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Editor - IK Morgan, c/o CCW, 56 Rhosmaen Street, Llandeilo, Dyfed, SA19 6HA

PEMBROKESHIRE ORTHOPTERA 1992 – J. STEER

The highlight of 1992 for me was finding the Grey Bush-cricket Platycleis denticulata between Freshwater East and Manorbier (SM0397). A female was observed egg laying and a male was also nearby. The faint stridulation was heard at a range of a couple of metres. The habitat was bracken with bramble on the south-facing slope on the clifftop. Green Bush-crickets Tettigonia viridissima and Dark Bush-crickets Pholidoptera griseoaptera were also quite abundant in the area. The site with the greatest number of records of Platycleis over the longest period is Marloes (SM7807) where it was recorded in 1946 and 1947, in 1982 (by J Comont and N. Jackson), in 1984 (I. Pross) and in 1991 (J. Donovan). The Manorbier - Freshwater East stretch of coast comes next in numbers of records. There was a record for Manorbier in 1943, Freshwater East (J.C. Hartley) in 1973, and my own record for 1992.

Round the Dale Peninsular from Marloes but in another 10Km square is another record from John Comont (then Conservation Officer with what would have then been the West Wales Naturalists Trust), for West Blockhouse (SM8103) in 1984. In the same 10Km square but some way to the east it was recorded at the Old Esso Refinery at Milford Haven (SM8705) in 1991 and 1992 where it was found to be quite abundant.

The only other Dyfed record is for St. Davids (SM7525) in 1947. The grid reference is for the town which leads me to view this record with some suspicion. The only other post 1961 records for Wales are from one square in the Llyn Peninsular in N. Wales (the most northerly record for Britain) and two squares in the Gower Peninsular. The distribution in Britain is along the coast of the English Channel from N. Foreland in Kent to Land's End, the only other English records being four 10KM squares from the south side of the Bristol Channel.

Its major requirement is obviously for warmth, hence it is scarcely found more than 1Km inland and likes south-facing slopes. The Pembrokeshire population is of importance and it is desirable to monitor the populations at known sites and check for its presence in suitable habitats.

ORTHOPTERA IN CARMARTHENSHIRE, 1992

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I.K. MORGAN

Unless one specifically beats foliage (particularly oak and hazel) from about mid-summer onwards, the chances of finding the markedly arboreal oak bush crickets Meconema thalassinum are small, though later in the season the lime- green adults will come to light - whether a domestic source or an ultraviolet moth trap. The oak bush crickets were recorded at three localities in 1992 - at Dinefwr Castle Woods 22/617217 (4 June) - a regular haunt, Newcastle Emlyn 22/313407 (7 June) and just NE of Middleton Hall 22/525186 (4 Sept). The oak bush cricket lays its eggs in crevices under bark or under lichens and it is the only British bush cricket which is largely carnivorous (Marshall & Haes, 1988). If naturalists were to methodically search the county's woodlands for this species, it is likely to be found to be widespread. The bog bush cricket Metrioptera brachyptera was again noted at its only vice-county locality - Cors Goch Llanllwch 22/363184 (A.P. Fowles, 15 July).

Another orthopteran which is probably significantly under-recorded is the delightful lesser earwig Labia minor which, on 16 July was abundant in a dung/grass heap at Cae'r malwas farm 22/562403 in the north of the county. To find this species, the superficial layers of dung heaps have to be removed and the entomologist has to delve into the warmer core of the heap and deftly capture the normally swift-moving adults before they flee.

The association of the mottled grasshopper Myrmeleotettix maculatus with old lead mine spoil tips has been regularly noted in Ceredigion and indeed the species was common in such a habitat at Nant-y-Bai, Rhandirmwyn 22/790447 in June. Elsewhere in Carmarthenshire, the mottled grasshopper is predominantly found on the coastal dune grasslands but also in the foothills of the Mynydd Du massif.

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DRAGONFLIES IN CARMARTHENSHIRE, 1992 - I.K. MORGAN

The highlight of dragonfly recording in 1992 was the discovery of two more breeding sites for the black-tailed skimmer Orthetrum cancellatum - at the Machynys Ponds 21/511981 and Dafen Pond 22/531041, both on 23 June. These comprise the second and third known breeding localities for Carmarthenshire, the species being already known to breed on some ponds at the Wildfowl and Wetlands Trust Centre at Penclacwydd 21/530986. Two males and a mating pair were seen at Dafen Pond whilst 5 males and a pair "in copulo" were observed at the main pond at Machynys. At the last site the very active males would swiftly skim low over the water's surface and repeatedly return to the same perch to briefly rest.

The hairy dragonfly Brachytron pratense exhibited a different "jizz" earlier in the season, when it would interweave in flight low amongst vegetation whilst searching for prey. It was noted around the coastal ditches at Morfa-bach 22/371135 (27 May); Ffrwd Fen 22/418027 (around the new pond, 28 May) and over the old canal behind Trenal, Pembrey 22/421019 (5 June).

For those wishing to view the normally elusive club-tailed dragonfly Gomphus vulgatissimus, there can be no better place than the banks of the Tywi below Dryslwyn Castle 22/555202, where access is straightforward and where the species regularly appears in late May/early June (depending on the season). The freshly-emerged yellow and black adults with swollen tips to their abdomens (particular so in males) can easily be approached and observed at very close range. Gomphus of course, occurs elsewhere on the Tywi, but searches on the Gwendraeth-fach and Llchwyr for example have not yielded proof of its presence.

More widespread in the county is the rather fugitive scarce blue-tailed damselfly Ischnura pumilio which is an early colonist of new - even small and shallow - water bodies, such as the roadside ditch besides a bog south of Carmel 22/589155 where it was seen, in June, by Barry Stewart. Adrian Fowles recorded the black darter Sympetrum danae on Cors Goch Llanllwch 22/363184 (a known site, 15 July) and George Hutchinson had the southern hawker Aeshna cyanea just west of Nantycaws 22/45-18- in late July; the latter species is rather irregularly recorded in the county, with most records emanating (but not exclusively) from near the coast and the Tywi valley.

Thanks to A.P. Fowles, G. Hutchinson and B. Stewart for providing records.

CARMARTHENSHIRE BUTTERFLIES & MOTHS, 1992 - I.K. Morgan

A couple of small tortoiseshell Aaldis urticae butterflies, feeding at dandelion flowers and enjoying spring sunshine at Erw-las, Llwynhendy 21/537993 on 4

March launched the 1992 butterfly season, but subsequently there was a wait of almost a month before warmish weather on 8/9 April brought out the vanguard of peacocks Inachis io and commas Polygonia c-album from hibernation at various south Carmarthenshire localities. The comma is reputed to overwinter amongst for example dense ivy on walls or tree trunks but, because of its cryptically-coloured crenulate wings, it is almost impossible to find.

By the 18th April, both speckled woods Pararge aegeria and orange tips Anthocaris cardamines had joined the peacocks and commas (though small tortoiseshells were rarely seen) and the first migrant - a painted lady Cynthia cardui was observed at Pembrev Forest 22/403018. Painted ladies were later seen (in usually small numbers) throughout the summer to mid October and one at Machynys on 23 June was watched as she laid eggs on spear thistle Carduus vulgaris. Dainty holly blues Celastrina argiolus emerged by the 3rd of May in the author's garden, with individuals characteristically flying quite high off the ground - an useful "jizz" factor for recognition later in the season when the more low-flying common blues Polyommatus icarus are around. Holly blues were also recorded later (on 24 July), by Graham Motley near Galt-y-Berau 22/771458. There were two records (both by Andrew Lucas) of green hairstreaks Callophrys rubi in the second half of May - a singleton at Cors Carmel 22/594155 (18/5) and many on the bracken and gorse-clad "heath" of Marros Mountain 22/208092 (27/5). Its relative abundance at this latter site is not unexpected as gorse is one of the main food plants for the well-camouflaged green hairstreak caterpillars.

By the 13th May, the weather had improved considerably and warm southerly winds brought the first red admirals Vanessa atalanta on the 14th, followed on the 16th by the first (at Cors Goch Llanllwch 22/361185) of a large scale invasion of clouded yellows Colia croceus. The first clouded yellows were mostly seen at or near the coast eg Carmarthen, Kidwelly and the Llanelli area but subsequently they spread far inland. Such were the numbers in evidence that local butterfly recorders tired of noting down occurrences - and the 1992 influx is thought to have easily exceeded the last prodigious "clouded yellow year" - 1983. These spring immigrants bred to produce myriad offspring in the mid-late summer period, for example at Machynys 21/513975 on 6 July, no less than 45 fresh-looking individuals were counted; the progeny of eggs laid on the swathes of lucerne Medicago sativa or other legumes at this locality. There were a few sightings of "pale clouded yellows" - at Banc-y-Lord 22/405047 (J.R. Ellis); near Trebersed, Carmarthen 22/390197 on 21 July (Mr & Mrs P. Swire) and near Whitland 22/199166 (Dr Malcolm Holder). It is not sure, however, whether these were the true pale clouded yellow Colias hyale or the pallid variety "helice" of the common clouded yellow. The last clouded yellows were seen (at several localities) in fine autumnal weather on 13 October.

There were a few records (as is usual) of brimstones Gonepteryx rhamni, principally from the SE of the county; at Derwydd 22/613178, 13 April (Matt Ridley); just NW of Trostre 21/522999 17 May; in the Sawdde Gorge 22/790263,

22 May (B. Stewart); N. of Fforest 22/58-05, 27 May; near Llangyndeyrn 22/465142, 26 May (A. Lucas); and an autumn record at Betws 22/635117, 27 September (A.L.). One was also watched as it flew along the Glamorgan side of the railway track at Pantyffynnon 22/623103 on 11 April (J. Friese). There was the first absolute confirmation of brimstones breeding in the county when, in early June, Barry Stewart discovered frequent larvae on planted bushes of alder buckthorn Frangula alnus at the Penclacwydd Wildfowl and Wetlands Centre 21/531986; he also remarked that no larvae were found on bushes of purging buckthorn Rhamnus cartharticus at the same site. Spring too saw a dingy skipper Erynnis tages at the small, disused limestone quarry NE of Garn-fawr 22/534150 (on 18 May), and several more a few days later (24/5) on waste ground immediately south of the derelict Morlais Colliery, Llangennech 22/578028. Here, together with common blues, they flew over a rich sward of flowers, including their food-plant, bird's foot trefoil Lotus corniculatus. Some rank grassland alongside the railway line (22/573022) by the colliery had several marbled whites Melanargia galathea on 24 June. A strong colony of marbled whites was present SE of Cefn Gwili 22/583088 (on 17 July), and one was also seen by Pippa Whitton SE of Milo 22/599172 on 16 July; a compact colony was discovered by Jamie Bevan and Dawn Gray by Cennen Tower 22/675214 on the 21st July. An oider record has also recently surfaced - another small colony on unimproved grassland near Pant-y-ddeuddwr 22/556116 on 29 June 1989

(David Stevens & Jonathan Turner). The Countryside Council for Wales "Phase I/II Grassland Survey" staff produced a number of useful records during their field work (principally in Dinefwr Borough); these are given below:

Marsh fritillary Euphydryas aurinia

Pant-y-bara	22/602179	15 June (1+)	D.Gray & J. Bevan
Glyn-deri	22/699141	12 June (1)	
N. of Parc Matho	22/443055	22 May (1)	P. Whitton
NNW of Llwyn Petris	22/455089	28 May (2)	

Small pearl-bordered fritillary Boloria selene

Llwyn-y-bedw	22/736259	25 June ("abundant")	D.Gray & J.Bevan
Caeau Llwyn-y-cwm	22/641100	23 June ("several")	Graham Motley
Esgair Tan-lan	22/687475	18 June (one)	
Bryn Ceiliogau	22/690490	18 June (three)	
Esgair Hendre	22/671488	25 June (c20)	
Nant-y-Rhaeadr	22/760426	early July (one)	
SW of Bryn-gwyn	22/654476	25 June (one)	

Many small pearl-bordereds were also recorded by the author at Cwm Crychan 22/823390 on 13 June, with individuals flying around the edge of the path which descends obliquely through the bracken to some damp pastures. Julian Friese also noted one by the Usk Reservoir 22/820276 on 14 June, but this individual was just inside the neighbouring vice-county of Breconshire.

In 1991 and again in 1992 an attempt was made to visit some of the sites where marsh fritillaries had been previously recorded, in order to try to assess the true status in the county of this declining species of damp grassland. This survey work was carried out by Nick Thomas in 1991 and Andrew Lucas during 1992; it was not possible to visit all known sites and the monitoring of marsh fritillary colonies will continue.

Marsh fritillaries have been, in recent years, recorded at thirty or so sites in Carmarthenshire, though other undoubtedly await discovery, and about two-thirds of these were visited during the survey. The results revealed some disturbing trends. Marsh fritillaries rely on a delicate balance of grazing and cutting to keep the "rhos" pasture, on which they depend, suitable. At the cessation of grazing the processes of ecological succession cause a site to become dominated by rank species such as purple moor-grass, and eventually to be invaded by scrub; the flower-rich meadow is then lost, and, with it, butterflies such as the marsh fritillary. Approximately 50% of surveyed sites exhibited habitat degradation, particularly parts of Cefn Blaenau (22/580414) and Tir Philip (22/480185).

Low numbers of individuals - less than five - caused by a reduction in the quality of habitat were also noted at Gilfach Wen (22/530429) and Bryn Du (22/478040). When numbers of insects become low, a colony becomes vulnerable to extinction due to chance events, such as poor weather at a critical point in the lifecycle. It is of some concern that a number of colonies seem perilously close to the edge. One colony at Cae Cwm Tywyll (22/481239) is thought to be extinct, and it seems inevitable that other losses will be confirmed in the future.

On a more positive note it is still possible to see thriving colonies in the Llanelli area particularly at Waun Wyllt (22/498055), Cwm Morlais uchaf (22/525095) and also Cencoed Uchaf (22/482032) where approximately twenty individuals were on the wing on a sunny afternoon in June 1992. It should be noted however, that even the latter site is declining in quality due to scrub invasion, a fact which highlights the need for sensitive management to conserve the marsh fritillary in its Carmarthenshire strongholds.

Dawn Gray and Jamie Bevan recorded graylings Hipparchia semele at Rhiw-ddu 22/725208 (20 Aug) and SE of Capel Tydist 22/675235 (19/8), whilst Graham Motley reported a very large population on old mine workings at Nantybai 22/777446 on 26 July. He also recorded this species at two other sites - one on a Molinia/Calluna wet heath NE of Cwm Saethe 22/773443 (15 July) and two by Llyn Brianne Reservoir 22/794486 (29 July). In Carmarthenshire, most

grayling colonies are on the coast - amongst the extensive dune systems or on urban wasteground. It also occurs on some of the dry and rocky sparsely- vegetated uplands - around the coalfield valleys, on the Millstone Grit ridge, the Mynydd Du massif and the upland block of the extreme NE. Its predilection for stone-strewn arid habitats is reflected in its Welsh name "Iar Fach y Graig" - "the butterfly of the rock".

There was only one 1992 record of the dark green fritillary Argynnis aglaia at Allt Rhyd-y-Groes 22/765485 on 25 June - whilst four silver-washed fritillaries Argynnis paphia (and purple hairstreaks Quercusia quercusii) were reported by Julian Frieze from the afore-mentioned Cwm Crychan in August. Another was reported at Gelli Aur 22/598198 at the end of July by wardening staff. The arboreal purple hairstreak was additionally observed by Graham Motley at Rhandirmwyn 22/783424 (16/7) and near Llansawel 22/610364 (Aug). Julian Frieze saw a white-letter hairstreak Strymonia w-album at a known site - Coed Penrhiwiau 22/659237 near Bethlehem, and Malcolm Holder reported a "new" locality where this elusive butterfly was known to at least 1989 - an old wych elm near Whitland Abbey 22/209181.

MOTHS

Due to domestic and other commitments, moth recording by the author was almost non-existent in 1992, with the exception of some exciting records of diurnal species. Barry Stewart (BS) continued to provide a stream of quality records and, as compensation, there was an increase in recording carried out by Andrew Lucas (especially at Cors Goch Llanllwch 22/362184 and Gelli Aur 22/592097) and Steve Lucas (at Dinefwr Castle Woods 22/622223 and Betws 22/642121).

One of the earlier records of note were the several oblique-striped moths Phibalapteryx virgata, disturbed from dune grassland at Pembrey Burrows 21/42- 99- on 23 April, the only other modern Welsh records being from Gower (though there are also some older ones, principally from the north Wales coast). On 1 July, B.S. light-trapped two noteworthy species at Pembrey - the heart and club Agrotis clavis (a noctuid whose larvae feeds on various sandhill plants) and the small purple-barred Phytometra viridaria, whose caterpillars utilise common milkwort Polygala vulgaris on dunes and heath milkwort P. serpyllifolia on more acidic pastures). On 9 July, B.S. captured a valerian pug Eupithecia valerianata at this site.

A species that the author would dearly like to see (and has unsuccessfully searched birch woods for on sunny, early spring days) is the orange underwing Archiearis parthenias. This April, R.A.D. Hughes was lucky to see this attractive day-flying geometrid at Allt Rhyd-y-Groes 22/773471 right in the NE of the vice-county. On 31 July, the writer and B.S. visited this superb, upland oak-birch wood and flushed a blue-bordered carpet Plemyria rubiginata - a distinctly local species - from herbage below some alders (its larval food plant) which line the footpath into this site. Barry also trapped this species at Cwm Clydach 22/444075 in July; it presumably breeding amongst the alders that fringe the nearby Afon Gwendraeth fawr. Another uncommonly-recorded woodland moth is the Svensson's copper underwing Amphipura berbera svenssoni, caught by Andrew Lucas at Talley 22/632388 on 9 August.

B.S. put a substantial effort into recording the often difficult to identify pugs in 1992, with fourteen species now recorded by him in the county. Much earlier in the season on 19 April, the author noted numerous narrow-winged pugs E. nanata at Cors Goch Llanllwch 22/362186, a rather unsurprising find, as the larval food plant - heather - abounds on parts of this lowland bog. A mother shipton Callistege mi was spotted on the restricted extent of flower- rich grassland which borders the southerly edge of Llyn Llech Owain 22/568152 on 28 May, and the CCW grassland survey team recorded scarlet tigers Callimorpha dominula at Llwyn-y-bedw 22/736259 (25/6, D. Gray & J. Bevan) and SW of Bryngwyn 22/654476 (25/6, G. Motley). Barry Stewart noted one near Cwm Clydach on 15 July, which - like the blue-bordered carpet - probably emanated from the wet carr and herbaceous fen along the Gwendraeth below Pont-newydd. The author discovered a thriving breeding colony (with c.24 simultaneously in flight) of scarlet tigers SSE of the Trostre works 21/532989 on 21 June. Singletons had been seen nearby over the years so it is pleasing to locate the presumed origin of these individuals. South-west Wales holds an important concentration of breeding sites for this attractive moth as recent reviews

have testified (eg Waring, 1992 see Fig.3). It is disappointing to record that, in 1992 British Steel embarked on the infilling of a substantial linear area of fen/carr to the south of the Works, despite the objections of many conservationists; such fens are at a premium for the range of uncommon wildlife that they support.

B.S. regularly trapped at his home in Water Street, Kidwelly 22/409073 and records of note include: a red-necked footman Atolmis rubricollis and a double-lobed Apamea ophiogramma on 8 July; an old lady Mormo maura on 9 August; large ranunculus Polymixis flavicincta (several dates in September) and a scarce migrant - the pearly underwing Peridroma saucia on 28 Sept. The first silver-Y's Plusia gamma were noted (with an influx of immigrant butterflies) on 14 May (at Taliaris 22/632286), but the county's few moth trappers were unable to put in sufficient effort to take advantage of the presumed influx of migrants (if the numbers of clouded yellows are a guide) that could well have occurred in 1992. However, a hummingbird hawk moth Macroglossum stellatarum was reported from Whitland 22/199166 in July (M. Holder) and a convolvulus hawk moth Agrius convolvuli was recorded by Steve Lucas on a garden post at Betws on 3 September. A visit to a venerable and almost-dead, solitary sweet chestnut in parkland SW of Stradey Castle (22/489014) on 8 June to check for "deadwood" hoverflies and beetles, provided perhaps the most exhilarating record of the year - a colony of the yellow-legged clearwing Synanthedon vespiformis. On that date, a female was caught about a metre up the trunk, and later another female was for a while watched as she oviposited under loose bark or in crevices, mostly between 0.5 and 2.5m off the ground. She would lay an egg, then move on rapidly to oviposit in other areas with the eggs being sometimes quite close to each other ie perhaps only 1cm apart. Six empty golden-brown pupal cases were also found at the base of the tree. Egg-laying females were frequently seen on subsequent dates to 22 June. This species is new to the vice-county of Carmarthenshire and only the 3rd Welsh record (with an old one from Glamorgan and 1992 record from Ceredigion).

Another species of clearwing, the six-belted Bembecia scopigera was noted in 1992 - a discrete colony based on the bird's-foot trefoil which grows on a disused length of railway (22/573023) near the old Morlais Colliery, Llangennech; this record (on 21 July) comprising the 2nd VC record, the other being at Machynys in 1985. Again the species is hardly known in Wales. It is worth mentioning that a possible site for the rare Welsh clearwing Synanthedon scoliaeformis may have been found on 9 September - in an upland birch wood at Allt Rhyd-y-Groes, where (at 22/771472) in a senescent, part-decayed and substantial birch, emergence holes (of c.5mm diameter) were noted. Repeat visits during the adults' emergence period (ie June-early July) may lead to a definite record of this fugitive moth. There are two old (earlier this century) records for the Neath and Taff valleys in Glamorgan (Norton in Hallet, 1936) so the ultimate discovery of this clearwing in the higher- altitude birchwoods of Carmarthenshire is not all that implausible.

For a few nights in June, Robin Howard sampled the moth fauna of Carmel Woods SSSI (22/598163) utilising a more powerful Robinson trap, which as well as attracting moths from the diverse ash-hazel woods and grassland of the Carmel limestone ridge, drew individuals from a wider catchment area including the bogs and acidic pastures of the quartzite/gritstone outcrop to the immediate south. Among the 110 species noted were several that are local or infrequently recorded in the county:

scalloped shell Rheumaptera undulata - a rather local species whose caterpillars feed on willow, aspen and bilberry.

heath rivulet Perizoma minorata - markedly local in Wales, its larvae utilising the seeds of eyebrights.

bleached pug Eupithecia expallidata - feeds on golden rod, presumably a wanderer from the quartzite ridge.

slender pug E. tenuiata - species of damp situations, larvae feed on willow blossom.

Blomer's rivulet Discoloxia blomeri - an attractive species whose larvae subsist on wych elm foliage.

clouded magpie Abraxas sylvata - as above.

white pinion-spotted Lomographa bimaculata - a woodlander which feeds on hawthorn and blackthorn.

lobster Stauropus fagi - rather local woodland species with distinctive caterpillars.

least black arches Nola confusalis - feeds on lichens on various trees.

green arches Anaplectoides prasinana - local species of deciduous woodland.

silvery arches Polia hepatica - another uncommonly recorded species (in Carms.) of woods and heathy situations.

coronet Craniophora ligustri - a local species whose caterpillars eat ash and privet foliage.

scarce burnished brass Diachrysia chryson - a very local moth whose larvae feed on hemp agrimony

gold spangle Autographa bractea - locally common nationally, but irregularly recorded in VC44.

Steve Lucas enthusiastically light-trapped at the Dyfed Wildlife Trust reserve at Dinefwr Castle Woods and, amongst a good range of woodland species, he recorded a Brussels lace Cleorodes lichenaria on 16 June (an arboreal lichen feeder); a double line Mythimna turca (24 June & 8 July) - a woodland noctuid which has declined in recent years and - best of all - a leopard moth Zeuzera pyrina on 30 June, a very scarce species indeed in west Wales. Its larvae develop in the stems or branches of a wide variety of deciduous trees and shrubs. At his home in Betws 22/642121 in the Aman valley, Steve trapped (on 6 Aug) a marble beauty Cryphia domestica (which feeds on lichens on buildings or rock outcrops); the currant-feeding (as larvae) V-moth Semiothisa wauaria in June and also in that month, two local inhabitants of blackthorn scrub - the short-cloaked moth Nola cucullatella and the phoenix Eulithis prunata.

The smoky wave Scopula ternata is a rather rare (or rarely recorded) small, undistinguished moth of upland situations, which B.S. recorded in the Caeo Forest 22/69-41- whilst searching for nightjars on 14 June. Two coastal records are worthy of mention - the striped wainscot Mythimna pudorina (a local noctuid whose caterpillars feed on reeds and reed canary grass) at Penclacwydd 21/533983 (24 July) B.S.), and Andrew Lucas' capture of a crescent dart Agrotis trux on the Old Red Sandstone cliffs at Wharley Point near Llansteffan 22/326100 on 17 September; it is essentially a scarce species of the western seaboard.

Unattributed records above are those of the author.

NB: with the grid references, 22=SN, 21=SS.

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DIPTERA RECORDING IN CARMARTHENSHIRE, 1992 - I.K. MORGAN

Comparatively little time was devoted to the recording of diptera in 1992, though a concentration of noteworthy records hailed from one site - Llangennech 22/573023 - which was subject to several visits. Here, in upper saltmarsh-brackish fen/carr habitat, the large soldier fly Stratiomys singularior and the RD33 cleg Haematopota grandis were both recorded on 7 August. Elsewhere in the county, S. singularior is known from a handful of coastal localities (eg the Machynys Ponds) whilst Haematopota grandis has only been recorded near Tywyn Point 22/365055 (on Sept 8th 1985). Drake (1991) cites only three other recent British localities for this largish and late-flying cleg - Subbourne Marshes and Walberswick NNR (Suffolk) and parts of the Severn Estuary (Gloucs.); though there are a few other older occurrences (all coastal localities). Also at the Llangennech saltmarsh/fen the syrphids, Tropidia scita and Platycheirus immarginatus were recorded earlier, on 27 May, whilst many of the reeds exhibited the swollen, cigar-shaped galls of the "reed gall-fly" Lipara lucens. These swollen galls were also noted on Phragmites south of Trostre 21/532989.

Antherix ibis was captured at a second vice-county locality - along the Afon Taf near Old Pale 22/239151 on 21st May; it has also been recorded on the Tywi at Dryslwyn. The scarce old woodland hoverfly Brachypalpus laphriformis was again noted at Stradey Woods (on 22 May), when a male was observed acting in an apparently territorial fashion around the base of an old, mostly dead, sweet chestnut (which also supported a colony of yellow-legged clearwing moths).

Criorhina floccosa, resplendent with its fox-coloured thorax and abdomen, on umbels of hemlock water-dropwort at Dinefwr Deer Park 22/613221 on 4 June, was the third species of Criorhina recorded at this site (the others being berberina and ranunculi). The open, upland oak-birch woods of Allt Rhyd-y- Groes 22/765480 and below Cribyn-du 22/759487 respectively provided, later in the season, records of Dioctria oelandica and Leptarthrus brevirostris; the few records of both these robberflies in Carmarthenshire all hail from the NE of the county.

An unimproved, neutral, wood-edge pasture NE of Middleton Hall 22/525186 yielded Arctophila fulva on 4 September, whilst earlier in the spring, the small wasp mimic Chrysotoxum arcuatum was swept from a ride east of Caeo 22/686404. A visit by Adrian Fowles to Cors Goch Llanllwch 22/363184 in mid- July produced two craneflies - the notable Erioptera nielsenii, a species usually associated with mildly acidic bogs (with strongholds in parts of Wales and the New Forest) and Molophilus occultus a small brown species which is quite common, if local, in bogland habitat in N and W Britain.

PEMBROKESHIRE HOVERFLIES 1991 & 1992 - S & A Coker

The following list gives the highlights of recording in Pembrokeshire during 1991 and 1992

Anasimyia contracta	12/953164	13.6.1991	Old Mill Grounds
	12/953164	26.6.1991	Old Mill Grounds
	12/874065	12.7.1992	Esso: ball fen

<i>Cheilosia nebulosa</i>	12/773271	27.4.1991	Dowrog: West Pond
<i>Criorhina berberina</i>	22/164420	18.7.1992	Cwmffrwd
<i>Criorhina floccosa</i>	12/872106	30.7.1992	Syke Pond
<i>Eumerus sabulonum</i>	12/861162	29.7.1991	Haroldston Chins
<i>Orthonevra brevicornis</i>	12/965186	27.5.1992	Withybush Woods
<i>Parasyrphus nigritarsis</i>	12/950082	3.5.1991	Rosemarket Stream Valley
	12/962119	1.5.1991	Little Milford Slebech
	22/028146	18.5.1992	Park
<i>Parhelophilus consimilis</i>	12/789263	26.5.1992	Waun Llechell
<i>Rhingia rostrata</i>	22/077141	14.8.1991	Canaston Wood Mountain:
	22/062222	11.8.1991	Garden Pond Mountain:
	22/062222	25.8.1991	Field Mountain: Field
	22/062222	14.9.1991	Slebech Park
	22/028146	2.6.1992	
<i>Sphegina verecunda</i>	22/293351	17.8.1991	A.Cych: N of Cwmorgan
<i>Tropidia scita</i>	12/727279	25.5.1991	Porth-melgan Broomhill
	11/891999	13.6.1992	Flushes Roch Bridge
	12/879229	22.5.1992	Blackpool Mill Cardigan
	22/062145	20.5.1992	Wildlife Park Afon Teifi
	22/189451	23.5.1992	
	22/193444	23.5.1992	
<i>Xylotomima lenta</i>	12/965185	3.6.1991	Withybush Woods Slebech
	22/028146	18.5.1992	Park

CARMARTHENSHIRE COLEOPTERA RECORDS, 1992 - I.K. MORGAN

On 19th April, the author and P.M. Pavett visited Cors Goch Llanllwch, reputedly the southernmost raised bog in Britain. Sifting of debris and vegetation at the base of greater tussock sedge Carex paniculata (at the SW margin of the bog 22/362186) produced an abundance of the attractive little (c.2.5mm) cucujid beetle Psammoecus bipunctatus; and also the rove beetle Staphylinus erythropterus. The notable weevil Magdalis carbonaria was collected by P.M.P., in some numbers as larvae and pupae under the bark of a dead birch. The species is more frequently encountered in northern Britain and this occurrence is only the 2nd Welsh record. Adrian Fowles, when later (15 July 1992) examining the population of the rare black bog ant Formica transcaucasica noted the small local chrysomelid Cryptocephalus pusillus on young birches, as well as the ladybird Coccinella hieroglyphica (which is already known from this site) on the more open parts of the bog. C. hieroglyphica was also swept from the bog on the Millstone Grit outcrop SE of Garn-big 22/583157 (on 21 July).

The orange ladybird Halysia 16-guttata is known to be associated with sycamores, (for an interesting discussion of the invertebrate fauna of sycamore Jones (1993) outlines the general wildlife value of this much-maligned tree), but near Old Pale 22/238151 (21/5) adults were beaten from hawthorns (together with plenty of cream-spots Calvia 14-guttata); whilst at Stradev Woods 22/489013 (22/5) it was obtained from a hybrid lime Tilia x. europaea: similarly at Pembrey Forest 22/398011 (23/5) it was on oaks, though here there were young sycamores nearby. Presumably the adults are more wide ranging when not breeding (when the young larvae feed on mildew under sycamore leaves (eg Marjerus & Kearns, 1989)). To save the day, several individuals were under sycamore leaves near Pont Felin-gat 22/527188 in mid-June! The kidney-spot ladybird Chilocorus renipustulatus was found in riverside willows

at Newcastle Emlyn 22/313407 (7 June).

A hasty visit to Dinefwr Deer Park 22/609223 in mid-May yielded Thanasimus formicarius, Dromius quadrinotatus and the all-red "cardinal beetle" Pyrochroa serraticornis, all known from this site. However, the carabid Leistes rufomarginatus, found under a log on 4 June, was new to the vice-county. This ground beetle has been spreading in recent years and has already been recorded in Ceredigion (Fowles, 1986), so its appearance in Carmarthenshire was long anticipated. Oiceoptoma thoracicum is a distinctly-marked silphid or carrion beetle (it has an orange thorax), but although it was recorded near Rhandirmwyn by Dafydd Davies in 1972 (and on Tywyn Burrows 22/36-05- by D.G. Hemingway in 1990), the author has somehow managed to overlook this species. In late May 1992 one was caught, in flight, as it travelled through a larch plantation (with abundant stink horns Phallus impudicus) at Taliaris Park 22/629284; one was seen the next day (20/5) at Gelli Aur 22/595202 and another was found under a pile of old sheep's wool at Allt Rhyd-y-Groes 22/765480 at the end of June. As well as utilising carrion, it is said to favour the fruiting bodies of the stinkhorn fungus - hence its occurrence at Taliaris.

Nationally, the longhorn Judolia cerambyciformis is a decidedly scarce and local species, but in NE Carmarthenshire it can be frequent. 1992 records were at Cwm Crychan 22/823390, SW of Fwng-uchaf 22/809429 (feeding at flowers of Rosa sherardi), Llyn Taliaris 22/634283 and at Allt Rhyd-y-Groes. At the latter site, another scarce longhorn, Strangalia quadrifasciata, was observed egg-laying into an ancient hawthorn. This species was also recorded by Lin Gander and N.R. Matthew at Goitre Farm 22/712326 on 5 July. Most recent Carmarthenshire records of the very attractive "bee chafer" Trichius fasciatus hail from the coast, where it utilises the abundance of drift wood, as is presumably the case at Penclacwydd 21/530984, where Barry Stewart noted one on 6 June. Trichius was also found around logs near Kidwelly Quay on the north shore of the Gwendraeth Estuary 22/395067. Earlier in the season, (23 April) Mark Pavett came across larvae of Dorcus parallelepipedus in drift material at Pembrey Burrows 21/43-99-; and the tenebrionids Melanion tibialis (a small 3-4mm, black species) and Opatrum sabulosum (a larger, 7-10mm, species) were common on bare sandy areas in the spring sunshine. Anthocomus rufipes, a small red melyrid, was commonly swept from fen vegetation at Llangennech 22/572022 in late August; it is quite frequent in the county's coastal marshes, though uncommon (or absent) in many parts of Wales.

Dave Hemingway has, during his annual visits since 1989, methodically surveyed the beetle fauna of the dunes and wet slacks at Tywyn Burrows 22/36-05-. At this one site he has recorded no less than 65 species of carabid (about 20% of the British fauna!) including the local Dyschirius politus a small burrowing species with flattened front tarsi, which preys on small rove beetles, and the notable Amara lucida and Harpalus serripes. Also on his list was Trechus fulvus, which is said to be rapidly declining nationally (D.G. Hemingway, pers. comm). Other local beetles noted by DGH at Tywyn Burrows are the histerid Carcinops pumilio and the silphid Silpha tristis; he also recorded the notable Cardiophorus asellus and the RDB2 Dicronychus equiseti (both "clicks"). Cardiophorus has a scattered distribution in southern and mid Britain, inhabiting coastal dunes and sandy heaths inland, whilst the rarer Dicronychus is completely confined to a few major dunes around the shores of the Bristol Channel (Hyman & Parsons, 1992). Carcinops was additionally found by Mark Pavett, whilst sieving through a pile of cut grass by the caravan park at the eastern end of Pembrey Forest 22/413007 in December. Dicronychus equiseti was also included in a batch of 1984 records recently submitted by Peter Hodge - it being recorded on Pendine Sands 22/24-07- on 28 May 1984. The previous day at Pembrey 22/426007, he collected three species of scarabaeid "in cow dung in a sandy field" - Aphodius depressus, A. granarius and A. merdarius; there are no other known vice-county records of the latter dung beetle. A further record of Dicronychus was provided by P.M.P., who found it, "in some numbers including mating pairs" on a sandy embankment in Pembrey Forest 22/390025 on 19 April 1992. He also provides a record of the notable carabid Amara praetermissa, two specimens of which (conf. M.L.Luff) were found lurking under a log at the edge of Pembrey Forest 22/396004 on 5 August. It is said (Hyman, 1992) to be "widespread and local throughout Great Britain".

Another noteworthy record received in 1992 was Dave Boyce's discovery of the RDB3 staphylinid Stenus opticus, one male of which was found in fen litter

between the Talley Lakes 22/632335 on 30 September 1991. Harpalus punctipes, recorded on the maritime shingle at Penrhynwyn 21/515957 on 10 August 1992, and Bradycellus ruficollis, collected at Cors Goch Llanllwch 22/362186 on 19 April were new to the vice-county; both of these carabids were collected by P.M. Pavett.

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WOODLOUSE RECORDING IN CEREDIGION, 1992

- A.O. CHATER

Little recording was done in 1992, but the discovery of Armadillidium pulchellum in two new 10km squares provides an opportunity to enlarge on the account of the distribution and habitats for this species given in Chater (1986). It is now known from 38 tetrads, and 20 of its 45 sites are on the coast. It is scattered all along the coast from Mwnt to Borth, but is absent from the Teifi estuary and from the whole coast between Borth and the Dyfi. All these sites are on hard rock cliff slopes, except for one on the boulder clay at Clogfryn SE of Aberaeron (22/445623), and all are on mossy cliff ledges and scree often associated with Heather Calluna vulgaris or English stonecrop Sedum anglicum. In these coastal sites A. pulchellum seems to have no preference for any particular aspect and so occurs mostly on the NW facing slopes on this predominantly NW facing coast, although also on some N, NW and NE facing slopes.

The 25 inland sites are very scattered, and although it has been found up to 285m it seems to be absent from sites of upland character. It is striking that 22 of these sites are on SW-SE facing slopes with two on level ground and one on a slight N facing slope). Seven of the 25 inland sites are in sessile oakwoods, and the others are in very varied habitats: bracken covered slopes (3), leadmine spoilheaps (3), scree slopes (3), ivy-covered mortared walls (2), grassy roadside banks (2) and one each for wet heath, gorse and heather- covered slope, natural cliff, ruined drystone wall and quarry. The microsites in which it is found resting by day almost always involve moss or litter (chiefly oak or bracken), although in screes it can be under stones on soil. In one site it was found in Tufted Hair-grass Deschampsia cespitosa tussocks, and once, in very wet weather, it was beaten from gorse. A juvenile was found in a nest of Formica rufa, and adults in nests of Lasius flavus. With the exception of the wet heath site, all the sites are well-drained and dry.

The picture is thus of a species very intolerant of waterlogging, and requiring sites that are either quickly warmed or frost free (S facing slopes inland or coastal slopes). The general sites may be exposed or sheltered, but the microsites, at least for daytime resting, need to provide a still, at least slightly damp atmosphere such as is provided under moss-mats, in a fair depth of litter, or in the interstices of a scree. No observations have been made on the foraging behaviour of A. pulchellum at night in Ceredigion. In view of the wide range of habitats it occupies, it is perhaps surprising it is so sparsely distributed inland. It has now been recorded in 18 10km squares: 22/15, 24, 25, 35, 36, 44, 45, 46, 56, 57, 58, 66, 67, 68, 69, 77, 78 and 79.

I am grateful to A.P. Fowles and D.C. Boyce for their records.

Reference

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LAND MOLLUSC RECORDING IN CEREDIGION, 1992 - A.O. CHATER

Mollusc recording has been at a low ebb in Ceredigion during the last year, but some attempt has been made to improve coverage of tetrads at over 300m in the uplands. This can be unproductive work, with many tetrads in this acidic and sheep-ridden district seeming to contain half a dozen species at the most. On the open sheepwalks, blanket mires and heaths, Arion ater in its black form is usually the only conspicuous species, although A. subfuscus and intermedius are usually found if one searches hard enough. Punctum pygmaeum and Nesovitrea hammonis occur even in some of the most acidic flushes and marshes, with only Common Rush Juncus effusus, but in such small numbers that sieving is the only practicable way of finding them. In slightly richer sites where sharp-flowered rush Juncus acutiflorus occurs they will usually be commoner, and a few other very catholic wetland species such as Carychium tridentatum and Deroceras laeve will occur. Carychium minimum and Vitrea crystallina are usually found only in flushes with dense mosses, Golden Saxifrage Chrysosplenium oppositifolium and some scrub or tree cover. Habitations, and ruins that still have nettle patches, rotting wood and mortar-rich rubble, often produce up to a dozen species. But the only upland sites of real molluscan interest in Ceredigion are the damp gulleys and ledges on some of the cliffs that botanists (but not geologists) recognise as base-rich. Here calcicole plants such as Rock Stonecrop Sedum forsterianum and Marjoram Origanum vulgare occur, there are a few stunted trees or bushes of Ash Fraxinus excelsior and small-leaved Lime Tilia cordata, and such essentially woodland plants as Primrose Primula vulgaris and Bluebell Hyacinthoides non-scripta, and if there is some flushing and the side is inaccessible to sheep so that tussocks, moss and litter have built up, quite a rich mollusc fauna can occur.

One such site, Craig y Pistyll SSSI (22/713856) at 310m has 16 species recorded, including the normally woodland species Acicula fusca and Leiostyla anglica. The site is very steep and south-facing and seems unlikely ever to have been very well wooded, and this is probably an example of how certain species considered ancient woodland indicators in more eastern parts of Britain can occur in open, but similarly long-undisturbed sites in West Wales.

Another such upland site, visited on 11 September 1992, is a SW facing cliff at 340m in the Doethie valley 22/74. Most of this 500m long cliff is dry and acidic, but at one point there is a flushed area 20 x 20m with two damp, densely vegetated gulleys, where Marjoram, Orpine Sedum telephium and Rock Stonecrop grow on the ledges, along with a few Ash trees. Small-leaved Lime grows appressed to the cliff nearby. In these gulleys Aegopinella nitidula, A. pura, Arion ater, Carychium minimum, C. tridentatum, Discus rotundatus, Lauria cylindracea, Nesovitrea hammonis, Vitrea contracta, V. crystallina and Zenobiella subrufescens occur. Zenobiella has not been found above 235m elsewhere in Ceredigion, though it is known as an upland species in other parts of Britain, it is abundant here, and it and Vitrea contracta are the two most abundant species in these gulleys. Zenobiella also occurs nearby at c. 140m in flushes and in Alder carr by the Doethie and Tywi. In Ceredigion as a whole it is very much a species of major valleys, occurring in wet woodland, in flushes and fens in the open, but also in dry scrub and on dry roadside banks where it has several times been beaten from Gorse. It seems very rare on the coast, and in general its distribution seems difficult to explain.

SNAILS AND SLUGS IN CARMARTHENSHIRE 1992 - I. K. MORGAN

Extremely little recording of molluscs was undertaken during the year, the main interest being provided by the discovery, new to Carmarthenshire and in some abundance, of the Great Ram's Horn snail Planorbis corneus in the old canal behind Trelle 22/421019. The "Atlas" (Kerney, 1976) shows it to be absent from the western half of Wales and the author is not sure whether Planorbis is entirely native at Trelle - there is the possibility that it is an introduction - dumped, perhaps, with unwanted goldfish!

The increasing alien slug Boetgerilla pallens was in the farmyard at Cae'r malwas farm 22/562403 and the local native old woodland slug Limax cinereoniger was found lurking under a log in the ashwood below Carreg Cennen 22/671191.

Reference

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SPIDERS AND HARVESTMAN RECORDING IN CEREDIGION IN 1992 - M.P. BAILEY

The most interesting record of the year, and the only new record for Ceredigion, was the local liniphid Porrhomma egeria, which I found at my home "Troedrhwi Seiri", 2 miles east of Penrhyncoch (SN675852). I came across a single male on rubbly soil whilst excavating behind a stone retaining near the house. This species is described as being of widespread distribution, occurring frequently in subterranean habitats (caves, cellars, mines), but rarely found outdoors. The absence of previous Dyfed records perhaps reflects a lack of recording from such habitats, which provide a fruitful area for investigation. The dry, south facing, semi-natural grassland beside the house was alive with Pardosa monticola on warm summer days, and casual investigation also revealed the handsome Steatoda phalerata, the ant mimic Micraria pulicaria and the crab spider Xysticus erraticus, together with its ubiquitous relative X. cristatus.

The Cors Fochno NNR pitfall trap monitoring project, in operation since 1986, revealed a single addition to the site list, that of Walckenaeria antica. It is possible however, that this species has been overlooked due to its great similarity to W. alticeps which commonly appears in the traps. Of the nationally notable species caught more or less annually, Agroecina striata was the most numerous with 19 individuals; Drassylus lutetianus and Marpissa nivoyi each yielded singletons. A further nine species new to the bog were recorded this year including the local Hyposinga pvgmaea (on Molinia); Araniella opistographa and Xysticus atomaria on bog meadows; and Walckenaeria acuminata (a male of the species, with its bizarre turret shaped head) shaken from deep heather. Additionally at Cors Fochno, Dolomedes fimbriatus was observed in small ditches on both northern and southern sides of the bog. Examination of Cors Caron pitfall trap material from 1988 and 1989, produced single records of Drassylus lutetianus and Pirata piscatorius, both Notable species already known from this site. Bathyphantes setiger, a local species of wet habitats, was a new addition to the Cors Caron species list, and when fully analysed these pitfall records will form a valuable comparison with those of Cors Fochno in determining the effects of fire on this group of peatland invertebrates.

SPIDERS IN PEMBROKESHIRE - 1992

S. Dobson

Apart from one record, Dysdera crocata from Pembroke Dock, all the information this year is from the field course at Oriellon. This took place in August, as usual, but for once the weather was wet and the spiders more abundant than in the previous two or three years.

Most of the species found added nothing to the known status and distribution of spiders in the county, but there were six additions to the county list. Two theridiids, Anelisomus vittatus and Theonoe minutissima, are both widely distributed in Britain; the former was from Tycanol, it is common and it is

surprising that it has not been found previously; the latter, found also at Tycanol and also at Tre-rhos Common, is not so common, but is easily overlooked as it is one of the smallest British spiders. Scotina gracilipes, a liocranid (previously clubionid), was taken at Tre-rhos and is probably uncommon in the county though widespread in Britain.

The remaining three are linyphiids. Hilaira excisa and Taranucnus setosus are both uncommon, and Hypselistes jacksoni even more so; all are found in damp habitats and all were taken at Tre-rhos.

SPIDERS IN CARMARTHENSHIRE, 1992

- I.K. MORGAN

As with some other invertebrate groups, unfortunately a reduced amount of time had to be devoted to the collection and recording of spiders. Five species (listed below) were recorded new to the vice-county in 1992, all except Larinioides sclopetarius being widespread species. Larinioides is said to be usually associated with buildings near water, but the Carm. specimen was taken at the edge of a raised bog at Cors Goch Llanllwch (also new to Dyfed).

Clubiona stagnatilis - nr. Pibwrlwyd 22/405177, 24.4.1992

B. pallidula - around Tir Morfa-fawr 21/533936, 18.5.1992

B. compta - around " " " " " "

Araniella opistographa " " " " " "

Larinioides sclopetarius - Cors Goch Llanllwch 22/362186, 19.4.1992

These five NCR's now brings the vice-county total to 276 species.

MISCELLANEOUS RECORDS, CARMARTHENSHIRE, 1992

- I.K. MORGAN

HETEROPTERA Just two species new to the vice-county were recorded - Sigara stagnalis in the brackish pond at Glynea, Bvnea 21/554939 (22 Sept) and Calocoris fulvomaculatus (a widespread species), SE of Garn-big 22/533157 on 21 July.

Reference

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HIBERNATING ORANGE-LADYBIRDS NEAR TENBY (SN124027) - JOHN STEER

On 10th February 1991 a friend found some ladybirds on the lower branches of a large horse chestnut while his children were playing in the snow in Knightson Woods near Tenby, Pembrokeshire. He said they were orange with white spots but was not aware that there was more than one species of ladybird! Having found a single specimen of Orange Ladybird Halyzia 16-punctata in these woods the previous autumn, I naturally suspected he had found some more. On 16th February I visited the woods and counted 133 on the tree he had described. There were groups of 14, 27 and 92 the maximum numbers actually touching one another being 11. The tree is approximately 20m high and is situated towards the bottom of a steep valley running north-south, it is on the west side leaning somewhat to the east and is thus protected from the prevailing S.W. winds. The lower branches almost reach the marshy ground at the valley bottom. It is obviously an extremely humid and sheltered situation.

The clusters of ladybirds were all found on branches on the east side of the tree mostly within 6m of the ground. They were mainly on the underside of branches between 11 and 20mm diameter, within 120mm of the ends and predominantly at points where the branches forked.

On 30th March I estimated there were in excess of 500 present. There were also five in a nearby grey willow Salix cinerea. They were still present on 12

April by which time the leaves had opened making an estimate of the numbers too difficult to attempt. On 2 May far fewer were to be found. On this visit I found three on a nearby grey willow and one on a small sycamore. I was unable to visit the woods again until 21 May by which time they had all gone.

These woods which are graced by the delightful, and now extremely scarce (in the wild) Tenby daffodil Narcissus obvallaris extend for over a mile along the valley of the Knightson Brook, They are a valuable wildlife habitat perhaps worthy of statutory protection.

It is interesting to speculate how far the orange ladybirds will migrate to reach a favourable hibernation site. Were these particular ones the population of the whole wood or had they come from even further afield?

FIELD MEETING: OLD CILGWYN, VC46 (SN 314416) - 7 JUNE 1992 - AP FOWLES

Surveys of the grassland and pasture-woodland habitats at Old Cilgwyn over the past couple of years have demonstrated that this is one of the richest localities for invertebrates in Ceredigion. The site consists of a mixture of hay meadows, semi-improved pastures and parkland, along with three ponds and a stream. This habitat diversity contributes to the richness of the fauna and interesting species are associated with each of the components. However, two aspects of Old Cilgwyn are particularly significant - the rough pastures and the old parkland trees. We were too early in the year to see the chief grassland speciality as the hornet robberfly *Asilus crabroniformis*, which occurs here at possibly its only surviving site in the county, is on the wing later in the summer. The visit was designed to coincide with the peak flowering period for hawthorn to enable us to record nectar-feeding insects, but this had been an early spring and the blossom was all but over.

Old Cilgwyn contains only a small number of over-mature oak trees, just a dozen or so, but several of them are afflicted with redrot and there is a good range of deadwood microhabitats. The saproxylic beetle fauna is well represented with a total of eleven 'Harding & Rose' indicator species recorded to date (giving an 'Alexander Index' of twelve). This is a good total for Wales and makes Cilgwyn the best site for saproxylics in Ceredigion. We had hoped to add substantially to this total during the DIG field meeting but few of the known indicator species were seen and there were no additions. The notable lathridiid beetle *Enicmus testaceus*, found amongst debris in the hollow trunk of an old oak, had not previously been recorded from Ceredigion, but otherwise the deadwood fauna was hardly in evidence.

The sun shone gloriously throughout the day and 131 invertebrate species were recorded, bringing the total known from Old Cilgwyn to more than 300 species. An unexpected find was a single marsh fritillary *Eurodryas aurinia* flying over an area of wet pasture. There are no known colonies in the vicinity and it may be that a small population is established at Cilgwyn. Devil's-bit scabious on drier grassland had the characteristic leaf mines and egg blotches of the jewel beetle *Trachys troglodytes*. The meeting produced a wealth of useful records for the site even though there was a remarkable absence of the scarce species that Old Cilgwyn is known to support. There are bound to be many other interesting discoveries to be made at Cilgwyn - another day!

FIELD MEETING: ESSO OIL REFINERY, MILFORD HAVEN (SM80), VC45 - 12 JULY 1992 - J.W. DONOVAN

The Esso Refinery site lies on the northern flank of Milford Haven where the climate is certainly mild and oceanic but also much exposed to Atlantic gales, particularly from the south-west. The refinery was constructed here in the late 1950s and was to be the first of five major oil installations in Pembrokeshire. By 1989, however, de-commissioning was well under way, processing ceased and equipment dismantled - probably the first termination of a major oil refinery in the world.

The exposed 750 acre site is geologically of Old Red Sandstone (Devonian) rocks and includes sandstones and red marls. The agricultural landscape was virtually eliminated by refinery development and in effect the area is a series of bunded compounds and concrete plains with skimming pools and other water features. During the refinery years, herbicide sprays were used to suppress vegetation, thus much bare soil of a compacted nature occurs. Slow colonisation by plants of rosette and ruderal type has since taken place. Additionally, seed from nearby coastal cliffs has been blown onto the outer slopes of bunds (in particular) and thus thrift, sea campion and sea plantain are among the colonists. The bunded tank bases, partly landscaped to meet the original planning consents, have a complete range of aspects and hydrology - pools (some ephemeral), seepages and streamlets - whilst patches of fen occur and this diversity clearly has a major impact on the invertebrates. The future of the site is uncertain but at least some ecological site assessment has taken place so the better areas for wildlife are known and hopefully can be catered for in any new industrial use.

The weather was perfect for the field meeting, permitting a good range of invertebrates to be recorded. It is impossible to do justice to such a large area in a single day but we visited several different types of habitat and gained a good impression of the richness of the fauna. With some records still outstanding, a total of ninety-one invertebrate species were recorded on the day, including one Red Data Book and six Nationally Notable species. Previous recording on the refinery site had revealed the presence of several scarce invertebrates (DIG 23: 5-6). Two of these, the grey bush cricket *Platycleis albopunctata* and the six-belted clearwing *Bembecia scopigera*, were also seen during the field meeting, inhabiting dry grassland on sandstone slopes at SM874057. An area of shallow pools at SM864067 held a good dragonfly fauna which included the scarce blue-tailed damselfly *Ischnura pumilio*, and the water beetle *Hydroglyphus pusillus* was common here. This latter species had not previously been recorded from any of the Dyfed vice counties. It is found in a wide variety of habitats in southern Britain but is most characteristic of shallow mesotrophic pools.

The impressive red-and-black solitary wasp *Podalonia hirsuta* was seen at a number of locations on the site, whilst the weevil *Sibinia primitus* was common in the flowers of the crucifer dittander. The most interesting record of the day, however, was that of *Mordellistena parvula*, the first record of this Red Data Book beetle in Wales. It is believed to breed in the stems of mugwort and has presumably benefited from the development of the ruderal flora on the site. Many other uncommon species of invertebrates were seen during the day, reflecting the varied habitats present. Of particular importance are the wetland habitats and the pioneer grassland communities on the friable soils. In its present condition the old Esso Refinery contains a number of important features for the conservation of uncommon and nationally scarce invertebrates and hopefully any future development of the site will take into account the features of greatest significance for nature conservation.

RED WOOD ANTS AND THEIR CONSERVATION
- A. P. FOWLES -

A colony of wood ants is unmistakable, but many naturalists are unaware that several species of *Formica* build similar wood edge nest mounds in Britain. Three species, the red wood ant *Formica rufa*, the hairy wood ant *F. lugubris* and the Scottish wood ant *F. aquilonia*, occur commonly in certain parts of Britain, and two of these occur in Wales. The hairy wood ant, which is widespread in Scotland and northern England, is frequent in the conifer plantations of north Wales, and also inhabits a few oakwoods in Merioneth and Radnor. The red wood ant, a characteristic species of open woodlands in southern England, is thinly scattered in lowland woods across Wales. Identification of the two species is largely based on the degree of hairiness of the eyes and head. The red wood ant would have been more common in Welsh woodlands that were coppiced in the past to provide fuel for the furnaces of the iron and lead mines, but the neglect of woodland management and the destruction of ancient woodland has caused a significant decline. This decline has largely gone unnoticed amongst conservationists in Wales and the current status of *F. rufa* in Wales is poorly known. A thorough search of the literature suggests that *circa* seventy-two colonies have been recorded in Wales, with concentrations in Gwent, northern Cardiganshire, and the Mawddach valley of Merionethshire. *Formica rufa* has never been recorded from Pembrokeshire, Flintshire or Anglesey, it is probably extinct in Denbighshire, and it is undoubtedly extremely scarce in Breconshire and Carmarthenshire. There are no known records of *rufa* in north Wales since 1972, although it is suspected that several of the twenty-seven colonies reported in the past are probably still in existence. In mid and south Wales there is a total of only sixteen sites with post-1980 records of *rufa* - Monmouth (4), Glamorgan (1), Brecon (1), Radnor (2), Carmarthen (1), Cardigan (6) and Montgomery (1). Most of these consist of just one or two nests and only two sites, one in Radnor and one in Ceredigion, are known to support colonies with more than fifteen nests.

The red wood ant is scarce in Dyfed and is only locally abundant in northern Ceredigion. The colony at Coed Neuadd-yr-ynys, consisting of c. fifty nests, is the second largest in Wales and there is also an important concentration around Furnace. Whilst the modern status of red wood ants in Dyfed is probably better known than for any other part of Wales it is quite possible that undiscovered colonies still exist, even in Pembrokeshire.

Grid ref. Locality	Last record
VC44 CARMARTHEN	
22/582345 Abergorlech	1992
22/838401 Cwm Crychan	Aug 1972
VC46 CARDIGAN	
22/634837 Gogerddan	1991
22/685951 Furnace	1991
22/652925 Coed Neuadd-yr-ynys	1993
22/662925 Tre'r-ddol	1992
22/703795 Coed Dol-fawr	1990
22/72-78- Coed Simdde Lwyd	Nov 1992

Although some invertebrates are predators of *F. rufa*, with the exception of rare battles between neighbouring wood ant nests the only serious threat from predation is the occasional destruction of nests by green woodpeckers. The

loss of woodlands due to clearance for agriculture and urban expansion has probably accounted for the extinction of a number of *rufa* colonies in Wales in the past but they are unlikely to be major threats in the future. The neglect of woodland management is probably the most serious threat facing the existing colonies in Wales as *rufa* is known to be very poor at colonising adjacent habitats once its nest sites become over-shaded (Welch 1978).

It is time that we gave some thought to the conservation of our red wood ants. This may seem strange when they are clearly not threatened in Britain as a whole and when each nest may slaughter up to six million woodland invertebrates each year. However, without taking care of our *rufa* colonies we stand to lose an important and interesting aspect of Welsh woodland ecology. In terms of species conservation, wood ant nests harbour a large number of myrmecophiles, invertebrates that live in close association with wood ants for all or most of their lives. Several of these species are national rarities and their conservation depends on the survival of wood ant colonies. In England and Wales, twenty-one species are entirely dependent upon wood ants for their conservation (several more occur in Scotland only with *aquilonia* and *lugubris*) and twelve of these have been recorded from Wales. Also, the activities of wood ants affect the composition of the woodland invertebrate community, creating an ecologically unique balance of species. Although the nests of *F. lugubris* may provide a suitable habitat for scarce myrmecophiles, we are in danger of losing the last examples of wood ant dominated oakwoods in Wales. We should recognise the importance of our own colonies and take steps to safeguard their future and the future of the community of woodland invertebrates they sustain.

Over the next couple of years the Countryside Council for Wales will be surveying the distribution of red wood ants in Wales to ascertain a true picture of its status. However, nests can be very localised and therefore over-looked. It would be a great help if naturalists in Wales kept us informed of any wood ants' nests they encounter. In Dyfed there is little chance of the hairy wood ant occurring and nests can be presumed to belong to the red wood ant but specimens sent for confirmation will be welcomed. Old records of the presence of wood ants' nests are also of interest. Please contact: A. P. Fowles, Countryside Council for Wales, Plas Penrhos, Ffordd Penrhos, Bangor, Gwynedd LL57 2LQ.

DYFED INVERTEBRATE BIBLIOGRAPHY - 1991.

ALEXANDER, KNA - Leptogaster guttiventris Zett. (Diptera., Asilidae) in Pembrokeshire. Br. J. ent. nat. hist. 4: 89.

[A single specimen of this scarce robberfly was taken at Good Hope, VC45; possibly the first Welsh record of this species]

ANON. - A lucky bite. Dyfed Wildlife Trust Bulletin 57: 9.

[The discovery of Formica transkaukasica on Cors Goch Llanllwch, VC44]

CHANDLER, P - New species and additions to the British List of the fungus gnat genera Zygomyia Winnertz and Sceptonia Winnertz (Diptera, Mycetophilidae). Br. J. ent. nat. hist. 4: 143-155.

[Includes record of Z. valeriae from Cors Goch Llanllwch, VC44]

COX, W & SUMMERS, J - In: British Macrolepidoptera, 1990 Annual Exhibition. Br. J. ent. nat. hist. 4: 23-27.

[Records dotted carpet and red-necked footman from Fishguard, VC45]

DRAKE, CM - Provisional atlas of the larger Brachycera (Diptera) of Britain and Ireland. ITE Huntingdon.

[Species accounts for all of the larger Brachycera with a selection of distribution maps. Many Dyfed records are included but unfortunately few post-1986 records appear, hence pre-dating much of the recent interest in this group of flies in the three vice-counties]

ELSE, GR - Wildlife reports: Bees, Wasps & Ants. British Wildlife 3: 116.

[Mentions discovery of Formica transkaukasica at Cors Goch Llanllwch, VC44]

FALK, SJ - A review of the scarce and threatened bees, wasps and ants of Great Britain. Research and Survey in Nature Conservation, No. 35. Nature Conservancy Council, Peterborough.

[Fifteen species are reported as occurring in one or other of the Dyfed vice-counties - this low figure reflecting the general paucity of recording effort of the aculeate Hymenoptera in the Region]

FALK, SJ - A review of the scarce and threatened flies of Great Britain (Part One). Research and Survey in Nature Conservation, No. 39. Nature Conservancy Council, Peterborough.

[Detailed account of distribution and life-history of the rarer British flies. This part chiefly covers the 'popular' families - hoverflies, robberflies, etc. - and contains innumerable references to species occurring in the Dyfed vice-counties. There are a few omissions and a small number of errors but essentially the review provides a good account of the scarcer elements of the Dyfed fly fauna for the families concerned]

FALK, SJ & STUBBS, AE - Further records and observations of Platycheirus

species (Syrphidae) recently added to the British List, with discussion on the identification of P. ramsarensis. Dipterist's Digest 10: 40-45. [Includes record of P. occultus from VC46]

FOWLES, AP - On the identification of Apion hydrolapathi (Marsham) and A. violaceum Kirkby (Apionidae). Coleopterist's Newsletter 44/45: 4-7. [Characters to separate this difficult pair of weevils, with a brief comment on their status in VC46]

HARRIES, H - Dowrog Delights. Dyfed Wildlife Trust Bulletin 55: 11.
[Brief introduction to butterfly and dragonfly monitoring transects on Dowrog Common, VC45]

HAWKINS, RD - In: Hemiptera, 1990, Annual Exhibition. Br. J. ent. nat. hist. 4: 43.
[Records of Heteroptera from coastal sites in VC45]

HOLMES, PR, BOYCE, DC & REED, DK - Nationally uncommon ground beetles (Col., Carabidae) from Welsh wetlands. Ent. Record 103: 301-306.
[Scarce carabids recorded during the Welsh Peatland Invertebrate Survey, including nine species reported from the Dyfed vice-counties]

HOLMES, PR, VALENTINE, J, BOYCE, DC & REED, DK - Lesser dung-flies (Diptera; Sphaeroceridae) in Welsh peatlands. Dipterist's Digest 8: 6-13.
[A vice-county checklist from Welsh Peatland Invertebrate Survey results, including numerous species from the Dyfed vice-counties]

KIRBY, P - A review of the scarcer Neuroptera of Great Britain. Research and Survey in Nature Conservation, No. 34. Nature Conservancy Council, Peterborough.
[Lists Sialis nigripes from the Afon Teifi, Dyfed, and Sisyra dalii and Wesmaelius balticus from VC46]

KIRBY, P - News Digest. Heteroptera Study Group Newsletter 10: 2-3.
[Mentions four scarce bugs recorded in VC45 during 1990]

KNIGHT, G - Cowslips. Dyfed Wildlife Trust Bulletin 55: 3.
[Mentions pollinators of cowslips in VC45]

MILES, PM - Observations on a gathering of Thaumatomyia notata Mg. (Dipt.) in Cardiganshire. Ent. Record 103: 162-163.
[Notes on an autumn swarm of this common chloropid fly involving some 12,000 individuals]

MILES, PM - Records of some noteworthy British Coleoptera. Ent. mon. Mag. 127: 90.
[Records of scarce beetles, including six from VC46 and two from VC45]

MORGAN, IK - Carmarthenshire Ladybirds. Llanelli Nats. Newsletter (Summer 1991). pp 10-15.
[Describes the distribution and habitat preferences of the 23 species reported from VC44]

MORGAN, MJ - Recording in Wales - Part 5. Neuro News 9: 8-10.
[Discusses the status of seven species of lacewings in Wales, six of which have been recorded in Dyfed. Distribution maps are included]

MURPHY, J - Spider Correction week at Orierton, Pembrokeshire: 1-8 August. 1990. Newsl. Br. arachnol. Soc. 61: 6-7.
[Description of the week's activities but only casually mentioning spiders]

OXFORD, GS - Visible morph-frequency variation in allopatric and sympatric populations of two species of Enoplognatha (Araneae: Theridiidae). Heredity 67: 317-324.
[A genetic study of colour variation in E. ovata and E. latimana from samples of spiders collected in Pembrokeshire]

PLANT, CW - Wesmaelius balticus (Tjeder) (Neuroptera: Hemerobiidae) new to Scotland, with a review of British records. Ent. Gazette 42: 171-174. [Includes record of this rare lacewing from VC46]

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[Includes records of these two rare lacewings from VC46 and VC45 respectively]

RILEY, AM - Late captures of Hepialus fusconebulosa de Geer, the map-winged swift (Lep., Hepialidae). Ent. Record 103: 109.

[A specimen of this widespread moth was caught in August 1990 at Rhandirmwyn, VC44]

ROBERTS, M - Wildlife Reports: Spiders. British Wildlife 3: 116.

[Recounts the activities of choughs at Stackpole, VC45, pulling up purse-web spiders Atypus affinis from the cliff grassland]

SMITH, SM - More gleanings from Dyfed. Conchologist's Newsletter 119: 428-431. [A brief discussion and partial species list for marine molluscs collected in VC45 and VC46 during April 1991]

SQUIRES, R - Butterflies and other invertebrates. Ynyshir Nature Reserve Report, 1990. RSPB. pp 19-22.

[Account of butterflies, dragonflies and bushcrickets at Ynyshir, VC46, in 1990]

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[A female specimen of this common moth, which usually appears in March, was captured in November 1990 at RAE Aberporth, VC46]

WALLACE, ID - A review of the Trichoptera of Great Britain. Research and Survey in Nature Conservation, No. 32. Nature Conservancy Council, Peterborough.

[Specific records of five species occurring in Dyfed - Agrypnia obsoleta, Allogamus auricollis, Oecetis notata, Trinodes rostocki and Ylodes simulans]

WHITEHEAD, PF - The genus Quedius Stephens. Coleopterist's Newsletter 42: 5-6. [Includes record of the staphylinid Q. fuliginosus from Marloes, VC45]

WILLIAMS, SA - Heliophanus dampfi Schenkel (Salticidae) in mid-Wales and new to Britain. Newsl. Brit. arachnol. Soc. 61: 3-4.

[Reports the discovery of this stenotopic jumping spider on the raised mire of Cors Fochno, VC46]

WOOD-BAKER, CS - The Aphid fauna of Wales (Part). Aphidologist's Newsletter 26: 7-11.

[A list, with brief notes on interesting species, of the 172 species of aphid identified so far from the Dyfed samples of WPIS, including the grass-root feeding Tetraneura longisetosa new to Britain]