4335	226957	<i>Culicoides impunctatus</i>	adult	F	1 July 2019	E. Laugegard & Ø. Ekrem	Marnardal	Lågåna Øvre Laudal
MM-Cer319	BOLD:ACG4335	227009	<i>Culicoides impunctatus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
HED-Cer98	BOLD:ACG4460	200963	<i>Culicoides kibunensis</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer140	BOLD:ACG4460	201005	<i>Culicoides kibunensis</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer141	BOLD:AAG6430	201006	<i>Culicoides kibunensis</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer221	BOLD:AAG6430	201086	<i>Culicoides kibunensis</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer222	BOLD:AAG6430	201087	<i>Culicoides kibunensis</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer257	BOLD:AAG6430	201122	<i>Culicoides kibunensis</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer258	BOLD:AAG6430	201123	<i>Culicoides kibunensis</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer117	BOLD:AAG6430	226807	<i>Culicoides kibunensis</i>	adult	F	17 June 2020	E. Stur	Drangedal	Engåa
MM-Cer78	BOLD:ACP1255	226768	<i>Culicoides kibunensis</i>	adult	F	21 July 2019	K. Berggren	Kristiansand	Nedre Timenes at bridge
SOE424	BOLD:AAG6430	110770	<i>Culicoides kibunensis</i>	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer21	BOLD:ACR6993	200470	<i>Culicoides kibunensis</i>	adult	M	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer32	BOLD:ACR6993	200481	<i>Culicoides kibunensis</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer34	BOLD:ACR6993	200483	<i>Culicoides kibunensis</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer36	BOLD:ACR6993	200485	<i>Culicoides kibunensis</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer230	BOLD:AAG6430	200679	<i>Culicoides kibunensis</i>	adult	M	22 June 2006	O. Hanssen	Roros	Sølandet
TRD-Cer272	BOLD:AAG6430	200721	<i>Culicoides kibunensis</i>	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer280	BOLD:ACG4460	200729	<i>Culicoides kibunensis</i>	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
HED-Cer119	BOLD:ABZ9443	200984	<i>Culicoides lenae</i>	adult	M	17 September 2016	T. Andersen <i>et al.</i>	Rendalen	Jøgåsmyra
FiCer2	BOLD:AAP9051	143848	<i>Culicoides manhuriensis</i>	adult	M	24 June 2010	Finnmarksprosjektet	Sør-Varanger	South of 96-høyden
MM-Cer08	BOLD:AEG3671	226698	<i>Culicoides maritimus</i>	adult	M	19 June 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer134	BOLD:AEG3671	226824	<i>Culicoides maritimus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
		227038	<i>Culicoides maritimus</i>	adult	M	26 June 2020	P. Dominiak	Kristiansand	Hamresanden

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
HED-Cer09	BOLD:AAM6198	200874	<i>Culicoides obsoletus</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer58	BOLD:ACF9576	200923	<i>Culicoides obsoletus</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbiern
HED-Cer97	BOLD:ACF9576	200962	<i>Culicoides obsoletus</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer12	BOLD:AAM6198	226702	<i>Culicoides obsoletus</i>	adult	F	19 June 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer136	BOLD:AAM6198	226826	<i>Culicoides obsoletus</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer276	BOLD:AAM6198	226966	<i>Culicoides obsoletus</i>	adult	F	1 August 2019	S. Svendsen	Birkenes	Birkeland
TRD-Cer86	BOLD:ACF9576	200535	<i>Culicoides obsoletus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer87	BOLD:ACF9576	200536	<i>Culicoides obsoletus</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer101	BOLD:AAM6198	200550	<i>Culicoides obsoletus</i>	adult	M	28 August 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
HED-Cer100	BOLD:ACP1727	200965	<i>Culicoides pallidicornis</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer306	BOLD:ACP1727	226996	<i>Culicoides pallidicornis</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Farsund	near Lista aluminium plant
MM-Cer09	BOLD:AAZ3959	226699	<i>Culicoides pictipennis</i>	adult	F	19 June 2019	K. Berggren	Kristiansand	Kristiansand
TRD-Cer68	BOLD:AAZ3959	200517	<i>Culicoides pictipennis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
HED-Cer07	BOLD:AEC5818	200872	<i>Culicoides pulicaris</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
MM-Cer28	BOLD:AEC5818	226718	<i>Culicoides pulicaris</i>	adult	F	16 May 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer58		226748	<i>Culicoides pulicaris</i>	adult	F	5 September 2019	T. Ekrem	Kristiansand	Hamresanden, Fugløyna
HED-Cer154	BOLD:ACX2603	201019	<i>Culicoides punctatus</i>	adult	M	5 November 2016	L. Hagenlund	Stor-Elvdal	Evenstad
MM-Cer29	BOLD:ACX2603	226719	<i>Culicoides punctatus</i>	adult	M	16 May 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer54	BOLD:ACX2603	226744	<i>Culicoides punctatus</i>	adult	M	29 August 2019	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
MM-Cer262	BOLD:ACX2603	226952	<i>Culicoides punctatus</i>	adult	M	5 August 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer275	BOLD:ACX2603	226965	<i>Culicoides punctatus</i>	adult	F	1 August 2019	S. Svendsen	Birkenes	Birkeland
HED-Cer27	BOLD:ABW3966	200892	<i>Culicoides rioxii</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
MM-Cer11	BOLD:ABW3966	226701	<i>Culicoides rioxii</i>	adult	F	19 June 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer138	BOLD:ABW3966	226828	<i>Culicoides rioxii</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
TRD-Cer20	BOLD:ABW3966	200469	<i>Culicoides rioxii</i>	adult	M	17 July 2014	E. Stur	Melhus	Gammlelva naturreservat
TRD-Cer65	BOLD:ABW3966	200514	<i>Culicoides rioxii</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
HED-Cer126	BOLD:ADS6479	200991	<i>Culicoides salinarius</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
TRD-Cer124	BOLD:ADS6479	200573	<i>Culicoides salinarius</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva

TABLE 2. *continued.*

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
HED-Cer03	BOLD:AAZ3985	200868	<i>Culicoides scoticus</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer05	BOLD:AAZ3985	200870	<i>Culicoides scoticus</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer06	BOLD:AAZ3985	200871	<i>Culicoides scoticus</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer10	BOLD:AAZ3985	200875	<i>Culicoides scoticus</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer11	BOLD:AAZ3985	200876	<i>Culicoides scoticus</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
MM-Cer272		226962	<i>Culicoides scoticus</i>	adult	M	1 August 2019	S. Svendsen	Birkenes	Birkeland
MM-Cer274		226964	<i>Culicoides scoticus</i>	adult	F	1 August 2019	S. Svendsen	Birkenes	Birkeland
TRD-Cer37	BOLD:AAZ3985	200486	<i>Culicoides scoticus</i>	adult	F	25 September 2014	E. Stur	Klebu	Selbusjøen
MM-Cer305	BOLD:AAZ9630	226995	<i>Culicoides segnis</i>	adult	F	26 June 2020	P. Dominiak & E. Stur	Farsund	near Lista aluminium plant
MM-Cer328	BOLD:AAZ9630	227018	<i>Culicoides segnis</i>	adult	F	1 July 2019	S. Svendsen	Birkenes	Birkeland
TRD-Cer33	BOLD:AAZ9630	200482	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelleva naturreservat
TRD-Cer35	BOLD:AAZ9630	200484	<i>Culicoides segnis</i>	adult	M	17 July 2014	E. Stur	Melhus	Gammelleva naturreservat
TRD-Cer55	BOLD:AAZ9630	200504	<i>Culicoides segnis</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer56	BOLD:AAZ9630	200505	<i>Culicoides segnis</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer57	BOLD:AAZ9630	200506	<i>Culicoides segnis</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer58	BOLD:AAZ9630	200507	<i>Culicoides segnis</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer59	BOLD:AAZ9630	200508	<i>Culicoides segnis</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer60	BOLD:AAZ9630	200509	<i>Culicoides segnis</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer61	BOLD:AAZ9630	200510	<i>Culicoides segnis</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer71	BOLD:AAZ9630	200520	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer72	BOLD:AAZ9630	200521	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer74	BOLD:AAZ9630	200523	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer75	BOLD:AAZ9630	200524	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer76	BOLD:AAZ9630	200525	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer79	BOLD:AAZ9630	200528	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer83	BOLD:AAZ9630	200532	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer84	BOLD:AAZ9630	200533	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer85	BOLD:AAZ9630	200534	<i>Culicoides segnis</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer203	BOLD:AAV9630	200652	<i>Culicoides segnis</i>	adult	M	3 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer297	BOLD:AAV9630	200746	<i>Culicoides segnis</i>	adult	F	31 July 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
HED-Cer220	BOLD:ABW3965	201085	<i>Culicoides sphagnumensis</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
MM-Cer192	BOLD:ACX3324	226882	<i>Dasyhelea acuminata</i>	adult	F	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
HED-Cer170	BOLD:ADG4457	201035	<i>Dasyhelea arenivaga</i>	adult	M	19 September 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
MM-Cer193	BOLD:ACX3059	226883	<i>Dasyhelea arenivaga</i>	adult	F	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
MM-Cer194	BOLD:ACX2767	226884	<i>Dasyhelea arenivaga</i>	adult	F	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
MM-Cer196	BOLD:ACX3059	226886	<i>Dasyhelea arenivaga</i>	adult	M	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
HED-Cer59	BOLD:ABW3983	200924	<i>Dasyhelea arenivaga</i>	adult	M	23 June 2020	P. Dominiak	Kristiansand	Hamresanden
HED-Cer157	BOLD:AAV5200	201022	<i>Dasyhelea baltica</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer309	BOLD:ABW3983	201174	<i>Dasyhelea baltica</i>	adult	M	31 May 2016	L. Hagenlund	Stor-Elvdal	Nabbjerm
MM-Cer202	BOLD:AAV5200	226892	<i>Dasyhelea baltica</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
MM-Cer342	BOLD:ABW3983	227030	<i>Dasyhelea baltica</i>	pupa	M	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
MM-Cer343	BOLD:ABW3983	227031	<i>Dasyhelea baltica</i>	pupa	M	13 June 2017	G. Kjaerstad	Trondheim	Lauglovatnet
NO 105	BOLD:AAV5200	200862	<i>Dasyhelea baltica</i>	adult	M	13 June 2017	G. Kjaerstad	Trondheim	Lauglovatnet
TRD-Cer313	BOLD:ABW3983	200762	<i>Dasyhelea baltica</i>	pupa	M	20 June 2010	J. K. Skei	Trondheim	Gjeddatnet
TRD-Cer314	BOLD:ABW3983	200763	<i>Dasyhelea baltica</i>	pupa	M	16 June 2015	G. Kjaerstad	Trondheim	Lauglovatnet
HED-Cer40	BOLD:AAV5200	200905	<i>Dasyhelea baltica</i>	adult	F	16 June 2015	G. Kjaerstad	Trondheim	Lauglovatnet
HED-Cer81	BOLD:AAV5200	200946	<i>Dasyhelea bensoni</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
MM-Cer15	BOLD:AAN5169	226705	<i>Dasyhelea bensoni</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
MM-Cer30	BOLD:AAN5169	226720	<i>Dasyhelea bilineata</i>	adult	F	29 August 2019	P. Dominiak & E. Stur	Kristiansand	Gillsvann
MM-Cer31	BOLD:AAN5169	226721	<i>Dasyhelea bilineata</i>	adult	M	16 May 2019	K. Berggren	Kristiansand	Kristiansand
TRD-Cer134	BOLD:AAN5169	200583	<i>Dasyhelea bilineata</i>	adult	F	16 May 2019	K. Berggren	Kristiansand	Kristiansand
HED-Cer49	BOLD:ACX2425	200914	<i>Dasyhelea biunguis</i>	adult	M	11 September 2014	E. Stur	Trondheim	Nidelva
MM-Cer169	BOLD:ACX2425	226859	<i>Dasyhelea biunguis</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer80	BOLD:AC13180	200945	<i>Dasyhelea caesia</i>	adult	M	17 June 2020	E. Stur	Drangedal	Sannes-Langen
HED-Cer82	BOLD:AC13180	200947	<i>Dasyhelea caesia</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer72	BOLD:AEC1756	226762	<i>Dasyhelea caesia</i>	adult	M	6 August 2019	K. Bergren	Kristiansand	Nedre Jegersbergvann
MM-Cer75	BOLD:AEC1756	226765	<i>Dasyhelea caesia</i>	adult	M	21 August 2019	K. Bergren	Kristiansand	Nedre Jegersbergvann
MM-Cer115	BOLD:AEC1756	226805	<i>Dasyhelea caesia</i>	adult	M	17 June 2020	E. Stur	Drangedal	Engåa
MM-Cer122	BOLD:AEC1756	226812	<i>Dasyhelea caesia</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kostløyjonn
MM-Cer163	BOLD:AEC1756	226853	<i>Dasyhelea caesia</i>	adult	F	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer182	BOLD:AEC1756	226872	<i>Dasyhelea caesia</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordeljønn
TRD-Cer52	BOLD:AC13180	200501	<i>Dasyhelea caesia</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer53	BOLD:AC13180	200502	<i>Dasyhelea caesia</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer64	BOLD:AC13180	200513	<i>Dasyhelea caesia</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer182	BOLD:AC13180	200631	<i>Dasyhelea caesia</i>	adult	F	11 September 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer225	BOLD:AC13180	200674	<i>Dasyhelea caesia</i>	adult	M	14 August 2014	E. Stur <i>et al.</i>	Trondheim	Jonsvatn
TRD-Cer226	BOLD:AC13180	200675	<i>Dasyhelea caesia</i>	adult	M	14 August 2014	E. Stur <i>et al.</i>	Trondheim	Jonsvatn
		227055	<i>Dasyhelea caesia</i>	adult	M	10 July 2020	P. Dominiak & E. Stur	Kristiansand	creek between Kostløyjonn and Jordeljønn
MM-Cer132	BOLD:ACX2966	226822	<i>Dasyhelea dampfi</i>	adult	M	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstudalen naturreservat
MM-Cer307	BOLD:ACX2966	226997	<i>Dasyhelea dampfi</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
		227047	<i>Dasyhelea dampfi</i>	adult	M	2 July 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
HED-Cer42	BOLD:ABZ8984	200907	<i>Dasyhelea europaea</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer63	BOLD:ABZ8984	200928	<i>Dasyhelea europaea</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer147	BOLD:ABZ8984	201012	<i>Dasyhelea europaea</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
HED-Cer179	BOLD:ABZ8984	201044	<i>Dasyhelea europaea</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer199	BOLD:ABZ8984	201064	<i>Dasyhelea europaea</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
HED-Cer242	BOLD:ABZ8984	201107	<i>Dasyhelea europaea</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
HED-Cer249	BOLD:ABZ8984	201114	<i>Dasyhelea europaea</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer252	BOLD:ABZ8984	201117	<i>Dasyhelea europaea</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer267	BOLD:ABZ8984	201132	<i>Dasyhelea europaea</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
TRD-Cer265	BOLD:ABZ8984	200714	<i>Dasyhelea europaea</i>	adult	F	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer266	BOLD:ABZ8984	200715	<i>Dasyhelea europaea</i>	adult	F	6 July 2006	O. Hanssen	Røros	Sølandet

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
AT-Cer13	BOLD:ACSI168	238686	<i>Dasyhelea flavifrons</i>	adult	F	7 July 2008	T. Hoffstad	Stor-Elvdal	Solbakken
HED-Cer293	BOLD:AD0494	201158	<i>Dasyhelea flavifrons</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Ulvåkjølen-Sundsetra
MM-Cer188	BOLD:AEF4343	226878	<i>Dasyhelea flavifrons</i>	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
TRD-Cer93	BOLD:ACSI168	200542	<i>Dasyhelea flavifrons</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer111	BOLD:ACSI168	200560	<i>Dasyhelea flavifrons</i>	adult	M	5 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer199	BOLD:ACS7525	200648	<i>Dasyhelea flavifrons</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
HED-Cer37	BOLD:ADF5686	200902	<i>Dasyhelea holosericea</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer62	BOLD:ACX2712	200927	<i>Dasyhelea lucida</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer107	BOLD:ADE5000	200972	<i>Dasyhelea lucida</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer152	BOLD:ACX2712	226842	<i>Dasyhelea lucida</i>	adult	M	19 June 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
MM-Cer201	BOLD:ACX2712	226891	<i>Dasyhelea lucida</i>	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
HED-Cer108	BOLD:ADG5071	200973	<i>Dasyhelea malleola</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer231	BOLD:ABW3962	201096	<i>Dasyhelea malleola</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer232	BOLD:ABW3962	201097	<i>Dasyhelea malleola</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer250	BOLD:ABW3962	201115	<i>Dasyhelea malleola</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer254	BOLD:ABW3962	201119	<i>Dasyhelea malleola</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer255	BOLD:ABW3962	201120	<i>Dasyhelea malleola</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer294	BOLD:ABW3962	201159	<i>Dasyhelea malleola</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Ulvåkjølen-Sundsetra
MM-Cer295	BOLD:ABW3962	226985	<i>Dasyhelea malleola</i>	adult	M	24 June 2020	P. Dominiak & E. Stur	Kristiansand	Storvannet
HED-Cer43	BOLD:ACM5978	200908	<i>Dasyhelea modesta</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer50	BOLD:ABW3955	200915	<i>Dasyhelea modesta</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer60	BOLD:ABW3955	200925	<i>Dasyhelea modesta</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer78	BOLD:AAG6542	200943	<i>Dasyhelea modesta</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer113	BOLD:ACX2419	200978	<i>Dasyhelea modesta</i>	adult	M	8 November 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
HED-Cer131	BOLD:ABW3955	200996	<i>Dasyhelea modesta</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvoll N
HED-Cer171	BOLD:ABW3954	201036	<i>Dasyhelea modesta</i>	adult	M	19 September 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvoll N
HED-Cer180	BOLD:ACM5978	201045	<i>Dasyhelea modesta</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer234	BOLD:ABW3955	201099	<i>Dasyhelea modesta</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
HED-Cer243	BOLD:ABW3955	201108	<i>Dasyhelea modesta</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Toiga	Bjørvollan N
HED-Cer253	BOLD:ACM5978	201118	<i>Dasyhelea modesta</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer291	BOLD:ABW3955	201156	<i>Dasyhelea modesta</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Enderdal	Ulvåkjølen-Sundsetra
HED-Cer292	BOLD:ABW3955	201157	<i>Dasyhelea modesta</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Enderdal	Ulvåkjølen-Sundsetra
HED-Cer307	BOLD:AAG6542	201172	<i>Dasyhelea modesta</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbtjern
HED-Cer308	BOLD:ABW3955	201173	<i>Dasyhelea modesta</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbtjern
MM-Cer23		226713	<i>Dasyhelea modesta</i>	adult	F	21 August 2019	P. Dominiak & E. Stur	Nissedal	Treungen
MM-Cer24		226714	<i>Dasyhelea modesta</i>	adult	M	25 August 2019	P. Dominiak & E. Stur	Farsund	Einarsneset
MM-Cer90	BOLD:ACX2419	226780	<i>Dasyhelea modesta</i>	adult	M	21 June 2019	K. Berggren	Kristiansand	Storevann
MM-Cer208	BOLD:ACX2419	226898	<i>Dasyhelea modesta</i>	pupa	M	26 June 2020	T. Ekrem	Kristiansand	Skråstadheia naturreservat
TRD-Cer7	BOLD:ACM5978	200456	<i>Dasyhelea modesta</i>	adult	M	20 June 2010	J. K. Skei	Trondheim	Gjeddtjørna inlet
TRD-Cer130	BOLD:ACS7831	200579	<i>Dasyhelea modesta</i>	adult	F	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer220	BOLD:ACS7831	200669	<i>Dasyhelea modesta</i>	adult	F	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer233	BOLD:ACY5045	200682	<i>Dasyhelea modesta</i>	adult	M	22 June 2006	O. Hanssen	Røros	Sølandet
TRD-Cer235	BOLD:ACM5978	200684	<i>Dasyhelea modesta</i>	adult	F	22 June 2006	O. Hanssen	Røros	Sølandet
TRD-Cer258	BOLD:ACY5045	200707	<i>Dasyhelea modesta</i>	adult	M	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer262	BOLD:ACY5045	200711	<i>Dasyhelea modesta</i>	adult	M	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer270	BOLD:ACM5978	200719	<i>Dasyhelea modesta</i>	adult	F	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer276	BOLD:ACY5045	200725	<i>Dasyhelea modesta</i>	adult	M	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer281		200730	<i>Dasyhelea modesta</i>	adult	M	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer284	BOLD:ACY5045	200733	<i>Dasyhelea modesta</i>	adult	F	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer299	BOLD:ACY4183	200748	<i>Dasyhelea modesta</i>	pupa	M	1 June 2015	G. Kjærstad	Trondheim	Kyvatnet
TRD-Cer300	BOLD:ACY4183	200749	<i>Dasyhelea modesta</i>	pupa	F	1 June 2015	G. Kjærstad	Trondheim	Kyvatnet
TRD-Cer301	BOLD:ACM8781	200750	<i>Dasyhelea modesta</i>	pupa	F	1 June 2015	G. Kjærstad	Trondheim	Kyvatnet
TRD-Cer315	BOLD:ACM5978	200764	<i>Dasyhelea modesta</i>	pupa	M	16 June 2015	G. Kjærstad	Trondheim	Lauglovatnet
TRD-Cer316	BOLD:ACM5978	200765	<i>Dasyhelea modesta</i>	pupa	M	16 June 2015	G. Kjærstad	Trondheim	Lauglovatnet
MM-Cer82	BOLD:ACX2450	226772	<i>Dasyhelea notata</i>	adult	M	8 July 2019	K. Berggren	Kristiansand	Storevann
MM-Cer297	BOLD:ACX2450	226987	<i>Dasyhelea notata</i>	adult	M	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer228	BOLD:ACY5046	200677	<i>Dasyhelea notata</i>	adult	M	22 June 2006	O. Hanssen	Røros	Sølandet
		227045	<i>Dasyhelea notata</i>	adult	M	1 July 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
		227065	<i>Dasyhelea notata</i>	adult	M	18 July 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
TRD-Cer244	BOLD:ACU5328	200693	<i>Dasyhelea parallela</i>	adult	F	22 June 2006	O. Hanssen	Røros	Sølandet
TRD-Cer285	BOLD:ACU5328	200734	<i>Dasyhelea parallela</i>	adult	M	20 July 2006	O. Frengen	Røros	Sølandet
MM-Cer254	BOLD:AEH1076	226944	<i>Dasyhelea stackelbergi</i>	adult	M	24 June 2020	P. Dominiak & E. Stur	Kristiansand	Storvannet
HED-Cer306	BOLD:ADI0897	201171	<i>Dasyhelea</i> sp. 14ES	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer61	BOLD:ADG4455	200926	<i>Dasyhelea</i> sp. 15ES	adult	F	09 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer106	BOLD:ADG7338	200971	<i>Dasyhelea</i> sp. 16ES	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer117	BOLD:ADG7458	200982	<i>Dasyhelea</i> sp. 17ES	adult	F	17 September 2016	T. Andersen <i>et al.</i>	Rendalen	Jegåsmyra
HED-Cer109	BOLD:ADG7459	200974	<i>Dasyhelea</i> sp. 18ES	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer310	BOLD:ADI0495	201175	<i>Dasyhelea</i> sp. 19ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer79	BOLD:ABW3976	200944	<i>Dasyhelea</i> sp. 1ES	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer233	BOLD:ABW3976	201098	<i>Dasyhelea</i> sp. 1ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer251	BOLD:ABW3976	201116	<i>Dasyhelea</i> sp. 1ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer269	BOLD:ABW3976	201134	<i>Dasyhelea</i> sp. 1ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
HED-Cer275	BOLD:ABW3976	201140	<i>Dasyhelea</i> sp. 1ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
HED-Cer295	BOLD:ABW3976	201160	<i>Dasyhelea</i> sp. 1ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Ulvåkjølen-Stundsetra
HED-Cer90	BOLD:ADG4456	200955	<i>Dasyhelea</i> sp. 22ES	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer130	BOLD:AAG6439	200995	<i>Dasyhelea</i> sp. 20ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
HED-Cer122	BOLD:ACX2689	200987	<i>Dasyhelea</i> sp. 24ES	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
HED-Cer123	BOLD:ACX2689	200988	<i>Dasyhelea</i> sp. 24ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
HED-Cer200	BOLD:ACX2689	201065	<i>Dasyhelea</i> sp. 24ES	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
HED-Cer224	BOLD:ACX2689	201089	<i>Dasyhelea</i> sp. 24ES	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer240	BOLD:ACX2689	201105	<i>Dasyhelea</i> sp. 24ES	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
HED-Cer241	BOLD:ACX2689	201106	<i>Dasyhelea</i> sp. 24ES	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollen N
MM-Cer33	BOLD:ACX2689	226723	<i>Dasyhelea</i> sp. 24ES	adult	F	4 June 2019	K. Berggren	Lister	Farsund
MM-Cer131	BOLD:ACX2689	226821	<i>Dasyhelea</i> sp. 24ES	adult	F	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstuelan naturreservat

TABLE 2. *continued.*

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer143	BOLD:ADE4834	226833	<i>Dasyhelea</i> sp. 24ES	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer144	BOLD:AEF1566	226834	<i>Dasyhelea</i> sp. 24ES	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer195	BOLD:AEF1566	226885	<i>Dasyhelea</i> sp. 24ES	adult	M	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
MM-Cer200	BOLD:ACX2689	226890	<i>Dasyhelea</i> sp. 24ES	adult	F	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadsheia naturreservat
MM-Cer299	BOLD:ADE4834	226989	<i>Dasyhelea</i> sp. 24ES	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer300	BOLD:AEF1566	226990	<i>Dasyhelea</i> sp. 24ES	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
		227039	<i>Dasyhelea</i> sp. 24ES	adult	M	27 June 2020	P. Dominiak	Kristiansand	Hamresanden
MM-Cer38	BOLD:AEH4464	226728	<i>Dasyhelea</i> sp. 25ES	adult	F	26 August 2019	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer141	BOLD:AEH4464	226831	<i>Dasyhelea</i> sp. 25ES	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
HED-Cer83	BOLD:ABW3986	200948	<i>Dasyhelea</i> sp. 2ES	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer268	BOLD:ABW3986	201133	<i>Dasyhelea</i> sp. 2ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
MM-Cer340	BOLD:AAV5098	227028	<i>Dasyhelea</i> sp. 5ES	pupa		26 July 2018	G. Kjaerstad	Orkland	Lake Sika
MM-Cer341	BOLD:AAV5098	227029	<i>Dasyhelea</i> sp. 5ES	larva		26 July 2018	G. Kjaerstad	Orkland	Lake Sika
TRD-Cer10	BOLD:AAV5098	200459	<i>Dasyhelea</i> sp. 5ES	adult	F	26 May 2014	E. Stur	Trondheim	Bymarka
TRD-Cer19	BOLD:AAV5098	200468	<i>Dasyhelea</i> sp. 5ES	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer242	BOLD:ACY5044	200691	<i>Dasyhelea</i> sp. 7ES	adult	M	22 June 2006	O. Hanssen	Roros	Sølandet
		227040	<i>Forcipomyia acidicola</i>	adult	M	28 June 2020	P. Dominiak	Kristiansand	Hamresanden
HED-Cer182	BOLD:ACP4569	201047	<i>Forcipomyia alacris</i>	adult	M	17 August 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer214	BOLD:ACP4569	201079	<i>Forcipomyia alacris</i>	adult	M	17 August 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer322	BOLD:ACP4569	201748	<i>Forcipomyia alacris</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
AT-Cer4	BOLD:ACO5584	238677	<i>Forcipomyia altaica</i>	adult	M	30 June 2008	T. Hoffstad	Folldal	Vollen
AT-Cer5	BOLD:ACO5584	238678	<i>Forcipomyia altaica</i>	adult	M	30 June 2008	T. Hoffstad	Folldal	Vollen
TRD-Cer12	BOLD:ACO5584	200461	<i>Forcipomyia altaica</i>	adult	F	4 June 2014	E. Stur <i>et al.</i>	Klebu	Selbusjøen
MM-Cer52	BOLD:AC06858	226742	<i>Forcipomyia aristolochiae</i>	adult	M	29 August 2019	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
HED-Cer17	BOLD:AAAN5148	200882	<i>Forcipomyia bipunctata</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer21	BOLD:AAAN5148	200886	<i>Forcipomyia bipunctata</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer23	BOLD:AAAN5148	200888	<i>Forcipomyia bipunctata</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
TRD-Cer178	BOLD:AAAN5148	200627	<i>Forcipomyia bipunctata</i>	adult	M	28 August 2014	E. Stur <i>et al.</i>	Melhus	Gaula river

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer185	BOLD:AAANS148	200634	<i>Forcipomyia bipunctata</i>	adult	F	9 October 2014	E. Stur <i>et al.</i>	Trondheim	Nidelva
TRD-Cer221	BOLD:AAANS148	200670	<i>Forcipomyia bipunctata</i>	adult	M	17 July 2014	E. Stur	Trondheim	Nidelva
HED-Cer75	BOLD:ABZ8720	200940	<i>Forcipomyia chaetoptera</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer20	BOLD:AAANS156	200885	<i>Forcipomyia ciliata</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer22	BOLD:AAANS156	200887	<i>Forcipomyia ciliata</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer185	BOLD:AAANS156	201050	<i>Forcipomyia ciliata</i>	adult	M	29 September 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer263	BOLD:AAANS156	226953	<i>Forcipomyia ciliata</i>	adult	M	5 August 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer291	BOLD:AAANS156	226981	<i>Forcipomyia ciliata</i>	adult	M	30 July 2019	S. Svendsen	Birkenes	Birkeland
TRD-Cer141	BOLD:AAANS156	200590	<i>Forcipomyia ciliata</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer155	BOLD:AAANS156	200604	<i>Forcipomyia ciliata</i>	adult	F	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer50	BOLD:AAANS156	200499	<i>Forcipomyia ciliata</i>	adult	F	5 June 2014	E. Stur <i>et al.</i>	Trondheim	Nidelva
HED-Cer227	BOLD:AAP6911	201092	<i>Forcipomyia crassipes</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer102	BOLD:ACP8376	200967	<i>Forcipomyia eques</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer14	BOLD:AEC6078	200879	<i>Forcipomyia fuliginosa</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer19	BOLD:AEC3440	200884	<i>Forcipomyia fuliginosa</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
MM-Cer22	BOLD:AEC6077	226712	<i>Forcipomyia fuliginosa</i>	adult	M	21 August 2019	P. Dominiak & E. Stur	Nissedal	Nisser
MM-Cer70	BOLD:AEC3819	226760	<i>Forcipomyia fuliginosa</i>	adult	F	6 August 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
HED-Cer91	BOLD:ACI7668	200956	<i>Forcipomyia glauca</i>	adult	M	30 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
HED-Cer92	BOLD:ACI7668	200957	<i>Forcipomyia glauca</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer186	BOLD:ACI7668	201051	<i>Forcipomyia glauca</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer205	BOLD:ACI7668	201070	<i>Forcipomyia glauca</i>	adult	M	17 August 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer237	BOLD:ACI7668	201102	<i>Forcipomyia glauca</i>	adult	F	2 September 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbuva
HED-Cer282	BOLD:ACI7668	201147	<i>Forcipomyia glauca</i>	adult	F	17 August 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
MM-Cer322	BOLD:ACI7668	227012	<i>Forcipomyia glauca</i>	adult	F	4 August 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbuva
MM-Cer324	BOLD:ACI7668	227014	<i>Forcipomyia glauca</i>	adult	F	21 July 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
HED-Cer30	BOLD:ACC1681	200895	<i>Forcipomyia hygrophila</i>	adult	M	21 July 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer13	BOLD:ACC1681	226703	<i>Forcipomyia hygrophila</i>	adult	M	11 May 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
				adult	M	19 June 2019	K. Berggren	Kristiansand	Kristiansand

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer41	BOLD:ACCI681	200490	<i>Forcipomyia hygrophila</i>	adult	M	11 September 2014	E. Stur	Trondheim	Nidelva
TRD-Cer49	BOLD:ACCI681	200498	<i>Forcipomyia hygrophila</i>	adult	F	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer106	BOLD:ACCI681	200555	<i>Forcipomyia hygrophila</i>	adult	F	28 August 2014	E. Stur <i>et al.</i>	Kliebu	Selbusjøen
TRD-Cer112	BOLD:ACCI681	200561	<i>Forcipomyia hygrophila</i>	adult	F	5 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer168	BOLD:ACCI681	200617	<i>Forcipomyia hygrophila</i>	adult	M	9 September 2014	E. Stur <i>et al.</i>	Kliebu	Selbusjøen
TRD-Cer169	BOLD:ACCI681	200618	<i>Forcipomyia hygrophila</i>	adult	M	9 September 2014	E. Stur <i>et al.</i>	Kliebu	Selbusjøen
TRD-Cer172	BOLD:ACCI681	200621	<i>Forcipomyia hygrophila</i>	adult	F	9 September 2014	E. Stur <i>et al.</i>	Kliebu	Selbusjøen
TRD-Cer136	BOLD:ADGG6930	201001	<i>Forcipomyia monilicornis</i>	adult	M	21 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
TRD-Cer138	BOLD:ACGS153	201003	<i>Forcipomyia monilicornis</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
TRD-Cer325	BOLD:ACZ5332	201751	<i>Forcipomyia monilicornis</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer36	BOLD:ACN2557	226726	<i>Forcipomyia monilicornis</i>	adult	M	26 August 2019	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer41	BOLD:ACQ8860	226731	<i>Forcipomyia monilicornis</i>	adult	M	26 August 2019	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer42	BOLD:ACQ8860	226732	<i>Forcipomyia monilicornis</i>	adult	F	26 August 2019	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer154	BOLD:ACQ8860	226844	<i>Forcipomyia monilicornis</i>	adult	F	19 June 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
MM-Cer155	BOLD:ACQ8860	226845	<i>Forcipomyia monilicornis</i>	adult	F	19 June 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
TRD-Cer126	BOLD:ACQ8860	200575	<i>Forcipomyia monilicornis</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer146	BOLD:ACQ8860	200595	<i>Forcipomyia monilicornis</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer13	BOLD:ABW3942	200878	<i>Forcipomyia nigra</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
TRD-Cer16	BOLD:ABW3942	200881	<i>Forcipomyia nigra</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
TRD-Cer18	BOLD:ABW3942	200883	<i>Forcipomyia nigra</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
TRD-Cer24	BOLD:ABW3942	200889	<i>Forcipomyia nigra</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
TRD-Cer65	BOLD:ABW3942	200930	<i>Forcipomyia nigra</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
TRD-Cer134	BOLD:ABW3942	200999	<i>Forcipomyia nigra</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
TRD-Cer202	BOLD:ABW3942	201067	<i>Forcipomyia nigra</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbuå
TRD-Cer285	BOLD:ABW3942	201150	<i>Forcipomyia nigra</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Ulvåkjølen-Sundsetra
TRD-Cer319	BOLD:ABW3942	201184	<i>Forcipomyia nigra</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer19	BOLD:ABW3942	226709	<i>Forcipomyia nigra</i>	adult	M	20 August 2019	P. Dominiak & E. Stur	Drangedal	Langmyr
MM-Cer110	BOLD:ABW3942	226800	<i>Forcipomyia nigra</i>	adult	M	1 August 2019	S. Svendsen	Birkeland	Nordåsvegen

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer40	BOLD:ABW3942	200489	<i>Forcipomyia nigra</i>	adult	F	25 September 2014	E. Stur	Kliebu	Selbusjøen
TRD-Cer48	BOLD:ABW3942	200497	<i>Forcipomyia nigra</i>	adult	F	14 August 2014	E. Stur	Trondheim	Nidelva
TRD-Cer91	BOLD:ABW3942	200540	<i>Forcipomyia nigra</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer100	BOLD:ABW3942	200549	<i>Forcipomyia nigra</i>	adult	M	28 August 2014	E. Stur et al.	Kliebu	Selbusjøen
TRD-Cer103	BOLD:ABW3942	200552	<i>Forcipomyia nigra</i>	adult	F	28 August 2014	E. Stur et al.	Kliebu	Selbusjøen
TRD-Cer187	BOLD:ABW3942	200636	<i>Forcipomyia nigra</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer190	BOLD:ABW3942	200639	<i>Forcipomyia nigra</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer192	BOLD:ABW3942	200641	<i>Forcipomyia nigra</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer207	BOLD:ABW3942	200656	<i>Forcipomyia nigra</i>	adult	F	14 August 2014	E. Stur et al.	Melhus	Gaula river
HED-Cer51	BOLD:ACM5599	200916	<i>Forcipomyia nigrans</i>	adult	M	9 June 2016	T. Andersen et al.	Stor-Elvdal	Nabbjern
HED-Cer64	BOLD:ACM5599	200929	<i>Forcipomyia nigrans</i>	adult	M	9 June 2016	T. Andersen et al.	Stor-Elvdal	Nabbjern
HED-Cer69	BOLD:ACM5599	200934	<i>Forcipomyia nigrans</i>	adult	F	9 June 2016	T. Andersen et al.	Stor-Elvdal	Nabbjern
HED-Cer152	BOLD:ACM5599	201017	<i>Forcipomyia nigrans</i>	adult	M	14 May 2016	T. Andersen et al.	Stor-Elvdal	Nabbjern
HED-Cer187	BOLD:ACM5599	201052	<i>Forcipomyia nigrans</i>	adult	M	17 August 2016	T. Andersen et al.	Åmot	Kildesaga
HED-Cer203	BOLD:ACM5599	201068	<i>Forcipomyia nigrans</i>	adult	F	2 September 2016	T. Andersen et al.	Rendalen	Sekserbua
HED-Cer213	BOLD:ACM5599	201078	<i>Forcipomyia nigrans</i>	adult	M	17 August 2016	T. Andersen et al.	Stor-Elvdal	Nabbjern
HED-Cer273	BOLD:ACM5599	201138	<i>Forcipomyia nigrans</i>	adult	M	23 June 2016	T. Andersen et al.	Rendalen	Sekserbua
HED-Cer320	BOLD:ACM5599	201746	<i>Forcipomyia nigrans</i>	adult	M	11 July 2016	T. Andersen et al.	Stor-Elvdal	Nabbjern
TRD-Cer3	BOLD:ACM5599	201762	<i>Forcipomyia nigrans</i>	adult	M	06 June 2010	J. K. Skei	Trondheim	Gjeddtjørna outlet
AT-Cer11	BOLD:ACR2789	238684	<i>Forcipomyia pallida</i>	adult	F	7 July 2008	T. Hoffstad	Stor-Elvdal	Solbakken
TRD-Cer39	BOLD:ACR2789	200488	<i>Forcipomyia pallida</i>	adult	F	25 September 2014	E. Stur	Kliebu	Selbusjøen
TRD-Cer104	BOLD:ACR2789	200553	<i>Forcipomyia pallida</i>	adult	F	28 August 2014	E. Stur et al.	Kliebu	Selbusjøen
TRD-Cer298	BOLD:ACR2789	200747	<i>Forcipomyia pallida</i>	adult	F	31 July 2014	E. Stur et al.	Melhus	Gammelleva naturreservat
HED-Cer137	BOLD:ABW3953	201002	<i>Forcipomyia palustris</i>	adult	M	21 July 2016	T. Andersen et al.	Engerdal	Åsen
HED-Cer286	BOLD:ABW3953	201151	<i>Forcipomyia palustris</i>	adult	M	11 July 2016	T. Andersen et al.	Engerdal	Ulvkjølen-Sundsetra
HED-Cer103	BOLD:ADG4098	200968	<i>Forcipomyia phlebotomoides</i>	adult	F	21 July 2016	T. Andersen et al.	Åmot	Kildesaga
HED-Cer139	BOLD:ADG4098	201004	<i>Forcipomyia phlebotomoides</i>	adult	F	21 July 2016	T. Andersen et al.	Engerdal	Åsen
HED-Cer181	BOLD:ADG4098	201046	<i>Forcipomyia phlebotomoides</i>	adult	M	11 July 2016	T. Andersen et al.	Tynset	Brydalskjølen

TABLE 2. continued.

<b>BOLD</b> Sample ID	<b>BIN</b>	<b>NTNU</b> -VM	<b>Taxon</b>	<b>Life Stage</b>	<b>Sex</b>	<b>Collection Date</b>	<b>Collectors</b>	<b>Region</b>	<b>Sector</b>
AT-Cer16	BOLD:ACO9087	238689	<i>Forcipomyia pulchrithorax</i>	adult	M	22 September 2008	T. Hoffstad	Foildal	Atna river
MM-Cer39	BOLD:ACO9087	226729	<i>Forcipomyia pulchrithorax</i>	adult	F	30 August 2019	P. Dominiak & E. Stur	Sogne	Sogneelva
TRD-Cer11	BOLD:ACO5698	200460	<i>Forcipomyia pulchrithorax</i>	adult	M	23-Apr-2014	E. Stur	Trondheim	Nidelva
TRD-Cer42	BOLD:ACO9087	200491	<i>Forcipomyia pulchrithorax</i>	adult	F	11 September 2014	E. Stur	Trondheim	Nidelva
TRD-Cer173	BOLD:ACO9087	200622	<i>Forcipomyia pulchrithorax</i>	adult	M	9 September 2014	E. Stur <i>et al.</i>	Melhus	Gammelleva naturreservat
TRD-Cer211	BOLD:ACO9087	200660	<i>Forcipomyia pulchrithorax</i>	adult	M	11 September 2014	E. Stur <i>et al.</i>	Melhus	Gaula river
HED-Cer74	BOLD:ABW3952	200939	<i>Forcipomyia sphagnophila</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer104	BOLD:ABW3952	200969	<i>Forcipomyia sphagnophila</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer212	BOLD:ABW3952	201077	<i>Forcipomyia sphagnophila</i>	adult	F	17 August 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer173	BOLD:ABW3952	226863	<i>Forcipomyia sphagnophila</i>	adult	F	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
TRD-Cer157	BOLD:ABW3952	200606	<i>Forcipomyia sphagnophila</i>	adult	F	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer189	BOLD:ABW3952	200638	<i>Forcipomyia sphagnophila</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
HED-Cer52	BOLD:ABW3952	200917	<i>Forcipomyia squamigera</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer53	BOLD:ACF8504	200918	<i>Forcipomyia squamigera</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer56	BOLD:ACF8504	200921	<i>Forcipomyia squamigera</i>	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer66	BOLD:ACF8504	200931	<i>Forcipomyia squamigera</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer68	BOLD:ACF8504	200933	<i>Forcipomyia squamigera</i>	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
HED-Cer101	BOLD:ACF8504	200966	<i>Forcipomyia squamigera</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer260	BOLD:ACF8504	201125	<i>Forcipomyia squamigera</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer261	BOLD:ACF8504	201126	<i>Forcipomyia squamigera</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer324	BOLD:ACF8504	201750	<i>Forcipomyia squamigera</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjern
MM-Cer01	BOLD:ABW3987	226691	<i>Forcipomyia tenuis</i>	adult	F	27 August 2019	P. Dominiak & E. Stur	Kristiansand	Storevann
TRD-Cer158	BOLD:ABW3987	200607	<i>Forcipomyia tenuis</i>	adult	F	09 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer167	BOLD:ABW3987	200616	<i>Forcipomyia tenuis</i>	adult	F	1 July 2013	E. Stur	Trondheim	Ringve Botanical Garden
AT-Cer12	BOLD:ABW3964	238685	<i>Forcipomyia titillans</i>	adult	M	7 July 2008	T. Hoffstad	Stor-Elvdal	Solbakken
AT-Cer15	BOLD:ABW3964	238688	<i>Forcipomyia titillans</i>	adult	F	7 July 2008	T. Hoffstad	Stor-Elvdal	Solbakken
HED-Cer15	BOLD:AAG6501	200880	<i>Forcipomyia titillans</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer188	BOLD:AAG6501	201053	<i>Forcipomyia titillans</i>	adult	M	17 August 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
HED-Cer204	BOLD:AG6501	201069	<i>Forcipomyia titillans</i>	adult	M	2 September 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbuva
HED-Cer228	BOLD:ABW3964	201093	<i>Forcipomyia titillans</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer259	BOLD:ABW3964	201124	<i>Forcipomyia titillans</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer02	BOLD:ABW3964	226692	<i>Forcipomyia titillans</i>	adult	F	27 August 2019	P. Dominiak & E. Stur	Kristiansand	Storevann
MM-Cer03	BOLD:ABW3964	226693	<i>Forcipomyia titillans</i>	adult	M	27 August 2019	P. Dominiak & E. Stur	Kristiansand	Storevann
MM-Cer04	BOLD:ABW3964	226694	<i>Forcipomyia titillans</i>	adult	M	24 August 2019	P. Dominiak & E. Stur	Flekkefjord	River Sira
MM-Cer149	BOLD:ABW3964	226839	<i>Forcipomyia titillans</i>	adult	F	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstudalen naturreservat
MM-Cer185	BOLD:AG6501	226875	<i>Forcipomyia titillans</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordeljønn
MM-Cer198	BOLD:ABW3964	226888	<i>Forcipomyia titillans</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer199	BOLD:ABW3964	226889	<i>Forcipomyia titillans</i>	adult	F	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer266	BOLD:ABW3964	226956	<i>Forcipomyia titillans</i>	adult	F	1 July 2019	E. Langedgard & O. Ekrem	Marnardal	Lågåna Øvre Lauda
MM-Cer296	BOLD:ABW3964	226986	<i>Forcipomyia titillans</i>	adult	F	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
TRD-Cer22	BOLD:ABW3964	200471	<i>Forcipomyia titillans</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer31	BOLD:ABW3964	200480	<i>Forcipomyia titillans</i>	adult	F	17 July 2014	E. Stur	Melhus	Gammelelva naturreservat
TRD-Cer82	BOLD:ABW3964	200531	<i>Forcipomyia titillans</i>	adult	F	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer119	BOLD:ABW3964	200568	<i>Forcipomyia titillans</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer139	BOLD:ABW3964	200588	<i>Forcipomyia titillans</i>	adult	F	11 September 2014	E. Stur	Trondheim	Nidelva
HED-Cer77	BOLD:ACN590	200942	<i>Forcipomyia tonnoiri</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjenn
MM-Cer159	BOLD:AEF4583	226849	<i>Forcipomyia tonnoiri</i>	adult	M	19 June 2020	P. Dominiak & E. Stur	Arendal	pond east Øvre Sagvann
MM-Cer283	BOLD:AEF4583	226973	<i>Forcipomyia tonnoiri</i>	adult	F	21 June 2019	K. Bergren	Kristiansand	Nedre Jegersbergvann
HED-Cer70	BOLD:ADG5672	200935	<i>Forcipomyia</i> sp. 12ES	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjenn
HED-Cer67	BOLD:ADG5670	200932	<i>Forcipomyia</i> sp. 13ES	adult	F	9 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjenn
HED-Cer236	BOLD:AG6429	201101	<i>Forcipomyia</i> sp. 14ES	adult	F	2 September 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer283	BOLD:AG6429	201148	<i>Forcipomyia</i> sp. 14ES	adult	M	4 August 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbuva
TRD-Cer159	BOLD:ACS7557	200608	<i>Forcipomyia</i> sp. 15ES	adult	F	30 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
MM-Cer46	BOLD:ABY0553	226736	<i>Forcipomyia</i> sp. 16ES	adult	F	30 August 2019	P. Dominiak & E. Stur	Songdalen	Kroksjø
MM-Cer47	BOLD:AG6433	226737	<i>Forcipomyia</i> sp. 17ES	adult	F	30 August 2019	P. Dominiak & E. Stur	Songdalen	Kroksjø

TABLE 2. *continued.*

<b>BOLD</b> Sample ID	<b>BIN</b>	<b>NTNU</b> -VM	<b>Taxon</b>	<b>Life Stage</b>	<b>Sex</b>	<b>Collection Date</b>	<b>Collectors</b>	<b>Region</b>	<b>Sector</b>
MM-Cer85	BOLD:AEC3718	226775	<i>Forcipomyia</i> sp. 18ES	adult	F	8 July 2019	K. Berggren	Kristiansand	Storevann
AT-Cer10	BOLD:AAL7406	238683	<i>Forcipomyia</i> sp. 19ES	adult	F	7 July 2008	T. Hoffstad	Stor-Elvdal	Solbakken
TRD-Cer94	BOLD:ACS2566	200543	<i>Forcipomyia</i> sp. 20ES	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
HED-Cer133	BOLD:ADG5110	200998	<i>Forcipomyia</i> sp. 22ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
TRD-Cer283		200732	<i>Forcipomyia</i> sp. 22ES	adult	F	6 July 2006	O. Hanssen	Røros	Sølenidet
AT-Cer14	BOLD:ACX1616	238687	<i>Forcipomyia</i> sp. 8ES	adult	F	7 July 2008	T. Hoffstad	Stor-Elvdal	Solbakken
HED-Cer41	BOLD:ACX1616	200906	<i>Forcipomyia</i> sp. 8ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
MM-Cer77	BOLD:ACX1616	226767	<i>Forcipomyia</i> sp. 8ES	adult	F	21 August 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
HED-Cer132	BOLD:ACX1616	200997	<i>Forcipomyia</i> sp. 8ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
HED-Cer239	BOLD:ACX1616	201104	<i>Forcipomyia</i> sp. 8ES	adult	M	9 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
HED-Cer323	BOLD:ACX1616	201749	<i>Forcipomyia</i> sp. 8ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
MM-Cer223	BOLD:ACX3683	226913	<i>Mallochohelea nitida</i>	pupa		16 June 2020	G. Kjaerstad	Drammen	Haerstrøm
MM-Cer239	BOLD:ACX3683	226929	<i>Mallochohelea nitida</i>	pupa		19 June 2020	G. Kjaerstad	Tvedestrand	Molandsvannet
Fimmark813	BOLD:ACD200	144971	<i>Mallochohelea</i> sp. 1ES	pupa		19 June 2010	G. A. Halvorsen	Sør-Våranger	Passvikdalen
MM-Cer97	BOLD:ACD2005	226787	<i>Mallochohelea</i> sp. 1ES	adult	F	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
HED-Cer161	BOLD:ADG6464	201026	<i>Mallochohelea</i> sp. 2ES	adult	F	25 July 2016	T. Andersen & L. Hagenlund	Somaadalen	Johnsgård
MM-Cer67	BOLD:ACX1539	226757	<i>Monohelea estonica</i>	adult	F	6 August 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer40	BOLD:AEA9570	227066	<i>Monohelea estonica</i>	adult	M	19 July 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
HED-Cer95	BOLD:ADG6917	200960	<i>Palpomyia citrinipes</i>	adult	F	26 August 2019	P. Dominiak & E. Stur	Kristiansand	Hamresanden
HED-Cer96	BOLD:ADG6917	200961	<i>Palpomyia distincta</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer159	BOLD:ADG6917	201024	<i>Palpomyia distincta</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer190	BOLD:ADG6917	201055	<i>Palpomyia distincta</i>	adult	F	27 July 2016	T. Andersen & L. Hagenlund	Stor-Elvdal	Skardmyra
HED-Cer191	BOLD:ADG6917	201056	<i>Palpomyia distincta</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer192	BOLD:ADG6917	201057	<i>Palpomyia distincta</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer244	BOLD:ADG6917	201109	<i>Palpomyia distincta</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
				adult	M	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
HED-Cer245	BOLD:ADG6917	201110	<i>Palpomyia distincta</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Ammot	Kildesaga
MM-Cer34	BOLD:ACX2908	226724	<i>Palpomyia distincta</i>	adult	M	26 June 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer111	BOLD:ACX2908	226801	<i>Palpomyia distincta</i>	adult	F	17 June 2020	E. Stur	Drangedal	Engåa
MM-Cer113	BOLD:ACX2908	226803	<i>Palpomyia distincta</i>	adult	M	17 June 2020	E. Stur	Drangedal	Engåa
MM-Cer114	BOLD:ACX2908	226804	<i>Palpomyia distincta</i>	adult	M	17 June 2020	E. Stur	Drangedal	Engåa
MM-Cer164	BOLD:AEF5430	226854	<i>Palpomyia distincta</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
MM-Cer171	BOLD:ACX2908	226861	<i>Palpomyia distincta</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
MM-Cer301	BOLD:ACX2908	226991	<i>Palpomyia distincta</i>	adult	F	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstudalen naturreservat
MM-Cer303	BOLD:ACX2908	226993	<i>Palpomyia distincta</i>	adult	F	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstudalen naturreservat
MM-Cer308	BOLD:ACX2908	226998	<i>Palpomyia distincta</i>	adult	F	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstudalen naturreservat
MM-Cer313	BOLD:ACX2908	227003	<i>Palpomyia distincta</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
MM-Cer57	BOLD:AEA8665	227057	<i>Palpomyia distincta</i>	adult	F	12 July 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadhøia naturreservat
MM-Cer74	BOLD:AEA8665	226747	<i>Palpomyia flavipes</i>	larva	F	24 August 2019	G. Kjaerstad	Flekkefjord	Flikkeid
MM-Cer180	BOLD:ACS1169	226764	<i>Palpomyia flavipes</i>	adult	F	20 August 2019	P. Dominiak & E. Stur	Drangedal	Smalsund
MM-Cer292	BOLD:AEA8665	226870	<i>Palpomyia flavipes</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordetjønn
TRD-Cer54	BOLD:ACS1169	226982	<i>Palpomyia flavipes</i>	adult	F	30 July 2019	S. Svendsen	Birkenes	Birkeland
TRD-Cer246	BOLD:ACS1169	200503	<i>Palpomyia flavipes</i>	adult	M	17 July 2014	E. Stur	Trondheim	Jonsvatn
TRD-Cer250	BOLD:ACS1169	200695	<i>Palpomyia flavipes</i>	adult	M	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer287	BOLD:ACS1169	200699	<i>Palpomyia flavipes</i>	adult	M	6 July 2006	O. Hanssen	Røros	Sølandet
TRD-Cer288	BOLD:ACS1169	200736	<i>Palpomyia flavipes</i>	adult	M	20 July 2006	O. Frengen	Røros	Sølandet
MM-Cer56	BOLD:ACX1556	200737	<i>Palpomyia flavipes</i>	adult	M	20 July 2006	O. Frengen	Røros	Sølandet
MM-Cer102	BOLD:ACX1556	226746	<i>Palpomyia lineata</i>	larva	M	20 August 2019	G. Kjaerstad	Drangedal	Brattsbergtoppen
MM-Cer176	BOLD:AA9060	226792	<i>Palpomyia lineata</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer207	BOLD:ACX1556	226866	<i>Palpomyia lineata</i>	adult	F	21 June 2020	P. Dominiak & E. Stur	Songdalen	Kroksjø
MM-Cer209	BOLD:AA9060	226897	<i>Palpomyia lineata</i>	larva	F	27 August 2019	G. Kjaerstad	Kristiansand	Storevann
MM-Cer210	BOLD:AA9060	226899	<i>Palpomyia lineata</i>	larva	M	30 August 2019	G. Kjaerstad	Sogne	Sogneelva
MM-Cer211	BOLD:AA9060	226900	<i>Palpomyia lineata</i>	larva	M	30 August 2019	G. Kjaerstad	Sogne	Sogneelva
MM-Cer211	BOLD:AA9060	226901	<i>Palpomyia lineata</i>	larva	M	30 August 2019	G. Kjaerstad	Sogne	Sogneelva

TABLE 2. *continued.*

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer216	BOLD:AAP9060	226906	<i>Palpomyia lineata</i>	larva		18 June 2020	G. Kjaerstad	Kristiansand	Kostøljønn
MM-Cer221	BOLD:AAP9060	226911	<i>Palpomyia lineata</i>	larva		26 June 2020	G. Kjaerstad	Farsund	Einarsneset
MM-Cer228	BOLD:AEH2394	226918	<i>Palpomyia lineata</i>	larva		24 August 2019	G. Kjaerstad	Flekkefjord	Lundevatn at Sira
MM-Cer229	BOLD:AEH2394	226919	<i>Palpomyia lineata</i>	larva		24 August 2019	G. Kjaerstad	Flekkefjord	Lundevatn at Sira
MM-Cer241	BOLD:AAP9060	226931	<i>Palpomyia lineata</i>	larva		24 June 2020	G. Kjaerstad	Kristiansand	Flekkerøy
MM-Cer247	BOLD:AAP9060	226937	<i>Palpomyia lineata</i>	larva		25 June 2020	P. Dominiak & E. Stur	Farsund	Einarsneset
MM-Cer259	BOLD:AAP9060	226949	<i>Palpomyia lineata</i>	adult	F	24 June 2020	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
MM-Cer331	BOLD:AAP9060	227021	<i>Palpomyia lineata</i>	larva		27 May 2020	G. Kjaerstad	Trondheim	Jonsvatnet
MM-Cer333	BOLD:AAP9060	227023	<i>Palpomyia lineata</i>	larva		27 May 2020	G. Kjaerstad	Trondheim	Jonsvatnet
TRD-Cer163	BOLD:ACS7887	200612	<i>Palpomyia lineata</i>	adult	M	1 July 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer165	BOLD:ACS7887	200614	<i>Palpomyia lineata</i>	adult	F	1 July 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer309	BOLD:AAP9060	200758	<i>Palpomyia lineata</i>	adult	M	3 July 2014	E. Stur <i>et al.</i>	Trondheim	Jonsvatn
		227075	<i>Palpomyia lineata</i>	adult	M	28 July 2020	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
MM-Cer69	BOLD:ACX1378	226759	<i>Palpomyia luteifemorata</i>	adult	F	6 August 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer96	BOLD:ACX1378	226786	<i>Palpomyia luteifemorata</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer101	BOLD:ACX1378	226791	<i>Palpomyia luteifemorata</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer103	BOLD:ACX1378	226793	<i>Palpomyia luteifemorata</i>	adult	F	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer227	BOLD:ACX1378	226917	<i>Palpomyia luteifemorata</i>	larva		17 June 2020	G. Kjaerstad	Drangedal	Engåa (pool)
MM-Cer326	BOLD:ACX1378	227016	<i>Palpomyia luteifemorata</i>	adult	F	21 July 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
HED-Cer189	BOLD:ACX1412	201054	<i>Palpomyia nigripes</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer218	BOLD:ACX1412	201083	<i>Palpomyia nigripes</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
MM-Cer25	BOLD:ACX1412	226715	<i>Palpomyia nigripes</i>	adult	M	26 May 2019	K. Berggren	Kristiansand	Kristiansand
MM-Cer88	BOLD:ACX1412	226778	<i>Palpomyia nigripes</i>	adult	F	21 June 2019	K. Berggren	Kristiansand	Storevann
MM-Cer170	BOLD:ACX1412	226860	<i>Palpomyia nigripes</i>	adult	M	17 June 2020	E. Stur	Drangedal	Sannes-Langen
MM-Cer302	BOLD:ACX1412	226992	<i>Palpomyia nigripes</i>	adult	F	22 June 2020	P. Dominiak & E. Stur	Lillesand	Badstuelalen naturreservat
TRD-Cer247	BOLD:ACX1412	200696	<i>Palpomyia nigripes</i>	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer248	BOLD:ACX1412	200697	<i>Palpomyia nigripes</i>	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer249	BOLD:ACX1412	200698	<i>Palpomyia nigripes</i>	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer252	BOLD:ACX1412	200701	<i>Palpomyia nigripes</i>	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer253	BOLD:ACX1412	200702	<i>Palpomyia nigripes</i>	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
HED-Cer47	BOLD:ADF741	227060	<i>Palpomyia nigripes</i>	adult	F	14 July 2020	P. Dominiak & E. Stur	Lillesand	Badstuelalen naturreservat
HED-Cer48	BOLD:ADF741	200912	<i>Palpomyia pubescens</i>	adult	F	09 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer85	BOLD:ADF741	200950	<i>Palpomyia pubescens</i>	adult	M	09 June 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer317	BOLD:ABW3938	201182	<i>Palpomyia pubescens</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
MM-Cer133	BOLD:AEF5429	226823	<i>Palpomyia pubescens</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Lillesand	Badstuelalen naturreservat
MM-Cer293	BOLD:AEF5429	226983	<i>Palpomyia pubescens</i>	adult	F	30 July 2019	S. Svendsen	Birkenes	Birkeland
HED-Cer158	BOLD:ABW3963	201023	<i>Palpomyia remmi</i>	adult	M	30 June 2016	G. M. Kvifte	Os	Langhåen vest
MM-Cer59	BOLD:ABW3963	226749	<i>Palpomyia remmi</i>	larva	M	31 August 2019	G. Kjærstad	Marnadal	Lågåna øvre Landal
HED-Cer316	BOLD:ADH8757	201181	<i>Palpomyia rufipes</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer318	BOLD:ADH8757	201183	<i>Palpomyia rufipes</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Stor-Elvdal	Nabbjerm
HED-Cer193	BOLD:ACX1684	201058	<i>Palpomyia serripes</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer248	BOLD:ACX1684	201113	<i>Palpomyia serripes</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer271	BOLD:ACX1684	201136	<i>Palpomyia serripes</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
HED-Cer272	BOLD:ACX1684	201137	<i>Palpomyia serripes</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Rendalen	Sekserbua
MM-Cer126	BOLD:ACX1684	226816	<i>Palpomyia serripes</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kostøljønn
MM-Cer127	BOLD:ACX1684	226817	<i>Palpomyia serripes</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kostøljønn
MM-Cer160	BOLD:ACX2304	226850	<i>Palpomyia serripes</i>	adult	F	19 June 2020	P. Dominiak & E. Stur	Arendal	pond east Øvre Sagvann
MM-Cer181	BOLD:ACX1684	226871	<i>Palpomyia serripes</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordejønn
MM-Cer248	BOLD:ACX1684	226938	<i>Palpomyia serripes</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	close to Jordejønn
MM-Cer258	BOLD:ACX3286	227043	<i>Palpomyia serripes</i>	adult	F	29 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstædheia naturreservat
MM-Cer158	BOLD:AEF5428	226948	<i>Palpomyia spinipes</i>	adult	F	24 June 2020	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
HED-Cer87	BOLD:ABZ9646	200952	<i>Palpomyia tibialis</i>	adult	F	27 July 2020	P. Dominiak & E. Stur	Kristiansand	Flekkerøy
HED-Cer94	BOLD:ABZ9646	200959	<i>Palpomyia sp. 5ES</i>	adult	M	19 June 2020	P. Dominiak & E. Stur	Tvedestrand	Molandsvannet
			<i>Palpomyia sp. 5ES</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
			<i>Palpomyia sp. 5ES</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga

TABLE 2. continued.

<b>BOLD</b> Sample ID	<b>BIN</b>	<b>NTNU</b> -VM	<b>Taxon</b>	<b>Life Stage</b>	<b>Sex</b>	<b>Collection Date</b>	<b>Collectors</b>	<b>Region</b>	<b>Sector</b>
HED-Cer194	BOLD:ABZ9646	201059	<i>Palpomyia</i> sp. 5ES	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer217	BOLD:ABZ9646	201082	<i>Palpomyia</i> sp. 5ES	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Engerdal	Åsen
HED-Cer246	BOLD:ABZ9646	201111	<i>Palpomyia</i> sp. 5ES	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer247	BOLD:ABZ9646	201112	<i>Palpomyia</i> sp. 5ES	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer112	BOLD:ABZ9646	226802	<i>Palpomyia</i> sp. 5ES	adult	F	17 June 2020	E. Stur	Drangedal	Engåa
TRD-Cer231	BOLD:ABZ9646	200680	<i>Palpomyia</i> sp. 5ES	adult	M	22 June 2006	O. Hanssen	Roros	Sølandet
TRD-Cer240	BOLD:ABZ9646	200689	<i>Palpomyia</i> sp. 5ES	adult	M	22 June 2006	O. Hanssen	Roros	Sølandet
TRD-Cer241	BOLD:ABZ9646	200690	<i>Palpomyia</i> sp. 5ES	adult	F	22 June 2006	O. Hanssen	Roros	Sølandet
TRD-Cer251	BOLD:ABZ9646	200700	<i>Palpomyia</i> sp. 5ES	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer255	BOLD:ABZ9646	200704	<i>Palpomyia</i> sp. 5ES	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer257	BOLD:ABZ9646	200706	<i>Palpomyia</i> sp. 5ES	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer278	BOLD:ABZ9646	200727	<i>Palpomyia</i> sp. 5ES	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer279	BOLD:ABZ9646	200728	<i>Palpomyia</i> sp. 5ES	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer286	BOLD:ABZ9646	200735	<i>Palpomyia</i> sp. 5ES	adult	M	20 July 2006	O. Frensen	Roros	Sølandet
MM-Cer162	BOLD:ACX3818	226852	<i>Palpomyia</i> sp. 6ES	adult	F	19 June 2020	P. Dominiak & E. Stur	Froland	Nidelva
MM-Cer128	BOLD:ACX2151	226818	<i>Phaenobezzia rubiginosa</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Kosteljønn
MM-Cer242	BOLD:ACX2151	226932	<i>Phaenobezzia rubiginosa</i>	pupa	F	18 June 2020	G. Kjaerstad	Kristiansand	Drangsholt
MM-Cer243	BOLD:ACX2151	226933	<i>Phaenobezzia rubiginosa</i>	pupa	F	18 June 2020	G. Kjaerstad	Kristiansand	Drangsholt
		227048	<i>Phaenobezzia rubiginosa</i>	adult	F	3 July 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
		227069	<i>Phaenobezzia rubiginosa</i>	adult	F	22 July 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden, Fugløyna
MM-Cer86	BOLD:AEC3341	226776	<i>Probezzia seminigra</i>	adult	F	8 July 2019	K. Berggren	Kristiansand	Storevann
MM-Cer87		226777	<i>Probezzia seminigra</i>	adult	M	8 July 2019	K. Berggren	Kristiansand	Storevann
MM-Cer204	BOLD:ACX3166	226894	<i>Probezzia seminigra</i>	adult	M	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
MM-Cer205	BOLD:ACX3166	226895	<i>Probezzia seminigra</i>	adult	F	23 June 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
MM-Cer226	BOLD:ACR2669	226916	<i>Probezzia seminigra</i>	pupa	F	17 June 2020	G. Kjaerstad	Drangedal	Sannes-Langen
TRD-Cer17	BOLD:ACR2669	200466	<i>Probezzia seminigra</i>	pupa	F	17 July 2014	E. Stur & T. Ekrem	Trondheim	Nidelva
HED-Cer177	BOLD:ACY5060	201042	<i>Schizohalea leucopeza</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
MM-Cer55	BOLD:ACL4093	226745	<i>Schizohalea leucopeza</i>	adult	F	24 August 2019	P. Dominiak & E. Stur	Flekkefjord	outlet Rekevikstjønna

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
MM-Cer63	BOLD:ACL4093	226753	<i>Schizothela leucopeza</i>	adult	F	31 July 2019	E. Langsgard & Ø. Ekrem	Marnadal	Lågána øvre Laudal
MM-Cer92	BOLD:ACL4093	226782	<i>Schizothela leucopeza</i>	adult	F	15 July 2019	E. Langsgard & Ø. Ekrem	Marnadal	Lågána øvre Laudal
MM-Cer119	BOLD:ACL4093	226809	<i>Schizothela leucopeza</i>	adult	F	19 June 2020	P. Dominiak & E. Stur	Arendal	Midtre Sagvann
TRD-Cer115	BOLD:ACL4093	200564	<i>Schizothela leucopeza</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer120	BOLD:ACL4093	200569	<i>Schizothela leucopeza</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer121	BOLD:ACL4093	200570	<i>Schizothela leucopeza</i>	adult	F	31 July 2014	E. Stur	Trondheim	Nidelva
TRD-Cer138	BOLD:ACL4093	200587	<i>Schizothela leucopeza</i>	adult	F	11 September 2014	E. Stur	Trondheim	Nidelva
TRD-Cer143	BOLD:ACL4093	200592	<i>Schizothela leucopeza</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer145	BOLD:ACL4093	200594	<i>Schizothela leucopeza</i>	adult	F	19 June 2014	E. Stur	Trondheim	Nidelva
TRD-Cer260	BOLD:ACY5060	200709	<i>Schizothela leucopeza</i>	adult	M	6 July 2006	O. Hanssen	Roros	Sølandet
TRD-Cer261	BOLD:ACY5060	200710	<i>Schizothela leucopeza</i>	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
HED-Cer195	BOLD:ADG4871	201060	<i>Serromyia atra</i>	adult	F	11 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
HED-Cer33	BOLD:ACA4694	200898	<i>Serromyia femorata</i>	adult	F	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer34	BOLD:ACX2455	200899	<i>Serromyia femorata</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tynset	Brydalskjølen
HED-Cer93	BOLD:ACA4694	200958	<i>Serromyia femorata</i>	adult	F	21 July 2016	T. Andersen <i>et al.</i>	Åmot	Kildesaga
MM-Cer32	BOLD:ACA4694	226722	<i>Serromyia femorata</i>	adult	M	4 June 2019	K. Berggren	Lister	Farsund
HED-Cer121	BOLD:ACX2455	200986	<i>Serromyia femorata</i>	adult	M	11 July 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
HED-Cer163	BOLD:ACA4694	201028	<i>Serromyia femorata</i>	adult	M	30 June 2016	G. M. Kvifte	Os	Røst nord
HED-Cer174	BOLD:ACA4694	201039	<i>Serromyia femorata</i>	adult	F	27 June 2016	G. M. Kvifte	Folldal	Langmyre
HED-Cer196	BOLD:ACA4694	201061	<i>Serromyia femorata</i>	adult	M	23 June 2016	T. Andersen <i>et al.</i>	Tolga	Bjørvollan N
TRD-Cer245	BOLD:ACY6482	200694	<i>Serromyia femorata</i>	adult	F	6 July 2006	O. Hanssen	Roros	Sølandet
HED-Cer01	BOLD:ACQ9613	200866	<i>Serromyia ledicola</i>	adult	M	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
HED-Cer02	BOLD:ACQ9613	200867	<i>Serromyia ledicola</i>	adult	F	16 September 2016	L. Hagenlund	Stor-Elvdal	Evenstad
TRD-Cer149	BOLD:ACS7502	200598	<i>Serromyia ledicola</i>	adult	M	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer150	BOLD:ACQ9613	200599	<i>Serromyia ledicola</i>	adult	F	9 August 2013	E. Stur	Trondheim	Ringve Botanical Garden
TRD-Cer160	BOLD:ACQ9613	200609	<i>Serromyia ledicola</i>	adult	F	30 August 2013	E. Stur	Trondheim	Ringve Botanical Garden

TABLE 2. continued.

BOLD Sample ID	BIN	NTNU -VM	Taxon	Life Stage	Sex	Collection Date	Collectors	Region	Sector
TRD-Cer186	BOLD:ACQ9613	200635	<i>Serromyia ledicola</i>	adult	M	31 July 2014	E. Stur	Trondheim	Nidelva
MM-Cer139	BOLD:AEF4425	226829	<i>Serromyia morio</i>	adult	F	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
MM-Cer140	BOLD:AEF4425	226830	<i>Serromyia morio</i>	adult	M	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden
TRD-Cer213	BOLD:ACT6684	200662	<i>Serromyia morio</i>	adult	M	24 June 2013	E. Stur	Trondheim	Ringve Botanical Garden
MM-Cer79	BOLD:ADV1401	226769	<i>Stilobezzia gracilis</i>	adult	F	21 July 2019	K. Berggren	Kristiansand	Nedre Timenes at bridge
MM-Cer80	BOLD:ADV1401	226770	<i>Stilobezzia gracilis</i>	adult	M	21 July 2019	K. Berggren	Kristiansand	Nedre Timenes at bridge
MM-Cer167	BOLD:ADV1401	226857	<i>Stilobezzia gracilis</i>	adult	H	18 June 2020	P. Dominiak & E. Stur	Kristiansand	Drangsholt
MM-Cer174	BOLD:ADV1401	226864	<i>Stilobezzia gracilis</i>	adult	M	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer189	BOLD:ADV1401	226879	<i>Stilobezzia gracilis</i>	adult	F	21 June 2020	P. Dominiak & E. Stur	Sogne	Sogneelva
MM-Cer94	BOLD:AEG0574	227077	<i>Stilobezzia gracilis</i>	adult	F	29 July 2020	P. Dominiak & E. Stur	Farsund	near Lista aluminum plant
MM-Cer105	BOLD:ACG4212	226784	<i>Stilobezzia ochracea</i>	adult	F	21 July 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer161	BOLD:ACG4212	226795	<i>Stilobezzia ochracea</i>	adult	M	4 June 2019	K. Berggren	Kristiansand	Nedre Jegersbergvann
MM-Cer175	BOLD:ACG4212	226851	<i>Stilobezzia ochracea</i>	adult	M	19 June 2020	P. Dominiak & E. Stur	Froland	Nidelva
MM-Cer233	BOLD:AEG0574	226865	<i>Stilobezzia ochracea</i>	adult	F	26 June 2020	P. Dominiak & E. Stur	Kristiansand	Skråstadheia naturreservat
MM-Cer234	BOLD:AEG0574	226923	<i>Stilobezzia ochracea</i>	pupa		23 June 2020	T. Ekrem	Kristiansand	Prestebekken
MM-Cer250	BOLD:AEG0574	226924	<i>Stilobezzia ochracea</i>	pupa		23 June 2020	T. Ekrem	Kristiansand	Prestebekken
		226940	<i>Stilobezzia ochracea</i>	adult	F	21 June 2020	P. Dominiak & E. Stur	Kristiansand	Songdalen
		227050	<i>Stilobezzia ochracea</i>	adult	F	05 July 2020	P. Dominiak & E. Stur	Kristiansand	Nedre Jegersbergvann
		227071	<i>Stilobezzia ochracea</i>	adult	M	24 July 2020	P. Dominiak & E. Stur	Kristiansand	Hamresanden, Fugløyna

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