EMPID AND DOLICHOPODID STUDY GROUP NEWSHEET NO 7 **Autumn 1989**

EDITORIAL

We are very pleased that there has been sufficient support to enable a second Newsheet to be produced this year, and thanks are due to our contributors for another selection of interesting and informative material. Please keep the contributions flowing, and copy for the next issue should be submitted before the end of December.

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HOW RARE ARE XANTHEMPIS LAETABILIS and SYNTORMON MACULA?

On 29 April 1989 I caught a male Xanthempis laetabilis on the English bank of the River Wye opposite Tintern (VC 34). The insect was swept from low, lush vegetation on a well wooded flood-plain about 10m from the river bank. Collin (British Flies 6: Empididae) records Aviemore as the only locality for this species but Roy Crossley tells me he has also seen it in Yorkshire which suggests that it may have a northern and western distribution. What is its true status?

On the same date, a few yards away, I captured two female Syntormon macula by sweeping vegetation emerging from the mud on the bank of the river (which is tidal at this point). In the Dolichopodid 'Handbook' Fonseca lists two localities near Bristol for this species and Ivan Perry has found it on the banks of the River Monnow, not far away in Herefordshire (Empid & Doli Newsheet No 2). This small cluster of records around the Severn estuary is interesting but does it reflect the true picture?

If anyone has records of X. laetabilis or S. macula please let myself or Roy Crossley know so we can set the record straight in a future newsletter.

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DOLICHOPUS ANDALUSIACUS STROBL IN CORNWALL

Between late June and early August, 1988 I found three male Dolichopus andalusiacus in samples of dolichopodids collected from three different places on the shore of Loe Pool, Penrose Estate, nr Helston, Cornwall. The identification was confirmed by Roy Crossley who examined a single male taken on 20 June. There appears to be no previously published records of this species in Cornwall and no records are held by the Cornish Biological Records Unit (CBRU). Fonseca in the Dolichopodid 'Handbook' notes this rarity as having been found at eight localities in five counties, all in southern England.

The three males key to couplet 54, page 24 of the 'Handbook' and are differentiated from D. caligatus by the hairy face, absence of ventral fringe of pale hairs on the hind femora, and triangular genital lamellae. All three specimens have yellow middle and hind femora but the front pair are brownish-black dorsally extending to both anterior and posterior surfaces leaving a yellowish ventral area. As Fonseca gives an alternative key originating from couplet 1 leading to couplet 8, page 17, some specimens must have the front femora completely encircled with black. Verrall in his List of British Dolichopodidae (1904 Ent.mon. Mag., **40**:226) refers to the darkened femora as 'light brownish-black rather than black, in fact, in some specimens it is little more than dusky'.

The history of the finding of andalusiacus in Britain by Verrall is interesting and in many respects the original locality is similar to Loe Pool. He discovered what is now know as andalusiacus at Slapton Ley, south Devon in August 1885 when he caught three males and one female of a species

which he considered to be previously undescribed and named D. scotti. Failing to find it again in the following two years, Verrall found it in profusion at the same site on 6 September, 1888. Subsequently he found that Dolichopus scotti had previously been described by Strobl from a single male found at Algecirus near Gibraltar and given it the name andalusiacus. Of the nine places cited by Verrall or Fonseca where it has occurred, seven, including the original site at Algecirus, are on or near the coast. Perhaps of some significance to the habitat requirements of andalusiacus is the similarity in the formation and morphology of Loe Pool and Slapton Ley. Both were formed by barrier shingle beaches creating shallow freshwater lakes exposed to sea spray.

Loe Pool, the largest freshwater lake in Cornwall was formed in the 14th century when a violent storm closed the estuary of the R. Cober with a massive shingle bar. The lake runs inland for some two kilometres and varies in width from a half to one kilometre with an extensive marsh at its northern end dominated by willow carr. Apart from this marsh and smaller areas of reed swamp or marsh where streams enter the lake, the basin and shore line is largely stony over slaty rock. The water is acid and the lake is subject to some salt spray particularly the southern end closest to the sea. The sites where andalusiacus was found were very similar-stony shore close to marshy areas where the main river and a stream entered the lake. The vegetation was short and sparse over exposed mud and stones left by a falling water level. Dolichopus spp. were scarce at these sites with ungulatus the only other species of this genus found with andalusiacus but Poecilobothrus, Syntormon and Campsicnemus were present.

Slapton Ley, south Devon is a narrow, shallow body of freshwater some three and a half kilometres long separated from the sea by a barrier beach formed about 1000 years ago. It is divided into two lagoons, Higher and Lower Ley, separated by a rock spur at Slapton Bridge. Higher Ley is largely reed swamp with some willow carr but Lower Ley is an open lake fringed with reeds mainly on the land side. The maximum water depth in summer is approx. three metres but depending on rainfall it can rise a further two metres in winter. The water is alkaline with a mean pH of 8.2, and salinity due to sea spray varies widely from 30 mg/1 to over 5000 mg/1 at the southern end subject to heavy spray in storm conditions. The lake shore is composed of slate gravel overlain in places with diatom mud and fans of beach gravel. From Verrall's description - 'near the bridge which divides the Lea' - it seems likely that he found D. andalusiacus on the shore of the rock spur which divides the two lagoons. In late summer with low water levels the shore would have been exposed and free from lush vegetation.

The apparant rarity of D. andalusiacus indicates that its habitat requirements are very specialised. Undoubtedly the sites at Loe Pool and Slapton Ley would reveal these if sufficient physical and chemical data could be obtained and related to the prey of andalusiacus and their food requirements.

If anyone has found D. andalusiacus in Cornwall or has come across any published or non-published records of this species in the county I would be most interested to receive them.

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A NEW BRITISH NEURIGONA FROM ANGLESEY

After the Bangor field meeting of July 1987 I put aside some odds and ends from Newborough Warren for later checking and listing before discarding, and have since found that a female without antennae, mentally noted as Syntormon aulicus, had a narrow face and the wrong venation and was in fact a Neurigona not on the British list.

In Parent's (Faune de France 1938) key to the then known 14 Palaearctic species it ran to biflexa Strobl but there is no description of it. Peter Dyte agrees that it is "almost certainly biflexa which was originally described from southern Spain and as far as I can find seems not to have been recorded from elsewhere". By chance he had two males and a female in some material from Israel which appeared to be biflexa, but the headless female differed in a few details from mine. Peter then sent me a recent Russian paper by Negrobov and Fursov with new keys to the now 35 Palaearctic species of Neurigona in which my female still runs to biflexa. However we think it is desirable to find a male for confirmation before formal publication, so keep a look out for a Neurigona with an obvious dark spot at the wing tip.

In both sexes the 4th vein (M1+2) is strongly undulating and reaches the costa near the tip of the 3rd vein (R4+5), well before the wing tip. The female was swept on 7th July from the central dunes area of the Warren well away from any trees, but a more promising area to search might be the forest belt between the dunes and the estuary to the north west.

My thanks to Peter Dyte for his ready help and interest as always.

Dec 1988

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RHAMPHOMYIA MORIO ZETT. A PLEA FOR RECORDS

Collin (British Flies VI. p.399) records this species from several Scottish localities, including the islands of St Kilda and Lewis, with, additionally, a 1955 record for North Wales.

Recently (1988) Dr B R Lawrence has described his experiences with this species in Orkney (Ent. mon. Mag. 124:103).

Early in June this year I took several specimens, both by sweeping and in water traps, at Cray Moss, a peat plateau at the head of Wharfedale, Yorkshire, at an altitude of c.550m.

So far I have been unable to trace any published records for this species in England and I shall be pleased to hear from anyone who knows of other occurrences outside Scotland and North Wales.

Roy Crossley

HERCOSTOMUS PLAGIATUS LOEW

Dr Marc Pollet has asked me to mention that collectors are advised to retain all specimens of H. plagiatus as he believes that two species are involved, with considerably different genital appendages in the males and a more distinct convergence of the cubital and discal veins in one of the types.

Roy Crossley

LEPTEMPIS GRISEA FALLEN - AN IDENTIFICATION PROBLEM

To the experienced dipterist Leptempis grisea is an unmistakable species with no close British relatives. However, there is an error in Collin's key which renders isolated females undeterminable and therefore presents the beginner with a confusing problem.

Collin, J.E., 1961, British Flies, Empididae, page 448 makes the following statement in his key to Empis species regarding females of grisea:

41(42) Female hind tibia yellow, slender, laterally compressed and pennate.

39. Leptempis (one species only) 1. grisea.

This couplet should read as follows:

41(42) Female hind tibia yellow, not laterally compressed or pennate.

39. Leptempis (one species only) 1. grisea.

The slightly flattened hairs beneath the base of the hind tibia are very inconspicuous and cannot really be described as a pennate fringe.

16 March 1989

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A SIMPLE EFFECTIVE METHOD FOR WET-COLLECTING EMPIDS

When using malaise or pan traps for collecting it is usual to employ alcohol or formaldehyde solutions in the collecting vessel.

For some years now I have successfully been using a simplified version of Galt's solution for this purpose. The recipe is:- 0.5g chloral hydrate, 5.0g sodium chloride (table salt) in 100 ml water, to which is added a drop of washing-up liquid and a few drops of glycerol (optional).

Although this mixture does not have the preservative powers of alcohol or formaldehyde I have experienced little trouble, providing traps are left no more than 4-6 weeks between servicing.

The main advantages of this solution are:-

1. Odourless.

2. Low volatility.

3. Specimens remain soft until transferred to alcohol.

4. Genitalia and eversible structures generally become fully extended and usually remain that way even when transferred to alcohol for permanent storage - this means few genitalia dissections. Substituting for washing-up liquid a strong non-ionic detergent such as Triton X-100 seems to enhance this effect.

5. Legs remain extended which can be helpful with genera such as Chelifera which normally die with femora and tibiae tightly pressed together hiding their bristles from easy view.

There is also the advantage that on long collecting trips and expeditions you do not need to carry large volumes of liquid which is heavy, bulky and leaks out into rucsacs etc. The solution can simply be made as required using stream water.

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RECORDING SCHEME - THE PRESENT POSITION

Thanks are due to a number of recorders who have sent in completed cards as requested in Newsheet No 6. It is known that more are still to come, but it will not now be possible to have preliminary maps available at the November meeting as originally planned.

However, thanks to the support of BRC staff we should be able to have "pre-preliminary" maps ready for up to 10 selected species in order to give everyone a taste of what is to come later. This depends upon yours truly getting down to the job of submitting the initial data in time, and I will do my best to do so.

Roy Crossley

Newsheet Editors:-
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