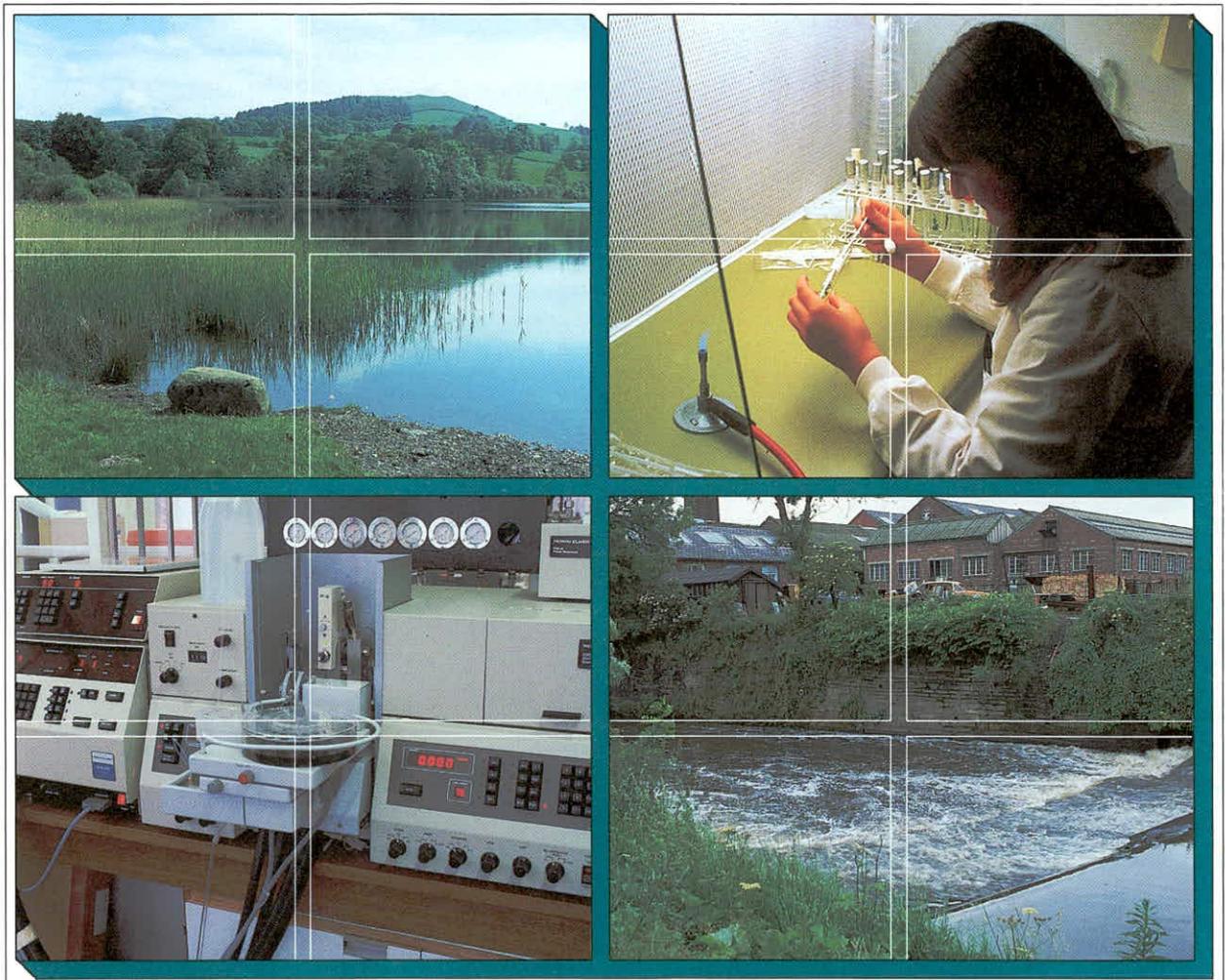
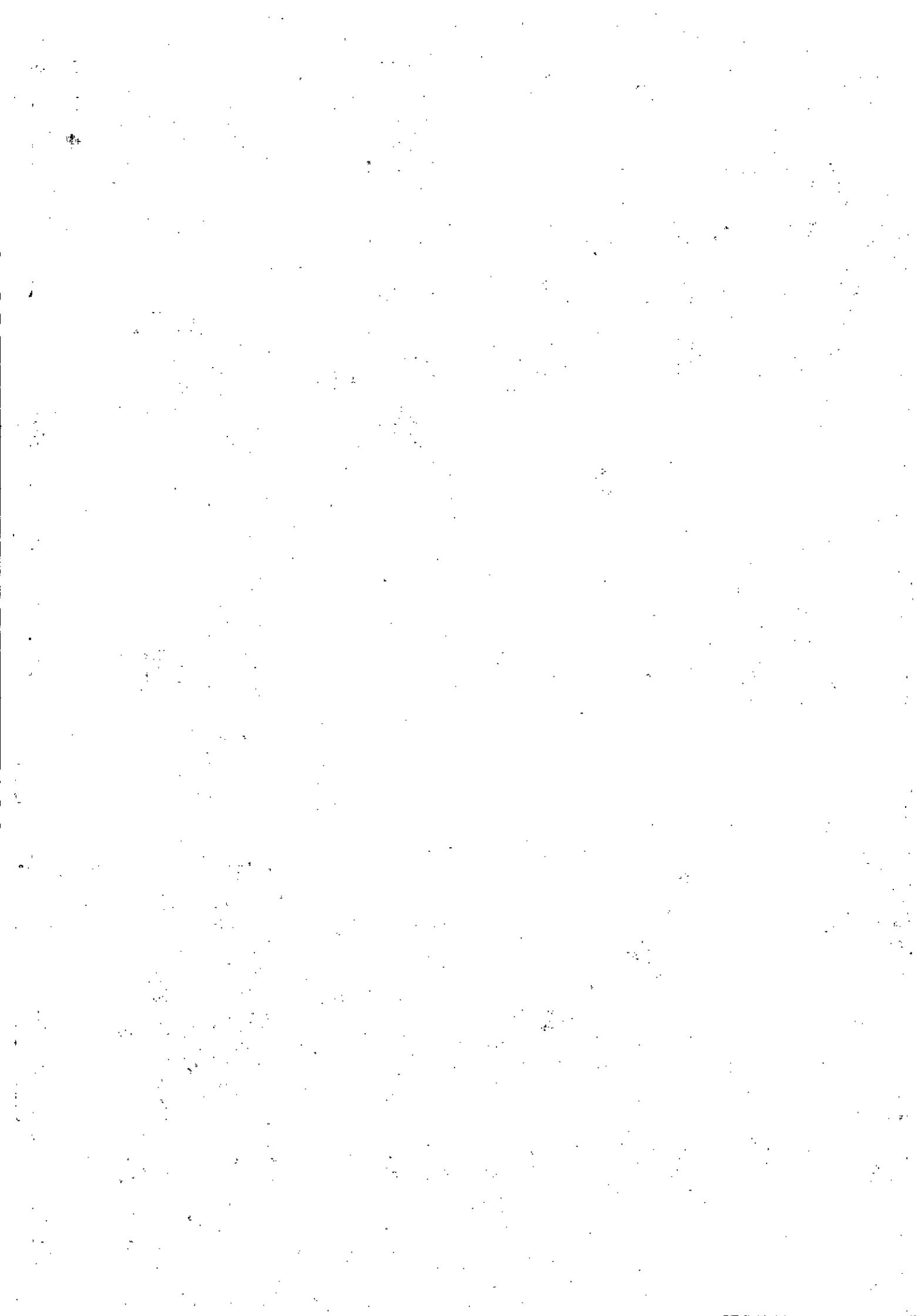


# An audit of performance in the processing of macro-invertebrate samples in 1993. NRA Thames Region

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**NRA Thames Region**

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The Institute of Freshwater Ecology is part of the Terrestrial and Freshwater Sciences Directorate of the Natural Environment Research Council.

## **1. INTRODUCTION**

In 1993 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 Thames Region of the NRA. 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.

#### **ACKNOWLEDGEMENTS**

Thanks to Diana Morton for typing the report.

TABLE 1. The IFE Report form

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION  RIVER

DATE  SITE

SORTER  SAMPLE CODE

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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

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

NOTES: NET LOSSES  NET GAINS

TABLE 2. The 12 spring samples audited for Thames Region.

River	Site	Losses	Gains	Omissions
Kennet	u/s Aldershot Water	0	2	1
Lyde	Deanlands Farm	2	2	3
Shabbington Brook	Shabbington Road Bridge	0	3	0
Wye	Bassetbury Lane	0	2	0
Four Shire Stream	Common Bridge	0	0	0
Burghfield Brook	u/s Foudry Brook	0	2	1
Mole	u/s Gatwick Stream	0	2	0
*Horsenden Stream	Bledlow	1	1	0
Foudry Brook	d/s Reading STW	0	7	0
Burstow Stream	Meathgreen Bridge	0	4	0
Yeading Brook	Suffolk Road	0	0	0
Chess	u/s Chenies	0	1	0

\*indicates no vial of animals in sample

TABLE 3. The 26 summer samples audited for Thames Region

River	Site	Losses	Gains	Omissions
Shalbourne Stream	Smitham Bridge	0	6	0
Baughurst Brook	d/s Ashford Hill Tip	1	3	0
Sherbourne Brook	d/s Sherbourne STW	4	6	2
Dudgrove Stream	RAF Fairford	0	3	0
Aldbourn	G.S. Ramsbury	0	6	1
Shill Brook	u/s Carterton STW	1	0	1
Colwell Brook	A415 Witney	1	0	2
Ashby Brook	Blackbird Hill Farm	0	1	0
Fleet Brook	u/s R. Hart	1	0	0
Froxfield Stream	u/s Dun	1	6	0
Colne	Coppermill Lane	1	0	0
Colne (Stockers Reach)	u/s Weir, Maple Cross	0	2	0
Colne	d/s G.U.C., Maple Cross	0	2	2
New Denham Stream	Lime Walk	0	1	0
Hartsbourne	Hamper Mill Lane	1	1	0
Aldbourn	u/s Colne Brook	1	1	0
New Years Green Bourne	u/s Frays River	0	0	0
Misbourne	d/s Gerrards Cross	1	3	0
Lee	Leagrave	0	3	0
Lee	d/s Osbourne Road	2	0	0
Lee	Leasey Bridge	0	3	0
Quinn	Braughing Bridge	0	2	1
Quinn	d/s Quinbury Farm	0	1	0
Ash (Lee)	d/s Much Hadham	0	3	0
Ash	Much Hadham	1	0	0
Pincey Brook	d/s Hatfield Heath STW	0	1	0

TABLE 4. The 22 autumn samples audited for Thames Region

River	Site	Losses	Gains	Omissions
Shalbourne Stream	Hungerford	0	1	0
Wey	Wyck	2	1	1
Clayhill Brook	d/s Burghfield STW	0	1	0
Kennet	u/s Aldershot Water	1	3	1
Burghfield Brook	u/s Foudry Brook	0	1	1
West End Brook	Tanhouse Bridge	0	1	0
Gubbinshole Ditch	Gubbins Hole	0	4	0
Blackwater	u/s Aldershot Town STW	1	0	0
Winterbourne	Bagnor	0	5	0
Sul	Saltney Mead, Pangbourne	0	3	0
Portlane Brook	d/s Kempton WTW	0	1	0
Mimram	d/s Tewin Fish Farm	0	5	0
Roding	Langford Bridge	0	1	1
Roding	Shonks Mill	0	0	0
Bulbourne	d/s G.U.C., Boxmoor	0	2	0
Misbourne	u/s Old Amersham	1	4	0
Cripsey Brook	Ongar Bridge	0	1	0
Cripsey Brook	Delved Bridge	1	0	0
Roding	High Ongar Bridge	0	2	0
Pool	Winsford Road	0	6	0
Rib	u/s Chapmore STW	0	2	0
White Roding Tributary	u/s White Roding STW	0	1	0

**APPENDIX**

**Results of individual sample audits**

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Kennet
DATE	15.4.93	SITE	u/s Aldershot Water
SORTER		SAMPLE CODE	NRA07 0112

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 Tipulidae*	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 only completed when no vial is supplied with sample)	2 Siphonuridae 3 Psychomyiidae 4 Tipulidae*

NET LOSSES 0

NET GAINS 2

NOTES:

2 Siphonurus sp. 1 only  
3 Psychomyia pusilla  
4 Antocha vitripennis' 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Lyde
DATE	22.4.93	SITE	Deanlands Farm
SORTER		SAMPLE CODE	NRA07 0120

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Lymnaeidae* 2 Erpobdellidae* 3 Hydroptilidae 4 Goeridae* 5 Tipulidae	6 Gyrinidae

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 only completed when no vial is supplied with sample)	7 Lymnaeidae* 8 Erpobdellidae* 9 Psychomyiidae 10 Goeridae*

NET LOSSES  2

NET GAINS  2

NOTES:

<p>3 Hydroptilid-like seed case in vial          6 Gyrinus urinator          7 Lymnaea peregra          8 Erpobdella octoculata, Trocheta subviridis          9 Lype sp. 1 only          5,10 Empty case in vial, Silo nigricornis in sample</p>
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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Shabbington Brook
DATE	27.4.93	SITE	Shabbington Roadbridge
SORTER		SAMPLE CODE	NRA07 0383

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Lymnaeidae 2 Haliplidae 3 Hydrophilidae

NET LOSSES  NET GAINS

NOTES:

1 Lymnaea palustris 1 only  
 2 Halipus lineatocollis (adult) 1 only  
 3 Anacaena limbata, Laccobius bipunctatus (adults)

No preservative in vial; specimens poorly preserved. Nothing recognisable as a Baetid among decomposed "bits" in vial but benefit of doubt given to NRA so no loss recorded.  
 Note on data sheet that Glossiphoniidae "not in vial, found on site".  
 Glossiphonia complanata found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Wye
DATE	15.3.93	SITE	Bassetsbury Lane
SORTER		SAMPLE CODE	NRA07 0370

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Lymnaeidae 2 Tipulidae

NET LOSSES  0

NET GAINS  2

NOTES:

1 Lymnaea palustris 1 only  
2 Helius sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Four Shire Stream
DATE	18.5.93	SITE	Common Bridge
SORTER		SAMPLE CODE	NRA07 0032

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	None

NET LOSSES  NET GAINS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Burghfield Brook
DATE	21.4.93	SITE	u/s Foudry Brook
SORTER		SAMPLE CODE	NRA07 0400

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Lymnaeidae*	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 only completed when no vial is supplied with sample)	2 Lymnaeidae* 3 Planorbidae 4 Ancyliidae

NET LOSSES  0

NET GAINS  2

NOTES:

1,2 Terrestrial snail found in vial; Lymnaea palustris and L.stagnalis found in sample  
3 Bathyomphalus contortus 1 only  
4 Ancylyus fluviatilis 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Mole
DATE	22.4.93	SITE	u/s Gatwick Stream
SORTER		SAMPLE CODE	NRA07 0151

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Leptoceridae 2 Tipulidae

NET LOSSES  NET GAINS

NOTES:

1 *Mystacides azurea* 1 only  
2 *Helius* sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Horsenden Stream
DATE	6.5.93	SITE	The Ford, Bledlow
SORTER		SAMPLE CODE	NRA07 0045

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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	No vial of animals present in sample. Identification check not possible.	N/a

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 only completed when no vial is supplied with sample)  1 Calopterygidae	2 Scirtidae

NET LOSSES  1

NET GAINS  1

NOTES:

2 Elodes sp. (larva) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Foudry Brook
DATE	27.4.93	SITE	d/s Reading STW
SORTER		SAMPLE CODE	NRA07 0427

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

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 only completed when no vial is supplied with sample)	1 Valvatidae 2 Hydrobiidae 3 Physidae 4 Glossiphoniidae 5 Baetidae 6 Haliplidae 7 Psychomyiidae

NET LOSSES  0

NET GAINS  7

NOTES:

- 1 Valvata piscinalis 1 only
- 2 Potamopyrgus jenkinsi
- 3 Physa sp. 1 only
- 4 Helobdella stagnalis 1 only
- 5 Indet Baetid (not Baetis sp.) 1 only
- 6 Haliplus fluviatilis (adults)
- 7 Lype sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Burstow Stream
DATE	13.5.93	SITE	Meathgreen Bridge
SORTER		SAMPLE CODE	NRA07 0139

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Piscicolidae	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 only completed when no vial is supplied with sample)	2 Dytiscidae 3 Hydroptilidae

NET LOSSES

NET GAINS

NOTES:

2 Agabus didymus, Potamonectes depressus (adults)  
3 Hydroptila sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Yeading Brook
DATE	19.5.93	SITE	Suffolk Road
SORTER		SAMPLE CODE	NRA07 AQC001

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	None

NET LOSSES

NET GAINS

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Chess
DATE	25.5.93	SITE	u/s Chenies
SORTER		SAMPLE CODE	NRA07 AQC002

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	1 Lepidostomatidae

NET LOSSES 0

NET GAINS 1

NOTES:

1 *Lepidostoma hirtum* 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Shalbourne Stream
DATE	26.8.93	SITE	Smitham Bridge
SORTER		SAMPLE CODE	NRA07 0361

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

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 only completed when no vial is supplied with sample)	1 Valvatidae 2 Lymnaeidae 3 Planorbidae 4 Piscicolidae 5 Hydrophilidae 6 Hydroptilidae

NET LOSSES  0

NET GAINS  6

NOTES:

- |  |
|--|
| <p>1 Valvata piscinalis 1 only<br/>                 2 Lymnaea peregra<br/>                 3 Anisus vortex 1 only<br/>                 4 Piscicola geometra 1 only<br/>                 5 Anacaena globulus (adult) 1 only<br/>                 6 Hydroptila sp. (pupa) 1 only</p> |
|--|

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Baughurst Brook
DATE	18.8.93	SITE	d/s Ashford Hill Tip
SORTER		SAMPLE CODE	NRA07 0395

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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	2 Beraeidae

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 only completed when no vial is supplied with sample)	3 Hydroptilidae 4 Limnephilidae

NET LOSSES  1

NET GAINS  3

NOTES:

2 Beraeodes minutus  
3 Hydroptila sp. 1 only  
4 Limnephilus sp. (juvenile) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Sherbourne Brook
DATE	22.6.93	SITE	d/s Sherbourne STW
SORTER		SAMPLE CODE	NRA07 0064

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 2 Oligochaeta 3 Piscicolidae 4 Ephemerellidae* 5 Dytiscidae 6 Leptoceridae*	7 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 only completed when no vial is supplied with sample)	8 Lymnaeidae 9 Asellidae 10 Ephemerellidae* 11 Caenidae 12 Hydrophilidae 13 Polycentropodidae 14 Leptoceridae*

NET LOSSES  4

NET GAINS  6

NOTES:

- 7 *Metalype fragilis*
- 8 *Lymnaea peregra* 1 only
- 9 *Asellus meridianus* 1 only
- 10 *Ephemerella ignita*
- 11 *Caenis horaria*
- 12 *Anacaena limbata* (adult) 1 only
- 13 *Polycentropus flavomaculatus/irroratus* (juvenile) 1 only
- 14 *Athripsodes albifrons*, *Mystacides azurea*

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Dudgrove Stream
DATE	16.8.93	SITE	Raf Fairford
SORTER		SAMPLE CODE	NRA07 0024

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Hydroptilidae 2 Goeridae 3 Tipulidae

NET LOSSES

NET GAINS

NOTES:

1 Hydroptila sp. 1 only  
2 Goera pilosa 1 only  
3 Tipula montium group 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Aldbourn
DATE	6.7.93	SITE	G.S.Ramsbury
SORTER		SAMPLE CODE	NRA07 0083

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

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 Hydroptilidae*	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 only completed when no vial is supplied with sample)	2 Dendrocoelidae 3 Lymnaeidae 4 Leuctridae 5 Elmidae 6 Hydropsychidae 7 Hydroptilidae* 8 Simuliidae

NET LOSSES  0

NET GAINS  6

NOTES:

2 Dendrocoelum lacteum 1 only  
 3 Lymnaea peregra  
 4 Leuctra fusca 1 only  
 5 Elmis aenea (adults + larvae)  
 6 Hydropsyche sp. (pupa) 1 only  
 7 Empty cases in vial, Hydroptila sp. (pupa) 1 only in sample  
 8 Simulium angustitarse group 1 only  
 Note on data sheet that Sericostomatidae "not in vial". Empty pupal case found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Shill Brook
DATE	14.7.93	SITE	u/s Carterton STW
SORTER		SAMPLE CODE	NRA07 0065

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Sphaeriidae* 2 Gerridae	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 only completed when no vial is supplied with sample)	3 Sphaeriidae*

NET LOSSES  1 NET GAINS  0

NOTES:

3 Pisidium sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Colwell Brook
DATE	25.8.93	SITE	A415 Witney
SORTER		SAMPLE CODE	NRA07 0018

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Sphaeriidae* 2 Asellidae* 3 Gerridae	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 only completed when no vial is supplied with sample)	4 Sphaeriidae* 5 Asellidae*

NET LOSSES  NET GAINS

NOTES:

4 Pisidium sp.  
5 Asellus aquaticus

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Ashby Brook
DATE	8.6.93	SITE	Blackbird Hill Farm
SORTER		SAMPLE CODE	NRA07 0284

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	1 Coenagriidae

NET LOSSES 0 NET GAINS 1

NOTES:

1 Pyrrhosoma nymphula 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Fleet Brook
DATE	2.7.93	SITE	u/s R.Hart
SORTER		SAMPLE CODE	NRA07 0102

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

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 Valvatidae	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 only completed when no vial is supplied with sample)	None

NET LOSSES  1 NET GAINS  0

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Froxfield Stream
DATE	6.7.93	SITE	u/s Dun
SORTER		SAMPLE CODE	NRA07 0372

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 Planariidae	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 only completed when no vial is supplied with sample)	2 Caenidae 3 Scirtidae 4 Rhyacophilidae 5 Polycentropodidae 6 Hydroptilidae 7 Sericostomatidae

NET LOSSES 1 NET GAINS 6

NOTES:

- 2 Caenis luctuosa/macrura
- 3 Elodes sp. (larvae)
- 4 Agapetus sp.
- 5 Plectrocnemia conspersa 1 only
- 6 Oxyethira sp. 1 only
- 7 Sericostoma personatum 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Colne
DATE	8.6.93	SITE	Coppermill Lane
SORTER		SAMPLE CODE	NRA07 AQC003

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Tipulidae	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 only completed when no vial is supplied with sample)	None

NET LOSSES  1 NET GAINS  0

NOTES:

1 Atalanta group (Empididae) in vial  
Note on data sheet that Dendrocoelidae "not in sample". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Colne (Stockers Reach)
DATE	8.6.93	SITE	u/s Weir, Maple Cross
SORTER		SAMPLE CODE	NRA07 AQC004

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

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 only completed when no vial is supplied with sample)	1 Aphelocheiridae 2 Hydroptilidae

NET LOSSES  0

NET GAINS  2

NOTES:

1 Aphelocheirus aestivalis (nymph) 1 only  
2 Hydroptila sp.

Note on data sheet that Unionidae "not in vial". Found by IFE in sample but specimens too large to fit in vial.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Colne
DATE	8.6.93	SITE	d/s GUC Maple Cross
SORTER		SAMPLE CODE	NRA07 AQC005

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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* 2 Ancyliidae*	None

B	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	3 Valvatidae 4 Planorbidae* 5 Ancyliidae* 6 Hydroptilidae

NET LOSSES  NET GAINS

NOTES:

- 3 Valvata piscinalis
- 4 Anisus vortex
- 5 Ancylus fluviatilis
- 6 Hydroptila sp. (pupa) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	New Denham Stream
DATE	15.6.93	SITE	Lime Walk
SORTER		SAMPLE CODE	NRA07 AQC006

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Planariidae

NET LOSSES 0

NET GAINS 1

NOTES:

1 Dugesia tigrina 1 only

Notes on data sheet that Calopterygidae, Ancylidae and Baetidae not in sample and Erpobdellidae not in vial. Of these, IFE found abdomens only of Baetis rhodani and B.scambus group in the sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Hartsbourne
DATE	21.6.93	SITE	Hamper Mill Lane
SORTER		SAMPLE CODE	NRA07AQC007

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 Gerridae	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 only completed when no vial is supplied with sample)	2 Glossiphoniidae

NET LOSSES 1

NET GAINS 1

NOTES:

1 Velia sp. (nymph) in vial  
2 Glossiphonia complanata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Alderbourne
DATE	21.6.93	SITE	u/s Colne Brook
SORTER		SAMPLE CODE	NRA07 AQC008

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 Gerridae	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 only completed when no vial is supplied with sample)	2 Hydroptilidae

NET LOSSES 1 NET GAINS 1

NOTES:

1 Velia sp. (nymph) in vial  
2 Hydroptila sp. 1 only

Notes on data sheet that Gerridae and Piscicolidae "in vial, not recorded", Hydropsychidae "not in sample" and Asellidae "not in vial". Of these, IFE found Piscicola geometra in the vial and Asellus aquaticus in vial and sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	New Years Green Bourne
DATE	6.7.93	SITE	u/s Frays River
SORTER		SAMPLE CODE	NRA07 AQC009

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	None

NET LOSSES 0 NET GAINS 0

NOTES:

Note on data sheet that Gerridae and Hydrometridae "recorded in field but not in sample". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Misbourne
DATE	6.7.93	SITE	d/s Gerrards Cross
SORTER		SAMPLE CODE	NRA10 AQC010

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 Gerridae	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 only completed when no vial is supplied with sample)	2 Valvatidae 3 Elmidae 4 Hydroptilidae

NET LOSSES 1 NET GAINS 3

NOTES:

1 Velia sp. (nymph) in vial  
 2 Valvata piscinalis 1 only  
 3 Elmis aenea (larva) 1 only  
 4 Hydroptila sp. 1 only

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

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Lee
DATE	14.7.93	SITE	Leagrave
SORTER		SAMPLE CODE	NRA07 AQC011

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	1 Physidae 2 Glossiphoniidae 3 Hydrophilidae

NET LOSSES 0

NET GAINS 3

NOTES:

1 Physa acuta/heterostropha 1 only  
 2 Glossiphonia complanata 1 only  
 3 Indet Hydrophilid (larva) 1 only

Note on data sheet that Crangonyctidae "not in sample - 1 only found, very small, assumed lost". Gammarus pulex found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Lee
DATE	14.7.93	SITE	d/s Osbourne Road
SORTER		SAMPLE CODE	NRA07 AQC012

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 2 Chironomidae	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 only completed when no vial is supplied with sample)	None

NET LOSSES 2 NET GAINS 0

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Lee
DATE	20.7.93	SITE	Leasey Bridge
SORTER		SAMPLE CODE	NRA07 AQC013

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Planorbidae 2 Glossiphoniidae 3 Psychomyiidae

NET LOSSES  0

NET GAINS  3

NOTES:

1 Gyraulus albus 1 only  
2 Indet Glossiphoniids (juveniles)  
3 Tinodes waeneri

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Quinn
DATE	10.8.93	SITE	Braughing Bridge
SORTER		SAMPLE CODE	NRA07 AQC014

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	2 Planorbidae* 3 Ancyliidae 4 Elmidae

NET LOSSES  0

NET GAINS  2

NOTES:

2 *Bathyomphalus contortus* 1 only  
3 *Ancylus fluviatilis*  
4 *Oulimnius* sp. (larvae)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Quinn
DATE	10.8.93	SITE	d/s Quinbury Farm
SORTER		SAMPLE CODE	NRA07 AQC015

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	1 Tipulidae

NET LOSSES 0

NET GAINS 1

NOTES:

1 Dicranota sp., Tipula montium group  
Note on data sheet that Ancylidae and Beraeidae "not in sample". Ancylus fluviatilis found by IFE in vial.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Ash (Lee)
DATE	24.8.93	SITE	d/s Much Hadham
SORTER		SAMPLE CODE	NRA07 AQC016

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Sphaeriidae 2 Ephemerellidae 3 Goeridae

NET LOSSES

NET GAINS

NOTES:

1 Pisidium sp.  
2 Ephemerella ignita 1 only  
3 Silo nigricornis

Note on data sheet that Gerridae "not in sample". Not found by IFE in vial or sample. Velia sp. (nymph) present in vial.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Ash
DATE	24.8.93	SITE	Much Hadham
SORTER		SAMPLE CODE	NRA07 AQC017

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Tipulidae	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 only completed when no vial is supplied with sample)	None

NET LOSSES

NET GAINS

NOTES:

1 Chelifera group (Empididae) in vial

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Pincey Brook
DATE	24.8.93	SITE	d/s Hatfield Heath STW
SORTER		SAMPLE CODE	NRA07 AQC018

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

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
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Goeridae

NET LOSSES  0 NET GAINS  1

NOTES:

1 Goera pilosa 1 only  
 Note on data sheet that Corixidae "not in sample". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Shalbourne Stream
DATE	14.10.93	SITE	Smitham Bridge, Hungerford
SORTER		SAMPLE CODE	NRA07 0361

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Planorbidae

NET LOSSES  0

NET GAINS  1

NOTES:

1 Anisus vortex 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Wey (N)
DATE	1.9.93	SITE	Mill Court Bridge, Wyck
SORTER		SAMPLE CODE	NRA07 0163

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 2 Haliplidae* 3 Goeridae	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 only completed when no vial is supplied with sample)	4 Erpobdellidae 5 Haliplidae*

NET LOSSES  2

NET GAINS  1

NOTES:

4 Indet Erpobdellids (juveniles)  
5 Halipus wehnckeii (adults)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Clayhill Brook
DATE	4.10.93	SITE	d/s Burghfield STW
SORTER		SAMPLE CODE	NRA07 0094

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Sphaeriidae

NET LOSSES

NET GAINS

NOTES:

1 Pisidium sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Kennet
DATE	17.11.93	SITE	u/s Aldershot Water
SORTER		SAMPLE CODE	NRA07 0112

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Valvatidae 2 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 only completed when no vial is supplied with sample)	3 Physidae 4 Heptageniidae 5 Dytiscidae 6 Leptoceridae*

NET LOSSES  1

NET GAINS  3

NOTES:

1 Sand-filled shell in vial  
3 Physa fontinalis  
4 Heptagenia sp. (damaged specimen) 1 only  
5 Platambus maculatus (larva) 1 only  
6 Athripsodes cinereus, Ceraclea annulicornis

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Burghfield Brook
DATE	10.11.93	SITE	u/s Foudry Brook
SORTER		SAMPLE CODE	NRA07 0400

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	2 Ancyliidae 3 Oligochaeta*

NET LOSSES 0

NET GAINS 1

NOTES:

2 Ancylyus fluviatilis  
3 Lumbricidae, Lumbriculidae, Tubificidae

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	West End Brook
DATE	4.10.93	SITE	Tanhouse Bridge
SORTER		SAMPLE CODE	NRA07 0418

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Haliplidae

NET LOSSES  0

NET GAINS  1

NOTES:

1 Haliplus lineatocollis (adult) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Gubbinshole Ditch
DATE	21.10.93	SITE	Gubbin's Hole
SORTER		SAMPLE CODE	NRA07 0311

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	1 Dendrocoelidae 2 Planorbidae 3 Sphaeriidae 4 Oligochaeta

NET LOSSES 0

NET GAINS 4

NOTES:

- 1 Dendrocoelum lacteum 1 only
- 2 Anisus vortex 1 only
- 3 Pisidium sp. 1 only
- 4 Lumbriculidae, Tubificidae

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Blackwater
DATE	22.10.93	SITE	u/s Aldershot Town STW
SORTER		SAMPLE CODE	NRA07 PLDR.0003

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	None

NET LOSSES

1

NET GAINS

0

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Winterbourne
DATE	23.9.93	SITE	Bagnor
SORTER		SAMPLE CODE	NRA07 0132

AQC OF BMWP FAMILIES A. IN VIAL  +  B. IN SAMPLE  +

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
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial is supplied with sample)	1 Lymnaeidae 2 Sphaeriidae 3 Nemouridae 4 Polycentropodidae 5 Goeridae

NET LOSSES  0

NET GAINS  5

NOTES:

- 1 Lymnaea sp. (juvenile) 1 only
- 2 Pisidium sp.
- 3 Nemurella picteti 1 only
- 4 Plectrocnemia conspersa 1 only
- 5 Silo nigricornis

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Sul
DATE	4.10.93	SITE	Saltney Mead, Pangbourne
SORTER		SAMPLE CODE	NRA07 0128

AQC OF BMWP FAMILIES A. IN VIAL  + B. IN SAMPLE  +

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 only completed when no vial is supplied with sample)	1 Sphaeriidae 2 Nepidae 3 Pleidae

NET LOSSES  0 NET GAINS  3

NOTES:

1 Pisidium sp. 1 only  
2 Nepa cinerea 1 only  
3 Plea leachi 1 only

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

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Portlane Brook
DATE	6.9.93	SITE	d/s Kempton WTW
SORTER		SAMPLE CODE	NRA07 AQC022

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	1 Hydroptilidae

NET LOSSES 0 NET GAINS 1

NOTES:

1 Agraylea multipunctata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Mimram
DATE	15.9.93	SITE	d/s Tewin Fish Farm
SORTER		SAMPLE CODE	NRA07 AQC026

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Ancylidae 2 Dytiscidae 3 Hydropsychidae 4 Hydroptilidae 5 Tipulidae

NET LOSSES

NET GAINS

NOTES:

- 1 Ancylus fluviatilis, Acroloxus lacustris
- 2 Ilybius sp., Platambus maculatus (larvae)
- 3 Hydropsyche siltalai 1 only
- 4 Hydroptila sp. (pupa) 1 only
- 5 Tipula montium group 1 only

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

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Roding
DATE	22.9.93	SITE	Langford Bridge
SORTER		SAMPLE CODE	NRA07 AQC030

AQC OF BMWP FAMILIES A. IN VIAL

+

B. IN SAMPLE

+

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 Hydroptilidae*	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 only completed when no vial is supplied with sample)	2 Ancylidae 3 Hydroptilidae*

NET LOSSES

0

NET GAINS

1

NOTES:

2 Ancylus fluviatilis  
3 Hydroptila sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Roding
DATE	22.9.93	SITE	Shonks Mill
SORTER		SAMPLE CODE	NRA07 AQC031

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	None

NET LOSSES

NET GAINS

NOTES:

Note on data sheet that Aeshniidae returned in field so not in sample  
Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Bulbourne
DATE	4.10.93	SITE	d/s GUC, Boxmoor
SORTER		SAMPLE CODE	NRA07 AQC035

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Ancylidae 2 Leptoceridae

NET LOSSES  0

NET GAINS  2

NOTES:

1 Ancylus fluviatilis  
2 Mystacides azurea 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Misbourne
DATE	7.10.93	SITE	u/s Old Amersham
SORTER		SAMPLE CODE	NRA07 AQC036

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 Sialidae	2 Piscicolidae

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 only completed when no vial is supplied with sample)	3 Glossiphoniidae 4 Caenidae 5 Hydropsychidae

NET LOSSES  1

NET GAINS  4

NOTES:

- 2 *Piscicola geometra*
- 3 *Glossiphonia complanata*, *Helobdella stagnalis*
- 4 *Caenis luctuosa/macrura*
- 5 *Hydropsyche* sp. (juvenile) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Cripsey Brook
DATE	19.10.93	SITE	Ongar Bridge
SORTER		SAMPLE CODE	NRA07 AQC037

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Asellidae

NET LOSSES

NET GAINS

NOTES:

1 Asellus aquaticus 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Cripsey Brook
DATE	19.10.93	SITE	Delved Bridge
SORTER		SAMPLE CODE	NRA07 AQC038

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	None

NET LOSSES  1

NET GAINS  0

NOTES:

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Roding
DATE	19.10.93	SITE	High Ongar Bridge
SORTER		SAMPLE CODE	NRA07 AQC039

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Valvatidae 2 Ancyliidae

NET LOSSES

NET GAINS

NOTES:

1 Valvata piscinalis  
2 Acroloxus lacustris

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Pool
DATE	2.11.93	SITE	Winford Road
SORTER		SAMPLE CODE	NRA07 AQC040

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Planariidae 2 Valvatidae 3 Hydrobiidae 4 Planorbidae 5 Ancyliidae 6 Caenidae

NET LOSSES  NET GAINS

NOTES:

- 1 Polycelis nigra/tenuis, Dugesia polychroa/lugubris
  - 2 Valvata cristata
  - 3 Potamopyrgus jenkinsi
  - 4 Bathyomphalus contortus
  - 5 Ancylyus fluviatilis
  - 6 Caenis luctuosa/macrura 1 only
- Note on data sheet that Chironomidae "not in vial". Indet Orthoclad 1 only found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	Rib
DATE	23.11.93	SITE	u/s Chapmore STW
SORTER		SAMPLE CODE	NRA07 AQC043

AQC OF BMWP FAMILIES A. IN VIAL + B. IN SAMPLE +

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 only completed when no vial is supplied with sample)	1 Polycentropodidae 2 Tipulidae

NET LOSSES 0 NET GAINS 2

NOTES:

1 *Cyrnus trimaculatus* 1 only  
2 *Nephrotoma* sp.  
  
Note on data sheet that Ancyliidae "not in sample". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Thames	RIVER	White Roding Tributary
DATE	23.11.93	SITE	u/s White Roding STW
SORTER		SAMPLE CODE	NRA07 AQC044

AQC OF BMWP FAMILIES A. IN VIAL  B. IN SAMPLE

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 only completed when no vial is supplied with sample)	1 Lymnaeidae

NET LOSSES  NET GAINS

NOTES:

1 Lymnaea sp. (juveniles)

