DYFED INVERTEBRATE GROUP

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EDITORIAL

My apologies are again due to readers for the late appearance of this autumn issue - for it is becoming increasingly difficult to find the time to prepare papers - or edit those of other contributors - for the Newsletter. This is compounded by the dramatic reduction in field work in recent years, which of course means that there may be little to report! I am again most grateful for the contributions submitted for this issue - including two which principally relate to Pembrokeshire

May I also announce to the readership that Steve Lucas (35 Maesquarre Road, Betws, Ammanford, Dyfed SA18 2LF) is now the recorder for Butterflies and Moths in Carmarthenshire, vc44. All records should now be sent to Steve who has just embarked on the computerisation of records for the county.

Finally, may I remind all that the subscription for the 1996 Newsletters are now due - 4 1st class stamps. Any papers or short notes for these issues will also be appreciated.

NATIONAL TRUST BIOLOGICAL SURVEY IN DYFED 1994 - A.P. FOSTER

During June and July 1994, the National Trust Biological Survey Team visited Dyfed as part of its continuing programme assessing the biological interests of NT holdings. The following is a summary of the records compiled so far by Keith Alexander and myself. There is, however, the inevitable backlog of specimens still to be examined. A list of the more notable species, arranged by site, is also provided.

The bulk of the field work was conducted at coastal properties in Pembrokeshire (vc45), incorporating a variety of maritime grassland and coastal heath habitats. In addition, a few coastal sites in Ceredigion (Cards., vc46) were sampled. We also surveyed Dinefwr Park. Carmarthenshire (vc44) - concentrating here on interests other than the relatively well documented saproxylic fauna. Elsewhere in Wales a series of National Trust sites on Gower (Glam vc41) were visited.

Pembrokeshire

Most of the properties surveyed were located along the rocky coastline of Pembrokeshire. Invertebrates having Lusitanian distributions are known to occur here, together with species which are exclusively coastal in distribution within the British Isles. Many are associated with the therophytic conditions - characterised by a sparse cover of species rich vegetation, combined with plenty of sun-baked bare ground. A good representation of these invertebrates were recorded during our studies. The Lusitanian woodlouse *Porcellionides cingendus* was recorded widely, and several species for which the bulk of the British records are from the coasts of south Wales were also noted eg the hoverfly *Eumerus. sabulonum* and the chafer beetle *Amphimallon ochraceus.* These occurred at a surprising number of sites, the former most often in association with spring squill, the latter in a range of maritime grassland situations. Among the other widely recorded, but Nationally Scarce[1] coastal species were the thrift clearwing moth *Bembecia muscaeformis,* whose larvae feed on the rootstock of thrift, and the weevils *Trichosirocalus dawsoni* and *Sibinia arenaria,* on their respective foodplants bucks-horn plantain and rock sea-spurrey.

Other noteworthy species were found only once, or on a few occasions. Perhaps the more significant are: the third Welsh record for the Red Data Book listed bug *Trapezonotus ullrichi* at Porthlysgi (SM72231 (see Alexander & Foster, in press); the little water beetle *Georyssus crenulatus* in a small flush on the cliffs at Porthmeglan, St David's Head (SM727279); the weevil *Tychius schneideri,* on its foodplant kidney vetch at Morfa Common (SM78243), Kirby (1990) has already noted this species at two other sites in Pembrokeshire; a colony of small blue butterfly *Cupido minimus* on the cliffs near Good Hope (SM9140); and Barrett's marbled coronet moth *Hadena luteago barrettii,* recorded in a light trap at Dinas Island (SN0040), - this moth is restricted to rocky south western coasts within the British Isles where its larvae feed on sea campion.

The only dune system visited was the Mere Pool Valley at Stackpole Warren (SR9794) where the 'dung beetle' *Aphodius plagiatus* was abundant in the damp dune slacks. Unlike many of its relatives which have larvae developing in dung, this species is thought to be associated with fungi growing in damp sand. A single example of the solitary wasp *Sapyga clavicornis* was captured at the back of the dunes along the base of a limestone cliff. This is only the third Welsh record for this Nationally Scarce species which is a cleptoparasite of megachilid bees. The other two Welsh records refer to NE Wales.

Inland, we had the opportunity to sample the high quality wet heath communities on a few of the St David's Commons (Tretio, Waun Fawr and Vachelich Moor). Among the more noteworthy species present were a colony of scarlet tiger *Panaxia dominula* at Tretio (SM7828), together with two

[1] Taxa which do not fall within Red Data Book categories, but which are nonetheless scarce in Great Britain. Category A are thought to occur in <30 10km squares of the National grid, category B in 31-100 10km squares.

herbivorous species specific to skullcap; the micro-moth *Choreutis myllerana* and the leaf beetle *Phyllobrotica quadrimaculata.* At Waun Fawr (SM7626), mines of the jewel beetle *Trachys troglodytes* were present on the foodplant devil's-bit scabious.

Away from National Trust properties, an m.v. light trap was operated at most of our accommodation bases. The most significant record generated was the first Pembrokeshire record for the poplar kitten moth *Furcula bifida* at Blackpool Mill (SN061144) on the night of 13-14th June 1994 (Foster, 1995). Its larvae feed on poplar and it is probable that it will have originated from a nearby poplar plantation. Other species of note encountered included the beautiful brocade *Lacanobia contigua* and Barrett's marbled coronet *H. luteago barrettii* at Dinas village (SN003380); both will probably have been strays from nearby coastal habitats.

Ceredigion

Three coastal properties were visited: Ty Hen (SN2852), New Quay - Cwm Tydu (SN3557-3759) and Mynachdy'r Graig (SN5574). Among the noteworthy species present were: the bug *Dicranocephalus agilis,* a species associated with various spurges on coastal dunes and found within a very small area of dune habitat at the back of Traeth Penbryn (Ty Hen); the pill woodlouse *Armadillidium pulchellum* at New Quay to Cwm Tydu, although Nationally Scarce, this species it is recorded widely at coastal localities within the county (Chater, 1986 & 1993); the scarce blue-tailed damselfly *Ischnura pumilio* and the water beetle *Enochrus affinis* both from an area of wet heath and small boggy pools at Mynachdy'r Graig.

Carmarthenshire

Given that the dead wood interests of Dinefwr Park are relatively well documented, e.g. Alexander & Pavett (1992), and Morgan (1992), our 1994 survey concentrated on other habitats likely to be of value for their invertebrate communities. Primarily these were river shingle, flood plain pools, and tufa spring habitats.

Tufa spring habitats which are often small and isolated, and thus vulnerable to damage or deterioration, frequently accommodate scarce and threatened specialist species. The springs and seepages here were no exception and contained the scarce soldierflies *Oxycera rara* and O*. pardalina.* Studies by other entomologists have recorded these and further species of interest (Morgan 1994).

Along the flood plain of the Afon Tywi are a series of cattle and sheep grazed fields containing a series of large and small shallow pools. Two scarce beetles were recorded from these, the water beetle *Helochares lividus,* a widely distributed freshwater species favouring well vegetated waterbodies, and the aquatic weevil *Litodactylus leucogaster* that was common here on its foodplant water-milfoil *Myriophyllum* spp. The river itself possesses extensive shingle bank habitats where the rare 5-spot ladybird *Coccinella quinquepunctata* was present - many other specialist river shingle species can be predicted to occur. (Actually, the click beetles *Negastrius sabulicola* (RDB3) and *Fleutiauxellus maritima* and the carabid *Amara fulva* (N) have already been recorded here (Ed.)

SUMMARY OF NOTEWORTHY RECORDS - INCLUDES RED DATA BOOK. NATIONALLY SCARCE AND CERTAIN LOCAL SPECIES.

PEMBROKESHIRE

Lydstep (SS0997), 14th June: MOLLUSCA - *Helicella itala:*
HEMIPTERA *Zicrona caerulea, Beosus maritimus.*

Stackpole Warren, Mere pool valley only (SR9794), 12th June:
HEMIPTERA -*Corizus hyoscyami, Enoplops scapha*; COLEOPTERA - *Aphodius plagiatus;* HYMENOPTERA - *Sapyga clavicornis.*

Marloes (SM7508-7509). *15th June: DIPTERA* - Eumerus sabulonum*; LEPIDOPTERA* - Bembecia muscaeformis*; COLEOPTERA* - Cetonia aurata, Crypticus quisquillius, Olibrus affinis, Trichosirocalus dawsoni, Sibinia arenaria*;* HYMENOPTERA - Podalonia hirsuta.

Gribbin (SM803240). 30th June: DICTYOPTERA - *Ectobius panzeri*; DIPTERA - *Chrysotoxum elegans, Eumerus sabulonum.*

Morfa Common (SM78243) 23rd June and 1st July: DICTYOPTERA - *Ectobius panzeri;* HEMIPTERA - *Henestaris laticeps;* COLEOPTERA - *Amphimallon ochraceus, Opatrum sabulosum, Barypeithes sulcifrons. Trichosirocalus dawsoni, Tychius schneideri, Sibinia arenarial* LEPIDOPTERA - *Bembecia muscaeformis. Panaxia dominula, Colias croceus, Boloria selene, Argynnis aglaja:* DIPTERA - *Eumerus sabulonum.*

Porthclais - Porthlysgi (SM7223-7423), 23rd June: DICTYOPTERA - *Ectobius panzeri;* HEMIPTERA - *Corizus hyoscyami, Henestaris laticeps, Trapezonotus ullrichi* (Alexander & Foster in press); COLEOPTERA - *Cetonia aurata, Amphimallon ochraceus, Sibinia arenaria;* LEPIDOPTERA - *Bembecia muscaeformis, Boloria selene;* DIPTERA - *Eumerus sabulonum;* HYMENOPTERA - *Podalonia hirsuta*; ISOPODA - *Armadillidium pulchellum.*

St David's Head (SM7228-7474), 16th and 22nd June: HEMIPTERA - *Henestaris laticeps, Liorhyssus hyalinus;* COLEOPTERA - *Helochares punctatus, Georyssus crenulatus, Trachys troglodytes, Apion scutellare:* LEPIDOPTERA - *Boloria selene. Argynnis aglaja:* DIPTERA - *Tropida scita;* HYMENOPTERA - *Podalonia hirsuta.*

Penberry, (SM7629), 22 June: MOLLUSCA - *Ponentina subvirescens*; DIPTERA - *Eumerus sabulonum.*

Waun Fawr (SM7626), 13th July: COLEOPTERA - *Trachys troglodytes:* LEPIDOPTERA - *Boloria selene.*

Tretio Common (SM7828), 13th July: COLEOPTERA - *Scydmoraphes helvola/sparshalli* (to be checked), *Phyllobrotica quadrimaculata:* LEPIDOPTERA - *Choreutis myllerana, Panaxia dominula, Boloria selene, Argynnis aglaja.*

Pwll Caerog (SM7830). 12th July: COLEOPTERA - *Amphimallon ochraceus, Caenopsis waltoni, Trichosirocalus dawsoni, Orobitis cyaneus:* LEPIDOPTERA - *Bembecia muscaeformis, Opsibotys fuscalis.*

Ynys Barri (SM7931-8132), 24th & 30th June: COLEOPTERA - *Olibrus affinis, Caenopsis waltoni, Trichosirocalus dawsoni:* DIPTERA - *Eumerus sabulonum.*

Treseissyllt (SM8835), 11th July: HEMIPTERA - *Beosus maritimus, Capsodes gothicus:* COLEOPTERA - *Amphimallon ochraceus:* LEPIDOPTERA - *Boloria selene. Argynnis aglaja.*

Good Hope (SM9140), 29th June: COLEOPTERA - *Trachys troglodytes, Cassida murraea, Trichosirocalus dawsoni, Caenopsis waltoni:* DIPTERA - *Ilione lineata, Tetanocera punctifrons;* LEPIDOPTERA - *Boloria selene, Cupido minimus*; HYMENOPTERA - *Myrmecina graminicola.*

Dinas Island (SN0040), 30th June: LEPIDOPTERA - *Standfussiana lucernea, Hadena luteago barrettii.*

Gernos (SN1248), 14th July: ISOPODA - *Armadillidium pulchellum;* HEMIPTERA - *Beosus maritimus, Capsodes gothicus;* COLEOPTERA - *Amphimallon ochraceus, Trichosirocalus dawsoni;* LEPIDOPTERA - *Hipparchia semele.*

CEREDIGION

Ty Hen (SN2852). 28th & 30th June: HEMIPTERA - *Dicranocephalus agilis* dunes behind Traeth Penbryn 30/vi/94 (Alexander & Foster in press): COLEOPTERA - *Anomala dubia, Cryptocephalus aureolus, Halyza 16-guttata*; LEPIDOPTERA - *Mompha lonqiella.*

New Quay - Cwm Tydu (SN3557-3759), : ISOPODA - *Armadillidium pulchellum;* HEMIPTERA - *Henestaris laticeps:* COLEOPTERA - *Caenopsis waltoni.*

Mynachdy'r Graig (SN5574), 28th June: ODONATA - *Ischnura pumilio;* HEMIPTERA - *Capsodes gothicus*; COLEOPTERA - *Enochrus affinis, Larinus planus;* LEPIDOPTERA - *Panaxia dominula, Boloria se!ene, Argynnis aglaja.*

CARMARTHENSHIRE

Dinefwr Park (SN6122), 27th June and 18th July: COLEOPTERA - *Helochares lividus, Coccinella quinquepunctata, Litodactylus leucogaster;* DIPTERA - *Oxycera pardalina, O. rara, Oplondontha viridula;* LEPIDOPTERA - *Argynnis paphia.*

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THE COUNTRYSIDE COUNCIL FOR WALES 'SURVEY AND EVALUATION OF INVERTEBRATE POPULATIONS OF WELSH PARKLANDS': DYFED - A. P. FOWLES

Although the potential of Dinefwr Deer Park was recognised by Harding (1978), up until 1986 virtually nothing was known of the invertebrate fauna of such habitats in Dyfed. Since then there has been a steady accumulation of information, especially for the Coleoptera, and we now have a much clearer (though still incomplete) idea of the possible significance of Dyfed's dead wood sites in a national context. However, very few of Dyfed's old parks have been investigated by entomologists and hence it is very difficult to determine the relative importance of individual sites. Indeed, apart from lichenological surveys, parklands have been more or less ignored by the conservation bodies in Wales and no attempt has been made to catalogue parklands or to assess the extent and quality of their old timber habitats.

This situation is very similar across the whole of Wales and, in order to define national priorities for conservation, in 1993 the Countryside Council for Wales embarked on a major project to locate Welsh parklands, evaluate their potential importance for wildlife, and undertake surveys of the best examples. The first problem in setting up such a project is how to define a parkland. Some parks have been traditionally maintained for centuries, especially in eastern Wales, and these are relatively easy to identify from OS maps. However, many parks have become fragmented over the years and any remaining concentrations of veteran trees are not necessarily associated with influential estates. Then again, there are many pasture woodlands with ancient oaks that are potentially important for saproxylic

invertebrates that do not correspond to open parkland. The woods of the Elan Valley in Brecon and Radnor are good examples. To compile an inventory of such pasture woodlands would necessitate an extensive field survey of Wales, which would be a long-term ideal for invertebrate conservation, but a more pragmatic solution was required.

For the purposes of this project, it was therefore decided to concentrate purely on open parklands. The first stage set out to identify the potential resource in Wales through examination of recent aerial photographs. Using a series of guidelines laid down in the contract specification, Wildlife & Countryside Services of Llanbadarn scrutinised over 16000 photographs covering the whole of Wales (Bray 1994). The resulting database of 201 sites is believed to include all sites in Wales where there are eight or more open-spaced mature native trees (excluding boundary trees) in any one enclosure. As expected, most parks are situated in eastern Wales, with Gwent, Powys and Clwyd together accounting for 65% of the total. Similarly, these eastern parks tend to contain greater numbers of parkland trees, with 70% of sites containing more than twenty-five trees located in the eastern vice-counties. Thirty parks were identified in the Dyfed vice-counties (ten in Carmarthen, six in Pembroke and fourteen in Ceredigion) and less than half of these contained more than twenty-five mature parkland trees.

From existing knowledge, 28 of the 201 sites on the Stage One database were excluded from further consideration as being of limited value for the conservation of saproxylic species. The potential significance of a further 13 sites, such as Dinefwr Deer Park, was already well known and this left 160 parks where virtually nothing was known of their conservation value, including the quality of their tree resource. Stage Two of the project therefore involved a rapid assessment of these remaining parks in February 1994 (EcoSurveys Ltd. 1994). The surveyors visited and photographed each site, identified and counted the mature and over-mature trees, commented on evident tree and pasture management, and noted the presence of salient features, such as sap-runs, hollow trees, tree planting, etc. Seven sites in Carms., six sites in Pembs. and five sites in Cards. were included in the Stage Two surveys.

Taking all available information into account, sixty-five parkland sites in Wales were considered likely to be of significance for saproxylic invertebrates at a vice-county or national level. Ten of these are in Dyfed: Dan-y-parc and Dinefwr Deer Park (Carms.); Cosheston Hall (Pembs.); Old Cilgwyn, Highmead, Parc Pont Faen, Trawscoed, Hafod, Parc Nanteos and Lovesgrove (Cards.). Ideally, comprehensive surveys of all these sites should be carried out over several seasons and using a range of sampling techniques. Realistically, however, it was necessary to refine this list of sites still further and thirty-two were selected as being most likely to support invertebrate (and/or lichen) assemblages of SSSI standard. Five Dyfed sites were included in this top echelon - Dan-y-parc and Dinefwr Deer Park (Carms.); Old Cilgwyn, Parc Pont Faen, and Parc Nanteos (Cards.). All of these sites were known to contain good numbers of ancient/overmature native trees (ranging from 55 at Dan-y-parc to 750 at Dinefwr Deer Park) with significant microhabitats.

Stage Three of the project was undertaken in July and August 1994 by entomologists from the Natural History Museum (Hammond & Hine 1995). Their brief was to spend an average of one day per site assessing the condition of the trees and sampling dead wood Coleoptera. Although several invertebrate Orders have species of conservation significance in parklands, saproxylic beetles were targeted because they were likely to yield more information on site quality on a brief visit. Considering how little time was spent at each site, this Stage of the project was very successful. 320 species of Coleoptera were recorded during the survey, including twenty-four species recorded for the first time in Wales. Two of these additions, both of which are Red Data Book species, came from parks in Carmarthenshire - *Scraptia testacea* from Dan-y-parc and *Ptinella limbata* from Dinefwr Deer Park.

Combining survey data with previous records for the five Dyfed parks allows a comparison to be made of the relative importance of each site for saproxylic Coleoptera. Table 1 lists the 'indicators of ecological continuity' (Harding & Rose 1986) known from each site and from these lists an index can be calculated (Alexander 1988a). Assessment of lists of saproxylic beetles from parklands throughout Great Britain (Harding & Alexander 1993) has indicated that sites with an index of twenty or more can be considered to be of national significance. Dinefwr is clearly in that category, along with two other Welsh parklands - Llanover in Gwent (index 21) and Powis Castle Park (index 20). That so few Welsh parklands are currently recognised as being of national importance for saproxylic invertebrates is chiefly due to three factors - under-recording, continuity of the tree resource, and biogeography.

Recording: The considerable advances made in our knowledge of Welsh saproxylic Coleoptera over the

past ten years or so are demonstrated by the fact that 40 of the 103 indicator species known from Wales have been recorded for the first time during that period. Few of the better sites have been sampled by coleopterists on more than one occasion and many Welsh parklands have never been surveyed at all. It can be anticipated that more species of saproxylic Coleoptera will be recorded from Wales in future years and a small number of other parks will reach or exceed the Index of Ecological Continuity threshold of 20.

Continuity: The history of Welsh parklands is not well chronicled but it is certain that few sites date back more than 300 years. Dinefwr Deer Park is believed to have been in existence for about 500 years but this is very much the exception rather than the rule. Deer parks often coincide with high quality pasture woodland sites but Whitehead (1950) could only list five deer parks surviving in Wales in 1949. Several herds were destroyed during the Second World War when parklands were ploughed up for food production and this undoubtedly also resulted in a loss of invertebrate interest from many sites. Removal of fallen timber and dangerous trees is inevitable in parks turned over to agricutural production, and the same is invariably true of parks used for public recreation. Post-war 'tidiness' in amenity parks, such as Margam in Glamorgan and Gelli Aur in Carms., reduces the availability of saproxylic microhabitats and hence the richness of the fauna. Forty-seven of the 160 sites surveyed during Stage Two of this project were either ploughed for arable or used for recreational purposes. There are also problems with long-term continuity of the dead wood resource. Very few parks in Wales have a sustained planting programme which will ensure the long-term replacement of over-mature trees. Sites such as Dan-y-parc, with its remarkable ancient oak pollards, are doomed because of the lack of trees in younger age-classes.

Biogeography: The saproxylic fauna of northern and western Britain is different to that of south-east England on which the list of 'Harding & Rose' indicators is largely based. "Many of the more specialist saproxylic invertebrate species are likely to be limited in their occurrence by the availability of suitable microhabitats (eg. red-rotten wood in old oaks, etc.). For various historical and possibly also climatic reasons the availability of suitable veteran trees with microhabitats of this type declines as one moves westwards and/or northwards in Britain. Climatic factors seem likely also to operate directly to influence the pattern of occurrence of some saproxylic species. In some instances, this may be associated with a general scarcity of arboricolous fungi, or at least of their fruiting bodies (Hammond & Hine 1995). Lott (1989) drew attention to the fact that a high proportion of Grade 1 & 2 'Harding & Rose' species are "associated with heartwood and require large, mature trees", hence it may be expected that some of these scarcer saproxylic beetles will be absent from Wales. In fact, only 27 of the 105 Grade 1 and 2 species listed by Harding & Rose have been recorded in Wales, whilst 76 of the 90 Grade 3 species are recorded. To adequately evaluate lowland pasture woodlands outside southern England on the basis of faunal inventories regional indicator lists need to be developed. This was attempted for an area of northern England by Garland (1983) and is largely applicable to other parts of northern and western Britain but ideally a separate index needs to be developed for Wales.

The saproxylic indicator species recorded from each of the vice-counties in Dyfed are listed in Table 1: Carms. (32), Pembs. (7), Cards. (35). To a certain degree these figures reflect the distribution of saproxylic microhabitats in Dyfed, but recording effort is much more significant. With the exception of a few records from Lawrenny Wood (Angus 1965, Alexander 1988b), very few coleopterists have paid any attention to dead wood habitats in Pembrokeshire. There are undoubtedly many more indicator species to be recorded for the vice-county. The Carmarthenshire list is dominated by surveys at Dinefwr Deer Park (eg. Alexander & Pavett 1992) and there are very few records of saproxylic indicator species from other parkland sites in the vice-county. Cardiganshire's parklands were frequently surveyed in recent years by DC Boyce and AP Fowles (Fowles 1994), such that the number of saproxylic indicator species known from the vice-county rose from 11 (Boyce 1988) to 35 in five years.

Table 1 also shows that 16 of the 51 saproxylic indicators known from Dyfed have not been recorded from any of the five parks included in the Stage Three survey. Indeed, twelve of these species have not been recorded from any of the ten parklands listed above as being of vice-county or national importance for saproxylic invertebrates. In part this is due to the unpredictability of recording saproxylic beetles - some of these species almost certainly occur on these sites - but it also emphasises the fact that many other dead wood sites in Dyfed will support interesting invertebrates. Examples include Pengelli Forest in Pembrokeshire, which is the only Welsh locality where *Hypulus quercinus* has been recorded; *Uleiota planata* is known only from a diseased elm at Llanelli (Pavett 1987); and the sole Welsh record of *Tetratoma ancora* is from Coed Nant Llolwyn in Cardiganshire. It is also possible that

some parkland sites in Dyfed have been overlooked, despite the thorough surveys described in this paper. For instance, Edwinsford, Carms., where ancient oaks are scattered down the valley amidst bracken and scrub, and Picton Park, Pembs., where 300 year old oaks have been underplanted with western hemlock, seem worthy of investigation.

The next Stage of the CCW survey will concentrate on the lichen assemblages associated with the 32 selected parklands but it is hoped that further work will be carried out on the invertebrates in the future. This is likely to take the form of extensive sampling of a few key sites in order to compile representative inventories for comparative purposes. Establishing well-inventoried reference sites will assist with the task of putting other parklands into a Welsh context and will provide valuable information for the development of a list of saproxylic indicator species for Wales.

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TABLE 1. SAPROXYLIC INDICATOR SPECIES RECORDED FROM THE VICE-COUNTIES AND *SELECTED PARKLANDS OF DYFED*

	DINEFWR DEER PARK	DAN-Y-PARC	OLD CILGWYN	PARC PONT FAEN	PARC NANTEOS	CARMS.	PEMBS.	CARDS.
Calosoma inquisitor (3)						44	-	46
Ptinella limbata (2)	*					44	-	-
Stenichnus bicolor (3)	*		*			44	-	46
Quedius aetolicus (3)						44	-	-
Quedius maurus (3)						-	-	46
Quedius scitus (3)	*					44	-	-
Sinodendron cylindricum (3)	*				*	44	45	46
Prionocyphon serricornis (2)						-	45	-
Stenagostus rhombeus (3)	*		*			44	-	46
Selatosomus bipustulatus (3)	*		*			44	-	46
Ctesias serra (3)	*		*			44	-	46
Dorcatoma chrysomelina (2)	*		*	*	*	44	45	46
Dorcatoma flavicornis (3)						-	-	46
Anitys rubens (1)				*		-	-	46
Ptinus subpilosus (2)						-	-	46
Phloiophilus edwardsi (3)					*	-	-	46
Thymalus limbatus (3)	*					44	-	-
Thanasimus formicarius (3)	*					44	-	-
Hylecoetus dermestoides (3)						-	-	46
Rhizophagus nitidulus (3)			*			-	45	46
Uleiota planata (1)						44	-	-
Pediacus dermestoides (3)	*		*			44	45	46
Biphyllus lunatus (3)	*					44	-	46
Triplax aenea (3)	*		*			44	-	46
Lathridius consimilis (1)						-	-	46
Mycetophagus atomarius (3)						-	-	46
Mycetophagus piceus (3)	*		*	*	*	44	-	46
Bitoma crenata (3)	*					44	-	-
Eledona agricola (3)	*					44	-	-
Prionychus ater (3)	*					44	-	-
Tetratoma ancora (3)						-	-	46
Tetratoma fungorum (3)					*	-	-	46
Pyrochroa coccinea (3)			*			-	-	46
Orchesia undulata (3)	*		*		*	44	-	46
Hypulus quercinus (2)						-	45	-
Melandrya caraboides (3)	*		*			44	-	46
Conopalpus testaceus (3)	*					44	-	-
Scraptia testacea (1)		*				44	-	-
Ischnomera caerulea (3)						-	-	46
Aderus oculatus (3)			*			-	-	46
Prionus coriarius (3)	*					44	-	-
Strangalia quadrifasciata (3)	*					44	45	46
Phymatodes testaceus (3)				*		-	-	46
Saperda scalaris (3)						-	-	46
Pentarthrum huttoni (3)						-	-	46
Mesites tardii (3)	*					44	-	46
Xyloterus domesticus (3)	*				*	44	-	46
Xyloterus lineatus (3)						44	-	-
Xyloterus signatus (3)	*				*	44	-	46
Xyloborus dryographus (3)	*					44	-	-
Platypus cylindrus (3)	*		*		*	44	-	46
Index of Ecological Continuity	29	3	15	7	10			

Nb: The 'ecological continuity' grade (Harding & Rose 1986) is given in brackets after the species name.

PROVISIONAL NOTES ON THE OCCURRENCE OF LONGHORN BEETLES (CERAMBYCIDAE) IN CARMARTHENSHIRE - I K Morgan

Longhorn beetles possess a characteristic appearance, being rather elongate and tapering towards the posterior, with wide marked "shoulders" on the front corners of the elytra and, most noticeably, long antennae. They are essentially woodland insects with most (in the larval state) boring through wood - whether tree trunks, branches or sometimes roots; a few inhabit stems of herbaceous plants. Much information on the biology of cerambycids is given in Duffy (1952). A very useful summary of the type of woody habitat utilised by various longhorns (as well as other helpful information) has been prepared by Dr David Lonsdale in Cooter *et al* (1991). Kaufmann (1946, 1947, 1948a,b and 1993) lists the occurrence of longhorns in the various Welsh counties and, as he correctly asserts (at least from a historical perspective, if not in more recent years), records from Carmarthenshire are sparse. Indeed, only fourteen species (out of a British total which exceeds sixty) have been recorded in the county. This rather low total is partially due to the difficulty in locating certain Longhorn species unless specialist collecting techniques, coupled with a substantial recording effort at the appropriate time of year are utilised. In contrast, the relatively easily-found *Strangalia maculata,* a conspicuous species which frequents umbel flowers in summer achieves modest coverage (see map). Certainly many additional species have been recorded in the neighbouring counties of Glamorgan, Brecon and Cardigan (Kaufmann loc.cit., Fowles (pers.comm.) and P.M. Pavett (1995)).

For example, two species of *Saperda (populnea* and *scalaris*), which are associated with poplars or willows have been recorded in Cardiganshire (VC46) whilst Glamorgan (VC41) has a particularly impressive recorded fauna, albeit (with the important exception of P.M. Pavett's recent work) comprising rather old records. *Gracilia minuta, Leptura livida, L. fulva, Strangalia aurulenta*, *S. melaneura, S. nigra,* and *Callidium violaceum* are species listed by Kaufmann (1946). Some of these are particularly old records from the Swansea area contributed by Lewis Weston Dillwyn (1829), and several of those listed are now great rarities in the British Isles. More recently, Mark Pavett has worked the Glamorgan fauna, finding for example, *Saperda populnea* near Aberdare and *Aromia moschata* in old willows at Crymlyn Bog. A full, detailed account of the Longhorns of Glamorgan by Mark Pavett follows this paper. The beautiful red *Pyrrhidium sanguineum* has been recorded in recent years in both Brecon (VC42) and Radnor (VC43) and it is certainly not impossible that this species will be found in NE Carmarthenshire.

The Species List for Carms VC44

Prionus coriarus Na - There are only two records of this species - one "found lying on its back on the floor below the light in the porch of Rhandirmwyn School" 22/782441 on 14th August 1972 (Dafydd Davies) and a singleton taken on 17th August 1986 at Dinefwr Deer Park 22/610225 by Tim Davies.

Ar*hopalus rusticus* - Noted in the extensive Corsican Pine plantations of Pembrey Forest 22/405015 in August 1991 by P. M. Pavett. One was also found under a pine log at Pembrey Burrows 21/414995 on 8th July 1995.

Asemum striatum - Three noted around a sawdust pile in conifer woodland at Abergorlech 22/575355, in bright late morning sunshine on 23rd May 1995.

Rhagium bifasciatum - Both this species and *R. mordax* have been rather widely recorded in the county, with *bifasciatum* associated with conifer deadwood and *mordax* with deciduous trees, particularly oak.

R. mordax - see *above*

Stenocorus meridianus - Two records only: (i) in Dinefwr Castle Woods 22/612217 on 18th June 1986 (K.N.A. Alexander, I.K. Morgan & A.P. Fowles) and (ii) near Craig-ddu, Cwm-y-rhaeadr 22/758437, July 1986 (IKM and D. Davies).

Grammoptera ruficornis - If sufficient "beating" of old hawthorns and other trees is undertaken, then this species would likely to prove widespread in Carmarthenshire.

Alosterna tabacicolor - noted as "common on hawthorn" at Dinefwr Park/Castle Woods, Llandeilo by Keith Alexander and Mark Pavett (Alexander & Pavett, 1992).

Judolia cerambyciformis - The stronghold of this local species is undoubtedly the hill country of the NE where it is found in a wide range of bushy situations. There is a minimum of 15 records for the county, including one of c.75 individuals feeding on wild raspberry *Rubus idaeus* flowers growing along rides in Crychan Forest 22/840405 in late June 1994. It is also found on wild rose blossom, including *Rosa sherardii* in the uplands.

Strangalia maculata - A widespread and easily-found species, probably the most familiar longhorn to the novice coleopterist. Flowers frequented by this species include hogwood *Heracleum sphondylium,* hogweed water-dropwort *Oenanthe croccata*, angelica *Angelica sylvestris,* wild parsnip *Pastinacea sativa,* meadow-sweet *Filipendula ulmaria* and bramble *Rubus fructicosus* agg. Sage (1955) noted the occurrence of the varieties *separata* Kaufmann and *seminotata* Kaufmann, "as well as the typical form" at Laugharne on 5th August 1954.

Strangalia quadrifasciata - There are eleven records of this nationally-uncommon species, it having been recorded from old clumps of grey willow *Salix cinerea,* alder *Alnus glutinosa,* an ashwood and one taken as it emerged from a decrepit hybrid poplar *Populus* x *canadensis* 'Serotina'. Like the commoner *S. maculata* it is regularly taken on umbel flowers and it particularly favours wild parsnip *Pastinacea sativa* in Pembrey Forest.

Clytus arietus - The "wasp beetle" is probably widespread, if not numerous.

Pogonocherus hispidus - Twice recorded in 1994, the sole records. A copulating pair were found on the evening of 12th June on a thin dead branch of a senile apple at Erw-las, Llwynhendy 21/538994, and the next day one was taken in the old orchard at "Garden Cotage", Gelli Aur 22/598203.

Leiopus nebulosus - only noted on 17th June 1988, at Dinefwr Deer Park 22/608227 when specimens were independently taken by D.C. Boyce and IKM.

Acanthocinus aedilus - There are two references to this species as occurring in the county. Kaufmann (1946) lists the species as "Caermarthen" [=Carmarthen), 1937 (and noting it as a new county record), whilst Brunker (c.1950) in his unpublished manuscript notes on the Llanegwad area mentions its occasional appearance in the coalfield area. As Kaufmann (loc.cit.) observed, these records undoubtedly refer to "importations in pit-props" during the hey-day of coal-mining in the area.

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Sage, B.L. (1955) - In *Nature in Wales,* **1**, No l: 14 (Spring 1955).

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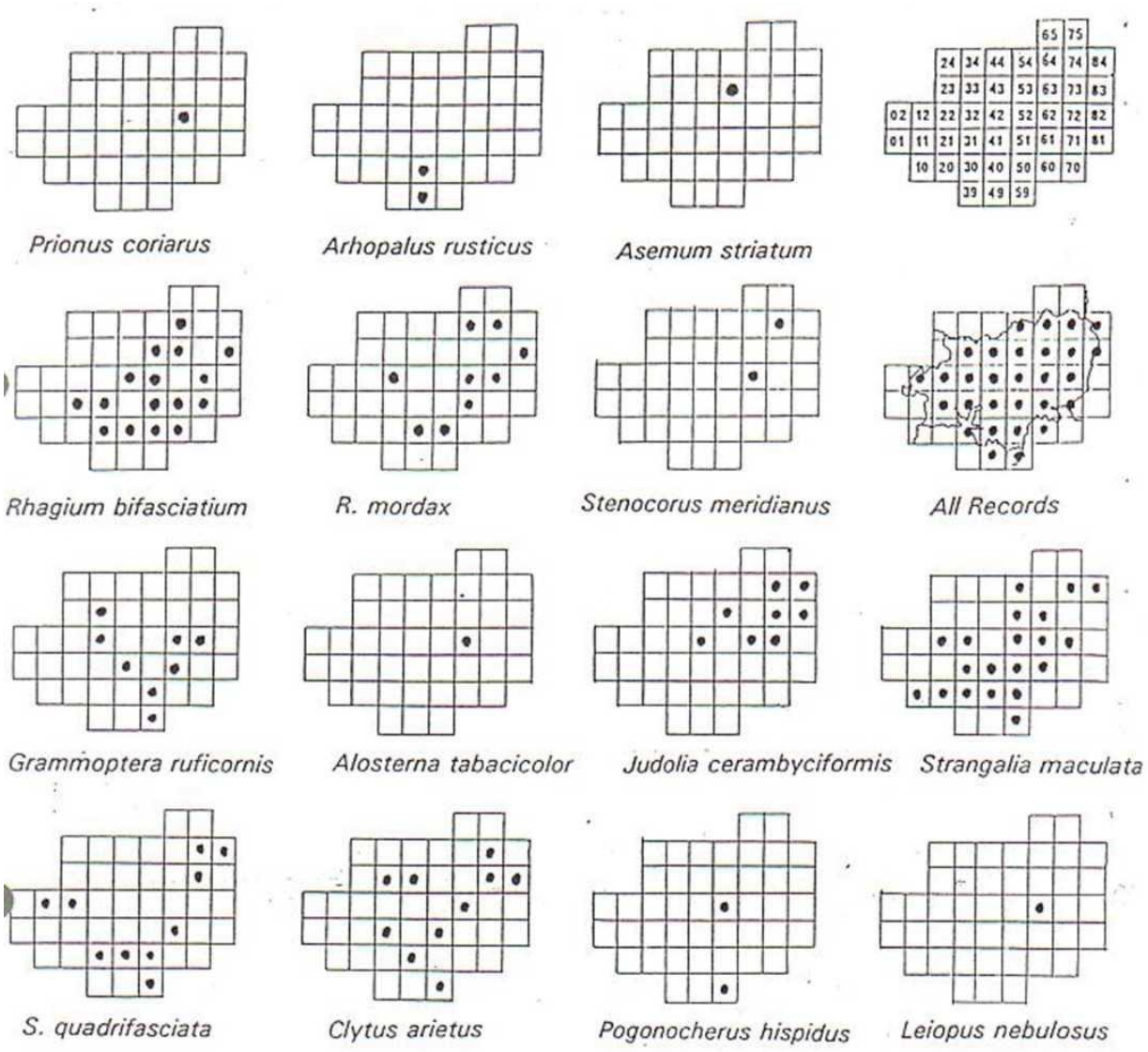
MAPS SHOWING THE DISTRIBUTION OF LONGHORN BEETLES IN CARMARTHENSHIRE ARE GIVEN ON THE NEXT PAGE.



TWO SPECIES OF COLEOPTERA BELIEVED TO BE NEW TO PEMBROKESHIRE, (vc 45) - G S MOTLEY & J MURPHY

During the summer of 1995, the authors recorded two species of Coleoptera near Monkstone Point, Tenby, which were thought to be new to Pembrokeshire. On the 23 June, a single specimen of the deadwood beetle *Dorcus parallelipipedus* (lesser stag beetle) was found resting on a wooden fence post at the edge of broadleaved woodland (mainly sycamore and ash) by the coastal path (SN145032). A brief search was made of the surrounding area, but no other specimens were located, and no sap-runs (the food source of the beetle) seen. At a later date (5.8.95). at the same site, we conducted a search

for *Dorcus* (which is usually inactive in the daytime) by torchlight in the early hours of the night. The broadleaved woodland was examined, but there was little invertebrate activity apart from harvestmen, slugs and dark bush-crickets *Pholidoptera griseoaptera.* Some of the trees in an adjacent conifer plantation (SN145033) were also checked for beetles. Although no *Dorcus* were observed, a single specimen of a large brown longhorn beetle was found resting on bark at the base of a pine. This was later identified by I K Morgan as *Arhopalus rusticus.* This species, which was once confined to Scotland has spread into England and Wales this century, due it is thought, to the increase in commercial conifer planting.

D. parallelipipedus was first recorded in Dyfed by IKM in driftwood at Pembrey Burrows (vc 44), on 26.7.1991. The first Dyfed record of *A. rusticus* was by P M Pavett at Pembrey (in a Corsican Pine plantation), Aug. 1991; IKM has also subsequently noted it under a pine log at Pembrey Burrows. Searches of other coniferous plantations (particularly of *Pinus* spp.) in Dyfed may turn up further records for this species.

Other invertebrates observed by the authors near Monkstone Point included the carabids *Dromius meridionalis* (beaten from larch) and *Agonum dorsale* (in grassland), and a caterpillar of the privet hawkmoth *Sphinx ligustri* feeding on privet *Ligustrum vulgare.*

ERRATUM

The following are errors noticed in recent DIG Newsletters.

DIG 27: 8 - *Hybomitra montana* is also known from Capel Dyddgen quarry 22/467127 (9.6.1989), IKM. (Also note P M Pavett's record for 'SW of Dinefwr Castle Woods 22/609222 (4.6.1988) in DIG **30**: 17).

The map on P11 (of DIG **27**) should NOT show a record for *H. muhlfeldi* from SN (22) 31.

DIG 28: 10 - *Atherix* mis-spelt (as *'Antherix').*

DIG 30: 14 - *Dioctria linearis* at Cors Goch Llanllwch 22/36-18- (AE Stubbs, 20.6.1994) is actually a new vc record for Carms. The 'coastal records' referred to are of *D.rufipes.*

DIG 30: 16 - Confusion here! *'Pissodes picea'* actually refers to the common weevil *Hylobius abietus.*

I K Morgan, Nov. 1995

AN INFLUX OF THE MIGRANT YELLOW-WINGED DARTER Sympetrum flaveolum IN S W WALES, 1995 - S & A COKER

The first indication that there might be an influx of migrant dragonflies in Pembrokeshire, (vc 45) was on 3 August 1995. On that day a single male was seen on Skomer Island. Between then and 11 September 1995 it was found at twenty three different sites, but despite visits to suitable sites in the north east of the county no *S. flaveolum* were seen in that area. Records so far received for S. *flaveolum* are listed below.

Grid ref	Date	Site name	Habitat	Recorder
11/976943	06081995	Bosherston Lily Ponds	5	sac

Southern end of ponds, east bank in tall grass single S. *flaveolum* found.

12/72-09- 03081995 Skomer Island 70 gt
One male S. *flaveolum* at least.

12/73-05- 27081995 Skokholm Island 40 mb
Single male *S. flaveolum.*

12/775082 22081995 Marloes Mere 50 jwd
Two *S. flaveolum,* plus more seen in distance.

12/734251 07081995 Trefeiddan 40 sac
About 20m in from southern end of road along eastern side of fen. Many S. *flaveolum* seen over dryish bogbean area. Pair *in cop,* female with shaded wings around midpoint.

12/734251 08081995 Trefeiddan 40 jwd
About 20m in from southern end of road along eastern side of fen. Many S. *flaveolum* seen. Pair *in cop,* mostly male c20.

12/771266 08081995 Dowrog west 50 jwd
Between firebreak pond and main pool, eight S. *flaveolum* (6 male - 2 female) seen.

12/889001 06081995 Broomhill Burrows 10 sac
Dry, many lakes disappeared many with tall grass. 15-20 *S. flaveolum* male and female, pair *in cop* in dunes bounding largest pool.

12/891100 18081995 Romans Castle Low Pd 50 sac
Pond below pasture at southern end of farm. Several *S. flaveolum* in tall veg. around northern edge with one *S. sanguineum.*

12/864205 14081995 Bathesland Pond 40 sac
S. flaveolum in 'reed' area between road and pond. Several seen.

12/888213 14081995 Roch Valley Pond 65 sac
S. *flaveolum* in tall 'reed' in valley bottom. Only 2 or 3 seen.

12/936060 21081995 Waterston Pool 50 sac
5 S. *flaveolum* found along eastern end on pool margin.

12/920102 21081995 Sunnyhill lower pond 55 sac
At least three *S. flaveolum* found along northern/eastern margin, set back a little from water. *A. mixta* (flying only), blue but much smaller than *A. imperator* flying with it.

12/994262 11081995 Stradland Moor 120 sac
Northern edge of Ambleston Common accessed through farm. Moorland very wet and soft. Several *S. flaveolum* seen.

12/911377 05081995 Llandruidion West Pd 120 sac
Pond/res in ungrazed wet pastures, 15-20 *S. flaveolum* seen.

12/913379 05081995 Llandruidion East Pd 120 sac
2-3 *S. flaveolum* in edge vegetation to pool in ungrazed pasture.

12/905407 09081995 Porthsychan 25 ghr
Two male S. *flaveolum* near coast/stream on side of rough grassland.

21/120995 08081995 Penally Marsh 5 sac
Single *S. flaveolum* caught in tall herb veg alongside dried out stream in SW corner field.

22/064023 23081995 Summerton Cot Pond 35 sac
Pond now very overgrown, almost disappeared. Still wet when walked across. Two *S. flaveolum* found along northern boundary in tall vegetation.

22/011172 13081995 Valley Fm West Pond 45 sac/jwd
Single female *S. f/aveolum* in tall veg in pond.

22/015173 10081995 Valley Lake 45 jwd
Several *S. flaveolum* males seen.

22/05173 13081995 Valley Lake 45 sac/jwd
10-15 *S. flaveolum* in wet pasture beside lake.

22/015173 04091995 Valley Pool 45 sac

22/015173 11091995 Valley Pool 45 sac
S. *flaveolum* male and female on tall grass edge at eastern end of lake.

22/039177 09081995 Clarey Dale 60 jwd
c 15 *S. flaveolum* seen mostly males.

22/039177 13081995 Clarey Dale 60 sac/jwd
West end of lake and bordering fields to the north west. About 15-20 *S. flaveolum* in tall grass beside lake.

22/04177 13081995 Clarey Dale Main Lake 60 sac/jwd
Eastern end of lake and bounding fields. Single S. *flaveolum* seen.

22/011268 13081995 Wallis Pond 130 sac
Single S. *flaveolum* in wet pasture just upstream of pond.

22/016301 22081995 Pd S of Waun Fawr 165 sac
Single *S. flaveolum* female in reeds near pond. Pond to the south of common.

22/164149 24081995 Whitehouse Mill Pds 40 sac
Single male *S. flaveolum* in edge veg to smaller pond.

sac = S & A Coker; jwd = Jack Donovan; gt = Graham Thompson; ghr = Graham Rees; mb = Michael Betts.

The observed behaviour of S. *flaveolum* in Pembrokeshire seems to have been similar to that recorded in the rest of the country. Virtually all sites were associated with open water but male 'territories' were not over the water but in the tall damp grassland vegetation close to the water. Very few males were seen over open water. The presence of females were noted at several sites and pairs *in cop* were seen at Trefeiddan and Broomhill Burrows. These two sites and Dowrog, to the south of the main pool seem to be the most likely places where breeding may have taken place and should certainly be monitored next year. Other species which were seen to be more widespread during this period were *S. sanguineum* (4 sites), *O. cancellatum* (3 sites) and *A. mixta* (3 sites).

In Carmarthenshire (vc44), it was reported from two sites :

(i) Penrhyngwyn, Machynys 21/515975 a single male seen in a ditch with *Scirpus maritimus* on 7 August (B Stewart, Sandra Turner & I K Morgan) - a new vc record.

(ii) Cors Goch Llanllwch 22/363186 a male on 8 August (L Gander & Steve Lucas).

At the time of writing, only one record is available from Ceredigion (Cardiganshire, vc46):
Ten (9 male, 1 female) at Rhos Pil Bach SSSI 22/367535, 14 August - Lin Gander.

There were several records from West Glamorgan, (vc41) the following account of yellow-winged darters at Broad Pool, Gower being provided by Barry Stewart and Sandra J Turner:
"On 5 August 1995, at Broad Pool on the Gower Peninsula (21/510910), two yellow-winged darters *Sympetrum flaveolum* were located near the western side of the pool and were observed for 15 minutes around 1400 hours. Both were males and one appeared to be

holding territory in a small dried up boggy flush *circa* 8m^2 dominated by *Potamogeton polygonifolius* and surrounded by *Juncus conglomeratus* and *Pteridium aquilinum.* On two occasions with only one individual returning. These may have been competing for this suitable hollow, which was sheltered from the strong breeze blowing across the common. The only other odonates recorded in the vicinity were *circa* 1 5 common darters *S. striolaturn,* although no interactions between the two species were noted as none were seen to enter the area held by *S. flaveolum".*

P M Pavett also reported seeing S. *flaveolum* on the cliffs at Overton 21/458848 on 2 August and at Horton 21/485855 on the next day.

LESSER EARWIG *Labia minor* ON MYNYDD DU - M E A Shardlow 1995

During a study of the spider fauna of the Black Mountain, (Mynydd Du), Carms., vc44 in 1992 (see Shardlow, 1994) a large number of specimens from other groups were collected. To enable the re-use of flasks the contents of several were quickly inspected prior to disposal. In a jar containing several dozen small staphylinids, collected between 18 July and 10 August 1992, a small earwig was spotted. On examination the specimen proved to be a female *Labia minor.*

This record is unusual for several reasons. At 8.5mm long, the specimen is large enough not to key out as *Labia minor* in the best currently available key. The species is usually associated with human habitations and lowland areas. This specimen fell into a pitfall trap over 2km from the nearest human dwelling, and on the mountain's crest at an altitude of 650m (SN796217). *Labia minor* is local in Britain, but rarely recorded in Wales with only a few other modern occurrences.

Unlike *Foriicula auricularia* (the common earwig), *Labia minor* is a strong flyer and is regularly recorded from moth traps. It is therefore likely that the single specimen was not a resident of the mountain but a dispersive individual passing through the area.

Acknowledgements:
Many thanks to Chris Haes for confirming my somewhat wary identification, and to Gareth Rondel for assistance with the project.

Reference
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PHAROAH ANTS *Monomorium pharaonis* AT TUMBLE, CARMARTHENSHIRE - I K Morgan.

Mr R H Davies of Llanelli Public Library recently drew my attention to an article in the *Llanelly Mercury* of Thursday, October 19 1950, entitled *'Red Raiders Repelled at Tumble!'.* Apparently the introduced species *Monomorium pharaonis* had been infesting houses at High St., Tumble (Carms. vc44, c SN54-11-). An earlier report (in the *Llanelly Mercury* of September 21 1950) by the Sanitary Inspector, Mr E Bibbs had drawn the public's attention to this pest.

Examples of ants had been sent to the British Museum where identification had been reached. This is seemingly the first record for the vice-county.

Bembidion laterale on the Burry Inlet - Barry Stewart

Observations

On 15 June 1995, whilst surveying the distribution of cockles *Cerastoderma edule* along a transect across the northern half of the Burry Inlet off Penclacwydd (Carms. vc44). large numbers of small carabid beetles were noted actively scurrying on a loosely packed sandy sediment in the middle of the

estuary in bright sunlight. The elytra of many individuals was a dark, dull, sandy colour and the densest concentration was at station 9 (SS 530972), 450m south of the saltmarsh edge. Because the location was so unusual for coleoptera, one or two were taken and were later identified that day by Ian Morgan as *Bembidion laterale.*

The number of individuals was relatively easy to assess because of the exposed nature of the site and was estimated to be around $10m^2$ at maximum density. Unfortunately the extent of occurrence was not determined, but the area of similar substrate extended for many hundreds, if not thousands of metres to the east and west. Along the transect *B. laterale* occurred in only three stations (8, 9 & 10, positioned at 400m, 450m and 500m from the saltmarsh edge), all of which were on sandy sediments. Stations 1-7 were on much wetter, muddy sediments which unlike the sandy sediments had dense populations of bivalves.
An interesting fact was the state of the tide, which at the time of the observations was only four hours after a very high spring tide. Therefore the tidal current over this area must have been very strong. It is likely that these beetles buried into the well-aerated sandy substrate while the tide was in, but it is also possible, although far less likely, that they flew into the area once the tide receded. It was noted that the whole area was dotted with small holes which matched the size of the beetles which were frequently seen to disappear down.

On the 27 June this species was also noted in a similar habitat just off Llanrhidian Saltmarsh (SS 499944, Glam. vc41) where only 6-8 were seen.

Discussion

The distribution of *B. laterale* given by Turin *et al.* (1977) (see figure 1) shows its affinity for coastal districts. In the Netherlands the species occurs from late April to early September with peak abundance occurring in June. Larvae were found in June and July. A North American equivalent, placed in the *laterale* species group, was identified from museum specimens collected at a Californian rocky-coast site in 1965 and named *B. palosverdes.* This colony, which has not yet been found subsequently, constitutes the only rocky-coast *Bembidion* to occur in North America (Kavanaugh & Erwin, 1992). The species' status in Britain is described by Lindroth (1974) as abundant in the tidal zone, however. Forsythe (1987) states there are <100 records.

The ecology appears not to be well studied, but being a halophilic species it must be adapted to cope with a wide range of salinities and its activities will be governed to some degree by tidal cycles. Green (Thiele, 1977) recorded it as a predator of the amphipods *Corophium volutator* and *Talitrus saltator* along with the larvae of Dolichopodidae in areas where *Nebria comp/anata* were studied. However, in the area off Penclacwydd where the beetles were observed foraging, none of the above prey items were recorded. *C. volutator* was in abundance in the viscous muds *circa* 400m away, and only the isopod *Sphaeroma rugicauda,* the amphipod *Bathyporeia pilosa* and polychaete *Owenia fusiformis* were recorded where the beetles were found, and only at low densities. A survey of the invertebrate fauna of the Burry Inlet by Banister & Poopetch (Nelson-Smith & Bridges, 1977) list other species as occurring in this zone, some of which may have been potential prey items utilised. These included: *Bathyporeia pelagica, Corophium arenarium, Urothoe grimaldi* and *Eurydice pulchra.*

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