

ADDITIONAL RECORDS OF CHIRONOMIDAE (DIPTERA, INSECTA) IN IRELAND WITH NEW COUNTY RECORDS FROM DONEGAL AND MEATH

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Abstract

Records are given for 27 species of Chironomidae (Diptera, Insecta) from Counties Cavan, Donegal, Kerry, Mayo and Meath in Hydrometric Areas (HAs) 7, 8, 22, 25, 29, 32, 34, 36 and 38. *Parachironomus tenuicaudatus* (Malloch, 1915) is reported for the first time in County Meath, HA7 and the Eastern River Basin District. *Tanytarsus medius* Reiss & Fittkau, 1971 is reported as new for County Donegal and HA38.

Key words: Chironomidae, Diptera, records, County, Hydrometric Area, distribution, Ireland.

Introduction

The prevailing Covid 19 pandemic restrictions on travel in Ireland reduced opportunities for fieldwork and collection of Chironomidae (Diptera, Insecta) during 2021. However, some collections were obtained in County Meath, supplementing data from collections in 2020 (Murray, 2020). The limitations to travel provided an opportunity to examine, curate and review specimens and slide preparations in collections from previous years. In the course of this undertaking material was examined in bulk collections of alcohol preserved imagines and pupal exuviae and also of some previously undetermined slide preparations. The specimens reviewed were in personal collections as well as in material collected by former students and colleagues in University College Dublin, including those from C. Dowling, G. Forde and B. P. Hayes. Distribution data is given here for 27 species of Chironomidae. Following the procedure in Murray (2012), records are given by county and physiographic hydrometric area (HA) along with details of location, six figure Irish Grid Reference and date of collection. The material examined provides new data on occurrence and distribution of species in Counties Cavan, Donegal, Kerry, Mayo and Meath in HAs 7, 8, 22, 25, 29, 32, 34, 36 and 38. Records are given for species in the subfamilies Tanypodinae (1 species), Orthocladiinae (11 species), Chironominae (15 species - Tribe Chironomini 8, Tribe Pseudochironomini, 1, Tribe Tanytarsini 6). The Chironomini species *Parachironomus tenuicaudatus* (Malloch, 1915) is reported for the first time in County Meath, HA7 and for the Eastern River Basin District while

the Tanytarsini species *Tanytarsus medius* Reiss & Fittkau, 1971 is reported as new for County Donegal and HA38.

Abbreviations

The following abbreviations are used: BPH - Brian Hayes; HA(s) - Hydrometric Area(s); leg. - collected by; Pe - pupal exuviae; RBD - River Basin District; ♂Im - adult male imago.

The records

Unless otherwise stated, records reported here are based on determinations by the author from pupal exuviae in personal collections or from specimens identified in collections supplied by colleagues and former students at University College Dublin.

Subfamily TANYPODINAE

***Procladius (Holotanypus) choreus* (Meigen, 1804)**

CAVAN: HA7 - Park River, Virginia (N591882), 18 December 1967.

This record is from a slide preparation, provisionally identified as “*Procladius* sp indet.”, that had been put aside. Following its identification as *Procladius choreus*, the record from 1967 now constitutes the earliest record of the species from the Park River at its inflow to Lough Ramor at Virginia since the only published record of the species at this site is from March 1968 based on identification of an adult ♂ caught on the wing (Murray, 1972).

WESTMEATH: HA25 - Lough Ennell, Tudenham shore (N415466), 1 July 1978.

There are two other records of adult ♂ *Procladius choreus* collected at Tudenham, from where it was first reported on 3 March 1966 (Murray, 1972) and later, by Gregory Forde, on an unspecified date in 1981 (Forde, 1985).

Subfamily ORTHOCLADIINAE

***Bryophaenocladus subvernalis* (Edwards, 1929)**

MEATH: HA8 - Stream, Meadesbrook, Ashbourne (O038594), 5 November 2020.

This is the second record from collections around Meadesbrook since swarming adults were caught by aerial net sweep on 12 November 2016 over the nearby grass lawn and reported in Murray and Ashe (2017).

***Chaetocladus (Chaetocladus) perennis* (Meigen, 1830)**

MEATH: HA8 - Lawn, Meadesbrook, Ashbourne (O040594), ♂Im, 25 February 2021.

This is the fifth record of the species from Meadesbrook from where it was first collected in May 2005 (Murray *et al.*, 2014). Three further records, from March 2016 and in April and November 2019 were documented in Murray (2019).

***Corynoneura celeripes* Winnertz, 1852**

MEATH: HA8 - Stream, Meadesbrook, Ashbourne (O038594), Pe and ♂Im, 11 November 2020.

There is one previous record of the species at this location from 10 November 2012 (Murray *et al.*, 2014).

***Cricotopus (Cricotopus) annulator* Goetghebuer, 1927**

WESTMEATH: HA25 - Lough Ennell, Tudenham shore (N415466), ♂Im, 29 June 1966.

This record is based on a slide preparation previously set aside and labelled as “*Cricotopus* sp indet.” This is the sole record of *Cricotopus (C.) annulator* from Lough Ennell and is a second record of the species for County Westmeath since it was reported from August 1973 at Lough Owel. It is also known from 11 other locations in HA25 (Murray *et al.*, 2014).

***Eukiefferiella minor* (Edwards, 1929)**

KERRY: HA22 - River Caragh, Lower Brida Valley (V740805), 28 January 1976, leg. C. Dowling.

This record is based on determination of the species from a slide preparation of pupal exuviae of assorted Orthocladinae by Colette Dowling from specimens obtained during the Caragh River Survey (Dowling *et al.*, 1981). This is the only record of the species from the River Caragh but there are eight other records from HA22 and nine in County Kerry (Murray *et al.*, 2014).

***Limnophyes minimus* (Meigen, 1818)**

MEATH: HA8 - Lawn, Meadesbrook, Ashbourne (O040594), ♂Im, 25 February 2021.

There is one previous record at this location, from 2 January 2013. It was also recorded at the nearby stream site at Meadesbrook in May 2005 (Murray *et al.*, 2014).

***Nanocladius (Nanocladius) rectinervis* (Kieffer, 1911)**

MEATH: HA8 - Stream, Meadesbrook, Ashbourne (O038594), 10 October and 5 November 2020.

There are four existing records of the species at this site, the first of which was in August 1999 (Murray *et al.*, 2014).

***Psectrocladius (Psectrocladius) limbatellus* (Holmgren, 1869)**

MEATH: HA7 - Animal drinking trough, Ardsallagh (N896635), Pe and ♂Im, 13 May 2021.

There are two previous records at this location from where it was first documented in April 2000 (Murray *et al.*, 2014) and later, in collections in June 2018, by Murray and O'Connor (2018). These are the only records from HA7 but there are records in HA8 on eight occasions between 1999 and 2020 from outdoor rainwater tanks around the author's home at Meadesbrook in County Meath. This species is typical of small water bodies including ponds, littoral regions of lakes and in man-made pools, water butts and animal drinking troughs.

***Rheocricotopus (Rheocricotopus) fuscipes* (Kieffer, 1909)**

MEATH: HA8 - Stream, Meadesbrook, Ashbourne (O038594), 10 October 2020.

There are records of this common species of rivers and streams from more than 100 locations in Ireland. It was recorded on five previous occasions at this site where it was first collected in May 1974 (Murray, 2016, 2020; Murray *et al.*, 2018).

***Synorthocladus semivirens* (Kieffer, 1909)**

CAVAN: HA36 - Lough Sillan, Shercock (H705067), 1971, leg. J. P. O'Connor.

This species is widespread in Ireland with records from some 420 locations (Murray *et al.*, 2018) including Lough Sillan from where, based on collections of pupal exuviae in April, June and September 2007, it was reported by Murray *et al.* (2014). The record from 1971 reported here was given by O'Connor and Bracken (1978) but was overlooked and regrettably omitted in the distribution data given by Murray *et al.* (2014).

***Tvetenia discoloripes* (Goetghebuer & Thienemann, 1936)**

MEATH: HA8 - Stream, Meadesbrook, Ashbourne (O038594), 10 October 2020, 1 January and 21 January 2021.

There are 12 previous records from this site at which it was first found on 31 May 1974 (Murray *et al.*, 2014, Murray, 2016, 2020). It would appear to be a multi voltine species, since specimens, either pupal exuviae or adult ♂ have been collected throughout the year.

Subfamily CHIRONOMINAE

Tribe Chironomini

***Chironomus (Chironomus) anthracinus* Zetterstedt, 1860**

GALWAY: HA29 - Lough Rea, Loughrea (M615154), ♂Im, 10 April 1987.

This constitutes the earliest record of the species from Lough Rea and is based on identification of adult specimens in an alcohol preserved bulk collection that had been given to the author by [†]Dr Martin O'Grady, former Senior Research Officer, Inland Fisheries Ireland. The sample was misplaced and had inadvertently remained unopened for 34 years until it was discovered during the present review. *Chironomus anthracinus* is already on record for Lough Rea from specimens collected and identified by P. H. Langton on 25 May 2003 (Murray *et al.*, 2015) but the record from specimens collected by O'Grady in 1987 is the earliest record of the species at this location.

***Chironomus (Chironomus) piger* Strenzke, 1956**

MEATH: HA8 - Stream, Meadesbrook, Ashbourne (O038594), 10 October 2020. There is a previous record of this species in 2012, also during the month of October, from a rainwater filled bucket at a nearby site at Meadesbrook (Murray *et al.*, 2015).

***Chironomus (Chironomus) riparius* Meigen, 1804**

MEATH: HA7 - Cattle drinking trough, Ardsallagh (N896635), 13 May 2021.

There is one previous record of this species at this location, obtained in the same month 16 years earlier, on 8 May 2005 (Murray *et al.*, 2015).

***Cryptochironomus psittacinus* (Meigen, 1830)**

WESTMEATH: HA25 - Lough Ennell, Tudenham shore (N415466), 1 July 1978.

This is the only record of the species from Lough Ennell and is based on identification of exuviae, overlooked in an alcohol preserved bulk collection, obtained in 1978. The species is known from 48 locations in Ireland, including a single record from County Westmeath at Lough Derravarragh in HA26 and two records in HA25 in Counties Offaly and Clare (Murray *et al.*, 2015, 2018).

***Demicryptochironomus (Demicryptochironomus) vulneratus* (Zetterstedt, 1838)**

MAYO: HA34 - Lough Conn, Brackwansha (G191098), 21 June 1965.

An unidentified slide preparation of the pupal exuviae of this species, labelled with location and collection date details only, was discovered during the present review. This specimen in the collection from June 1965 is the only record of the species in Lough Conn. However, there are records of the species from 14 locations in County Mayo and five in HA34, two of which, in 1995 and 2008, are at Drummin Wood along the northeast shore of the adjoining and interconnected Lough Cullin (Murray *et al.*, 2015).

***Endochironomus albipennis* (Meigen, 1830)**

WESTMEATH: HA25 - Lough Ennell, Tudenham (N415466), ♂Im 1 July 1978.

There are two earlier records of this species at Lough Ennell in June 1966 (Murray, 1972). It is a common species in lakes and is known from 114 locations in Ireland (Murray *et al.*, 2018). Records already exist from five locations in County Westmeath and from ten sites in HA25 (Murray *et al.*, 2015).

***Parachironomus tenuicaudatus* (Malloch, 1915) First record for County Meath, HA 7 and the Eastern River Basin District**

MEATH: HA7 - Attenuation pond number AP-SB/018MP 35.2, adjacent to M3 Motorway bridge over the River Boyne, Bellinter, Navan (N894625), Pe, 5 May 2021.

Parachironomus tenuicaudatus is currently known from 30 locations in 13 counties across 14 Hydrometric Areas in western, southern and central regions of the country (Murray *et al.*, 2015). It is thus far not on record in hydrometric areas of catchments comprising the River Basin Districts of the Eastern, North Eastern or Neagh Bann water resource management areas (Murray *et al.*, 2018). The record presented here, from pupal exuviae in a surface water net sweep along the margin of the attenuation pond, is the first record of the species in County Meath, in HA7 and in the Eastern RBD.

***Polypedilum (Polypedilum) nubeculosum* (Meigen, 1804)**

MEATH: HA7 - Animal drinking trough, Ardsallagh (N896635), 13 May 2021.

There is one previous record of this species at Ardsallagh based on adult males caught in an aerial net sweep beside the nearby River Boyne on 7 July 1988 at a distance of approximately 500m from the drinking trough (Murray *et al.*, 2015).

Tribe Pseudochironomini

***Pseudochironomus prasinatus* (Stæger, 1839)**

CAVAN: HA36 - Lough Sillan, Shercock (H705067), 1971.

This record is taken from the faunal list given by O'Connor and Bracken (1978) that was overlooked by Murray *et al.* (2015). This is the only record from Lough Sillan, however, the species is already known from three other locations in County Cavan and from nine locations in HA 36 (Murray *et al.*, 2015).

Tribe Tanytarsini

***Micropsectra apposita* (Walker, 1856)**

MEATH: HA8 - Stream, Meadesbrook, Ashbourne (O038594), Pe, 10 October 2020 and ♂Im 25 February 2021 from an aerial sweep net collection on the nearby lawn (O040594).

The species has been recorded at Meadesbrook on only two previous occasions, 2 April 1973 and 3 March 1996 (Murray *et al.*, 2015).

***Micropsectra atrofasciata* (Kieffer, 1911)**

MEATH: HA8 - Lawn, Meadesbrook, Ashbourne (O040594), ♂Im, 14 November 2020 in aerial sweep net collection adjacent to stream.

This is a very common species in Irish waters (Murray *et al.*, 2018) and there are now ten previous records at Meadesbrook from where it was first collected in June 1968 (Murray, 1972).

***Micropsectra notescens* (Walker, 1856)**

MEATH: HA8 - Stream, Meadesbrook, Ashbourne (O038594), 10 October 2020.

Pupal exuviae of this species were present in the same collection that contained *Micropsectra apposita* (above). There are now 11 records of *M. notescens* at Meadesbrook where it was first collected in March 1996 and most recently in May 2020 Murray (2020).

***Tanytarsus medius* Reiss & Fittkau, 1971 First for Donegal, HA 38 and the NW RBD**

DONEGAL: HA38 - Lough Dungloe (B783112), 12 August 1988, leg. BPH.

A mislaid slide preparation of this specimen, collected by B. P. Hayes (Hayes, 1991) and not identified at that time was located during the present review and positively identified. This is the first record of the species in County Donegal in HA38 and in the North Western River Basin District.

***Virgatanytarsus arduennensis* (Goetghebuer, 1922)**

GALWAY: HA32 - River Dawros, Tullywee Bridge, Letterfrack (L730586), Pe, 18 August 1981, leg. BPH.

The specimen on which this record is based is from recently discovered unidentified slide preparations by Hayes (1991). The species is known from two other locations in County Galway, one in the adjoining HA31 and one in HA26.

WESTMEATH: HA25 - Lough Ennell, Tudenham shore (N415466), ♂Im, 29 June 1966.

This record is derived from a previously undetermined slide preparation in personal collections. This is the only known record of the species from Lough Ennell. However a record exists from July 1973 at Lough Owel, some 5km north of Lough Ennell (Murray *et al.*, 2015).

***Virgatanytarsus triangularis* (Goetghebuer, 1928)**

MAYO: HA32 - Ashliegh Falls, River Erriff (L895645), pharate male pupa, 18 August 1988, leg. BPH.

Based on an undetermined slide preparation by Hayes (1991), discovered during the present review, this is the only record of the species from the River Erriff and is the third record of the species for County Mayo and HA32 (Murray *et al.*, 2015).

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