

GETTING TO KNOW SYRPHIDS

NATIONAL BIODIVERSITY DATA CENTRE
HOVERFLY WORKSHOP
2012

MARTIN C.D. SPEIGHT



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Martin Speight

1.FINDING & COLLECTING

2. PRESERVING

3.IDENTIFICATION & STUDY

WHERE TO FIND SYRPHIDS?

1. Flowers
2. Sap runs
3. Flight lines
4. Water's edge
5. Hovering
6. Swept from vegetation

WHERE TO FIND SYRPHIDS: FLOWERS

Common yellow flowers used by syrphids are:
composites, crucifers, buttercups, spurge

Yellow Papilionaceae are an exception: vetches,
gorse, broom etc are not used by most syrphids



WHERE TO FIND SYRPHIDS: FLOWERS

Common white flowers used by syrphids are: umbellifers, *Sorbus* (including rowan), crucifers, blackthorn, whitethorn guelder rose etc



WHERE TO FIND SYRPHIDS: FLOWERS

Some syrphids will also use 'Red' flowers:



Only some syrphids use red flowers, because they require elongate mouthparts (like this *Rhingia*) to extract the nectar. The red colour signals to insect visitors that the flower has concealed nectar sources.

WHERE TO FIND SYRPHIDS: FLOWERS

Don't forget some species will also use wind pollinated flowers like grasses, plantains, reeds & sedges.



Platycheirus fulviventris



Melanostoma scalare

Some syrphids make use of the flowers of grasses and sedges to obtain pollen as a food source. *M.scalare* is a field edge and woodland species; *P.fulviventris* is a wetland species. Adults of many wetland syrphids use grasses and sedges as a source of pollen for food. This makes sense given that a high proportion of wetland herbaceous plants are grasses, sedges etc.


WHERE TO FIND SYRPHIDS: SAP RUNS



WHERE TO FIND SYRPHIDS: FLIGHT LINES

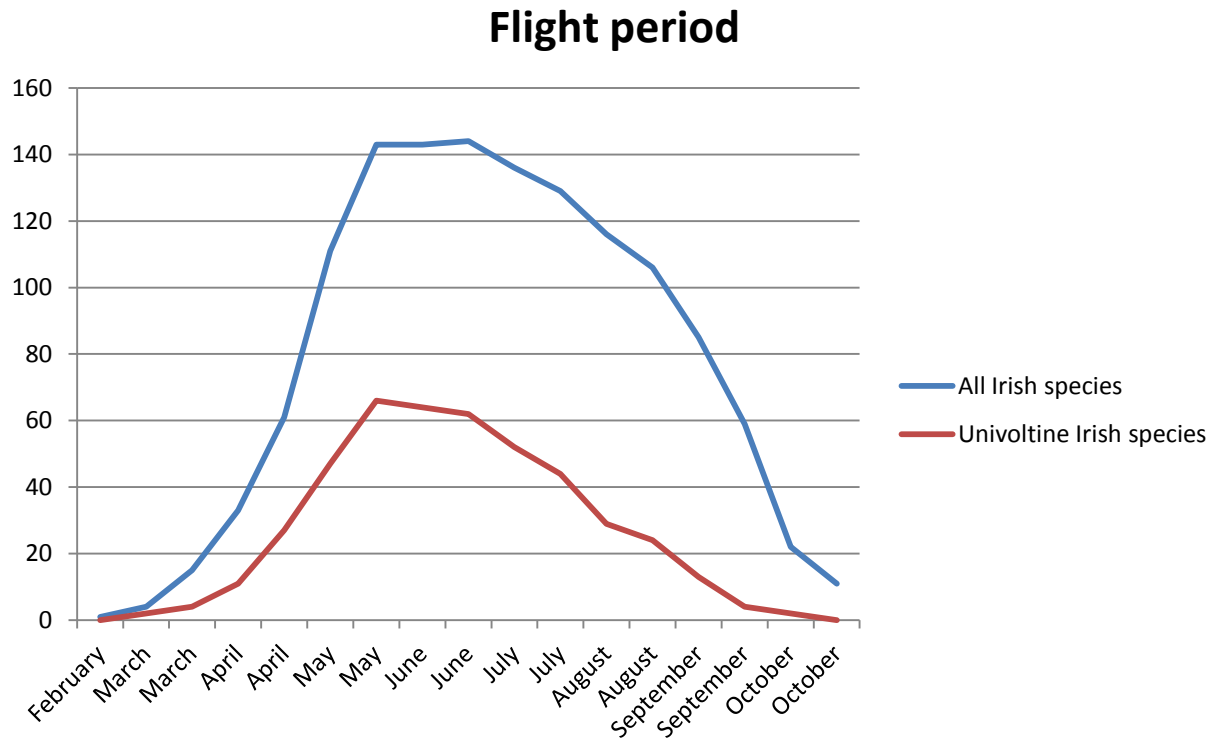


WHEN TO FIND SYRPHIDS



Early morning sun	(08.30-10.00)	sun-bathing on foliage (on bare ground in sun)
Sunny days	(10.00-14.30)	on flowers (and on rocks in sun); foliage; tree trunks; stumps
	(11.00-16.00)	sap-runs
	(12.00-16.00)	(drinking at water's edge)
Sunny evenings	(17.00-18.00)	sun-bathing on foliage (on bare ground in sun)

WHEN TO FIND SYRPHIDS



COLLECTING SYRPHIDS

For some species photographs can be useful but for most species specimens are required



COLLECTING SYRPHIDS



There are considerations:

1. Difficulty of identifying live insects reliably, in the field
2. Need for reference specimens, to augment keys
3. Need for voucher specimens, to validate records

COLLECTING SYRPHIDS

Hand nets can be used to collect syrphids but
the most effective way to sample a site is to
use a malaise trap

COLLECTING SYRPHIDS

Hand nets: « spring-frame net »



B & S Entomological Services: <http://www.entomology.org.uk/>

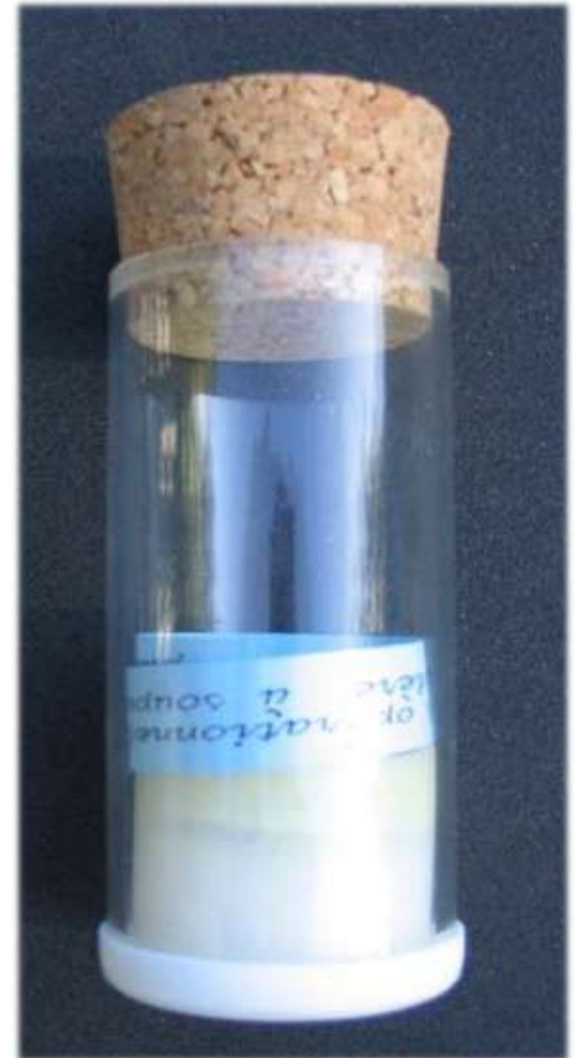
COLLECTING SYRPHIDS

Hand nets: kite net/sweep net



COLLECTING SYRPHIDS

You need to lethally sample syrphids for identification. The best solution is a cyanide killing bottle.



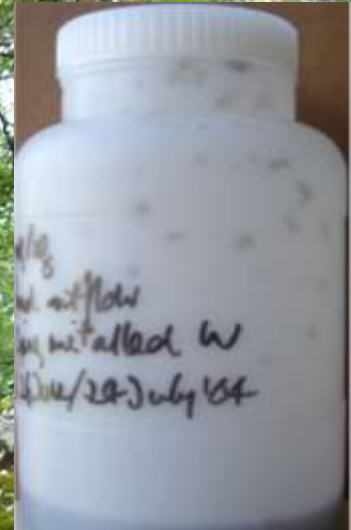
COLLECTING SYRPHIDS

The afternoon is often best used for pinning the catch



COLLECTING SYRPHIDS

Malaise trap



70% industrial alcohol


Insects fly into the net and try to escape at the top where they are captured in a bottle of 70% alcohol.

COLLECTING SYRPHIDS

When using malaise traps make sure to situate them along flight lines




COLLECTING SYRPHIDS



This malaise trap
is not along flight
line – poor catch

careful siting of Malaise traps is important



Along flight line
– good catch

COLLECTING SYRPHIDS

Emergence traps can also be used



PRESERVING SYRPHIDS

WET OR DRY?



70% industrial alcohol



PRESERVING SYRPHIDS

DRY

Considerations:

1. Pinning
2. Labelling
3. Storage

PRESERVING SYRPHIDS

Dry: pinning

English-
length pin:
English-
depth boxes



Continental-
length pin:
Continental-
depth boxes

Pin lengths differ and this will have implications for storage boxes used

PRESERVING SYRPHIDS

Labelling of specimens is very important

The labels should include the following information:

On data label:

1. Locality data, including: 6-figure grid reference, altitude (worth recording if over 700ft., in Ireland), county & country
2. Ecological data: date (it is advisable to give century in full and to spell out the month), ecotype in which collected, what the specimen was doing when caught e.g., on flowers of *Heracleum*, any other ecological data for that particular taxonomic group, method of collection
3. Collector's name

On determination label:

1. Latin name of organism plus name of describer of organism
2. Name of identifier, plus date of determination

PRESERVING SYRPHIDS

STORAGE

You need to be aware of both space and weight considerations



PRESERVING SYRPHIDS

Store box organisation: pins and thread can be used to assist organisation



PRESERVING SYRPHIDS

Entomological suppliers:

B & S Entomological Services

www.entomology.org.uk/

0044 7760388463

37 Derrycarne Road, Portadown, Co. Armagh, BT62 1PT, N. Ireland
(hand nets and Malaise traps)

Entomophil

entomo.oxatis.com

0033 299979256

7 rue du saut Roland, "La croix Bertin", 35210 Dompierre du Chemin,
France
(cyanide killing bottles : « Bocal de chasse D 50 »)

Watkins and Doncaster

www.watdon.co.uk/the-naturalists/

0044 333 8003133

PO Box 5, Cranbrook, Kent, TN18 5EZ, UK
(forceps, pins, store boxes etc.)

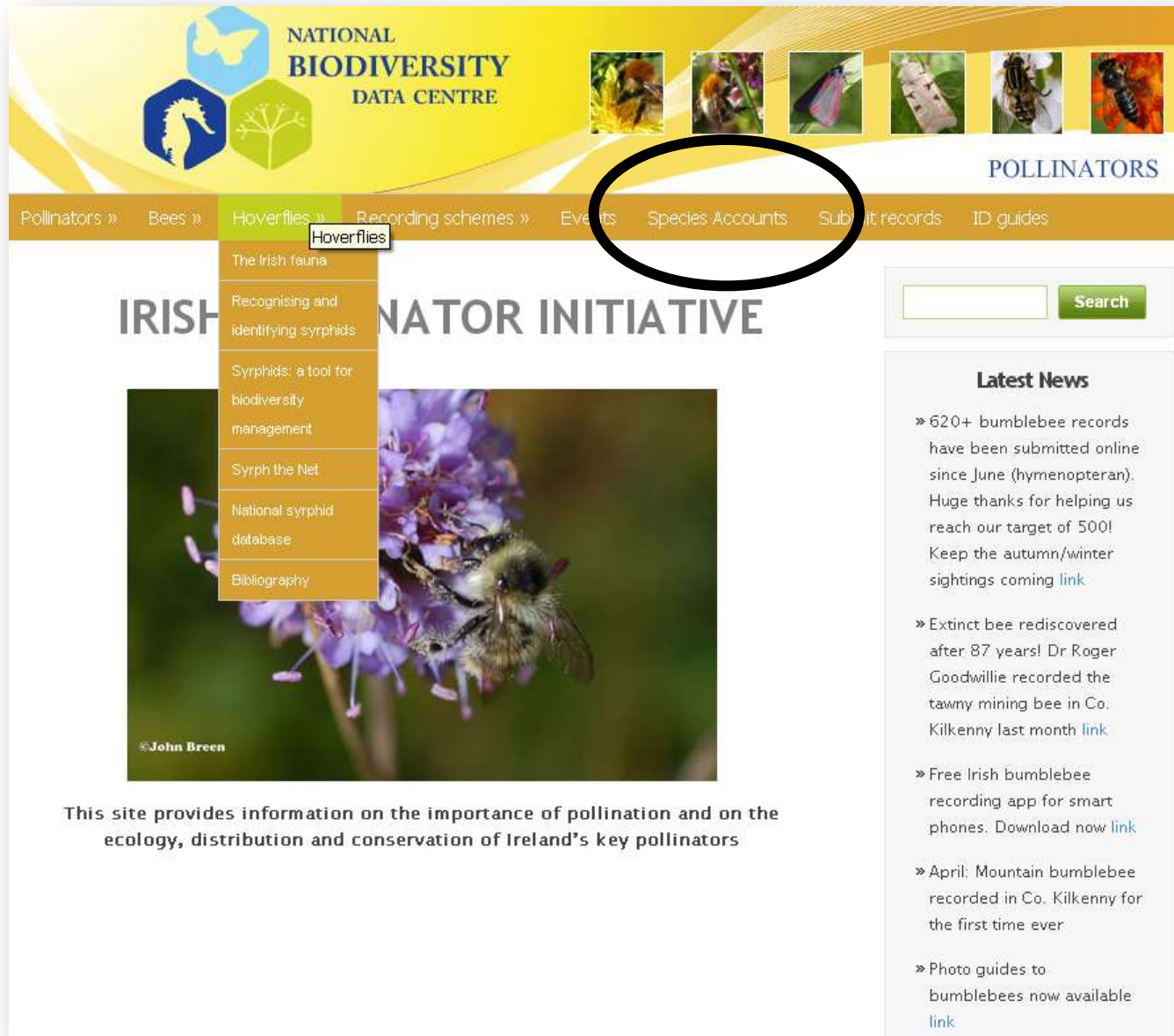
IDENTIFICATION & STUDY

Resources:

1. Syrph the Net (includes databased information for Irish Syrphidae)
2. Irish Wildlife Manual No. 36: Database of Irish Syrphidae (Diptera).
3. Website on Irish Syrphidae
<http://pollinators.biodiversityireland.ie/>



Resources: a website on Irish syrphids is available



The screenshot shows the National Biodiversity Data Centre website. The header features the logo and the text "NATIONAL BIODIVERSITY DATA CENTRE". Below the header is a navigation bar with links: Pollinators », Bees », Hoverflies », Recording schemes », Events », Species Accounts », Submit records », and ID guides ». The "Hoverflies" link is circled in black. Below the navigation bar, the "IRISH POLLINATOR INITIATIVE" section is visible. It includes a large image of a bumblebee on a purple flower, credited to "©John Breen". To the right of the image is a sidebar with a search bar and a "Search" button. Below the search bar is a "Latest News" section with several news items, each with a "link" to the full article.

NATIONAL BIODIVERSITY DATA CENTRE

POLLINATORS

Pollinators » Bees » Hoverflies » Recording schemes » Events » Species Accounts » Submit records » ID guides »

IRISH POLLINATOR INITIATIVE

©John Breen

This site provides information on the importance of pollination and on the ecology, distribution and conservation of Ireland's key pollinators

Latest News

- » 620+ bumblebee records have been submitted online since June (hymenopteran). Huge thanks for helping us reach our target of 500! Keep the autumn/winter sightings coming [link](#)
- » Extinct bee rediscovered after 87 years! Dr Roger Goodwillie recorded the tawny mining bee in Co. Kilkenny last month [link](#)
- » Free Irish bumblebee recording app for smart phones. Download now [link](#)
- » April: Mountain bumblebee recorded in Co. Kilkenny for the first time ever
- » Photo guides to bumblebees now available [link](#)



Dasysyrphus albostriatus (Fallen, 1817)



Click map for live map



About the species

Preferred environment: forest; most types of coniferous and deciduous forest and conifer plantation, up to the lower limits of the alpine zone. In Ireland, *D. albostriatus* may be found in suburban gardens and parks, along tall hedges and around open areas in conifer plantations as much as in more natural surroundings. Although in general associated with forested situations, this species frequents areas of young woodland and scrub as well as more mature forest. It thus occurs in Ireland with the *Corylus* scrub of the limestone karst areas, as well as in association with oak woods. It has to be regarded as a largely anthropophilic species here.

Adult habitat and habits: tracksides, clearings etc.; to a significant extent arboreal, but often within 2-3m of the ground; settles on foliage of trees and bushes; may be found sunning itself in the evening, on bushes in sheltered locations.

Flowers visited: yellow composites; white umbellifers; *Acer pseudoplatanus*, *Calluna*, *Crataegus*, *Euphorbia*, *Lonicera xylosteum*, *Papaver*, *Ranunculus*, *Rubus*, *Salix*, *Sorbus*, *Stellaria*, *Succisa pratensis*, *Viburnum opulus* (for extended list, see de Buck, 1990).

Flight period: end April (early April in southern Europe) /September, with stragglers into October. Larva: described and figured by Dusek & Laska (1962), Brauns (1968) and Goeldin (1974); predominantly aphid-feeding, but apparently predatory on a wide range of soft-bodied insects; according to Goeldin (1974) the larvae twine around twigs or small branches like an annulus, keeping to the woody parts, where their colouration makes them almost

Species accounts are available for the 180 species of syrphid that occur in Ireland.



Bumblebee Identification Guides

These files contain a series of images of Irish bumblebees, and have been developed as an identification guide. Photographs will first appear unlabeled so that you have the option to test your identification if you wish. Huge thanks to all those who have generously allowed their photographs to be included in the guides.

[Irish bumblebees 1 \(2012\)](#) This pdf guide is 1.6MB in size

[Irish bumblebees 2 \(2012\)](#) This pdf guide is 1.2MB in size

[B. lucorum](#) and [B. terrestris](#) This pdf guide is 1.3MB in size. *Bombus lucorum* (White-tailed bumblebee) and *B. terrestris* (Buff-tailed bumblebee) are both very common in Ireland, but can be difficult to distinguish. This guide provides advice on how to identify queens, workers and males.

Hoverfly Identification Guides

[StN_key \(2011\)](#) StN keys for the identification of adult European Syrphidae (Diptera), Glasgow 2011. This pdf is 1.2MB in size.

ID guides

Search

Latest News

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- » April: Mountain bumblebee recorded in Co. Kilkenny for the first time ever

IDENTIFICATION & STUDY



It is the intention of the National Biodiversity Data Centre to maintain a reference collection of Irish syrphidae which will be available for use during office hours.

IDENTIFICATION & STUDY

WHERE TO NOW?

1. Collect some hoverflies
2. Start a reference collection
(don't neglect data labels)
3. Look for a project that
interests you (site list? county
list?)
4. Attend a workshop in the
National Biodiversity Data
Centre.

