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Four species of Mycetophilidae (Diptera) new to Ireland

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## Plants

### First record of *Leucojum aestivum* L. from the Woodford River, Lough Derg (H15)

Thirteen clusters of the Summer Snowflake *Leucojum aestivum* subsp. *aestivum* Linnaeus, 1759, were located on the eastern bank of the delta of the Woodford River entering into Lough Derg at Rossmore (R788966) associated with the reed *Phragmites australis* (Cavanille) von Trinius ex von Steudel, 1841, and an *Equisetum* sp. Plants were up to 80 cm in height and were easily seen from the river within 5 m of the river bank margin over a distance of c.50 m. The subspecies was distinguished from *L. aestivum* subsp. *pulchellum* (Salisbury) Briquet, 1973, by having a wide spathe of 12-14 mm and from the larger and more numerous flowers (4-9) with tepals of 16-18 mm in length when fully open (Crellin 2011). However, the flower stems were not rough, a characteristic of *L. aestivum* subsp. *pulchellum*. The plants were in full flower with some just past flowering on 21 April and when revisited on 28 April 2011 some had inflated capsules.

Plants occurred in a damp area liable to flooding where dredged spoil had been deposited following the dredging of the river to maintain it for navigation. This initial deepening took place from the mid-1800s in order to extract peat as fuel for steamships plying the lake. The species is reported from two other localities about the lake, from the Portumna area (1970) and Dromineer (1996) (M80 and R88 respectively, BSBI 2011), although the source of these records cannot be traced (Matthew Jebb 2011 pers. comm.). The inner part of Dromineer Bay and the Nenagh River were examined on 29 April and no specimens were seen. Both sites are at least 8 km distant from the present location. Its status is considered as cryptogenic as this same plant is available for sale over the internet and at garden centres. However, its occurrence in Vice-Counties H8-9, and H12 are presumed to be native but elsewhere may have been introduced (Scannell and Synnott 1972). A similar opinion is expressed by Reynolds (2002). Identification was confirmed by Dr Matthew Jebb of the National Botanic Gardens, Glasnevin and a photograph and stem from one cluster were lodged in the National Herbarium together with two bulbs presented for cultivation.

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## Insects

### Four species of Mycetophilidae (Diptera) new to Ireland

Two species of fungus gnat (Mycetophilidae) were recorded for the first time in Ireland and two other species requiring confirmation as Irish were also found in managed plantation forests designated as WD4 (Fossitt 2000). They were captured using standard emergence traps (SETs), which were erected over decaying woody brush (piles of predominantly fine woody debris or FWD) left *in situ* after commercial forestry thinning and clear fell operations. The standard emergence traps were supplied by B&S Entomological Services, Portadown. The Owen emergence trap which has been used extensively in entomological research is a good reference point for the design and size of the SET. The SET lacks the enclosed base like that of the Owen trap but similarly, it sits flush to the ground *in situ*, enclosing woody debris within. They were constructed of a fine mesh and required 1 m stakes (to which the collecting head and 600 ml bottle were attached) to erect.

*Trichonta vulcani* (Dziedzicki, 1889)

New to Ireland

Two male specimens were caught in Shanavara, Co. Laois (S346991). One was caught on 16 August 2010 and the other was caught three weeks later on 6 September 2010. This is a widespread but local species in Britain and is new to Ireland.

*T. vulcani* has not yet been reared, but many species within the genus have been reared from bark encrusting fungi (Gagné 1981).

*Exechiopsis (Exechiopsis) fimbriata* (Lundström, 1909)

New to Ireland

Two male specimens were caught in Carrigagulla, Co. Cork (W374837). One was caught on 9 August 2010 and the other was caught three weeks later on 30 August 2010. This is also a widespread but local species in Britain and is new to Ireland.

*E. fimbriata* is associated with the small and common, edible fungus *Laccaria laccata* (Scopoli, 1772) from which it has been reared several times (Trifourkis 1977, Kurina 1991, Ševčík 2006).

*Mycetophila abiecta* (Laštovka, 1963)

Confirmed for Ireland

Seven male specimens were caught in Lismore, Co. Waterford (S027062) and Carrigagulla. Five were caught in Lismore on 20 July 2010, one was caught in the same locality on 31 August 2010 and one was caught in Carrigagulla on 19 July 2010. Fourteen other female specimens of the *Mycetophila vittipes* group (to which *M. abiecta* belongs) were also found and thought to be *M. abiecta* based on their similar appearance to the male in most respects (Laštovka 1963), particularly in regards to similar wing markings. *M. abiecta* was previously recorded in Ireland by Chandler (1987) based on two females from Cos Wicklow and Cavan and was subsequently recorded in Britain in 1988 from male specimens (Chandler 1988). The species has since been found to occur widely in Britain, with most records from wet woodland in the South. As females cannot be reliably separated from allied species it was consequently listed as requiring confirmation as an Irish species in the Irish checklist.

*M. abiecta* has recently been reared from a moist fallen, moss-covered trunk of willow (*Salix caprea* Linnaeus, 1753) without fungal fruiting bodies (Jakovlev 2011). The allied species *M. vittipes* Zetterstedt, 1852, develops in myxomycetes.

*Phthinia humilis* (Winnertz, 1863)

Confirmed for Ireland

Ten male specimens were caught in Lismore and Carrigagulla (W374837). In Carrigagulla, one specimen was caught on 19 July 2010 and six specimens were caught on 30 August 2010. One was caught in Lismore on 20 July 2010 and two were caught on 31 August 2010. This species is widespread in Britain, occurring around rotten wood in wetter woodland. It was earlier recorded from Ireland only from

the female, which is not separable from the allied species *P. mira* (Ostroverkhova, 1977) and required confirmation following the record of *P. mira* from Ireland by Alexander and Chandler (2009).

Earlier rearing records for *P. humilis* could refer to *P. mira*. Jakovlev (2011) cites references to the biology of *P. humilis*: “emergence traps on soil, moss carpets and ground vegetation” (Økland 1999) and over “decaying logs” (Jakovlev *et al.* 2006).

A *Cordyla* species found to be present at all the sites surveyed is an as yet unnamed member of the *C. murina* Winnertz, 1863, group. It was mentioned by Chandler (1998) in Note 1 to the list of Mycetophilidae as being represented by the figures of the male genitalia given for *C. murina* by Edwards (1925), while the figures of *C. murina* by Zaitzev (2003) are of the true *C. murina*. This group is to be the subject of a revision that is currently in preparation by Olavi Kurina. One hundred and forty six male and female specimens of this species were caught in Carrigagulla, Lismore, Reanagowan, Co. Kerry (Q961181) and Shanavaur between 20 July 2010 and 9 September 2010. In Carrigagulla, four were found on 9 July 2010 and seven on 30 of August 2010, one in Lismore on 20 July 2010 and one on 31 of August 2010. In Reanagowan, 14 were found on 29 July, 17 on 19 August and 90 on 6 of September. Finally, one was found in Shanavaur on 16 August 2010 and eleven were found on 6 September 2010 here also. This species is widespread in Britain; there is a previous Irish record from Wicklow (Chandler 1987 as “*C. murina* Group B of Laštovka MS”) and it was more recently found by Keith Alexander at two sites in Co. Derry.

## SITE HABITATS

The Shanavaur compartment in the current study is a mature first rotation plantation forest made up predominantly of Sitka spruce (*Picea sitchensis* (Bongard, 1832) Carrière) (average tree height *c.*19 m) with sporadic holly (*Ilex aquifolium*), planted in 1977 and last thinned (at the time of this study) in 2008. The Reanagowan compartment is similar to Shanavaur, in that it is made up predominantly of first rotation *P. sitchensis* (average tree height *c.*20 m) except that it is a more wet, bryophyte and pteridophyte rich habitat with numerous drainage gullies often containing water. It was planted in 1973 and at the time of the study had last been thinned in 2004. The Lismore and Carrigagulla compartments are both made up of second rotation pre-thicket *P. sitchensis* (average tree height *c.*2 m). The planting

year of trees in Lismore was 2003 and trees in Carrigagulla were planted in 2004 after clear fell. Prior to clear fell in Lismore, the first rotation consisted of 40 ha of *P. sitchensis* and lodgepole pine (*Pinus contorta* Douglas ex Loudon, 1838) (33% and 66% respectively) planted between 1962 and 1964. In Carrigagulla, 20 ha of 100% *P. sitchensis* was present before being felled. The planting year for this crop was 1956.

Specimens were identified by the author and subsequently confirmed by Peter Chandler. Nomenclature follows Chandler (1998). Voucher specimens have been retained and will be deposited in the museum at the School of Biological, Earth and Environmental Sciences, University College Cork.

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