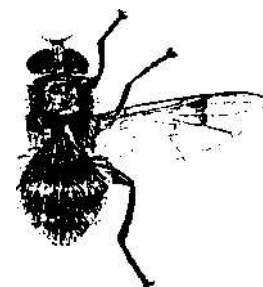


DYFED INVERTEBRATE GROUP



NEWSLETTER N° 9

June 1988

ISSN 0952- 5327

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For those of you who have not yet forwarded your subscription for 1988 may I remind you that we require four 1st class stamps to renew your membership. The next issue of the Newsletter (DIG 10) is due out in September and will not be sent to members who have failed to renew their subscription. The present issue has been delayed for a number of reasons, not least of which is the amount of information that has had to be collated by the vice-county recorders as a result of the growing interest in invertebrates in Dyfed. In order to present all of this material together as a point of reference, this issue is necessarily larger than usual and therefore there will be only three issues this year.

The field meetings for 1988 are detailed below; as always they will combine the opportunity to make a valuable contribution to site recording with the chance to meet colleagues and share experiences, problems, and techniques. The meetings are not designed as guided walks but there is always somebody on hand to help the beginner with a broad range of invertebrate groups. Packed lunches are essential, and bring a sense of humour if the weather is bad - meetings are never cancelled, we just look at slugs instead of butterflies if it's raining!

- 25 June 1988** - Whitesands Bay and St David's Head, Pembrokeshire - A spectacular coastal complex with much potential for interesting discoveries, comprising cliff and flush communities, sand dunes, and boggy wet heath. Meet at the car park at 12/733271 at 11.00 am.
- 9 July 1988** - Denmark Farm, Llanybi, Ceredigion - This forty-acre hill farm is being developed as a demonstration centre for conservation projects in the agricultural landscape. DIG has been invited to make recommendations for the management of invertebrates on the farm and we intend to spend the morning surveying a diverse range of newly-created habitats. After lunch we will move on to another site in the same area with more established plant communities. Meet at 11.00 am in the yard at Denmark Farm, 22/586536.
- 6 August 1988** - Pembrey Forest, Carmarthenshire - An extensive Corsican Pine plantation established 60 years ago on dune grassland. Broad rides and clearings retain a rich dune flora and the shelter provided by the pines promotes an excellent insect fauna. Meet at 11.00 am outside the Butcher's Arms public house, 22/417020.

Finally, can I request that everyone who reads the DIG Newsletter keeps alert to published references to Dyfed invertebrates in other bulletins, journals, newsletters, magazines, etc....I attempt to scan as much as possible but cannot hope to keep track of everything and I would like the annual bibliography to be fully comprehensive. A couple of subscribers have kindly passed on references but I'd be grateful for more feedback in this respect. It benefits us all to be able to consult published knowledge and the more we can learn the more we can help to conserve invertebrates. Don't fall into the trap of thinking that someone else is bound to have seen and reported the reference you're reading, whether it be a complete article or an isolated record - it's better to hear several times about relevant reference than not at all.

ORTHOPTERA

GRASSHOPPERS, BUSH-CRICKETS, ETC.... IN CARMARTHENSHIRE, 1987 - I K MORGAN

Unfortunately, for the second year running, little attention was given to this group in the vice-county. However, Cepero's groundhopper Tetrix ceperoi was noted in some abundance in damp dune slacks on Laugharne Burrows (22/27-08-) on 1 May and its common relative, T. undulata, was also present. The bog bush-cricket Metrioptera brachyptera was recorded in late July amongst heather Calluna vulgaris and bog-myrtle Myrica gale at the south-eastern end of Cors Goch, Llanllwch (22/365186) - its only Carmarthenshire locality.

GRASSHOPPERS AND BUSH-CRICKETS IN CEREDIGION, 1987 - A P FOWLES

The first grasshoppers were singing this year on 21 June when Qmocestus viridulus and Chorthippus brunneus were heard on the cliff grassland at Aberporth. Two weeks later, on 7 July, Chorthippus parallelus joined in the chorus - it always seems to mature a little later in the summer than the other two common species. Once again, my impression was that orthopteran numbers were generally depressed but despite this a few interesting records and observations filtered in during the summer. Myrmeleotettix maculatus, the scarcest of the vice-county's four grasshopper species, was recorded for the first time in the south of the district - on the rocky, sparse grassland of Foel-y-Mwnt (22/193520). Three new localities for this species were found on stabilised areas of shingle on the banks of the rivers Rheidol and Ystwyth; it was found in a similar habitat in 1986 and these records confirm that old river-bed shingle is a favoured habitat. Previously M. maculatus was known chiefly from disused lead-mine spoil and coastal grassland.

Eleven records were received for Tetrix undulata, the most in any single year, and this endearing groundhopper was seen from 19 April to 20 September in a range of habitat types. There were no 1987 sightings of Conocephalus dorsalis reported and just two records of Pholidoptera griseoptera. David Boyce found a nymph in the Teifi gorge (22/193448) on 20 June, and on 19 August adults were chirping noisily from roadside hedgebanks in the village of Llangrannog (22/313540), where Ragge (1973) recorded the species new to Ceredigion in 1966. The highly-localised distribution of P. griseoptera in the vice-county continues to baffle local orthopterists. By way of contrast, there were seven records of Leptophyes punctatissima whereas there had only been a total of eight records prior to 1987. All sightings were in rank vegetation along the coast, particularly where thickets of bramble occur in swards of false oat-grass Arrhenatherum elatius, except for three adults found feeding on spinach in Arthur Chater's garden at Penyrangor, Aberystwyth (22/581808) on 3 September.

The highlight of the year was the discovery of a new colony of bog bush-crickets Metrioptera brachyptera at Hengwrt, Aberarth (22/500633), previously reported in the newsletter (Fowles 1987). This handsome bush-cricket was also seen this year in both of its other Ceredigion colonies, including the early record of a nymph swept from the central dome of Cors Fochno (22/635914) on 20 May. Metrioptera roeselii was reported twice from the fringes of the Dyfi estuary, where Dave Elliot found it widely distributed alongside the railway line from the Afon Clettwr to Ynys-hir (22/644941-673962). The oak bush-cricket Meconema thalassinum was only seen on two occasions this year but it is undoubtedly widely overlooked due to its nocturnal habits. The orthopteran season drew to a close towards the end of September with the last records of O. viridulus on 8 September, C. brunneus on 26 September and C. parallelus on 4 October.

A related record of interest was the finding of a population of lesser earwigs Labia minor (Dermaptera) in an old manure heap near Llechryd (22/192438) by D C Boyce et al on 15 November. This is the first record of the species in Ceredigion but more attention paid to the entomologically rich, if somewhat unappealing, manure heaps in the south of the county should reveal its wider presence.

References:

FOWLES, A P (1987) - A new record of the bog bush-cricket Metrioptera brachyptera in Dyfed. DIG Newsletter 7: 7.

RAGGE, D R (1973) - The British Orthoptera: a supplement. Ent. Gaz. 24; 227 - 245.

LEPIDOPTERA

BUTTERFLIES AND MOTHS IN CARMARTHENSHIRE, 1987 - I K MORGAN

The 1987 season began with the emergence, in pleasant spring weather, of small tortoiseshells Aglais urticae, peacocks Inachis io and a solitary comma Polygonia c-album in Stradey Woods (22/4901) on 5 April. A few weeks later, warm southerly winds brought the first migrants in the form of painted ladies Cynthia cardui at several coastal localities and a red admiral Vanessa atalanta at Carmel Woods (22/6016). Red admirals were also evident after a pronounced immigration in the early autumn, but clouded yellows Colias croceus were only noted on a few occasions in mid-summer, with Laugharne Burrows (22/2708) providing several records (J Rees).

Marsh fritillaries Eurpdryas aurinia were recorded on the unimproved acidic pastures at Rhos Pwll-y-gawnen (22/288299), together with small pearl-bordered fritillaries Boloria selene on 26 June. Marsh fritillaries were also noted at the herb-rich pastures of Hendy Farm (22/672123) on 7 July and Rhydycymerau (22/577384) on 30 June. Jonathon Turner recorded some notable butterflies whilst surveying coalfield grassland sites near Llanelli-marsh and small pearl-bordered fritillaries at Maesllydan (22/512064) and marbled whites Melanargia galathea in several fields south of Cynheidre (22/496065). A new coalfield locality for the marbled white was the rough grassland at the periphery of the old Glyn-glas open-cast site (22/593142) near Penygroes (S J Tyler). This attractive species was also encountered on the small dune area at Morfa-uchaf, north of Ferryside (22/371122). It is interesting to read in a small article entitled "The Naturalists' Corner" in The Carmarthen Journal of 6 August 1909 that - "the marbled white seems to be well-established on the railway cutting near Ferryside station". It is pleasing to report that the species was still there in 1987.

By far the best butterfly sighting of the year was the ovipositing brown hairstreak Thecla betulae seen at Bryn Siriol, Capel Dewi (22/473203) on 18 August (N Sharp). Although Dyfed is considered to be a stronghold of this species it is, nevertheless, still a very scarce and elusive butterfly.

In late April, the dunes of Pembrey Burrows (21/4199 and 22/4300) yielded the uncommon oblique-striped moth Phibalapterix virgata whose larvae feed on lady's bedstraw Galium verum. Sporadic light-trapping of moths took place at Stradey (22/4901) throughout the spring and summer but captures were mostly of common and widespread species. Casual recording of moths encountered during daylight survey work also continued, with the uncommon scarlet tiger Callimorpha dominula being recorded at Crug-las (22/684241) on 7 July.

Sincere thanks are due to the regular contributors of lepidoptera records - Trevor Crosby, Graham Hopkins and George Hutchinson.

PEMBROKESHIRE LEPIDOPTERA IN 1987 - R ELLIOT

1987 was, for butterflies, an average year with most species recovering from the poor season in 1986 - in general, numbers were back to the normal expected level for most of the common species. Whilst large skippers Ochlodes venata and small skippers Thymelicus sylvestris were widely recorded there have still been no further records of Essex skippers T. lineolus since Ivan Kruys reported sightings near Cilgwyn, Newport (22/0736) in 1974 and 1975 (Kruys 1974, 1975). This notable extension of range seems not to have been regarded by recent authors on butterfly distribution and further confirmation of its presence in Pembrokeshire would be most welcome.

Only a few red admirals Vanessa atalanta were seen in early summer and most sightings were from the later generation in July/August. There was a single record of clouded yellow Colias croceus when a male was seen on the coast path near St Brides (12/8011) on 2 September (O Lewis). Painted ladies Cynthia cardui were seen mainly in August with late records at Kingsmoor (22/124068) in mid-December (P Brown) and Lawrenny (22/0107) on Christmas Day (A Poole). The earliest record of the year was for peacocks Inachis io hibernating with herald moths Scoliopterix libatrix in Scoveston Fort (12/943064) in January (J Bird).

On-site breeding was proven for brown hairstreak Thecla betulae when four eggs were found on blackthorn Prunus spinosa on the DWT reserve at West Williamston (22/0305) in December. A further search a few days later revealed more eggs on an adjacent site within the reserve. Previously this species had only been recorded once before on the reserve, in 1981 when a male and female were caught on the same day. A new colony of small blues Cupido minimus was discovered near Strumble Head (12/8941) in July by S B Evans and C Thomas and they also recorded a green hairstreak Callophrys rubi at the promontory fort near Pwll-deri (12/888386); the only other record for this species was at Rosebush (22/0729) in May (M J Clist).

Dark green fritillaries Argynnis aqlaja were common in July in the Freshwater West area (11/8899) and on the Castlemartin range (11/9196) but there was only one record of silver-washed fritillaries Argynnis paphia - at Esgyrn Bottom (12/976347) on 6 July. Small pearl-bordered fritillaries were reported from five sites and the Welsh Peatland Invertebrate Survey (NCC) discovered two new colonies of marsh fritillaries Eurodryas aurinia - at St David's Airfield (12/788262) and Portheddy Moor (12/808314).

Moth-trapping from May through to September at Lamphey (22/0100) produced good numbers of the more common moths, notably 411 large yellow underwings Noctua pronuba out of a total of 720 moths caught on 20/21 August. Other interesting species taken in the trap include frosted green Polyploca ridens, common lutestring Ochropacha duplaris, angle-striped sallow Enargia palacea (on 29 July) and vestal Rhometra sacaria. Other highlights of the year include a death's-head hawkmoth Acherontia atropos caught at Dale Fort Field Centre (12/824050) by the Director, D Emerson; a privet hawk Sphinx ligustri at Lamphey in June; and a convolvulus hawk Agrius convolvuli at Dale Fort in August.

References:

KRUYS, I P (1974) - The Essex Skipper. West Wales Naturalists' Trust Bulletin 11: 10-11.

KRUYS, I P (1975) - Pembrokeshire (Insects). West Wales Naturalists' Trust Bulletin 16: 7-8.

LEPIDOPTERA RECORDS FROM CEREDIGION IN 1987 - A P FOWLES

1987 was rather a "curate's-egg" for butterflies, with many species (particularly the grass-feeders) doing well whilst others suffered badly until the improved autumn weather allowed some respite. A total of thirty species were reported but there were no records of some of the scarcer residents such as holly blue Celastrina argiolus, grizzled skipper Pyrgus malvae and small blue Cupido minimus. Apart from the August/September influx of red admirals Vanessa atalanta, the migrants which reached Dyfed's southern coasts failed to continue on their way to Ceredigion. There was only a single clouded yellow Colias croceus sighting (on 20 September) and just five records of painted ladies Cynthia cardui. As in 1986, the two common hibernators - small tortoiseshells Aglais urticae and peacocks Inachis io - had a poor year, although commas Polygona c-album appeared in several new localities.

It was a case of mixed fortunes for our scarcer species, with coastal and wetland inhabitants having an average season and our woodland butterflies faring particularly badly. Dark-green fritillaries Argynnis aglaia were flying on the very early date of 14 June at Cwmtudu (22/355575) and dingy skippers Erynnis tages were abundant on the slopes of Constitution Hill (22/583828) in May. There was just one record of pearl-bordered fritillaries Boloria euphrosyne in 1987, at Llangrannog (22/321542) on 7 May. Whilst speckled woods Pararge aegeria were widespread and fairly common the rest of our woodland species were rarely seen. There were no records of white-letter hairstreak Strymonidia w-album and purple hairstreaks Quercusia quercus were only seen on three occasions. One of the biggest casualties of the year would seem to be silver-washed fritillaries Argynnis paphia as there was only a single sighting in the whole county, at Ynyshir (22/680960) in late July. Whilst this is a local species in Ceredigion it is widely distributed and most of the larger woodlands support colonies (it has been recorded from fifty-three tetrads since 1970), its virtual absence this year is most surprising.

The NCC invertebrate survey of Welsh peatlands contributed to the wealth of records for small pearl-bordered fritillaries Boloria selene, which were recorded from a total of twenty-four sites. Green hairstreaks Callophrys rubi were seen at six sites and there were three new colonies of marsh fritillaries Eurodryas aurinia discovered. The butterfly transect for marsh fritillaries at Rhos Llawr-cwrt NNR (22/411499) indicated a slight improvement over the last two years and adults were on the wing from 26 May to 1 July. This transect has been walked annually since 1984 and is charting the recovery of the species at this site following a dramatic population crash in 1985. The transect is modelled on the long-term

Butterfly Monitoring Scheme carried out at Dyfi NNR (22/604927) and RSPB Ynys-hir and follows the same national guidelines (Hall 1981) except that counts are targeted for a single species and the transect is only walked during the relevant flight-period. Few butterfly recorders have the flexibility to be able to commit themselves for the full 26-weeks required for the national scheme and these single-species transects are therefore an excellent way to contribute valuable information on abundance patterns for our scarcer species. In 1986 a transect was established on Cors Fochno NNR (22/635915) to monitor the large heath Coenonympha tullia colony and there was a slight decline in numbers for the Index of Abundance in 1987. A similar transect was set-up last year at Cors Caron NNR (22/685625) to compare the fortunes of the large heaths at a higher altitude. The continuation of these schemes should yield interesting results in future years.

Moth recorders produced a number of good records this year and there were two observations of particular conservation importance. On 3 May an adult narrow-bordered bee hawk Hemaris tityus was seen in the garden at Ynys Edwin (22/677962), the first record of this nationally rare and declining species in the county since 1976. In the mid-1970's a larva was found nearby on the West Marsh at Ynys-hir and it is to be hoped that a colony still exists in the area. The other outstanding discovery of the year also concerns a nationally rare wetland moth, the rosy marsh Eugraphe subrosea. In June a larva was found in a pitfall-trap set on an isolated mire which is a remnant of the former extent of Cors Fochno (22/69). Subsequently, twenty-seven adults came to a light-trap operated on the site on 17 August. This is now the third colony of this species in Ceredigion and it has not been seen anywhere else in Britain since the draining of its former stronghold on the Huntingdonshire fens in the 1850's.

Two species were added to the county list in 1987. A delicate Mythimna vitellina was captured at Salem (22/669843) on 17 September and the prevailing southerly winds brought another specimen to Tregaron (22/688619) a few days later. Also at Salem, the occurrence of a Blair's shoulder-knot Lithophane leautieri on 9 October marks a predicted extension of range of this recent British colonist. Since its arrival in 1951 it has spread steadily northwards (Hewlett & Majerus 1987), feeding on Monterey cypress Cupressus macrocarpa and can be anticipated to occur in Carms and Pems.

The winds that brought the delicates to Ceredigion carried little else of interest with them apart from a few vestals Rhodometra saccharia and, generally, it was not a particularly exciting year for migrants. However, there were four records of humming-bird hawkmoths Macroglossum stellatarum during the summer, in May and July. Details of the catches from the three Rothamsted Insect Survey traps operated in the county are not yet to hand and they may reveal further interesting migrant records.

A moth trap set continuously from mid-June until the end of the year at Salem captured a total of 204 species of "macro-moths", including five nationally notable species and five county rarities (in addition to the two mentioned above). Three of the nationally notables - cloaked carpet Euphyia bianculata, golden-rod pug Eupithecia virgaureata, and pale pinion Lithophane socia - are reasonably widespread in Ceredigion. Ashworth's rustic Xestia ashworthii and scarce silver Y Syngrapha interrogationis have both been recorded on less than ten occasions and details of their capture, along with two of the county rarities, have already been reported in the Newsletter (Holmes 1987). The other species rarely seen in Ceredigion are - pale eggar Trichiura crataegi (one on 10 September was the eighth county record, most of which have been in this general area around Bow Street); plain wave Idaea straminata (only the second record since 1950, although probably overlooked); and short-cloaked moth Nola cuculatella (two in late July were the sixth and seventh county records).

Two other nationally notable species were reported this year from wetland habitats. The silver hook Eustrotia uncula was seen on two of the northern bogs (where the larvae feed on sedges); and the scarlet tiger Callimorpha dominula was reported from ten localities, including Ynyslas Dunes (22/604926) where the larvae were commonly observed feeding on houndstongue Cynoglossum officinale in May. Of the many locally scarce species recorded in the county this year, some of the more interesting are listed below:

Wood tiger Parasemia plantaginis - Reported from Cors Fochno, Cors Caranod (22/565647) and Comin Esgairmaen (22/652649). This handsome moth had gone undetected for more than twenty years but since 1984 there have now been five records.

White-line dart Euxoa tritici - One at Nant-llwyd (22/788524) on 6 July, all previous records had been from coastal localities.

Heath rustic Xestia agathina - Eighteen were caught on Cors Fochno in September, the only recent county records have been from Cors Caron.

Beautiful yellow underwing Anarta myrtili - Three came to light-traps on Cors Fochno on 18 and 22 August, there has only been one previous record of this diurnal species at light in the county.

Nutmeg Discestra trifolii - One at Ynyshir on 17 August, the first record in Ceredigion for nearly thirty years.

Double-lobed Apamea ophiogramma - One at Tregaron on 1 August, the seventh county record.

Hawthorn's minor Celaena haworthii - Reported from Figyn Blaenbrefi (22/717545) and Cors Caranod; probably widespread but only recorded from the Cors Caron area in the last 40 years.

I am grateful to the following for continuing to send records of lepidoptera in Ceredigion, upon which this report is based - D C Boyce, P M Burnham, A O Chater, W M Condry, J E Davis, P Holmes, M Jones, R Liford, A N B Simpson, R Squires, P Thornley, I J L Tillotson, I Williams, D Winsland and D Woolley.

References:

HALL, M L (1981) -Butterfly monitoring scheme. Instructions for independent recorders. Institute of Terrestrial Ecology, Abbots Ripton. 14 pages.

HOLMES, P (1987) - Moth trapping at Salem, Penrhynoch (VC 46) 22/668843. DIG Newsletter 7: 8-9.

HOWLETT, R & MAJERUS, M (1987) - The spread of Blair's shoulder-knot Lithophane leautieri hesperica. Ent. Rec. J Var. 99: 258-260.

ODONATA

CARMARTHENSHIRE DRAGONFLIES 1987 - I K MORGAN

Several new localities of Odonatological interest were found in 1987. The fine unimproved meadow and associated wet flushes at Crug-las SSSI (22/684241) held the scarce blue-tailed damselfly Ischnura pumilio, the keeled skimmer Orthetrum coerulescens, and three common species on 7 July. A new site for the black darter Sympetrum danae was discovered by Adrian Fowles on 20 August at Cors Bryn-mawr (22/672501), an upland basin mire near the Twrch watershed on the Carmarths/Cards border. The common hawkler Aeshna juncea was also seen ovipositing here. Finally, on a quick visit to the brackish marsh near Commissioners Bridge, Kidwelly (22/408056) on 20 July, two male I. pumilio were caught as they flew (with many blue-tailed damselflies I. elegans) over a ditch dominated by sea club-rush Scirpus maritimus. Such a brackish-water site is rather atypical for I. pumilio (Fox 1987), although commonplace for I. elegans.

References:

FOX, A D (1987) - Ischnura pumilio (Charpentier) in Wales: a preliminary review. J. Br. Dragonfly Soc. 3: 32-36.

DRAGONFLIES IN CEREDIGION 1987 - I S FRANCIS

All Odonata enthusiasts hoped for a rather better season in 1987 than the two previous years, but it was not to be. Being "new to the job", I was hardly in Ceredigion during the year, but in the south of England it was certainly the case that the activity of many species was greatly depressed and conditions were generally disappointing. The poor weather is likely to be the main reason for the low number of Odonata records for the year, with a total of 147 individual records from ten observers. There were few notable findings, Orthetrum coerulescens and Ischnura pumilio being the only relatively uncommon species recorded. Records of the latter came from the NCC's Welsh Peatland Invertebrate Survey team, including a new site on the valley fen of Comin Esgairmaen (22/652644). All wildlife gardeners, however, should be envious of the impressive total of eleven species recorded from Ian Callan's garden near Lampeter (22/568575), including Calopteryx splendens and C. virgo - not all of us are privileged to have the Afon Aeron flowing next to our house though.

Clearly there is much scope for improvement in 1988! Can I ask any invertebrate recorders who will be out and about in Ceredigion this year to send me their sightings? I'll take them in any form and convert them to BRC format to pass on to the national scheme. Please send dragonfly records for 1988 to: Ian Francis, Department of Geography, University College of Wales, Aberystwyth, Dyfed, SY23 3DB. Finally thanks to Fiona Evans for co-ordinating the county dragonfly records until the end of 1987, and a special thank you to all who contributed records.

HYMENOPTERA/DIPTERA/ODONATA

RECORDING ALONG THE PEMBROKESHIRE COAST - A & S COKER

In recent years most of our recording effort has been concentrated on our Odonata surveys and although many interesting and beautiful places have been visited during this time, the coastline has been rather neglected because of its relative unattractiveness to breeding dragonflies. Pembrokeshire must have one of the most accessible, yet least populated coastlines in Britain as the Coast Path provides easy access to virtually its whole length. The varied nature of the coastline could be expected to support a host of insects and some interesting finds in several groups have been made on our occasional visits to coastal localities.

The most obvious evidence of insects when walking along the coast is the large number of burrows to be found in the path itself. The path surface and its banks, where it passes along steep slopes, provide continuous bare ground habitat of varying exposure and aspect. The sheer numbers of solitary bees, wasps and bumble bees have intimidated us into not venturing into a study of these groups, but several of the most obviously different specimens have been taken. These include Coelioxys mandibularius at Mere Pool Valley (11/97-94-) on 5 July and Andrena labiata and Melitta leporina at Trwynhwrddyn, St David's (12/732273) on 11 July.

Amongst the coastal hover-flies recorded in Pembrokeshire, two species are of special interest. Several Chrysotoxum were found in a small marshy area on St David's peninsula (12/7824) on 13 June and one was caught and identified as C.elegans. This large wasp mimic is said to be a mainly woodland species but has been found in cliff-top habitats in Cornwall. The other species, Eumerus sabulonum, was recorded at three sites in the vice-county this year - Trwynhwrddyn, Ogof Goch (22/097446) and Careg Wylan (22/101451). Each site has actually been on the coastal path itself, where there is a large expanse of bare ground as the path crosses a steep, west-facing bank. E. sabulonum is a small reddish fly which behaves much like a small, red-bodied, solitary bee or even a large ant as it hovers very close to the ground (only millimetres above) or scuttles over it. From our limited observations it seems likely that this nationally rare (RDB3) species may be widespread along the coast path as there is plenty of suitable lightly-vegetated habitat. Another small, low-flying hoverfly occurring along the coast is Paragus haemorrhous, it may also be found in similar habitat to E. sabulonum but prefers slightly more vegetative cover, particularly with clumps of heather Calluna vulgaris.

The coast does also have some Odonata interest, with valuable habitat provided by the many small pools and streams. The large dune-slacks at Freshwater West (11/8899) hosted a rare migrant during May, a single mature specimen of Sympetrum fonscolombei. There have been very few Welsh records of this southern European species. The small dune-slack at Bosherton (11/9794) holds Pembrokeshire's only known breeding colony of Aeshna mixta - in 1986 over seventy exuviae were collected there. Since there are no records of this species in the vice-county prior to 1985 it is possible that A. mixta is expanding its range along the south Wales coast. Will it soon be found further west, and will the other large dragonfly thought to be expanding its range in the same way, Orthetrum coerulescens, soon be found at Bosherton?

DIPTERA

A REVIEW OF NOTABLE DIPTERA RECORDS IN CARMARTHENSHIRE 1987 - I K MORGAN

To the dipterist, spring could be said to begin when the first hoverflies emerge en masse to visit spring-time flowers. Such a day was 5 April with Eristalis tenax, Syrphus torvus and Melangyna lasioptalma all out in Stradey Woods (22/4901). Late April provided a new county record in the form of Metasyrphus latifasciatus at Pembrey Burrows (22/426004) and Pipiza fenestrata was also new to Carmarthenshire, at Stradey Woods in early May. In the same area of mostly dry deciduous woodland the marshland hoverfly Tropidia scita was recorded on several occasions, a rather unexpected habitat for the species (Morgan 1987).

A nice find was the Red Data Book hoverfly Neoascia obliqua at Llandyfeisant Woods (22/626221) on 19 May; perhaps even better was Microdon mutabilis (RDB3) on the remnant acidic pastures of Rhos Pwll-y-gawnen, Trelech (22/289298) on 15 June. The larvae of this musual and very localised hoverfly develop in association with ants, often in mossy situations. A local species that is found around the estuaries of the Carmar coast is Platycheirus immarginatus, of which there were two records in 1987 - (1) common on the brackish marsh near Commissioner's Bridge, Kidwelly (22/408056) on 20 July and (2) frequent on the saltmarsh at Morfa-uchaf, Ferryside (22/371122) on 31 July. Another uncommon hoverfly in Carmar is Trichopsomyia flavitarsis, it was netted on the freshwater marshes of Ffrwd (22/419022) on 5 July.

Once again, Adrian Fowles has made some noteworthy records in Carmarthenshire, including three new county records. On 30 June he saw Sericomyia lapponum and Xylota coeruleiventris at Rhydcymerau (22/5738) and Pipiza luteitarsis was taken at Allt Rhyd-y-groes NNR (22/762486) on 6 August. X. coeruleiventris was also seen during the summer at Allt Rhyd-y-groes and at Abergorlech (22/586337). Graham Hopkins - another recorder who regularly produces first-class records - noted Rhingia rostrata (for the second consecutive year) at Dinefwr Castle Woods (22/609219) on 27 August and (new to VC 44) Xanthandrus comtus at the same site on 3 August. The larvae of Xanthandrus are thought to be predatory on small caterpillars feeding on buckthorn Rhamnus catharticus or alder buckthorn Frangula alnus, both of which are rather rare plants in south-west Wales. In total, 129 hoverfly species have now been recorded from Carmarthenshire.

The first tabanid of the season, a male Tabanus cordiger at Dinefwr Castle Woods on 13 June, was a new vice-county record and it was also seen on the banks of the Afon Tywi at Llandovery (22/755331) five days later. Atylotus fulva - a most handsome horsefly with a chestnut body and large iridescent green eyes - was taken at Cors Goch, Llanllwch (22/365186) on 29 July; it is mainly an inhabitant of southern heathland in Britain. In contrast to the previous year, Tabanus sudeticus was rare in 1987 with only one record. The genus Chrysops, however, was quite widely recorded and included two records of C. viduatus in woodland-edge sites - at Dinefwr (22/617225) and Crug-las (22/684241).

Whereas the common bee-fly Bombylius major was noted at many localities during early 1987, B. canescens was much more local with two records on vegetated shingle (Llanwrda (22/713306 and Llandovery 22/755331) and a third sighting at Grongar Hill (22/573216). The Llandovery site had, on 19 July, another interesting dipteran, the small rotund Acrocera globulus whose larvae are internal parasites of spiders.

A robberfly new to the county in 1987 was the small, dark Lasiopogon cinctus which was first noted on a small dune area near Gilman Point (22/226076) on 1 May. Subsequently, this species was found in three other coastal localities, all on sand dunes. A grassy clearing in Pembrey Forest (22/390017) yielded Dioctria rufipes in mid-June whilst Leptogaster cylindrica was caught when sweeping grass near the Machynys Ponds (21/513981) on 5 July. This slender robberfly is easily overlooked because of its small size. Apparently, instead of waiting bandit-like to ambush its prey (as do most asilids) - "the slim, elegant Leptogaster makes scouting flights and pounces on stationary victims including such an unlikely target as a spider sitting on a stem of grass" (Oldroyd 1964). The large grey asilid Philonicus albiceps was noted at many coastal dunes during the summer but the much more local Machimus atricapillus was only encountered on the carboniferous limestone outlier of Carreg Cennen (22/671191).

Soldier-flies recorded in 1987 include Oxycera trilineata at two sites (Machynys Ponds and Commissioner's Bridge) and also the notable Beris clavipes at Erw-las, Llwynhendy (21/537994), Ffrwd Fen (22/419023) and Machynys Ponds. B. clavipes, a local species of southern marshland, was easily caught by beating hawthorn and willow scrub in wet localities in late May. No individuals of the genus Stratiomys were recorded in 1987 in spite of known localities being visited at appropriate times.

1987 was a poor year for conopids, although there were two new vice-county records. Myopa buccata was captured at Edwinsford (22/633343) on 4 June and Conops ceriaeformis was recorded on the flowers of creeping thistle Cirsium arvense at Carreg Cennen and on yarrow Achillea millefolium near Rhandirmwyn (22/719461). Presumably much-overlooked because of its tiny size, Thecophora atra was noted on 11 June, feeding at flowers of ox-eye daisy Chrysanthemum leucanthemum on the limestone outcrop at Llawr-cwrt (22/516145).

Finally, two notable species from other dipteran families were recorded at Pembrey Burrows (21/4199) on 7 July - the therevid Dialineura anilis and the otitid Tetanops myopinus, the latter as prey of Philonicus albiceps.

References:

MORGAN, I K (1987) - Tropidia scita - a fenland species takes to the woods? BRC Hoverfly Newsletter 16: 2.

OLDROYD, H (1964) - The Natural History of Flies. London.

DIPTERA RECORDING IN CEREDIGION: HIGHLIGHTS OF 1987 - A P FOWLES

Several major contributions to the knowledge of the dipteran fauna of Ceredigion were made in 1987 and we are beginning to get a clearer picture of the county composition of several families. The major event of the year was the recognition by the Nature Conservancy Council that Banc-y-Mwldan (22/201488) is a key site for the conservation of invertebrates in Britain. This decision was based on the richness and diversity of a range of wetland invertebrate groups inhabiting the unimproved pastures and flush-fens of this 46-acre site but a major feature was the presence of an extensive population of the soldier-fly Odontomyia hydroleon. This relatively large, distinctive species was discovered at Banc-y-Mwldan in 1986 and is not known to occur anywhere else in Britain. There are a few museum specimens from southern England dating from the nineteenth century but it had not been recorded since then. It is a rare species in much of western Europe and is regarded as having declined considerably in many countries; in this context the Ceredigion colony takes on an international

importance, similar in many respects to the rosy marsh moth Eugraphe subrosea on Cors Fochno NNR (22/6391). Banc-y-Mwldan is in private ownership but managed by agreement with the Nature Conservancy Council and it is imperative that anyone wishing to visit the site should contact the Assistant Regional Officer at Plas Gogerddan, Aberystwyth, for details of access.

The diptera of Banc-y-Mwldan were comprehensively surveyed by Ian McLean and Alan Stubbs on 13 July when a respectable total of 185 species was recorded. Ten species of stratiomyid were found on the day and they included Beris fuscipes, Oplodontha viridula, Oxycera pygmaea, O. rara and O. trilineata in addition to Odontomyia hydroleon. The site list of eleven species (Pachygaster leachii was seen in 1986 but not in 1987) is exceptional for Ceredigion. Another exceptional total was the 51 species of hoverflies recorded during the day, including the nationally rare Orthonevra brevicornis and the scarce Anasimyia lunulata and Pipiza bimaculata. Single specimens of the latter and Chrysotoxum cautum were additions to the county fauna. Other visits by Tony Simpson and myself have increased the site list to an impressive 67, which represents half of the species recorded from Ceredigion to date (133). Crane-flies were also extensively sampled, yielding sixty-five species of which eight were nationally notable - Limonia inusta, L. lucida, L. trivittata, Lipsothrix nervosa, Molophilus variispinus, Pilaria fuscipennis, Tasiocera laminata, and Thaumastopera calceata. Other predominantly wetland families with interesting records were the dolichopodids - Dolichopus virgultorum, Syntormon pumilus, S. spicatus - and the sciomyzids - Psacadina verbekei, Tetanocera punctifrons, Tetanura pallidiventris. The catalogue of scarce species was completed with Chrysops viduata (Tabanidae), Scathophagus scybalaria (Scathophagidae) and Spanochaeta dorsalis (Muscidae).

Hoverfly recording continued throughout the season at a fairly intensive level with 115 species being recorded during the year. Fourteen of these were new to the county, including three Red Data Book species - Parasyrphus nigritarsis, Orthonevra brevicornis (mentioned above), and Parhelophilus consimilis. Two male P. nigritarsis were taken at Nant Llolwyn (22/584767) on 25 and 26 May, providing one of the most extraordinary invertebrate records of the year. The species was only known in Britain from two females collected in Inverness-shire in 1937, but it has recently been discovered in Ireland (Speight 1986). The Nant Llolwyn specimens were actually taken in my garden as they perched on a washing-line on consecutive days - although I suspect this is not their normal habitat! The larvae are reported on the continent as predators of chrysomelid larvae and aphids and it may prove that they are associated with the two aspens Populus tremulus that grow adjacent to the garden. It is possible that the species is widely overlooked as the adults bear a strong resemblance to the common Syrphus ribesi although, as Speight (loc. cit.) points out, the abdominal bands are a richer yellow. A useful field character, once the specimen has been netted, is that nigritarsis has a black margin to the upper mouth-edge whereas ribesi has a completely yellow face. My own experience (and as I write this in May 1988 males are again taking up station on the washing-line!) is that the neat contrast between the black and yellow markings of the tergites are more reminiscent of a Metasyrphus than a Syrphus and it was for this reason that I bothered in the first place to consider the strategy required to capture a hoverfly sitting in such an awkward place.

A female Parhelophilus consimilis was taken in a water-trap on the acid valley fen at Cors Llyn Farch (22/544638) in late July by the Welsh Peatland Invertebrate Survey. Scattered records exist for southern Britain, mainly associated with stands of reedmace Typha latifolia in the marginal fen of ponds; however, there is no Typha at Llyn Farch. The NCC survey operated water-traps at 15 sites over three fortnightly periods during the season. Catches from two of these trapping periods have been identified so far and contained fifty-three species. This study will help to determine the typical syrphid fauna of mid-Welsh peatlands and should enable the categorisation of a number of indicator species of different fen types. Amongst the more interesting records were Anasimyia contracta, A. lunulata, Arctophila fulva, Platycheirus scambus, and Tropidia scita. A male Neoascia meticulosa caught at Cors Caranod (22/565647) was a new county record.

Most of the remaining species recorded for the first time in Ceredigion came from wooded sites and this habitat has the potential for providing many of the species that are still to be discovered in the county. The most impressive of the 1987 additions was Criorhina ranunculi which was frequently seen around the blossom of grey willow Salix cinerea and bullace Prunus domestica in late April at Coed Nant Llolwyn (22/588770). Pipiza luteitarsis was also recorded in April from the same site. Male Neocnemoden pubescens were found amongst bluebells Hyacinthoides non-scripta in the mixed woodland of Coed Pwll-crown (22/622834) during a day of cloud and sunshine in May - members of this genus are thought to spend most of their time up in the tree canopy. A woodland-edge species, typically found at blackthorn Prunus spinosa blossom, is Platycheirus ambiguus - a single male was taken at Cwm Cynfelin (22/603832). Two Melangyna species added to the county list were umbellatarum and quadrifasciatum - both recorded in association with willow carr. M. umbellatarum was taken alongside the Afon Rheidol at Dolcniw (22/646801) and M. quadrifasciatum was found at Trawsant, Cellan (22/617477). Also associated with woods and scrub, Cheilosia impressa was actually found in a narrow coastal cliff gulley at Coybal (22/372592). The final newcomer is Platycheirus immarginatus, a scarce saltmarsh species - it was recorded from Pentood (22/184449) and Tanybwlich (22/580804) and can be anticipated to occur along the Dyfi Estuary. In addition to the species mentioned above, a further four nationally notable hoverflies were reported in the county this year - Chrysogaster virescens, Eriozona syrphoides, Megasyrphus annulipes and Xylota coeruleiventris.

Crane-flies received a great deal of attention this year with the visit of Alan Stubbs to Banc-y-Mwldan and the catches of the Welsh Peatland Invertebrate Survey. Alan called in at a few other sites during his visit and in a coastal seepage on the cliffs at Gwbert (22/162492) he captured a single Erioptera bradleyi, otherwise known only from the type male. Further details of this important record are not yet to hand. The NCC peatland survey material has been identified by Alan and sixty-one species have been recorded from the fifteen sites sampled in the vice-county, although there are bound to be several more when all of the material has been looked at. Five of the species are currently regarded as being of Red Data Book status but it is likely that the survey will result in down-grading for some of them. In particular, Erioptera nielseni and Limnophila abdominalis were widely distributed and Pilaria meridiana was frequent in acidic fens. The two species of greatest interest were Paradelphomyia nielseni, of which nineteen were captured in a soligenous flush on Rhos Llawr-cwrt NNR (22/421496), and Limnophila glabricula. A single specimen of L. glabricula was caught on the pingo fen at Rhos Llawr-cwrt (22/411498) and another taken on the watershed mire of Gors Lwyd (22/856757), but twenty-one were caught in river fen alongside the Afon Teifi through Cors Caron (22/690635). Four other notable species were recorded - Limnophila pulchella, Molophilus propinquus, M. pleuralis and Limonia dilutior. At Llawr-cwrt farm (22/415500) a female Ctenophora pectinicornis was found floating in a rain-butt. This genus of handsome tipulids breeds within hardwood timber and pectinicornis is considered a good indicator species of ancient woodland - it must have strayed a little off the beaten track.

Away from Banc-y-Mwldan there were very few interesting records of soldier-flies this year. Many stratiomyids inhabit the richer fens and flush systems that are all too rare in Ceredigion. Coastal wetlands with some base-enrichment are likely to hold the richest fauna and brackish estuarine marshes would repay further study. In 1987 two such sites were visited, one at either end of the county - Cors Afon Ddu (22/667942) had Nemotelus notatus frequent on hemlock water-dropwort Oenanthe crocata in early July and Oplodontha viridula was recorded on Pentood (22/185455). Coastal flushes on the boulder clay at Pen-yr-ergyd (22/161490) held three scarce species - Oxycera rara, O. pygmaea and N. notatus whilst in a more acidic habitat Beris clavipes was reported as "common" on Llangynfelyn common (22/6392) in late May.

The remaining 1987 diptera records of interest come chiefly from a range of families of conspicuous flies which all seem to be much less common this year compared to 1986. Conopids were definitely scarce although a single Conops strigatus was recorded. Depending on your point of view, tabanids were pleasantly rare this summer with only three sightings of Tabanus sudeticus reported, although Atylotus fulva at Esgairwen-fawr (22/453538) and Tabanus cordiger at Ty'n-yr-helyg (22/595765) were good records, The bee-fly Bombylius canescens was only seen at one locality but B. major was widespread in woodland-edge habitats as usual. There was no great excitement to be found amongst the asilids but Leptarthrus brevirostris was frequent on the acidic coastal heath of RAE Aberporth (22/238522) and Dioctria oelandica was taken in a woodland ride at Ynyshir (22/677956). Philonicus albiceps was common on the Gwbert dunes (22/161486) during the DIG field meeting in July.

Finally, a little-studied family in the vice-county is the Empididae. This is a group of predatory flies, amongst which many species spend their adult life running at high-speed across the ground in search of prey. Pitfall-trapping throughout the summer on river shingle alongside the Afon Ystwyth at Ty'n-yr-helyg (22/595765) produced sixteen specimens of Tachydromia halidayi and a single female was caught at Glanrafon (22/614804) on the Afon Rheidol. It was known previously from a total of ten sites in Britain, chiefly in Scotland also on the River Monnow in Herefordshire and the Afon Tywi in Carmarthenshire. The specimens occurred between 9 May and 1 August.

The above report is based upon records supplied by S & A Coker, A Hubbard, I F G McLean, D Reed, A N B Simpson, A E Stubbs, D Winsland and D Woolley - to whom I offer my grateful thanks.

References:

SPEIGHT, M C D (1986) - Cheilosia nasutula, Neocnemodon vitripennis and Parasyrphus nigrirarsis: hoverflies (Dip., Syrphidae) new to Ireland. Ir. Nat. J. 22: 149-152.

COLEOPTERA

SUMMARY OF INTERESTING BEETLE RECORDS FROM CARMARTHENSHIRE IN 1987 I K MORGAN

Amongst the ground-beetles, the first noteworthy find of the year was Chlaenius nigricornis, an attractive species with a pronounced metallic, reddish-bronze lustre on the pronotum and with greenish elytra - it was found at the Machynys Ponds, Llanelli (21/511987) on 14 March. Later on in the season this notable carabid was found by ponds alongside the Afon Tywi at Llanwrda (22/714307) and near Llandovery (22/753333). On the expanses of river shingle nearby at Llandovery, A P Fowles recorded the Red Data Book species Lionychus quadrillum, together with the scarce Clivina collaris, on 8 May.

A visit to the imposing corrie cliffs above Llyn-y-Fan fach (22/805216) in a May snow shower was made most profitable by the presence of three species said to be characteristic of the British upland fauna (Goodier 1968) - Nebria gyllenhali, Pterostichus aethiops and P. adstrictus; these occurrences represent some of the most southerly records for these beetles.

Commissioner's Bridge, Kidwelly (22/408056) had the notable Trechus discus under deeply-embedded boulders in an embankment next to marshland. This attractive carabid is reputed to be difficult to find because of its subterranean habits and it may have been brought closer to the surface by the heavy rain which preceded its discovery. A few miles to the east, Pembrey Burrows (21/4199) produced the uncommon Harpalus neglectus and, under a single piece of driftwood, no less than nine individuals of the strand-line carabid Eurynebria complanata together with Brosicus cephalotes and Anisodactylus binotatus. Eurynebria occurs principally on the shores of the Mediterranean Basin, the west-coast of France and south-west Britain, with south Wales providing the northernmost records for the species (King & Stabins 1971). In addition to Pembrey, E. complanata was also noted at Pendine Sands (22/295067). Another coastal species, Cicindela maritima, was seen on the small area of dunes just west of Gilman Point (22/227074).

The chafer Anomala dubia is a feature of hot sunny days on the dune systems of the Carmarthenshire coast, where they can be seen in ponderous, buzzing flight before 'crash-landing' amongst the marram grass Ammophila arenaria. It is a variable species which ranges in colour from metallic bottle-green to purplish-brown. An unusual occurrence on the small extent of dunes at Morfa-uchaf (22/371122) on 31 July was the finding of a blue, water-filled container containing the drowned bodies of five bee-chafers Trichius fasciatus. Another interesting scarabid observation was the attraction of Serica brunnea to a mercury-vapour moth trap at Stradey (22/495013), something which this species does with regularity according to Jessop (1986).

Probably the most interesting cantharid discovery of 1987 was the scattered colonies of Silis ruficollis in fenny vegetation around the invertebrate-rich Machynys Ponds (21/513981) and at the Ffrwd Nature reserve (22/419022). These occurrences, together with recent records from two sites in Glamorgan, are part of a geographically-isolated population away from the species' main range in south-east England (K N A Alexander, pers. comm.). Other areas of floriferous Juncus-marshland further west in coastal Dyfed should be checked in early July for this distinctive soldier-beetle.

The finding of small colonies of the 5-spot ladybird Coccinella quinquepunctata at two river shingle sites, Llanwrda and Llandovery on the Afon Tywi, were perhaps the most outstanding beetle records of 1987. Hitherto, the last known British sighting was in 1953 in Scotland though it has since emerged that Dafydd Davies caught a specimen on the Afon Bran (a tributary of the Tywi) at Cynghordy (22/809402) on 1 May 1974. Another notable ladybird find was Halyzia 16-guttata on sycamores Acer pseudoplatanus in damp woodland near the Pistyll quarry, Llandybie (22/623167). Other interesting coccinellid records were the 16-spot Micraspis 16-punctata from coastal saltings (three sites) and the 11-spot Coccinella 11-punctata inland at Maesdulais quarry (22/517145).

Beating of flowering hawthorn Crataegus monogyna in late May/early June showed that the small longhorn beetle Grammopteryx rufescens was quite widespread in Carms. The notable Judolia cerambyciformis was seen at a few sites and there were two new localities for Strangalia quadrifasciata - Carreg Cennen (22/671191) and Dyffryn Conyn (22/116206). S. quadrifasciata is proving to be more frequent than previous authors have supposed, though it is still far less common than the related S. maculata with which it sometimes occurs.

The bright, iridescent colours of the Chrysomelidae make this family popular with coleopterists and the variation in colour is matched by the differing body forms and lifestyles of the 250 or so British species - less than fifty of which have been recorded in Carmarthenshire. The discovery of Donacia obscura, a Red Data Book species, in some numbers amongst bur-reed Sparganium sp. and sedges Carex sp. between the Talley lakes (22/632335) on 7 May was undoubtedly the most exciting record of the year. M L Cox (In: Shirt 1987) states that D. obscura is "a species occurring in lakes on uplands, in fens and

woodland. The adults have been recorded from water-lilies (Nymphaeaceae) and sedges Carex during April-July. The larvae probably develop at the roots of the host plants during the autumn, winter and spring". Since the 1987 discovery, a previously unpublished record by Dafydd Davies has surfaced. It was recorded on 25 May 1974 at Talley and also at the nearby oligotrophic Taliaris lake (22/633282) on 4 June 1974. The Carmarthenshire records are the southernmost British occurrences for, apart from three other Welsh records and an old, undated East Anglian record, all the other records are from Scotland.

Three uncommon chrysomelids were noted at coastal localities in 1987 - Chrysolina hyperici at Ferryside (22/363094); Cryptocephalus aureolus at Pembrey Burrows (21/4199); and Sermylassa halensis also at Pembrey (22/427003). On the flower-rich coalfield meadows at Nant Garenig (22/672127) were many egg-laying Galeruca taneceti, a large all-black species.

River shingle provided many interesting beetle records in 1987 and this included some of the southernmost British occurrences of the click-beetle Fleutiauxellus maritimus, at the Llanwrda and Llandovery sites mentioned above. A species that is normally found in bare coastal situations is Hypnoides riparius but it also occurs in ecologically-similar micro-habitats (bare with free-drainage) at inland sites, normally in upland areas. There were two such records this year - the montane corrie of Bannau Sir Gaer (22/805216) and a rocky pasture at Pant-y-Cerrig (22/563307).

The all-yellow tenebrionid Cteniopiopus sulphureus was common on the coastal burrows in July where, a month later, Lagria hirta could be found sparingly in the same habitat; this latter species is c. 7-10 mm long, black with yellow-brown elytra and, as the specific name suggests, hairy.

A nice late record was that of the churchyard beetle Blaps mucronata - the largest British tenebrionid - found by Margaret Dunn at her farm Wernddu, near Carmarthen (22/375179).

Orchesia undulata, a distinctive-looking beetle (boat-shaped with brown and blackish markings) was found under bark in the ashwood below Carreg Cennen. This is a characteristic member of the primary deadwood fauna (Harding & Rose 1986); it has been found at two other sites in the vice-county.

References:

GOODIER, R (1968) - Welsh Mountain Beetles. Nat. Wales 11: 57-67.

HARDING, P T & ROSE, F (1986) - Pasture-woodlands in lowland Britain. Institute of Terrestrial Ecology, Huntingdon.

JESSOP, L (1986).- Dung Beetles and Chafers. Handbooks for the identification of British insects. Vol 5, part 11: 30.

KING, P E & STABINS, V (1971) - Aspects of the biology of a strandline beetle Eurynebria complanata. J. Nat. Hist. 5: 17-28.

SHIRT, D B (Ed) (1987) - British Red Data Book. 2: Insects. Nature Conservancy Council, Peterborough. Pages 222-223.

CEREDIGION COLEOPTERA RECORDS - D C BOYCE AND A P FOWLES

The main sources of beetle records this year have been the NCC's Welsh Peatland Invertebrate Survey; the continuing investigation of the ground-active fauna on Cors Fochno NNR (22/6391); A P Fowles' study of river shingle invertebrates; and R S Key's survey of the flushes and herb-rich pastures at Banc-y-Mwldan (22/201488). River shingle produced the most outstanding records of the year, the total of thirteen nationally rare species partly reflecting the neglect this habitat has suffered by entomologists. Three species were more or less considered extinct in Britain as they had not been recorded for at least thirty years. Details of the discovery of Lionychnus quadrillum and Coccinella 5-punctata have already been reported in the DIG newsletter (Fowles & Morgan 1987) and both were found to be widespread along shingle in the lower reaches of the rivers Ystwyth and Rheidol. The third beetle in this category, the staphylinid Thinobius newberyi represents a discovery of great importance as there are very few specimens in existence. It was first recorded at Great Salkeld in Cumbria between 1907 and 1909 and was found at Aviemore, Easternness in 1938. It is believed to be endemic to Britain so the male that was caught in a pitfall-trap at Ty'n-yr-helyg (22/595765) on the Afon Ystwyth in early July was the first seen in the world for fifty years! This important specimen has been deposited in the national collection at the British Museum (Natural History). Another rare staphylinid caught at Ty'n-yr-helyg was Lathrobium dilutum, seven specimens of which were captured between 4 July and 12 September. Previously the species was known only from two localities in the Scottish Highlands. Three other nationally scarce rove-beetles were found at Ty'n-yr-helyg - Deleaster dichrous, Myllaena kraatzi and Hydrosmectina subtilissima - whilst Neobisnius prolixus was caught at Lovesgrove (22/632808) on the Afon Rheidol. The ground beetle fauna of river shingle is chiefly dominated by members of the genus Bembidion and by far the commonest species on the two rivers studied was B. atrocoeruleum. Two fossorial (subterranean) carabids which are classed as nationally notable were found at several sites - Clivina collaris occurred at eight localities on the Ystwyth, Rheidol and Teifi, whilst the diminutive Perileptus areolatus was found only on the Rheidol, at Glanrafon (22/614804), Glandwr (22/605803) and Lovesgrove. In recent years this latter species has only been reported from four vice-counties in Wales and the Welsh Borders although there are older records from other areas in western Britain. Brachygluta pandellei (Pselaphidae) is another species with few modern records although it was known from several localities in Scotland and was found at Llanafan on the Ystwyth in 1949 (Pearce 1953). In 1987 it was seen in abundance on many shingle banks along the Rheidol and Ystwyth and seems to be a genuine member of the shingle fauna - in the past it was believed to live amongst moss-cushions on river banks. The click-beetle Fleutiauxellus maritimus [found at Glanrafon, Ty'n-yr-helyg and Llanilar (22/620756)] concludes the terrestrial rarities of river shingle and the final species is the water beetle Bidessus minutissimus. This attractive dytiscid was seen frequently at Ty'n-yr-helyg and Pont Llanfarian (22/590777) on the Ystwyth, dashing across the pebbles in the shallow water of the main river alongside shingle banks or in small pools on the shingle left behind during periods of low water-levels. Bidessus was recorded from the Rheidol in 1947 by J R E Jones and was re-found there in 1985 by Garth Foster. Elsewhere there are modern records for Radnorshire, Cheshire and south-west Scotland but it is thought to have disappeared from sites in western Scotland, Devon, and north Wales as a result of changes in water quality or due to river improvement schemes. River shingle has received such little attention nationally from entomologists that it is difficult to evaluate the overall importance of these records, it is likely that many (if not all) of these species will prove to be fairly widespread. In Dyfed and neighbouring Powys we have many rivers with high quality shingle banks and they should be surveyed as soon as possible to allow the formulation of a conservation strategy for such habitats in south-west Wales. River shingle is one of those unfortunate habitats that has a highly-specialised and threatened invertebrate fauna but whose significance is generally overlooked by the conservation organisations because it looks superficially barren and lacking in wildlife interest - we have a responsibility in Dyfed to ensure that its importance is recognised.

Peatlands are obviously another highly important feature for the conservation of wildlife in Dyfed and whilst the NCC invertebrate survey has not yet turned up any rarities comparable to the river shingle fauna, nonetheless a number of interesting species have been found. Amongst the carabids, six notable species have been recorded in Ceredigion. Chlaenius nigricornis appears to be confined to the Teifi valley where it was captured in pitfall-traps at Llanio-isaf (22/638558), Cors Caron (22/690635), and Pentwd (22/185455) - probably due to its specialised requirement for flood-plain fens, a habitat type that is not common in Ceredigion. Also found on this habitat at Llanio-isaf were Trechus secalis and Blethisa multipunctata. A fourth species that has only been recorded from the Teifi valley is Badister sodalis, which was taken on the river fen at Cors Caron and at Coedmore (22/1954351). It is clear that wetland sites along the Afon Teifi have a very rich beetle fauna that would repay further investigation. The metallic, diurnal carabid Agonum ericeti was recorded from all three raised domes at Cors Caron and at Cors Fochno, Cors Caranod (22/565647) and on the blanket mire at Figyn Blaen-brefi (22/717547). It is regarded as a specialist of ombrotrophic mires but at Caranod it occurs in a small peat-cutting dominated by bog-mosses Sphagnum spp. Elaphrus uliginosus was recorded by the peatland team at Ynys Edwin (22/679962) and by Roger Key on the flush system at Banc-y-Mwldan.

Other interesting wetland species include the chrysomelids Galeruca tanacetii (Rhos Llawr-cwrt - 22/411498 and Llyn Eiddwen - 22/607674), Chaetocnema confusa (Rhos Rydd - 22/572738 and Cors Caranod), Phyllotreta flexuosa (Cors Caron - 22/712664), Mantura obtusata (Llyn Fanod - 22/602642), Longitarsus holsaticus (Rhos Rydd and Ynys Edwin), Phyllobrotica quadrimaculata (Cors Caron - 22/690635 and Dulas Marshes - 22/614532) and the buprestid Trachys troglodytes. This appears to be the first record of a representative of the latter family in Dyfed (Alexander 1987). The individual in question was taken at Rhos Rydd, where there is an abundance of the larval foodplant devil's-bit scabious Succisa pratensis. Sweeping on 'rhos' pasture in June may well reveal further colonies of this very local beetle. Keith Alexander kindly identified the soldier-beetles collected by the peatland team and they included six specimens of Cantharis figurata taken on Rhos Rydd in June. The local Cantharis thoracica was found at Llangynfelyn Common (part of Cors Fochno - 22/641923) in August.

The flushes at Banc-y-Mwldan produced some good beetles amongst the 105 species recorded by Roger Key on 13 July. In addition to Elaphrus uliginosus, mentioned above, there was also Cercyon ustulatus, Cassida murraea, Hydrothassa glabra, Sitona cambricus and Philonthus atratus. The tiny hydrophilid Georissus crenulatus, which camouflages itself by plastering its body with mud, was found in a large puddle. The beetle fauna of Cors Fochno, on the other hand, appears to be comprised chiefly of common and widespread peatland species. Pitfall-trapping for two summers has resulted in sixty species being recorded and, apart from Agonum ericeti, the only nationally notable beetles seen to date are the silphids Nicrophorus interruptus (4 specimens) and Silpha tristis (one only). However, sweep-netting at dusk in May yielded a single Helochares punctatus, a water-beetle that inhabits moorlands in southern Britain and is therefore experiencing a steady decline.

Moving away from wetland habitats to look at coastal Coleoptera, a few records are worthy of mention. At Ynyslas (22/603938) the local dung-beetle Aphodius plagiatus was found in strandline debris where it probably feeds on small fungi (Jessop 1986). On the same visit in May Dyschirius politus was taken in a dune slack by splashing water on its burrows in damp sand at the edge of a temporary pool. Associates were D. globosus and many staphylinids of the genus Bledius - D. politus being a specialist predator of the latter beetles. Damp, coastal boulder-clay cliffs are quite widespread in the county and provide excellent beetle habitat. At Morfa, Aberarth (22/499658) the carabid Bembidion stephensi was found and it was also present at Morfa Bychan (22/564744) in company with B. saxatile. The exclusively coastal B. rnaritimum was found in abundance behind the shingle beach at Tan-y-bwlch (22/579800) - the first record of this species in Dyfed. Other notable records from the Tan-y-bwlch area have already been reported in the Newsletter (Boyce 1987).

The beetle fauna of woodlands has been much neglected in Ceredigion and would benefit from further investigation. Of great interest in 1987 was the discovery of two 16-spot ladybirds Halysia 16-guttata hibernating under ivy on a wall-top in Coed Pwll-crwn (22/620836). The only previous reference to this species in the vice-county is of one at a mercury-vapour light at Trawscoed (22/670731) in 1960 (Miles 1960). A repeat visit to Coed Pwll-crwn on 1 August yielded several adults and larvae on sycamore Acer pseudoplatanus. This was an important find as it was apparently the first time larvae had been seen in Britain (Majerus 1987). The following month a large population was found in Coed Nant-llolyn (22/588770) and it seems likely that it may occur quite commonly in Dyfed on wood-edge sycamore in damp situations.

A short pitfall-trapping programme in Coed Rheidol NNR (22/743779) sadly produced little of interest apart from 21 specimens of the carabid Pterostichus oblongopunctatus, a species considered to be characteristic of ancient woodlands. The longhorn beetle Judolia cerambyciformis, another notable dead-wood species, appeared to be much less common in Ceredigion this year than in 1986 with singletons only being reported from two sites - Coed Nant-llolyn and Ynyshir (22/678956).

Upland beetles are similarly poorly-known but could prove to be interesting. A day on the summit of Pumlumon (22/790870) was rewarded by the occurrence of the carabids Pterostichus adstrictus, Leistus rufomarginatus and Notiophilus germinyi. P. adstrictus was also taken in pitfalls at Figyn Blaen-brefi.

There is plenty of scope to provide information on the distribution of water-beetles in the vice-county. Specimens identified by Garth Foster from the Welsh Peatland Invertebrate Survey included several interesting species even though their sampling methods are not designed for aquatic invertebrates. Helophorus strigifrons was taken at Llanio-isaf; Laccobius sinuatus at Pentwd; Hydroporus longicornis at Cors Caranod; and Chaetarthria siminulum at Rhos Llawr-cwrt, Rhos Rydd and Ynys Edwin. Another species not really expected to turn up in pitfall-traps was the dead-wood Melandrya caraboides which probably originated from mature willow-carr along the Teifi before finding its way to Gwaun Ystrad Caron (22/670594).

References:

ALEXANDER, K N A (1987) - Soldier beetles in Dyfed. DIG Newsletter 5: 11-12.

BOYCE, D C (1987) - Beetles of the Tan-y-bwlch area, Aberystwyth (22/580800), VC 46. DIG Newsletter 7: 3.

Fowles, A P & Morgan, I K (1987) – “The Lost World” – discoveries in Dyfed. DIG Newsletter 6: 8-9.

JESSOP, L (1986) - Dung beetles and chafers (Col: Scarabaeoidea). Handbooks for the identification of British Insects. Royal Entomological Society, London.

MAJERUS, M E N (1987) - The continued resurgence of the orange ladybird. Cambridge Ladybird Survey Newsletter 6: 6-7.

MILES, P M (1960) - Field Notes: Insects. Nature in Wales 6: 143.

PEARCE, E J (1953) - The rediscovery of Brachygluta cotus (Col, Pselaphidae) in Great Britain. Ent. Mon. Mag. 89: 94.

MOLLUSCA

SNAILS AND SLUGS IN CARMARTHENSHIRE IN 1987 - I K MORGAN

Columella edentula is an uncommon snail of damp, base-enriched situations within deep valley woodlands in Carmarthenshire, as at Cwm Cych (22/290354) where it was discovered early in the year. Conversely, a mollusc that is far more catholic in habitat choice is the grey, worm-like slug Boetgerilla pallens which is spreading quite rapidly in the vice-county. It is normally found in synanthropic habitats such as gardens, churchyards and wasteground, but has also turned up in ancient woodland and even under driftwood on the upper saltmarshes in the Taf estuary! Four new, and widely separated, localities were discovered in 1987.

Typically occurring in coastal habitats or on the limestone outcrops, Candidula intersecta was found on established river shingle grassland at Carreg Sawdde Common, near Llangadog (22/704276) together with Vallonia excentrica, another mostly coastal/limestone dry-ground species in VC44. In 1987 two other new sites for V. excentrica were Dryslwyn Castle Hill (22/554203) and the Box Cemetery, Llanelli (22/519001).

A nice assemblage of uncommon snails was recorded on a visit to the limestone headland at Dolwen Point, Pendine (22/233078) on 8 May. They included Helicella itala (the only known Carms site), Pomatias elegans (one of only three sites - all coastal - in VC 44), and Cecilioides acicula (scarce on coastal/limestone sites in Carms). A species that is decidedly coastal in distribution in Carmarthenshire is Ceruella virgata, which was noted on the remnant area of dunes and dune grassland at the North Dock, Llanelli (21/498992). Here, too, is found Monarchia cantiana, a medium-sized snail which is probably a post-Roman introduction to Britain and has spread mainly into synanthropic habitats. This attractive species is nevertheless quite rare in Dyfed and the North Dock site is threatened by landscaping proposals.

Another rather local snail is Vertigo pygmaea which was found, along with Pyramidula rupestris, on the limestone outcrop north-east of Garn-fawr (22/533150). The last interesting record of 1987 was that of Trichia plebeia, discovered below Dryslwyn Castle on 28 December in some quantity under concrete and limestone rubble at the bottom of the Castle slope by the river. Its commoner relative, T. hispida, is abundant amongst nettles and rubble around the castle itself.

TERRESTRIAL MOLLUSCA, PEMBROKESHIRE 1987 - I K MORGAN

A visit to the deeply-incised wooded valley of Cwm Cych on the Carms/Pembs border proved rewarding for A P Fowles et al on 5 January when a characteristic ancient woodland assemblage was recorded at two extensive base-rich flushes (22/290354 and 22/292345). Amongst abundant opposite-leaved golden saxifrage Chrysosplenium oppositifolium and dog's-mercury Mercurialis perennis the rich mollusc fauna included Leiostyla anglica, Euconulus alderi, Vertigo substriata, Spermodea lamellata, Zenobiella subrufescens, Columella edentula and Arion flagellus. This is only the second county record of Spermodea, not having been seen since its initial discovery in the Goultrap Roads cliff oakwoods (12/8412) in 1957.

LAND MOLLUSC RECORDING IN CEREDIGION, 1987 - A O CHATER

Tetrad recording has continued in Ceredigion and there are now at least some post - 1983 records from 50% of the tetrads, and a small selection of maps are reproduced here. Those of Discus rotundatus and Arion ater (incl. A. rufus), the commonest snail and slug, indicate coverage to date, and show clearly that the latter seems fairly ubiquitous while the former seems very sparse in the uplands. The maps of Ashfordia granulate and Balea perversa make an interesting contrast. Ashfordia, a species of damp, well-vegetated sites, is predominantly south-western and coastal in Ceredigion, although like many chiefly coastal animals and plants it also extends some distance up the Teifi valley. Balea, a species of dry, rather exposed sites, is predominantly northern and coastal in Ceredigion, although with scattered inland sites on buildings and walls as well as in ancient woodland.

No new species were added to the Ceredigion list in 1987, but a third site for Ena obscura was found in March, on a ruined, partly limestone wall by the disused railway at Llanilar (22/627753). Spermodea lamellata, now known from 16 tetrads, had until this year only been found in sites already considered on botanical or historical evidence to be ancient woodland, but in 1987 it was found in two sites of less obvious interest. Both were flushes with opposite-leaved golden saxifrage Chrysosplenium oppositifolium on stream banks in ash/alder woodland - by the Afon Feinog (22/481537) and in the DWT Reserve in Cwm Sylltyn (22/308434). In both sites it was the only rarity or presumed ancient woodland indicator present, and this will obviously be of some interest when the whole question of such indicators in Ceredigion comes to be considered in detail.

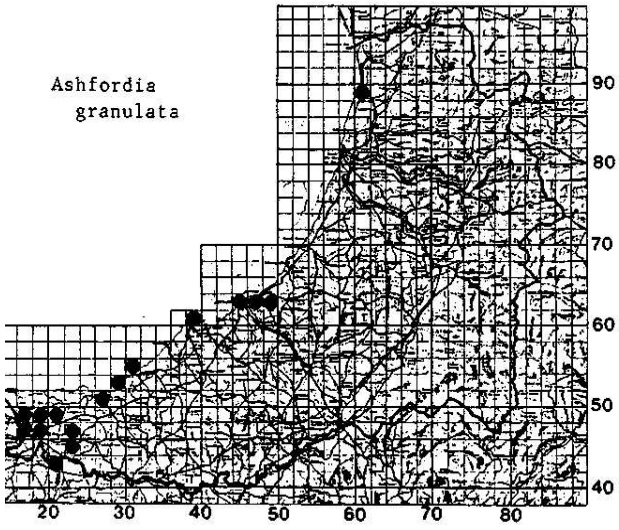
Several further sites were found for Vertigo pygmaea, which is now known from eleven tetrads in Ceredigion. For a species so rare in the vice-county it has a surprisingly wide range of habitats. Two sites are on the partially colonised landward slopes of coastal shingle beaches, two are at the edges of unimproved inland pastures, three are in poor fen inland, two are on flush fens on sea cliffs; two are by cottage and limekiln ruins (near and on the coast respectively), and two are in chapel graveyards. The two habitats which are in no way synanthropic are the shingle beaches and fens. In Britain as a whole the characteristic habitat of V. pygmaea is dry calcareous grassland, and this of course is largely absent from Ceredigion. It is surprising that the species has not been found on the Ynys-las dunes, or on the drier and somewhat calcareous parts of the RAE site at Aber-porth.

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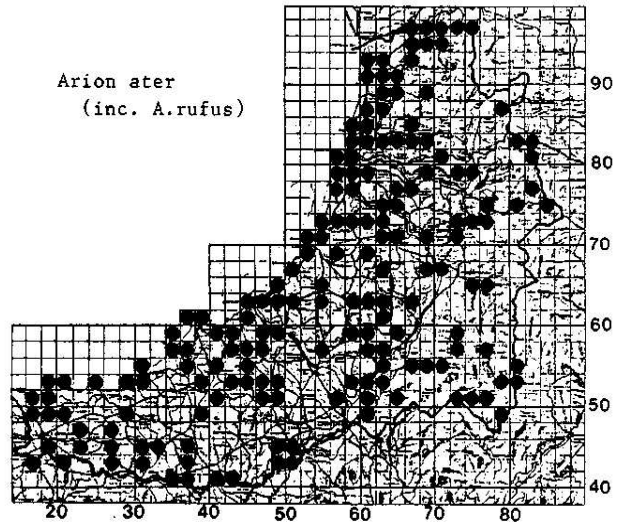
CARMARTHENSHIRE WOODLOUSE REPORT, 1987 - I K MORGAN

A woodlouse that is probably under-recorded in Carmarthen is Haplophthalmus danicus, several specimens of which were found under logs and leaf-litter in willow carr around the Witchett Pool on Laugharne Burrows (22/2708) on 1 May. Later that month, the closely-related H. mengei was found under limestone scree in the Carmel ashwoods (22/601164). The 'water hog-lice', Asellus spp., are also badly under-recorded - A. aquaticus was noted at the Bishop's Pond, Abergwili (22/446210) on 22 June. An uncommon pillbug, Armadillidium nasatum, is an infrequent component of the dry coastal grassland fauna in Carms., - two additional sites were discovered during 1987 - stable dune grassland at Morfa-uchaf, Ferryside (22/371122) and very abundantly on waste ground at Bynea, Llanelli (21/555990). On 5 October the luisitanian woodlouse Porcellionides cingendus was found to be quite common in the coastal oakwood and scrub just inside the county boundary east of Amroth (22/176073); this comprises only the second county record for the species.

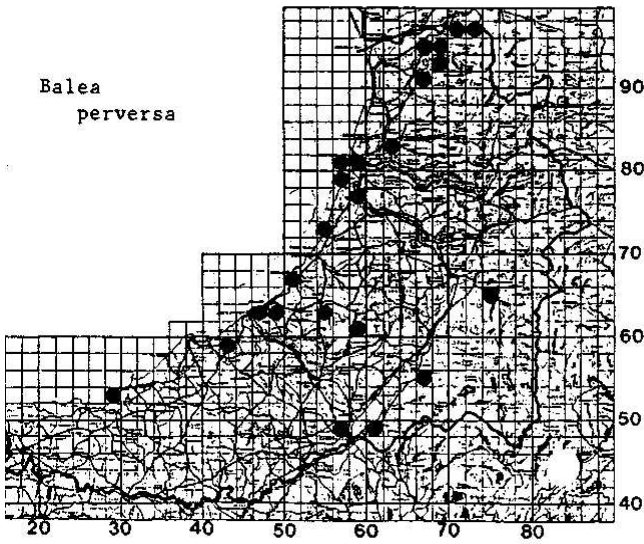
Ashfordia
granulata



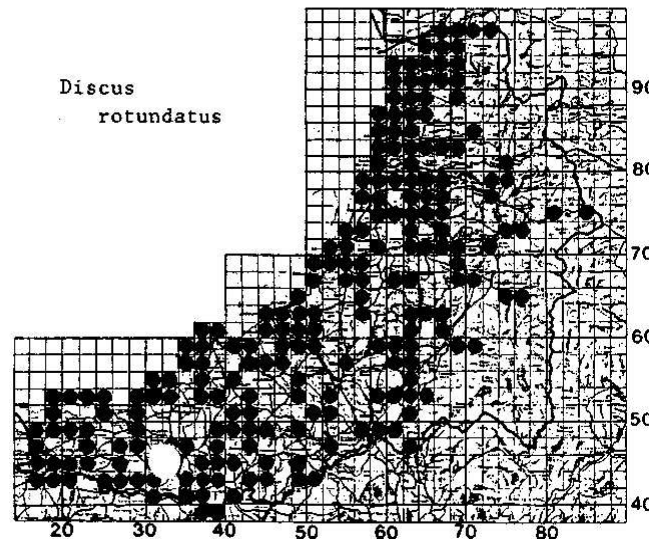
Arion ater
(inc. A.rufus)



Balea
perversa



Discus
rotundatus



WOODLOUSE RECORDING IN CEREDIGION, 1987 - A O CHATER

Tetrad mapping of woodlice was continued in Ceredigion in 1987, but less intensively than in the previous two years. Most of the records have simply confirmed or filled out already known patterns of distribution (Chater 1986), but a few are worth commenting on separately. The most interesting discovery was of half a dozen individuals of Armadillidium pulchellum in crevices in a small, long-disused scrape quarry at 200m a.s.l. and 8kms from the sea, two kms south of Mydroilyn (22/453536). The site is completely rural, adjacent to scrub, pasture and a rocky ridge, and quite unconnected with any wall, ruin or other stonework, indicating that A. pulchellum may thus occur in natural, acidic rocky sites well inland in this part of Wales. It must, though, be uncommon in such sites to have escaped detection in this comparatively well-worked area.

A. nasatum was found on the sea cliffs at Gwbert (22/162494) and in a manure heap at Coednore SSE of Cardigan (22/192438), consolidating its position in the south-west part of the vice-county. Porcellionides pruinosus was also found in this manure heap, its fifth county record. Haplophthalmus danicus was found in five more sites - two of which were in railway ballast, by Gogerddan (22/620836) and in the DWT Allt Fedw Cutting reserve (22/665729), where it was associated with H. mengei. The other sites were in the very characteristic habitat of litter beneath Prunus laurocerasus thickets in old estates, at Pen-y-wern (22/637762) and Coedmore (22/195436), and under deadwood in a garden at Llanfarian (22/584767). Specimens of H. mengei sent from most of its Ceredigion sites have been confirmed by S P Hopkin as this species and not the, as yet un-named, species known from many places in the south of England.

In July A P Fowles found Armadillidium album amongst strandline debris on the embryo dunes at Poppit in VC 45 (22/159483). During the DIG field meeting to Gwbert several individuals were recorded on the strandline at the Patch (22/161485) and the species is thus now known to be well established on both sides of the Teifi estuary.

References:

CHATER, A O (1986) - Woodlice in Ceredigion, DIG Newsletter 2: 3 - 10.

ARANEAE AND OPILIONES

SPIDER AND HARVESTMAN RECORDING IN DYFED, 1987 - K M CATLEY

Perhaps the most interesting find this season has been the rare linyphiid Glyphesis servulus from Pembrokeshire; however, many new county records and notable species have been identified, including several spiders new to Wales. The scarce clubionid Clubiona norvegica has been taken in pitfall traps at four sites in north Ceredigion - the watershed mire of Gors Lwyd (22/856757), a basin mire at Cors Llyn Farch (22/599638), on humid heath at Cors Caranod (22/565647) and the watershed mire of Figyn Blaen-brefi (22/717547). The few British records have been restricted to localities in Yorkshire and Perthshire, Llyn Crafnant in Caernarvonshire, and Gors Lwyd where it was first discovered in 1975. All of the Welsh records to date are from upland localities with the Ceredigion sites ranging from 250 to 385 metres a.s.l.

The jet-black cursorial hunting spider Drasyllus lutetianus was recorded as new to Wales in 1986 when it was discovered to be well-established on Cors Fochno NNR (22/6391). Now a single male has been taken in a pitfall-trap on the west bog of Cors Caron NNR (22/680630). These two ombrotrophic mires remain its only known wetland sites in Wales, although it is also known from one coastal site at Cei Bach (22/414599) in Ceredigion (Catley 1986). A parallel can be drawn between the distribution of D. lutetianus and the liocranid spider Agroeca striata. This ground-living species has not been found in any wetland sites in southwest Wales (despite extensive sampling by the NCC's Welsh Peatland Invertebrate Survey) other than Cors Fochno NNR - the only Welsh site for the species. However, a total of seven females and a single male were captured during May and June in pitfall-traps set on riverbank shingle at Ty'n-yr-helyg, Afon Ystwyth (22/595765). This is the first record in Britain away from marshy habitats and raises the question of this species being capable of leading a diplostenocious existence (occurring in two different habitat types) and not, as was previously thought, being confined to a strictly hygrophilous niche.

The wolf-spider Trochosa spinipalpis has been recorded as new to the county from Cors Caron and Gors Lwyd; it is a very local species and restricted to wet habitats. Another wetland lycosid is Pirata piscatorius - this was previously only known in Wales from Anglesey and now its range has been extended to two sites in Pembrokeshire; Brynberian Moor (22/120347) and Treffeiddan Moor (22/733252). In Ceredigion it is only known from one locality, the flood-plain fen at Llanio-isaf (22/638558).

The theridiid Theridion instabile has been recorded as new to Wales from reed-mace swamp Typha sp at the Ritec, Pembrokeshire (22/104019). It has a rather patchy southern distribution but cannot be considered rare; it is surprising that it has not been recorded previously in Wales. More interesting were the two male Theridiosoma gemmosum taken amongst reeds Phragmites australis at Cors Penally, Pembrokeshire (12/119985). This scarce spider is rarely encountered and its habit of building a horizontal orb-web low down in damp vegetation will do nothing to improve this situation. It has a distinctly southern distribution with Norfolk as its most northerly limit and it has only been found once before in Wales.

During an ecological survey of the invertebrate fauna of river shingle in Ceredigion (Fowles 1988) several interesting spiders were recorded. Not least of these was Arctosa cinerea, first recorded from Cardiganshire by the Rev. C E Tottenham in 1949. This large, impressive spider inhabits burrows in the gravel banks of northern and western rivers and in 1987 it was found to occur in large numbers at many sites on both the Ystwyth and Rheidol in Ceredigion and also at Llandovery (22/753333) on the Afon Tywi in Carmarthenshire. (Another spider restricted to the river shingle habitat is the linyphiid Caviphantes saxetorum. A single male was taken at Ty'n-yr-helyg, Afon Ystwyth (22/595765) and Glanrafon, Afon Rheidol (22/614804). Nationally the spider is rare (but probably under-recorded) and is known from only eight localities in Scotland and Northumberland and it has previously been found on the Afon Tywi at Llandovery. A single female Zelotes subterraneus was also taken at Ty'n-yr-helyg in July. This cursorial spider has only recently been shown to occur in Britain (Murphy & Platnick 1986) and is very similar to Z. apricorum which also occurs in Ceredigion. No doubt these two species have been confused in the past and although Z. subterraneus has been found on coastal sites in East Anglia and Scotland, this is the first Welsh record.

The money-spiders have provided some interesting records during 1987, many of these coming from the Welsh Peatland Invertebrate Survey. The notable linyphiid Satilatus (=Perimones) britteni had previously only been found in Wales at a saltmarsh on Newborough Warren, Anglesey. The survey has shown it to occur at four sites in Dyfed - Figyn Blaenbrefi, the west bog of Cors Caron (where it occurred in large numbers), lakeside fen at Llyn Eiddwen (22/607674), and in a soligenous flush at Brynberian moor. All records were of males and

they were taken during May and June. British records for this species are restricted to scattered localities in the north and west except for a single southern locality at Poole, Dorset. A single female Porrhoma montanum was taken at Figyn Blaenbrefi in June and represents a county record. This uncommon spider occurs on high ground in Scotland, northern England and North Wales; the Ceredigion record marks the southern limit of its range in Britain.

The coastal habitat has been largely unworked this year but the notable lycosid Pardosa purbeckensis, a local species with strong halophytic associations, was found by I K Morgan on the saltmarsh at Pembrey Burrows, Carmarthenshire (22/427003) and it was also recorded from three sites in Ceredigion. On the dunes at Pembrey (21/4194) Ian Morgan also found the rare ant mimic Synageles venator, which is known from dune systems in Glamorgan, Carmarthenshire and Pembrokeshire and has a very restricted southern distribution.

Bathyphantes setiger belongs to the sub-family Linyphiinae, it is widespread but local in Britain and is confined to marshy areas. The spider was found, for only the second time in Wales, on Cors Fochno NNR in 1986 and this year it was discovered in three sites in Pembrokeshire. Stanley Dobson recorded it on Dowrog Common (12/7727) during the British Arachnological Society Field Course at Orielson and it has also been taken at Brynberian Moor and Waun Fawr (22/143295) in pitfall-traps operated by the Peatland Invertebrate Survey. Maso gallicus is a rare linyphiid which was taken, as a single male, in a water-trap set on the relict fragment of raised mire at Ynys Eidiol (22/679957) in June. This is the first Welsh record for the species but, perhaps more interestingly, it is the first time that it has been found away from eastern England. Nationally it is confined to a few wetland localities in the Midlands, Kent and the East Anglian Fens.

The only Red Data Book spider found so far is Glyphesis servulus, which has occurred at two sites in the same area of Pembrokeshire - at Esgym Bottom (12/923271) on degraded raised mire and Llangloffan Fen (12/895317) amongst grazed herb-rich fen. Only three specimens were found - two males and a female. Until now records have been confined to two East Anglian fens and a wet woodland in Dorset. Its apparent rarity may, however, be an artifact as the spider is very small (1.9mm) and may easily be overlooked while hand-searching. These specimens were taken in pitfall-traps during the NCC survey and this may prove to be the best method for finding the species.

The uncommon troglid harvestman Anelasmoecephalus cambridgii is most often found on chalky substrates and has a distinctly southern distribution. The adults cover themselves with particles of earth and reputedly feed on snails. A single specimen was taken in leaf-litter on top of an old wall in Coedmore, Llechryd (22/193436) in the rich woodlands of the Teifi gorge. This represents the first record for Dyfed, it is rarely found in Wales and has only been recorded from Glamorgan and Flint.

Britain's rarest harvestman, Sabacon viscayanum, was found by A P Fowles under a fallen log in a dry south-east facing oakwood at Allt-goed, Betws Bledrws on 15 September. A few days later I recorded a specimen in a steeply-sloping, south-east facing beechwood at Abercarn (31/217961) in Gwent, under fallen timber. There are now five localities for the species in Britain, all of which are in south and south-west Wales. Worldwide, Sabacon is found throughout the northern hemisphere but is restricted to small localised pockets; it is considered to be a relict species and in decline. The Welsh records might represent a previously overlooked animal or, conversely, may show it to be an introduced species with synanthropic associations as several of the sites are close to quarry or mine-workings.

The scarce opilionid Dicranopalpus ramosus was recorded three times in 1987, twice from Carmarthenshire - from the wall of an outbuilding at the Wildfowl Trust's Penclacwydd Farm (21/531984) and in a sheltered ashwood west of Gilman Point, Pendine (22/226095) - and once from Pembrokeshire - on the wall of the railway station at Penally (21/119990). D. ramosus is a Mediterranean species first recorded in Britain at Bournemouth in 1957 and it has spread slowly north and west. It has been recorded only infrequently along the south coast of England, with south-west Wales marking the most northerly limit. Two other local harvestmen were recorded this year from coastal localities, both in Ceredigion - Nelima sylvatica at Tanybwllch (22/579799) and Opilio saxatilis at Ynyslas (22/606940).

References:

CATLEY, K M (1986) - Five new Welsh spider records. Newsl. Br. arachnological Soc. 48: 3.

FOWLES, A P (1988) - An ecological study of the distribution of cursorial invertebrates on polluted riparian shingle. Unpublished M.Sc. thesis, UCW Aberystwyth.

MURPHY, J & PLATNICK, N I (1986) - On Zelotes subterraneus in Britain. Bull. Br. arachnol. Soc. 7: 97-100.

EDITOR'S NOTE

There have been several references throughout this report to "nationally notable" and "Red Data Book" species - phrases which may not be familiar to all readers of the DIG Newsletter. Many groups of invertebrates have now been assigned status codes by the Nature Conservancy Council as part of a national review of invertebrate conservation. For the scarcer species, the codes are as follows:

- RDB 1 - Endangered; taxa in danger of extinction.
- RDB 2 - Vulnerable; taxa under threat from serious adverse factors throughout their range.
- RDB 3 - Rare; taxa with small populations at risk but not presently threatened or endangered.
- Notable A - Species known to occur in thirty or less 10km squares of the national grid.
- Notable B - Species known from more than thirty but less than one hundred 10km squares of the national grid.