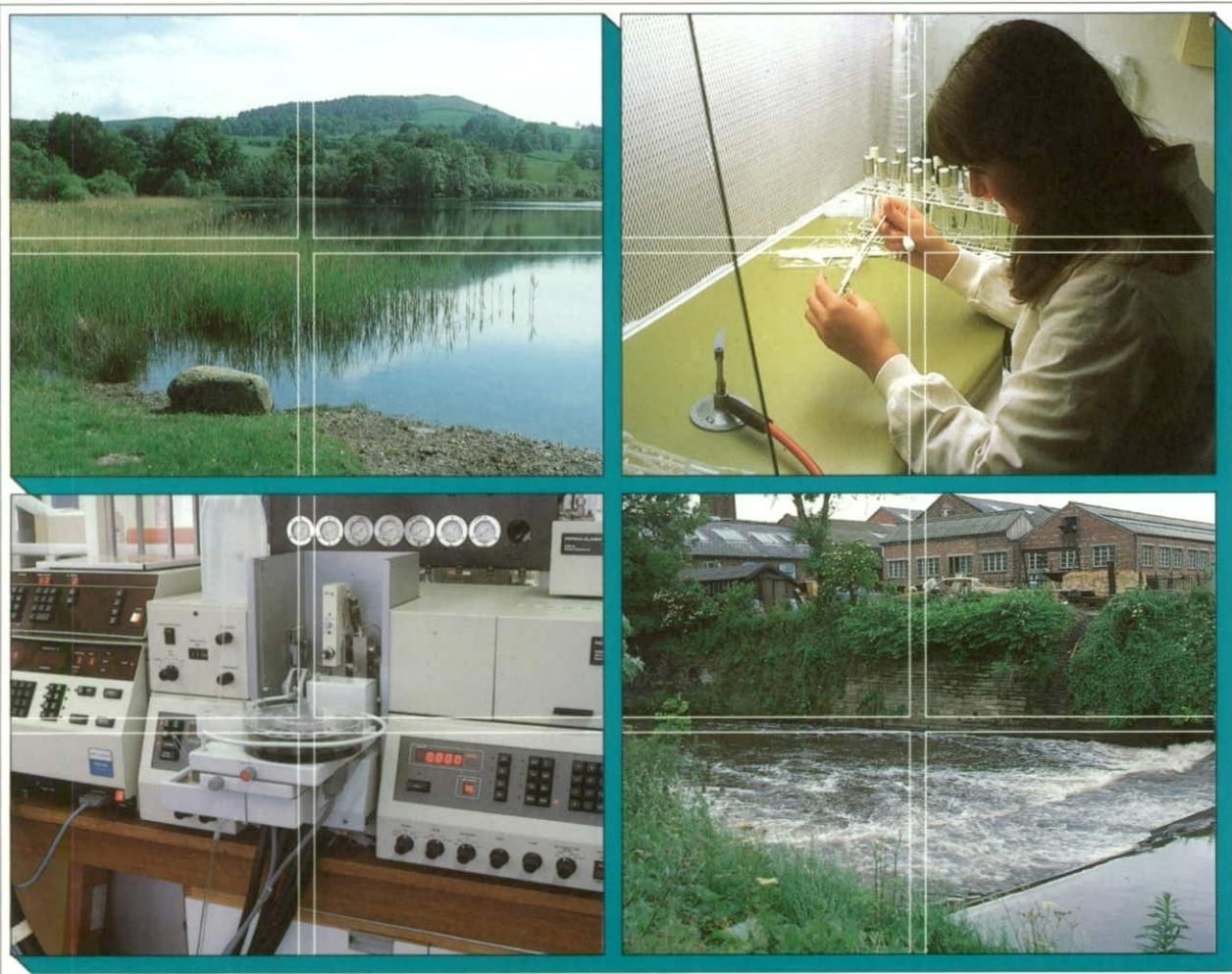




An audit of performance in the processing of macro-invertebrate samples in 1991. NRA Thames Region

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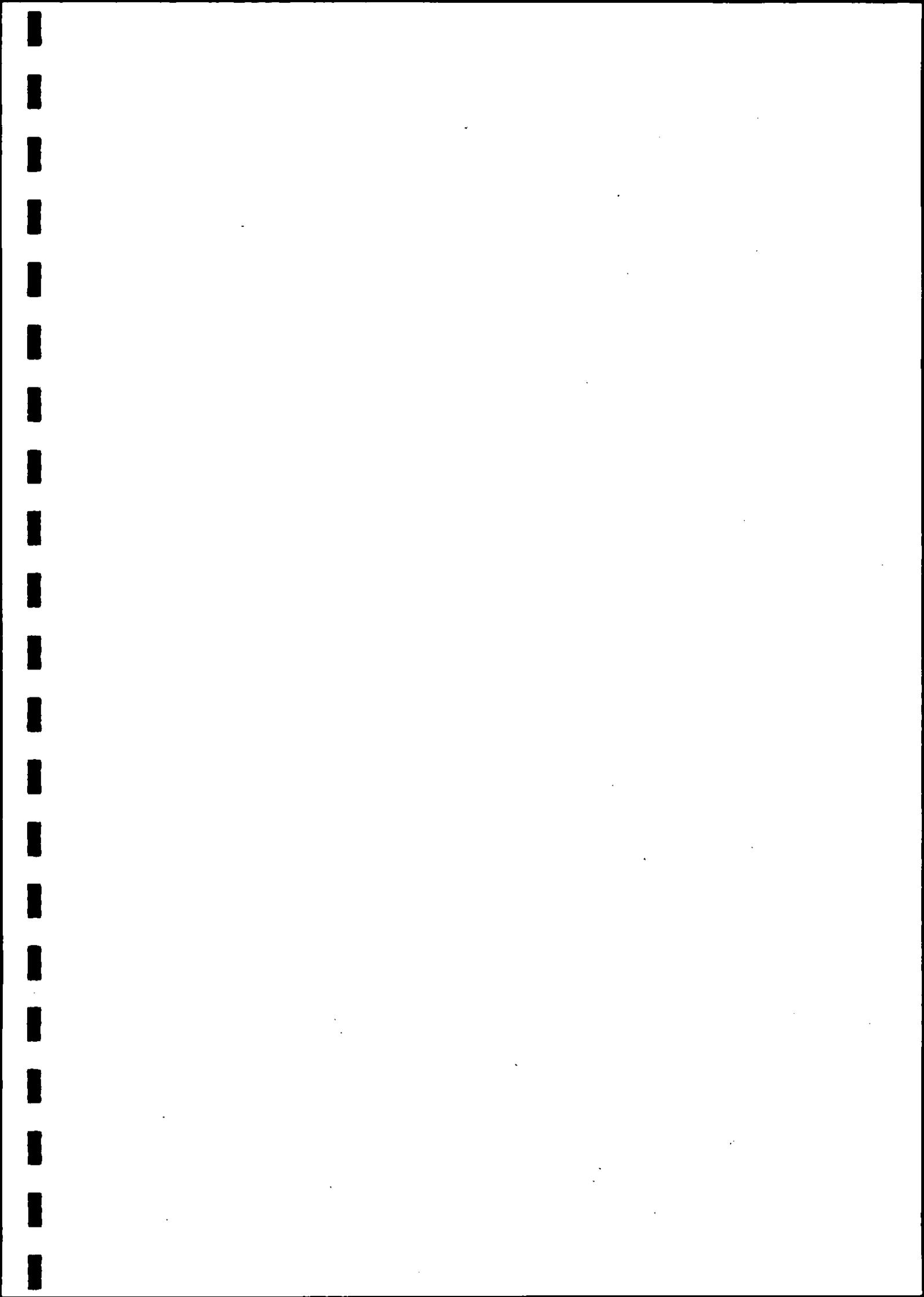
**An audit of performance in the processing
of macro-invertebrate samples in 1991.**
NRA Thames Region

R.J.M. Gunn, J.F. Wright, J.M. Winder & J.H. Blackburn

Project leader:	J.F. Wright
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1. INTRODUCTION

In 1991 the sampling of aquatic macro-invertebrates for the biological assessment of river quality continued throughout the United Kingdom. In England and Wales this task was undertaken by the National Rivers Authority (NRA), the River Purification Boards (RPBs) sampled in Scotland and the Department of Economic Development (DED) undertook the work in Northern Ireland.

The majority of sites were sampled in spring, summer and autumn. Standard collection procedures, as used in the 1990 River Quality Survey, were retained 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). For a variety of reasons, a few locations were sampled in just one or two seasons.

Samples were sorted by NRA, RPB and DED 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.

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. As in 1990, the IFE was contracted to undertake an audit of the sample sorting and identification performance of each NRA region, several RPBs and the DED. 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.

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 DED 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. 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 Mike Furse for help and advice, to Kay Symes and Angela Matthews for assistance with cataloguing and storage of samples and to Valerie Palmer and Diana Morton for typing the manuscript.

TABLE 1. The IFE Report form

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION		RIVER	
DATE		SITE	
SORTER		SAMPLE CODE	

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

		LOSSES	GAINS
A	<p style="text-align: center;"><u>VIAL</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in VIAL by IFE</p>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
B	<p style="text-align: center;"><u>SAMPLE</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in SAMPLE by IFE</p>	BMWP FAMILIES NOT FOUND BY IFE (This box only completed when no vial supplied with sample)	ADDITIONAL FAMILIES FOUND BY IFE

NET LOSSES NET GAINS

NOTES

TABLE 2. The 10 spring samples audited for Thames Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'

River	Site	Sorter	Losses	Gains	Omissions
Whitewater	Heckfield	JAB	1	1	0
Scotsgrove Brook	U/s Haddenham STW	JAB	2	2	0
Windrush	Swinbrook	JAB	0	4	0
Fleet Brook	U/s R. Hart	JAB	0	3	0
Moor Ditch	B4016 Appleford	JAB	0	1	0
Lambourn	Bagnor	JAB	0	2	0
Gainsbridge Brook	A329 Bridge	JAB	2	0	0
Ginge Brook	Church West Hendred	JAB	1	3	0
Rissington Ditch	U/s Windrush Loop	JAB	1	2	0
Thame	Shabbington Bridge	JAB	0	4	0

TABLE 3. The 24 summer samples audited for Thames Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'

River	Site	Sorter	Losses	Gains	Omissions
Whitewater	Heckfield	LPR	0	5	0
Whitewater	U/s Blackwater	LPR	0	1	3
Haseley Brook	U/s Thame	LPR	0	5	0
Wey (S)	Haslemere	LPR	2	2	2
Veneymore Stream	D/s Trout Farm	LPR	1	3	3
Crawters Brook	Lowfield Heath	JAB	0	3	0
Cole	Coleshill	LPR	1	3	2
Basingstoke Canal	Eclmoor Bridge	JAB	1	4	0
Leach	Lechlade	LPR	0	5	1
Og	U/s R. Kennet	JAB	2	0	2
Rib	Bengeo Hall	DJL	0	0	0
Misbourne	D/s Gerards Cross STW	JE	0	1	0
Felthamhill Brook	U/s Portlane Brook	DJL	1	2	0
Stort	Roydon	DJL	0	3	0
Ash	U/s Ashford WTW	DJL	0	0	0
Ver	U/s R. Colne	JE	0	2	0
Ash (Lee)	Easneye	DJL	0	2	0
Lee	Waterhall	DJL	0	1	0
Gade	Casiobury Park	DJL	0	0	0
Mimram	Codicote Bottom	JE	1	1	0
Mimram	Panshanger	JE	0	0	2
Mimshall Brook	Water End	JE	0	0	0
Beane	Watton-at-Stone	JE	0	2	0
Quinn	Braughing Bridge	JE	0	2	0

TABLE 4. The 26 autumn samples audited for Thames Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'

River	Site	Sorter	Losses	Gains	Omissions
Peppershill Brook	Westfield Farm	JAB	0	3	0
Caker Stream	D/s Alton STW	AJH	0	3	0
Ray	Moredon Bridge	LPR	1	1	0
Lyde	Deanlands Farm	LPR	1	3	0
Lydebank Brook	Ford Lane	AJH	1	1	2
Ray	Morris Street	LPR	0	0	0
Boveney Ditch	U/s R. Thames	JAB	1	0	0
Ock (Surrey)	Ock above Wey	AJH	1	6	0
Liden Brook	Lower Earls court Farm	AJH	0	2	0
Filchampstead Brook	U/s R. Thames	JAB	0	6	0
Oxford Canal	Cropredy Bridge	LPR	0	2	1
Leach	Lechlade	JAB	1	6	1
Northfield Brook	Sandford	LPR	0	2	2
Tuckmill Brook	D/s Shrivensham STW	JAB	2	2	0
Ladygrove Ditch	B4016 Bridge	AJH	1	1	1
Brookhouse Brook	Brookhouse	JE	0	1	0
Grand Union Canal	Mile End	DJL	0	0	0
Ock	Abingdon Common	JAB	1	2	0
Rom/Beam	A12 Bridge	JE	0	2	0
Lee Navigation	Dobbs Weir	DJL	0	0	0
Colne	U/s R. Thames	JE	2	4	0
Frays	U/s R. Colne	DJL	1	1	1
Roding	Luxborough Lane	DJL	0	0	0
Ingrebourne	A12 Bridge	JE	0	0	0
Ingrebourne	Harold Court Road	JE	0	1	0
Roding	Ilford Golf Course	DJL	0	1	0

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Whitewater
DATE	22.4.91	SITE	Heckfield
SORTER	JAB	SAMPLE CODE	NRA07 0130

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Curculionidae	None
B	<u>SAMPLE</u>	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 supplied with sample)	2 Baetidae

NET LOSSES NET GAINS

NOTES

- 1 Not included in 1991 survey
 - 2 *Centroptilum luteolum* 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Scotsgrove Brook
DATE	7.3.91	SITE	U/s Haddenham STW
SORTER	JAB	SAMPLE CODE	NRA07 0062

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Ancyliidae 2 Hydroptilidae	None

B	<u>SAMPLE</u>	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 supplied with sample)	3 Valvatidae 4 Scirtidae

NET LOSSES NET GAINS

NOTES

3 Valvata piscinalis
4 Elodes sp. (larva) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Windrush
DATE	29.4.91	SITE	Swinbrook
SORTER	JAB	SAMPLE CODE	NRA07 0261

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

		LOSSES	GAINS
A	<p style="text-align: center;"><u>VIAL</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p style="text-align: center;">None</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center;">None</p>
B	<p style="text-align: center;"><u>SAMPLE</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>(This box only completed when no vial supplied with sample)</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>1 Gyrinidae 2 Rhyacophilidae 3 Lepidostomatidae 4 Brachycentridae</p>

NET LOSSES NET GAINS

NOTES

- 1 Orectochilus villosus (larvae)
- 2 Rhyacophila dorsalis 1 only
- 3 Lepidostoma hirtum
- 4 Brachycentrus subnubilus (pupa) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Fleet Brook
DATE	28.3.91	SITE	U/s R.Hart
SORTER	JAB	SAMPLE CODE	NRA07 0102

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Planorbidae 2 Gammaridae 3 Nemouridae

NET LOSSES NET GAINS

NOTES

1 Bathymphalus contortus
2 Crangonyx pseudogracilis
3 Nemoura sp. 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION <input style="width: 100%;" type="text" value="Thames"/>	RIVER <input style="width: 100%;" type="text" value="Moor Ditch"/>
DATE <input style="width: 100%;" type="text" value="19.3.91"/>	SITE <input style="width: 100%;" type="text" value="B4016 Appleford"/>
SORTER <input style="width: 100%;" type="text" value="JAB"/>	SAMPLE CODE <input style="width: 100%;" type="text" value="NRA07 0122"/>

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Planorbidae

NET LOSSES NET GAINS

NOTES

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Lambourn
DATE	2.4.91	SITE	Bagnor
SORTER	JAB	SAMPLE CODE	NRA07 0116

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

		LOSSES	GAINS
A	<u>VIAL</u> 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 None	ADDITIONAL FAMILIES FOUND BY IFE None

B	<u>SAMPLE</u> 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 (This box only completed when no vial supplied with sample)	ADDITIONAL FAMILIES FOUND BY IFE 1 Haliplidae 2 Beraeidae
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NET LOSSES NET GAINS

NOTES

1 *Haliplus wehnckeii* (adult) 1 only
 2 *Beraea pullata* 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Gainsbridge Brook
DATE	15.4.91	SITE	A329 Little Milton
SORTER	JAB	SAMPLE CODE	NRA07 0033

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Glossiphoniidae 2 Scirtidae	None

B	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES NET GAINS

NOTES

2 Cast skin of Elodes sp. in vial

No Astacidae in vial - assumed returned to river

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames	RIVER Ginge Brook
DATE 19.3.91	SITE Church West Hendred
SORTER JAB	SAMPLE CODE NRA07 0104

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

	LOSSES	GAINS								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center; font-weight: bold;">A</td> <td style="text-align: center;"><u>VIAL</u></td> </tr> <tr> <td colspan="2"> Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE </td> </tr> </table>	A	<u>VIAL</u>	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">BMW FAMILIES NOT FOUND BY IFE</td> </tr> <tr> <td style="text-align: center;">1 Planariidae</td> </tr> </table>	BMW FAMILIES NOT FOUND BY IFE	1 Planariidae	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</td> </tr> <tr> <td style="text-align: center;">2 Polycentropodidae</td> </tr> </table>	ADDITIONAL FAMILIES FOUND BY IFE	2 Polycentropodidae
A	<u>VIAL</u>									
Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE										
BMW FAMILIES NOT FOUND BY IFE										
1 Planariidae										
ADDITIONAL FAMILIES FOUND BY IFE										
2 Polycentropodidae										

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center; font-weight: bold;">B</td> <td style="text-align: center;"><u>SAMPLE</u></td> </tr> <tr> <td colspan="2"> Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE </td> </tr> </table>	B	<u>SAMPLE</u>	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">BMW FAMILIES NOT FOUND BY IFE</td> </tr> <tr> <td style="text-align: center;">(This box only completed when no vial supplied with sample)</td> </tr> </table>	BMW FAMILIES NOT FOUND BY IFE	(This box only completed when no vial supplied with sample)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</td> </tr> <tr> <td style="text-align: center;">3 Psychomyiidae 4 Simuliidae</td> </tr> </table>	ADDITIONAL FAMILIES FOUND BY IFE	3 Psychomyiidae 4 Simuliidae
B	<u>SAMPLE</u>									
Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE										
BMW FAMILIES NOT FOUND BY IFE										
(This box only completed when no vial supplied with sample)										
ADDITIONAL FAMILIES FOUND BY IFE										
3 Psychomyiidae 4 Simuliidae										

NET LOSSES 1 NET GAINS 3

NOTES

2 Plectrocnemia conspersa
 3 Lype sp. 1 only
 4 Simulium costatum 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Rissington Ditch
DATE	29.4.91	SITE	U/s Windrush Loop
SORTER	JAB	SAMPLE CODE	NRA07 0342

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	2 Gammaridae 3 Tipulidae

NET LOSSES NET GAINS

NOTES

2 Gammarus pulex 1 only
3 Limonia sp. 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Thame
DATE	7.3.91		SITE	Shabbington Bridge
SORTER	JAB		SAMPLE CODE	NRA07 0262

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

		LOSSES	GAINS
A	<u>VIAL</u>	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

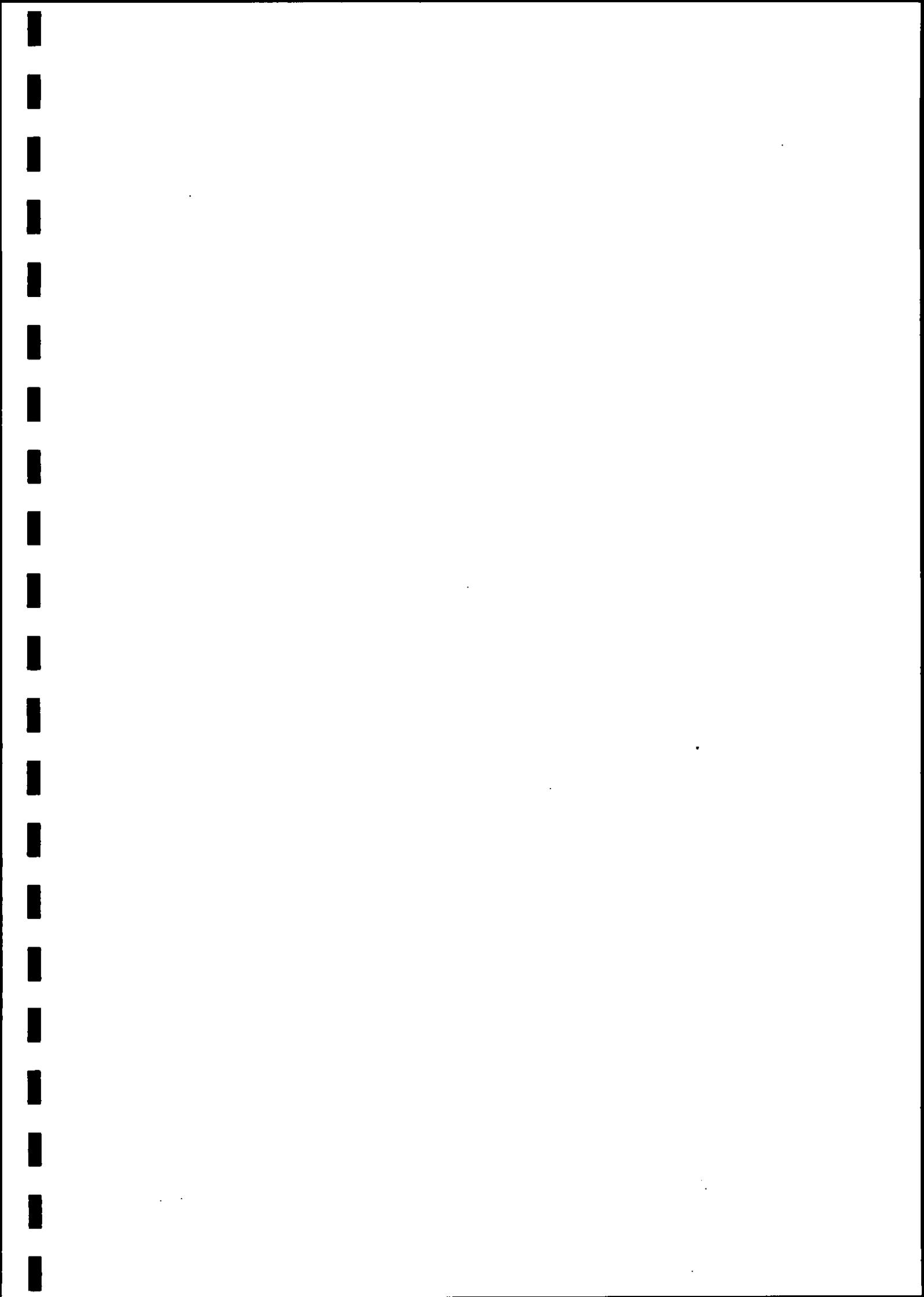
B	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	1 Physidae 2 Ancylidae 3 Elmidae 4 Psychomyiidae

NET LOSSES NET GAINS

NOTES

1 Physa fontinalis 1 only
 2 Ancylus fluviatilis, Acroloxus lacustris
 3 Oulimnius tuberculatus (adults + larvae)
 4 Lype sp.

Lymnaeidae + Hydroptilidae not found in vial but written on label



1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Whitewater
DATE	5.8.91	SITE	Heckfield
SORTER	LPR	SAMPLE CODE	NRA07 0130

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

		LOSSES	GAINS
A	<u>VIAL</u> 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 None	ADDITIONAL FAMILIES FOUND BY IFE 1 Dytiscidae
B	<u>SAMPLE</u> 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 (This box only completed when no vial supplied with sample)	ADDITIONAL FAMILIES FOUND BY IFE 2 Neritidae 3 Valvatidae 4 Lymnaeidae 5 Hydroptilidae

NET LOSSES NET GAINS

NOTES

1 Potamonectes sp. (larva) in vial, Potamonectes depressus, Platambus maculatus (adults) in sample
 2 Theodoxus fluviatilis
 3 Valvata piscinalis 1 only
 4 Lymnaea peregra
 5 Hydroptila sp., Ithytrichia sp.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Whitewater
DATE	5.8.91	SITE	U/s Blackwater
SORTER	LPR	SAMPLE CODE	NRA07 0131

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

	LOSSES	GAINS
A <u>VIAL</u> 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 1 Glossiphoniidae* 2 Asellidae* 3 Corixidae*	ADDITIONAL FAMILIES FOUND BY IFE None

B <u>SAMPLE</u> 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 (This box only completed when no vial supplied with sample)	ADDITIONAL FAMILIES FOUND BY IFE 4 Hydrobiidae 5 Glossiphoniidae* 6 Asellidae* 7 Corixidae*
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NET LOSSES NET GAINS

NOTES

- 4 Potamopyrgus jenkinsi, Bithynia tentaculata
- 5 Helobdella stagnalis
- 6 Asellus aquaticus
- 7 Sigara dorsalis/striata

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Haseley Brook
DATE	30.7.91	SITE	U/s Thame
SORTER	LPR	SAMPLE CODE	NRA07 0040

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Elmidae

B	<u>SAMPLE</u>	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 supplied with sample)	2 Valvatidae 3 Ephemeridae 4 Caenidae 5 Gyrinidae

NET LOSSES NET GAINS

NOTES

1 *Elmis aenea* (adult)
 2 *Valvata piscinalis*
 3 *Ephemera danica* 1 only
 4 *Caenis luctuosa/macrura* 1 only
 5 *Gyrinus* sp. (larva) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Wey (S)
DATE	1.8.91	SITE	Haslemere
SORTER	LPR	SAMPLE CODE	NRA07 0165

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

		LOSSES	GAINS
A	<p><u>VIAL</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>1 Planariidae 2 Rhyacophilidae* 3 Lepidostomatidae 4 Chironomidae*</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>None</p>
B	<p><u>SAMPLE</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>(This box only completed when no vial supplied with sample)</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>5 Lymnaeidae 6 Planorbidae 7 Rhyacophilidae* 8 Chironomidae*</p>

NET LOSSES NET GAINS

NOTES

5 *Lymnaea peregra*
 6 *Bathyomphalus contortus* 1 only
 7 *Rhyacophila dorsalis*
 8 Tanypodinae, Prodiamesinae, Orthocladiinae

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Veneymore Stream
DATE	7.8.91	SITE	D/s Trout Farm
SORTER	LPR	SAMPLE CODE	NRA07 0080
AQC OF BMWP FAMILIES		A. IN VIAL	<input style="border: 1px solid black;" type="text" value="+"/>
		B. IN SAMPLE	<input style="border: 1px solid black;" type="text" value="+"/>

		LOSSES	GAINS
A	<p style="text-align: center;"><u>VIAL</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in VIAL by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>1 Planorbidae*</p> <p>2 Sphaeriidae*</p> <p>3 Erpobdellidae*</p> <p>4 Leptoceridae</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>5 Beraeidae</p>
B	<p style="text-align: center;"><u>SAMPLE</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in SAMPLE by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>(This box only completed when no vial supplied with sample)</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>6 Planorbidae*</p> <p>7 Sphaeriidae*</p> <p>8 Erpobdellidae*</p> <p>9 Scirtidae</p> <p>10 Goeridae</p>

NET LOSSES

NET GAINS

NOTES

1,6 Empty shell in vial, Anisus vortex, Gyraulus albus, Bathyomphalus contortus in sample

2,7 Empty shell in vial, Pisidium sp. in sample

5 Beraeodes minutus

8 Erpobdella octoculata

9 Elodes sp. (larva) 1 only

10 Silo nigricornis

Comments section of form states "Ancylid, Dendrocoelid not in vial"

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Crawters Brook
DATE	12.8.91	SITE	Lowfield Heath
SORTER	JAB	SAMPLE CODE	NRA07 0144

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

		LOSSES	GAINS
A	<u>VIAL</u> 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 None	ADDITIONAL FAMILIES FOUND BY IFE None
B	<u>SAMPLE</u> 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 (This box only completed when no vial supplied with sample)	ADDITIONAL FAMILIES FOUND BY IFE 1 Hydrobiidae 2 Gammaridae 3 Tipulidae

NET LOSSES NET GAINS

NOTES

1 Potamopyrgus jenkinsi 1 only
 2 Gammarus pulex 1 only
 3 Antocha vitripennis 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Cole
DATE	7.8.91	SITE	Coleshill
SORTER	LPR	SAMPLE CODE	NRA07 0017

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

		LOSSES	GAINS
A	<p><u>VIAL</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in VIAL by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>1 Oligochaeta* 2 Siphonuridae 3 Haliplidae*</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>4 Ephemerellidae</p>
B	<p><u>SAMPLE</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in SAMPLE by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>(This box only completed when no vial supplied with sample)</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>5 Oligochaeta* 6 Haliplidae* 7 Hydrophilidae 8 Psychomyiidae</p>

NET LOSSES NET GAINS

NOTES

4 Ephemerella ignita
6 Halipus fluviatilis (adults)
7 Helophorus brevipalpis (adult) 1 only
8 Tinodes waeneri 1 only

Comments section of form states "Gyrinid, Dendrocoelid not in vial, Anodonta returned to river"

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Basingstoke Canal
DATE	7.8.91	SITE	Eelmoor Bridge
SORTER	JAB	SAMPLE CODE	NRA07 0174

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Hydrometridae	2 Polycentropodidae

B	<u>SAMPLE</u>	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 supplied with sample)	3 Caenidae 4 Naucoridae 5 Elmidae

NET LOSSES NET GAINS

NOTES

1 *Ranatra linearis* (nymph) in vial
 2 *Cyrrnus flavidus* (pupa)
 3 *Caenis horaria*
 4 *Ilyocoris cimicoides* (nymph) 1 only
 5 *Oulimnius tuberculatus* (adult) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Leach
DATE	7.8.91	SITE	Lechlade
SORTER	LPR	SAMPLE CODE	NRA07 0050

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

		LOSSES	GAINS
A	<p style="text-align: center;"><u>VIAL</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE</p>	<p style="text-align: center;">BMWP FAMILIES NOT FOUND BY IFE</p> <p style="text-align: center;">1 Planariidae*</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center;">None</p>
B	<p style="text-align: center;"><u>SAMPLE</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE</p>	<p style="text-align: center;">BMWP FAMILIES NOT FOUND BY IFE</p> <p style="text-align: center;">(This box only completed when no vial supplied with sample)</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center;">2 Planariidae* 3 Valvatidae 4 Piscicolidae 5 Leptophlebiidae 6 Caenidae 7 Beraeidae</p>

NET LOSSES NET GAINS

NOTES

2 Polycelis nigra/tenuis
 3 Valvata cristata
 4 Piscicola geometra
 5 Habrophlebia fusca 1 only
 6 Caenis luctuosa/macrura
 7 Beraeodes minutus 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Og
DATE	5.8.91	SITE	U/s Kennet
SORTER	JAB	SAMPLE CODE	NRA07 0124

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

		LOSSES	GAINS
A	<p><u>VIAL</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in VIAL by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>1 Planariidae 2 Dendrocoelidae 3 Chironomidae* 4 Simuliidae*</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>None</p>
B	<p><u>SAMPLE</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in SAMPLE by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p>(This box only completed when no vial supplied with sample)</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>5 Chironomidae* 6 Simuliidae*</p>

NET LOSSES NET GAINS

NOTES

5 Tanypodinae, Prodiamesinae
6 Simulium aureum group

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Rib
DATE	8.7.91	SITE	Bengeo Hall
SORTER	DJL	SAMPLE CODE	NRA07 0223

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES NET GAINS

NOTES

Note in Comments section of NRA data sheet that the following families are not in vial:

Goeridae, Coenagriidae, Gerridae, Corixidae, Hydropsychidae.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Misbourne
DATE	18.6.91		SITE	D/s Gerards Cross STW
SORTER	JE		SAMPLE CODE	NRA07 0199

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Planariidae

NET LOSSES

NET GAINS

NOTES

1 Polycelis nigra/tenuis

Note in Comments section of NRA data sheet that Asellidae is not in vial

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Felthamhill Brook
DATE	26.6.91	SITE	U/s Portlane Brook
SORTER	DJL	SAMPLE CODE	NRA07 0191

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	2 Valvatidae

B	<u>SAMPLE</u>	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 supplied with sample)	3 Hydrobiidae

NET LOSSES

NET GAINS

NOTES

2 Valvata piscinalis
3 Bithynia tentaculata

Note in Comments section of NRA data sheet that Gerridae and Nepidae are not in sample.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Stort
DATE	8.7.91		SITE	Roydon
SORTER	DJL		SAMPLE CODE	NRA07 0231

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Molannidae

B	<u>SAMPLE</u>	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 supplied with sample)	2 Gerridae 3 Elmidae

NET LOSSES

NET GAINS

NOTES

- 1 Molanna angustata
- 2 Gerris sp (nymph) 1 only
- 3 Oulimnius tuberculatus (adults)

Note in Comments section of NRA data sheet that Unionidae and Dendrocoelidae are not in vial.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Ash
DATE	26.6.91		SITE	U/s Ashford WTW
SORTER	DJL		SAMPLE CODE	NRA07 0176

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample).	None

NET LOSSES NET GAINS

NOTES

Note in Comments section of NRA data sheet that Baetidae not in sample and Viviparidae not in vial.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Ver
DATE	20.6.91	SITE	U/s Colne
SORTER	JE	SAMPLE CODE	NRA07 0203

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Ancylidae 2 Corixidae

NET LOSSES NET GAINS

NOTES

1 Ancylus fluviatilis
2 indet corixid (nymph) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Ash (Lee)
DATE	8.7.91		SITE	Easneye
SORTER	DJL		SAMPLE CODE	NRA07 0206

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

	LOSSES	GAINS
<div style="border: 1px solid black; padding: 2px; width: 15px; text-align: center; float: left; margin-right: 5px;">A</div> <div style="border: 1px solid black; padding: 5px; margin-left: 15px;"> <p style="text-align: center; margin: 0;"><u>VIAL</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE</p> </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> BMWP FAMILIES NOT FOUND BY IFE </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 10px;"> None </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> ADDITIONAL FAMILIES FOUND BY IFE </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 10px;"> None </div>

<div style="border: 1px solid black; padding: 2px; width: 15px; text-align: center; float: left; margin-right: 5px;">B</div> <div style="border: 1px solid black; padding: 5px; margin-left: 15px;"> <p style="text-align: center; margin: 0;"><u>SAMPLE</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE</p> </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> BMWP FAMILIES NOT FOUND BY IFE </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 10px;"> (This box only completed when no vial supplied with sample) </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> ADDITIONAL FAMILIES FOUND BY IFE </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 10px;"> 1 Hydropsychidae 2 Hydroptilidae </div>
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NET LOSSES

NET GAINS

NOTES

1 Hydropsyche sp (pupa) 1 only
 2 Hydroptila sp.

Note in Comments section of NRA data sheet that Molannidae not in sample.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Lee
DATE	8.7.91		SITE	Waterhall
SORTER	DJL		SAMPLE CODE	NRA07 0216

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Hydrophilidae

NET LOSSES NET GAINS

NOTES

1 Indet hydrophilid larva 1 only

Note in Comments section of NRA data sheet that Sialidae not in sample.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Gade
DATE	15.7.91		SITE	Casiobury Park
SORTER	DJL		SAMPLE CODE	NRA07 0194

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES

NET GAINS

NOTES

Note in Comments section of NRA data sheet that Gerridae not in sample.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Mimram
DATE	27.6.91		SITE	Codicote Bottom
SORTER	JE		SAMPLE CODE	NRA07 0217

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Perlodidae	2 Leuctridae

B	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES

NET GAINS

NOTES

2 Leuctra geniculata

Note in Comments section of NRA data sheet that Dytiscidae not in vial.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Mimram
DATE	27.6.91		SITE	Panshanger
SORTER	JE		SAMPLE CODE	NRA07 0218

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Elmidae*	None
B	<u>SAMPLE</u>	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 supplied with sample)	3 Valvatidae* 4 Elmidae*

NET LOSSES NET GAINS

NOTES 1,3 Aberrant Armiger crista in vial, Valvata piscinalis in sample
 4 Elmis aenea, Limnius volckmari (larvae)

Note in Comments section of NRA data sheet that Caenidae, Astacidae and Agriidae not in sample.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Mimshall Brook
DATE	20.6.91		SITE	Water End
SORTER	JE		SAMPLE CODE	NRA07 0197

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES NET GAINS

NOTES

Note in Comments section of NRA data sheet that Baetidae not in sample.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Beane
DATE	3.7.91		SITE	Watton-at-Stone
SORTER	JE		SAMPLE CODE	NRA07 0207

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Baetidae 2 Ephemerellidae

NET LOSSES

NET GAINS

NOTES

1 Baetis rhodani 1 only
2 Ephemerella ignita 1 only

Note in Comments section of NRA data sheet that Physidae not in sample.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Quinn
DATE	3.7.91		SITE	Braughing Bridge
SORTER	JE		SAMPLE CODE	NRA07 0221

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

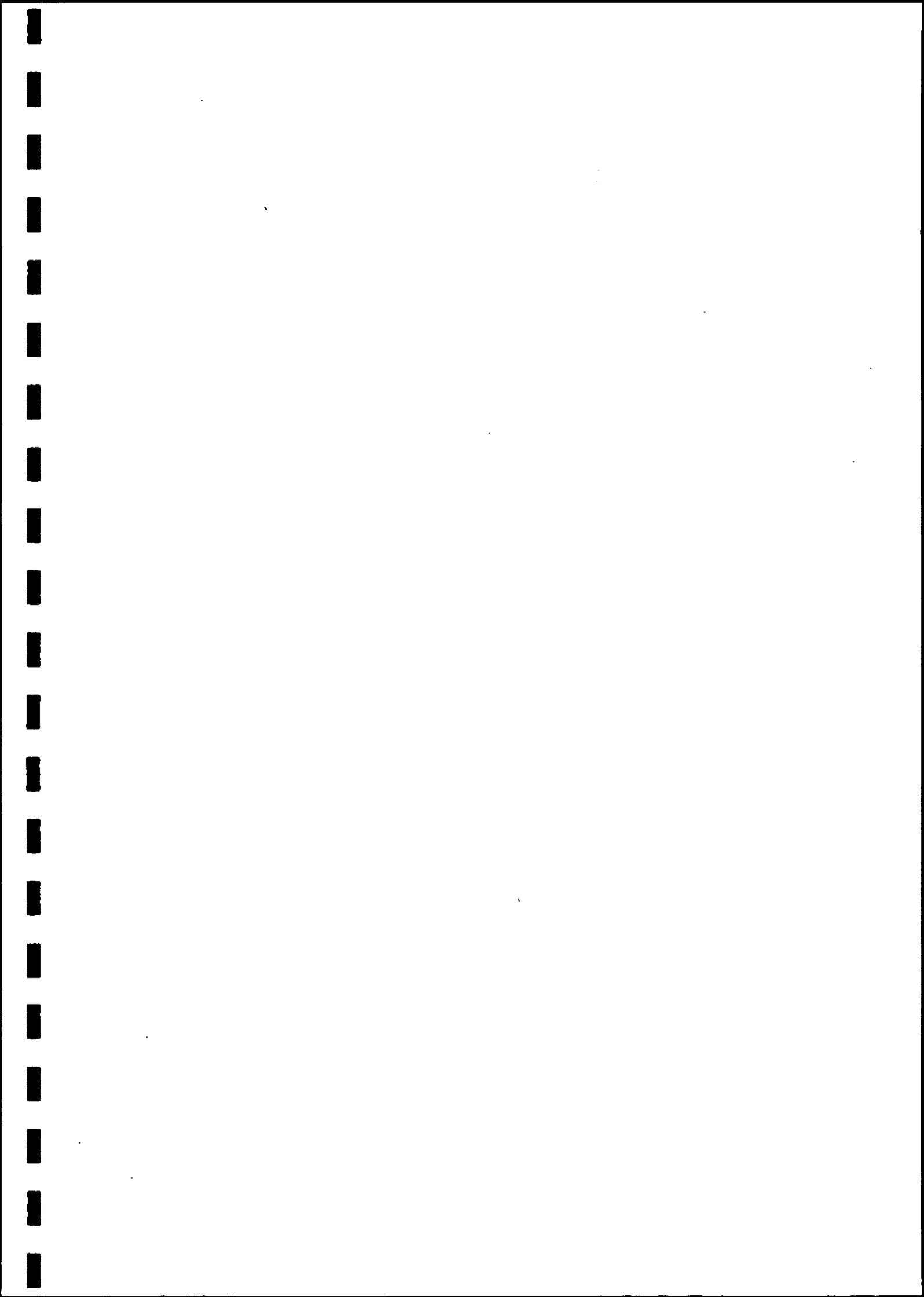
		LOSSES	GAINS
A	<u>VIAL</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	None	None

B	<u>SAMPLE</u>	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 supplied with sample)	1 Planorbidae 2 Némouridae

NET LOSSES NET GAINS

NOTES

1 *Bathyomphalus contortus*
2 *Nemurella picteti* 1 only



1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Peppershill Brook
DATE	17.11.91		SITE	Westfield Farm
SORTER	JAB		SAMPLE CODE	NRA07 0380

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Gammaridae 2 Dytiscidae 3 Scirtidae

NET LOSSES NET GAINS

NOTES

1 Gammarus pulex 1 only
 2 Ilybius fuliginosus (larvae)
 3 Elodes sp. (larvae)

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Caker Stream

DATE 12.11.91

SITE D/s Alton STW

SORTER AJH

SAMPLE CODE NRA07 0421

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Valvatidae 2 Piscicolidae 3 Haliplidae

NET LOSSES 0

NET GAINS 3

NOTES

- 1 Valvata piscinalis
- 2 Piscicola geometra 1 only
- 3 Haliplus lineatocollis (adult) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Ray

DATE 6.11.91

SITE Moredon Bridge

SORTER LPR

SAMPLE CODE NRA07 0058

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
Differences between: 1) BMWP families listed on sample data sheet and 1i) BMWP families found in VIAL by IFE		1 Chironomidae	None

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

NET LOSSES 1

NET GAINS 1

NOTES

2 Pisidium sp.

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Lyde

DATE 4.11.91

SITE Deanlands Farm

SORTER LPR

SAMPLE CODE NRA07 0120

AQC OF BMWP FAMILIES A. IN VIAL

B. IN SAMPLE

LOSSES

GAINS

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

B	<u>SAMPLE</u>	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 supplied with sample)	2 Valvatidae 3 Polycentropodidae 4 Goeridae

NET LOSSES

NET GAINS

NOTES

- 2 *Valvata piscinalis*
- 3 *Polycentropus irroratus* 1 only
- 4 *Silo nigricornis*

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Lydebank Brook
DATE	5.11.91		SITE	Ford Lane
SORTER	AJH		SAMPLE CODE	NRA07 0412

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Sphaeriidae* 3 Hydrometridae	None

B	<u>SAMPLE</u>	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 supplied with sample)	4 Hydrobiidae* 5 Sphaeriidae* 6 Elmidae

NET LOSSES NET GAINS

NOTES

1,2 Empty shells in vial
6 Elmis aenea (larva) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Ray
DATE	6.11.91		SITE	Morris Street
SORTER	LPR		SAMPLE CODE	NRA07 0057

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES NET GAINS

NOTES

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Boveney Ditch
DATE	5.11.91		SITE	U/s Thames
SORTER	JAB		SAMPLE CODE	NRA07 0138

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	None

B	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES NET GAINS

NOTES

1 Empty shell in vial

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Ock (Surrey)

DATE 12.11.91

SITE Ock Above Wey

SORTER AJH

SAMPLE CODE NRA07 0371

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	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 Hydrobiidae

B	<u>SAMPLE</u>	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 supplied with sample)	3 Planorbidae 4 Unionidae 5 Sphaeriidae 6 Heptageniidae 7 Limnephilidae

NET LOSSES 1

NET GAINS 6

- NOTES
- 2 Potamopyrgus jenkinsi
 - 3 Hippeutis complanatus 1 only
 - 4 Anodonta sp.
 - 5 Pisidium sp.
 - 6 Heptagenia sulphurea
 - 7 Indet limnephilid juveniles

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Liden Brook

DATE 5.11.91

SITE Lower Earls court Farm

SORTER AJH

SAMPLE CODE NRA07 0330

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Calopterygidae 2 Haliplidae

NET LOSSES 0

NET GAINS 2

NOTES

1 Calopteryx splendens
2 Haliplus lineatocollis (adult) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Filchampstead Brook
DATE	13.11.91		SITE	U/s Thames
SORTER	JAB		SAMPLE CODE	NRA07 0030

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

LOSSES		GAINS				
A	<u>VIAL</u> Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">BMWP FAMILIES NOT FOUND BY IFE</th> <th style="width: 50%;">ADDITIONAL FAMILIES FOUND BY IFE</th> </tr> <tr> <td style="text-align: center; vertical-align: middle;">None</td> <td style="text-align: center; vertical-align: middle;">None</td> </tr> </table>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE	None	None
BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE					
None	None					

B	<u>SAMPLE</u> Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">BMWP FAMILIES NOT FOUND BY IFE</th> <th style="width: 50%;">ADDITIONAL FAMILIES FOUND BY IFE</th> </tr> <tr> <td style="text-align: center; vertical-align: middle;"> (This box only completed when no vial supplied with sample) </td> <td style="text-align: center; vertical-align: middle;"> 1 Valvatidae 2 Hydrobiidae 3 Platycnemididae 4 Haliplidae 5 Scirtidae 6 Limnephilidae </td> </tr> </table>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE	(This box only completed when no vial supplied with sample)	1 Valvatidae 2 Hydrobiidae 3 Platycnemididae 4 Haliplidae 5 Scirtidae 6 Limnephilidae
BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE					
(This box only completed when no vial supplied with sample)	1 Valvatidae 2 Hydrobiidae 3 Platycnemididae 4 Haliplidae 5 Scirtidae 6 Limnephilidae					

NET LOSSES NET GAINS

- NOTES
- 1 Valvata piscinalis 1 only
 - 2 Potamopyrgus jenkinsi 1 only
 - 3 Platycnemis pennipes 1 only
 - 4 Haliplus sp. (larva) 1 only
 - 5 Cyphon sp. (larvae)
 - 6 Indet limnephilid juveniles

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Oxford Canal

DATE 23.10.91

SITE Cropredy Bridge

SORTER LPR

SAMPLE CODE NRA07 0169

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

LOSSES

GAINS

A	<u>VIAL</u>	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 Gammaridae*	None

B	<u>SAMPLE</u>	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 supplied with sample)	2 Sphaeriidae 3 Gammaridae* 4 Corophiidae

NET LOSSES 0

NET GAINS 2

NOTES

- 2 Sphaerium sp.
- 3 Crangonyx pseudogracilis
- 4 Corophium curvispinum 1 only

Note in comments section of NRA data sheet:
 Viviparus and Anodonta returned

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Leach
DATE	7.11.91		SITE	B4449 Lechlade
SORTER	JAB		SAMPLE CODE	NRA07 0050

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Leptophlebiidae	None

B	<u>SAMPLE</u>	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 supplied with sample)	3 Dendrocoelidae* 4 Valvatidae 5 Lymnaeidae 6 Physidae 7 Piscicolidae 8 Dytiscidae 9 Lepidostomatidae

NET LOSSES

NET GAINS

NOTES

- 3 Dendrocoelum lacteum 1 only
- 4 Valvata piscinalis 1 only
- 5 Lymnaea peregra, L.palustris, L.stagnalis
- 6 Physa fontinalis 1 only
- 7 Piscicola geometra 1 only
- 8 Platambus maculatus (larva) 1 only
- 9 Lepidostoma hirtum 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Northfield Brook

DATE 30.10.91

SITE Sandford

SORTER LPR

SAMPLE CODE NRA07 0054

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	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 Glossiphoniidae* 2 Simuliidae*	None
B	<u>SAMPLE</u>	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 supplied with sample)	3 Physidae 4 Glossiphoniidae* 5 Haliplidae 6 Simuliidae*

NET LOSSES 0

NET GAINS 2

NOTES

- 3 Physa fontinalis
- 4 Helobdella stagnalis
- 5 Haliplus sp. (larva) 1 only
- 6 Simulium ornatum group, S. erythrocephalum

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Tuckmill Brook

DATE 28.10.91

SITE D/s Shrivenham STW

SORTER JAB

SAMPLE CODE NRA07 0079

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

LOSSES

GAINS

A	<u>VIAL</u>	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 Psychomyiidae	3 Valvatidae

B	<u>SAMPLE</u>	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 supplied with sample)	4 Hydropsychidae

NET LOSSES 2

NET GAINS 2

NOTES 3 Valvata cristata in sample, specimen without shell in vial
4 Hydropsyche angustipennis 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Ladygrove Ditch

DATE 5.11.91

SITE B4016 Appleford

SORTER AJH

SAMPLE CODE NRA07 0411

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	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 Sphaeriidae*	None

B	<u>SAMPLE</u>	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 supplied with sample)	3 Sphaeriidae* 4 Haliplidae

NET LOSSES 1

NET GAINS 1

NOTES

- 1,2 Empty shells in vial
- 3 Pisidium sp.
- 4 Halipus lineatocollis (adults)

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Brookhouse Brook

DATE 21.11.91

SITE Brookhouse

SORTER JE

SAMPLE CODE NRA07 0208

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	BMW 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	<u>SAMPLE</u>	BMW 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 supplied with sample)	1 Erpobdellidae

NET LOSSES 0

NET GAINS 1

NOTES 1 Indet erpobdellid (juvenile) 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Grand Union Canal

DATE 20.11.91

SITE Solbay St, Mile End

SORTER DJL

SAMPLE CODE NRA07 0243

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<p><u>VIAL</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p style="text-align: center; margin-top: 20px;">None</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center; margin-top: 20px;">None</p>

B	<p><u>SAMPLE</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <p style="text-align: center; margin-top: 20px;">(This box only completed when no vial supplied with sample)</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center; margin-top: 20px;">None</p>
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NET LOSSES 0

NET GAINS 0

NOTES

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Ock
DATE	30.10.91		SITE	Abingdon Common
SORTER	JAB		SAMPLE CODE	NRA07 0056

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	2 Caenidae 3 Molannidae

NET LOSSES

NET GAINS

NOTES

2 *Caenis luctuosa/macrura* 1 only
3 *Molanna angustata* 1 only

Note on label that Valvatidae and Hydroptilidae not placed in vial

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Rom/Beam

DATE 28.11.91

SITE A12 Bridge

SORTER JE

SAMPLE CODE NRA07 0228

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	BMW FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMW families listed on sample data sheet and ii) BMW families found in VIAL by IFE	None	None

B	<u>SAMPLE</u>	BMW FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMW families listed on sample data sheet and ii) BMW families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	1 Glossiphoniidae 2 Hydropsychidae

NET LOSSES 0

NET GAINS 2

NOTES

1 Glossiphonia complanata, Helobdella stagnalis
2 Hydropsyche angustipennis 1 only

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Lee Navigation

DATE 20.11.91

SITE Dobbs Weir

SORTER DJL

SAMPLE CODE NRA07 0253

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES 0

NET GAINS 0

NOTES

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Colne

DATE 25.11.91

SITE U/s Thames

SORTER JE

SAMPLE CODE NRA07 0186

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	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 Baetidae 2 Coenagriidac	None

B	<u>SAMPLE</u>	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 supplied with sample)	3 Erpobdellidae 4 Agriidae 5 Corixidae 6 Hydroptilidae

NET LOSSES 2

NET GAINS 4

NOTES

- 3 Indet erpobdellid (juvenile) 1 only
- 4 Calopteryx sp. (juvenile) 1 only
- 5 Sigara dorsalis/striata 1 only
- 6 Hydroptila sp. (pupa) 1 only

Unionidae not in vial or sample; assumed returned to river

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Frays
DATE	18.11.91		SITE	U/s Colne
SORTER	DJL		SAMPLE CODE	NRA07 0193

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

		LOSSES	GAINS
A	<u>VIAL</u>	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 Ancyliidae* 2 Hydroptilidae	None

B	<u>SAMPLE</u>	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 supplied with sample)	3 Planorbidae 4 Ancyliidae*

NET LOSSES NET GAINS

NOTES

3 Gyraulus albus
4 Ancylus fluviatilis

Notes in comments section of NRA data sheet:
Unionidae not in vial (found by IFE in sample)
Lymnaeidae and Physidae not in sample (not found by IFE in sample)

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION Thames

RIVER Roding

DATE 20.11.91

SITE Luxborough Lane

SORTER DJL

SAMPLE CODE NRA07 0226

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES 0

NET GAINS 0

NOTES

Note in comments section of NRA data sheet:
Hydropsyche not in sample (not found by IFE in sample)

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Ingrebourne
DATE	28.11.91		SITE	A12 Bridge
SORTER	JE		SAMPLE CODE	NRA07 0211

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	None

NET LOSSES NET GAINS

NOTES

Note in comments section of NRA data sheet:
Ancyliidae not in sample (not found by IFE in sample)

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames		RIVER	Ingrebourne
DATE	28.11.91		SITE	Harold Court Road
SORTER	JE		SAMPLE CODE	NRA07 0212

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

		LOSSES	GAINS
A	<u>VIAL</u>	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	<u>SAMPLE</u>	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 supplied with sample)	1 Planariidae

NET LOSSES

NET GAINS

NOTES 1 Polycelis nigra/tenuis

1991 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	Thames	RIVER	Roding
DATE	20.11.91	SITE	Ilford Golf Course
SORTER	DJL	SAMPLE CODE	NRA07 0227

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

LOSSES		GAINS
A	<u>VIAL</u> 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 None
		ADDITIONAL FAMILIES FOUND BY IFE None

B	<u>SAMPLE</u> 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 (This box only completed when no vial supplied with sample)
		ADDITIONAL FAMILIES FOUND BY IFE 1 Baetidae

NET LOSSES

NET GAINS

NOTES 1 Cloeon dipterum 1 only