

## **FURTHER RECORDS OF CHIRONOMIDAE (INSECTA: DIPTERA) IN IRELAND FROM RECENT AND PAST COLLECTIONS**

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### **Abstract**

Records are given for 31 species of Chironomidae (Diptera, Insecta) from Counties Armagh, Clare, Dublin, Louth, Meath and Mayo in Hydrometric Areas (HAs) 6, 7, 8, 9, 27 and 30. First records for *Metriocnemus (Inermipupa) carmencitabertarum*, Langton & Cobo, 1997 are given for Counties Armagh and Louth in HA6 and for *Tanytarsus brundini* Lindeberg, 1963 in County Dublin. *Paralauterborniella nigrohalteralis* (Malloch, 1915), already known from County Mayo, is reported as new for HA30 and a second record of *Rheotanytarsus reissi* Lehmann, 1970 is given in HA 7 in County Meath.

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

### **Introduction**

Examination of chironomid pupal exuviae and adult male Chironomidae in collections taken during 2023 up to March 2024 as well as determinations from photographs and of specimens in a single alcohol preserved bulk sample collected in 1974 and on some undetermined slide preparations from collections in 1966 and 1973, have yielded new data additional to species distribution records given in Murray *et al.* (2018) and Murray (2020, 2021, 2023). This paper gives a brief account of these findings with information on 31 species.

### **Abbreviations**

Abbreviations used: HA(s) – Hydrometric Area(s); Loc. – Location; leg. – collector; Pe♂/♀ – male/female pupal exuviae; Im♂/♀ – adult male/female; E-JM – Elle-J Murray; SM – Savannah Murray; DM – D. Murray; OM – Orlagh Murray; FP – Fionn Power.

### **Methods**

Records are reported from ten locations, by County and Hydrometric Area (see <www.epa.ie> for details of hydrometric areas), along with information on location, six figure Irish Grid Reference, date of collection and collector. Unless otherwise stated collections were

made by the author (DM). To foster an interest in invertebrate biodiversity of aquatic habitats in the younger generation, the author encouraged granddaughters Elle-J Murray (E-JM) and Savannah Murray (SM) and one of their friends, Fionn Power (FP), to obtain skim net collections of pupal exuviae at one location (Loc 5) while adult specimens were captured by Orlagh Murray at another (Loc 7) or removed from a cobweb (DM). Pupal exuviae were also hand picked from the surface of outdoor rainwater filled containers. Identifications of adults are based on Langton and Pinder (2007) and of pupal exuviae on Langton and Visser (2003).

Records from collections in 2023 and 2024 at seven locations are reported from Counties Armagh, Louth and Meath in HAs 6, 7 and 8. Examination of alcohol preserved material, and some slide preparations from former collections at three locations yielded new records from 1966 in County Dublin in HA9, in 1973 from County Clare in HA27 and in 1974 from County Mayo in HA30.

The ten locations (Loc.), with details of County, Hydrometric Area, Grid Reference, habitat date(s) of collection, collector (by the author unless stated otherwise) from which records are reported are:

**Loc. 1** - County Armagh, HA6, Portadown, IGR J300575, rainwater container, 3 November 2023, B. Nelson.

**Loc. 2** - County Louth, HA6, Dundalk, IGR J005000, rainwater container, 10 September 2023, C. Daly.

**Loc. 3** - County Meath, HA7, Ardsallagh, IGR N896635, cobweb, 5 June and 10 July 2023.

**Loc. 4** - County Meath, HA7, Mullaghboy, Navan, IGR N853668, rainwater container, 29 December 2023.

**Loc. 5** - County Meath, HA7, River Skane, Balgeeth, IGR N887594, skim net collections, 5 June 2023 DM and 15 June 2023, E-JM, SM and FP.

**Loc. 6** - County Meath, HA7: Feeder stream to River Hurley, Rathfeigh, IGR N994611, skim net collection, June 2023.

**Loc. 7** - County Meath, HA8, Meadesbrook, Ashbourne IGR O040594. June to November 2023 and January to April 2024, rainwater container and aerial net sweep, DM and OM.

**Loc. 8** - County Dublin HA9, River Dodder, Bohernabreena, IGR O009242, 27 July 1966.

**Loc. 9** - County Clare, HA27, Lough Raha, Corofin, IGR R266866, 26 May 1973, leg. N. Hackett.

**Loc. 10** - County Mayo, HA30, Lough Carra, Ballinrobe, IGR M165680, 5 April 1974.

## **Results**

Distribution data is given for 31 species (Table 1), six in the subfamily Tanypodinae, one Diamesinae, nine Orthocladiinae and fifteen Chironominae, (eight in the Tribe Chironomini,

one in the Pseudochironomini and six Tanytarsini). The material examined in recent collections yielded records for 21 species, with new County and Hydrometric Area records for *Metriocnemus (Inermipupa) carmencitabertarum* Langton & Cobo, 1997 and a second record in Ireland of *Rheotanytarsus reissi* Lehmann, 1970. Examination of specimens in past collections between 1966 and 1974 yielded records for 11 species (one of which was also obtained in recent collections) with a first county record for *Tanytarsus brundini* Lindeberg, 1963 and a new Hydrometric Area record for *Paralauterborniella nigrohalteralis* (Malloch, 1915).

## The records

### Subfamily TANYPODINAE

#### *Ablabesmyia (Ablabesmyia) longistyla* Fittkau, 1962

**MEATH: HA7 - Loc 5**, 15 June 2023, Pe♂, leg. E-JM and SM.

*Ablabesmyia longistyla* is widely distributed in Ireland currently with records from 187 locations. This is a second record of the species at this location but details of the previous record (leg. DM) from 13 August 2016 were inadvertently unpublished. However the record was included in tabulations given in Murray *et al.* (2018).

#### *Ablabesmyia (Ablabesmyia) monilis* (Linnaeus, 1758)

**MEATH: HA7 - Loc 5**, 5 June 2023, Pe♂.

This is the first record of the species from the River Skane. It is already recorded at 12 other locations in HA7, five in County Cavan and seven in County Meath. *Ablabesmyia longistyla* has a widespread distribution in Ireland and is now documented from 285 locations – an increase of thirteen since records were given in Murray *et al.* (2018).

#### *Arctopelopia griseipennis* (van der Wulp, 1859)

**MAYO: HA30 - Loc 10**, 5 April 1974, Pe♂.

This record from 1974 is the earliest account of the species at Lough Carra from where it was also collected on two previous occasions, in 1996 and 2008 (Murray *et al.*, 2013). *Arctopelopia griseipennis* is documented from 67 locations in Ireland - six in County Mayo of which two are in HA30, one each in HA32 and HA33 and two in HA34.

#### *Procladius (Holotanypus) crassinervis* (Zetterstedt, 1838)

**MAYO: HA30 - Loc 10**, 5 April 1974, Pe♂.

This is the only record of the species to date from Lough Carra although it is already known in HA30 from collections in 2007 from Loughs Beaghcauneen and Corrib and in 2008 from Lough Mask (Murray *et al.*, 2013).

#### *Procladius (Holotanypus) simplicistilus* Freeman, 1948

**MAYO: HA30 - Loc 10**, 5 April 1974, Pe♂.

There are previous records of this species at this location, from April and June 2008 (Murray

*et al.*, 2013). However, the record from 1974 reported here predates published information by 34 years and is thus the earliest record of the species from Lough Carra.

***Zavreliomyia (Zavreliomyia) nubila* (Meigen, 1830)**

**MEATH: HA7 - Loc 3**, 10 July 2023, Im♂, specimen removed from a cobweb.

The cobweb from which the adult male removed was at a distance of approximately 100m from an animal drinking trough from which there are two previous records of the species, as pupal exuviae, in May 1986 and March 2000 (Murray *et al.*, 2013). Larvae of *Zavreliomyia (Zavreliomyia) nubila* typically inhabit small standing water bodies. The species is thus far only known from five locations in Ireland in the east of the country in Counties, Kildare, Meath and Wicklow (Murray, 2023).

**Subfamily DIAMESINAE**

***Potthastia gaedii* (Meigen, 1838)**

**MEATH: HA7 - Loc 5**, 15 June 2023, Pe♂, leg. EJM and SM.

*Potthastia gaedii* is widely distributed in Ireland and, including this record at Loc. 5, it is now known from 197 locations in Ireland, 18 in County Meath and 16 in HA7.

**Subfamily ORTHOCLADIINAE**

***Brillia longifurca* Kieffer, 1921**

**MEATH: HA7 - Loc 5**, 15 June 2023, Pe♂, leg. E-JM and SM. - **Loc. 6**, 18 June 2023, Pe♂.

With the addition of the two new records from the River Skane and at Rathfeigh, both lying in HA7, there are records of *Brillia longifurca* from 70 locations in Ireland, nine in County Meath with six in HA7 and three in the adjacent HA8.

***Eukiefferiella claripennis* (Lundbeck, 1898)**

**MEATH: HA7 - Loc 5**, 15 June 2023, Pe♂, leg. EJM and SM.

*Eukiefferiella claripennis* is now known from 115 locations in Ireland including 13 locations in County Meath - one in HA6, two in HA8 and ten in HA7, one of which is at Dalgan Park, approximately 5km downstream of Loc 5 on the River Skane (Murray, 2015).

***Metriocnemus (Inermipupa) carmencitabertarum* Langton and Cobo, 1997 New for Counties Armagh, Louth and HA6**

**ARMAGH: HA6 - Loc 1**, 3 November 2023, emerging Im♀ and Pe♀, leg. Brian Nelson.

**LOUTH: HA6 - Loc 2**, 10 September 2023, larvae in rainwater-filled container, C. Darby.

**MEATH: HA8 - Loc 7**, 10 September and 14 November 2023, 18 March 2024. larvae, Pe and Im♂.

The record from County Armagh comes from an initial posting of a photograph by Brian Nelson on the *Facebook* Group “Insects and Invertebrates of Ireland”, of an adult female semi emerged from its characteristic readily identifiable pupal exuviae (Plate 1). Following

subsequent communication, BN provided an alcohol-preserved specimen to the author for confirmation of identification. The record from County Louth is similarly based on a *Facebook* posting, by C. Darby, of a video sequence of larvae exhibiting the characteristic movement pattern described in Murray (2013).

The species was first reported from Ireland in 2012 (Murray, 2012) and there have been annual records of this species at Location 7 in HA8 in County Meath since June 2012. Including the two new county records in HA6 reported here, the species is now known from 16 locations in Ireland in seven HA's: 3, 6, 7, 8, 9, 10 and 14 from eight Counties: Armagh, Derry, Dublin, Kildare, Laois, Louth, Meath and Wicklow.

***Orthocladus (Orthocladus) oblidens* (Walker, 1856)**

**MEATH: HA7 - Loc 5**, 15 June 2023, Pe♂, leg. E-JM and SM.

This is the first record of *Orthocladus oblidens* from the River Skane and it is now known from 142 locations in Ireland - 12 in County Meath, one each in HA6 and HA8 and now ten in HA7.

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

**MEATH: HA7 - Loc 3**, 5 June 2023, Im♂ removed from house door cobweb.

*Psectrocladius limbatellus* is known from 51 locations in Ireland with five previous records at this location during the last 24 years (Murray, 2023). It was first recorded in April 2000 in a collection of pupal exuviae from the permanent animal drinking trough located about 100m from the present collection site.

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

**DUBLIN: HA9 - Loc 8**, 17 July 1966, Pe♂.

This record comes from examination of a previously unidentified slide mount discovered during a review of personal slide preparations. It is a second record of the species at this site at which it was first observed 20 years earlier, on 2 April 1946, by A. Fitzgerald (1947 - unpublished M.Sc thesis). That record was included in the listing by Murray *et al.* (2014). It is a third record of the species for HA9. **MEATH: HA7 - Loc 5**, 5 June 2023 Pe♂, leg. DM and 15 June 2023, Pe♂, leg. EJM and SM. **Loc 6**, 18 June 2023 Pe♂.

There are records of this species from 110 locations in Ireland with two previous records in HA7 (Murray *et al.*, 2014; Murray, 2015). It is now known from six locations in County Meath, four in HA7.

***Smittia aterrima* (Meigen, 1818)**

**MEATH: HA8 - Loc 7**, 17 March 2024, Im♂♀, leg. OM.

Larvae of *Smittia aterrima* are predominantly terrestrial and are abundant in damp soil and compost (Andersen *et al.*, 2013). There are records of the species from nine locations in Ireland based on adult male specimens. It was first recorded at the present location (Meadesbrook) in

1996 and has been documented there on a further six occasions (Murray *et al.*, 2014, 2018).

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

**MEATH: HA7 - Loc 5**, 15 June 2023, Pe ♂, leg. E-JM and SM.

There are records of *Tvetenia discoloripes* from 66 different locations in collections from lotic water habitats in Ireland. It is known from 23 locations in County Meath, with three previous records of the species in HA7 from three sites on the River Boyne (Murray *et al.*, 2014).

**Subfamily CHIRONOMINAE**

**Tribe Chironomini**

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

**MAYO: HA30 - Loc 10**, 5 April 1974, Im♂

This common species is known from 57 locations in Ireland, however this record from 1974 is the first documented record of the species in the section of HA30 in County Mayo. *Chironomus (Chironomus) anthracinus* is known from other locations in HA30 - at Lough Corrib in County Galway and in County Mayo in the adjoining HA32 catchment at Lough Knappabeg (Murray *et al.*, 2015).

***Chironomus (Chironomus) luridus* Strenzke, 1959**

**MEATH: HA8 - Loc 7**, 13 and 22 June 2023 and 17 March 2024, Im♂, Pe ♂.

*Chironomus (Chironomus) luridus* is a common species of ephemeral static and stagnant waters and has been regularly observed in water barrels, garden tanks etc. at this location since 1986 (Murray *et al.*, 2015). The species is currently known from 29 locations in Ireland (Murray, 2023).

***Chironomus (Chironomus) tentans* Fabricius, 1805**

**MAYO: HA30 - Loc 10**, 5 April 1974, Im♂.

There is one earlier record of *Chironomus (Chironomus) tentans* from this location that was based on collections made for the author by Noel Hackett (Inland Fisheries Trust) on 25 August 1964 and reported in Murray (1972). *C. tentans* is known from 53 locations in Ireland (Murray *et al.*, 2018).

***Dicrotendipes pulsus* (Walker, 1856)**

**MAYO: HA30 - Loc 10**, 5 April 1974, Im♂.

*Dicrotendipes pulsus* is known from 96 locations in Ireland, including seven locations in HA30 and three in County Mayo, with one record at Lough Carra from July 2008 (Murray *et al.*, 2015). The record reported here, from a collection in 1974, predates existing published information (Murray *et al.*, loc.cit) by 34 years and is the earliest documented record of the species at L. Carra.

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

**CLARE: HA27 - Loc 9**, 26 May 1973, Im♂, leg. N. Hackett

*Endochironomus albipennis* has been documented from 160 locations in Ireland (Murray, 2023) and has been recorded at eight locations in HA27, ten in County Clare (Murray *et al.*, 2015, 2018). However, this record in May 1973 is the earliest known record of the species in County Clare and in HA27.

***Microtendipes pedellus* (De Geer, 1776)**

**MEATH: HA7 - Loc. 3**, 10 July 2023, Im♂ in cobweb.

With the addition of this record at Loc. 3 *Microtendipes pedellus* is now known from 65 Locations in Ireland, including eight in County Meath, six of which lie in HA7 and two in HA8. The species is already known from collections in the vicinity of the present location in April 1984 (Murray *et al.*, 2015).

***Paralauterborniella nigrohalteralis* (Malloch, 1915) New for HA30**

**MAYO: HA30 - Loc. 10**, 5 April 1974, Im♂.

This record of *Paralauterborniella nigrohalteralis* from a sample collected 1974 from Lough Carra, is the first record of the species in HA30 and is also the earliest record of the species in County Mayo where it is also documented at Lough Lannagh, Castlebar in collections made in August 2008 (Murray *et al.*, 2015). The species is now known from 28 locations in Ireland, one additional location to the total given in Murray *et al.* (2018).

***Phaenopsectra flavipes* (Meigen, 1818)**

**MEATH: HA7 - Loc 5**, 5 June 2023, Pe♂.

There are existing records of *Phaenopsectra flavipes* from four locations in HA7 in County Meath (Murray, 2016). The finding of the species at Loc 5, the first record for the River Skane, provides an additional record for HA7 and County Meath and. The species is now known from 72 locations in Ireland.

**Tribe Pseudochironomini**

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

**MAYO: HA30 - Loc 10**, 5 April 1974, Im♂.

There are records of *Pseudochironomus prasinatus* from 126 locations in Ireland, including a published record from a collection at the present site taken in June 2008 (Murray *et al.*, 2015), nine in HA30 of which two are in County Mayo and seven in County Galway. The earliest records of *P. prasinatus* in Ireland are from July 1911 as reported by Grimshaw (1912) from collections in County Mayo from “a lough near Westport” and from Lough Keel, Achill in HA32.

### Tribe Tanytarsini

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

MEATH: HA7 - Loc 5, 15 June 2023, Pe♂, leg. E-JM and SM.

*Micropsectra apposita* is known from 59 locations in Ireland, four in HA7 and six in County Meath including two in HA8 (Murray *et al.*, 2015; Murray, 2016) and was previously reported at this site in June 2018 (Murray and O'Connor, 2018)

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

MEATH: HA7 - Loc 4, 29 December 2023, Im♂, Pe♂; Loc 6, 18 June 2023, Pe♂; HA8 - Loc 7, 10 January 2022 Pe♂ and 3 April 2024 Pe♂, Im♂.

This is a widespread species in Ireland and with the addition of the records from two new locations in HA7 it is now known from 148 locations, 16 in HA7 and 18 in County Meath.

#### *Micropsectra junci* (Meigen, 1818)

MEATH: HA8 - Loc 7, 13 December 2023 Im♂, Pe♂.

*Micropsectra junci* is known 33 locations in Ireland with eight previous records at this location, six during the summer months May, June and July and two in November (Murray *et al.*, 2015). The species is known from one nearby location in HA8 and from four other locations in County Meath in HA7.

#### *Rheotanytarsus reissi* Lehmann, 1970

MEATH: HA7 - Loc 5, 15 June 2023, Pe♂, leg. Fionn Power.

This is the second record of *Rheotanytarsus reissi* in Ireland. It was first documented from County Meath in HA7 from collections on the River Skane, at Dalgan Park (N901626), approximately 5km downstream of the present location (Murray, 2015). *R. reissi* is known from Great Britain and west European countries only (Murray *et al.*, 2018).

#### *Tanytarsus brundini* Lindeberg, 1963 New for County Dublin

DUBLIN: HA9 - Loc 8, 17 July 1966, Pe♂.

Records of *Tanytarsus brundini* were given from 152 locations by Murray, *et al.* (2015, 2018). With the additions of this new record for County Dublin from a recently discovered slide preparation from 1966, and with the record reported from County Louth (Murray, 2019), *T. brundini* is now known from 154 locations in Ireland. It was already reported from HA9 in collections in June 2000 at Blessington, County Wicklow (Murray *et al.*, 2015).

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

MEATH: HA7 - Loc 3, 12 July 2023, Im♂, in cobweb.

There are sporadic records in Ireland of this species that is currently known from 16 locations in Ireland, seven in County Meath in HA7, including an adjacent site at St Briget's Well (N897635) beside the River Boyne - a distance of approximately 200m away (Murray *et al.*, 2015).



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TABLE 1. Distribution data.

| Taxon  | Location | County  | HA  |
|--|----------|---------|-----|
| <b>Tanypodinae</b>   |          |         |     |
| <i>Ablabesmyia (Ablabesmyia) longistyla</i> Fittkau, 1962                  | 5        | Meath   | 7   |
| <i>Ablabesmyia (Ablabesmyia) monilis</i> (Linnaeus, 1758)                  | 5        | Meath   | 7   |
| <i>Arctopelopia griseipennis</i> (van der Wulp, 1859)                      | 10       | Mayo    | 30  |
| <i>Procladius (Holotanypus) crassinervis</i> (Zetterstedt)                 | 10       | Mayo    | 30  |
| <i>Procladius (Holotanypus) simplicistilus</i> Freeman, 1948               | 10       | Mayo    | 30  |
| <i>Zavrelimyia (Zavrelimyia) nubila</i> (Meigen, 1830)                     | 3        | Meath   | 7   |
| <b>Diamesinae</b>  |          |         |     |
| <i>Potthastia gaedii</i> (Meigen, 1838)                                    | 5        | Meath   | 7   |
| <b>Orthoclaadiinae</b>   |          |         |     |
| <i>Brillia longifurca</i> Kieffer, 1921                                    | 5        | Meath   | 7   |
| "  | 6        | Meath   | 7   |
| <i>Eukiefferiella claripennis</i> (Lundbeck, 1898)                         | 5        | Meath   | 7   |
| <i>Metriocnemus (Inermipupa) carmencitabertarum</i> Langton and Cobo, 1997 | 1        | Armagh* | 6*  |
| "  | 2        | Louth*  | 6*  |
| "  | 7        | Meath   | 8   |
| <i>Orthocladus (Orthocladus) oblidens</i> (Walker, 1856)                   | 5        | Meath   | 7   |
| <i>Paraphaenocladus impensus</i> (Walker, 1856)                            | 7        | Meath   | 8   |
| <i>Psectrocladius (Psectrocladius) limbatellus</i> (Holmgren, 1869)        | 3        | Meath   | 7   |
| <i>Rheocricotopus (Rheocricotopus) fuscipes</i> (Kieffer, 1909)            | 5        | Meath   | 7   |
| "  | 6        | Meath   | 7   |
| "  | 8        | Dublin  | 9   |
| <i>Smittia aterrima</i> Meigen 1818  | 7        | Meath   | 8   |
| <i>Tvetenia discoloripes</i> (Goetghebuer & Thienemann, 1936)              | 5        | Meath   | 7   |
| <b>Chironominae - Chironomini</b>  |          |         |     |
| <i>Chironomus (Chironomus) anthracinus</i> Zetterstedt, 1860               | 10       | Mayo    | 30  |
| <i>Chironomus (Chironomus) luridus</i> Strenzke, 1959                      | 7        | Meath   | 8   |
| <i>Chironomus (Chironomus) tentans</i> Fabricius, 1805                     | 10       | Mayo    | 30  |
| <i>Dicrotendipes pulsus</i> (Walker, 1856)                                 | 10       | Mayo    | 30  |
| <i>Endochironomus albipennis</i> (Meigen, 1830)                            | 9        | Clare   | 27  |
| <i>Microtendipes pedellus</i> (De Geer, 1776)                              | 3        | Meath   | 7   |
| <i>Paralauterborniella nigrohalteralis</i> (Malloch, 1915)                 | 10       | Mayo    | 30* |
| <i>Phaenopsectra flavipes</i> (Meigen, 1818)                               | 5        | Meath   | 7   |
| <b>Chironominae - Pseudochironomini</b>                                    |          |         |     |
| <i>Pseudochironomus prasinatus</i> (Stæger, 1839)                          | 10       | Mayo    | 30  |
| <b>Chironominae - Tanytarsini</b>  |          |         |     |
| <i>Micropsectra apposita</i> (Walker, 1856)                                | 5        | Meath   | 7   |
| <i>Micropsectra atrofasciata</i> (Kieffer, 1911)                           | 4        | Meath   | 7   |
| "  | 6        | Meath   | 7   |
| "  | 7        | Meath   | 8   |
| <i>Micropsectra junci</i> (Meigen, 1818)                                   | 7        | Meath   | 8   |
| <i>Rheotanytarsus reissi</i> Lehmann, 1970                                 | 5        | Meath   | 7   |
| <i>Tanytarsus brundini</i> Lindeberg, 1963                                 | 8        | Dublin  | 9*  |
| <i>Virgatanytarsus arduennensis</i> (Goetghebuer, 1922)                    | 3        | Meath   | 7   |

\* = New County or Hydrometric Area record



**PLATE 1.** Adult female of *Metriocnemus (I.) carmencitabertarum*, overturned and partially emerged from its pupal exuviae, floating on the water surface of an outdoor water butt, Portadown, County Armagh, 3 November 2023, B. Nelson. Photograph: Brian Nelson.