

Riverfly Monitoring Newsletter



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Environment
Agency Wales

Southwest Wales – forward look for 2009

December 2009

A word from your Environment Agency Co-ordinator

Firstly I'd like to say a huge thank you to all of our volunteers for what has been a brilliant first full year of our South West Wales monitoring programme. Not only are we now covering over 100 sites overall, we are growing all the time, so the word is obviously spreading about this scheme.

Here are a few interesting facts about the work we've done this year, some of which surprised me!

Total number of sites covered: **100**

Number of volunteers involved this year: **62**

Total number of samples taken: **160**

Total number of concerns identified and resolved: **10**

As you can see we've achieved a huge amount in 2009, here's to a successful 2010!!

High Flows / Bad Weather

Unfortunately, during the autumn/winter period we have been subjected to very bad weather, namely lots of rain swiftly followed by very icy, dangerous driving conditions. As a result of this we were missing samples from several sites, which was very unfortunate as this is the time of year when pesticide issues are most likely to be picked up. Lets hope for a drier, warmer 2010 so we can get a really good dataset going!

Having said that, all volunteers should treat the river with respect, and no sample is worth taking risks for in the event of high flows - if in doubt, keep out!

Refresher Training

We are planning on running one or two refresher training sessions in the first half of 2010, so if anyone feels that they would benefit from this, please let your co-ordinator know. There is already one arranged for the Teifi volunteers in February, but another similar workshop could also take place further east or in Pembrokeshire if there is the demand for it.

In particular we will be looking at the more tricky invertebrate families, namely the dreaded Blue Winged Olives which have been absent on the initial training days thanks to the timing of their life cycle. We've got a few pickled specimens to bring along to make up for their lifecycle not allowing their appearance in the field during the spring months, which means we can all become familiar with their round gills, brown bodies and stripy legs.

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Teifi Results

Yet again, the TRIM monitors have excelled themselves and sampled almost every single sample point this autumn, despite the atrocious weather conditions and high flows at the end of the period. This definitely highlights the advantage of getting out early in the season and finding that sometimes all too elusive weather window.

Teifi Group Sampling Points

Collection Point	River	Grid Reference	Monitors
1	Cych	SN249411	C. Chapman , M. Tabernacle
2	Cych	SN276359	C. Chapman , M. Tabernacle
3	Cych	SN244382	C. Chapman , M. Tabernacle
4	Mamog, a tributary of the Cych	SN294361	C. Chapman , M. Tabernacle
5	Dulas, a tributary of the Ceri	SN313468	R.Harding,
6	Nant Bargod	SN358379	S.Elcomb, S.Owen
7	Nant Bargod	SN354391	S.Elcomb, S.Owen
8	Clettwr Fach	SN440483	G.Jones, I.Thomas
9	Clettwr Fawr	SN425469	G.Jones, I.Thomas
10	Clettwr	SN448436	G.Jones, I.Thomas
11	Cwerchyr	SN367446	I. Thomas
12	Nant Gran, a tributary of the Tyweli	SN437347	E.Davies, S.Jones
13	Talog, a tributary of the Tyweli	SN463376	E.Davies, S.Jones
14	Tyweli	SN422390	E.Davies, S.Jones
15	Nant Ythan, a tributary of the Cerdin	SN412428	D.F. Roberts, R.Foulkes
16	Cerdin	SN409441	D.F. Roberts, R.Foulkes
17	Cerdin	SN422416	D.F. Roberts, R.Foulkes
18	Ceri	SN324469	R.Harding
19	Teifi above Llanybydder	SN524445	Meurig Davies, Emyr Jones
20	Teifi abve Llanybydder	SN529447	Alan Davies , Emyr Jones
21	Afon Duar	SN524444	Alan Davies , Emyr Jones
22	Nant Cledlyn	SN492431	Alan Davies, Meurig Davies
23	Afon Grannell	SN534471	Meurig Davies, Emyr Jones
24	Afon Pedran	SN276358	Rob Wilson, Jez More
25	Afon Cneifa	SN269371	Rob Wilson, Jez More
26	Afon Brefi	SN667553	Cap Morris, Emyr Lake
27	Afon Teifi	SN641548	Cap Morris, Emyr Lake
28	Afon Ceri	SN318462	Andrew Thomas
29	Afon Ceri	SN344481	Andrew Thomas
30	Afon Dulas, Ceri trib	SN318462	Andrew Thomas

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Autumn 2009 Results

AUTUMN '09		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
CADDIS FLIES	Trichoptera - Caseless Caddis	2	3	6	5	1	2	1	7	1	5	2	6	9	5	5	5	1	6	30	20	2	20	20	1	0	N/S	N/S	0	0	6	
	Trichoptera - Cased Caddis	3	0	0	0	1	1	3	6	1	6	4	4	2	5	10	60	5	5	30	20	20	20	10	27	36	N/S	N/S	10	10	0	
MAY FLIES	Baetidae, e.g. Olives	25	40	15	20	40	70	20	70	45	98	30	100	100	80	10	80	60	20	20	20	60	80	50	100	40	N/S	N/S	30	35	30	
	Ephemeridae, Mayflies	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/S	N/S	0	0	0
	Ephemerellidae	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	1	5	0	0	6	0	N/S	N/S	0	0	0
	Heptageniidae, e.g. Yellow May Dun	20	30	45	15	30	50	80	9	9	35	15	0	0	0	0	10	20	2	10	2	20	20	40	10	80	50	N/S	N/S	90	45	65
STONE FLIES	Plecoptera	15	40	20	10	10	40	30	0	0	72	30	80	100	80	15	30	20	15	10	20	30	20	6	60	5	N/S	N/S	6	30	30	
SHRIMPS	Gammarus	10	1	15	0	40	60	50	23	23	51	10	18	6	3	20	20	20	8	1	5	30	10	0	0	0	N/S	N/S	10	8	25	
	Leeches	0	2	0	12	1	0	0	0	0	0	4	1	0	0	0	20	20	0	1	1	2	1	5	10	0	0	N/S	N/S	0	0	0
	Snails	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	N/S	N/S	0	0	0
	Hog Louse	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	N/S	N/S	0	0	0	
	Saucer Bugs/ Beetles	2	2	0	0	0	1B	0	0	0	0	0	0	0	0	5B	0	0	4SB	20B	0	0	0	0	0	0	N/S	N/S	0	0	0	

Interpretation of Results

Cych Catchment

This Autumn's results are showing a much healthier picture than those in previous samples, which is encouraging to see. Environment Agency Staff (myself leading on this) have recently carried out an intensive catchment survey looking for any signs of pesticide pollution on the main Cych and its tributaries, and the picture of the whole catchment has been generally very good. The site right at the bottom of the Cych immediately above the Teifi confluence was still slightly poor compared with other sites, so further monitoring and visits to landowners have been requested. The Sylgen was also very poor, but this was almost certainly due to the recent high flows washing the invertebrates out of the bedrock dominated site. We will be checking this site again when carrying out work in the area just to make sure there isn't anything else causing an impact.

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Environment Agency follow-up survey results

Here is a table summarising the results of our own monitoring on the Cych catchment this year, explanations of the Pesticide group categorisation and BMWP scores are also included below.

Watercourse	Site Description	NGR	BMWP Score	No. Families	Sheep Dip Group	Comments
Cych	u/s Teifi Confluence	SN 2458 4187	68	12	4/5	Low numbers of Gammarus
Nant Morw	u/s Cych Confluence	SN 2456 4132	68	12	5	
Dulas	u/s Bridge near Ty Isaf	SN 23168 38051	67	10	5	
Dulas Trib	u/s Ford	SN 23141 38113	60	8	5	
Dulas Trib	U/S Boncath-Bwlchygroes Rd	SN 21478 37486	58	10	4	Gammarus absent – substrate unsuitable
Dulas	u/s Boncath-Bwlchygroes Rd	SN 21510 37459	99	14	5	
Dulas	u/s Cych confluence	SN 2528 3854	79	13	5	
Cneifa	u/s Cych confluence	SN 2703 3720	91	13	5	
Dwrog	U/S Cych	SN 27054 37473	81	14	5	
Mamog	U/S Road Bridge and STW	SN 29498 36158	83	12	5	
Cych	d/s Barddu Confluence	SN 29332 34970	86	14	5	
Barddu	u/s Cych	SN 2941 3186	89	13	5	
Sylgen	u/s Bridge at Gilfachmerson	SN 30279 33127	24	3	4	Very low score and poor fauna – most likely to be flow related.
Pedran	U/S trib at Cwm Pedran	SN2728234146	84	13	5	
Cneifa trib	Star	SN2450434983	73	11	5	
Cneifa	Star	SN2450634966	92	13	5	

Flow chart used to categorise pollution impacts at each site using BMWP score and indicator taxa (i.e. Stoneflies and Gammarus).

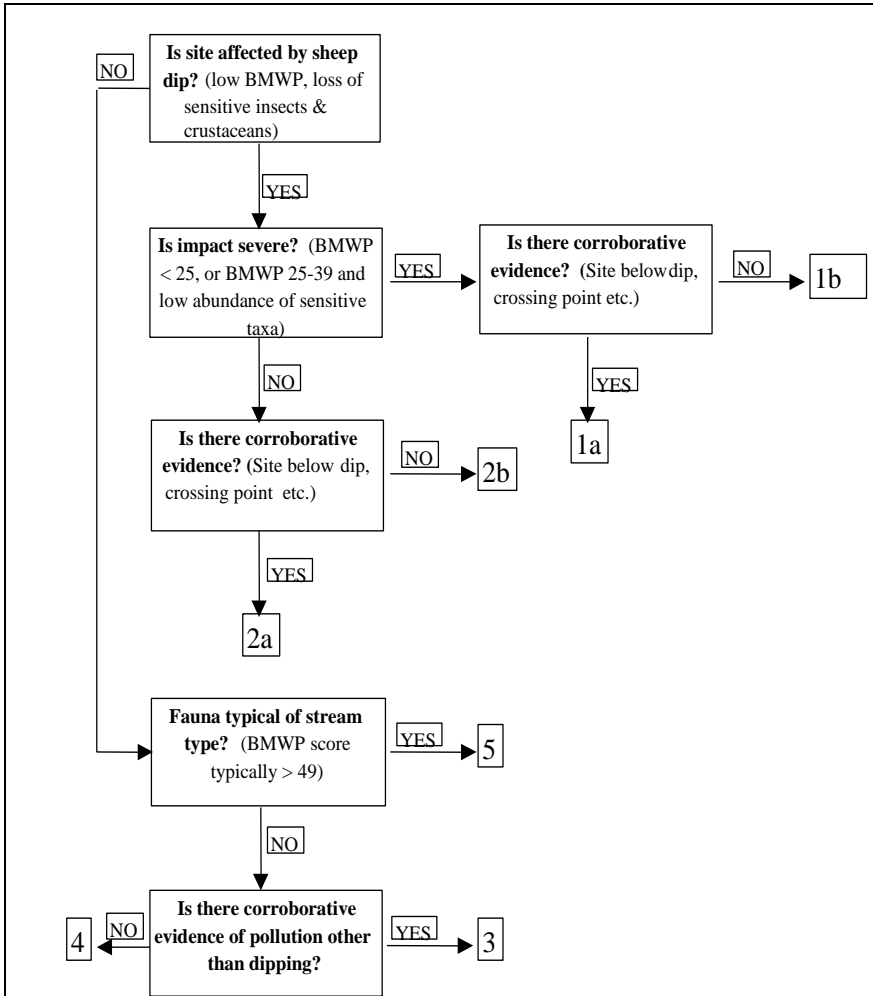
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BMWP Scores

The BMWP (Biological Monitoring Working Party) scoring method is an index that gives an overall indication of how 'healthy' the river is: the higher the score, the better the biological quality of the river. It does not however, take into account the abundance of the animals present. Each family found has an individual score of 1-10 depending on how sensitive it is to organic pollution (10 being the most sensitive). The total score is then calculated by adding up the scores for each family.

Ceri Catchment

No obvious problems shown. This is very encouraging as the catchment has suffered badly from numerous pollution sources in the past. Obviously recent work with landowners in the surrounding area has paid off.

Nant Bargod

No obvious problems shown.

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Clettwr Catchment

The two sites higher up on the Clettwr Fach and Clettwr Fawr show markedly lower biological quality than the site at the bottom of the catchment, which may be a case for another Environment Agency investigation.

Cwerchyr

Despite having poor results last Autumn and Winter, leading us to suspect a pesticide issue somewhere in the catchment, we are pleased to see that the river is looking fairly healthy this Autumn. Continued monitoring at the site is still of great importance though in order to monitor whether this encouraging improvement is maintained.

Tyweli Catchment

No problems shown

Cerdin Catchment

No problems shown.

Llanybydder and Lampeter sites

No problems shown.

Pembrokeshire results

Pembrokeshire Group Sampling Points

Collection Point	Sample Point	Grid Reference	Monitors
1	Knock Brook at Cutty Bridge	SM942188	J. Codd and D.Nattress
2	W Cleddau at St Catherines Bridge	SM945192	J. Codd and D. Nattress
3	W Cleddau at Musland Farm Bottom	SM945271	L. and G. Evans
4	W Cleddau at Musland Farm Top	SM945271	L. and G. Evans
5	Cartlett Brook	SM966164	R. Davies, R. Baker and J. Wright
6	Merlin's Brook	SM948147	R. Davies, R. Baker and J. Wright
7	Halt Pool		E. and G.W. Williams
8	Anghof		E. and G.W. Williams

Autumn Sampling Results

No results have been received for the Pembrokeshire area this quarter.

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Carmarthenshire Rivers Trust Results.

Thanks to those keen samplers who managed to get out despite the adverse weather conditions. It seems that the adverse weather conditions have been a real problem for this quarter, which is a bit of a shame as this is exactly when we should be out checking for sheep dip issues. Unfortunately for us we can't control the weather!

Lower Tywi Catchment Sites

Site Number	Site Name	Grid reference	Monitors
1	Gwili at Abergwili Road Bridge	SN 43350-21040	N Evans, S Edwards
2	Duad at Cwmduad	SN 3740 3015	N Evans, S Edwards
3	Gochen at Cynwyl Elfed	SN 372 274	D N Evans, D M Greves
4	Myddyfi d/s Cilsan Ford	SN 5959 2210	Jamie Harries
5	Dryslwyn Dulas	SN-5557-2253	M Jones, G W Price
6	Llangadog Bran u/s Tywi	SN 6964 2841	Mike Jenkins
7	Llanwrda Dulais at Llanwrda	SN 7190 3130	Mike Jenkins
8	Rhosmaen Dulais at A40 Road Bridge	SN 6467 2443	Mike Jenkins
9	Rhosmaen Dulais at Glanthames	SN 6420 2670	E Rimmer, M Davies
10	Rhosmaen Dulais at Pont Rhyd Y March	SN 7557 2887	Mike Jenkins
11	Sawdde at Llangadog Common	SN 7060 2765	Helen Scutt
12	Crychiau at Dalpen Bridge	SN 445 227	D N Evans, D M Greves
3	Nant Alltwalis at Llanpumsaint	SN 4191 2929	Dominic and Rosie Carmichael
14	Gwili at Llanpumsaint	SN 4192 2907	Dominic and Rosie Carmichael
15	Gwili Aeron at Llanpumsaint	SN 4196 2936	Dominic and Rosie Carmichael
16	Sawdde at Hen Bont	SN 7418 2332	Helen Scutt
17	Sawdde Clydach at Pont Newydd	SN 7362 2336	Helen Scutt
18	Cennen at Ffairfach	SN 6208 2148	Jamie Harries
19	Cib at Ffairfach	SN 6331 2161	Jamie Harries

Autumn Sampling Results

None received this quarter.

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Cothi Catchment Sites

Site Number	Site Name	Grid Reference	Monitors
1	Cothi Clydach at Pont Cwmmawr	SN 51459 32642	B Jones, J Price
2	Cothi at Cwrt Y Cadno	SN 6917 4413	P John, M Heckler
3	Cothi Twrch at Pumpsaint	SN 65391 40799	P John, M Heckler
4	Cothi at Pumpsaint	SN6558 4053	P John, M Heckler
5	Annell at Crugybar	SN 6456 3608	P John, M Heckler
6	Melindwr at Llansawel Road Bridge	SN 6187 3617	Dave Harry
7	Gorlech at Abergorlech	SN 5855 3377	Dave Harry
8	Marlais u/s Brechfa Village	SN 5230 3036	Huw Denman
9	Pib u/s Cwm Marydd Confluence	SN 5010 3067	Huw Denman
10	Cwm Marydd u/s Pib Confluence	SN 5012 3072	Huw Denman

Autumn 2009 results

No results received for the Cothi this quarter.

Upper Tywi Catchment Sites

1	Doethie at Rhydygroes	SN 77045 47413	B Jones, J Price
2	Doethie u/s Pysgotwr	SN 76516 48358	B Jones, J Price
3	Doethie u/s Pwll yr wyn	SN 768515	E Lake, M Morris
4	Pysgotwr u/s Doethie	SN-7645-4826	B Jones, J Price
5	Doethie Fach at Pont Rhiw Gelynen	SN 756533	E Lake, M Morris
6	Doethie Fawr at Pwll Mari	SN 754530	E Lake, M Morris
7	Doethie Fawr at Pont Penlan	SN 742543	E Lake, M Morris
8	Tywi at Rhandirmwyn	SN-7790-4345	B Jones, M Morris
9	Tywi at Llandovery railway bridge	SN 64673 24438	B Jones, M Morris
10	Llandovery Bran at Pont Rhyd Owen	SN 7745 3525	B Jones, M Morris
11	Dunant u/s Tywi	SN 7580 3840	B Jones, M Morris

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Autumn 09		1	2	3	4	5	6	7	8	9	10	11
CADDIS FLIES	Trichoptera, Caseless Caddis	11	5	N/S	2	N/S	N/S	N/S	10	N/S	N/S	N/S
	Trichoptera, Cased Caddis	6	0	N/S	1	N/S	N/S	N/S	5	N/S	N/S	N/S
MAY FLIES	Baetidae, Olives	13	7	N/S	4	N/S	N/S	N/S	31	N/S	N/S	N/S
	Ephemeroidea, Mayflies	0	0	N/S	0	N/S	N/S	N/S	0	N/S	N/S	N/S
	Ephemeroidea, BWO	0	0	N/S	0	N/S	N/S	N/S	0	N/S	N/S	N/S
	Heptageniidae, Yellow May Dun	102	54	N/S	24	N/S	N/S	N/S	59	N/S	N/S	N/S
STONE FLIES	Plecoptera	89	54	N/S	89	N/S	N/S	N/S	87	N/S	N/S	N/S
SHRIMPS	Gammarus	0	0	N/S	0	N/S	N/S	N/S	0	N/S	N/S	N/S
Misc.	Leeches	0	0	N/S	0	N/S	N/S	N/S	0	N/S	N/S	N/S
	Snails	0	0	N/S	0	N/S	N/S	N/S	0	N/S	N/S	N/S
	Hog Louse	0	0	N/S	0	N/S	N/S	N/S	0	N/S	N/S	N/S
	Saucer Bugs / Beetles	0	0	N/S	0	N/S	N/S	N/S	0	N/S	N/S	N/S

The results are looking very encouraging for the Doethie catchment this quarter, with very good numbers of Heptagenid Mayflies recorded, which is a good indication that there haven't been too many extreme acidity events in the past few months.

Loughor Catchment Sites

Collection Point	Site name	Grid Reference	Monitors
1	Amman at Garnant	SN 692 113	J Jones, G Thomas
2	Cathan at Garnswllt	SN 628 320	J Jones, G Thomas
3	Garnant at Garnant	SN 692 451	J Jones, G Thomas
4	Lash below known problems	SN 616 071	J Jones, G Thomas
5	Pedol at Garnant	SN 690 613	J Jones, G Thomas
6	Lash above known problems	SN 614 291	J Jones, G Thomas
7	Loughor u/s Parc Henri	SN 6269 1419	Bethan Dardecker
8	Marlais at Brynmarlais	SN 6239 1362	Bethan Dardecker

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Autumn 09		1	2	3	4	5	6	7	8
CADDIS FLIES	Trichoptera, Caseless Caddis	12	11	7	2	9	9	4	7
	Trichoptera, Cased Caddis	6	3	5	7	4	3	5	12
MAY FLIES	Baetidae, Olives	26	32	24	26	37	33	28	58
	Ephemeraeidae, Mayflies	4	2	4	7	3	5	0	0
	Ephemeraellidae, BWO	2	3	5	5	4	4	0	0
	Heptageniidae, Yellow May Dun	43	90	38	140	43	120	77	102
STONE FLIES	Plecoptera	16	11	12	26	21	15	22	9
SHRIMPS	Gammarus	8	7	6	6	5	7	11	13
Misc.	Leeches	3	2	3	1	2	2	0	0
	Snails	0	0	0	0	0	0	1	0
	Hog Louse	0	0	0	0	0	0	0	0
	Saucer Bugs / Beetles	0	0	0	0	0	0	0	0

Again, all of the Loughor sites were covered this quarter, which was very good to see considering the weather. All of the sites sampled showed fairly good biological quality.

Taf Catchment Sites

Collection Point	Site name	Grid Reference	Monitors
1	Gafel at Rhydowen	SN 193 290	Keith and Lesley Jones
2	Gronw u/s Taf	SN 202 163	Keith and Lesley Jones
3	Nant Elwyn u/s Taf	SN 195 286	Keith and Lesley Jones
4	Taf at Llanfyrnach	SN 221 311	Keith and Lesley Jones
5	Taf u/s Elwyn	SN 195 287	Keith and Lesley Jones
6	Taf u/s Gronw	SN 202 162	Keith and Lesley Jones
7	Taf u/s Marlais	SN 186 168	Keith and Lesley Jones

Autumn 2009 results

No samples collected this quarter.

Gwendraeth Catchment Sites

Collection Point	Site Name	Grid Reference	Monitors
1	Gwendraeth Fach at Gelli Deg	SN 41868 10156	A Stuart, M Price
2	Gwendraeth Fawr at Pont Spwdwr	SN 43383 05873	A Stuart, M Price
3	Gwendraeth Fawr at Pont Henri	SN 47530 09398	A Stuart, M Price
4	Gwendraeth Fawr d/s Pontyates STW		A Stuart, M Price

No samples collected this quarter

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Tawe Catchment Sites

Collection Point	Site name	Grid Reference	Monitors
1	Twrch at Lower Cwmtwrch	SN 7670 1020	R Lockyer, P Jones
2	Giedd at Cwmgiedd	SN 7885 1112	R Lockyer, P Jones
3	Llynfell at Cwmllynfell	SN 7480 1250	R Lockyer, P Jones

No Autumn data received to date.