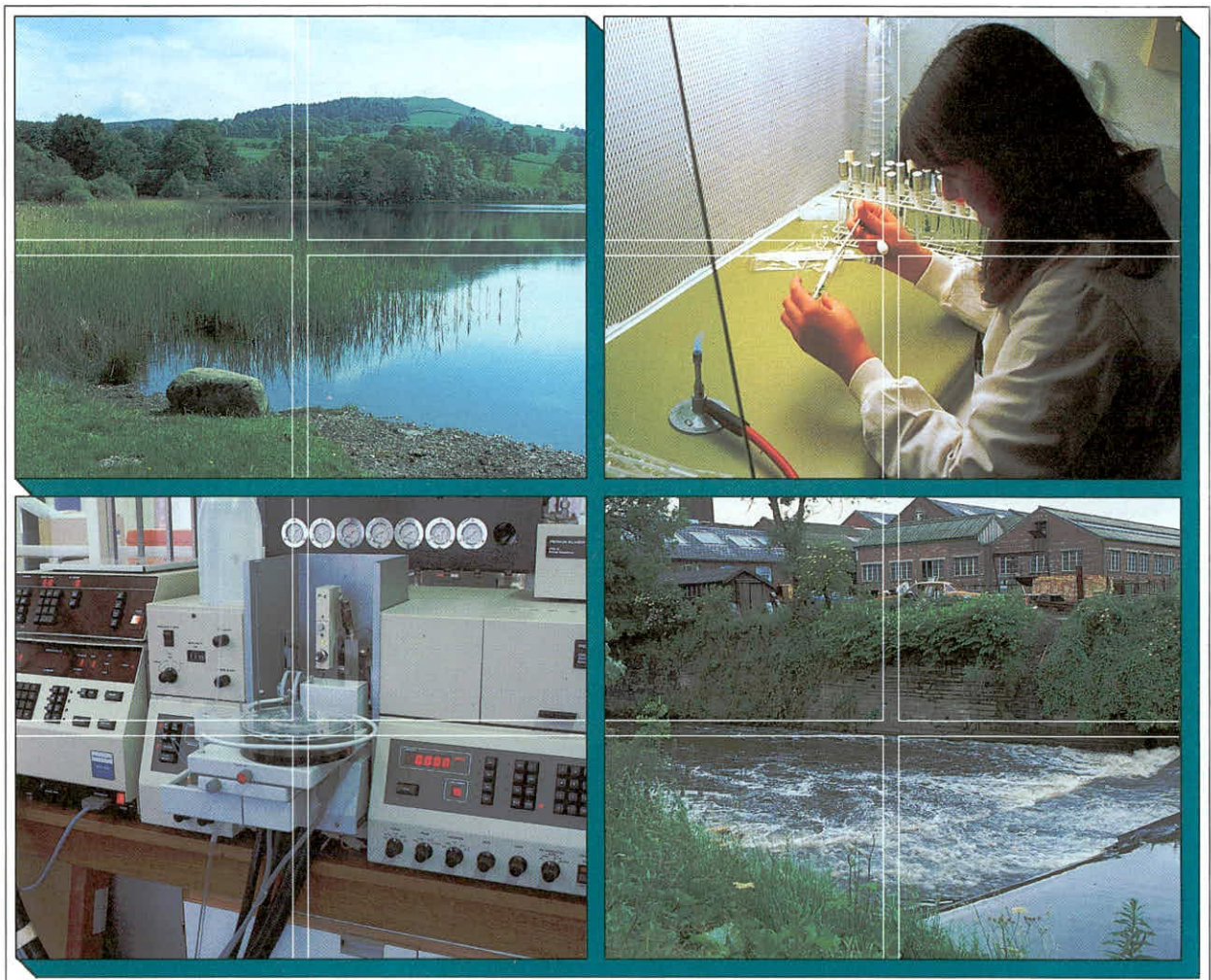


An audit of performance in the processing of macro-invertebrate samples in 1993. NRA Anglian Region

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NRA Anglian Region

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Project leader:	R.J.M. Gunn
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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 Anglian 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	<input type="text"/>	RIVER	<input type="text"/>
DATE	<input type="text"/>	SITE	<input type="text"/>
SORTER	<input type="text"/>	SAMPLE CODE	<input type="text"/>

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		

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)	

NOTES: NET LOSSES ☐ NET GAINS ☐

TABLE 2. The 16 spring samples audited for Anglian Region.

River	Site	Sorter	Losses	Gains	Omissions
Holt Stream	Letheringsett Bridge	EDT	0	2	0
Elstow Brook	d/s Marston STW	TNA	0	1	0
Rhee	Haslingfield Bridge	SJL	0	2	1
Binham Tributary	Binham Ford	EDT	1	3	0
Gwash	South Gunthorpe	DMB	1	7	0
Elstow Brook	Dovecote Crossing	TNA	0	1	0
Glaven	Wiveton Bridge	EDT	0	3	1
Ouse	Private Bridge	TNA	1	4	3
Binham Tributary	Binham Bridge	EDT	0	4	1
Cringle Brook	Thunder Bridge	RPC	0	2	0
Chater	Lyndon	DMB	1	5	0
Spring Beck	d/s Weybourne STW	EDT	0	2	0
Roman River	Manwood Bridge	PJM	1	1	1
Tattingstone Brook	A137 Bridge	PJM	0	1	0
Tenpenny Brook	E. of Stable Wood	PJM	0	2	0
Roman River	Bounstead Bridge	PJM	1	0	0

TABLE 3. The 12 summer samples audited for Anglian Region

River	Site	Sorter	Losses	Gains	Omissions
Great Eau	Gayton Engine	CAE	0	2	0
Stainfield Beck	Stainfield	DMB	0	4	1
New Dyke	Locks Lane	EDT	0	4	0
Easton Broad	Potters Bridge	EDT	0	1	0
Morton's Leam	Old Railway Bridge	RPC	0	2	0
Shadingfield Watercourse	Sotterley Park	EDT	0	3	0
Marsh Dyke	d/s Beccles STW	EDT	0	5	0
Lothingland Hundred	R. Hulver Bridge	EDT	0	3	1
Wissey	Wissington	TNA	1	1	0
Scawby	A15 Bridge	SJB	0	1	0
Ten Mile River	Hilgay	TNA	1	1	0
Wissey	A10 Hilgay Bridge	TNA	1	1	0

TABLE 4. The 32 autumn samples audited for Anglian Region

River	Site	Sorter	Losses	Gains	Omissions
Stretham Catchwater	Adj. Pump Station	SJL	1	2	2
Old West	Wilburton	SJL	0	2	2
Cottenham Lode	North Fen Bridge	SJL	1	1	2
Bugbrooke	A5 Bridge	RPC	0	3	0
Spratton Brook	Broomhill	RPC	0	3	0
Brampton Branch	Brixworth	AT	1	0	0
Lymn	Mill Bridge	AT	0	2	0
Hobhole	Frieston Bridge	RPC	0	1	0
Morcott Brook	South Luffenham	CAE	0	3	0
Glen	Tongue End	RPC	1	2	0
Virley Brook	Mill Road Bridge, Salcott	JMG	0	5	0
Domsey Brook	B1023 Bridge	TMT	0	3	2
Newton Longville Brook	d/s Newton Longville	TNA	1	3	0
Hobhole	Midville	RPC	0	3	0
Glen	Kate's Bridge	RPC	0	2	0
Slea	Bonemill Bridge	CAE	0	4	0
Ouzel	Simpson Bridge	TNA	0	4	1
Stour	Smallbridge Wormingford	JMG	0	1	0
Waithe Beck	Brigsley	AT	0	2	0
Colne	Earls Colne Road Bridge	JMG	1	6	0
Walgrave Stream	Walgrave	RPC	0	1	1
Willow Brook	Fotheringhay	RPC	0	1	0
Slade Brook	Pytchley Road Bridge	CAE	0	3	0
Colne	Chapel Road	JMG	0	1	0
Lud	Engine Gate Walk	AT	0	0	1
Sywell Brook	Sywell	RPC	0	0	0
Acle Spring	A47 Bridge	TMT	0	5	0

River	Site	Sorter	Losses	Gains	Omissions
Asheldham Brook	Brook Farm Cottages	PJM	0	2	0
Hannington Stream	Pitsford Reservoir	RPC	0	4	0
Grendon Brook	Ryeholmes Bridge	RPC	0	0	0
Lymn/Steeping	Crows Bridge	AT	0	2	1
Nene	Denford	AT	0	4	3

APPENDIX

Results of individual sample audits

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Holt Stream
DATE	6.5.93	SITE	Letheringsett Bridge
SORTER	EDT	SAMPLE CODE	NRA01 0173

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 Hydrobiidae 2 Sphaeriidae

NET LOSSES NET GAINS

NOTES:

1 Potamopygus jenkinsi
2 Pisidium sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Elstow Brook
DATE	4.5.93	SITE	d/s Marston STW
SORTER	TNA	SAMPLE CODE	NRA01 BF12M29

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 Sphaeriidae

NET LOSSES NET GAINS

NOTES:

1 Pisidium sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Rhee
DATE	5.5.93	SITE	Haslingfield Bridge
SORTER	SJL	SAMPLE CODE	NRA01 BF30M07

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 Simuliidae*	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)	2 Elmidae 3 Psychomyiidae 4 Simuliidae*

NET LOSSES NET GAINS

NOTES:

2 Elmis aenea (adult & larvae), Oulimnius sp (larvae)
 3 Tinodes waeneri 1 only
 4 Simulium ornatum group

Sampling date on pot and label says 7.5.93, that on data sheet says 5.5.93

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Binham Tributary
DATE	6.5.93	SITE	Binham Ford
SORTER	EDT	SAMPLE CODE	NRA01 0169

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 Hirudinidae	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)	2 Elmidae 3 Hydroptilidae 4 Tipulidae

NET LOSSES NET GAINS

NOTES:

2 Elmis aenea (larvae) Oulimnius tuberculatus (adults)
 3 Hydroptila sp. 1 only
 4 Dicranota sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglia	RIVER	Gwash
DATE	4.5.93	SITE	South Gunthorpe
SORTER	DMB	SAMPLE CODE	NRA01 1077

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 Simuliidae

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 Ancyliidae 4 Hydrophilidae 5 Scirtidae 6 Elmidae 7 Hydroptilidae 8 Tipulidae

NET LOSSES ☐NET GAINS ☐

NOTES:

- 2 Simulium ornatum group
- 3 Ancylos fluviatilis
- 4 Hydraena pulchella (adult) 1 only
- 5 Elodes sp.(larva)
- 6 Elmis aenea, Limnius volckmari, Oulimnius tuberculatus (adults & larvae)
- 7 Hydroptila sp.
- 8 Limnophila (Eloeophila) sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Elstow Brook
DATE	4.5.93	SITE	Dovecote Crossing
SORTER	TNA	SAMPLE CODE	NRA01 BF12M25

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 Glossiphoniidae

NET LOSSES NET GAINS

NOTES:

1 Glossiphonia complanata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Glaven
DATE	6.5.93	SITE	Wiveton Bridge
SORTER	EDT	SAMPLE CODE	NRA01 0174

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 Chironomidae*	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)	2 Planariidae 3 Hydroptilidae 4 Chironomidae* 5 Simuliidae

NET LOSSES NET GAINS

NOTES:

2 Polycelis nigra/tenuis, Dugesia tigrina
 3 Hydroptila sp.
 4 Prodiamesinae, Orthocladiinae, Chironomini
 5 Simulium ornatum group (pupa) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Ouse
DATE	4.5.93	SITE	Private Bridge
SORTER	TNA	SAMPLE CODE	NRA01 BF12M05

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* 2 Gammaridae* 3 Calopterygidae* 4 Lestidae	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)	5 Oligochaeta* 6 Glossiphoniidae 7 Gammaridae* 8 Baetidae 9 Calopterygidae* 10 Polycentropodidae 11 Hydroptilidae

NET LOSSES

NET GAINS

NOTES:

- 5 Tubificid, Lumbriculid
- 6 Helobdella stagnalis, Glossiphonia heteroclita
- 7 Gammarus pulex, Crangonyx pseudogracilis
- 8 Centroptilum luteolum
- 9 Calopteryx splendens 1 only
- 10 Cynurus trimaculatus 1 only
- 11 Hydroptila sp. 1 only

Unionidae written on label. Assumed returned to river.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Binham Tributary
DATE	6.5.93	SITE	Binham Bridge
SORTER	EDT	SAMPLE CODE	NRA01 0168

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
	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 Ancyliidae 4 Oligochaeta* 5 Scirtidae 6 Goeridae

NET LOSSES NET GAINS

NOTES:

2 Valvata cristata
 3 Ancylos fluviatilis 1 only
 4 Tubificidae, Naididae
 5 Elodes sp.(larva) 1 only
 6 Goera pilosa

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Cringle Brook
DATE	20.5.93	SITE	Thunder Bridge
SORTER	RPC	SAMPLE CODE	NRA01 0081

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 Physidae 2 Ancyliidae

NET LOSSES NET GAINS

NOTES:

1 Physa fontinalis 1 only
2 Acroloxus lacustris 1 only

Note on data sheet that Astacidae, Gerridae and Dendrocoelidae
"seen in field only". Gerris lacustris 1 only found by IFE in sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Chater
DATE	4.5.93	SITE	Lyndon
SORTER	DHB	SAMPLE CODE	NRA01 BFCHATO80L

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	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)	2 Planorbidae 3 Ancyliidae 4 Leptoceridae 5 Tipulidae 6 Sericostomatidae

NET LOSSES

1

NET GAINS

5

NOTES:

2 Armiger crista 1 only
 3 Ancylos fluviatilis
 4 Athripsodes aterrimus
 5 Pylaria (Pylaria) sp. 1 only
 6 Sericostoma personatum

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Spring Beck
DATE	6.5.93	SITE	d/s Weybourne STW
SORTER	EDT	SAMPLE CODE	NRA01 0175

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 Oligochaeta 2 Dytiscidae

NET LOSSES

0

NET GAINS

2

NOTES:

1 Naididae, Tubificidae
2 Rhantus sp.(larva) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Roman River
DATE	6.5.93	SITE	Manwood Bridge
SORTER	PJM	SAMPLE CODE	NRA01 0077

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 Ancyliidae 2 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)	3 Planariidae 4 Oligochaeta*

NET LOSSES NET GAINS

NOTES:

3 Dugesia lugubris/polychroa, Polycelis nigra/tenuis
4 Naididae, Lumbriculidae, Tubificidae

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Tattingstone Brook
DATE	7.5.93	SITE	A137 Bridge
SORTER	PJM	SAMPLE CODE	NRA01 0049

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 Limnephilidae

NOTES:

NET LOSSES NET GAINS

1 Limnephilus lunatus 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Tenpenny Brook
DATE	6.5.93	SITE	East of Stable Wood
SORTER	PJM	SAMPLE CODE	NRA01 0079

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 Dendrocoelidae 2 Notonectidae

NET LOSSES NET GAINS

NOTES:

1 Dendrocoelum lacteum 1 only
2 Notonecta sp. (nymph) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Roman River
DATE	7.5.93	SITE	Bounstead Bridge
SORTER	PJM	SAMPLE CODE	NRA01 0076

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 Caenidae	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	Anglian	RIVER	Great Eau
DATE	21.7.93	SITE	Gayton Engine
SORTER	CAE	SAMPLE CODE	NRA01 R05BFGEAU1306

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	1 Caenidae

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)	2 Elmidae

NET LOSSES NET GAINS

NOTES:

1 Caenis horaria
2 Oulimnius sp. (larva) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Stainfield Beck
DATE	28.7.93	SITE	Stainfield
SORTER	DMB	SAMPLE CODE	NRA01 R03BFSTAI1305

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*	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 Haliplidae 3 Scirtidae 4 Sialidae* 5 Hydroptilidae 6 Tipulidae

NET LOSSES

NET GAINS

NOTES:

2 Halipus sp. (larvae)
 3 Elodes sp. (larva) 1 only
 4 Sialis lutaria
 5 Hydroptila sp. 1 only
 6 Dicranota sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	New Dyke
DATE	9.8.93	SITE	Locks Lane
SORTER	EDT	SAMPLE CODE	NRA01 0266

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 Piscicolidae 2 Caenidae 3 Aeshnidae 4 Corixidae

NET LOSSES NET GAINS

NOTES:

1 Piscicola geometra 1 only
 2 Caenis horaria 1 only
 3 Aeshna sp. (juvenile) 1 only
 4 Cymatia coleoptrata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Easton Broad
DATE	9.8.93	SITE	Potters Bridge B1127
SORTER	EDT	SAMPLE CODE	NRA01 0274

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 Corixidae

NET LOSSES

NET GAINS

NOTES:

1 Sigara dorsalis

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Morton's Leam
DATE	26.7.93	SITE	Old Railway Bridge
SORTER	RPC	SAMPLE CODE	NRA01 R05BFMORT090D

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 Polycentropodidae

NET LOSSES NET GAINS

NOTES:

1 Physa fontinalis 1 only
2 Holocentropus picicornis, Cynus flavidus

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Shadingfield Watercourse
DATE	9.8.93	SITE	Sotterly Park
SORTER	EDT	SAMPLE CODE	NRA01 0271

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 Oligochaeta 2 Erpobdellidae 3 Dytiscidae

NET LOSSES

NET GAINS

NOTES:

1 Lumbriculidae 1 only
2 Erpobdella octoculata 1 only
3 Ilybius sp. (larva) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Marsh Dyke
DATE	9.8.93	SITE	d/s Beccles STW
SORTER	EDT	SAMPLE CODE	NRA01 0269

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 Oligochaeta 3 Gammaridae 4 Coenagriidae 5 Gyrinidae

NET LOSSES NET GAINS

NOTES:

1 Lymnaea palustris
 2 Tubificidae
 3 Crangonyx pseudogracilis
 4 Ischnura elegans 1 only
 5 Gyrinus sp. (larva) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Lothingland Hundred
DATE	9.8.93	SITE	R.Hulver Bridge
SORTER	EDT	SAMPLE CODE	NRA01 0273

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 Aeshnidae

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 Dendrocoelidae* 4 Valvatidae 5 Elmidae

NET LOSSES

NET GAINS

NOTES:

2 Aeshna sp. (juvenile)
 3 Dendrocoelum lacteum 1 only
 4 Valvata cristata 1 only
 5 Oulimnius tuberculatus (adults)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Wissey
DATE	26.8.93	SITE	Five Mile Bridge, Wissington
SORTER	TNA	SAMPLE CODE	NRA01 BF50M01

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 Erpobdellidae	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)	2 Hydrophilidae

NET LOSSES

1

NET GAINS

1

NOTES:

2 Hydraena gracilis (adult) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Scawby Catchwater
DATE	6.9.93	SITE	A15 Bridge
SORTER	SJB	SAMPLE CODE	NRA01 R03BFSCCW030A

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 Hydroptilidae

NET LOSSES NET GAINS

NOTES:

1 Agrylea multipunctata 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Ten Mile River
DATE	26.8.93	SITE	Hilgay
SORTER	TNA	SAMPLE CODE	NRA01 BF47M02

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	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)	2 Elmidae

NET LOSSES

1

NET GAINS

1

NOTES:

1 Empty Leptocerid cases found by IFE in sample
2 Oulimnius sp. (larvae)

Notes in vial saying "Viviparidae" and "Unionidae". Unionid assumed returned to river. Viviparus viviparus found by IFE in sample.

Code on data sheet is 47M02, code on sample pot is 47M01.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Wissey
DATE	26.8.93	SITE	A10 Hilgay Bridge
SORTER	TNA	SAMPLE CODE	NRA01 BF50M02

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 Phryganeidae	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 Oligochaeta

NET LOSSES

NET GAINS

NOTES:

2 Indet Tibificid 1 only

Notes in vial saying "Naucoridae" and "Gyrinidae". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Stretham Catchwater
DATE	6.9.93	SITE	Adj Pump Station
SORTER	SJL	SAMPLE CODE	NRA01 BF35M20

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 Baetidae* 3 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)	4 Planariidae 5 Dendrocoelidae* 6 Baetidae* 7 Dytiscidae

NET LOSSES

1

NET GAINS

2

NOTES:

4 Dugesia polychroa/lugubris 1 only
 5 Dendrocoelum lacteum 1 only
 6 Cloeon dipterum
 7 Agabus/Ilybius (larva) 1 only

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

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Old West River
DATE	6.9.93	SITE	Wilburton
SORTER	SJL	SAMPLE CODE	NRA01 BF35M03

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 Viviparidae* 2 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)	3 Viviparidae* 4 Planorbidae* 5 Erpobdellidae 6 Asellidae

NET LOSSES ☐NET GAINS ☐

NOTES:

3 Viviparus viviparus
4 Anisus vortex 1 only
5 Erpobdella octoculata 1 only
6 Asellus aquaticus

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Cottenham Lode
DATE	6.9.93	SITE	North Fen Bridge
SORTER	SJL	SAMPLE CODE	NRA01 BF35M15

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 Leptoceridae*	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)	4 Oligochaeta* 5 Leptoceridae* 6 Chironomidae

NET LOSSES

NET GAINS

NOTES:

4 Stylaria lacustris 1 only
 5 Athripsodes aterrimus
 6 Potthastia longimana group 1 only

Note on data sheet that Gyrinidae "NIV" (assumed to mean not in vial)
 Not found by IFE in vial or sample

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Bugbrooke
DATE	14.9.93	SITE	A5 Bridge, Bugbrooke
SORTER	RPC	SAMPLE CODE	NRA01 R05BFBUGB090B

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 Asellidae 3 Hydroptilidae

NET LOSSES

0

NET GAINS

3

NOTES:

- 1 Gyraulus albus
- 2 Asellus meridianus 1 only
- 3 Hydroptila sp. (pupa) 1 only

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

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Spratton Brook
DATE	14.9.93	SITE	Broomhill - Spratton Lodge
SORTER	RPC	SAMPLE CODE	NRA01 R05BFSPRA060S

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 2 Baetidae 3 Beraeidae

NET LOSSES

0

NET GAINS

3

NOTES:

1 Polycelis nigra/tenuis 1 only
2 Baetis rhodani
3 Beraea maurus 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Brampton Branch
DATE	9.11.93	SITE	Brixworth
SORTER	AT	SAMPLE CODE	

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
	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:

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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Lymn
DATE	11.10.93	SITE	Mill Bridge
SORTER	AT	SAMPLE CODE	

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 Taeniopterygidae 2 Hydroptilidae

NET LOSSES

NET GAINS

NOTES:

1 Taeniopteryx nebulosa 1 only
2 Hydroptila sp. (pupae)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Hobhole
DATE	14.10.93	SITE	Frieston Bridge
SORTER	RPC	SAMPLE CODE	NRA01 R03BF140F

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 Caenidae

NET LOSSES NET GAINS

NOTES:

1 Caenis horaria 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Morcott Brook
DATE	9.11.93	SITE	South Luffenham
SORTER	CAE	SAMPLE CODE	

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 Sphaeriidae 2 Asellidae 3 Lepidostomatidae

NET LOSSES

0

NET GAINS

3

NOTES:

1 Pisidium sp.
2 Asellus meridianus 1 only
3 Lepidostoma hirtum

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Glen
DATE	4.11.93	SITE	Tongue End
SORTER	RPC	SAMPLE CODE	NRA01 R05BFGLEN520T

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 Limnephilidae	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)	2 Nepidae 3 Hydroptilidae

NET LOSSES NET GAINS

NOTES:

2 Nepa cinerea
3 Agraylea multipunctata

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Virley Brook
DATE	15.11.93	SITE	Mill Road Bridge, Salcott
SORTER	JMG	SAMPLE CODE	NRA01 R01BFMT1220

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 Hydrobiidae 3 Coenagriidae 4 Limnephilidae 5 Tipulidae

NET LOSSES

0

NET GAINS

5

NOTES:

- 1 Polycelis nigra/tenuis
- 2 Potamopyrgus jenkinsi 1 only
- 3 Coenagrion puella/pulchellum
- 4 Glyphotaelius pellucidus 1 only
- 5 Tipula sp. (juveniles)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Domsey Brook
DATE	15.11.93	SITE	B1023 Bridge
SORTER	TMT	SAMPLE CODE	NRA01 R01BFBL0365

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 Caenidae*	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 Planorbidae 4 Sphaeriidae* 5 Asellidae 6 Caenidae* 7 Hydroptilidae

NET LOSSES NET GAINS

NOTES:

3 Bathyomphalus contortus 1 only
 4 Pisidium sp.
 5 Asellus meridianus
 6 Caenis luctuosa/macrura 1 only
 7 Hydroptila sp. (pupa) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Newton Longville Brook
DATE	25.10.93	SITE	d/s Newton Longville
SORTER	TNA	SAMPLE CODE	NRA01 BF08M18

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 Sphaeriidae 3 Corixidae 4 Limnephilidae

NET LOSSES NET GAINS

NOTES:

2 Pisidium sp.
3 Micronecta sp. (nymph) 1 only
4 Indet Limnephilid (juvenile) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Hobhole
DATE	14.10.93	SITE	Midville
SORTER	RPC	SAMPLE CODE	NRA01 R03BFHOBH040M

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 Gammaridae 2 Coenagriidae 3 Elmidae

NET LOSSES

NET GAINS

NOTES:

1 Crangonyx pseudogracilis 1 only
2 Indet Coenagriid (juvenile) 1 only
3 Oulimnius sp. (larvae)

Note on data sheet that Unionidae "seen in field only, not in vial or sample" and Planariidae "disintegrated, not in vial". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Glen
DATE	4.11.93	SITE	Kate's Bridge
SORTER	RPC	SAMPLE CODE	NRA01 R05BFGLN500K

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 Baetidae 2 Goeridae

NET LOSSES

0

NET GAINS

2

NOTES:

1 Baetis rhodani 1 only
2 Goera pilosa 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Slea
DATE	12.10.93	SITE	Bonemill Bridge
SORTER	CAE	SAMPLE CODE	

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 Baetidae 2 Coenagriidae 3 Elmidae 4 Hydroptilidae

NET LOSSES

NET GAINS

NOTES:

1 Cloeon dipterum
2 Indet Coenagriid (juveniles)
3 Oulimnius sp. (larvae)
4 Oxyethira sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Ouzel
DATE	25.10.93	SITE	Simpson Bridge
SORTER	TNA	SAMPLE CODE	NRA01 BF8M08

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 Caenidae*	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)	2 Physidae 3 Ancyliidae 4 Gammaridae 5 Caenidae* 6 Coenagriidae

NET LOSSES

0

NET GAINS

4

NOTES:

2 Physa acuta/heterostropha 1 only
 3 Ancyclus fluviatilis 1 only
 4 Gammarus pulex, Crangonyx pseudogracilis
 5 Caenis luctuosa/macrura
 6 Ischnura elegans

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Stour
DATE	27.10.93	SITE	Smallbridge Wormingford
SORTER	JMG	SAMPLE CODE	NRA01 0027

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	1 Aeshnidae

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:

1 Aeshna sp. 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Waithe Beck
DATE	1.12.93	SITE	Brigsley
SORTER	AT	SAMPLE CODE	

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	1 Chironomidae

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)	2 Nemouridae

NET LOSSES NET GAINS

NOTES:

1 *Brillia modesta* pupa in vial, larvae in sample
2 *Nemoura avicularis* 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Colne
DATE	27.10.93	SITE	Earls Colne Road Bridge
SORTER	JMG	SAMPLE CODE	NRA01 0060

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 Gyrinidae	2 Ancyliidae 3 Hydrophilidae

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)	4 Baetidae 5 Goeridae 6 Tipulidae 7 Simuliidae

NET LOSSES

1

NET GAINS

6

NOTES:

2 Acroloxus lacustris
 3 Indet Hydrophilid (larva)
 4 Baetis rhodani, B. vernus
 5 Goera pilosa 1 only
 6 Tipula montium group 1 only
 7 Simulium ornatum group 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Walgrave Stream
DATE	17.12.93	SITE	Walgrave
SORTER	RPC	SAMPLE CODE	NRA01 R05BFWALG040W

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
	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 Oligochaeta* 3 Dytiscidae

NET LOSSES

0

NET GAINS

1

NOTES:

2 Lumbriculidae, Tubificidae
3 Indet Dytiscid (larva) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Willow Brook
DATE	10.12.93	SITE	Fotheringhay
SORTER	RPC	SAMPLE CODE	

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 NET GAINS

NOTES:

1 Polycelis nigra/tenuis 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Slade Brook
DATE	17.12.93	SITE	Pytchley Road Bridge
SORTER	CAE	SAMPLE CODE	

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 2 Physidae 3 Coenagriidae

NET LOSSES

0

NET GAINS

3

NOTES:

1 Polycelis nigra/tenuis 1 only
 2 Physa fontinalis
 3 Indet Coenagriid (juvenile) 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Colne
DATE	27.10.93	SITE	Chapel Road
SORTER	JMG	SAMPLE CODE	NRA01 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	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 Piscicolidae

NET LOSSES NET GAINS

NOTES:

1 Piscicola geometra 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Lud
DATE	1.12.93	SITE	Engine Gate Walk
SORTER	AT	SAMPLE CODE	

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*	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)	2 Sphaeriidae*

NET LOSSES

0

NET GAINS

0

NOTES:

2 Pisidium sp., Sphaerium sp.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Sywell Brook
DATE	17.12.93	SITE	Sywell
SORTER	RPC	SAMPLE CODE	NRA01 R05BFSYWB020S

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

0

NET GAINS

0

NOTES:

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EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Acle Spring
DATE	7.12.93	SITE	A47 Bridge
SORTER	TMT	SAMPLE CODE	NRA01 R04BFBUR200

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 Dendrocoelidae 2 Valvatidae 3 Planorbidae 4 Ancyliidae 5 Dytiscidae

NET LOSSES NET GAINS

NOTES:

- 1 Dendrocoelum lacteum 1 only
- 2 Valvata piscinalis
- 3 Anisus vortex, Armiger crista
- 4 Acroloxus lacustris 1 only
- 5 Stictotarsus duodecimpustulatus (adult), Ilybius sp. (larvae)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Asheldham Brook
DATE	7.12.93	SITE	Brook Farm Cottages
SORTER	PJM	SAMPLE CODE	NRA01 R01BFD0310

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 Hydrobiidae 2 Psychomyiidae

NET LOSSES

0

NET GAINS

2

NOTES:

1 Hydrobia ulvae, H. ventrosa
2 Tinodes waeneri 1 only

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Hannington Stream
DATE	17.12.93	SITE	Pitsford Reservoir
SORTER	RPC	SAMPLE CODE	

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 Erpobdellidae 2 Leptophlebiidae 3 Scirtidae 4 Elmidae

NET LOSSES NET GAINS

NOTES:

- 1 Erpobdella octoculata
- 2 Paraleptophlebia sp. 1 only
- 3 Elodes sp. (larvae)
- 4 Elmis aenea (adult + larva)

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Grendon Brook
DATE	25.11.93	SITE	Ryeholmes Bridge
SORTER	RPC	SAMPLE CODE	

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	Anglian	RIVER	Lymn/Steeping
DATE	17.11.93	SITE	Crows Bridge
SORTER	AT	SAMPLE CODE	

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 Dytiscidae*	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)	2 Glossiphoniidae 3 Dytiscidae* 4 Hydroptilidae

NET LOSSES NET GAINS

NOTES:

2 Glossiphonia complanata 1 only
3 Hygrotus versicolor (adults)
4 Agraylea multipunctata 1 only

Note on data sheet that Unionidae "not in vial - field observation only". Not found by IFE in vial or sample.

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES - 1993

REGION	Anglian	RIVER	Nene
DATE	21.12.93	SITE	Denford
SORTER	AT	SAMPLE CODE	

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* 2 Valvatidae* 3 Erpobdellidae*	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)	4 Planariidae* 5 Valvatidae* 6 Erpobdellidae* 7 Baetidae 8 Caenidae 9 Polycentropodidae 10 Molannidae

NET LOSSES NET GAINS

NOTES:

- 4 Polycelis nigra/tenuis
- 5 Valvata piscinalis
- 6 Erpobdella octoculata
- 7 Cloeon dipterum 1 only
- 8 Caenis luctuosa/macrura 1 only
- 9 Cynurus flavidus 1 only
- 10 Molanna angustata 1 only

