

## **SOME RECORDS OF ADULT STONEFLIES (PLECOPTERA), INCLUDING OBSERVATIONS ON WING LENGTH, FROM IRELAND, 2018-2020**

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### **Abstract**

Adult distribution records for 14 species of stoneflies (Plecoptera) collected between May 2018 and October 2020 are provided. Records of brachyptery and microptery are also provided, where relevant. One notable record included is that of an adult female *Perla bipunctata* which is the earliest confirmed for Irish populations to date.

**Key words:** Plecoptera, stonefly, distribution, wing length, brachyptery, microptery.

### **Introduction**

In recent years there have been several reviews of stoneflies in Ireland with the most recent by Feeley, Baars and Kelly-Quinn (2016) and Feeley *et al.* (2020). The former publication provided an update of species distributions using 10km maps and provided an extensive review of available ecological information for each species. In contrast, Feeley *et al.* (2020) updated the information on the number, and chronological distribution, of records available for Irish stoneflies covering the period from early 1900s up to, and including, 2018 and also provided an assessment of the International Union for the Conservation of Nature status for each species. Feeley *et al.* (2020) also provided an update on nomenclature and confirmed the regional extinction of *Perlodes mortoni* (Klapálek, 1906) in Ireland. The island now has 19 extant and verified species.

Between May 2018 and October 2020, the authors have collected additional adult stoneflies from many parts of the country while on fieldwork. Some additional records submitted to HBF for verification are also included. The adults were identified using Hynes (1977) and the data are presented here. The nomenclature follows Feeley *et al.* (2020). All adults were fully winged (i.e. macropterous) unless otherwise stated. A small number of individuals were difficult to identify definitively. These specimens were sent to Craig R. Macadam (Buglife, U.K.) for confirmation.

One notable record relates to that of an adult female *Perla bipunctata* Pictet, 1833, recorded on 9 May 2020 along a small inflow of Lough Na Fooley, County Mayo. While the record is within the noted period of emergence by Hynes (1977), this is the earliest recorded adult the authors can confirm for Irish populations. Previously, adult *P. bipunctata* have only been recorded in late May and early June (Costello, McCarthy and O'Farrell, 1984; Feeley, Baars and Kelly-Quinn, 2009; Feeley and Kelly-Quinn, 2016, and see similar records below). Additionally, this species tends to exhibit protandrous emergence (Feeley and Kelly-Quinn, 2016) which could suggest a male emergence in late April, but this remains unconfirmed.

All records will be forwarded to the National Biodiversity Data Centre in Addendum 3 to the dataset "Stoneflies (Plecoptera) of Ireland" (Feeley, 2020) and to the Centre for Environmental Data and Recording (Belfast) (last updated 4 February 2020 after Feeley *et al.*, 2020). The following abbreviations are used in the text: HBF = Hugh B. Feeley and JRB = Jan-Robert Baars.

### Family CHLOROPERLIDAE

#### *Chloroperla tripunctata* (Scopoli, 1763)

**WEXFORD:** River Bann, Pallis Bridge (T1168), 1♀ 18 June 2020, HBF.

#### *Siphonoperla torrentium* (Pictet, 1841)

**CARLOW:** Pollmounty River, downstream Aughananagh River confluence (S7435), 1♀ 30 June 2020, HBF.

**KILDARE:** Hartwell Stream, bridge south of Kill (N9321), 2♀♀ 25 June 2020, JRB.

**KILKENNY:** Gowran River, bridge east of Freneystown (S5960), 1♀ 23 June 2020, HBF.

**LAOIS:** Crooked River (Stradbally), Timoge Bridge (west of Ballintestock) (S5593), 1♀ 15 June 2020; River Barrow, Tinnahinch Bridge (N3510), 2♀♀ 8 June 2020; River Douglas, Gale's Bridge (S6585), 1♀ 16 June 2020; Stradbally River, bridge north-west of Ballintlea (S5389), 2♀♀2♂♂ 15 June 2020, all HBF.

**WEXFORD:** Aughnacrew River, bridge just upstream of the Pollmounty River confluence (S7634), 1♀ 30 June 2020; Lask River, bridge north-west of Craanford (T0762), 6♀♀ 17 June 2020; River Bann, bridge at Hollyfort (T1264), 4♀♀ 18 June 2020; River Boro, Ballymackesy Bridge (S8935), 1♀ 30 June 2020, all HBF.

**WICKLOW:** Cock Brook, bridge north-west of Kilmore (O0208), 1♂ 24 April 2020; Glashaboy Brook, Glashaboy Bridge (O0601), 1♂ 24 April 2020; River Derry, Balisland Bridge (T9764), 1♀5♂♂ 15 July 2020; River Slaney, Tuckmill Bridge (S8791), 2♀♀ 26 June 2020, all HBF.

**Family LEUCTRIDAE**

***Leuctra fusca* (Linnaeus, 1758)**

**KILDARE:** River Liffey, bridge in Kilcullen (N8049), 1♂ 13 September 2020; Rye Water River, Rye Bridge, Kilcock (N8840), 2♀♀1♂ 17 September 2020; Wheatfield Stream, a tributary of the River Liffey, north of Ardclough (N9530), 1♀ 18 September 2020, all JRB.

**TIPPERARY:** River Suir, Cahir Park (S0522), 1♀1♂ 10 October 2020; River Suir, Thonoge River confluence (S0620), 1♀1♂ 11 October 2020, all Larry Doherty.

***Leuctra hippopus* Kempny, 1899**

**GALWAY:** Ardderry Lough (L9845), 2♀♀1♂ 21 August 2019; Ballyquirke Lough (M2330), 1♀ 22 August 2019, all HBF.

**KILDARE:** Hartwell Stream, bridge south of Kill (N9321), 1♀ 25 June 2020, JRB.

**WICKLOW:** Annalecka Brook, Annalecka Bridge (O0501), 10♀♀5♂♂ 24 April 2020; Avonmore River, bridge south-east of the Sally Gap (O1409), 2♀♀1♂ 28 April 2020; Ballinagee River, Ballinagee Bridge (O0302), 1♀2♂♂ 24 April 2020; Ballylow Brook, bridge upstream of the Ballydonnell Brook confluence (O0613), 1♀ 28 April 2020; Cock Brook, bridge north-west of Kilmore (O0208), 16♀♀8♂♂ 9 April 2019, & 2♀♀8♂♂ 24 April 2020; Glashaboy Brook, Glashaboy Bridge (O0601), 1♀ 24 April 2020; Glashaboy Brook, tributary near Glashaboy Bridge (T0601), 2♀♀2♂♂ 24 April 2020; Glenealo River, ford upstream of the Upper Lake (T0996), 1♀ 27 April 2020; Kings (Liffey) River, bridge 100m upstream of the Ballinagee River confluence (O0302), 1♀1♂ 24 April 2020; River Liffey, 2km north-west of the Sally Gap (O1112), 1♀ 28 April 2020; River Liffey, bridge east of Ballysmuttan (O0514), 1♀ 28 April 2020, all HBF.

***Leuctra inermis* Kempny, 1899**

**WICKLOW:** Annalecka Brook, Annalecka Bridge (O0501), 1♂ 24 April 2020; Avonmore River, bridge south-east of the Sally Gap (O1409), 1♀ 28 April 2020; Ballylow Brook, bridge upstream of the Ballydonnell Brook confluence (O0613), 1♂ 28 April 2020; Glashaboy Brook, tributary near Glashaboy Bridge (T0601), 2♀♀ 24 April 2020; River Liffey, 2km north-west of the Sally Gap (O1112), 1♂ 28 April 2020, all HBF.

**Family NEMOURIDAE**

***Amphinemura sulcicollis* (Stephens, 1836)**

**LAOIS:** Glenlahan River, Clarahill Bridge (N3410), 1♀ 8 June 2020, HBF.

***Nemoura avicularis* Morton, 1894**

**WICKLOW:** Lough Dan, Scout Centre (south-east of the pier) (O1503), 5♂♂ 27 April 2020, HBF.

It is interesting to note that Lough Dan is one of the two lakes where *Nemoura avicularis* was first discovered in Ireland (O'Connor and Bracken, 1980), the other being Lough Sillan, County Cavan.

***Nemoura cinerea* (Retzius, 1783)**

**WICKLOW:** Lough Dan, Scout Centre (south-east of the pier) (O1503), 2♀♀ 27 April 2020, HBF.

***Protonemura meyeri* (Pictet, 1841)**

**KILKENNY:** Gowran River, bridge east of Freneystown (S5960), 1♂ 23 June 2020, HBF.

**WEXFORD:** Lask River, Craanford (T0960), 1♀ 6 April 2019, HBF.

**WICKLOW:** River Liffey, 2km north-west of the Sally Gap (O1112), 1♀5♂♂ 28 April 2020; Ballinagee River, Ballinagee Bridge (O0302), 2♀♀2♂♂ 24 April 2020; Ballydonnell Brook, Ballylow Bridge (O0613), 2♀♀ 28 April 2020; Ballylow Brook, bridge upstream of Ballydonnell Brook confluence (O0613), 1♂ 28 April 2020; Cloghoge Brook, bridge upstream of Avonmore River confluence (O1506), 1♀ 4 April 2019; Cock Brook, bridge north-west of Kilmore (O0208), 1♀5♂♂ 9 April 2019; Glendasan River, bridge near old Lead Works (T0998), 1♂ 27 April 2020; Glenealo River, ford upstream of the Upper Lake (T0996), 1♀ 27 April 2020; Glashaboy Brook, Glashaboy Bridge (O0601), 1♂ 24 April 2020; Kings (Liffey) River, bridge 100m upstream of the Ballinagee River confluence (O0302), 1♀3♂♂ 3 April 2019 & 11♀ 24 April 2020; River Avonbeg, Drumgoff Bridge (T1090), 1♀ 23 April 2020; River Avonbeg, ford near Barravore (T0694), 1♂ 2 April 2019; River Avonbeg, Greenan Bridge (T1487), 3♀♀1♂ 23 April 2020; River Ow, bridge near Aghavannagh (T0586), 2♀♀1♂ 23 April 2020, all HBF.

**Family PERLIDAE**

***Dinocras cephalotes* (Curtis, 1827)**

**CLARE:** Annacarriga River, 6km north-west of Ballina (R6677), 14♀♀ (macropterous) 16♂♂ (brachypterous) 28 May 2018 & 2♀♀ (macropterous) 1♂ (brachypterous) 9 June 2020; Caher River, bridge between Fermoy and Craggeagh, east of Fanore (M1706), 30♀♀ (macropterous) 54♂♂ (brachypterous) 28 May 2018 & 33♀♀ (macropterous) 18♂♂ (brachypterous) 9 June 2020; tributary of Broadford River, Kilbane west of Killaloe (R6272), 8♀♀ (macropterous) 5♂♂ (brachypterous) 28 May 2018, all JRB.

**OFFALY:** Camcor River, bridge north-west of Kinnitty (N1706), 1♀ 28 May 2018, JRB.

***Perla bipunctata* Pictet, 1833**

**CLARE:** tributary of Broadford River, Kilbane west of Killaloe (R6272), 1♀ 9 June 2020, JRB.

**GALWAY:** River near Currarevagh, draining Ben Beg on the south side of Lough Na Fooey (500m south-east of the Fooey River inflow) (L9559), 1♀ 9 May 2020, Úna Donoghue.

**OFFALY:** Camcor River, bridge north-west of Kinnitty (N1706), 4♀♀ (macropterous) 5♂♂ (brachypterous) 28 May 2018 & 2♀♀ (macropterous) 1♂ (brachypterous) 9 June 2020, Camcor River, bridge south-west of Kinnitty near Forelacka (N2104), 1♀ 9 June 2020, all JRB.

### **Family PERLODIDAE**

#### ***Diura bicaudata* (Linnaeus, 1758)**

**MAYO:** Lough Mask, on small headland after the first bay south-east (~700m) of Cloon River inflow (M1371), 1♀ (brachypterous) 1♂ (micropterous) 23 July 2020, Brian Nelson.

**WICKLOW:** Annalecka Brook, Annalecka Bridge (O0501), 1♀ 24 April 2020; Avonmore River, bridge south-east of the Sally Gap (O1409), 1♂ (micropterous) 28 April 2020; Cock Brook, bridge north-west of Kilmore (O0208), 2♀♀ 24 April 2020; Lugduff Brook, just downstream of the bridge, Pollanass (T1196), 2♂♂ (micropterous) 27 April 2020; River Liffey, 2km north-west of the Sally Gap (O1112), 1♀ 9 April 2019 & 1♀ 28 April 2020; River Ow, Ballymanus Bridge (T0981), 1♂ (micropterous) 23 April 2020, all HBF.

#### ***Isoperla grammatica* (Poda, 1761)**

**CARLOW:** Ballyroughan Little Stream, bridge south-west of Ballyroughan Little (S7346), 2♀♀1♂ 29 June 2020; Pollmounty River, downstream of Aughananagh River confluence (S7435), 1♀ 30 June 2020, all HBF.

**KILDARE:** Hartwell Stream, bridge south of Kill (N9321), 1♀2♂♂ 25 June 2020, JRB.

**LAOIS:** Glenlahan River, Clarahill Bridge (N3410), 2♂♂ 8 June 2020; Owenass River, bridge north of Irishtown House (Mountmellick) on the N80 (N4507), 4♂♂ 9 June 2020; Stradbally River, Bauteoge Bridge (S5593), 2♀♀ 15 June 2020, all HBF.

**OFFALY:** Camcor River, bridge north-west of Kinnitty (N1706), 2♀♀ 9 June 2020, JRB.

**WEXFORD:** River Bann, Pallis Bridge (T1168), 2♀♀ 18 June 2020; Lask River, bridge north-west of Craanford (T0762), 2♀♀ 17 June 2020, all HBF.

**WICKLOW:** River Slaney, Tuckmill Bridge (S8791), 2♂♂ 26 June 2020, HBF.

### **Family TAENIOPTERYGIDAE**

#### ***Brachyptera risi* (Morton, 1896)**

**MAYO:** small inflow near Callow Lake Upper (G3103), 1? 5 April 2020, Bryan Kennedy (genitalia not visible, species confirmed using wing venation by HBF).

**KILKENNY:** Ballinaboley, Kilmacow (S5320), 1♀ 24 March 2020, Adrian Allen.

**WICKLOW:** Annalecka Brook, Annalecka Bridge (O0501), 1♂ 24 April 2020; Ballinagee River, Ballinagee Bridge (O0302), 2♀♀2♂♂ 24 April 2020; Ballylow Brook, bridge upstream of Ballydonnell Brook confluence (O0613), 1♀ 28 April 2020; Cock Brook, bridge north-west of Kilmore (O0208), 3♀♀3♂♂ 9 April 2019 & 2♀♀1♂ 24 April 2020; Glashaboy Brook,

Glashaboy Bridge (O0601), 1♂ 24 April 2020; Glendasan River, bridge near old lead works (T0998), 1♀1♂ 27 April 2020; Kings (Liffey) River, bridge north-west of Lockstown Upper (N9703), 1♂ 24 April 2020; River Avonbeg, Drumgoff Bridge (T1090), 2♀♀ 23 April 2020; River Liffey, bridge east of Ballysmuttan (O0514), 2♂♂ 28 April 2020, all HBF.

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