



An audit of performance in the processing of macro-invertebrate samples in 1994. NRA Welsh Region

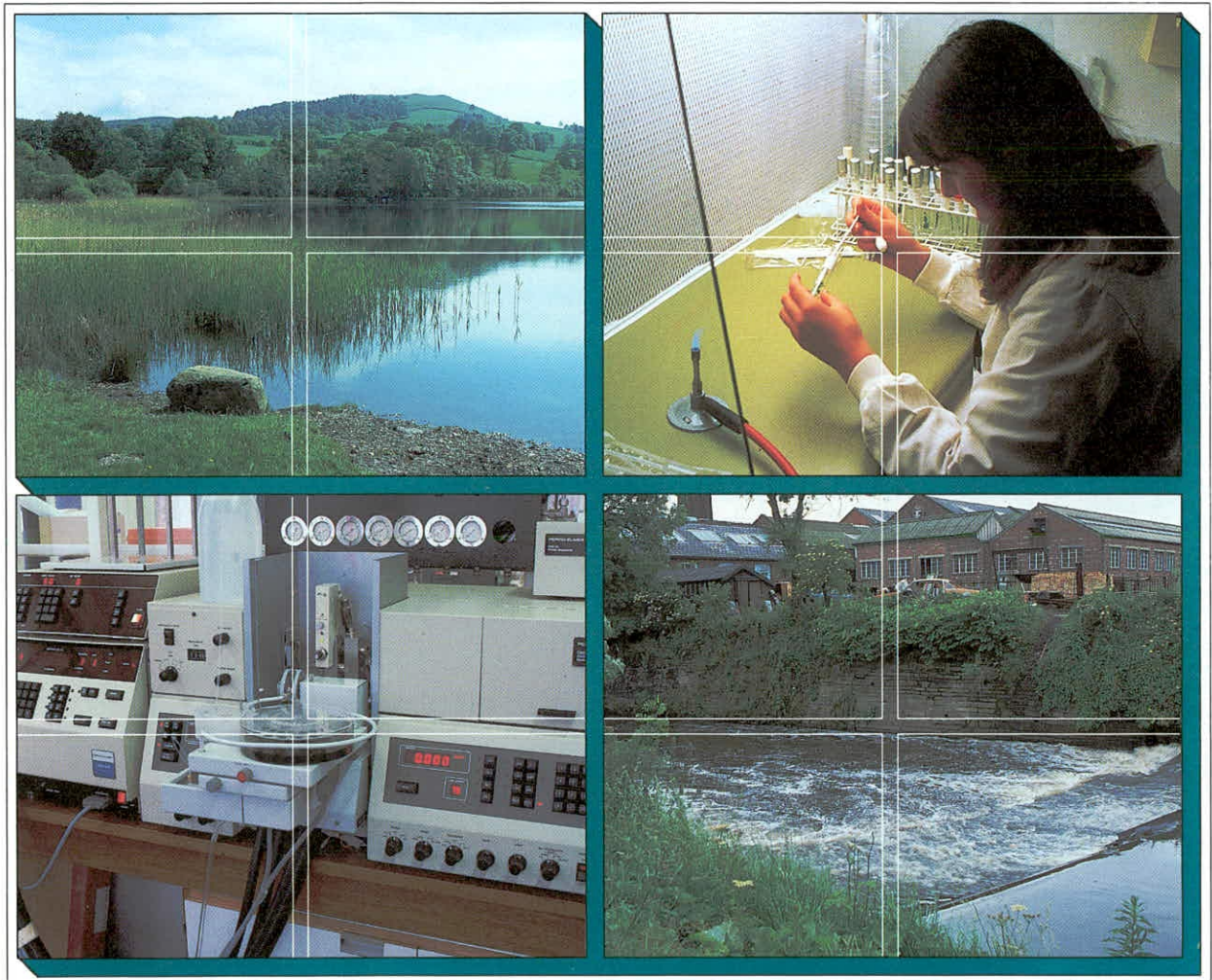
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National Rivers Authority, Welsh Region
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An audit of performance in the processing of macro-invertebrate samples in 1994. NRA Welsh Region

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Project Leader:
Report Date:
Report To:
IFE Report Ref. No:

R.J.M. Gunn
May 1995
National Rivers Authority, Welsh Region
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1. INTRODUCTION

In 1994 the sampling of aquatic macro-invertebrates for the biological assessment of river quality continued throughout the United Kingdom. This task was undertaken by the National Rivers Authority (NRA) in England and Wales, the River Purification Boards (RPBs) in Scotland and the Industrial Research & Technology Unit (IRTU) in Northern Ireland.

In view of the number of staff involved and the variability of sample processing techniques, it was recognised that an independent quality control exercise was necessary to promote a consistently high level of reliability. The IFE was contracted to undertake an audit of the sample sorting and identification performance of each NRA region, several RPBs and the IRTU. This report presents the results of 61 samples audited for NRA Welsh Region. The IFE was not required to perform any statistical analyses nor interpretation of the results of the audit.

Each organisation employed standard collection procedures, as used in the 1990 River Quality Survey, and the sampling strategy was therefore compatible with RIVPACS (River InVertebrate Prediction And Classification System), which has been developed by the Institute of Freshwater Ecology (IFE).

Samples were sorted by NRA, RPB and IRTU personnel for the families of macro-invertebrates included in the Biological Monitoring Working Party (BMWP) system. Taxa present were recorded on site data sheets. Sample processing and recording techniques varied from region to region.

2. SAMPLE SELECTION

Samples for audit were selected internally by each of the agencies being monitored. The biologists processing these samples had no prior knowledge of the samples to be audited.

The manner of sample selection, which biologists would be monitored and the number of audit samples from each season, were left to the discretion of the agency, within the limits of the total number of samples that IFE was contracted to audit.

3. SAMPLE PROCESSING

The normal protocol for NRA, RPB and IRTU biologists was to sort their samples within the laboratory and to select examples of each scoring taxon within the BMWP system. In most cases, the invertebrates were placed in a vial of preservative (4% formaldehyde solution or 70% industrial alcohol) and the BMWP taxa were listed on a data sheet. The vial of animals and the sorted material were then returned to the sample container and preservative added. Thus, each sample available to IFE for audit should have included:

- i) a list of the BMWP families found in the sample
- ii) a vial containing representatives from each family
- iii) the preserved sample

When these three elements were present, the sequence of operations at IFE was as follows:

- a) The remainder of the sample was sorted and the BMWP families listed
- b) The families contained within the vial were identified and listed
- c) A comparison was made between the NRA listing of families and those identified from the vial by IFE
- d) A comparison was made between the NRA listing of families and those found in the sample by IFE
- e) "Losses" or "gains" from the NRA listing of families were noted. In the case of "gains", each additional family was identified, where possible, to species level, in order to clarify any specific repetitive errors.

For a number of different reasons, some samples did not include a vial containing representative examples of the families listed on the data sheet. Others arrived with the vial damaged in transit such that the representative examples were no longer separated. For these samples, only operations a), d) and e) above were appropriate.

Several directives were issued to IFE relating to the treatment of BMWP taxa. Terrestrial representatives of BMWP scoring families, animals deemed to have been dead at the time of sampling, cast insect skins, pupal exuviae, empty mollusc shells and posterior ends of "living" specimens were to be excluded from the listing of families present. Chrysomelidae and Curculionidae, which appear in the BMWP list, were also to be excluded for the purposes of the audit. Trichopteran pupae, although not routinely identified by many biologists, were to be included in the listing of families.

4. REPORTING

The results of each sample audit were recorded on a standard report form (Table 1). For audit samples where a vial of animals was included, the comparison between the NRA listing and the taxa found in the vial by IFE was shown in box A of the report form. Discrepancies could be due to carelessness, misidentifications or errors in completing the NRA data sheet. Families not on the NRA listing but found by IFE in the remainder of the sample were entered in box B of the report form under "additional families". When the families listed as "losses" in section A of the report form were compared with the full list of families recorded in the sample by IFE, some apparent losses from the vial were offset by the presence of those families in the remainder of the sample. These taxa were therefore listed in the "losses" box of section A and the "gains" box of section B and were neither a net loss nor a net gain. In these cases, the families were marked with an asterisk in both boxes. Such errors are noted as "omissions" in the tables which summarise the results for each season (Tables 2, 3 and 4).

Species identifications, state of development (eg adult or larval coleopterans) and the presence of a single representative of a family within the remainder of the sample were recorded in the notes section of the report form. Where the NRA data sheet indicated that a family was noted and released at the site, this was recorded in the notes section but not included as a "loss", even though the family was not found in the vial.

For those samples in which the vial of animals was damaged or missing, box A of the report form was not applicable (N/a). Families not on the NRA list but present in the sample were listed in box B under "additional families" as before. Families recorded on the NRA list but not found by IFE were indicated on the left hand side of box B. If the vial of animals was retained by the NRA, entries in this box could include the sole representative of a family which was removed by the NRA, a family seen at the site which escaped or was released (without mention being made on the NRA data sheet), inaccurate identification, the wrong family box being ticked on the NRA data sheet or the family being present in the sample but missed by IFE.

Results of the audits of individual samples are presented in the Appendix.

TABLE 1. The IFE Report form

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	<input type="text"/>	RIVER	<input type="text"/>
DATE	<input type="text"/>	SITE	<input type="text"/>
SORTER	<input type="text"/>	CODE	<input type="text"/>

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE		

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

TABLE 2. The 18 spring samples audited for Welsh Region.

River	Site	Sorter	Losses	Gains	Omissions
Rhymney	Pengam	PC	1	0	0
Colwyn	Beddgelert	RAC	0	1	0
Dwyrdd	d/s Cynfal	JB	0	4	0
Twymyn	Bont Dolgadfan	RAC	2	3	0
Prysor	u/s Trawsfynydd STW	MDW	0	0	0
Afon Leri	Dolybont	JB	0	0	0
Nant Alltwalis	d/s STW	KJ	1	0	0
Nant-y-Aber	Abertridwr	NS	0	0	0
Gledyr	Caerphilly	AT	0	0	0
Rhymney	Tirphil	AT	0	1	0
Afon Dyfi	B4404 Bridge	JB	0	3	0
Nantcol	Cwm Nantcol	JB	0	3	0
Afon Glyn	Pont-y-Glyn	RAC	0	1	0
Dulas North	Glan Fechan	MW	0	4	0
Glas Lyn	Pont Croesor	MW	0	1	0
Dafen	d/s Road Bridge	KJ	1	1	0
Taf Bargoed	u/s Trelewis	MC	1	3	0
Maendy Tip	Site 2	MC	0	2	0

TABLE 3. The 36 summer samples audited for Welsh Region.

River	Site	Sorter	Losses	Gains	Omissions
Norton Brook	u/s Norton STW	NS	0	0	0
Coldstone Brook	d/s Kingstone & Madley STW	AT	0	1	0
Coldstone Brook	u/s Kingstone & Madley STW	AT	0	0	1
Pant Brook	u/s Llanddewi Rhydderch STW	NS	0	0	1
Un-named Stream	u/s Pen-y-Stryt STW	JB	0	2	0
Un-named Stream	u/s St Asaph STW	JB	0	3	0
Un-named Stream	u/s Bryn Du STW	MW	0	0	0
Un-named Stream	u/s Llaniestyn STW	MDW	0	0	0
Un-named Stream	u/s Henllan STW	RAC	0	3	1
Ceri	u/s Rhydlewis STW	MJ	0	1	0
Clydach	d/s Fforestgoch STW	DB	0	1	0
Cresswell Tributary	u/s Langdon STW	DB	0	1	0
Morgennau Tributary	u/s Boncath STW	AK/KJ	0	1	0
Crymlyn Tributary	d/s Gas pipeline	KJ	2	1	0
Marlas	Carmel	MJ	1	1	0
Nant-y-Wilcae	Raglan	PC	0	0	0
Howey Brook	Howey STW	PC	0	0	0
Caled Frwid	u/s Bryn Refail STW	RAC	0	0	0
Afon Merddwr Tributary	u/s Glasfryn STW	RAC	0	0	0
Afon Aled	u/s Llansannan STW	JB	0	2	0
Byr Brook	u/s Treuddyn STW	MW	1	1	0
Nant Comeliw Tributary	u/s Groes Bronallt STW	MW	1	2	0
Dulais	d/s Onllwyn Coal Washery	KJ	0	5	0
Dulais Tributary	Betws Bledrws	MJ	0	1	0

River	Site	Sorter	Losses	Gains	Omissions
Afon Tawe	d/s Llandovery CSO	AK	1	3	0
Duar	d/s Teifi Valley Fish Farm	MJ	0	0	0
Lliw	u/s BSC Bryngwyn	MJ	0	0	0
Neath	u/s Resolven STW	KJ	0	2	0
Lugg	d/s Boultribrook Fish Farm	NS	0	1	0
Nant Draethen	d/s Draethen Fish Farm 1	PC	0	0	0
Nant Draethen	d/s Draethen Fish Farm 2	PC	0	0	0
Nant Rhyd Halog	u/s Forest Wood Quarry	PC	0	0	0
Rhymney	Llechryd	NS	0	0	0
Rhymney	The Mill	AT	0	1	0
Rhymney	Ystrad Mynach	PC	0	0	0
Nant-y-Aber	Caerphilly	AT	0	0	0

TABLE 4. The 7 autumn samples audited for Welsh Region.

River	Site	Sorter	Losses	Gains	Omissions
Soden	d/s Nanternis STW	KJ	0	3	0
Gorrey Fach	d/s Confluence	KJ	1	1	0
Camddwr Fach	u/s Swydd Fynnon STW	MJ	0	2	0
Cleddau Tributary	u/s Right Tributary	DB	0	2	0
Wyre	u/s Llangwyfron STW	KJ	0	4	0
Wyre Tributary	u/s Lledrod STW	MJ	0	2	0
Teifi	Pontrhydfendieiad	MJ	0	0	0

APPENDIX

Results of individual sample audits

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Rhymney
DATE	26.4.94	SITE	Pengam
SORTER	PC	CODE	NRA08 E250/01

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Leptoceridae	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Specimen of *Mystacides* sp. was dead at time sample was taken.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Colwyn
DATE	11.5.94	SITE	Beddgelert
SORTER	RAC	CODE	NRA08 N044

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Lepidostomatidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 *Lepidostoma hirtum* 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Dwyrdd
DATE	16.5.94	SITE	d/s Cynfal
SORTER	JB	CODE	NRA08 N035

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Hydrobiidae 2 Dytiscidae 3 Hydrophilidae 4 Tipulidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

- | |
|---|
| <p>1 Potamopyrgus jenkinsi 1 only
 2 Oreodytes sanmarkii (adult) 1 only
 3 Hydraena gracilis (adult) 1 only
 4 Dicranota sp. 1 only</p> |
|---|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Twymyn
DATE	16.5.94	SITE	Bont Dolgadfan
SORTER	RAC	CODE	NRA08 N015

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Oligochaeta 2 Asellidae	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	3 Cordulegasteridae 4 Limnephilidae 5 Goeridae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

2 Terrestrial Isopod in vial
 3 Cordulegaster boltonii 1 only
 4 Indet Limnephilid (juvenile) 1 only
 5 Silo pallipes

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Prysor
DATE	16.5.94	SITE	u/s Trawsfynydd STW
SORTER	MDW	CODE	NRA08 N037

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Afon Leri
DATE	11.5.94	SITE	Dolybont
SORTER	JB	CODE	NRA08 N004

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nant Alltwalis
DATE	11.5.94	SITE	d/s STW
SORTER	KJ	CODE	NRA08 (B648/1A)

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Psychomyiidae	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nant-y-Aber
DATE	27.4.94	SITE	Abertridwr
SORTER	NS	CODE	NRA08 E259

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

Note on data sheet that Cordulegasteridae "not in vial". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Gledyr
DATE	27.4.94	SITE	Caerphilly
SORTER	AT	CODE	NRA08 E256

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Rhymney
DATE	26.4.94	SITE	Tirphil
SORTER	AT	CODE	NRA08 E350

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Glossiphoniidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Glossiphonia complanata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Afon Dyfi
DATE	19.5.94	SITE	B4404 Bridge
SORTER	JB	CODE	NRA08 N003

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	1 Leuctridae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	2 Planariidae 3 Caenidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

- | |
|--|
| <p>1 <i>Leuctra inermis</i>, <i>L.moselyi</i>
 2 <i>Crenobia alpina</i>
 3 <i>Caenis rivulorum</i></p> |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nantcol
DATE	12.5.94	SITE	Cwm Nantcol
SORTER	JB	CODE	NRA08 N033

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Lymnaeidae 2 Ephemerellidae 3 Hydrophilidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 <i>Lymnaea peregra</i> 1 only 2 <i>Ephemerella ignita</i> 3 <i>Hydraena gracilis</i> (adults)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Afon Glyn
DATE	12.5.94	SITE	Pont-y-Glyn
SORTER	RAC	CODE	

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Ancylidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Ancylus fluviatilis 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Dulas North
DATE	19.5.94	SITE	Glan Fechan
SORTER	MW	CODE	NRA08 N009

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Hydrophilidae 2 Elmidae 3 Tipulidae 4 Chironomidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

- | |
|--|
| <p>1 <i>Hydraena gracilis</i> (adult) 1 only
 2 <i>Esolus parallelepipedus</i> (adult + larva)
 3 <i>Dicranota</i> sp. 1 only
 4 Indet Orthoclaadiinae, Diamesinae</p> |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Glas Lyn
DATE	11.5.94	SITE	Pont Croesor
SORTER	MW	CODE	NRA08 N034

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Hydroptilidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Ithytrichia lamellaris 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Dafen
DATE	17.5.94	SITE	d/s Road bridge
SORTER	KJ	CODE	NRA08 W092

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Tipulidae	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	2 Physidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Indet Dolichopodid in vial
 2 Physa sp. (decalcified juvenile) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Taf Bargoed
DATE	2.3.94	SITE	u/s Trelewis
SORTER	MC	CODE	

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Lymnaeidae	2 Hydrobiidae

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	3 Leptophlebiidae 4 Perlodidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

2 Potamopyrgus jenkinsi 3 Paraleptophlebia cincta 1 only 4 Isoperla grammatica 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Maendy Tip Survey
DATE	22.3.94	SITE	Site 2
SORTER	MC	CODE	

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Ancylidae 2 Psychomyiidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Ancylus fluviatilis 2 Lype sp. 1 only
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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Norton Brook
DATE	14.7.94	SITE	u/s Norton (Old) STW
SORTER	NS	CODE	NRA08 STWE154U/S

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Coldstone Brook
DATE	26.7.94	SITE	d/s Kingstone & Madley STW
SORTER	AT	CODE	NRA08 STWE151D/S

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Ephemerellidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Ephemerella ignita 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Coldstone Brook
DATE	26.7.94	SITE	u/s Kingstone & Madley STW
SORTER	AT	CODE	NRA08 STWE151U/S

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Chironomidae*	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	2 Chironomidae*

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

2 Tanypodinae, Orthoclaadiinae, Tanytarsini

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Pant Brook
DATE	4.7.94	SITE	u/s Llanddewi Rhydderch STW
SORTER	NS	CODE	NRA08 STWE152U/S

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Oligochaeta*	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	2 Oligochaeta*

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

2 Indet Tubificidae

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Un-named Stream
DATE	29.7.94	SITE	u/s Pen-y-Stryt STW
SORTER	JB	CODE	NRA08 (S33)

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Planariidae 2 Sphaeriidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Polycelis felina 1 only
2 Pisidium sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Un-named Stream
DATE	1.8.94	SITE	u/s St.Asaph STW
SORTER	JB	CODE	NRA08 (S39)

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Nemouridae 2 Elmidae 3 Leptoceridae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Protonemura sp. (juvenile) 1 only
 2 Elmis aenea, Limnius volckmari, Esolus parallelepipedus (adults + larvae)
 3 Athripsodes sp. (pupa) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Un-named Stream
DATE	27.7.94	SITE	u/s Bryn Du STW
SORTER	MW	CODE	NRA08 (S23)

A	<p align="center">VIAL</p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE</p>	<p align="center">BMWP FAMILIES NOT FOUND BY IFE</p>	<p align="center">ADDITIONAL FAMILIES FOUND BY IFE</p>
		None	None

B	<p align="center">SAMPLE</p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE</p>	<p align="center">BMWP FAMILIES NOT FOUND BY IFE</p>	<p align="center">ADDITIONAL FAMILIES FOUND BY IFE</p>
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Un-named Stream
DATE	2.8.94	SITE	u/s Llaniestyn STW
SORTER	MDW	CODE	NRA08 (S49)

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Un-named Stream
DATE	2.8.94	SITE	u/s Henllan STW
SORTER	RAC	CODE	NRA08 (\$67)

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Dytiscidae*	2 Sialidae

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	3 Leuctridae 4 Dytiscidae* 5 Rhyacophilidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

- 2 Sialis fuliginosa
- 3 Leuctra fusca 1 only
- 4 Oreodytes sanmarkii (adult) 1 only
- 5 Rhyacophila dorsalis (pupae)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Ceri
DATE	5.8.94	SITE	u/s Rhydlewis STW
SORTER	MJ	CODE	NRA08 (B773/111D)

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Planariidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Phagocata vitta 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Clydach
DATE	19.7.94	SITE	d/s Fforestgoch STW
SORTER	DB	CODE	NRA08 (B750/87C)

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Lepidostomatidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Crunoecia irrorata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Cresswell Tributary
DATE	21.7.94	SITE	u/s Langdon STW
SORTER	DB	CODE	NRA08 (B737/103D)

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Sphaeriidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Pisidium sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Morgennau Tributary
DATE	5.8.94	SITE	u/s Boncath STW
SORTER	AK/KJ	CODE	NRA08 (B766/62C)

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Glossiphoniidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Glossiphonia complanata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Crymlyn Tributary
DATE	1.6.94	SITE	d/s Gas pipeline
SORTER	KJ	CODE	NRA08 (B684/1A)

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Cordulegasteridae 2 Simuliidae	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	3 Hydrophilidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

3 Anacaena globulus (adult) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Marlas
DATE	24.8.94	SITE	Carmel
SORTER	MJ	CODE	NRA08 (B844/116D)

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Asellidae	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	2 Perlodidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

<p>1 Terrestrial Isopod in vial 2 Indet Perlodid (juvenile) 1 only</p>
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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nant-y-Wilcae
DATE	4.7.94	SITE	Raglan
SORTER	PC	CODE	NRA08 STW E137 U/S

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None
Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE			

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None
Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE			

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Howey Brook
DATE	5.7.94	SITE	Howey STW
SORTER	PC	CODE	NRA08 STW E149 D/S

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Caled Frwid
DATE	2.8.94	SITE	u/s Bryn Refail STW
SORTER	RAC	CODE	

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Afon Merddwr Tributary
DATE	5.8.94	SITE	u/s Glasfryn STW
SORTER	RAC	CODE	

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Afon Aled
DATE	2.8.94	SITE	u/s Llansannan STW
SORTER	JB	CODE	

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Gammaridae 2 Ephemerellidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Gammarus pulex 2 Ephemerella ignita
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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Byr Brook
DATE	29.7.94	SITE	u/s Treuddyn STW
SORTER	MW	CODE	

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Lepidostomatidae	2 Limnephilidae

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

2 Indet Limnephilid (juvenile)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nant Comeliw
DATE	2.8.94	SITE	u/s Groes Bronallt STW
SORTER	MW	CODE	

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Valvatidae	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	2 Ephemerellidae 3 Hydropsychidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

- | |
|--|
| 1 Terrestrial snail (Euconulidae) in vial
2 Ephemerella ignita
3 Hydropsyche sp. (juveniles) |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Dulais
DATE	27.7.94	SITE	d/s Onllwyn Coal Washery
SORTER	KJ	CODE	NRA08 D/S IND DIS

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Sphaeriidae 2 Oligochaeta 3 Glossiphoniidae 4 Dytiscidae 5 Hydropsychidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

- | |
|--|
| 1 Pisidium sp. 1 only
2 Nais sp. 1 only
3 Glossiphonia complanata 1 only
4 Agabus sp. (larvae)
5 Hydropsyche sp. (pupa) 1 only

Data sheet labelled 27.7.94, sample pot labelled 22.7.94 |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Dulais Tributary
DATE	18.8.94	SITE	u/s Betws Bledrws
SORTER	MJ	CODE	NRA08 u/s STW

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Nemouridae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Protonemura sp. (juvenile) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Afon Tawe
DATE	18.8.94	SITE	u/s Llandoverly CSO
SORTER	AK	CODE	NRA08 CSO

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Odontoceridae	2 Limnephilidae

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	3 Lepidostomatidae 4 Sericostomatidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

2 Ecclisopteryx guttulata 3 Lasiocephala basalis 4 Sericostoma personatum 1 only
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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Duar
DATE	8.8.94	SITE	d/s Teifi Valley Fish Farm
SORTER	MJ	CODE	NRA08 D/S IND DIS

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Lliw
DATE	25.8.94	SITE	u/s BSC Bryngwyn
SORTER	MJ	CODE	NRA08 U/S IND

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Neath
DATE	22.7.94	SITE	u/s Resolven STW
SORTER	KJ	CODE	NRA08 U/S STW

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Caenidae 2 Simuliidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Caenis rivulorum 2 Simulium reptans
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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Lugg
DATE	4.8.94	SITE	d/s Boultribrook Fish Farm
SORTER	NS	CODE	

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Erpobdellidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Indet Erpobdellid (juvenile) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nant Draethen
DATE	23.8.94	SITE	d/s Draethen Fish Farm 1
SORTER	PC	CODE	

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nant Draethen
DATE	23.8.94	SITE	d/s Draethen Fish Farm 2
SORTER	PC	CODE	

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nant Rhyd Halog
DATE	24.8.94	SITE	u/s Forest Wood Quarry
SORTER	PC	CODE	

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Rhymney
DATE	28.7.94	SITE	Llechryd
SORTER	NS	CODE	NRA08 E254

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Rhymney
DATE	27.7.94	SITE	The Mill
SORTER	AT	CODE	NRA08 E242

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Polycentropodidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Polycentropus flavomaculatus 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Rhymney
DATE	28.7.94	SITE	Ystrad Mynach
SORTER	PC	CODE	NRA08 E249

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Nant-y-Aber
DATE	28.7.94	SITE	Caerphilly
SORTER	AT	CODE	NRA08 E258

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

Leuctridae & Perlodidae ticked on data sheet and found by IFE in vial hence records accepted. However, no abundance categories allotted on data sheet and it appears that these families were excluded from the statistics for this site (18 taxa recorded instead of 20).

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Soden
DATE	2.9.94	SITE	d/s Nanternis STW
SORTER	KJ	CODE	NRA08 (B882/58C)

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Lymnaeidae 2 Leptophlebiidae 3 Rhyacophilidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

- 1 *Lymnaea truncatula* 1 only
- 2 *Paraleptophlebia* sp. (juveniles)
- 3 *Rhyacophila dorsalis* (pupa) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Gorrey Fach
DATE	13.10 94	SITE	d/s Confluence
SORTER	KJ	CODE	NRA08 (B924/71C)

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		1 Sialidae	2 Baetidae

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

2 Baetis rhodani

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Camddwr Fach
DATE	1.9.94	SITE	u/s Swydd Fynnon STW
SORTER	MJ	CODE	NRA08 U/S STW

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Leuctridae 2 Leptoceridae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES

0

NET GAINS

2

OMISSIONS

0

NOTES:

1 Leuctra fusca 1 only
2 Athripsodes sp. (juvenile) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Cleddau Tributary
DATE	11.11.94	SITE	u/s Right tributary
SORTER	DB	CODE	

A	VIAL	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Ancylidae 2 Goeridae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Ancylus fluviatilis 1 only
2 Silo pallipes 1 only

Data sheet labelled 11.11.94, sample pot labelled 25.11.94

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Wyre
DATE	21.9.94	SITE	u/s Llangwyfron STW
SORTER	KJ	CODE	NRA08 U/S STW

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Gammaridae 2 Heptageniidae 3 Leptoceridae 4 Lepidostomatidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

- | |
|---|
| 1 Gammarus pulex 1 only
2 Rhithrogena sp. 1 only
3 Athripsodes sp. 1 only
4 Lepidostoma hirtum |
|---|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Wyre Tributary
DATE	1.9.94	SITE	u/s Lledrod STW
SORTER	MJ	CODE	NRA08 U/S STW

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	1 Hydropsychidae 2 Lepidostomatidae

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

1 Diplectrona felix 2 Crunoecia irrorata 1 only
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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Welsh	RIVER	Teifi
DATE	1.9.94	SITE	Pontrhydfendieiad
SORTER	MJ	CODE	NRA08 D/S STW

A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		None	None

B	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
		(This box is only completed when no vial is supplied with the sample)	None

* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)

NET LOSSES NET GAINS OMISSIONS

NOTES:

