Clogheen Marsh Nature Reserve Project: Hoverfly survey summary report, 2003

Tom Gittings

METHODS

I carried out hoverfly survey work between June and September 2003. I recorded hoverflies by continuous operation of two Malaise traps. These were located close to the western boundary of the central section of the marsh. I recorded the macrohabitats present using the macrohabitat classification of Speight et al. (2003); note that this differs from the classification of Fossit (2000). I used the analytical techniques described in Section 4.2 of Speight et al. (2000) to compare the macrohabitat associations of the recorded and predicted fauna. Nomenclature follows Speight (2003).

HOVERFLY FAUNA OF CLOGHEEN MARSH

The hoverfly species recorded are listed in Table 1. A total of 45 species were recorded. Notable species included: *Helophilus trivittatus*, *Lejogaster tarsata*, and *Neoascia geniculata*. The following notes are based on Speight (2000), unless otherwise stated.

Helophilus trivittatus was first recorded in Ireland in 1991, and has now been recorded from seven 50 km squares. It is described as a low altitude wetland species that "appears to be rapidly spreading" by Speight (2000), but is categorised as endangered by Speight et al. (2003).

Lejogaster tarsata is associated with spring-fed pools and small brooks in oligotrophic wetlands where livestock are either excluded or exert minimal influence. It is considered to be vulnerable or endangered in Ireland. It has been recorded from six 50 km squares, mainly in the south-east of Ireland and has not been previously recorded in south-west Ireland.

Neoascia geniculata is associated with oligotrophic wetlands and has been recorded quite widely in Ireland (from 25 50 km squares). However there are few recent records and the species is considered to probably be vulnerable.

In addition to *Lejogaster tarsata*, one other species recorded in this survey, *Cheilosia latifrons*, is a new record for Co. Cork.

MACROHABITAT ASSOCIATIONS

The habitat associations of the recorded species are shown in Table 2 and compared to the number of species predicted to occur in each habitat. For the open ground and wetland habitats 50% or more of the predicted Irish fauna and around 60% of the predicted Cork fauna were recorded, with higher percentages from the brackish macrohabitats. According to Speight et al. (2000), "representation on-site of 50% of the species predicted for a particular natural/semi-natural habitat can be taken as indicating a reasonable representation of the fauna of that habitat on that site, in our experience, while figures higher than 50% can be used to identify sites of exceptional quality". Therefore, this preliminary analysis suggests that the wetland hoverfly fauna of Clogheen Marsh is of significant nature conservation importance.

Oligotrophic wet grassland has the highest number of recorded species associated with it, but the highest percentage of the predicted fauna occurs in saltmarsh. However, the

saltmarsh-associated species are mainly generalist species with wide habitat tolerances, and were not necessarily particularly dependent upon the fragmentary saltmarsh habitat present at Clogheen. A similar situation applies to the lagoon fauna. Most of the species with more restricted habitat preferences are associated with the oligotrophic wet grassland, acid fen, swamp, and marsh habitats. There is only a small area of acid fen habitat present, and all the acid fen-associated species are also associated with one, or more of the other habitats. Therefore, the most important habitats for hoverflies at Clogheen Marsh are probably the oligotrophic wet grassland, swamp, and marsh habitats.

REFERENCES

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Table 1. Hoverfly species caught at Clogheen Marsh, July-September 2003.

Species	Number caught	
	Malaise trap 1	Malaise trap 2
Anasimyia contracta	2	1
Anasimyia lineata	0	3
Cheilosia bergenstammi	0	1
Cheilosia latifrons	1	0
Cheilosia pagana	1	0
Cheilosia variabilis	1	0
Chrysotoxum bicinctum	2	4
Criorhina berberina	0	1
Episyrphus balteatus	2	4
Eristalinus sepulchralis	3	9
Eristalis abusiva	0	4
Eristalis arbustorum	18	68
Eristalis interrupta	2	15
Eristalis intricaria	8	13
Eristalis pertinax	6	18
Eristalis tenax	0	4
Eumerus strigatus	8	5
Eupeodes corollae	0	1
Eupeodes latifasciatus	9	6
Helophilus hybridus	9	21
Helophilus pendulus	36	99
Helophilus trivittatus	0	3
Lejogaster metallina	9	7

Species	Number caught	
	Malaise trap 1	Malaise trap 2
Lejogaster tarsata	1	0
Melanostoma mellinum	18	19
Melanostoma scalare	8	14
Melanostoma sp.	4	1
Meliscaeva auricollis	2	2
Neoascia geniculata	1	2
Neoascia tenur	0	7
Paragus haemorrhous	1	0
Platycheirus albimanus	12	48
Platycheirus angustatus	5	6
Platycheirus clypeatus	52	24
Platycheirus fulviventris	2	2
Platycheirus granditarsus	19	10
Platycheirus manicatus	2	1
Platycheirus occultus	9	2
Platycheirus rosarum	7	5
Platycheirus scutatus	1	3
Platycheirus sp.	2	0
Rhingia campestris	19	43
Sericomyia silentis	0	2
Sphaerophoria interrupta	4	1
Sphaerophoria philantha	0	1
Sphaerophoria sp.	7	1
Syrphus ribesii	2	1
Volucella bombylans	1	0
Xylota segnis	0	2

Table 2. Macrohabitat associations of Clogheen Marsh hoverfly fauna.

Macrohabitat[1]	Number of species:			% of predicted:	
	recorded	predicted from:		Irish fauna	Cork fauna
		Irish fauna	Cork fauna		
Oligotrophic wet grassland (23122)	30	60	53	50%	57%
Acid fen (612)	21	41	36	51%	58%
Reed swamp (641)	13	26	22	50%	59%
Marsh (65)	19	34	29	56%	66%
Lagoon (82)	9	16	13	56%	69%
Saltmarsh (833)	8	11	10	73%	80%
Scrub (122)	13	39	34	33%	38%
Alder swampwood (1422)	9	24	23	38%	39%
Willow swampwood (1432)	16	37	33	43%	48%

[1] Habitat codes in parentheses from Speight et al. (2003).