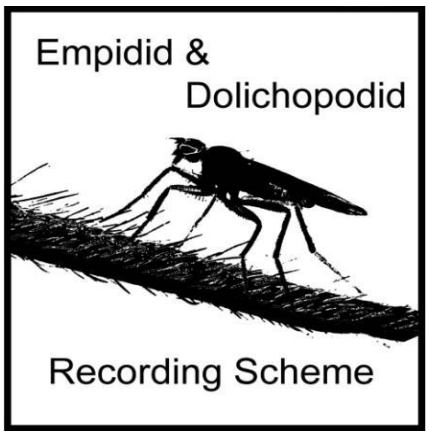


Newsletter No. 23 Autumn 2018

Editorial

This is again a purely dolichopodid issue but we hope to satisfy empid enthusiasts next time. Anyone wanting to get to grips with empids could book onto the next Preston Montford training course on empids and hybotids (see main Bulletin).

Interesting dolichopodid records from the Snowdonia field meeting, 11-17 June 2017

Martin Drake

I was grateful for the large number of specimens forwarded to me during the week's field meeting. These and my own collecting resulted in over 6,400 specimens of 109 species from about 53 sites in 22 hectads. This total slightly exceeded the 101 species recorded at the Bangor meeting in 2014 (Drake 2015). There were ten nationally scarce species, using Falk & Crossley's (2005) statuses.

Among the most widespread species, one worth noting was *Dolichopus signatus*, which ranked fourth in the number of sites occupied and not far behind in terms of specimens caught. This is not particularly remarkable since *signatus* is widespread in Britain apart from an apparent hole in its distribution in central England, but in north Wales is outshone the usually abundant *D. plumipes* and *D. ungulatus*. Another particularly widespread species, which like *D. signatus* is hardly rare, was *Anepsiomyia flaviventris*, in 10th place, beating other small but very common species like *Campsicnemus curvipes*, *C. loripes* and *Syntormon pallipes*. Going further down the list were several species that are widespread in Britain but apparently rare in north Wales; these included *D. picipes* (7 sites) which may reflect its preference for at least base-rich wetlands, *Gymnopternus metallicus* (ten sites), *G. celer* (six sites) and *Rhaphium monotrichum* (nine sites). These are all obvious species so are not likely to have been overlooked during more general recording, so are probably genuinely uncommon in north Wales.

The coast was outstanding for five nationally scarce species. *Dolichopus nitidus*, which may not actually need coastal conditions, was found at four sites: Morfa Harlech wet slacks, Cors Geirch poor fen, and two sites (Traeth Glaslyn, Maentwrog) along the Afon Dwyryd; these were the first records since 1988. *Dolichopus notatus* was particularly numerous at Morfa Dyffryn and Morfa Harlech, mainly in the damp dune slacks but also in dry scrubby dunes and at saltmarsh. At the Morfa Dyffryn saltings, *D. strigipes* was frequent, along with a stray from Morfa Harlech dunes (it's a saltmarsh species); these are useful confirmation of the population found at Anglesey in 2015, and is one of the rare occurrences on saltmarshes on the west of Britain. The most interesting saltmarsh species was *Muscidideicus praetextatus* which was found only at the Morfa Dyffryn saltings, but at least it is now known in north Wales away from Anglesey. The final coastal species of interest was *Dolichopus signifer*, at Bontddu close to the estuary of the Afon Mawddach; it has not been recorded in north Wales for nearly 30 years.

The remaining nationally scarce species do not fall into neat ecological groups. A species new for north Wales was *Tachytrechus consobrinus* which is almost confined to bog seepages and pools, and was found at a tiny patch of wet heath at Utica by the Magnox power station. Another acidophile is *Campsicnemus pusillus* which is usually found in acid seepages, mire or poor fen, so the records at same patch of wet heath at Utica and Cors Fochno (Borth Bog) were from the 'right' habitat, but specimens from saltmarsh at Ynys-hir may be strays from adjacent freshwater marsh. *Campsicnemus pumilio* is usually found at water margins of lakes and ponds, and in 2017 was found at ponds on raised bog at Cors Fochno (with *C. pusillus*) and damp slacks at Morfa Harlech. *Hercostomus fulvicaudis* has been muddled with *rothi* but western records may be correct. The single previous Welsh record, with rather poor accompanying data, was from Ynys-hir where it was found at two points in 2017. Thus this single site appears to be its only Welsh locality, but at least the population may be stable. *Thrypticus tarsalis* was found in a bizarre location (for a species whose larvae probably feed within *Eleocharis* spike-rush) at Pont Rhyd-y-fen at a disused railway cutting where there was a pool under sallows, at about 350m OD in a somewhat bleak landscape. This is certainly the first record for the species in Wales away from the south coast but records of *Thrypticus*, except for two very obvious but rare species, are probably full of errors so maybe this is a completely new record for Wales.

Three species that we found will upgraded to Nationally Scarce in the forthcoming dolichopodid status review. *Orthoceratium lacustre* is such a lovely species that it would not be overlooked (there's more on its ecology in Pollet *et al*. 2017). Apart from a record from the Dee estuary, it has not been seen in north Wales for 40 years until two specimens were found at a tiny patch of the Morfa Dyffryn saltings. *Chrysotus pulchellus* and *Dolichopus acuticornis* were both widespread at Morfa Dyffryn and less so at Morfa Harlech,

and *C. pulchellus* was sometimes abundant on sparsely vegetated damp slacks. It was also present on Cors Fochno, probably at a seepage in pasture at the margin of this raised bog.

I find *Medetera* an exceptionally difficult genus, with no key working well. A species from the environs of the field centre at Tan-y-Bwlch and woodland above it may well be new to Britain but I cannot get a convincing identification. If there is any rhyme or reason to the genus, it is close to *gracilicauda* Parent but I can make it fit two others.

A first for me was the newly described *Sympycnus septentrionalis*, which has eluded me for years – it has been known for a long time but only just sorted out from the common *S. pulicarius*, both previously muddled under *desoutteri* (Pollet *et al.*, 2015). It was numerous and widespread at the estuarine saltmarsh at Ynys-hir where *S. pulicarius* was scarce, and Nigel Jones found it at saltings at Llanbedr, thus supporting the suggestion that the species is coastal, and reinforcing a possible restriction in Britain to saltmarsh.

There's plenty to say about many more species – hardly surprising when dealing with a third of the British fauna in one short field trip – such as apparently new records for north Wales for *Dolichopus claviger*, *Hydrophorus bipunctatus*, *Sybistroma crinipes*, *Syntormon zelleri*, *Thinophilus flavipalpis*, *Thrypticus laetus*, *T. bellus* and *Medetera ambigua* which keys better to the reputedly Scottish *M. infumata* (as I said, no keys work well for this genus). But I'll leave the account as it stands. One day the data will be available on the NBN Atlas.

References

Drake, C.M. 2015. Interesting dolichopodid records from the Bangor field meeting, 7-11 July 2014. *Empidid and Dolichopodid Newsletter* **20**, 5.

Pollet, M., Persson, M., Bøggild, E., & Crossley, R. 2015. A long-lasting taxonomic problem in European *Sympycnus* resolved, with the description of a new species and data on habitat preferences. *Zootaxa* **4032**, 81-102.

Pollet, M., De Braekeleer, A., Drake, C.M. and Van de Meutter, F. 2017. The rediscovery of *Orthoceratium lacustre* (Scopoli, 1763) (Diptera: Dolichopodidae) in Belgium, with data on its ecology and distribution in the Palaearctic region. *Biologia* **72**, 62-69.

Hercostomus nigrilamellatus (Macquart, 1827) reared from decaying oak wood

Robert Wolton

In May 2017 I gathered a few handfuls of red rotting wood and humus from the top of the hollow trunk of an ancient pollard oak and placed the decaying material in a covered bucket. Within a month, a male and female *H. nigrilamellatus* emerged. This species is rated Nationally Scarce species by Steven Falk and Roy Crossley, 2005 (*A review of the scarce and threatened flies of Great Britain, Part 3: Empidoidea*, published by the JNCC). Keith Alexander, in his 2002 review *The invertebrates of living and decaying timber in Britain & Ireland* (English Nature Research Reports No. 647) records that the species has been reared from decomposing wood debris in the base of hollow trees, etc; willow, poplar & elm. Oak can now be added to this list. The tree in question is close to the River Lew within Rutleigh Wood (SS518008), Northlew, Devon, an ancient broadleaved wood. In July 2015 I caught 11 individuals (10 males and 1 female) in a Malaise trap placed over a rotting alder stump in a wet woodland at Scadsbury Moor (SS517014), 600m to the north of the oak in Rutleigh Wood, suggesting that this tree may also provides suitable larval habitat. The only other fly species that emerged from the oak debris was a single *Trichopeza longicornis* (Meigen, 1822). This larvae of this common empid may not have previously have been recorded as being associated with decomposing woody debris.

Ancient pollard oak in Rutleigh Wood from which *Hercostomus nigrilamellatus* bred.

Dolichopodids of dry habitats

Martin Drake

We assume that dolichopodids are primarily wetland beasts but there are a few exceptions. We may even be overlooking them by ignoring dolichopodids found in dry places in the expectation that they are probably strays. Here is a selection of xerophiles - or at least species found in what passes for hot dry sites in cool damp Britain.

Dolichopus migrans A species of dry sandy grassland and sandy heath, found in only the Breckland of Suffolk and Norfolk where it is frequent, and two isolated sites, at Risby Warren, Lincolnshire, and Barmby Moor, Yorkshire where the colonies appear stable.

I previously mentioned the affinity of *D. virgultorum* for dry woodland and hedgerows (*E&D Newsletter* No. 22, p2). *Dolichopus agilis* has been found in a disparate mix of habitats but as well as wetlands there are plenty of records from dry examples of grasslands, heaths, woods and possibly coastal dunes. Perhaps it is just catholic or tolerant, like the common *D. festivus, griseipennis, trivialis* and *ungulatus* and which can be found commonly in hedgerows far from any wetland.

Hercostomus gracilis can be frequent on coastal dunes, shingles and dry cliffs and, to demonstrate that it is the dry,

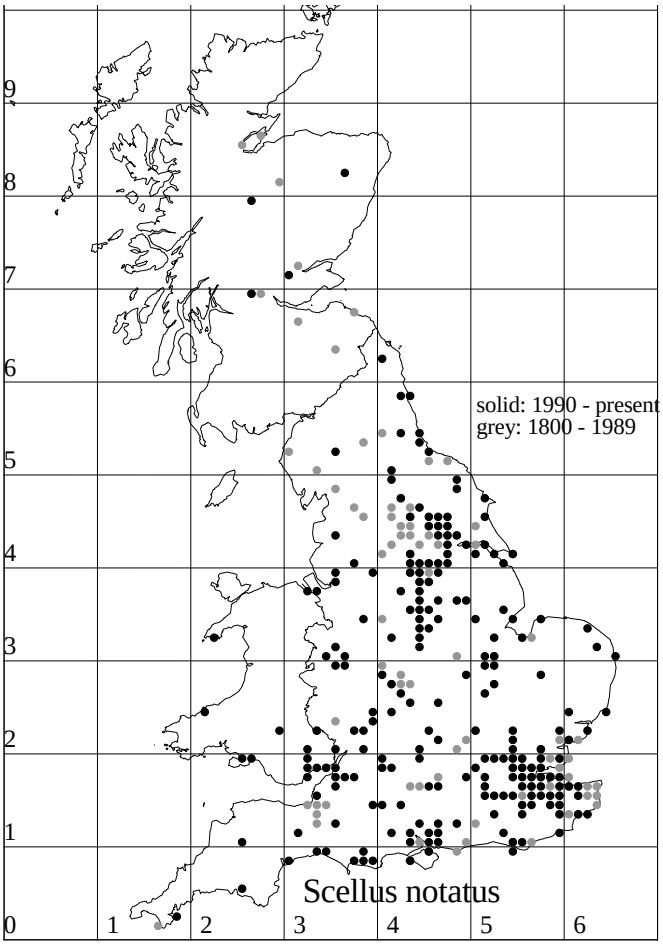
well-drained conditions that it likes, it is also widespread in the Suffolk Brecklands far from the coast. Adults may show a slight preference for low shrubby vegetation but I have not been able to demonstrate this conclusively. It can also be collected in damp areas by dunes but I think this is because the adults move about a lot rather than requires damp sites. *Hercostomus germanus* is a species predominantly of dry grasslands, mainly on chalk and limestone, but also marram, grey lichen and rank grassland of coastal dunes. It is not confined to such places and I suspect this is because it just needs grass sward on well-drained soils, so it is also sometimes found on uplands which may have free-draining rock under the grazed sward. *Hercostomus nigripennis* may just fall into the category species preferring dry places, as it can sometimes be the only dolichopodid in dry acid grasslands and heaths, although it will be picked up as often in acid mire and wet heaths. It is probably just very tolerant of a wide range of soil dampness. *Hercostomus rothi* is too scarce to allow a strong case for dry-preference but on mainland Europe and in Norfolk it has been found in arable land. The few British records may be due to us not looking for tiny dolichopodids in dull arable hedgerows.

Medetera as a whole are clearly at home in dry places since their larvae are mainly predators of wood-boring beetles. But some must feed on other organisms, since three species are restricted to open dry habitats without a tree in sight. *Medetera saxicola* will be found anywhere (at least in England) with bare sandy or gravelly ground in sparse vegetation. So its habitats include exposed riverine sediments, dry heaths, chalk grassland, cliff-tops and soft cliffs, dunes, and man-made bare areas usually maintained by rabbits in post-industrial brown-field sites and quarries. If it is found in a wetland, there is almost certainly dry bare soil around, such as the bare draw-down zones of saltmarsh ponds. It is only infrequently found on tree trunks, and then usually in open areas such as wood pasture. *Medetera petrophiloides* is the main dune *Medetera*, found not just on dunes but sometimes in similar dry coastal places, although nearly always with a sand component such as sandy cliffs rather than just coarse cobbles. I may be unduly pessimistic about recorders' ability to identify *Medetera* (me included) but I'm suspicious of inland records of this species. *Medetera micacea* is a species of short swards on dunes, heaths, chalk grassland and sandy coastal cliffs, often grazed by animals big and small, such as around rabbit scrapes. Some bare sandy or dry soil may be a requirement.

Chrysotus laesus has fairly clearly defined requirement for dry, often rank grassland. The presence of bracken appears often in the records, although it is found on both base-rich or acid soils. As a consequence, this fly is found in lots of grassland habitats but not often in damp or wetter sites. The common *C. gramineus* and *blepharosceles* are too widespread and catholic to count as xerophilic, although they can be numerous in dry grasslands.

Scellus notatus is an odd species, cropping up erratically in all sorts of places, but often in dry sites, and if on a wetlands, such as saltmarsh, there is often some dry land nearby, such as the sea wall. Scrub is another frequent component of its sites. So it is found in deciduous woodlands, old quarries, clay-pits, gravel-pits, brown-field sites, coastal marshes on clay (which probably dry out locally). I'm guessing that the frequent mention of ponds was just the magnet that drew the recorder to the site, rather than a requirement of *Scellus*. In short, mainly not very attractive places! Its distribution is margainlly more eastern than western (see map) and its scarcity around wet Devon where I live is real.

Dolichopodids found often in dry woods are most species of *Neurigona*, *Sybistroma*, *Xanthochlorus*, *Argyra ilonae* and *Chrysotimus flaviventris*. I won't go into these as they should form part of an article about woodland dolichopodids.



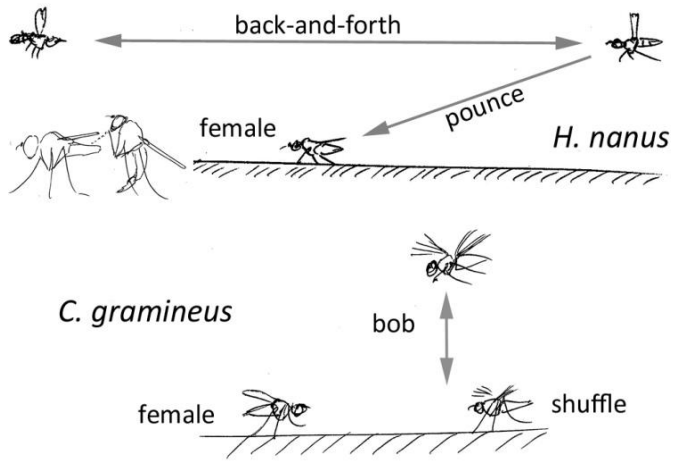
Courship of *Hercostomus nanus* and *Chyrsotus gramineus*

Martin Drake

31 May 2018, at 9am, was an overcast, still and humid time in my garden in East Devon. A small oak with its leaves conveniently at chest-height was being used as a feeding and courtship arena by *Hercostomus nanus*. About ten flies of both sexes were flitting about while mopping the partially wet leaves. Males would fly above a female, back-and-forth, in a horizontal flight path about 10-15cm long, and about 3-5cm above the female when he was directly above her; at either end of the flight-line, he reversed his orientation and lingered for a second or two before flying back again. About 5 such passes were followed by the male landing directly behind the female with genitalia brought forward, so he made a banana-shape (see sketch), walking on the mid and hind legs as the female moved. His front legs may have been touching or even holding the female, although this is guesswork based on the unvarying distance between them as they walked about. In some ten such approaches, none resulted in copulation but in the female flying off. There were few other flies on these

leaves to distract the males although one made an attempt at a small *Hilara*. One male 'attacked' another when he was in the behind-the-female position, by several up-and-down bounces, but with no success in dislodging the attending male. A few male and female *Anepsiomyia flaviventris* arrived after some time, along with a large female *Dolichopus* and female *Sciapus* but no other dolichopodids. During the next hour, only one more courtship display was seen, elsewhere in the garden, although I don't know whether this is when courstship is over or that my earlier observations were merely fortuitous. I pooted a male *nanus* and *flaviventris* to check my field identifications.

Chrysotus gramineus was common in the garden in late June. The 21st June was sunny at 8.30 in the morning, and *gramineus* was frequent on leaves of bind-weed, woundwort and other low foliage. It was the only fly apart from a few *Dolichopus* on these leaves. The males' dance consisted of landing in front of female (or other male) about 15-20mm away, doing about five side-to-side shuffles of a few mm, with some wing-raising, and an occasional 'bob' a few mm into the air. If the other fly was a female (not a male), the dance became increasingly frenetic, with the shuffle being replaced in increasingly vigorous bobs up to 15mm into the air, and apparently bouncing off the leaf at each bob, looking like he was vigorously vibrating up-and-down, and still about 15mm in front of her. This lasted perhaps 2-3 seconds and with 10-15 bobs although the dance was so fast it was impossible to estimate accurately – how do they do this? The dance ended with a dash to the female but I never saw a convincing coupling, and the female usually flew off. Males engaged in aerial dog-fights consisting of much rapid and short-lasting whirling about.



Dolichopodids use a range of courtship displays and there is work to do in classifying them. Some have been described, for example, leg-waving in *Dolichopus plumipes* (Stubbs, 1988) and leap-frog in *Poecilobothrus nobilitatus* (e.g. Land 1993, Lunau 1992). The display of *Hercostomus nanus* could be described as the 'fly-by', and that of *C. gramineus* as 'shuffle and bob'.

References

Land, M.F. 1993. Chasing and pursuit in the dolichopodid fly *Poecilobothrus nobilitatus*. *Journal of Comparative Physiology A* **173**, 605-613.

Lunau, K. 1992. Mating behaviour in the long-legged fly *Poecilobothrus nobilitatus* L. (Diptera, Dolichopodidae): courtship behaviour, male signalling and mating success. *Zoologische Beiträge* **34**, 465-479.

Stubbs, A. 1988. Courtship of *Dolichopus plumipes* (Scop.) (Dolichopodidae). *Dipterists Digest (First Series)* **1**, 43.

Record Cards

Roy Crossley has a pile of record cards: RA 67 – Dolichopodidae & RA66 – Empids. If anyone find them useful, could they ask Roy for a supply.

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Recent literature

Pollet, M., De Braekeleer, A., Drake, C.M. and Van de Meutter, F. 2017. The rediscovery of *Orthoceratium lacustre* (Scopoli, 1763) (Diptera: Dolichopodidae) in Belgium, with data on its ecology and distribution in the Palaearctic region. *Biologia* **72**, 62-69. [includes distribution map and ecological data for Britain]

Grichanov, I. Ya. & Ahmadi, A. 2017. Palaearctic species of the genus *Lamprochromus* Mik, 1878 (Diptera: Dolichopodidae). *Far Eastern Entomologist* **336**, 1-12. [key to nine Palaearctic species; justification for name change of *L. strobli* to *semiflavus*]

Drake, C.M. 2018. The British species of *Lamprochromus* Mik (Diptera, Dolichopodidae) including *L. kowarzi* Negrobov & Chalaja new to Britain. *Dipterists Digest (Second Series)* **24**, 115-128.

Negrobov, O.P. & Naglis, S. 2016. Palaearctic species of the genus *Medetera* (Diptera: Dolichopodidae). *Zoosystematica Rossica* **25**, 333-379. [Key to 180 species and lateral view of hypopygium of many of them, mainly from *Die Fleigen der Palaearctischen Region*. It does not make this difficult genus any easier to identify.]

Acknowledgements

Thanks for the dolichopodid records or specimens sent by: Abby Rhodes, Andrew Cunningham, David Bryce, Howard Bentley, John Hunnisett, Liverpool Museum records sent by Tony Hunter, Martin Luff, Mike Pugh's record in BENHS collection sent by Peter Chandler, Mike Shurmer, Murdo Macdonald, Nigel Jones, Peter Vincent, Phil Brighton, Richard Dickson, Rob Wolton, Roy Crossely, Sorby Invertebrate Group extracted by Derek Whiteley, Stephen Hewitt, Winchester Museum records extracted by Christine Taylor.

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