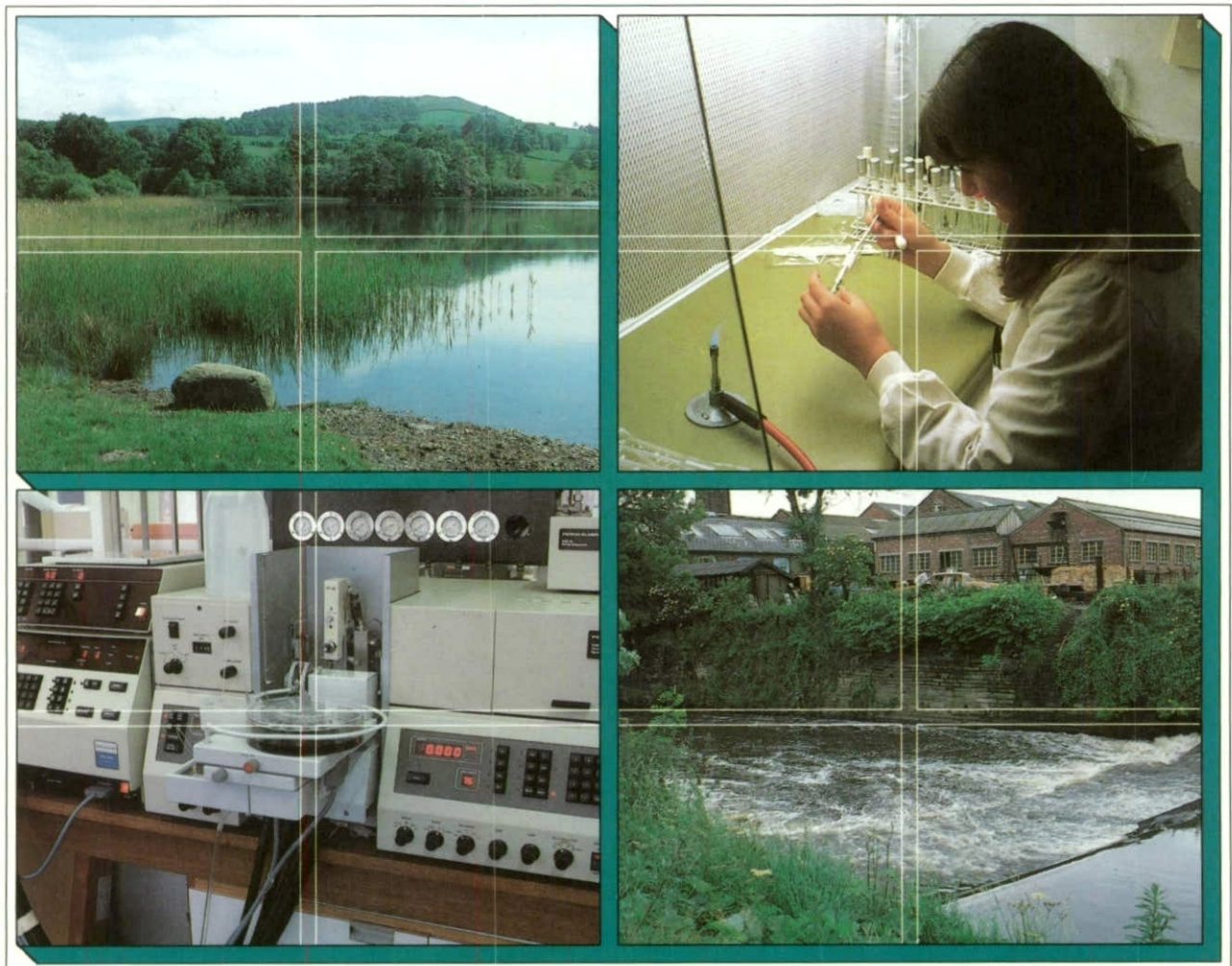


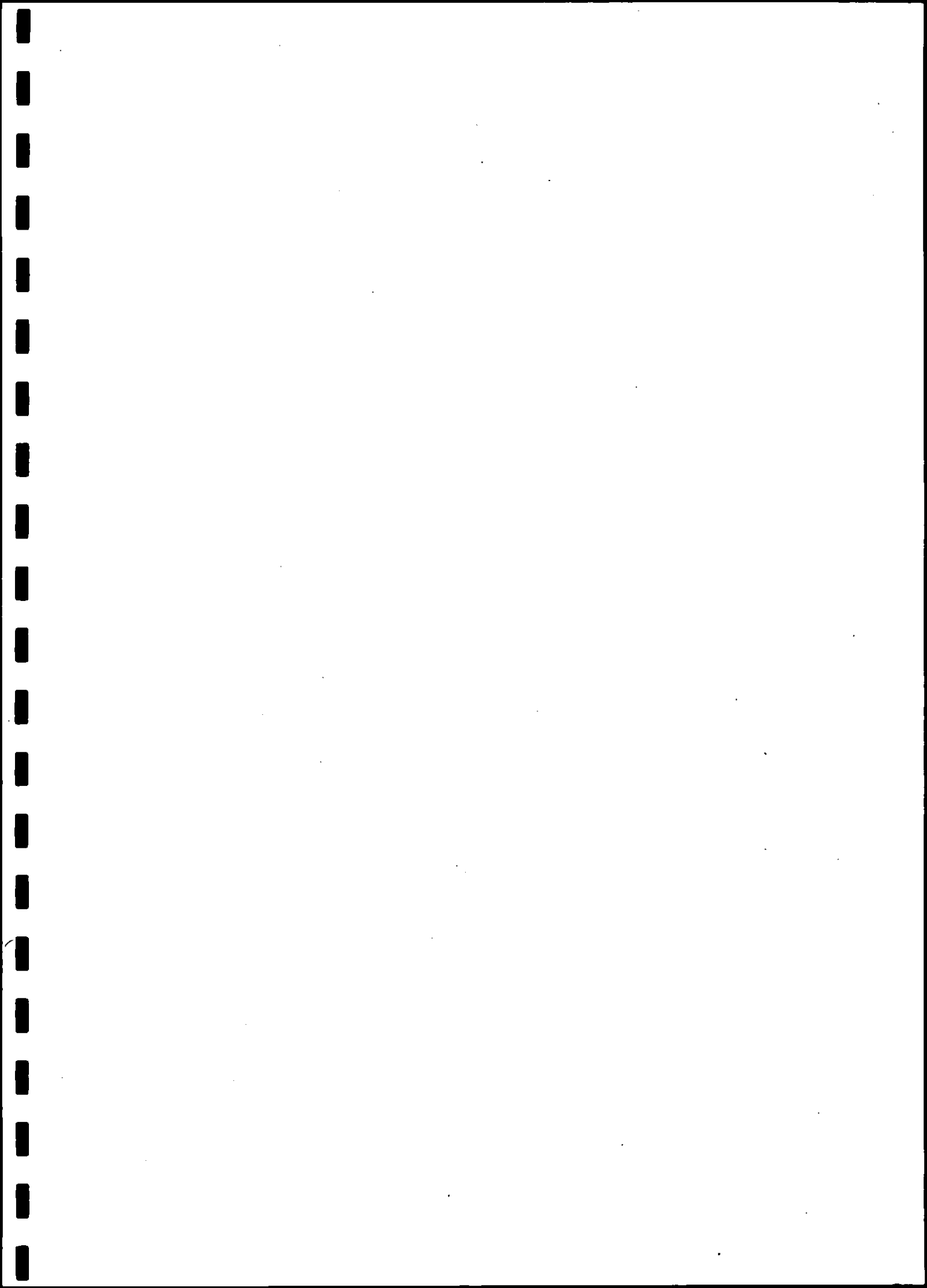


Institute of
Freshwater
Ecology

Quality audit of biological samples for the 1990 River Quality Survey NRA South West Region

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for the 1990 River Quality Survey
NRA South West Region

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Project leader: J.F. Wright
Report date: December 1991
Report to: National Rivers Authority
South West Region

Contract No:
IFE Report Ref: RL/T04053q1/5
TFS Project No: T04053q1

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

1. INTRODUCTION

The 1990 River Quality Survey included the sampling of aquatic macro-invertebrates for biological assessment of river quality throughout the United Kingdom. In England and Wales the survey 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.

Approximately 7750 sites were surveyed, the majority of which were sampled in spring, summer and autumn. Standard collection procedures were used and the sampling strategy was compatible with RIVPACS (River InVertebrate Prediction And Classification System), which has been developed by the Institute of Freshwater Ecology (IFE). Most of the remaining sites were sampled in a single season only, in order to extend the scope of the survey. For a variety of reasons, a few locations were sampled in just two seasons.

Samples were sorted 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 order to undertake this massive programme of fieldwork and sample processing, a large number of new staff were employed by the surveying agencies. 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, RPB and the DED. This report collates the results of 63 samples audited for South West 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

Nearly all samples from the 1990 River Quality Survey were sent to IFE for storage. They were catalogued on arrival and placed in crates, such that individual samples were readily accessible. A stratified random selection of samples for each sample processor was then made. Selection was undertaken by IFE staff and no selection was made before each sample had been received by IFE. Thus, sample processors had no means of knowing which of their samples would be audited.

The total number of sample processors employed nationally during the survey was considerably higher than that anticipated at the outset. As a consequence, the number of samples audited per processor was limited by the need to keep within the contracted overall total of 700 samples. A minimum of 4 samples was audited per processor, except where individuals processed very few samples or did not process material from each of the 3 seasons.

Sample selection was weighted towards spring samples in order to give early feedback on the blindspots of particular sorters and problems of identification.

3. SAMPLE PROCESSING

Biologists processing samples for the 1990 Survey were instructed to sort their samples, ideally within the laboratory, and 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 selection 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 NRA data sheet. These samples were avoided for audit, where possible. When selection of such samples was unavoidable (eg where a particular sorter would otherwise have been excluded from the audit exercise), 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 tail 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 which did not contain a vial of animals, 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 Table 5.

ACKNOWLEDGEMENTS

Thanks to Mrs Jessica Winder and Mrs Kay Symes for assistance with cataloguing and storage of samples and Mrs Valerie Palmer for typing the manuscript.

TABLE 1. The IFE Report form

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION RIVER

SEASON SITE

SORTER SAMPLE CODE

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		

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)	

NET LOSSES NET GAINS

NOTES

TABLE 2. The 39 spring samples audited for South West Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'

River	Site	Sorter	Losses	Gains	Omissions
Hawkridge Brook	Hawkridge Bridge	JBS	0	1	1
Venn	Venn Bridge	LMB	1	6	0
Sterridge	Old Sawmill Inn	RG	0	4	0
Lamorna Stream	Lamorna	TJR	0	4	0
Helford Gweek	Mether-Uny Mill	NB	0	4	0
Porth Navas Stream	Trenarth Bridge	MAV	0	5	0
Bray	Meethe Barton	RG	0	0	0
Newlyn	Buryas Bridge	MAV	0	2	0
Abbey	Hartland Abbey	LB	1	1	0
Hayle	St Erth GS	TJR	0	1	0
Hayle	Godolphin Bridge	NB	0	2	0
Crooked Oak Stream	Yeo Barton Br	JBS	0	1	0
Helford	Mellangoose	TJR	0	7	0
Mylor Creek	Mylor Bridge	DJP	0	3	0
Torridge	Woodford Bridge	PG	0	2	0
Taw	Park Mill Bridge	AA	0	1	0
Torridge	Rothern Bridge	PG	0	4	0
Neet	A39 Hele Bridge	PAB	4	6	0
Porthleven	U/s Harbour	PAB	1	0	1
Helford	U/s Gweek Mill	MAV	0	2	0
Okement	South Dornaford	AA	0	3	0
Lapford Yeo	Bow Bridge	PG	1	2	0
Allen	Idless Bridge	DJP	0	3	0
Otter	Otterton Bridge	AA	1	2	0
Clyst	A38 Broadclyst Br	RG	3	0	0
Otter	Weston	DH/JS	1	0	0
Lynher	Notter Bridge	PAB	0	6	0
Offwell Brook	Offwell Footbridge	EP	1	2	0
Exe	Exebridge	RG	1	0	0
Corry Brook	Old Corryton	LAW	2	2	0
Inny	St Clether Bridge	NB	0	2	0
Penpont Water	Two Bridges	DJP	1	0	0
Lowman	A373 Tiverton Bridge	RG	0	0	0
Waldon	Sutcombe Bridge	LMB	0	0	0
Coly	Woodbridge	EP	0	1	0
Culm	Skinner's Fm Br	LAW	1	3	0
Yeo (Creedy)	Binneford	JBS	0	1	0
Brockey	Brooksbridge Cot	EP	1	1	0
Haddeo	Pixycopse	LAW	0	3	0

TABLE 3. The 21 summer samples audited for South West Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'

River	Site	Sorter	Losses	Gains	Omissions
Aller Brook	U/s Edginswell PS	PG	1	2	1
Bratton Brook	Bratton Clovelly	PAB	0	1	0
Baldhu Stream	Bissoe Bridge	DJP	0	0	0
Millpool Stream	Millpool	DJP	3	2	0
Torrige	Woodford Bridge	JF	0	3	1
Torrige	Newbridge	JF	0	1	0
Newlyn	Skimmel Bridge	TJR	0	0	0
Newlyn	Newlyn Bridge	NB	1	1	0
Erme	Sequers Bridge	JF	0	2	0
Oare Water	Oare Bridge	AA	0	2	0
Barbrook	D/s PS Dean	RG	1	0	0
Yeo (Molland)	Bish Mill Bridge	JBS	1	0	0
Offwell Brook	Roadpitt Farm	LAW	0	3	0
Beaford/Wooleigh	B3220 Bridge	LAW	1	1	0
Rye Stream	Loxhore Cross Br	LB	0	1	0
Holewater Stream	Linkleyham Bridge	EP	0	0	0
Synderford	Beere Farm	RP	0	4	0
Bovey	Blackaller Bridge	TB	0	3	0
Glaze Brook	Higher Turtley	TRG	0	1	0
Whatley stream	Ammerham	TB	1	1	0
Clyst	Withy Bridge	TRG	1	0	0

TABLE 4. The 3 autumn samples audited for South West Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'.

River	Site	Sorter	Losses	Gains	Omissions
Dart	Dart Bridge	JF	0	0	0
Mole	Head Barton	TRG	0	0	0
Oare Water	Oare Bridge	TB	0	5	0

TABLE 5
Results of individual sample audits

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Hawkridge Brook
SEASON	Spring	SITE	U/s Hawkridge Bridge
SORTER	JBS	SAMPLE CODE	NRA06 3011

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 Planorbidae*	2 Leptophlebiidae
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*

NET LOSSES NET GAINS

NOTES

- 1 Empty Zonitidae? shell in vial
- 2 Paraleptophlebia sp.
- 3 Hippeutis complanatus

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Venn
SEASON	Spring	SITE	U/s Venn Bridge
SORTER	LMB	SAMPLE CODE	NRA06 3004

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>1 Nemouridae</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p>2 Leptophlebiidae 3 Taeniopterygidae 4 Hydrophilidae</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>(This box only completed when no vial supplied with sample)</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p>5 Ephemerellidae 6 Goeridae 7 Lepidostomatidae</p>

NET LOSSES NET GAINS

- NOTES
- 2 Paraleptophlebia sp. 1 only
 - 3 Brachyptera risi?
 - 4 Hydracna gracilis
 - 5 Ephemerella ignita 1 only
 - 6 Silo nigricornis 1 only
 - 7 Crunoecia irrorata 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Sterridge
SEASON	Spring	SITE	Old Sawmill Inn
SORTER	RG	SAMPLE CODE	NRA06 3101

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>None</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>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 Nemouridae 2 Chloroperlidae 3 Hydrophilidae 4 Leptoceridae</p>

NET LOSSES 0 NET GAINS 4

NOTES

1 Nemoura cambrica group 1 only
 2 Chloroperla tripunctata 1 only
 3 Hydraena gracilis
 4 Adicella reducta

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Lamorna Stream
SEASON	Spring	SITE	Lamorna
SORTER	TJR	SAMPLE CODE	NRA06 2109

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 EphemereLLidae 2 Lepidostomatidae

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 Hydrophilidae 4 Hydroptilidae

NET LOSSES NET GAINS

NOTES

1 EphemereLLa ignita
 2 Lepidostoma hirtum
 3 Hydraena gracilis
 4 Ithytrichia sp. 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	<input type="text" value="South West"/>	RIVER	<input type="text" value="Helford Gweek River"/>
SEASON	<input type="text" value="Spring"/>	SITE	<input type="text" value="Mether-Uny Mill Bridge"/>
SORTER	<input type="text" value="NB"/>	SAMPLE CODE	<input type="text" value="NRA06 1907"/>

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 Lepidostomatidae
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 Hydroptilidae 4 Goeridae

NET LOSSES NET GAINS

NOTES

- 1 Lepidostoma hirtum
- 2 Pisidium sp. 1 only
- 3 Ithytrichia sp. 1 only
- 4 Silo pallipes

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Porth Navas Stream
SEASON	Spring	SITE	Trenarth Bridge
SORTER	MAV	SAMPLE CODE	NRA06 1905

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 Gyrinidae

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 Planariidae 3 Leptophlebiidae 4 Goeridae 5 Lepidostomatidae

NET LOSSES NET GAINS

- NOTES
- 1 Orectochilus villosus (larvae)
 - 2 Polycelis felina
 - 3 Paraleptophlebia sp.
 - 4 Silo pallipes 1 only
 - 5 Lepidostoma hirtum 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Bray
SEASON	Spring	SITE	U/s Meethe Barton Bridge
SORTER	RG	SAMPLE CODE	NRA06 3031

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 None

NET LOSSES NET GAINS

NOTES

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Newlyn
SEASON	Spring		SITE	Buryas Bridge
SORTER	MAV		SAMPLE CODE	NRA06 2111

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; font-size: 1.2em;">None</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center; font-size: 1.2em;">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;">1 Lymnaeidae 2 Lepidostomatidae</p>

NET LOSSES NET GAINS

NOTES

1 Lymnaea peregra 1 only
 2 Lepidostoma hirtum 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Abbey
SEASON	Spring	SITE	Hartland Abbey
SORTER	LB	SAMPLE CODE	NRA06 2802

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 Aphelocheiridae	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 Odontoceridae

NET LOSSES NET GAINS

NOTES

1 Nymph of terrestrial Hemipteran in vial
2 Odontocerum albicorne 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Hayle
SEASON	Spring	SITE	St Erth G.S.
SORTER	TJR	SAMPLE CODE	NRA06 2205

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 Lepidostomatidae

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 Lepidostoma hirtum
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1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	<input type="text" value="South West"/>	RIVER	<input type="text" value="Hayle"/>
SEASON	<input type="text" value="Spring"/>	SITE	<input type="text" value="Godolphin Bridge"/>
SORTER	<input type="text" value="NB"/>	SAMPLE CODE	<input type="text" value="NRA06 2204"/>

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 Sphaeriidae 2 Hydroptilidae

NET LOSSES NET GAINS

NOTES

1 Pisidium sp. 2 Oxyethira sp. 1 only
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1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Crooked Oak Stream
SEASON	Spring	SITE	D/s Yeo Barton Bridge
SORTER	JBS	SAMPLE CODE	NRA06 3026

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; font-size: 1.2em;">None</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center; font-size: 1.2em;">1 Leptophlebiidae</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; font-size: 1.2em;">(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; font-size: 1.2em;">None</p>

NET LOSSES

NET GAINS

NOTES 1 Paraleptophlebia sp. 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Helford

SEASON Spring

SITE Mellangoose

SORTER TJR

SAMPLE CODE NRA06 1909

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 Limnephilidae
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 Planariidae 3 Hydrobiidae 4 Glossiphoniidae 5 Perlodidae 6 Polycentropodidae 7 Goeridae

NET LOSSES 0

NET GAINS 7

- NOTES
- 1 Potamophylax sp., Micropterna sequax
 - 2 Polycelis felina
 - 3 Potamopyrgus jenkinsi 1 only
 - 4 Helobdella stagnalis 1 only
 - 5 Isoperla grammatica 1 only
 - 6 Plectrocnemia sp. 1 only
 - 7 Silo pallipes 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Mylor Creek
SEASON	Spring	SITE	Mylor Bridge
SORTER	DJP	SAMPLE CODE	NRA06 1902

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

		LOSSES	GAINS
A	<u>VIAL</u>	BMW P FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMW P families listed on sample data sheet and ii) BMW P families found in VIAL by IFE	None	None
B	<u>SAMPLE</u>	BMW P FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMW P families listed on sample data sheet and ii) BMW P families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	1 Elmidae 2 Psychomyiidae 3 Lepidostomatidae

NET LOSSES 0 NET GAINS 3

NOTES

1 <i>Elmis aenea</i> (larva) 1 only 2 <i>Lype</i> sp. 1 only 3 <i>Lepidostoma hirtum</i>
--

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Torridge
SEASON	Spring	SITE	U/s Woodford Bridge
SORTER	PG	SAMPLE CODE	NRA06 2916

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 Leptophlebiidae

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

NET LOSSES NET GAINS

NOTES 2 Caenis rivulorum

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Taw
SEASON	Spring	SITE	U/s Park Mill Bridge
SORTER	AA	SAMPLE CODE	NRA06 3014

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)	None

NET LOSSES

NET GAINS

NOTES

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Torridge

SEASON Spring

SITE D/s Rothern Bridge

SORTER PG

SAMPLE CODE NRA06 2908

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 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)	2 Gammaridae 3 Nemouridae 4 Lepidostomatidae

NET LOSSES 0

NET GAINS 4

NOTES

- 1 Leuctra geniculata
- 2 Crangonyx pseudogracilis 1 only
- 3 Amphinemura sulcicollis
- 4 Lepidostoma hirtum

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Neet
SEASON	Spring	SITE	Hele Bridge (A39 Rd Br)
SORTER	PAB	SAMPLE CODE	NRA06 2706

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 and ii) BMWP families found in VIAL by IFE</p>	<p style="text-align: center;">BMWP FAMILIES NOT FOUND BY IFE</p> <p>1 Siphonuridae 2 Rhyacophilidae 3 Lepidostomatidae 4 Sericostomatidae</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p>5 Ephemerellidae 6 Hydrophilidae 7 Hydropsychidae 8 Leptoceridae</p>
B	<p style="text-align: center;"><u>SAMPLE</u></p> <p>Differences between: i) BMWP families listed on sample data sheet and and ii) BMWP families found in SAMPLE by IFE</p>	<p style="text-align: center;">BMWP FAMILIES NOT FOUND BY IFE</p> <p>(This box only completed when no vial supplied with sample)</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p>9 Perlodidae 10 Chloroperlidae</p>

NET LOSSES NET GAINS

NOTES

6 *Hydraena gracilis*, *H. rufipes*
 7 *Hydropsyche pellucidula*
 8 *Athripsodes albifrons*
 9 *Isoperla grammatica* 1 only
 10 *Chloroperla torrentium* 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Porthleven
SEASON	Spring	SITE	U/s from Harbour
SORTER	PAB	SAMPLE CODE	NRA06 2101

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>1 Sericostomatidae 2 Simuliidae*</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>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>3 Simuliidae*</p>

NET LOSSES NET GAINS

NOTES 1 Empty cases
 3 1 only in sample

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Helford
SEASON	Spring		SITE	U/s Gweek Mill
SORTER	MAV		SAMPLE CODE	NRA06 1910

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; font-size: 1.2em;">None</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center; font-size: 1.2em;">1 Oligochaeta 2 Hydrophilidae</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; font-size: 1.2em;">(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; font-size: 1.2em;">None</p>

NET LOSSES NET GAINS

NOTES

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Okement
SEASON	Spring	SITE	South Dornaford
SORTER	AA	SAMPLE CODE	NRA06 2926

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 Leptophlebiidae

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 Dytiscidae 3 Simuliidae

NET LOSSES NET GAINS

NOTES 2 Oreodytes sanmarkii (adult) 1 only
 3 Simulium ornatum group 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Lapford Yeo
SEASON	Spring		SITE	U/s Bow Bridge
SORTER	PG		SAMPLE CODE	NRA06 3015

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>1 Leuctridae</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>2 Chloroperlidae</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>3 Psychomyiidae</p>

NET LOSSES

NET GAINS

NOTES
 2 Chloroperla torrentium 1 only
 3 Lype sp. 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Allen
SEASON	Spring	SITE	Idless Bridge
SORTER	DJP	SAMPLE CODE	NRA06 1935

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 Hydroptilidae 2 Leptoceridae 3 Lepidostomatidae

NET LOSSES NET GAINS

NOTES

1 Ithytrichia sp.
 2 Athripsodes sp. 1 only
 3 Lepidostoma hirtum

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Otter
SEASON	Spring	SITE	D/s Otterton Bridge
SORTER	AA	SAMPLE CODE	NRA06 0406

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 Notonectidae	2 Corixidae
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 Planariidae

NET LOSSES 1 NET GAINS 2

NOTES

2 Sigara distincta
3 Polycelis sp. 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Clyst
SEASON	Spring	SITE	A38 Bridge, Broadclyst
SORTER	RG	SAMPLE CODE	NRA06 0510

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>1 Dendrocoelidae 2 Platycnemididae 3 Curculionidae</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>(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;">None</p>

NET LOSSES NET GAINS

NOTES 3 Terrestrial species (Anthonomus sp.)

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Otter
SEASON	Spring		SITE	Weston
SORTER	DH/JS		SAMPLE CODE	NRA06 0403

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 Lymnaeidae	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

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Lynher
SEASON	Spring		SITE	Notter Bridge
SORTER	PAB		SAMPLE CODE	NRA06 1270

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;">None</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center;">1 Brachycentridae 2 Simuliidae</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;">3 Planariidae 4 Ancyliidae 5 Calopterygidae 6 Goeridae</p>

NET LOSSES NET GAINS

- NOTES
- 1 Brachycentrus subnubilus (pupae)
 - 2 Simulium vernum group 1 only
 - 3 Polycelis felina 1 only
 - 4 Ancyclus fluviatilis 1 only
 - 5 Calopteryx sp. (juvenile) 1 only
 - 6 Silo pallipes 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION

RIVER

SEASON

SITE

SORTER

SAMPLE CODE

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 Corduliidae	2 Cordulegasteridae

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 Goeridae

NET LOSSES

NET GAINS

NOTES

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Exe
SEASON	Spring		SITE	Exebridge
SORTER	RG		SAMPLE CODE	NRA06 0535

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)	None

NET LOSSES NET GAINS

NOTES 1 Terrestrial species (Apion sp.)

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Corry Brook
SEASON	Spring		SITE	Old Corryton
SORTER	LAW		SAMPLE CODE	NRA06 0229

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>1 Dytiscidae 2 Limnephilidae</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <p>3 Lepidostomatidae</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>4 Ephemerellidae</p>

NET LOSSES NET GAINS

NOTES

3 *Lepidostoma hirtum*
 4 *Ephemercella ignita*

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Inny
SEASON	Spring		SITE	St Clether Bridge
SORTER	NB		SAMPLE CODE	NRA06 1263

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 Taeniopterygidae 2 Brachycentridae

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 Brachyptera risi
2 Brachycentrus subnubilus (pupa)

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Penpont Water
SEASON	Spring		SITE	Two Bridges
SORTER	DJP		SAMPLE CODE	NRA06 1266

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)	None

NET LOSSES NET GAINS

NOTES 1 Terrestrial species (Otiorrhynchus sp.)

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Lowman
SEASON	Spring	SITE	A373 Bridge, Tiverton
SORTER	RG	SAMPLE CODE	NRA06 0544

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: 1) 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; font-size: 1.2em;">None</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center; font-size: 1.2em;">None</p>

B	<p style="text-align: center;"><u>SAMPLE</u></p> <p>Differences between: 1) 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; font-size: 1.2em;">(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; font-size: 1.2em;">None</p>
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NET LOSSES NET GAINS

NOTES

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Waldon
SEASON	Spring	SITE	Sutcombe Bridge
SORTER	LMB	SAMPLE CODE	NRA06 2921

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

Psychomyiidae? confirmed = Tinodes waeneri

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Coly
SEASON	Spring	SITE	Woodbridge
SORTER	EP	SAMPLE CODE	NRA06 0208

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 Tipulidae

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 Dicranota sp.

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Culm
SEASON	Spring	SITE	Skidders Farm Bridge
SORTER	LAW	SAMPLE CODE	NRA06 0518

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 Agriidae	2 Lepidostomatidae

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 4 Psychomyiidae

NET LOSSES 1

NET GAINS 3

NOTES

- 1 Cast skin in vial
- 2 Lepidostoma hirtum
- 3 Potamopyrgus jenkinsi 1 only
- 4 Psychomyia pusilla 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Yeo (Creedy)
SEASON	Spring	SITE	Binneford
SORTER	JBS	SAMPLE CODE	NRA06 0562

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

NET LOSSES NET GAINS

NOTES 1 Gammarus pulex

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Brockey
SEASON	Spring	SITE	Brooksbridge Cottage Br.
SORTER	EP	SAMPLE CODE	NRA06 0540

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 Planorbidae	2 Leptophlebiidae

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 Zonitoides sp. in vial
2 Indet Leptophlebiid juvenile

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION

RIVER

SEASON

SITE

SORTER

SAMPLE CODE

AQC OF BMWP FAMILIES A. IN VIAL B. IN SAMPLE C. 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 2 Ephemerellidae 3 Brachycentridae

NET LOSSES

NET GAINS

NOTES

1 Polycelis felina 1 only
 2 Ephemerella ignita
 3 Brachycentrus subnubilus (pupae)

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Aller Brook
SEASON	Summer	SITE	U/s Edginswell PS
SORTER	PG	SAMPLE CODE	NRA06 0601

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 Lymnaeidae	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 Hydrobiidae* 4 Planorbidae 5 Gammaridae

NET LOSSES 1 NET GAINS 2

NOTES

1,2 Empty shells
 3 Potamopyrgus jenkinsi 1 only
 4 Gyraulus albus 1 only
 5 Crangonyx pseudogracilis 1 only

Other taxa
 Libellulid(?) not found in vial but large Psocopteran (book louse) found in sample

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Bratton Brook
SEASON	Summer	SITE	Bratton Clovelly
SORTER	PAB	SAMPLE CODE	NRA06 1231

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 Odontoceridae

NET LOSSES NET GAINS

NOTES Odontocerum albicorne 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Baldhu Stream
SEASON	Summer	SITE	Bissoe Bridge
SORTER	DJP	SAMPLE CODE	NRA06 1941

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

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Millpool Stream
SEASON	Summer	SITE	Millpool
SORTER	DJP	SAMPLE CODE	NRA06 2206

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 Platycnemididae 2 Scirtidae 3 Dryopidae	4 Coenagriidae 5 Gyrinidae

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 Indet terrestrial larva
- 3 Terrestrial species Xyleborus dryographus (Scolytidae)
- 4 Ischnura elegans
- 5 Gyrinus sp. (larvae)

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Torridge
SEASON	Summer	SITE	Woodford Bridge
SORTER	JF	SAMPLE CODE	NRA06 2916

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 Chloroperlidae*	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 Piscicolidae 3 Glossiphoniidae 4 Chloroperlidae* 5 Polycentropodidae

NET LOSSES NET GAINS

NOTES

2 Piscicola geometra 1 only
 3 Helobdella stagnalis 1 only
 4 Chloroperla torrentium
 5 Polycentropus flavomaculatus 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Torridge
SEASON	Summer	SITE	Newbridge
SORTER	JF	SAMPLE CODE	NRA06 2907

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 Tipulidae

NET LOSSES NET GAINS

NOTES 1 Dicranota sp. 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	<input type="text" value="South West"/>	RIVER	<input type="text" value="Newlyn"/>
SEASON	<input type="text" value="Summer"/>	SITE	<input type="text" value="Skimmel Bridge"/>
SORTER	<input type="text" value="TJR"/>	SAMPLE CODE	<input type="text" value="NRA06 2107"/>

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

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Newlyn
SEASON	Summer	SITE	Newlyn Bridge
SORTER	NB	SAMPLE CODE	NRA06 2108

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 Mesoveliidae	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 Asellidae

NET LOSSES NET GAINS

NOTES

1 Velia sp. (nymph) in vial
2 Asellus meridianus 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Erme
SEASON	Summer	SITE	Sequers Bridge
SORTER	JF	SAMPLE CODE	NRA06 0903

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>None</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>1 Nemouridae 2 Perlodidae</p>

NET LOSSES NET GAINS

NOTES

1 Protonemura sp. 1 only
 2 Perlodes microcephala, Isoperla grammatica

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Oare Water

SEASON Summer

SITE Oare Bridge

SORTER AA

SAMPLE CODE NRA06 3205

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 Rhyacophilidae

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 Dytiscidae

NET LOSSES 0

NET GAINS 2

NOTES

1 Rhyacophila dorsalis, Glossosoma sp. (pupa)
 2 Oreodytes sanmarkii (adult)

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Barbrook

SEASON Summer

SITE D/s P.S. Dean

SORTER RG

SAMPLE CODE NRA06 3202

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)	None

NET LOSSES 1

NET GAINS 0

NOTES

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Yeo (Molland)

SEASON Summer

SITE U/s Bish Mill Bridge

SORTER JBS

SAMPLE CODE NRA06 3028

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 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)	None

NET LOSSES 1

NET GAINS 0

NOTES

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Offwell Brook

SEASON Summer

SITE Roadpitt Farm

SORTER LAW

SAMPLE CODE NRA06 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 Planariidae 2 Planorbidae 3 Dytiscidae

NET LOSSES 0

NET GAINS 3

NOTES
 1 Polycelis nigra/tenuis
 2Bathyomphalus contortus 1 only
 3 Agabus sp. (larva) 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Beaford/Wooleigh

SEASON Summer

SITE B3220 Road Bridge

SORTER LAW

SAMPLE CODE NRA06 2909

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 Lymnaeidae	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 Brachycentridae

NET LOSSES 1

NET GAINS 1

NOTES 2 Brachycentrus subnubilus 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Rye Stream

SEASON Summer

SITE Loxhore Cross Bridge

SORTER LB

SAMPLE CODE NRA06 3035

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 Hydroptilidae

NET LOSSES 0

NET GAINS 1

NOTES 1 Agraylea sp. (pupa) 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Holewater Stream

SEASON Summer

SITE Linkleyham Bridge

SORTER EP

SAMPLE CODE NRA06 3032

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

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION **South West**

RIVER **Synderford**

SEASON **Summer**

SITE **Beere Farm**

SORTER **RP**

SAMPLE CODE **NRA06 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	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 Sphaeriidae 2 Glossiphoniidae 3 Leptophlebiidae 4 Chloroperlidae

NET LOSSES

NET GAINS

NOTES
 1 Pisidium sp.
 2 Glossiphonia complanata 1 only
 3 Habrophlebia fusca 1 only
 4 Chloroperla torrentium 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION

RIVER

SEASON

SITE

SORTER

SAMPLE CODE

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 Hydrobiidae 2 Leptophlebiidae 3 Leptoceridae

NET LOSSES

NET GAINS

NOTES

- 1 Potamopyrgus jenkinsi
- 2 Paraleptophlebia cincta 1 only
- 3 Mystacides sp. (pupa) 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Glaze Brook
SEASON	Summer	SITE	Higher Turtley
SORTER	TRG	SAMPLE CODE	NRA06 0812

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

	LOSSES	GAINS								
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center; border: 1px solid black;">A</td> <td style="width: 35%; text-align: center; border: 1px solid black;"><u>VIAL</u></td> <td style="width: 35%; text-align: center; border: 1px solid black;">BMWP FAMILIES NOT FOUND BY IFE</td> <td style="width: 25%; text-align: center; border: 1px solid black;">ADDITIONAL FAMILIES FOUND BY IFE</td> </tr> <tr> <td colspan="2" style="border: none;"> Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE </td> <td style="text-align: center; border: 1px solid black;">None</td> <td style="text-align: center; border: 1px solid black;">None</td> </tr> </table>	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		
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							

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center; border: 1px solid black;">B</td> <td style="width: 35%; text-align: center; border: 1px solid black;"><u>SAMPLE</u></td> <td style="width: 35%; text-align: center; border: 1px solid black;">BMWP FAMILIES NOT FOUND BY IFE</td> <td style="width: 25%; text-align: center; border: 1px solid black;">ADDITIONAL FAMILIES FOUND BY IFE</td> </tr> <tr> <td colspan="2" style="border: none;"> Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE </td> <td style="text-align: center; border: 1px solid black;">(This box only completed when no vial supplied with sample)</td> <td style="text-align: center; border: 1px solid black;">1 Nouridae</td> </tr> </table>	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 Nouridae		
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 Nouridae							

NET LOSSES NET GAINS

NOTES 1 Protonemura sp. (juvenile) 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Whatley Stream

SEASON Summer

SITE Ammerham

SORTER TB

SAMPLE CODE NRA06 0219

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 Planorbidae	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 Glossiphoniidae

NET LOSSES 1

NET GAINS 1

NOTES 1 Zonitoides found in vial
2 Glossiphonia complanata 1 only

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West	RIVER	Clyst
SEASON	Summer	SITE	Withy Bridge
SORTER	TRG	SAMPLE CODE	NRA06 0511

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 Mesoveliidae	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 1 NET GAINS 0

NOTES 1 Velia sp. (nymphs) in vial

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Dart

SEASON Autumn

SITE Dart Bridge

SORTER JF

SAMPLE CODE NRA06 0708

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

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION	South West		RIVER	Mole
SEASON	Autumn		SITE	Head Barton
SORTER	TRG		SAMPLE CODE	NRA06 3024

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

1990 RIVER QUALITY SURVEY

AQC - BIOLOGICAL SAMPLES

REGION South West

RIVER Oare Water

SEASON Autumn

SITE Oare Bridge

SORTER TB

SAMPLE CODE NRA06 3205

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 2 Hydrobiidae 3 Leptophlebiidae 4 Nemouridae 5 Lepidostomatidae

NET LOSSES 0

NET GAINS 5

NOTES

- 1 Crenobia alpina
- 2 Potamopyrgus jenkinsi
- 3 Paraleptophlebia sp. 1 only
- 4 Protonemura sp. (juveniles)
- 5 Lepidostoma hirtum

