Hoverfly Newsletter

Number 4 - October,1986

It is a pleasure to record that, as in the previous Newsletter, the rate of submission of contributions by members of the Hoverfly Recording Scheme continues to be very satisfactory. However, in producing this belated issue, it is well worth mentioning that I have used up almost all the material so far sent in and that I would now appreciate more!

It will be of great encouragement to members to learn that the Nature Conservancy Council has been able to find sufficient funds to enable the existing Hoverfly records to be entered into the Biological Records Centre (Institute of Terrestrial Ecology, Natural Environment Research Council) computer files. This work will commence before the end of the financial year and, it is estimated, is likely to take about six months. The length of this period must be a satisfying measure of the activities of scheme contributors. You will note that the timing of this operation allows a space in which to send in those records on which you may have been 'sitting' to be sure they are included in this first phase of ingestion/digestion by the computer! I recently promised to produce a second Provisional Atlas of the Hoverflies of the British Isles in which I had set myself a deadline of around summer, 1986. However, in view of developments, it now seems futile for me to compile maps by hand when the computer can produce them so much more easily. Thus it seems sensible to suggest a postponed date for the second Provisional Atlas of winter 1987.

In the review of Ernst Torpe's Hoverfly book in this issue, it is suggested that in the next issue we should begin to include accounts of Palaearctic genera represented by species present in the British Isles. This wider view must have strong attractions, and contributions from those who feel appropriately motivated will be very welcome.

In this issue you will note a first major contribution devoted to the juvenile stages and habits of Hoverflies, as foreshadowed by comments in earlier issues. We would welcome contributions in this area, even if these are of a fragmentary nature and on individual species.

A second edition of British Hoverflies (A E Stubbs & S J Falk) is now in preparation and will eventually be published by the British Entomological and Natural History Society. This must be a source of satisfaction to Hoverfly Recording Scheme members since to a large extent it is a measure of your support of the first edition. We, who have faith in the Diptera Recording Scheme in general, look forward to works of this nature on other groups of flies.

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CONTENTS

Notes on *Microdon mutabilis* in Mull : Boyd Barr

In response to 'A plea for collection of information on the distribution of *Microdon* in Britain' (P F Entwistle, 1982, Hoverfly Newsletter No 1) the following notes may be of some interest.

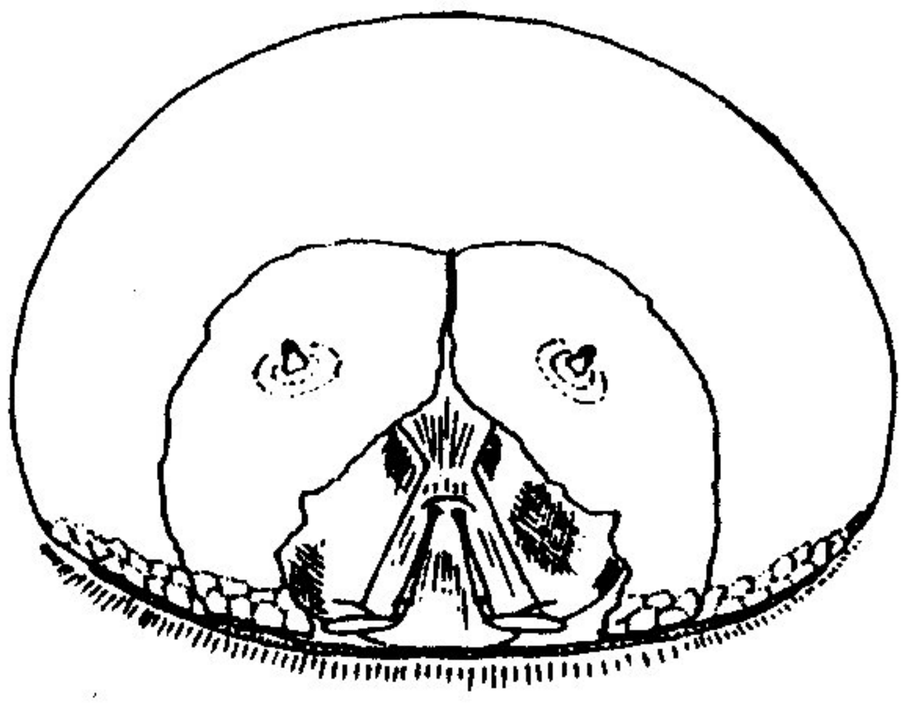
On 25 February 1984, I decided to revisit a site on the Island of Mull where in June 1983 I had taken a single specimen of *Microdon mutabilis* to attempt to search for larvae. This site is an inland, well drained, south facing one with an abundance of ant nests. After only a few minutes I had collected a number of spent puparia still attached to the underside of the large rocks that cover the hosts nests. Being quite early in the season, larvae were a little difficult to come by. However, two hours later in addition to 70 spent puparia I had also found 7 smallish larvae! One interesting feature of the larvae was that they were at variable stages of development, some being much smaller than others. It may be that larvae require two years, in some instances, to develop fully here in the Hebrides.

My next visit to the same site was on 24 April 1984. This time I was lucky enough to find four full grown larvae which pupated the next day. At the point of pupation the larva begins to turn much darker from its dull opaque white to a dull matt lightish brown. The irregular polygonal patterns on the dorsum are a dark buff. The puparial head cap is outlined with a light buff coloured line which extends from the centre of the lateral line down to the fringe of the venter thus dividing the head cap into two equal parts. The cap actually divides into three upon emergence of the adult (see figures). When the puparium is fresh the head cap is adorned with two light buff coloured spots which at first are flush with the dorsal surface but soon begin to dome out. After a couple of days these domed spots are forced off the head cap to make way for paired 'horns'. These horns are quite glossy in comparison with the rest of the puparium being slightly darker brown and surrounded by a circle of the original buff coloured spot. The horns themselves are adorned with numerous raised spots at the apex but clear of such markings at the point of attachment.

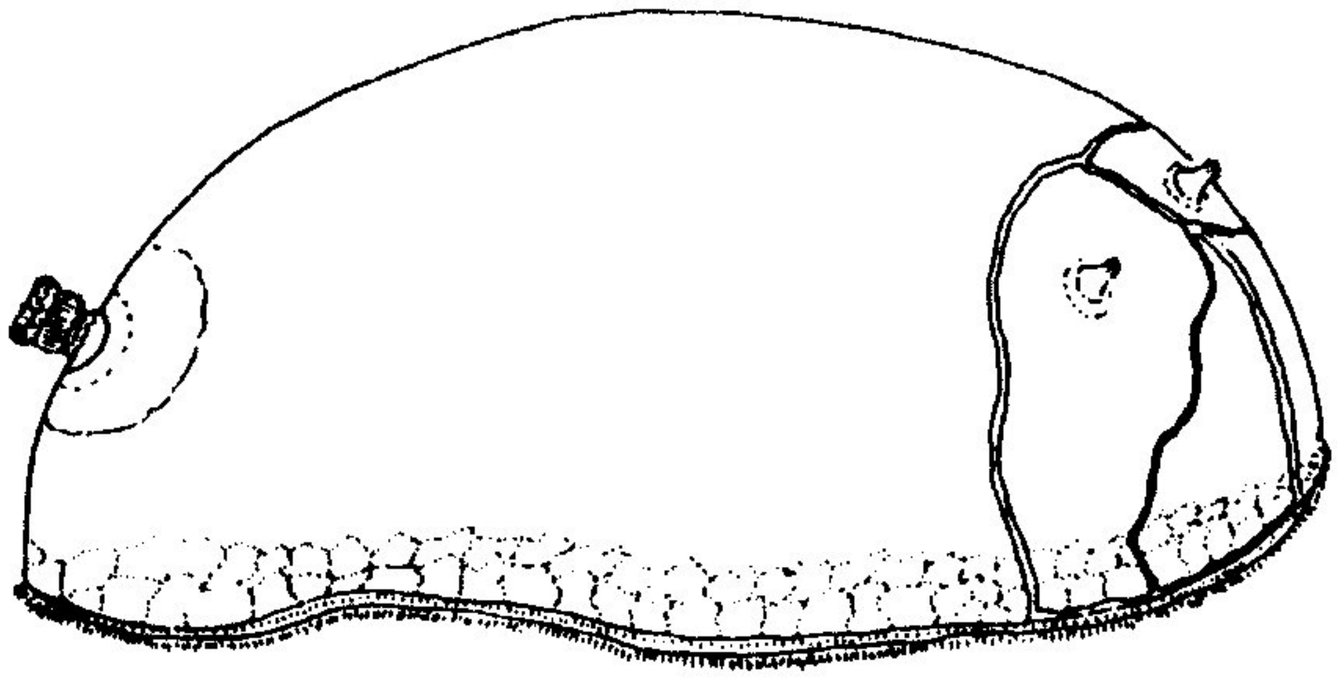
Two more visits were made to the same site to search for fresh puparia. These were on 1 May 1984 when 14 puparia were collected and 9 May 1984 when 17 were found. Obeerving the larvae collected on 24 April it appeared that the pupal period is about 36 days. If we take the first adult emergence from puparia collected on 9 May (those from which adults appeared within 24 hours) we can estimate the date of pupation to have been around 3 April 1984. Sex ratios appeared to be even, the 14 puparia collected on 1 May producing 7 males and 7 females with a marked tendency for females to emerge later than males. Unfortunately the puparia collected on 9 May were not all from the same nest, although the two ant nests were only a metre apart. Nevertheless, the tendency of females to emerge later was still apparent.

Following frequent visits to this locality a few other observations should be recorded. Firstly Donisthorpe (1927, *Guests of British Ants*, Routledge, London) stated that the larva is quite safe as long as it remains dorsal side up. However, I have seen a couple of examples of ants consuming semi-pupated specimens still attached by their ventral soles. Secondly, Verrall (1901, *British Flies*, vol 8, Gurney and Jackson, London) stated that the humming noise of the adult is created by the halteres vibrating against short bristly hairs. I did not observe this; close inspection of fresh specimens showed that the sound is produced by rapid stridulation of the wings. The adults will 'perform' when disturbed and raise themselves up on their legs, swaying from side to side whilst emitting this hymenopterous buzzing note. Finally, another observation I have not seen in the literature relates to adults feeding. On 5 June 1984 I boxed a rather stupified male that was feeding on bedstraw flowers.

Microdon mutabilis.
Drw. showing position of adult antenna in relation to pupae 'horns'.



Microdon mutabilis.
Pupae showing 'horns' at 3 days old.



I hope these notes prove of some interest and I should be very pleased to hear from other recorders any observations they may have of Microdon species. I am also willing to exchange specimens of M. mutabilis for other less common Syrphidae.

The Bothy, Glenleedle, Salen, Aros, Isle of Mull.

Parasyrphus - a brief profile : David M Robertson

Small to medium flies, species of Parasyrphus usually have yellow spots rounded posteriorly or yellow bands with an undulating posterior margin and rolled over margins to the tergites though, as Vokeroth (1969) points out the abdomen in P. nigritarsis is distinctly, if weakly, margined. The genus is one of the most clearly defined in the tribe Syrphini.

Sometimes known as Mesosyrphus or Phalacrodira, Parasyrphus contains at least 27 species. Eleven are known from Europe and Asia and 16 from North America. Six species are found in the British Isles, although no British specimens of P. nigritarsis have been confirmed for several years. It is an entirely northern genus being found in the Holarctic region including the Arctic Circle, but excluding North Africa.

With the exception of P. nigritarsis - a rarity only recorded in the north of Scotland - Parasyrphus species appear to be generally distributed in Britain today and are perhaps extending their ranges in connection with the spread of coniferous woodland. For example, recent records of P. malinellus, which Coe (1953) described as rare, have bridged the gap in the disjunct distribution (nothing between Perthshire and Southern England) given by Coe. When British Hoverflies (A E Stubbs and S J Falk, 1983, British Entomological and Natural History Society) appeared, the status of P. annulatus in Scotland was unknown and the northern limits of P. lineolus were uncertain. The records now reveal the former as probably not uncommon in Scotland as far north as Sutherland as, it turns out is the situation with P. lineolus.

Species of Parasyrphus are strongly associated with coniferous woodland. However larvae of P. vittiger have been found in Switzerland by Goeldlin de Tiefenau (1974) feeding on aphids on blackcurrant and adults have been caught in emergence traps on a spruce forest floor in Czechoslovakia (Kula, 1980). It seems likely therefore that the larvae of at least some of the Parasyrphus will prey on aphids from a variety of host plants and habitats. P. lineolus is also known to be aphidophagous (Goeldlin de Tiefenau, 1974) and associated with spruce (Entwistle, 1983). P. nigritarsis has been reported from the Continent as feeding on the eggs and larvae of chrysomelid beetles (Schneider, 1953). P. punctulatus has been observed laying eggs on young spruce shoots (Stubbs, 1983). Considering how frequently adults of the genus are encountered, remarkably little is known of the immature stages on the basis of which Dr G E Rotheray (in this issue) suggests a specialist habit for the genus possibly making detection somewhat difficult. P. Goeldlin de Tiefenau (1974, Mitt. Schweiz. ent. Ges., 47, 151-252) was able to describe larvae and puparia of P. lineolus and P. vittiger which he reared by inducing adults to oviposit in captivity and then rearing the larvae on Aphis fabae, the common black aphid of beans.

P. punctulatus is early on the wing (March-June) as is P. malinellus (April-June). P. nigritarsis appears to be an early summer species: the few dates for this country are in June while van der Goot (1981) gives a mid-May to early July flight period for North West Europe. The remaining 3 British species are found from May to August, with P. vittiger extending into

September. De Tiefenau comments that several species (at least on the Continent) participate in autumnal migrations, notably P. annulatus, P. lineolus and P. vittiger, but that though they are often locally abundant, they constitute only a small percentage of migratory syrphid swarms.

In the field we probably overlook many Parasyrphus because of their superficial resemblance to commoner species in other genera. Speight, Chandler and Nash (1975) draw attention to this, comparing P. malinellus and P. vittiger with Syrphus ribesii/S. vitripennis, and P. annulatus and P. lineolus with Melangyna cincta and Meliscaeva cinctella. So an extra careful look at specimens of all these species is needed to be sure that they are not Parasyrphus.

Identification of Parasyrphus is not always straightforward and it is unwise to rely on abdominal colour patterns since these can vary: P. annulatus can have the band on the third tergite interrupted and P. vittiger can have the bands on the third and fourth tergites separated into spots. Comments on individual species and comparisons with related species such as are provided by Verrall (1901) and Stubbs (1983) are extremely useful; and access to museum and other collections (and to a knowledgeable curator!) can be invaluable in resolving difficulties.

There may be more than the 6 species of Parasyrphus presently known from the British Isles, so it is well worth looking out for them.

I am grateful to Philip Entwistle and Graham Rotheray for the help I received in putting this brief note together.

A proposed revision of European Cheilosia : Steven J Falk

Readers may be interested in a revision of the European species of the genus Cheilosia which I am currently undertaking. The work originated as a study to determine the use of male genitalia in identifying British species. This demonstrated that the male genitalia do provide a large number of useful characteristics, which greatly aid the separation of most British species, and also strongly reflecting the phylogeny of the group, so that at long last natural subdivisions of the genus may be possible.

So far I have made detailed drawings of the male genitalia of all the British species and most of the European ones. I hope to eventually cover the male and female genitalia, and larvae, of as many European species as are available to me. Detailed morphological and genitalial descriptions and new keys are being presently produced and it is worth noting that none of the European keys is completely accurate or easy to use.

This project has also given me the opportunity to revise much of the British and European collection of Cheilosia at the BMNH and to identify much accession material for early incorporation into the main collection. This will provide long series of most European species. I am also very interested in the potential of Cheilosia as weed control agents and thus will undertake some biological studies.

The work has so far clarified many problems and produced plenty more to replace them! I would like to make the following amendments to Stubbs and Falk (1983, British Hoverflies, British Entomological and Natural History Society):

1. Sp C (pp 84 and 176) is simply a dwarf specimen of C. fraterna and its similarity to C. vernalis reflects their close phylogenetic relationship.

2. The strange specimen of C. praecox with a swollen frons referred to on page 172 is a rather small though otherwise normal example of C. nebulosa, this being confirmed by genitalia.

3. Sp D (p 176) and E (p 177) are both broods of C. proxima (Falk, in prep).

4. The status of sp A and B is still being determined.

Any European material or even British (especially problematic specimens) plus rearing and other biological information, would be greatly appreciated and will ensure that the final publication does justice to this highly difficult group.

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Introducing predacious Hoverfly larvae : Graham E Rotheray

The great majority of Syrphinae are predators of aphids. Their larvae are unique among Diptera in being diversely coloured and patterned. Much of this coloration is cryptic in nature. For instance, Epistrophe larvae are remarkably flattened and green, suiting them to camouflage on leaves. Dasysyrphus larvae are similarly flattened, but are brown and hide on bark. Others are partially opaque and further disguise themselves with disruptive black and white colour patterns eg Syrphus and Episyrphus.

There are three larval stages. The third stage, which is about 1-2 cm long is simply distinguished from all other Diptera by the possession of a single respiratory process. This is a tawny coloured projection at the end of the body. In larvae of all other Diptera it is either inconspicuous or divided into two well separated parts. First and second stages have similarly divided respiratory processes but can be distinguished by their generally opaque appearance. At the front end of the body the black scythe-shaped mouthparts can be seen through the integument.

Smaller species such as Platycheirus and Sphaerophoria require 200-300 aphids to complete development whereas larger species like Syrphus and Scaeva need up to 600. Hoverfly larvae are sucking predators and aphids are captured only during characteristic hunting movements called 'casts'. These involve lifting the front end of the body and expanding it forward on to the substrate. During feeding, struggling aphids are often raised up from the plant and held in the mouthparts with sticky saliva.

Saliva is important in other ways. For example it is used for defence. If a larva manages to smear a parasitoid's antennae or mouthparts, the parasitoid will end its attack. Larvae also use it to aid movement. As part of locomotion, saliva is frequently daubed on the substrate and larvae move through it. By coating the undersurface in this way, meniscus forces form between the larva and the substrate.

Most common syrphines are moderately polyphagous on herb layer aphids. Episyrphus balteatus and Syrphus ribesii are notably more polyphagous occurring on a wide range of vegetation from grasses to trees. Pipizini prefer 'hidden' aphids in galls, curled leaves and on roots. Judging from the few described species, Melangyna, Parasyrphus and allied genera are specialists. M. cincta is found principally on beech aphids. The appropriately white coloured larva of M. umbellatarum feeds on hogweed aphids and the bird dropping mimic, M. triangulifera, is on birch.

Finding Hoverfly larvae presents little difficulty. Look for aphid colonies at the growing tips of plants, underneath leaves etc and carefully search around them. Third stage larvae tend to spend the day low down on the plant hiding in leaf curls, beside raised leaf veins or on the ground, so search these places as well. They are most active at dawn and dusk - definitely the best times to obtain larvae and observe feeding. Beating trees is another good way to obtain larvae. Also, leaf litter searches are productive, particularly in winter. Cultures are easy to start with gravid females caught from the field. Place females with aphids in a small container such as a Petri dish or sandwich box for an hour or so to obtain eggs.

McLean, in the Dipterist's Handbook, gives details of rearing techniques. However, because of cannabalism, rear larvae individually, and resist mixing stages or species together. An important part of the rearing process is to watch for the time when the accumulated black material in the hind gut is excreted (turn larva over to view). When this happens, feeding is ended and the larva is ready to begin the next phase of development. This could be pupation, aestivation or diapause depending on species and time of year. When excretion is over, wrap larvae up in damp tissue paper. This is also the best way to overwinter larvae and pupae. Overwintered larvae do not feed again in the spring.

Virtually no reference collections of larvae exist. A fully annotated collection of larvae, associated aphids, reared adults and parasitoids would be particularly valuable. With barely half the British fauna described there is plenty of scope. Unfortunately, the colours do not preserve well, especially in individuals with black material in the gut. So detailed notes, drawings or photographs are necessary. The simplest way to start identifying larvae is to identify them from the reared adult.

Parasitoids are quite common and interesting in their own right. The most common are Diplazontinae (Hym. : Ichneumonidae). These can be recognized by their tridentate mandibles. I would very much like to contact anyone interested in Hoverfly larvae, so please write.

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Portevinia maculata

Closely allied to the genus Cheilosia, this species seems seldom to fly far from its host plant, ramsons often also known as wild garlic, Allium ursinum. Verrall (1901) suspected such an association though he personally met with this insect only once, on 13 June 1888 in Dovedale. Indeed the larvae are to be found in the base of the leaves.

A. ursinum itself is generally associated with damp deciduous woodland, often calcareous, and is neither averse to steep slopes nor to some elevation. It is an insect-pollinated plant.

Over 50% of British records of P. maculata fall in the last week of May and the first week of June, with very few outside these two months. A record of a male in late September in the vicinity of Compton Dando, Gloucestershire, may indicate a lack of an obligatory diapause and the possibility of more than one generation in warmer areas. A propos of this, Seguy records in from May-August in France.

The UK distribution of P. maculata is interesting and is here contrasted with that of its host plant. From the distribution maps, it seems clear that in England, Wales and Western Scotland A. ursinium is frequent. However, P.

Portevinia maculata

o pre '60

● post '60

C 607/12

ALLIUM URSINUM L.

Ramsons

× Recorded introductions

● All other records

KM

MILES

maculata is most strongly represented in the Gloucester area and in the north of England* and much more weakly elsewhere - a trend which is rather the reverse of the distribution of entomologists and therefore likely to indicate a real situation.

There is only one Welsh record, whilst in Ireland P. maculata seems to be restricted to the east despite a scatter of records for A. ursinum across the whole island. It has recently been found on the Isle of Man (Eileen Thorpe in 1985). Such contrasting distributions of insect and host plant could provide a challenge to those interested in Hoverflies to investigate why this should be. Alan Stubbs has suggested that in some areas, eg the south and south-east, woodland canopy in areas where A. ursinum occurs is often too dense for the requirements of P. maculata. In some northern limestone areas A, ursinum occurs on quite steep scree slopes with comparatively open woodland canopies, and here P. maculata seems more frequent.

* Various records for Lancashire and Cheshire could not be presented on the map as the appropriate local list gives only vc numbers instead of named localities.

Eriozona syrphoides on the Scottish Lowlands : Sir Arthur Duncan*

Some letters ago you suggested that I might find Eriozona syrphoides in this area in 1983. This I failed to do though on 25 June I found a fine female on a flower of Rhododendron ponticum near Glasgow University's field station by Loch Lomond, where a group of Scottish entomologists were enjoying a weekend.

On 10 August 1984 I went to look at a colony of Grayling at Craigturra above Tynron village (NX 8193) to check whether butterflies were smaller, they certainly are darker, than those from coastal sites. On my way along a ride through a plantation of spruce, with which the Forestry Commission have, with their usual sensitivity, defaced a previously lovely area, I saw a male Eriozona syrphoides sitting on a yarrow (Achillea millefolium) flower. Further search in this area being unrewarded, I went off to the Forest of Ae, a very large FC plantation covering several thousands of acres in the headwaters of the rivers Ae, Lochar and Kinnel, where I knew of two easily reached flowery sites. My search over the next three days was fruitless though persistence (or virtue!) was rewarded by finding Megasyrphus annulipes, Didea fasciata in numbers and Xylota coeruleiventris as well as Eristalis rupium both widespread and common flies in the Scottish Solway area.

PS I wrote the above note in late August, but at the same place between 15 and 22 September I saw five Eriozona syrphoides, two on yarrow, two on Ragwort (on the same plant on successive days - 25 and 26 September - different individuals) and one on a yellow composite (Crepis sp?). These were all apparently freshly or certainly recently emerged. There was an abundant supply of Devil's-bit Scabious flowers much favoured by both Arctophila mussitans (= fulva) and Sericomyia silentis.

* This report is in response to letters I wrote to Sir Arthur who, alas, as reported in the Diptera Recording Schemes Bulletin No 18, died on 2 November 1984.

Eriozona syrphoides in the northern Highlands of Scotland and a possible new syrphid trapping method

T H Pennington first encountered this notable Hoverfly in the British Isles but in ignorance of this unreported event in 1969, Peter Crow published his independant discovery in Wales. Thereafter there was progressive spread (or could it also have been progressive discovery?) with, to date, records from the Forest of Dean, to Yorkshire, to the Lowlands of Scotland, to Glasgow, to the Carron Valley near Stirling and then to Angus. This 'list' follows a geographic rather than a temporal cline.

In 1984, on 17 July, I captured a female with my bare hands - not having a net available - at Philadelphus blossom in a wild garden at Achany, 3 miles south of Lairg in the county of Sutherland. On 31 May in the following year I found a male in a Panolis flammea pheromone trap about 20 miles further north in North Dalchork block of Shin Forest, also in Sutherland. This trap had not been inspected for some time so that the specimen could have been there at least 8 days previously. Hence we may assume that E. syrphoides has now penetrated the Highland massif and has more or less reached the very extreme north of Scotland. There are, of course, coniferous forests (all dominated by Pinus contorta, Lodgepole pine) further north than North Dalchork and to those fortunate to be able to visit and to collect in this entomologically surprising and fascinating region I would recommend further search in Borgie and Strathy Forests, both very close to the extreme north coast and easily identifiable on OS maps.

Comment is perhaps worthwhile on the pheromone trap mentioned here. It consisted of a cylindrical reservoir of about one litre capacity with a removable lobster pot type lid - the entrance to which pointed vertically but with the entry of rain very effectively prevented by a inverted saucer shaped roof spaced from the funnel entrance by stalks each about 3 cm long. For purposes of capturing P. flammea males the trap was baited with a slow release preparation of its female sex pheromone and captures were fairly rapidly killed by dichlorvos evaporating from a small piece of impregnated sponge placed at the bottom of the collecting vessel. However, as far as Syrphidae are concerned, the efficiency of the trap was probably determined by the bright yellow colour of the body (the roof was green) for, as is known from past experience, yellow is very attractive to this group. During the period in which these traps were observed (April to end June) they appeared predominantly to catch Bachini, Syrphini, Eristalini and Sericomyiini. Flowers are rather poorly represented in North Dalchork, and it is probably notable that when one of these traps was placed in an area (Achany), which is both richer in flowers and Hoverflies, it actually trapped fewer flies! We might infer from this that it is a poor competitor for flowers but could be very useful in certain situations where flowers are uncommon. It is possible that variable experience of the effectiveness of coloured water-traps may be attributable to this cause.

Incidentally, bumblebees were also caught, especially in traps in more open areas rather than in shady rides.

Callicera spinolae - a welcome return : Ivan Perry

In Hoverfly Newsletter No 3 (April, 1984) I discussed the possible extinction of Callicera spinolae in the British Isles along with a huge diminution in its most plausible breeding site, the Elm. However, I am pleased to report that in September 1984, after an absence of four years, it reappeared at its old locality in the Gog Magog Hills just outside Cambridge. Coe (Entomologist, 1941, 74, 131-132) commented on the longevity of larval Callicera rufa and it

is interesting to speculate that the flies I found in 1984 were the progeny of the adults seen in 1979, the last time they appeared in any numbers. Certainly I had looked for C. spinolae every year, and apart from one found in 1980, none were seen in the intervening years. Although a few standing dead Elms remain at the locality, it seems likely that C. spinolae must be using the planted Beech trees as a breeding site.

One final point perhaps worth mentioning, and one which I touched on in my previous article: the Hornet was absent from the Ivy blossom in 1984 - does a bad Hornet year mean a good year for C. spinolae and vice versa?

Hoverflies and the Isle of Man : Steven Crellin

The Isle of Man (IOM), which lies equidistant from Scotland and Ireland in the Northern third of the Irish Sea, is an Island of approximately 220 square miles in area (33 miles long by 12 miles broad). A ridge of high ground, rising to 2034 feet at the summit of Snaefell, runs northeast-southwest and it gives the Island a varied selection of habitats. These habitats are further diversified by the prevailing westerly winds which, with the relief of the land, produce variable levels of rainfall within the Island. Mild winters provide a climate suitable for growing tender plants and so allows the possibility of insects with a southerly distribution on the mainland to occur in the more northerly IOM.

Native woodland is very rare in the Island but since 1950 there has been large scale planting of conifers with some hardwoods on the lower slopes of the hills. As these plantations have been neglected entomologically, their insect inhabitants are little known. This absence of deciduous woodland, except for some coastal 'pleasure' glens, may have had the effect of causing woodland species to adapt to more 'open' habitats such as the areas of willow carr, or Curraghs, of the Northern Plain and Central Valley. The Curraghs seem to be excellent habitat for Hoverflies and some nice species such as Tropidia scita (Harris), Chalcosyrphus nemorum (F.) and Cheilosia nebulosa (Verrall) have been taken in the Curraghs of the Northern Plain. The pleasure glens of the Island which are wooded may also have some surprises. Ballaglass Glen produced Melangyna guttata (Fallén), Parasyrphus vittiger (Zett.) and Melangyna ?labiatarum (Verrall) from a few hours collecting. Another site of ecological interest is the area of stony, acid dunes called the Ayres which cover the extreme north of the Island. The Bombyliid, Villa modesta (Meigen) is found sunbathing on the perimeter wall of the Point of Ayre Lighthouse compound, so other coastal species could be here.

The first list of Hoverflies of the Isle of Man was published in 1948. The article by A E Wright appeared in "The Peregrine" (1(5), 12-15) which was the Journal of the Manx Field Club (it is now published by the Manx Ornithological Society), and it listed 48 species collected through the efforts of W S Cowin of the Manx Museum. Since 1948, the number of species has risen to 95 through the efforts of J M Nelson, S M Crellin and Eileen Thorpe, which is 37% of the British total; hopefully this will be increased over the next few years. The species are those indicated on the list.

9 Ash Grove, Ramsey, Isle of Man

The oviposition behaviour of Volucella inanis : Steven J Falk

In the summer of 1983, a Vespula vulgaris nest was present under the door of my kitchen at my house in North London and unfortunately this meant a kitchen full of wasps whenever food was about, but in August it also attracted females of Volucella inanis and I spent some time observing their oviposition behaviour.

Manx Hoverflies:

SYRPHINAE

▼▲■ [illegible] Baccha spp
1201 Chrysotoxum arcuatum
○■ [illegible] bicinctum
1203 cautum
1204 elegans
○▲■ [illegible] festivum
1206 octomaculatum
1207 vernale
1208 verralli
■ [illegible] Dasysyrphus albostriatus
▼ [illegible] lunulatus
○■ [illegible] tricinctus
▲▼■ [illegible] venustus
1501 Didea alneti
1502 fasciata
1503 intermedia
1601 Doros conopseus
■ [illegible] Epistrophe diaphana
○▲■ [illegible] eligans
○■ [illegible] grossulariae
1704 nitidicollis
1801 Epistrophella euchroma
○▼■ [illegible] Episyrphus balteatus
2001 Erlozona syrphoides
○▲■ [illegible] Leucozona glaucia
■ [illegible] laternaria
○▲▼■ [illegible] lucorum
3201 Megasyrphus annulipes
■ [illegible] Melangyna arctica
3302 barbifrons
3303 cincta
3304 compositarum
3305 ericarum
■ [illegible] guttata
3307 labiatarum
■ [illegible] lasiophthalma
○ [illegible] quadrimaculata
3310 triangulifera
3311 umbellatarum
○▼■ [illegible] Melanostoma mellinum
○▼■ [illegible] scalare
○■ [illegible] Meliscaeva auricollis
■ [illegible] cinctella
▲■ [illegible] Metasyrphus corollae
3702 lapponicus
○■ [illegible] latifasciatus
3704 latilunulatus
○▲▼■ [illegible] luniger
3706 Metasyrphus nielsoni
3707 nitens
4401 Paragus albifrons
4402 finitimus
▼■ [illegible] haemorrhous
4601 Parasyrphus annulatus
4602 lineolus
4603 mallinellus
4604 nigritarsis
4605 punctulatus
■ [illegible] vittiger
○▼■ [illegible] Platycheirus albimanus
5102 ambiguus
○■ [illegible] angustatus
▼■ [illegible] clypeatus
○ [illegible] discimanus
■ [illegible] fulviventris
5107 immarginatus
○▼■ [illegible] manicatus
5109 melanopsis
○■ [illegible] peltatus
■ [illegible] perpallidus
5112 podagratus
5113 scambus
▼■ [illegible] scutatus
5115 stipticus
5116 tarsalis
▲■ [illegible] Pyrophaena granditarsa
○▲■ [illegible] rosarum
5701 Scaeva albomaculata
5702 mecogramma
○■ [illegible] pyrastri
5704 selenetica
5901 Sphaerophoria abbreviata
5902 loewi
▲■ [illegible] menthastri
■ [illegible] philanthus
○ [illegible] rueppellii
▲■ [illegible] scripta
5907 taeniata
5908 virgata
○▲▼■ [illegible] Syrphus ribesii
○▼■ [illegible] torvus
○▼■ [illegible] vitripennis
6601 Xanthandrus comtus
6701 Xanthogramma citrofasciatum
■ [illegible] pedissequum

MILESIINAE

■ [illegible] Anasimyia lineata
102 lunulata
103 transfuga
201 Arctophila fulva
401 Blera fallax
501 Brachyopa bicolor
502 insensilis
503 pilosa
○▼■ [illegible] Ferdinandea cuprea
2402 ruficornis
2501 Hammerschmidtia ferruginea
2601 Helophilus groenlandicus
■ [illegible] hybridus
2603 parallelus
○▼■ [illegible] pendulus
2701 Meringia heringi

■ CRELLIN ● GLASER ▲ NELSON ▼ THORPE ○ WRIGHT

Manx Hoverflies:

304		acutellaris
601	Brachypalpus	bimaculatus
602		cunctus
701	Calliprobola	speciosa
801	Callicera	aenea
802		rufa
803		spinolae
901	Chamaesyrphus	caledonicus
902		scaevoidea
1001	Cheilosia	albipila
1002		albitarsis
1003		antiqua
1004		barbata
▲■		berganastami
1006		carbonaria
1007		chrysocoma
1008		cynocephala
1009		fraterna
1010		globulipes
▲		grossa
1012		honesta
▼■		illustrata
1014		impressa
■		intonsa
1016		longula
1017		mutabilis
1018		nasutula
■		nebulosa
1020		nigripes
1021		paganus
1022		praecox
1023		proxima
1024		pubera
1025		sahlbergi
■		scutellata
1027		semifasciata
1028		soror
1029		variabilis
1030		velutina
■		vernalis
1032		vulpina
■	Chrysogaster	chalybeata
▼▲■		hirtella
▲■		macquarti
1104		solstitialis
1105		virescens
1201	Criorhina	asilica
1202		berberina
1203		floccosa
1204		ranunculi
○▲▼■	Eristalinus	aeneus
▼■		sepulchralis
2201	Eristalis	abusivus
○▲▼■		arbustorum
2203		cryptarum
○▲▼■		horticola
○■		intricarius
○▼■		nemorum
○▼■		pertinax
○		rupium
○■		tenax
2301	Eumerus	ornatus
2302		sabulonum
■		strigatus
■		tuberculatus

■	Lejogaster	metallina
2802		splendida
2901	Lejops	vittata
●	Mallota	cimbiciformis
○▲■	Merodon	equestris
3801	Microdon	devius
3802		eggeri
3803		mutabilis
○▼■	Myathropa	florea
4001	Myolepta	luteola
4002		potens
4101	Neoascia	aenea
▼■		dispar
4103		geniculata
4104		obliqua
♂▲▼■		podagrica
4201	Neocnemodon	latitarsis
4202		pubescens
4203		verrucula
4204		vitripennis
4301	Orthonevra	brevicornis
4302		geniculata
4303		nobilis
▼■		splendens
4501	Parapanium	flavitarsis
4701	Parhelophilus	consimilis
4702		frutetorum
4703		versicolor
4801	Pelecocera	tricincta
4901	Pipiza	austriaca
4902		bimaculata
4903		fenestrata
4904		lugubris
○		lutitarsis
○■		noctiluca
5001	Pipizella	maculipennis
▲■		varipes
5003		virens
5201	Pocota	personata
▼	Portevinia	maculata
5401	Psilota	anthracina
○▲▼■	Rhingia	campestris
5602		rostrata
○	Sericomyia	lappona
○▲■		silentis
■	Sphegina	clunipes
6002		kimakowiczi
6003		verecunda
○▲▼■	Syritta	pipiens
6301	Triglyphus	primus
■	Tropidia	scita
○▲■	Volucella	bombylans
6502		inanis
6503		inflata
○■		pellucens
6505		zonaria
6801	Xylota	abiens
6802		coeruleiventris
6803		florum
○▲▼■		segnis
○■		sylvarum
6806		tarda
6807		xanthocnema
6901	Xylotomima	tenta
■		nemorum

Usually a female would land on the wall several feet above the nest entrance, sit still for several minutes and then would fly to within a foot or so and nervously walk to within a few inches. The ovipositor was then repeatedly extended and eggs appeared to be laid on the concrete around the nest hole. After about a minute or so, or as soon as disturbed by a wasp, the Hoverfly flew off and often returned to the spot several feet above the nest and then repeated the whole sequence again.

I have not seen any papers concerning this behaviour but would like to express a belief that eggs are laid near the nest entrance without the fly actually entering.

Ernst Torpe : <u>De Danske Svirrefluer</u>

In DANMARKS DYRELIU vol. 1, 300 pp. Price to non-Danish customers is D Kr 250 plus postage (at the time of writing - 19.3.86 - this is about £20.80).

Forewarned in the last Hoverfly Newsletter, this book was published in 1984. It is a credit both to the author and to a rather slender band of recorders which, though the area of Denmark is considerably less than that of the British Isles, have an extremely creditable record in convincingly delineating the distribution of 263 species.

Ernst Torpe's work is of compelling interest to naturalists in the British Isles because the Hoverfly fauna of that country is both very familiar and yet alien in kind and degree. Thus, exotic genera like <u>Temnostoma</u> are to be found whilst <u>Blera fallax</u>, here known only from the Highlands, in Denmark is widely distributed.

Attached to this excellent book is both bad and good news. The bad news for us is that a large part of the tantalisingly attractive material is in Danish; the good news is that individual biological and distributional notes on all of the species are covered in English and that subscripts to both tables and figures are bilingual. On reflection, this is very sensible. We in Britain, have little need of a key to Danish species, whereas the need in Denmark itself is self evident. On the other hand, biological comments are of universal interest. Maps of distribution are, of course, international.

The book itself is produced to a very high standard on good quality paper and is hard bound in an attractively decorated pale green cover. It contains four excellent colour photographic plates entailing 112 specimens and almost as many species, and has a liberal quantity of line drawings, these taken from a variety of literature sources. Its layout is as follows: adult morphology, pp 15-18; keys, pp 19-67; biology and ecology, pp 68-98; cytology (this is an unique feature), pp 99-108; predation/mimicry/diapause/migration/economic importance, pp 109-131; biological notes - species by species (in English), pp 132-155; literature, pp 156-162; distribution maps (263 in all), pp 164-295. There is a very good index, itself the hallmark of a competent worker.

Ernst Torpe introduces a modest level of change of names, possibly presaging a greater pressure for change as hinted at by Christian Thompson. It is unnecessary to quote all these here, save to say they appear to be based on an evaluation of historical precedent. Thus, for instance, <u>Megasyrphus annulipes</u> (Zetterstedt 1838) becomes <u>M. erraticus</u> (Linnaeus 1758).

This book should be added to the library of all those who take more than a provincial view of syrphid questions, whether taxonomic, zoogeographic or ecological - after all, our Islands constitute a fairly trivial part of that larger regional entity to which we belong, the Palaearctic, which stretches

from the most western extremities of Ireland to a breath away from Alaska. (If it is of general interest to readers, in future issues I will introduce accounts of the larger distribution and habits of genera represented in the British Isles.) One of these days, a gifted linguist within the BRC schemes will translate into English those parts of Dr Torpe's book from which by language most of us are currently isolated.

This reviewer extends his congratulations to Dr Torpe for a book which will not only constitute an encouragement to Danish workers to extend his observations, but which will also be an incentive throughout Europe.

French Hoverflies : Martin C D Speight

I am trying to gather informtion about the distribution of French hoverflies and am prepared to determine labelled material collected in France. Specimens would be returned to the sender afterwards unless this was not required.

The hoverfly fauna of regions like Brittany is poorly known, but British entomologists travelling from GB to the continent on holiday frequently make small collections en route through N France. The information content of such small collections all too often gets lost because, for the collector, such collections rarely relate to anything in particular. I'd be particularly interested to see such material.

In case someone has a massive hoverfly collection from the Alps or somewhere, that they would like determined, I would ask that they let me know in advance how many specimens are involved!

The French fauna of Syrphidae is massive - probably in excess of 400 species. The volume by Seguy (1961) on the French fauna is difficult to use, out of date and omits a number of reliably recorded French species. The mountains of the Vosges possess a fauna containing boreal elements. The Alps have a dramatically diverse central European fauna. The Pyrenees are a law unto themselves, with bits and pieces from everywhere else and an Iberian element which reaches its limit in Europe there. The lowlands of N France have a fauna like that of most of Great Britain or Denmark, the garrigue of the south supports a sizeable contingent of species found only round the rim of the Mediterranean to Asia Minor and N Africa.

A consideration of the French hoverfly fauna throws up some puzzles in relation to the British fauna. Why are Brachypalpus valgus and Tropidia fasciata so widely distributed in France (including close to the Channel coast) but unknown in Great Britain? Why is Melangyna arctica unknown from France although it reaches the S coast of England? Why is Callicera spinolae recorded from France and Great Britain but not from elsewhere in Western Europe? Why is Cheilosia laskai found in Ireland and NE France but not in Great Britain?

Without more distribution data it is impossible to decide which of such questions are more apparent than real.

I should end on a note of caution. The taxonomy of the European species of Cheilosia, Eumerus, Merodon and Pipiza is a mess. Although I am interested to see French material belonging to these genera I would be foolhardy indeed to suggest that all such specimens can be determined! I would expect to have to return some of them as sp. indet.

Research Branch, Forest and Wildlife Service, Sidmonton Place, Bray, Co Wicklow, Ireland.

Essex hoverflies; an appeal for further records : Roger G Payne

Starting in 1973, three publications have been produced on the Essex Hoverflies by Roger Payne. The last of these was an atlas of Provisional maps (n.d.) in which the state of knowledge on the distribution of 156 species is summarized. It is clear that many species are under-recorded and that some species may have gone undetected.

Roger would welcome any further Essex records of which Diptera Recording Scheme members may be aware. Please contact him at Southend Museum Biological Records Centre, Central Museum, Victoria Avenue, Southend-on-Sea, SS2 6EX. (Telephone 0702 330214).

Syrphid collections new to the Royal Scottish Museum : Graham E Rotheray

In December 1984 we received the entire insect collection of the late Sir Arthur Duncan. Particular strengths are in the social and solitary bees, tipulids and syrphids. The syrphid part consists of approximately 2500 staged adults mostly from the somewhat poorly known Dumfriesshire and Galloway region. Cheilosia, Sphaerophoria and Platycheirus are particularly well represented as well as a sprinkling of rarities eg Tropidia scita (EMM 118 p 30), Xanthogrammes pedisequum (EMM 119 p 244), Megasyrphus annulipes, Eumerus sabulonum and Dasysyrphus hilaris.

A second collection was presented through the kindness of Professor and Mrs A F G Dixon (University of East Anglia). It consists of about 400 eggs, larvae and pupae collected from Silwood Park, Berkshire and various sites in Scotland. This is an important collection, apart from the fact that few collections of early stages exist, because it partially formed the basis of Mrs Dixon's valuable key to and descriptions of syrphid larvae (1960, Trans. R. Ent. Soc. Lond. 112, 345-379).

Most tribes are represented, except Cheilosiini, and larvae are stored in alcohol according to details given in her paper.

Anyone wishing details of these collections or indeed any other part of the collections can do so by contacting Graham E Rotheray, Royal Scottish Museum, Chambers Street, Edinburgh EH1 1JF (031 225 7534).