

Riverfly Monitoring Newsletter

Southwest Wales

July 2015

A word from your Natural Resources Wales Co-ordinator

Spring is an excellent time to undertake ecological monitoring in rivers. The impacts of acidification will be clearly evident and the effects of farm pollution should still be obvious following wet winter weather with livestock kept indoors and waste management systems put under significant strain. It's encouraging, therefore, that volunteers have got out in the last few months and gathered useful information in many parts of Pembrokeshire, Ceredigion and Carmarthenshire.

Non-native species were reported at two of the sites. There was himalayan balsam on the bank of the Syfynwy at Gelli and skunk cabbage on the Eastern Cleddau at Glanleddau. The skunk cabbage has been reported to the web-site of the GB Non-native species secretariat because it is a species that is in the process of range expansion. However, it is well worth reporting sightings of all invasive plant and animals because I can add them onto our data base and pass the information onto the local records centre. This will increase knowledge of the distribution of these damaging species. The most common species you'll find are Himalayan balsam and Japanese knotweed. These plants are very distinctive but if in any doubt you can check identification features on the web at <http://www.nonnativespecies.org/index.cfm?sectionid=47>. You could also take photographs and submit them with your monitoring data.

An interesting photograph was submitted from the Taf.



This insect resembles an adult caddis in terms of the wing shape and the length of the antennae. In fact it is the yellow-barred long-horn (*Nemophora degeerella*) which is a type of moth. Moths and caddis are closely related and their flight is often similar. In this case the extreme length of the antennae and the distinctive yellow markings are clues that this is not a caddis which tend to be planer looking. Identification was provided by users of the web-site www.ispotnature.org. This is a very useful site if you are unsure of the identity of something you find in the countryside. Even very obscure things can be identified from photographs by the dedicated users of this site.

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Another nice photograph comes from Clive Parrish of the Ceredigion monitoring group:-



This picture of a March Brown (*Rhithrogena germanica*) was taken above the confluence of the Teifi and Brefi during a small hatch on 17th March. The March Brown has been described as the most famous British mayfly and is very unusual amongst mayflies for emerging so early in the year. It is threatened across Europe and Britain may be potential stronghold for this species which has been copied by anglers for over 500 years,

Best wishes,

Graham Rutt

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TRIM Results

Lower Teifi

		AFON MORGENNAU SN 21547 42948 (APPROX)		AFON ARBERTH SN21906 43695	
Date : 31 st March 2015		Category	Recorded	Category	Recorded
CADDIS FLIES	Caseless	A	1	A	2
	Cased	A	2	A	4
UPWINGED FLIES	Baetidae (Olives)	A	7	A	7
	Ephemeridae (Mayfly)				
	Ephemerellidae (B.W.O)			A	4
	Heptageniidae (Yellow May)	A	5		
STONEFLIES	Stoneflies	B	60	A	3
SHRIMPS	Shrimps (Gammarus)	A	2	A	3
Leeches	Leeches	A	1	A	1
Snails	Snails				
Hog louse	Hog Louse				
Saucer Bugs	Saucer Bugs				

Low numbers of invertebrates recorded especially on the Arberth. This is in keeping with results from Summer 2014 and is worthy of investigation.

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30th March 2015		AFON CERI PONT-WNDA Recorded	afon CERI FELIN GWM Recorded	AFON DULAS Recorded	afon CERI CWMDU Recorded
CADDIS FLIES	Caseless	1	2	2	3
	Cased	2	9	3	5
UPWINGED FLIES	Baetidae (Olives)	100	100	100	80
	Ephemeridae (Mayfly)				
	Ephemerellidae (B.W.O)				
	Heptageniidae (Yellow May)	80	80	50	100
STONEFLIES	Stoneflies	3	5		2
SHRIMPS	Shrimps (Gammarus)	10	5	5	5
Leeches	Leeches				
Snails	Snails				
Hog louse	Hog Louse				
Saucer Bugs	Saucer Bugs				

All these sites have reasonable numbers of sensitive species.

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Middle Teifi

		SITE NO 10		SITE NO 9		SITE NO 8	
		SN448436		SN425469		SN440483	
		CLETTWR		CLETTWR FAWR		CLETTWR FACH	
Date: 20th April 2015		Category	Recorded	Category	Recorded	Category	Recorded
CADDIS FLIES	Caseless	A	5	A	2	A	4
	Cased	A	3			A	2
UPWINGED FLIES	Baetidae (Olives)	B	20	B	26	B	50
	Ephemeroidea (Mayfly)						
	Ephemerellidae (B.W.O)						
	Heptageniidae (Yellow May)	B	40	B	14	B	20
STONEFLIES	Stoneflies	A	4			B	25
SHRIMPS	Shrimps (Gammarus)			A	2	A	7
Leeches	Leeches						
Snails	Snails						
Hog louse	Hog Louse						
Saucer Bugs	Saucer Bugs						

There was a complete lack of stoneflies on the Clettwr Fawr and other species were not abundant. This should be followed up if the next sample shows equal impoverishment.



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		COLLECTION POINT 11 SN368446 RIVER CWERCHYR		COLLECTION POINT 12 SN368466 RIVER GRAN		COLLECTION POINT 13 SN464376 RIVER TALOG		COLLECTION POINT 14 SN442379 RIVER TYWELI	
Date : 25 th March 2015		Category	Recorded	Category	Recorded	Category	Recorded	Category	Recorded
CADDIS FLIES	Caseless	A	2	A	4	A	4	A	3
	Cased	A	5	A	5	A	2	A	8
UPWING ED FLIES	Baetidae (Olives)	C	100	C	150	C	200	C	100
	Ephemerid ae (Mayfly)								
	Ephemerell idae (B.W.O)								
	Heptagenil dae (Yellow May)	B	20	B	50	B	40	B	20
STONEF LIES	Stoneflies	B	10	B	20	B	20	A	2
SHRIMP S	Shrimps (Gammaru s)	B	20	A	0	A	0	A	1
Leeches	Leeches								
Snails	Snails								
Hog louse	Hog Louse								
Saucer Bugs	Saucer Bugs								

Good abundances present of all sensitive species. No perceived problems.



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		Site No.19 Teifi 1		Site No.20 Teifi 2		Site No.21 Duar		Site No.22 Cledlyn		Site No.23 Grannell	
Spring 2015		Categor y	Recode d	Categor y	Recode d	Categor y	Recode d	Categor y	Recode d	Categor y	Recode d
CADDIS FLIES	Caseless	A	6	A	6	B	10	B	20	A	5
	Cased		0	A	3	B	30	B	10	A	2
UPWINGED	Baetidae (Olives)	B	40	B	20	C	100	B	90	C	300
FLIES	Ephemeroidea (Mayfly)		0		0		0		0		0
	Ephemeroidea (B.W.O)		0		0		0		0		0
	Heptageniidae (Yellow May)	C	100	B	30	B	20	C	100	C	100
STONEFLIES	Stoneflies	B	20	B	40	B	60	B	20	B	30
SHRIMPS	Shrimps (Gammarus)	A	3		0	B	10		0		0
Leeches	Leeches	A	1	A	4	A	1	A	1		0
Snails	Snails		0		0		0	5	0		0
Hog louse	Hog Louse		0		0		0		0		0
Saucer Bugs	Saucer Bugs		0		0		0		0		0

Excellent abundances found at all sites.

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Upper Teifi

		SITE NO. 26 AFON BRENNIG		SITE NO. 27 AFON TEIFI/BREFI		SITE NO. 31 AFON TEIFI ABERCARFAN		SITE NO. 32 AFON TEIFI PENRALLT	
		Category	Recorded	Category	Recorded	Category	Recorded	Category	Recorded
March 2015									
CADDIS FLIES	Caseless	B	10	B	13	A	6	B	14
	Cased	B	16	B	20	A	1	B	27
UPWINGED FLIES	Baetidae (Olives)	B	80	B	94	B	44	C	142
	Ephemeroidea (Mayfly)								
	Ephemerellidae (B.W.O)								
	Heptageniidae (Yellow May)	B	49	B	45	B	23	B	50
STONEFLIES	Stoneflies	B	26	B	16	B	36	B	18
SHRIMPS	Shrimps (Gammarus)			A	6				
Leeches	Leeches			A	1			A	4
Snails	Snails			A	1			A	2
Hog louse	Hog Louse			A	1			A	2
Saucer Bugs	Saucer Bugs			A	5			A	2

CATEGORY	Abundance	Record	CATEGORY	Abundance	Record
A	1 to 9	Count	C	100 - 99	Nearest 100
B	10 - 99	Nearest 10	D	Over 1000	Nearest 100

NOTES Site 26 Afon Brennig 1 Stone Loach, 1 Bullhead 1 Cleg larva Site 27 Afon Teifi/Brefi 1 Bullhead 1 Cleg larva Site 31 Afon Teifi Abercarfan N/A Site 32 Afon Teifi Penrallt 1 Stone Loach, 1 Minnow, 1 Cleg larva.

All sites support a diverse fauna.

Rheidol

No data submitted for the Rheidol

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Pembrokeshire results

Western Cleddau

		St Catherines Bridge		Western Cleddau near Cutty Bridge		Cartlett Brook		Anghof Beulah Bridge		Camrose Brook		Pelcombe Brook	
Location code [for future interactive map]		1		2		16		31		25		3	
GPS		SM945198		SM941188		SM 983 181		SM 981 284		SM 927199		SM 9391177	
Date		12/04/2015		12/04/2015		22/03/2014		28/05/2014		06/12/2014		13/04/2015	
Name of Monitors		DN/JC		DN/JC		WE/BE		JCu/PP		SH/JE/JCu		DSt	
Conditions						Fairy high, slightly coloured.		Low flows.		Low flows, clear water.		Low flows, clear water.	
Caddis Flies	Cased Caddis	B	30	B	20	B	15	B	10	A	6	B	13
	Caseless Caddis	B	10	B	10	A	2	A	8	A	5	A	1
Mayfly nymphs	Up-wing (Ephemeroidea)	A	1	A	1	A	5	-	0	-	0	A	1
	Blue-winged Olive up-wing	-	0	A	6	B	50	B	30	-	0	-	0
	Flat-bodied up-wing (Heptageniidae)	C	200	B	60	B	50	B	10	-	0	-	0
	Olive up-wing (Baetidae)	B	50	B	20	C	150	C	140	B	30	B	53
Stonefly nymphs	Stonefly nymphs	B	10	A	1	-	0	B	10	A	1	-	0
Freshwater shrimps	Freshwater shrimps	B	30	A	3	B	30	A	4	B	22	B	35
Leeches	Leeches	B	10	A	2	A	3	-	0	-	0	B	19
Snails	Spire shells/ramshorn	-	0	-	0	-	0	A	2	-	0	A	4
Hoglouse	Hoglouse	-	0	-	0	B	30	-	0	-	0		0
Density/biomass indicator (totals)		341		123		335		214		64		126	
Previous Density/biomass indicator (totals)		5.12.14 = 170		5.12.14 = 115						30.6.13 = 84		30.6.13 = 84	
Previous Density/biomass indicator (totals)		16.6.14 = 253		16.6.14 = 512								3.12.12 = 302	
Previous Density/biomass indicator (totals)		22.3.14 = 335		14.04.14 = 199						-		-	
Previous Density/biomass indicator (totals)		30.09.13 = 294		07.10.13 = 126				15.09.13 = 173		-		-	
Previous Density/biomass indicator (totals)		24.6.13 = 1074		25.6.13 = 447		7.5.13 = 142		-		-		-	
Previous Density/biomass indicator (totals)		16.4.13 = 434		16.4.13 = 101		-		-		-		-	
Previous Density/biomass indicator (totals)		26.2.13 = 103		26.2.13 = 54		-		-		-		-	
Previous Density/biomass indicator (totals)		26.10.12 = 558		-		-		-		-		-	
Other		Fish											
Previous Density/biomass indicator (totals)		Other						Large quantity of small beetles and a number of earth worms.		2 limpets, one worm. Lots of very small Baetids and midge larvae.		3 worms.	
Comments	No weed in sample area. Water temperature 9C. No hatch	No weed in sample area. Water temperature 9C. No hatch				Stony shallow area.		Nearby property owner keen to be kept informed.				Two small eels.	

Samples from the Camrose and Pelcombe Brook sites are both impoverished with a total absence of heptageniidae and only a single stonefly – in the Camrose. These streams are well known to be affected by farm pollution and have been subject to recent investigations by NRW staff. The other sites appear relatively healthy.

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Eastern Cleddau

		Narberth Brook - Shipping Factory		Narberth Brook - Canaston Bridge		Narberth Brook at Twll Lane		Syfni - Gelli Bridge		Eastern Cleddau - Glancladdau Farm		Afon Wern - Tir Bach, Rhos Bach south	
Location code [for future interactive map]		6		27		43		12		13		14	
GPS		SN 09582 14482		SN 06727 15105		SN12040 13834		SN 082 195		SN 098 212		SN 12923 28476	
Date		18/04/2015		27/04/2015		21/04/2015		21/04/2015		21/04/2015		18/03/2015	
Name of Monitors		JH/JeH		JH/JeH		GJ/RD		RB/CB		RB/CB		JS/	
Conditions		Depth 15-30cm		Depth 10-25cm		Low flow levels.		Low clear water		Low clear water		Cold, clear, medium height	
Caddis Flies	Cased Caddis	B	25	B	51	B	33	A	4	B	15	A	7
	Caseless Caddis	A	5	A	4	A	2	B	20	B	80	-	0
Mayfly nymphs	Up-wing (Ephemeraeidae)	A	1	-	0	A	4	-	0	-	0	-	0
	Blue-winged Olive up-wing	B	25	B	97	A	3	-	0	-	0	A	10
	Flat-bodied up-wing (Heptageniidae)	B	52	B	19	B	16	B	35	B	85	B	18
	Olive up-wing (Baetidae)	B	22	B	99	B	16	B	45	B	25	B	50
Stoneflies	Stonefly nymphs	A	1	-	0	A	12	B	45	B	80	B	17
Freshwater shrimps	Freshwater shrimps	B	27	B	20	C	120	B	20	-	0	-	0
Leeches	Leeches	A	1	-	0	A	1	A	4	-	0	-	0
Snails	Spire shells/ramshorn	A	2	A	2	-	0	-	0	-	0	-	0
Hoglouse	Hoglouse	-	-	-	0	A	1	-	0	B	20	-	0
Density/biomass indicator (totals)		161		292		208		173		314		102	
Previous Density/biomass indicator (totals)		26.6.14 = 167		23.7.14 = 80				6.3.15 = 115		6.3.15 = 216		19.10.14 = 112	
Previous Density/biomass indicator (totals)		26.6.14 = 167		12.3.14 = 289				27.11.14 = 70		27.11.14 = 101		16.07.14 = 102	
Previous Density/biomass indicator (totals)		10.3.14 = 225		29.9.13 = 71				15.09.14 = 76		15.09.14 = 109		21.5.14 = 102	
Previous Density/biomass indicator (totals)		11.9.13 = 118		5.8.13 = 105				08.08.14 = 73		08.08.14 = 178		10.7.13 = 105	
Previous Density/biomass indicator (totals)		3.7.13 = 217						19.6.14 = 291		19.6.14 = 255		21.5.14 = 102	
Previous Density/biomass indicator (totals)		Other		3 other fly larvae		4 whirlygig? Beetles, 8 fly larva found in samples or attached to rock.		10 worms and several midge pupae.		Several midge pupae		10 worms and several midge pupae.	
		Construction of weir like structure of large stones has altered flow and may have increased diversity at this sampling point. There is a slightly deeper pool before the stones up to 30cm on the sampling day. Fallen branches which are sprouting leaves have		Water depth lower at an average of 15cm. Moss like water weed approx 25% now. Lots of silt/mud around both stones and weed.				Himalayan balsam on bank behind river.		One skunk cabbage on river bank which is spreading.			

All sites had good numbers of sensitive invertebrates giving no cause for concern. Skunk cabbage is an invasive species which is expanding its range quite rapidly. The plant seen at Glancladdau has been reported to the GB Non-native Species secretariat.

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		Syfni - Gelli Bridge		Eastern Cleddau - Glanleddau Farm	
Location code [for future interactive map]		12		13	
GPS		SN 082 195		SN 098 212	
Date		20/05/2015		20/05/2015	
Name of Monitors		RB/CB		RB/CB	
Conditions		Two days after heavy rain		Two days after heavy rain	
Caddis Flies	Cased Caddis	A	6	A	8
	Caseless Caddis	B	25	B	15
Mayfly nymphs	Up-wing (Ephemeroidea)	-	0	A	1
	Blue-winged Olive up-wing	-	0	-	0
	Flat-bodied up-wing (Heptageniidae)	B	30	A	6
	Olive up-wing (Baetidae)	B	60	B	25
Stonefly nymphs	Stonefly nymphs	A	1	B	25
Freshwater shrimps	Freshwater shrimps	B	20	-	0
Leeches	Leeches	A	2	A	1
Snails	Spire shells/ramshorn	-	0	-	0
Hoglouse	Hoglouse	-	0	B	45
Density/biomass indicator (totals)		144		135	
Previous Density/biomass indicator (totals)		6.3.15 = 115		21.4.15=314	
Previous Density/biomass indicator (totals)		27.11.14 = 70		6.3.15 = 216	
Previous Density/biomass indicator (totals)		15.09.14 = 76		27.11.14 = 101	
Previous Density/biomass indicator (totals)		08.08.14 = 73		15.09.14 = 109	
Previous Density/biomass indicator (totals)		19.6.14 = 291		08.08.14 = 178	
Previous Density/biomass indicator (totals)		16.5.14 = 367		19.6.14 = 255	
Previous Density/biomass indicator (totals)		12.03.14 = 98		16.5.14 = 270	
Previous Density/biomass indicator (totals)		11.12.13 = 394		12.03.14 = 397	
Previous Density/biomass indicator (totals)		20.9.13 = 357		11.12.13 = 185	
Other	Fish				
	Other	Earthworms and midge pupae		Several midge pupae	
Comments		Gelli Bridge had heavy slurry loads on all surrounding fields, and although PRT had "fenced" some of Gelli Olau land at Clog-yr-edwyn the slurry is mostly within 3 metres of the river.			

Numbers of sensitive species are reasonable though the number of hoglouse at Glanleddau is unusual and may reflect recent low flows. Results from the summer survey should be carefully assessed to see if there is any evidence of organic pollution.

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Nevern

		Nevern - Crosswell Bridge	
Location code [for future interactive map]		11	
GPS		SN 12597 37014	
Date		26/04/2015	
Name of Monitors		DS/PL	
Conditions		River fairly low and clear. Air temp 19c	
Caddis Flies	Cased Caddis	A	7
	Caseless Caddis	A	9
Mayfly nymphs	Up-wing (Ephemeroidea)	-	0
	Blue-winged Olive up-wing	B	20
	Flat-bodied up-wing (Heptageniidae)	B	30
	Olive up-wing (Baetidae)	A	7
Stonefly nymphs	Stonefly nymphs	B	20
Freshwater shrimps	Freshwater shrimps	B	30
Leeches	Leeches	-	0
Snails	Spire shells/ramshorn	-	0
Hoglouse	Hoglouse	-	0
Density/biomass indicator (totals)		123	
Previous density/biomass indicator (totals)		17.05.14 = 136	
Previous density/biomass indicator (totals)		10.09.13 = 207	
Previous density/biomass indicator (totals)		29.4.13 = 390	
Other	Fish		
	Other		
Comments			

Reasonable diversity in fauna at this site.

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Taf Results

		Taf - Cwm Milles	
Location code [for future interactive map]		10	
GPS		SN 16136 21610	
Date		18/04/2015	
Name of Monitors		DS/CS	
Conditions		River low and clear. Air temp 14c	
Caddis Flies	Cased Caddis	A	6
	Caseless Caddis	A	2
Mayfly nymphs	Up-wing (Ephemeraeidae)	-	0
	Blue-winged Olive up-wing	A	4
	Flat-bodied up-wing (Heptageniidae)	B	30
	Olive up-wing (Baetidae)	B	20
Stonefly nymphs	Stonefly nymphs	A	8
Freshwater shrimps	Freshwater shrimps	-	0
Leeches	Leeches	A	1
Snails	Spire shells/ramshorn	-	0
Hoglouse	Hoglouse	A	1
Density/biomass indicator (totals)		72	
Previous density/biomass indicator (totals)		12.07.14 = 210	
Previous density/biomass indicator (totals)		16.05.14 = 156	
Previous density/biomass indicator (totals)		11.09.13 = 110	
Previous density/biomass indicator (totals)		30.4.13 = 48	
Other	Fish		
	Other	1 worm	
Comments		Lots of silt in river bed	

Overall abundances are low at this site compared with recent samples but not as low as in April 2013. The abundances of key sensitive mayflies and stoneflies are however reasonable. The reported silt may be responsible for this. If abundances are low again next time further investigation may be warranted.

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Colby Stream Results

River invertebrate monitoring results		Colby HW to tidal limit GB110061030760. West tributary feeding stream through Woodland gardens		Colby HW to tidal limit GB110061030760. East tributary feeding stream through Woodland gardens.	
Location code [for future interactive map]		35		36	
GPS		SN 15538 08514		SN 15734 08194	
Date		13/04/2015		13/04/2015	
Name of Monitors		LJ/GJ		LJ/GJ	
Conditions		1st sample of season; good flow following a relatively dry winter, water clear and clean though silt disturbed by kick		1st sample of season; good flow following a relatively dry winter, water clear and clean though silt disturbed by kick	
Caddis Flies	Cased Caddis	B	11	A	2
	Caseless Caddis	A	2	A	3
Mayfly nymphs	Up-wing (Ephemeroidea)	-	0	A	7
	Blue-winged Olive up-wing	B	16	-	0
	Flat-bodied up-wing (Heptageniidae)	B	34	B	40
	Olive up-wing (Baetidae)	-	0	B	25
Stonefly nymphs	Stonefly nymphs	B	25	A	6
Freshwater shrimps	Freshwater shrimps	B	38	B	80
Leeches	Leeches	-	0	-	0
Snails	Spire shells/ramshorn	-	0	-	0
Hoglouse	Hoglouse	-	0	-	0
Density/biomass indicator (totals)		126		163	
Previous density/biomass indicator (totals)		13.8.14 = 116		13.8.14 = 42	
Previous density/biomass indicator (totals)		13.8.14 = 116		13.8.14 = 42	
Previous density/biomass indicator (totals)		02.07.14 = 51		02.07.14 = 137	
Other	Fish				
	Other				
Comments		Pair of grey wagtails seen upstream of sampling site; no trout seen in stream, possibly a bit early?			

A favourable fauna at both sites though the lack of olive upwings on the West tributary is surprising.



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Alun catchment

		Pont y Penyd, St Davids	
Location code [for future interactive map]		37	
GPS		SM75179 25733	
Date		18/04/2015	
Name of Monitors		vs/	
Conditions			
Caddis Flies	Cased Caddis	B	33
	Caseless Caddis	A	9
Mayfly nymphs	Up-wing (Ephemeroidea)	-	0
	Blue-winged Olive up-wing	-	0
	Flat-bodied up-wing (Heptageniidae)	B	22
	Olive up-wing (Baetidae)	B	33
Stonefly nymphs	Stonefly nymphs	-	0
Freshwater shrimps	Freshwater shrimps	B	30
Leeches	Leeches	A	2
Snails	Spire shells/ramshorn	A	9
Hoglouse	Hoglouse	-	0
Density/biomass indicator (totals)		138	
Previous density/biomass indicator (totals)			
Other	Fish		
	Other	1 x Chironomid midge larvae 5 x Aquatic beetles	
Comments			

A reasonable fauna present at this low-gradient site.

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Carmarthenshire Results

Cothi Catchment

River Name		Cothi		Cothi		Cothi		Cothi		Cothi	
Site Name		Cwrt Y Cadno		Twrch		Annell Island Farm)		Brechfa Clydach		Pumpsaint	
Dates		20th April, 2015		20th April, 2015		20th April, 2015		19th May, 2015		19th May, 2015	
Samplers		Peter John / Mike Hekler		Peter John / Mike Hekler		Peter John / Mike Hekler		Peter John / Mike Hekler		Peter John / Mike Hekler	
		Category	Number found	Category	Number found	Category	Number found	Category	Number found	Category	Number found
Caddis Flies	Cased Caddis	B	11	B	59	B	23	B	33	B	27
	Caseless Caddis	B	33	B	68	B	46	B	70	B	50
Mayfly nymphs	Up-wing (Ephemeroidea)									A	4
	Blue-winged Olive up-wing	A	3					A	1	A	2
	Flat-bodied up-wing (Heptageniidae)	B	42	C	424	C	370	C	355	C	295
	Olive up-wing (Baetidae)	B	10	B	44	C	480	C	175	C	520
Stonefly nymphs	Stonefly nymphs	B	60	C	379	C	161	C	101	B	55
Freshwater shrimps	Freshwater shrimps			A	1	A	1				
Leeches	Leeches			A	1	A	4				
Snails	Snails	A	1								
Hoglouse	Hoglouse										
Density/biomass indicator (totals)		160		976		1085		735		953	
Notes		1 Bullhead, 1 Salmonid seen at site		Deepest part of pool moved downstream during Winter floods & sample now collected from inlet to pool rather than outlet. Large mass of Daphnia at edge of water.		Salmonid fish & minnows seen near sample site. Many invertebrates collected from within weed (ranunculus?)		Good flow after previous days spate. Several very large stoneflies collected as normal at this site.		Strong current after previous days spate. 1 bullhead in sample. Grey wagtail seen at sampling site, dipper seen further down catchment at Pontynyswen bridge.	
Biological Quality		Good		Excellent		Excellent		Excellent		Excellent	

All sites with a fauna characteristic of good water quality.



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Llandovery Bran Catchment - September

No results received

Llandovery Bran Catchment – October

No results received

Lower Tywi

No results received

Riverfly Monitoring Newsletter

Southwest Wales

July 2015

Doethie catchment – January 2015

River Name		Doethie		Doethie		Doethie		Pysgotwr	
Site Name		Blaendoethie		Pwll Marie		Fach (control site)		Nant Gwernog	
Date		30th January, 2015		30th January, 2015		30th January, 2015		30th January, 2015	
Samplers		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr	
Conditions		pH: 5.14				pH: 6.71		pH: 6.56	
		Category	Number found	Category	Number found	Category	Number found	Category	Number found
Caddis Flies	Cased Caddis	B	12	B	18	A	3	B	12
	Caseless Caddis	A	5	A	3	B	14	A	8
Mayfly nymphs	Up-wing (Ephemeridae)								
	Blue-winged Olive up-wing								
	Flat-bodied up-wing (Heptageniidae)			B	21	B	37	B	14
	Olive up-wing (Baetidae)					B	21		
Stonefly nymphs	Stonefly nymphs	B	39	B	31	C	108	C	153
Freshwater shrimps	Freshwater shrimps								
Leeches	Leeches								
Snails	Snails								
Hoglouse	Hoglouse								
Density/biomass indicator (totals)		56		73		183		187	
Notes						Prolific sample! Lots of leaf litter.			

The Doethie Fach control site is the only site which held the full expected compliment of mayflies and stoneflies. Doethie at Pwll Marie and the Pysgotwr at Nant Gwernog had Heptagenid mayflies but lacked Baetidae (olive-upwings). The Doethie at Blaendoethie lacked all mayflies as is typical of this very acidic site which registered a pH of 5.16. The fauna at Pwll Marie and Nant Gwernog is typical of sites where the fauna is moderately restricted by acidification

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Doethie Catchment – February 2015

River Name		Doethie		Doethie		Doethie		Doethie		Pysgotwr	
Site Name		Blaendoethie		Pwll Marie		Fach (control Site)		Foel Fraith		Nant Gwernog	
Date		16th February, 2015		16th February, 2015		16th February, 2015		16th February, 2015		16th February, 2015	
Samplers		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr	
Conditions				pH: 6.86		pH: 6.89				pH: 6.13	
		Category	Number found	Category	Number found	Category	Number found	Category	Number found	Category	Number found
Caddis Flies	Cased Caddis	A	2	B	12	A	4	A	4	A	7
	Caseless Caddis			B	11	A	5	A	7	B	11
Mayfly nymphs	Up-wing (Ephemeraeidae)										
	Blue-winged Olive up-wing										
	Flat-bodied up-wing (Heptageniidae)			B	23	B	19	B	92	B	11
	Olive up-wing (Baetidae)	A	1	A	1	A	3	B	22	A	1
Stonefly nymphs	Stonefly nymphs	B	43	B	67	B	52	B	48	B	71
Freshwater shrimps	Freshwater shrimps										
Leeches	Leeches										
Snails	Snails										
Hoglouse	Hoglouse										
Density/biomass indicator (totals)		46		114		83		173		101	
Notes											

.The Doethie at Blaendoethie stands out again in having no heptagenid mayflies and only a single Baetidae.

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River Name		Doethie		Pysgotwr		Doethie		Doethie	
Site Name		U/S confl. Pysgotwr		U/S confl. Doethie		Rhyd y Groes		Tywi (Campsite)	
Date		24th February, 2015		24th February, 2015		24th February, 2015		24th February, 2015	
Samplers		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr	
Conditions		pH: 5.85 Depth: 0.66m		pH: 5.87 Depth: 0.66m		pH: 6.63 Depth: 0.66m		pH: 6.89 Depth: 0.66m	
		Category	Number found	Category	Number Found	Category	Number Found	Category	Number found
Caddis Flies	Cased Caddis			A	4	A	1	A	3
	Caseless Caddis	A	3	A	2	A	3	B	4
Mayfly nymphs	Up-wing (Ephemerae)								
	Blue-winged Olive up-wing								
	Flat-bodied up-wing (Heptageniidae)	B	17	B	24	B	24	B	81
	Olive up-wing (Baetidae)	A	9	A	4	B	11	B	59
Stonefly nymphs	Stonefly nymphs	B	13	A	9	A	4	C	125
Freshwater shrimps	Freshwater shrimps								
Leeches	Leeches								
Snails	Snails								
Hoglouse	Hoglouse								
Density/biomass indicator (totals)		44		43		43		272	
Notes								Lots & Lots of Simuliids, Leuctra, & Heptageniids! Fish fry in sample (looked like a bullhead(?)).	

Although all sites had a good variety of sensitive species, the abundances on the Doethie and Pysgotwr sites were generally rather low. This may have been due to immediately preceding high flows on the 22nd and 23rd washing out some of the fauna together with associated acidity.

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Doethie March 2015

River Name		Doethie		Doethie		Doethie		Doethie		Pysgotwr	
Site Name		Blaendoethie		Pwll Marie		Fach (control site)		Foel Fraith		Nant Gwernog	
Date		20th March, 2015		20th March, 2015		20th March, 2015		20th March, 2015		20th March, 2015	
Samplers		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr	
Conditions		pH: 5.76 (low Flows)		pH: 6.58 (low Flows)		pH: 6.76 (low Flows)		(low Flows)		pH: 6.43 (low Flows)	
		Category	Number found	Category	Number found	Category	Number found	Category	Number found	Category	Number found
Caddis Flies	Cased Caddis	A	4	A	5	A	7	A	9	A	5
	Caseless Caddis	A	5	A	7	A	9	A	3	A	9
Mayfly nymphs	Up-wing (Ephemeraeidae)										
	Blue-winged Olive up-wing										
	Flat-bodied up-wing (Heptageniidae)			B	12	B	17	B	76	B	14
	Olive up-wing (Baetidae)					A	1	B	31		
Stonefly nymphs	Stonefly nymphs	B	91	B	72	B	56	B	39	C	118
Freshwater shrimps	Freshwater shrimps										
Leeches	Leeches										
Snails	Snails										
Hoglouse	Hoglouse										
Density/biomass indicator (totals)		100		96		90		48		146	
Notes								Pair of Goosanders seen flying upstream (breeding pair?)			

The Blaendoethie site again demonstrated high acidity both in terms of a low flow pH of 5.76 and a complete lack of mayflies. The other four sites all had acid sensitive heptageniidae showing some resilience to acidity but only the Doethie Fach and Foel Fraith sites had the more sensitive Baetidae with only 1 specimen present in the Doethie Fach sample.

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Doethie – April 2015

River Name		Doethie		Doethie		Doethie		Doethie		Pysgotwr	
Site Name		Blaendoethie		Pwll Marie		Fach (control site)		Foel Fraith		Nant Gwernog	
Date		April, 2015		April, 2015		April, 2015		April, 2015		April, 2015	
Samplers		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr	
Conditions		pH: 5.13		pH: 5.89		pH: 6.19				pH: 5.68	
		Category	Number found	Category	Number found	Category	Number found	Category	Number found	Category	Number found
Caddis Flies	Cased Caddis	A	5	A	8	A	9	A	5	A	6
	Caseless Caddis	A	9	A	6	A	7	A	8	A	6
Mayfly nymphs	Up-wing (Ephemeroidea)										
	Blue-winged Olive up-wing										
	Flat-bodied up-wing (Heptageniidae)			B	16	B	21	B	97	B	21
	Olive up-wing (Baetidae)			A	2	B	15	B	27	A	5
Stonefly nymphs	Stonefly nymphs	B	82	B	86	B	67	B	45	B	65
Freshwater shrimps	Freshwater shrimps										
Leeches	Leeches										
Snails	Snails										
Hoglouse	Hoglouse										
Density/biomass indicator (totals)		96		118		119		182		103	
Notes											

Once again the Blaendoethie site comes out as the most impoverished with no mayflies and a pH of only 5.13. All the other sites had both heptagenid and baetid mayflies though numbers (especially of Baetidae) were relatively low at Pwll Marie and Nant Gwernog which both recorded pH below 6.

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River Name		Doethie		Pysgotwr		Doethie		Doethie	
Site Name		U/S confl. Pysgotwr		U/S confl. Doethie		Rhyd y Groes		Tywi (Campsite)	
Date		April, 2015		April, 2015		April, 2015		April, 2015	
Samplers		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr	
Conditions		pH: 6.01 Depth: 0.36m		pH: 5.86 Depth: 0.36m		pH: 6.32 Depth: 0.36m		pH: 6.85 Depth: 0.36m	
		Category	Number found	Category	Number found	Category	Number found	Category	Number found
Caddis Flies	Cased Caddis	B	11	B	15	A	8	A	9
	Caseless Caddis	A	6	B	21	B	11	B	16
Mayfly nymphs	Up-wing (Ephemerae)								
	Blue-winged Olive up-wing								
	Flat-bodied up-wing (Heptageniidae)	B	95	B	81	B	87	B	82
	Olive up-wing (Baetidae)	B	42	B	26	B	35	B	65
Stonefly nymphs	Stonefly nymphs	B	37	B	18	B	26	B	27
Freshwater shrimps	Freshwater shrimps								
Leeches	Leeches								
Snails	Snails								
Hoglouse	Hoglouse								
Density/biomass indicator (totals)		191		161		167		199	
Notes		Fish parr found in sample (too small to tell)							

All the expected sensitive taxa were recorded in good abundance, especially the mayflies. This was despite fairly low pH being recorded on the Pysgotwr and Doethie upstream of the confluence.

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Doethie – May 2015

River Name		Doethie		Doethie		Doethie		Doethie		Pysgotwr	
Site Name		Blaendoethie		Pwll Marie		Fach (control site)		Foel Fraith		Nant Gwernog	
Samplers		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr		Caroline Orr	
Conditions		5.23		6.12		6.39				6.32	
Comments		25th May, 2015		25th May, 2015		25th May, 2015		25th May, 2015		25th May, 2015	
		Category	Number found	Category	Number found	Category	Number found	Category	Number found	Category	Number found
Caddis Flies	Cased Caddis	A	4	B	10	A	9	A	4	B	11
	Caseless Caddis	A	8	B	11	A	8	B	12	B	22
Mayfly nymphs	Up-wing (Ephemeraeidae)										
	Blue-winged Olive up-wing									B	3
	Flat-bodied up-wing (Heptageniidae)			B	21	B	15	B	26	A	4
	Olive up-wing (Baetidae)			B	5	B	26	B	24	B	29
Stonefly nymphs	Stonefly nymphs	B	45	B	37	B	26	B	48	B	58
Freshwater shrimps	Freshwater shrimps										
Leeches	Leeches										
Snails	Snails									B	16
Hoglouse	Hoglouse										
Density/biomass indicator (totals)		57		84		84		114		143	
Notes										Snails = <i>Ancylus fluviatilis</i>	

Again the acidity of the Blaendoethie site was very evident in May with no mayflies present and a recorded pH of 5.23. The other four sites had reasonable numbers of mayflies with blue-winged olive (*Serratella ignita*) appearing in small numbers at the Pysgotwr site. The presence of *Ancylus fluviatilis*, the river limpet at this site is a very interesting observation because this is the first record of this acid-sensitive species at this site which points to successful improvement in water quality. It will be interesting to see if this population is able to maintain itself.



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July 2015

Loughor Results

No results received