



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

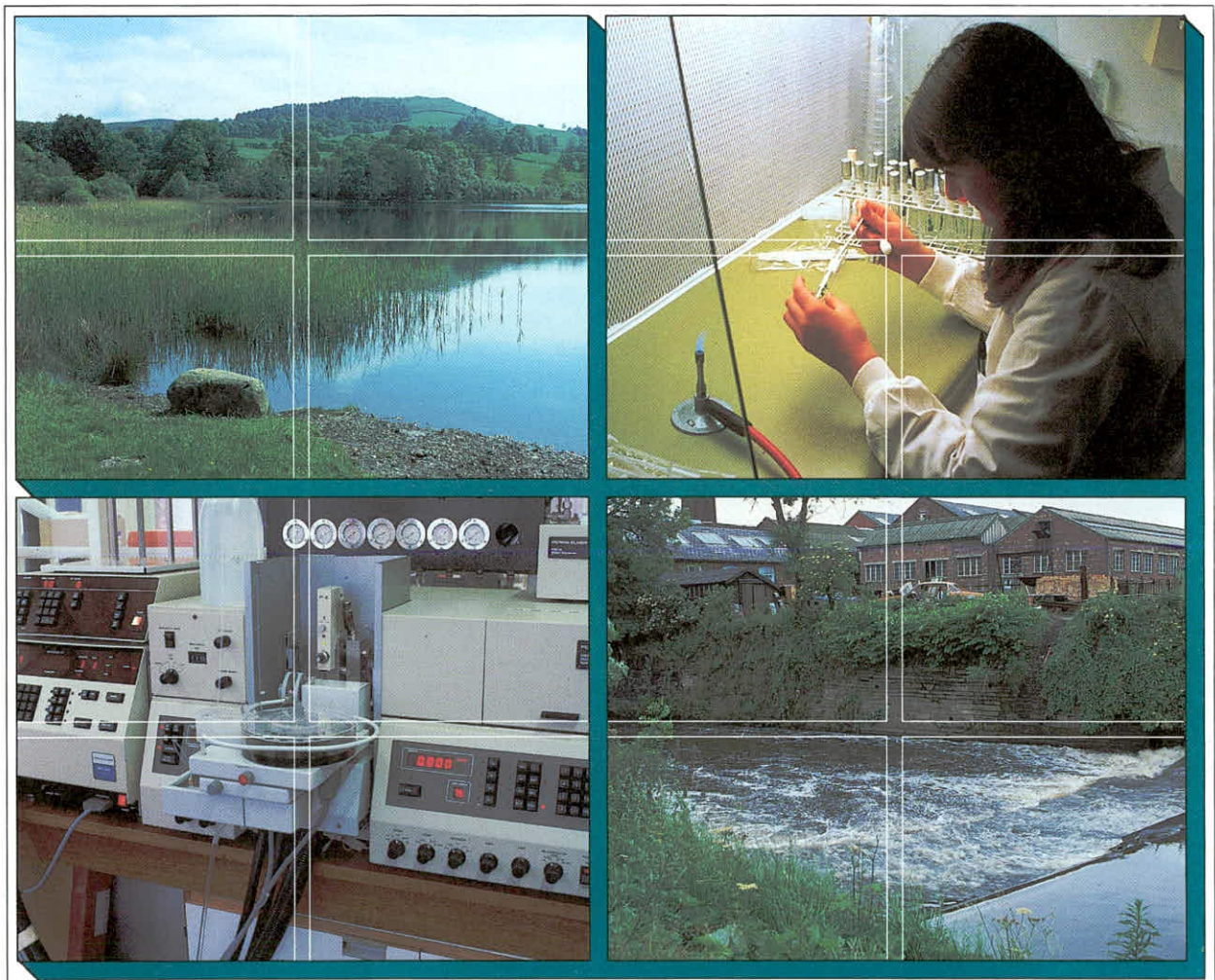
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Report To:
IFE Report Ref. No:

National Rivers Authority, Thames Region
RL/T04071h1/07





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

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Report Date:	May 1995
Report To:	National Rivers Authority, Thames 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 60 samples audited for NRA Thames 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 13 spring samples audited for Thames Region.

River	Site	Losses	Gains	Omissions
Showells Brook	Crawley	3	6	1
Leigh Brook	Leigh Bridge	1	0	0
Emm Brook	Winnersh	0	2	1
Mole	Stoke D'abernon Bridge	3	2	1
Og	u/s R. Kennet	1	1	3
Cholsey Brook	d/s Cholsey STW	0	1	0
Ash	u/s R. Thames	0	0	0
Wandle	Goat Bridge	0	0	0
Wandle Brook	Wandsworth	1	0	1
Potters Bar Brook	u/s Mimshall Brook	0	0	0
Ingrebourne	A12 Bridge	0	0	0
Wandle	Hackbridge Estate	2	2	0
Beverley Brook	Motspur Park	0	0	0

TABLE 3. The 25 summer samples audited for Thames Region.

River	Site	Losses	Gains	Omissions
Evenlode	Cassington	1	2	3
Glyme	Woodstock	2	2	2
Cherwell	u/s Banbury STW	1	6	1
Derry Brook	Ashton Keynes	1	5	0
Yeading Brook	Charville Road	0	1	0
Lee	Batford	0	2	0
Stevenage Brook	Frogmore Hall	0	4	0
Wantz Stream	Ballard Road	0	0	1
Roding	Broad Bridge	0	3	0
Roding	Gang Bridge	0	6	1
Weald Brook	Wrights Bridge	0	2	0
Pyl Brook	West Barns Lane	0	2	0
Cripsey Brook	Shelley Bridge	1	2	0
Misbourne	d/s Gerards Cross STW	0	0	1
Small Lee	u/s Turkey Brook	0	0	0
Farnborough Ditch	College Farm Track	0	2	1
Farthinghole Stream	u/s Cherwell	0	1	0
Webbs Lane Stream	d/s Beenham Tip	0	2	2
Foudry Brook	Hartley Court Farm	1	2	2
Hanwell Brook	u/s Oxford Canal	1	8	0
Marcham Brook	Mill Road	0	2	1
Woodhill Brook	u/s Childrey	1	2	0
Baldon Brook	u/s R. Thame	0	1	0
Swere	Bloxham Bridge	1	5	2
Bloxham Brook	u/s Sor Brook	0	8	1

TABLE 4. The 22 autumn samples audited for Thames Region.

River	Site	Losses	Gains	Omissions
Pincey Brook	Ealing Bridge	0	0	0
Mimram	Whitwell	0	1	0
Stoke Brook	u/s Bear Brook	0	3	1
Halton Brook	u/s Bear Brook	0	3	0
Latchford Brook	Peggs Farm	0	2	1
Horsenden Stream	Bledlow	1	2	1
Fleet Brook	u/s R. Hart	0	2	3
The Cut	Bray Wick	0	4	1
Culworth Brook	u/s Cherwell	1	4	0
Faringdon Brook	Great Faringdon	0	4	0
Bletchington Brook	u/s Gallos Brook	0	5	1
Hornton Stream	Horley	0	7	0
Mimram	Panshanger	0	3	0
Ravensbourne	Rookery Lane	0	4	0
Lee	Kings Weir	0	1	0
Lee Navigation	u/s Old Ford Lock	0	2	0
Stort	u/s Spellbrook Lock	0	2	0
Dollis Brook	Bell Lane	0	2	0
Ash	Easneye	0	3	0
Chess	Sarratt	0	5	1
Chess	u/s R. Colne	0	0	0
Lea	Amwell Magna	0	2	0

APPENDIX

Results of individual sample audits

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Showells Brook
DATE	20.4.94	SITE	Crawley
SORTER		CODE	NRA07 PWRR.0039

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 2 Planorbidae 3 Sericostomatidae 4 Chironomidae*	5 Erpobdellidae

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)	6 Planariidae 7 Piscicolidae 8 Polycentropodidae 9 Hydropsychidae 10 Chironomidae* 11 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:

- | |
|---|
| 2 Terrestrial snail in vial
5 Erpobdella octoculata
6 Polycelis nigra/tenuis
7 Piscicola geometra 1 only
8 Plectrocnemia conspersa 1 only
9 Hydropsyche siltalai
10 Orthocladiinae, Tanytarsini
11 Simulium costatum |
|---|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Leigh Brook
DATE	9.5.94	SITE	Leigh Bridge
SORTER		CODE	NRA07 PMLR.0014

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 Gerridae	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	Thames	RIVER	Emm Brook
DATE	16.3.94	SITE	Winnersh
SORTER		CODE	NRA07 PLDR.0118

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 Simuliidae*	2 Gammaridae

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 Planariidae 4 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:

- 2 Gammarus pulex
- 3 Polycelis nigra/tenuis, Dugesia lugubris/polychroa
- 4 Simulium ornatum group

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Mole
DATE	9.5.94	SITE	Stoke D'abernon Bridge
SORTER		CODE	NRA07 PMLR.0033

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 Planariidae 2 Piscicolidae* 3 Haliplidae 4 Elmidae	5 Hydropsychidae

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)	6 Piscicolidae* 7 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:

- 5 Hydropsyche contubernalis, H.pellucidula, H.siltalai
- 6 Piscicola geometra
- 7 Antocha vitripennis (larva + pupae)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Og
DATE	13.4.94	SITE	U/s R.Kennet
SORTER		CODE	NRA07 PKER.0074

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 Planariidae 2 Asellidae* 3 Gammaridae* 4 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)	5 Asellidae* 6 Gammaridae* 7 Leptophlebiidae 8 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:

5 Asellus meridianus 1 only
 6 Gammarus pulex
 7 Paraleptophlebia submarginata 1 only
 8 Tanypodinae, Orthocladiinae, Chironomini, Tanytarsini

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Cholsey Brook
DATE	4.5.94	SITE	d/s Cholsey STW
SORTER		CODE	NRA07 PTHR.0016

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 Valvatidae

* 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 Valvata cristata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Ash
DATE	18.5.94	SITE	u/s R.Thames
SORTER		CODE	NRA07 PTHR.0005

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 Hydropsychidae "not in sample". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Wandle
DATE	10.5.94	SITE	Goat Bridge
SORTER		CODE	NRA07 PWAR.0053

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	Thames	RIVER	Wandle Brook
DATE	10.5.94	SITE	Wandsworth
SORTER		CODE	NRA07 PWAR.0055

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 Hydrobiidae* 2 Planorbidae

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:

2 Empty shell in vial 3 Potamopyrgus jenkinsi
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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Potters Bar Brook
DATE	17.5.94	SITE	u/s Mimshall Brook
SORTER		CODE	NRA07 PCNR.0083

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	Thames	RIVER	Ingrebourne
DATE	16.5.94	SITE	A12 Bridge
SORTER		CODE	NRA07 PRGR.0017

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:

Note on data sheet that Ancyliidae, Gerridae, Haliplidae and Tipulidae "not in sample". Dicranota sp.(1 only) found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Wandle
DATE	26.5.94	SITE	Hackbridge Estate
SORTER		CODE	NRA07 PWAR.0078

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 Planariidae 2 Ancyliidae	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 Physidae 4 Haliplidae

* 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 Physa fontinalis 1 only 4 Halipus fluviatilis (adult) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Beverley Brook
DATE	26.5.94	SITE	Motspur Park
SORTER		CODE	NRA07 PBVR.0004

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 Hydrobiidae and Sphaeriidae "not in sample". Potamopyrgus jenkinsi (1 only) and Pisidium sp.(1 only) found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Evenlode
DATE	28.6.94	SITE	Cassington
SORTER		CODE	NRA07 PEVR.0006

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* 3 Elmidae* 4 Hydroptilidae*	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)	5 Asellidae* 6 Hydrophilidae 7 Elmidae* 8 Rhyacophilidae 9 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:

- | |
|--|
| 5 Asellus aquaticus
6 Helophorus brevipalpis (adults)
7 Elmis aenea, Limnius volckmari, Oulimnius sp. (larvae)
8 Rhyacophila dorsalis 1 only
9 Hydroptila sp., Ithytrichia sp. |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Glyme
DATE	14.6.94	SITE	Woodstock
SORTER		CODE	NRA07 PEVR.0018

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 Dendrocoelidae 2 Erpobdellidae 3 Baetidae* 4 Leuctridae*	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)	5 Baetidae* 6 Leuctridae* 7 Hydrophilidae 8 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:

5 Baetis rhodani, Centroptilum pennulatum 6 Leuctra geniculata 7 Helophorus brevipalpis, Hydraena sp. (adults) 8 Antocha vitripennis 1 only
--

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Cherwell
DATE	6.7.94	SITE	u/s Banbury STW
SORTER		CODE	NRA07 PCHR.0026

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 Aeshnidae 2 Notonectidae*	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 Planariidae 4 Hydrobiidae 5 Ancyliidae 6 Caenidae 7 Coenagriidae 8 Notonectidae* 9 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 Polycelis nigra/tenuis
- 4 Potamopyrgus jenkinsi, Bithynia tentaculata
- 5 Acroloxus lacustris 1 only
- 6 Caenis horaria 1 only
- 7 Ischnura elegans
- 8 Notonecta sp. (nymphs)
- 9 Helophorus brevipalpis (adults)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Derry Brook
DATE	17.6.94	SITE	Ashton Keynes
SORTER		CODE	NRA07 PUTR.0043

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 Planorbidae 2 Baetidae*	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 Valvatidae 4 Baetidae* 5 Dytiscidae 6 Gyrinidae 7 Psychomyiidae 8 Brachycentridae

* 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 Empty shells in sample
3 Valvata piscinalis 1 only
4 Cloeon dipterum 1 only
5 Potamonectes depressus (adult + larva), Hydroporus sp. (larva)
6 Gyrinus sp. (larva) 1 only
7 Tinodes waeneri 1 only
8 Brachycentrus subnubilus 1 only |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Yeading Brook
DATE	28.6.94	SITE	Charville Road
SORTER		CODE	NRA07 PCRR.0003

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

* 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

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Lee
DATE	13.6.94	SITE	Batford
SORTER		CODE	NRA07 PLER.0286

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 Psychomyiidae

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 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 Tinodes waeneri
- 2 Simulium erythrocephalum 1 only

Note on data sheet that Planariidae, Dendrocoelidae, Haliplidae and Leptoceridae "not in vial". Halipus sp. (larvae), Mystacides azurea and Ceraclea senilis found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Stevenage Brook
DATE	16.6.94	SITE	Frogmore Hall
SORTER		CODE	NRA07 PLER.0268

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 Hydrobiidae 2 Ancyliidae 3 Sphaeriidae 4 Haliplidae

* 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 Potamopyrgus jenkinsi
2 Ancylyus fluviatilis 1 only
3 Pisidium sp.
4 Haliplus lineatocollis (adult) 1 only |
|---|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Wantz Stream
DATE	1.8.94	SITE	Ballard Road
SORTER		CODE	NRA07 PRGR.0044

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 Oligochaeta*	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 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 Lumbriculidae, Lumbricidae, Tubificidae

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Roding
DATE	15.8.94	SITE	Broad Bridge
SORTER		CODE	NRA07 PRGR.0075

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 2 Erpobdellidae 3 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 Dugesia tigrina 1 only
 2 Indet Erpobdellidae (juveniles)
 3 Hydroptila sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Roding
DATE	15.8.94	SITE	Gang Bridge
SORTER		CODE	NRA07 PRGR.0110

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 Physidae 3 Planorbidae 4 Oligochaeta* 5 Coenagriidae 6 Dytiscidae 7 Hydropsychidae 8 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:

- | | |
|---------------------------------|-------------------------------------|
| 2 Physa fontinalis | 6 Indet Colymbetinae (larva) 1 only |
| 3 Anisus vortex, Gyraulus albus | 7 Hydropsyche sp. (juvenile) 1 only |
| 4 Tubificidae | 8 Hydroptila sp. 1 only |
| 5 Indet Coenagriidae (juvenile) | |

Note on data sheet that Dytiscidae "not in vial or sample". Does not appear to have been included in the list of 13 BMWP taxa found by NRA and therefore included as a gain in IFE audit.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Weald Brook
DATE	1.8.94	SITE	Wrights Bridge
SORTER		CODE	NRA07 PRGR.0116

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 Haliplidae 2 Elmidae

* 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 Haliplus immaculatus (adult) 1 only
2 Elmis aenea (adult + larva)

Note on data sheet that Planariidae and Gerridae "not in sample".
Polycelis nigra/tenuis 1 only found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Pyl Brook
DATE	8.8.94	SITE	West Barnes Lane
SORTER		CODE	NRA07 PBVR.0020

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 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 Ancylus fluviatilis 2 Glossiphonia complanata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Cripsey Brook
DATE	28.7.94	SITE	Shelley Bridge
SORTER		CODE	NRA07 PRGR.0009

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 Leptoceridae	2 Phryganeidae

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 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:

2 Phryganea sp. (juvenile)
 3 Simulium aureum group 1 only

Note on data sheet that Unionidae "too big for vial - in sample" and Hydrophilidae "not in sample". Unio tumidus 1 only found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Misbourne
DATE	19.7.94	SITE	d/s Gerrards Cross STW
SORTER		CODE	NRA07 PCNR.0072

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 Planorbidae*	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 Planorbidae*

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

NET LOSSES NET GAINS OMISSIONS

NOTES:

1,2 Empty shell (Anisus vortex) in vial, Bathyomphalus contortus in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Small Lee
DATE	12.7.94	SITE	u/s Turkey Brook
SORTER		CODE	NRA07 PLER.0207

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:

Note on data sheet that Unionidae "not in sample". Assumed returned to river.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Farnborough Ditch
DATE	23.8.94	SITE	College Farm Track
SORTER		CODE	NRA07 0310

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 Baetidae*	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 Sphaeriidae 3 Baetidae* 4 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 Pisidium sp. 1 only
3 Baetis rhodani
4 Agapetus sp. 1 only |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Farthinghoe Stream
DATE	9.8.94	SITE	u/s Cherwell
SORTER		CODE	NRA07 0029

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 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 Hydraena riparia (adult), Indet Hydrophilid (larva)

Note on data sheet that Unionidae returned to stream - not in vial. Not seen by IFE.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Webbs Lane Stream
DATE	9.8.94	SITE	d/s Beenham Tip
SORTER		CODE	NRA07 0417

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 Gammaridae* 2 Elmidae*	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 Erpobdellidae 4 Gammaridae* 5 Elmidae* 6 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:

- 3 Trocheta subviridis
- 4 Gammarus pulex
- 5 Elmis aenea (larva) 1 only
- 6 Hydropsyche pellucidula 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Foudry Brook
DATE	9.8.94	SITE	Hartley Court Farm
SORTER		CODE	NRA07 0103

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 Glossiphoniidae* 2 Baetidae* 3 Coenagriidae	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)	4 Lymnaeidae 5 Glossiphoniidae* 6 Baetidae* 7 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:

- 4 Lymnaea peregra, L.stagnalis
- 5 Glossiphonia complanata
- 6 Baetis scambus/fuscatus, Centroptilum luteolum
- 7 Hydroptila sp. 1 only

Note on data sheet that Goeridae "not in vial". Indet Goerid pupa found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Hanwell Brook
DATE	23.8.94	SITE	u/s Oxford Canal
SORTER		CODE	NRA07 0038

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 Polycentropodidae	2 Psychomyiidae

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 Physidae 4 Ancyliidae 5 Sphaeriidae 6 Erpobdellidae 7 Baetidae 8 Gyrinidae 9 Elmidae

* 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 Lype sp.
- 3 Physa sp. 1 only
- 4 Ancyclus fluviatilis 1 only
- 5 Sphaerium sp. 1 only
- 6 Erpobdella octoculata
- 7 Centropilum luteolum, Cloeon dipterum
- 8 Gyrinus sp. (larva) 1 only
- 9 Oulimnius tuberculatus (adults + larvae)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Marcham Brook
DATE	28.7.94	SITE	Mill Road
SORTER		CODE	NRA07 0053

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 Leptoceridae*	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 Hydrophilidae 3 Leptoceridae* 4 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:

2 Helophorus brevipalpis (adult) 1 only
 3 Athripsodes albifrons, Mystacides azurea
 4 Simulium erythrocephalum 1 only

Note on data sheet that "flatworms not in vial". None found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Woodhill Brook
DATE	1.6.94	SITE	u/s Childrey
SORTER		CODE	NRA07 0352

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	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 Tipulidae 3 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 Succinea sp. in vial
- 2 Dicranota sp. 1 only
- 3 Simulium ornatum group 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Baldon Brook
DATE	22.7.94	SITE	u/s R.Thame
SORTER		CODE	NRA07 0002

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

* 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 Note on data sheet "dead Hydropsychidae not counted". Hydropsyche pellucidula and H.contubernalis (head only) found by IFE in sample.

Note on data sheet that "one live Gammarid seen, not in sample". Gammarus pulex 1 only found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Swere
DATE	9.8.94	SITE	Bloxham Bridge
SORTER		CODE	NRA07 0070

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 Hydrobiidae* 2 Gyrinidae 3 Polycentropodidae*	4 Psychomyiidae

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)	5 Hydrobiidae* 6 Sialidae 7 Rhyacophilidae 8 Polycentropodidae* 9 Limnephilidae 10 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:

- | |
|--|
| 4 Lype sp.
5 Potamopyrgus jenkinsi
6 Sialis sp. (juvenile) 1 only
7 Agapetus sp.
8 Polycentropus sp. (juvenile) 1 only
9 Halesus radiatus 1 only
10 Lepidostoma hirtum (pupa) 1 only
Note on data sheet that Astacidae "returned to river". Not found by IFE in vial or sample. |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Bloxham Brook
DATE	9.8.94	SITE	u/s Sor Brook
SORTER		CODE	NRA07 0286

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*	2 Glossiphoniidae 3 Leuctridae

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)	4 Planorbidae 5 Haliplidae 6 Hydrophilidae 7 Hydroptilidae 8 Linnephilidae 9 Goeridae 10 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 Glossiphonia complanata | 7 Hydroptila sp. |
| 3 Leuctra fusca | 8 Halesus radiatus 1 only |
| 4 Armiger crista | 9 Goera pilosa 1 only |
| 5 Haliplus sp. (larva) 1 only | 10 Tanypodinae, Tanytarsini |
| 6 Helophorus brevipalpis (adults) | |

Note on data sheet that Hydropsychidae and Baetidae "not in vial". IFE found Baetis vernus and B.scambus/fuscatus in sample and Hydropsyche pellucidula in vial and sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Pincey Brook
DATE	9.9.94	SITE	Ealing Bridge
SORTER		CODE	NRA07 PLER.0107

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	Thames	RIVER	Mimram
DATE	13.9.94	SITE	Whitwell
SORTER		CODE	NRA07 PLER.0092

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 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 Oxyethira sp. (pupa) 1 only

Note on data sheet that Hydrophilidae, Elmidae and Planariidae "not in sample (seen in field)". Elmis aenea (larva) 1 only found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Stoke Brook
DATE	12.10.94	SITE	u/s Bear Brook
SORTER		CODE	NRA07 0069

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 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)	2 Asellidae* 3 Caenidae 4 Hydrophilidae 5 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:

1,2 Terrestrial Isopod in vial, Asellus aquaticus 1 only in sample 3 Caenis luctuosa/macrura 1 only 4 Helophorus brevipalpis (adult) 1 only 5 Simulium aureum group 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Halton Brook
DATE	12.10.94	SITE	u/s Bear Brook
SORTER		CODE	NRA07 0320

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 Haliplidae 3 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 Pisidium sp. 2 Halipus sp. (larvae) 3 Tinodes assimilis/macclachlani 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Latchford Brook
DATE	28.9.94	SITE	Peggs Farm
SORTER		CODE	NRA07 0329

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 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)	2 Hydrobiidae 3 Asellidae* 4 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:

1,3 Terrestrial Isopod in vial, Asellus aquaticus in sample
 2 Potamopyrgus jenkinsi 1 only
 4 Lype sp. 1 only

Assumed that Astacidae was returned to river.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Horsenden Stream
DATE	8.9.94	SITE	Bledlow
SORTER		CODE	NRA07 0045

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 Planorbidae 2 Erpobdellidae*	3 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)	4 Erpobdellidae* 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:

- | |
|---|
| 1 Empty shell in vial
3 Potamopyrgus jenkinsi
4 Erpobdella octoculata
5 Agapetus sp. (pupae) |
|---|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Fleet Brook
DATE	12.10.94	SITE	u/s R.Hart
SORTER		CODE	NRA07 0102

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 Erpobdellidae* 2 Asellidae* 3 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)	4 Erpobdellidae* 5 Asellidae* 6 Elmidae 7 Tipulidae 8 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:

- | |
|--|
| <p>4 Trocheta subviridis 1 only
5 Asellus aquaticus
6 Oulimnius tuberculatus (adult) 1 only
7 Tipula montium group 1 only
8 Simulium ornatum group, S. erythrocephalum</p> |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	The Cut
DATE	7.10.94	SITE	Bray Wick
SORTER		CODE	NRA07 0097

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 Oligochaeta*	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 Valvatidae 3 Physidae 4 Planorbidae 5 Oligochaeta* 6 Elmidae

* 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 Valvata cristata
3 Physa fontinalis 1 only
4 Armiger crista, Bathyomphalus contortus
5 Indet Tubificidae
6 Elms aenea (larvae) |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Culworth Brook
DATE	17.10.94	SITE	u/s Cherwell
SORTER		CODE	NRA07 0376

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 Dendrocoelidae	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 Asellidae 3 Psychomyiidae 4 Tipulidae 5 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 Asellus aquaticus 1 only
- 3 Lype sp. 1 only
- 4 Limnophila (Elceophila) sp.
- 5 Brillia modesta, Rheocricotopus sp., Micropsectra sp.

Note on data sheet that Rhyacophilidae and Planariidae "not in vial". Agapetus sp. found by IFE in sample. Planariidae not found in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Faringdon Brook
DATE	27.10.94	SITE	Great Faringdon
SORTER		CODE	NRA07 0309

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 Asellidae

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 Oligochaeta 3 Hydrophilidae 4 Limnephilidae

* 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 Asellus aquaticus, A.meridianus
 2 Indet Tubificidae
 3 Helophorus brevipalpis (adults)
 4 Indet Limnephilid (juvenile) 1 only</p> |
|---|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Bletchington Brook
DATE	7.9.94	SITE	u/s Gallos Brook
SORTER		CODE	NRA07 0374

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 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)	2 Hydrobiidae 3 Sphaeriidae 4 Asellidae* 5 Hydrophilidae 6 Scirtidae 7 Elmidae

* 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 1 only
- 3 Pisidium sp.
- 4 Asellus aquaticus, A.meridianus
- 5 Anacaena lutescens (adult) 1 only
- 6 Elodes sp. (larvae)
- 7 Elmis aenea (larvae)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Hornton Stream
DATE	16.11.94	SITE	Horley
SORTER		CODE	NRA07 0318

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 Lymnaeidae 2 Baetidae 3 Sialidae 4 Psychomyiidae 5 Goeridae 6 Lepidostomatidae 7 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:

- | |
|--|
| 1 Lymnaea peregra 1 only
2 Baetis rhodani
3 Sialis fuliginosa 1 only
4 Lype sp. 1 only
5 Silo pallipes 1 only
6 Lasiocephala basalis
7 Sericostoma personatum 1 only |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Mimram
DATE	14.9.94	SITE	Panshanger
SORTER		CODE	NRA07 PLER.0091

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 2 Calopterygidae 3 Limnephilidae

* 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>Glossiphonia complanata</i>, <i>Helobdella stagnalis</i>
 2 <i>Calopteryx splendens</i> 1 only
 3 <i>Limnephilus</i> sp. (juvenile) 1 only</p> |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Ravensbourne
DATE	12.10.94	SITE	Rockery Lane
SORTER		CODE	NRA07 PRVR.0042

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 Hydrobiidae 2 Scirtidae 3 Elmidae 4 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 Potamopyrgus jenkinsi
2 Elodes sp. (larva) 1 only
3 Elmis aenea (larvae)
4 Athripsodes aterrimus 1 only |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Lee
DATE	20.10.94	SITE	d/s Kings Weir
SORTER		CODE	NRA07 PCER.0168

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 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 Simulium aureum group

Note on data sheet that Baetidae, Planariidae and Erpobdellidae "not in sample (seen in field)". Cloeon dipterum 1 only found by IFE in sample. Planariidae and Erpobdellidae not found in vial or sample.

Boreobdella verrucata found in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Lee Navigation
DATE	17.10.94	SITE	u/s Old Ford Lock
SORTER		CODE	NRA07 PLER.9980

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 Planorbidae 2 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 Anisus vortex, Planorbis carinatus
2 Cynrus flavidus

Note on data sheet that Viviparidae "not in sample (retained in tank)". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Stort
DATE	29.9.94	SITE	u/s Spellbrook Lock
SORTER		CODE	NRA07 PLER.0323

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 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:

1 Acroloxus lacustris 1 only
 2 Indet Limoniinae 1 only

Note on data sheet that Gerridae "not in sample (seen in field)". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Dollis Brook
DATE	12.9.94	SITE	Bell Lane
SORTER		CODE	NRA07 PBRR.0068

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 Valvatidae 2 Planorbidae

* 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 Valvata piscinalis 1 only 2 Armiger crista 1 only
--

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Ash
DATE	5.12.94	SITE	Easneye
SORTER		CODE	NRA07 PLER.0005

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 2 Ephemerellidae 3 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 Polycelis nigra/tenuis 1 only
- 2 Ephemerella ignita
- 3 Hydroptila sp.

Note on data sheet that Gerridae "not in sample (seen in field)". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Chess
DATE	5.10.94	SITE	Sarratt
SORTER		CODE	NRA07 PCWR.0147

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 Dendrocoelidae 3 Valvatidae* 4 Heptageniidae 5 Polycentropodidae 6 Tipulidae 7 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:

- 1,3 Empty shell in vial, Valvata piscinalis in sample
- 2 Dendrocoelum lacteum 1 only
- 4 Heptagenia sulphurea 1 only
- 5 Polycentropus sp. (juvenile) 1 only
- 6 Dicranota sp. 1 only
- 7 Simulium ornatum group

Note on data sheet that Ancyliidae "not in sample (recorded in field)" Ancyclus fluviatilis found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Chess
DATE	5.10.94	SITE	u/s R.Colne
SORTER		CODE	NRA07 PCNR.0013

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 Heptageniidae, Planariidae and Dendrocoelidae "not in sample (seen in field)". Heptagenia sulphurea, Polycelis felina and Dugesia tigrina found by IFE in sample. Dendrocoelidae not found in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1994

REGION	Thames	RIVER	Lea
DATE	15.11.94	SITE	Amwell Magna
SORTER		CODE	NRA07 PLER.0054

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 2 Simuliidae

* 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 Hydroptila sp. (larvae + pupa)
2 Simulium sp. (juvenile) 1 only

Note on data sheet that Unionidae "too large for vial". Unio tumidus found by IFE in sample.

