

Riverfly Monitoring Newsletter



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

Southwest Wales

May/June 2012

A word from your Environment Agency Co-ordinator

Well, hello everybody, it's nice to be back in business again after so long! I'm now back at work fulltime, and my little boy is now 21 months old...time certainly does go by very quickly!

After a bit of a lapse in Riverfly Project activity for a number of reasons, it's great to see that we now have so many new volunteers and co-ordinators joining the scheme, welcome to you all, and a big thank you for your time input and commitment to this very worthwhile scheme so far. This is the first Newsletter that we've produced in a while, and it's great to see that several new rivers are being covered by the volunteer network, which increases our chances of finding and tackling any pollution issues that might occur. Many of these sites aren't covered by Environment Agency routine monitoring programmes due ongoing resource issues, so it's reassuring to know that someone is still keeping an eye on them.

Special thanks to Jo and Bob, our new co-ordinators for the Pembrokeshire and TRIM monitoring groups, your help is much appreciated.

We ran a training session back in March that was extremely well attended, big thanks to Dai Roberts and the CRT boys for running this. It was great to meet you all, and fantastic to see so many new keen volunteers.

This is the first Newsletter that we've produced in a while, and there still isn't data for all of the scheduled sites, but as usual, we've had another typical wet welsh summer so far which has evidently hampered everyone's efforts. We're in the middle of carrying out plant surveys right now in our team, and have had similar difficulties finding rivers we can actually get into at all, let alone being able to identify the mosses growing in them!

Thanks again for everybody's hard work so far, and I look forward to getting even more results back for the new sites.

Nicola Broadbridge

Senior Environmental Monitoring Officer
Environmental Monitoring (Analysis and Reporting)

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Teifi Results

Middle Teifi Sampling Points – March Results

River Name		Teifi	Teifi	Duar	Cledlyn	Grannell
Site Name		d/s Duar	u/s Duar	Llanybydder	Rhyddlan	Llanwnen
NGR		SN524445	SN529447	SN524444	SN492431	SN534471
Samplers		Davies, Emyr Jones	Alan Davies, Emyr Jones	Alan Davies, Emyr Jones	Davies, Alan Davies	Davies, Emyr Jones
Conditions						
Caddis Flies	Cased Caddis	10	1	20	30	10
	Caseless Caddis	10	3	40	50	10
Mayfly nymphs	Up-wing (Ephemeraeidae)	0	0	0	0	0
	Blue-winged Olive up-	5	20	0	0	0
	Flat-bodied up-wing (Heptageniidae)	60	0	50	80	50
	Olive up-wing (Baetidae)	70	0	150	30	150
Stonefly nymphs	Stonefly nymphs	20	10	10	30	10
Freshwater shrimps	Freshwater shrimps	1	2	1	4	1
Leeches	Leeches	0	0	2	5	2
Snails	Spire shells	0	0	0	0	0
	Ramshorn	0	0	0	0	0
Hoglouse	Hoglouse	10	0	0	1	0
Density/biomass indicator (totals)						
Other	Fish	0	0	0	0	0
	Other	0	0	0	0	0
Comments						

The results for all of these sites on the whole look pretty healthy. The absence of Flat-bodied and Olive upwings in the Teifi and low invertebrate numbers in general above Llanybydder is a bit of a mystery. If this site continues to score poorly then a biological investigation by EA staff will be scheduled in order to identify any potential problems

Upper Teifi Sampling Points – March results

River Name		Brennig	Brefi	Teifi	Teifi
Site Name				Abercarfan	Penrallt
NGR		SN67591	SN641548	SN664574	SN674586
Samplers		Clive	Clive Parish	Clive Parish	Clive Parish
Conditions					
Caddis Flies	Cased Caddis	46	5	9	49
	Caseless Caddis	11	3	4	17
Mayfly nymphs	Up-wing (Ephemeraeidae)	0	0	0	0
	Blue-winged Olive up-wing	0	0	0	0
	(Heptageniidae)	43	43	54	68
	Olive up-wing (Baetidae)	28	70	43	104
Stonefly nymphs	Stonefly nymphs	41	21	20	26
Freshwater shrimps	Freshwater shrimps	0	5	4	15
Leeches	Leeches	0	1	1	21
Snails	Spire shells	0	0	0	0
	Ramshorn	0	0	0	0
Hoglouse	Hoglouse	0	2	2	30
Density/biomass indicator (totals)					
Other	Fish		Brook Lamprey 1		Minnow 1
	Other	5 gnat larvae	2 disc beetles	5 disc beetles	4 disc beetles
Comments					

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There are no obvious problems with any of these sites, and all have good number of sensitive invertebrate families.

Upper Teifi Sampling Points – May/June Results

River Name		Cwerchyr	Brennig	Brefi	Teifi	Teifi
Site Name		Maeslyn			Abercarfan	Penrallt
NGR		SN368446	SN67591	SN641548	SN664574	SN674586
Samplers		Ieuan Thomas	Clive Parish	Clive Parish	Clive Parish	Clive Parish
Conditions						
Caddis Flies	Cased Caddis	4	43	22	22	24
	Caseless Caddis	2	2	18	9	0
Mayfly nymphs	Up-wing (Ephemeroidea)	0	0	0	0	0
	Blue-winged Olive up-wing (Heptageniidae)	0	23	26	17	11
	(Heptageniidae)	12	9	29	13	13
	Olive up-wing (Baetidae)	50	157	204	318	171
Stonefly nymphs	Stonefly nymphs	5	39	12	31	16
Freshwater shrimps	Freshwater shrimps	12	0	12	0	0
Leeches	Leeches	0	1	1	2	1
Snails	Spire shells	0	0	0	0	0
	Ramshorn	0	0	0	0	0
Hoglouse	Hoglouse	0	0	1	0	1
Density/biomass indicator (totals)						
Other	Fish	0	0	0	Stoneloach 1	Minnnows 4
	Other	Saucer bugs 20	3	Saucer bugs 3	Saucer bugs 10	0
Comments			30 small disc beetles	100+ small disc beetles	50 small disc beetles	30 small disc beetles

These sites have continued to have healthy invertebrate populations, with no signs of pollution.

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Pembrokeshire results

River invertebrate monitoring results															
Spring / Summer 2012		St Catherines Bridge		Cutty Bridge		Pelcombe Brook		Goodwick Brook		Cartlett Brook		Narberth Brook		Rosemarket Stream	
Location		1		2		3		4		5		6		7	
GPS		SM 94494 19795		SM 94129 18729		TBC		SM 94741		SN 00590		SN 09582		SM95480 07850	
Date		21/05/2012		22/05/2012		23/05/2012		30/05/2012		14/06/2012		19/06/2012		26/06/2012	
Name of Monitors		DN/JCo		DN/JCo		DS/?		JCu/RK		JCu/LE		JH/JCu		JBC/JCu	
Conditions		10°C. Slightly above normal summer level.		clean, slightly above summer level.		Warm, overcast		Medium flow. Bed=silt/mud/stones.		Medium flow. Bed=stoney.		Medium flow. Bed=stoney.		bed=grit/large stones/algae. Raining.	
Caddis Flies	Cased Caddis	B	45	C	110	B	14	B	16	A	4	B	18	B	12
	Caseless Caddis	B	12	A	5	-	0	A	2	A	2	A	4	B	13
Mayfly nymphs	Up-wing (Ephemeroidea)	-	0	A	2	A	7	-	0	-	0	-	0	A	1
	Blue-winged Olive up-wing	A	5	A	7	-	0	-	0	A	5	B	31	A	3
	Flat-bodied up-wing (Heptageniidae)	C	150	A	7	A	3	A	2	B	25	A	8	A	1
	Olive up-wing (Baetidae)	C	280	C	120	B	42	A	8	B	40	B	64	A	3
Stonefly nymphs	Stonefly nymphs	B	20	A	1	-	0	A	2	A	3	-	0	A	3
Freshwater shrimps	Freshwater shrimps	B	66	B	15	B	60	-	0	B	40	C	280	B	45
Leeches	Leeches	B	12	A	7	B	25	-	0	A	8	-	0	A	1
Snails	Spire shells	-	0	-	0	A	1	A	1	-	0	A	5	-	0
	Ramshorn	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Hoglouse	Hoglouse	-	0	-	0	A	1	-	0	-	0	-	0	-	0
Density/biomass indicator (totals)		590		274		152		31		127		410		82	
Other	Fish	2 parr	-	-	-	-	-	Elver	Bullhead	Bullhead & baby bullhead		-	-	-	-
	Other	Limpet	-	-	-	-	-	Beetles	Limpet,	3 Beetles		larvae	-	-	-
Comments		River clear & apparently clean. Improved quality, few blackfly larvae.		Totals below usual. Possible sponge found adherant to stone.				Lots of fish seen throughout the brook by Reserve		Plenty of debris.					

In general, the biological quality of the streams sampled is fairly good, although the Pelcomb brook, Rosemarket Stream and Goodwick brook look a little bit impoverished and are showing signs of organic pollution (low numbers of flat bodied mayflies and stoneflies). In the case of the Goodwick Brook it might be a habitat issue as a silty bed will also result in low numbers of these families. Environment Agency Staff will be doing an intensive biological catchment survey of the Pelcomb Brook this winter as part of Water Framework Directive investigative monitoring which should hopefully pinpoint and deal with any sources of pollution.

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Carmarthenshire Rivers Trust Results.

Gwaun-Cae-Gurwen Angling Association sample points – June/July

River Name		Araeth		Breinant		Dunant		Gwenlais	
Site Name									
NGR									
Samplers		GCG		GCG		Lyn Martinson		Lyn Martinson	
Conditions		SN6602323670		SN6370422124		SN7548038915		SN7564839335	
		Category	Number found	Category	Number found	Category	Number Found	Category	Number found
Caddis Flies	Cased Caddis					A	1	B	10
	Caseless Caddis (Ephemeroidea)					A	2	A	5
Mayfly nymphs	Blue-winged Olive up-wing					-	0	-	0
	Flat-bodied up-wing (Heptageniidae)					B	19	B	20
	Olive up-wing (Baetidae)					B	12	B	21
							-	0	B
Stonefly nymphs	Stonefly nymphs					A	2	-	0
Freshwater shrimps	Freshwater shrimps					A	2	-	0
Leeches	Leeches					-	0	-	0
Snails	Snails					-	0	-	0
Hoglouse	Hoglouse					-	0	-	0
Density/biomass indicator (totals)						Total no. recorded: 38		Total no. recorded:	
Notes						Water medium peat		Water very clear.	
Biological Quality						Poor		Disappointing	
Comments						Needs to be checked out urgently!		As for Dunant	

The results on the Dunant and Gwenlais were quite disappointing, in terms of numbers of individuals found. These sites were resampled by Gethyn Thomas on the 8th August, and numbers were much better for both sites, although the Dunant still shows signs of acidification with low numbers of mayflies. The top of the catchment drains Caio forest, which is the most likely source of a lowered pH.

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Tawe Anglers sample points.

River Name		Giedd		Llynfell		Twrch	
Site Name		Cwmgiedd		Cwmllynfell		Cwmtwrch	
NGR		SN78851112					
Samplers		Rob Bending/ Mark Hughes		Rob Bending/ Mark Hughes		Rob Bending/ Mark Hughes	
Conditions							
		Category	Number found	Category	Number Found	Category	Number found
Caddis Flies	Cased Caddis	A	1	B	15	-	0
	Caseless Caddis	A	8	B	10	B	80
Mayfly nymph	Up-wing (Ephemeraeidae)	-	0	-	0	-	0
	Blue-winged Olive up-wing	A	2	B	16	-	0
	Flat-bodied up-wing (Hepta)	B	41	A	8	B	40
	Olive up-wing (Baetidae)	C	138	B	16	C	106
Stonefly nym	Stonefly nymphs	B	16	B	40	B	32
Freshwater s	Freshwater shrimps	B	13	-	0	-	0
Leeches	Leeches	B	40	-	0	A	8
Snails	Snails	-	0	-	0	-	0
Hoglouse	Hoglouse	-	0	-	0	-	0
Density/biomass indicator (totals)		259		105		266	
Notes							
Biological Quality							
Comments						<i>Large Olive hatch witnessed</i>	

No major problems were found with any of these sites.

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Cothi Sample Points

June/July 2012

River Name		Cothi		Cothi		Cothi Twrch		Cothi Clydach		Cothi Annell	
Site Name		Pumsaint		Cwrt Y Cadno		Pumsaint		Cwm Mawr du		Island Farm	
NGR											
Samplers		P John, M Heckler		P John, M Heckler		P John, M Heckler		P John, M Heckler		P John, M Heckler	
Conditions											
		Category	Number found	Category	Number Found	Category	Number found	Category	Number found	Category	Number found
Caddis Flies	Cased Caddis	B	46	B	49	B	38	B	41	B	50
	Caseless Caddis	B	14	B	14	B	30	B	20	A	5
Mayfly nymphs	Up-wing (Ephemeraeidae)	-	0	-	0	A	1	-	0	-	0
	Blue-winged Olive up-wing	B	16	-	0	-	0	B	16	-	0
	Flat-bodied up-wing (Heptageniidae)	B	13	C	132	B	39	A	9	C	153
	Olive up-wing (Baetidae)	C	121	C	106	C	493	C	121	C	141
Stonefly nymphs	Stonefly nymphs	A	4	B	47	B	79	B	44	B	48
Freshwater shrimps	Freshwater shrimps	A	1	-	0	A	1	A	1	A	4
Leeches	Leeches	B	36	-	0	-	0	A	1	A	2
Snails	Snails	-	0	-	0	-	0	-	0	-	0
Hoglouse	Hoglouse	-	0	-	0	-	0	-	0	-	14
(totals)		Total no. recorded:		Total no. recorded:		Total no. recorded:		Total no. recorded:		Total no. recorded: 417	
Notes		1 salmon fry in the sample and 6 bullheads		2 bullheads and 1 salmon fry in sample		One mink seen at the site		Gravel has shifted leaving more exposed bedrock and less suitable for sampling		Lush weed growth. Compacted gravel unlikely to produce the very best invertebrate counts.	
Biological Quality		Good		Very good		Excellent		Good		Very Good	

The Cothi sites all had extremely good biology, which is very encouraging to see, considering that the catchment has had major issues in the past.

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Gorlech and Melindwr Sample Points.

February 2012

River Name		Gorlech		Melindwr	
Site Name		Abergorlech			
NGR					
Samplers		Dave Harry		Dave Harry	
Conditions					
		Category	Number found	Category	Number Found
Caddis Flies	Cased Caddis	A	7	B	32
	Caseless Caddis	B	12	A	8
Mayfly nymphs	Up-wing (Ephemeraeidae)	0	0	A	1
	Blue-winged Olive up-wing	0	0	0	0
	Flat-bodied up-wing (Heptageniidae)	C	380	C	180
	Olive up-wing (Baetidae)	C	189	C	130
Stonefly nymph	Stonefly nymphs	C	280	C	210
Freshwater shrimps	Freshwater shrimps	0		A	2
Leeches	Leeches	0		0	
Snails	Snails	0		0	
Hoglouse	Hoglouse	0		0	
Density/biomass indicator (totals)		868			563
Notes					
Biological Quality					

May 2012

River Name		Gorlech		Melindwr	
Site Name		Abergorlech			
NGR					
Samplers		Dave Harry		Dave Harry	
Conditions					
		Category	Number found	Category	Number Found
Caddis Flies	Cased Caddis	C	135	B	18
	Caseless Caddis	B	21	A	1
Mayfly nymphs	Up-wing (Ephemeraeidae)				
	Blue-winged Olive up-wing				
	Flat-bodied up-wing (Heptageniidae)	C	133	B	87
	Olive up-wing (Baetidae)	B	98	B	95
Stonefly nymph	Stonefly nymphs	C	201	B	83
Freshwater shrimps	Freshwater shrimps				
Leeches	Leeches				
Snails	Snails				
Hoglouse	Hoglouse				
Density/biomass indicator (totals)		588			284
Notes					
Biological Quality					
Comments					

Both sites had very good invertebrate populations for both the February and May samples, with absolutely huge numbers of sensitive Heptagenid mayflies!

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Ogmore Results

River Name		Ffornwg	Ffornwg	Cynffig	Cynffig	Cynffig
Site Name		Cwrt Colman	Pen Y Fai	Abercynffig	Fountain	Cwm Ffos
NGR		SS 88169 81441	SS 89371 81650	SS 89444 83472	SS 88073 83430	SS 86644 83397
Samplers		Colin Chapman	Colin Chapman	Colin Chapman	Colin Chapman	Colin Chapman
Conditions						
Caddis Flies	Cased Caddis	300	10	15	4	0
	Caseless Caddis	8	5	2	4	0
Mayfly nymphs	Up-wing (Ephemeroidea)	0	0	1	0	0
	Blue-winged Olive up-wing	0	8	2	0	0
	Flat-bodied up-wing (Heptageniidae)	0	2	10	8	0
	(Baetidae)	150	25	>100	>100	0
Stonefly nymphs	Stonefly nymphs	0	150	150	50	0
Freshwater shrimps	Freshwater shrimps	200	0	0	0	>100
Leeches	Leeches	0	0	0	0	0
Snails	Spire shells	10	0	0	0	>300
	Ramshorn	0	0	0	0	0
Hoglouse	Hoglouse	0	0	0	0	>50
Density/biomass indicator (totals)						
Other	Fish	0	0	1 (bullhead)	0	0
	Other					
Comments			Green algae present			Site likely to dry in summer

The Ffornwg and Cynffig both have an invertebrate fauna typical of a stream suffering from historical organic pollution or sedimentation, with high numbers of olive upwings and freshwater shrimps. The site on the Cynffig at Cwm Ffos looks particularly bad, and it would be interesting to see if this site actually does dry up at any point. The lower sites seem to fare a bit better, with good numbers of Heptagenids and stoneflies. The Ffornwg is a lot healthier at the lower site. It will be interesting to see how seasonality affects these new sites.