

An audit of performance in the processing of macro-invertebrate samples in 1994. NRA Wessex Area of South Western Region

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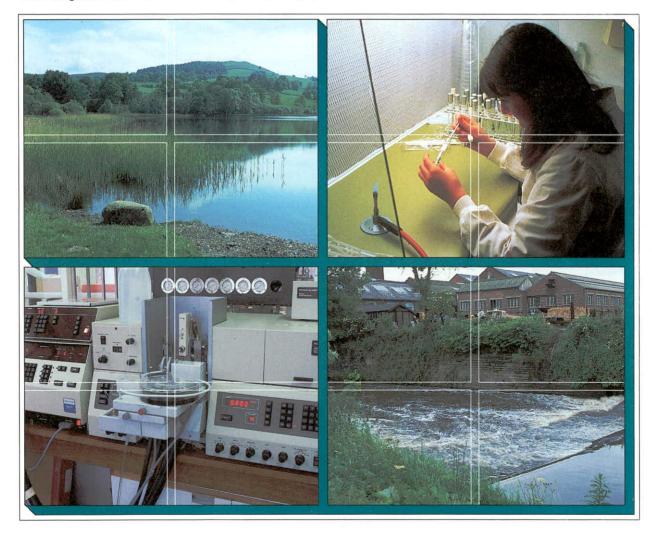
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1. INTRODUCTION

In 1994 the sampling of aquatic macro-invertebrates for the biological assessment of river quality continued throughout the United Kingdom. This task was undertaken by the National Rivers Authority (NRA) in England and Wales, the River Purification Boards (RPBs) in Scotland and the Industrial Research & Technology Unit (IRTU) in Northern Ireland.

In view of the number of staff involved and the variability of sample processing techniques, it was recognised that an independent quality control exercise was necessary to promote a consistently high level of reliability. The IFE was contracted to undertake an audit of the sample sorting and identification performance of each NRA region, several RPBs and the IRTU. This report presents the results of 60 samples audited for Wessex Area of NRA South Western Region. The IFE was not required to perform any statistical analyses nor interpretation of the results of the audit.

Each organisation employed standard collection procedures, as used in the 1990 River Quality Survey, and the sampling strategy was therefore compatible with RIVPACS (River InVertebrate Prediction And Classification System), which has been developed by the Institute of Freshwater Ecology (IFE).

Samples were sorted by NRA, RPB and IRTU personnel for the families of macro-invertebrates included in the Biological Monitoring Working Party (BMWP) system. Taxa present were recorded on site data sheets. Sample processing and recording techniques varied from region to region.

2. SAMPLE SELECTION

Samples for audit were selected internally by each of the agencies being monitored. The biologists processing these samples had no prior knowledge of the samples to be audited.

The manner of sample selection, which biologists would be monitored and the number of audit samples from each season, were left to the discretion of the agency, within the limits of the total number of samples that IFE was contracted to audit.

3. SAMPLE PROCESSING

The normal protocol for NRA, RPB and IRTU biologists was to sort their samples within the laboratory and to select examples of each scoring taxon within the BMWP system. In most cases, the invertebrates were placed in a vial of preservative (4% formaldehyde solution or 70% industrial alcohol) and the BMWP taxa were listed on a data sheet. The vial of animals and the sorted material were then returned to the sample container and preservative added. Thus, each sample available to IFE for audit should have included:

- i) a list of the BMWP families found in the sample
- ii) a vial containing representatives from each family
- iii) the preserved sample

When these three elements were present, the sequence of operations at IFE was as follows:

- a) The remainder of the sample was sorted and the BMWP families listed
- b) The families contained within the vial were identified and listed
- c) A comparison was made between the NRA listing of families and those identified from the vial by IFE
- d) A comparison was made between the NRA listing of families and those found in the sample by IFE
- e) "Losses" or "gains" from the NRA listing of families were noted. In the case of "gains", each additional family was identified, where possible, to species level, in order to clarify any specific repetitive errors.

For a number of different reasons, some samples did not include a vial containing representative examples of the families listed on the data sheet. Others arrived with the vial damaged in transit such that the representative examples were no longer separated. For these samples, only operations a), d) and e) above were appropriate.

Several directives were issued to IFE relating to the treatment of BMWP taxa. Terrestrial representatives of BMWP scoring families, animals deemed to have been dead at the time of sampling, cast insect skins, pupal exuviae, empty mollusc shells and posterior ends of "living" specimens were to be excluded from the listing of families present. Chrysomelidae and Curculionidae, which appear in the BMWP list, were also to be excluded for the purposes of the audit. Trichopteran pupae, although not routinely identified by many biologists, were to be included in the listing of families.

4. REPORTING

The results of each sample audit were recorded on a standard report form (Table 1). For audit samples where a vial of animals was included, the comparison between the NRA listing and the taxa found in the vial by IFE was shown in box A of the report form. Discrepancies could be due to carelessness, misidentifications or errors in completing the NRA data sheet. Families not on the NRA listing but found by IFE in the remainder of the sample were entered in box B of the report form under "additional families". When the families listed as "losses" in section A of the report form were compared with the full list of families recorded in the sample by IFE, some apparent losses from the vial were offset by the presence of those families in the remainder of the sample. These taxa were therefore listed in the "losses" box of section A and the "gains" box of section B and were neither a net loss nor a net gain. In these cases, the families were marked with an asterisk in both boxes. Such errors are noted as "omissions" in the tables which summarise the results for each season (Tables 2, 3 and 4).

Species identifications, state of development (eg adult or larval coleopterans) and the presence of a single representative of a family within the remainder of the sample were recorded in the notes section of the report form. Where the NRA data sheet indicated that a family was noted and released at the site, this was recorded in the notes section but not included as a "loss", even though the family was not found in the vial.

For those samples in which the vial of animals was damaged or missing, box A of the report form was not applicable (N/a). Families not on the NRA list but present in the sample were listed in box B under "additional families" as before. Families recorded on the NRA list but not found by IFE were indicated on the left hand side of box B. If the vial of animals was retained by the NRA, entries in this box could include the sole representative of a family which was removed by the NRA, a family seen at the site which escaped or was released (without mention being made on the NRA data sheet), inaccurate identification, the wrong family box being ticked on the NRA data sheet or the family being present in the sample but missed by IFE.

Results of the audits of individual samples are presented in the Appendix.

REC	NOIE	RIVER	
1	DATE	SITE	
SOI	RTER	CODE	
A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT ` FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
В	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)	ADDITIONAL FAMILIES FOUND BY IFE
ir	Taxa recorded on data sheen sample (omissions) NET LOS		and found by I.F.E. O OMISSIONS 0

TABLE 2. The 23 spring samples audited for Wessex Area.

River	Site	Sorter	Losses	Gains	Omissions
Sydling Brook	Sydling St. Nicholas	PRH	0	2	0
Filley Brook	Quarr	PRH	0	1	0
Kimmeridge Stream	d/s Gaulter Cottages	JFP	1	0	0
Bovington Stream	Old Drove	PRH	0	4	0
Sydling Brook	Grimstone	PRH	0	1	0
Piddle	West Mills	JFP	0	1	2
Alham	Milton Clevedon	RA	0	2	0
Ladden Brook	Hall End	JF	0	0	0
Tone	Water Row Site 1	LK	0	2	0
Back Stream	Langford	LK	0	1	0
Back Stream	Combe Florey	LK	0	4	0
Hele Stream	Middle Stoford	LK	0	3	0
Croford Watercourse	Ford u/s Road Bridge	LK	0	1	0
Hartlake	Godney	RA	2	0	0
Tone	Water Row Site 2	LK	0	2	0
Hele Stream	Hele Hill	LK	1	0	1
Tone	Nynehead	LK	0	2	0
By Brook	Gatcombe Hill	· JF	1	6	0
Broad Mead Brook	Nettleton Shrub	JF	0	4	0
Boyd	Bitton	JF	0	0	0
St. Catherines Brook	Ayford Farm	JF	0	3	0
Maiden Bradley Brook	Highcroft Farm	AB	0	1	0
Wellow Brook	Radstock East	AB	0	1	0

TABLE 3. The 21 summer samples audited for Wessex Area.

River	Site	Sorter	Losses	Gains	Omissions
Frome	Frampton	BJJ	1	7	0
Frome	u/s Evershot	PRH	0	7	0
Frome	Police College	PRH	0	7	0
Caundle Brook	Blackmoor Ford Bridge	PR	. 0	5	1
Piddle	Turners Puddle	PR	0	3	0
Key Brook	Blynfield Farm	BJJ	1	2	0
Piddle	West Mills	PR	1.	4	0
Sydling Water	Shear Place Mill	PR	0	4	0
Cam	Holnest Church	PR	0	5	0
Mappowder Watercourse	Mappowder	PR	0	5	0
Crane	d/s Lessers Outfall	BJJ	0	2	0
Frome Carrier	Waddock Cross	PR	0	4	0
Marcombe Lake Stream	Trace Bridge	LK	0	0	0
Croford Watercourse	Ford	LK	0	4	0
Bristol Frome	Stapleton	JF	0	4	1
Trym	Comb Dingle	· JF	0	0	0
Tone	Bishops Hull	LK	0	.0	0
Brislington Brook	St. Annes Park	JF	1	2	0
Priston Stream	Priston	JF	0	2	0
Alham	Alhampton	AB	0	0	0
Chew	Litton	AB	0	1	0

TABLE 4. The 16 autumn samples audited for Wessex Area

River	Site	Sorter	Losses	Gains	Omissions
Lydden	Cannings Court	PR	0	2	0
Piddle	Piddlehinton	PR	2	11	0
Piddle	South House	JFP	0	1	1
Lydden	Bagber Bridge	PR	0	3	0
Crane	Does Hatch	JFP	0	1	0
Lydden Tributary	Bagber	PR	0	0	0
Mangerton Brook	West Milton	JFP	0	0	0
Lydden	Twofords Bridge	PR	1	3	0
Cale	Burtons Mill Farm	BJJ	0	0	0
Park Gate Watercourse	Wonston	BJJ	1	3	0
Crane	u/s Romford Bridge	PRH	0	3	0
Mappowder Watercourse	Mappowder	BJJ	0	5	0
Haydn Stream	Caundle Marsh	BJJ	0	0	0
Crane	d/s Lessers Outfall	PRH	0	2	0
Hele Stream	Middle Stoford	LK	1	0	0
Back Stream	Langford	LK	0	0	0

APPENDIX

Results of individual sample audits

REG	GION Wessex	RIVER	Sydlin	ng Brook		
I	DATE 21.3.94	SITE	Sydlin	ng St.Nicholas		
SOR	RTER PRH	CODE				
A	VIAL	BMWP FAMILIES 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 Leptoceridae		
В	SAMPLE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is onl completed when vial is supplie with the sample	no đ	2 Sphaeriidae		
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 2 OMISSIONS 0						
Γ	TES: 1 Athripsodes sp. (juveni 2 Sphaerium sp. 1 only	le) 1 only				

REC	SION	Wessex	RIVER	Fille	y Brook
I	DATE	23.5.94	SITE	Quarr	
sor	RTER	PRH	CODE		
A	i) F	VIAL Eerences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE None		ADDITIONAL FAMILIES FOUND BY IFE None
В	i) F (ii) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no	ADDITIONAL FAMILIES FOUND BY IFE 1 Leptophlebiidae
in No	samp	recorded on data shee le (omissions) NET LOS prophlebia fusca			

REG	€ION	Wessex	RIVER	Kimme	ridge Stream		
Ι	DATE	7.2.94	SITE	đ/s G	aulter Cottages		
SOF	RTER	JFP	CODE				
A		VIAL	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	i) 1	Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	1 Chironomidae		None		
В			BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	i) 1 (ii) 1	SAMPLE Ferences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	(This box is onl completed when vial is supplie with the sample	no d	None		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 1 NET GAINS 0 OMISSIONS 0						

REC	GION	Wessex	RIVER	Bovin	gton Stream
1	DATE	19.5.94	SITE	Old D	rove
soi	RTER	PRH	CODE		
A	i) I (ii) I	VIAL Gerences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE 1 Hydropsychidae
В	i) F (ii) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no đ	ADDITIONAL FAMILIES FOUND BY IFE 2 Ancylidae 3 Nemouridae 4 Goeridae
NO	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 4 OMISSIONS 0 NOTES: 1 Hydropsyche angustipennis 2 Ancylus fluviatilis 1 only 3 Nemoura cinerea 1 only 4 Goera pilosa (pupa) 1 only				

REC	SION	Wessex	RIVER	Sydlii	ng Brook		
I	DATE	21.3.94	SITE	Grimst	tone		
SOI	RTER	PRH	CODE				
A	i) 1	VIAL Ferences between: SMWP families listed on sample data sheet	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None		
	•	and BMWP families found in VIAL by IFE					
В	i) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no d	ADDITIONAL FAMILIES FOUND BY IFE 1 Lepidostomatidae		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 1 OMISSIONS 0						
		idostoma hirtum					

REC	SIÓN	Wessex	RIVER	Piddl	е
I	DATE	27.4.94	SITE	West 1	Mills
SOF	RTER	JFP	CODE		
A	i) I	VIAL Serences between: SMWP families listed on sample data sheet and SMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFF 1 Planorbidae* 2 Sphaeriidae*		ADDITIONAL FAMILIES FOUND BY IFE 3 Valvatidae
В	i) F (ii) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no d	ADDITIONAL FAMILIES FOUND BY IFE 4 Planorbidae* 5 Sphaeriidae*
in NO	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 1 OMISSIONS 2 NOTES: 1,4 Empty shell in vial, Anisus vortex in sample 3 Valvata piscinalis 5 Sphaerium sp.				

RE	GION	Wessex	RIVER	Alham		
1	DATE	14.4.94	SITE	Milton	n Clevedon	
SOI	RTER	RA	CODE	NRA09	BRU09C	
A	i) I (ii) I	VIAL Eerences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFF		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Ephemerellidae 2 Simuliidae	
ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 2 OMISSIONS 0 NOTES: 1 Ephemerella ignita 1 only 2 Simulium ornatum group 1 only					

REGION		Wessex	RIVER	Ladde	n Brook		
			<u> </u>	-			
1	DATE	10.5.94	SITE	Hall 1	End		
]				
SOI	RTER	JF	CODE	NRA09	BFR08E		
_					www.st		
A		VIAL	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	i) F	Terences between: SMWP families listed on sample data sheet and SMWP families found In VIAL by IFE	None		None		
_			E				
В			BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
		SAMPLE			None		
	i) E	erences between: MWP families listed on sample data sheet and MWP families found on SAMPLE by IFE	(This box is onl completed when vial is supplie with the sample	no d			
ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 0 OMISSIONS 0 NOTES:						

RE	GION Wessex	RIVER Tone				
1	DATE 12.4.94	SITE Water	Row			
so	RTER LK	CODE NRA09	TON02B			
A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE None	ADDITIONAL FAMILIES FOUND BY IFE None			
В	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)	ADDITIONAL FAMILIES FOUND BY IFE 1 Ephemerellidae 2 Ephemeridae			
iī	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 2 OMISSIONS 0 NOTES: 1 Ephemerella ignita 1 only 2 Ephemera danica 1 only Date on sample pot and front of data sheet 12.4.94, that on back of data sheet 18.4.94					

REC	SION	Wessex	RIVER	Back :	Stream	
I	DATE	20.4.94	SITE	Langf	ord	
SOF	RTER	LK	CODE	NRA09	TON27B	
A	i) 1 (ii) 1	VIAL Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i) F	SAMPLE Serences between: BMWP families listed on sample data sheet and BMWP families found In SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Gammaridae	
NO	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 1 OMISSIONS 0 NOTES: 1 Gammarus pulex 1 only Date on sample pot and front of data sheet 20.4.94, that on back of data sheet 6.7.94					

REGION Wessex		Wessex	RIVER	Back S	Stream
1	DATE	23.5.94	SITE	Combe	Florey
			1	<u></u>	
SO	RTER	LK	CODE	NRA09	TON39B

A			BMWP FAMILIES	NOT	ADDITIONAL FAMILIES
ш		VIAL	FOUND BY IF	<u> </u>	FOUND BY IFE
	i) 1	Ferences between: BMWP families listed on sample data sheet and BMWP families found	None		None
	:	in VIAL by IFE			
_					
В			BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE
:	i) 1	SAMPLE ferences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	(This box is onl completed when vial is supplie with the sample	no ed	1 Caenidae 2 Hydrophilidae 3 Polycentropodidae 4 Hydroptilidae
		recorded on data sheeple (omissions)	et but absent fro	om vial	and found by I.F.E.
N	OTES:	NET LOS	SSES 0 NET GA	AINS 4	OMISSIONS 0
1 Caenis rivulorum 1 only 2 Hydraena gracilis (adult) 1 only 3 Plectrocnemia conspersa 1 only 4 Ithytrichia sp.					

REC	SION	Wessex	RIVER	Hele S	tream		
r	ATE	27.5.94	SITE	Middle	Stoford		
SOF	RTER	LK	CODE	NRA09	TON17B		
A	i) 1 (ii) 1	VIAL ifferences between:) BMWP families listed on sample data sheet and) BMWP families found in VIAL by IFE		ADDITIONAL FAMILIES FOUND BY IFE None			
В	i) F (ii) F	SAMPLE Ferences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Caenidae 2 Hydrophilidae 3 Dryopidae		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 3 OMISSIONS 0 NOTES: 1 Caenis luctuosa/macrura 2 Hydraena gracilis (adult) 1 only 3 Helichus substriatus (adult) 1 only						

REG	ON	Wessex	RIVER	Crofo	rd Watercourse		
E	ATE	23.5.94	SITE	Ford t	ı/s Road Bridge		
SOR	TER	LK	CODE	NRA09	TON19B		
A	VIAL Differences between: i) BMWP families listed		BMWP FAMILIES NOT FOUND BY IFE None		ADDITIONAL FAMILIES FOUND BY IFE None		
	ii) E	on sample data sheet and BMWP families found in VIAL by IFE		;			
В	i) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Odontoceridae		
in No	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 1 OMISSIONS 0 NOTES: 1 Odontocerum albicorne 1 only						

REGION Wessex		Wessex	RIVER	Hartla	ake	
1	DATE	7.5.94	SITE	Godney	,	
SOI	RTER	RA	CODE	NRA09	BRU17C	
A	i) 1	VIAL Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFF 1 Piscicolidae 2 Tipulidae		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i)	SAMPLE Eerences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE None	
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 2 NET GAINS 0 OMISSIONS 0 NOTES: 1 Elongated Theromyzon tessulatum in vial 2 Chrysops group (Tabanidae) in vial					

REC	HOI	Wessex	RIVER	Tone			
I	DATE	9.5.94	SITE	Water	Row		
SOF	RTER	LK	CODE	NRA09	TON02B		
A		VIAL	BMWP FAMILIES FOUND BY IF		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			
В	i) F (ii) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFF (This box is onl completed when vial is supplied with the sample sample)	y no	ADDITIONAL FAMILIES FOUND BY IFE 1 Caenidae 2 Lepidostomatidae		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 2 OMISSIONS 0 NOTES: 1 Caenis rivulorum 1 only 2 Lepidostoma hirtum 1 only						

REGION Wessex		Wessex RIVER		Hele Stream		
			J	<u> </u>		
1	DATE	27.5.94	SITE	Hele 1	Hill	
			l			
SO	RTER	LK	CODE	NRA09	TON38B	
_	r					
A		VIAL	BMWP FAMILIES FOUND BY IF		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 Hydrophilidae 2 Tipulidae*		None	
	L .	Į.		•		
В			BMWP FAMILIES FOUND BY IF		ADDITIONAL FAMILIES FOUND BY IFE	
		SAMPLE			3 Tipulidae*	
	i) I (ii) I	Ferences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)			
		recorded on data shee	et but absent fro	om vial	and found by I.F.E.	
ir	ı samı	ole (omissions)				
N	TES:	NET LOS	SSES 1 NET G	AINS 0	OMISSIONS 1	
		restrial larva in vis Thrysops group (Tabani		icranota	sp. in sample	

REGION Wessex		Wessex	RIVER	Tone		
1	DATE	13.5.94	SITE	Nynehe	ead	
SOI	RTER	LK	CODE	NRA09	TON04B	
A			BMWP FAMILIES FOUND BY IFF		ADDITIONAL FAMILIES FOUND BY IFE 1 Leptophlebiidae	
В	i) I (ii) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 2 Leuctridae	
ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 2 OMISSIONS 0 NOTES: 1 Paraleptophlebia submarginata 1 only 2 Leuctra geniculata 1 only					

			٦		
RE	GION	Wessex	RIVER	By Bro	ook
;	DATE	24.5.94	SITE	Gatcor	mbe Hill
SO	RTER	JF	CODE	NRA09	BY01E
A		VIAL	BMWP FAMILIES FOUND BY IF		ADDITIONAL FAMILIES FOUND BY IFE
	i) 1 (ii) 1	Ferences between: SMWP families listed on sample data sheet and SMWP families found in VIAL by IFE	1 Planorbidae		2 Planariidae 3 Sphaeriidae 4 Simuliidae
П	<u></u>				
В		SAMPLE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE
	i) I (ii) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)		5 Heptageniidae 6 Caenidae 7 Hydroptilidae
		recorded on data shee	et but absent fro	m vial	and found by I.F.E.
N	OTES:	NET LOS	SSES 1 NET GA	ins 6	OMISSIONS 0
	2 Polycelis felina 3 Pisidium sp. 4 Simulium ornatum group, S.aureum group 5 Ecdyonurus sp. 6 Caenis rivulorum 1 only 7 Hydroptila sp.				

REG	SION	Wessex	RIVER	Broad	Mead Brook	
Γ	ATE	24.5.94	SITE	Nettle	eton Shrub	
SOR	RTER	JF	CODE	NRA09	BY05E	
A	i)	VIAL Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Sphaeriidae 2 Dytiscidae 3 Odontoceridae 4 Goeridae	
in NO	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 4 OMISSIONS 0 NOTES: 1 Pisidium sp. 2 Oreodytes sanmarkii (adult) 1 only 3 Odontocerum albicorne 4 Silo nigricornis (pupa) 1 only					

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RE	GION	Wessex	RIVER	Boyd			
1	DATE	12.5.94	SITE	Bitto	n		
			1	<u> </u>			
SOI	RTER	JF	CODE	NRA09	LBT11E		
_							
A		VIAL	BMWP FAMILIES FOUND BY IF		ADDITIONAL FAMILIES FOUND BY IFE		
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found		None		None		
		n VIAL by IFE					
В	,,	SAMPLE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	i) I (ii) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)		None		
* ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)						
NC	TES:	NET LOS	SSES 0 NET GA	INS 0	OMISSIONS 0		
	,						

REC	GION	Wessex	RIVER	St. C	atherine's Brook	
1	DATE	16.5.94	SITE	Ayfor	d Farm	
SORTER		JF	CODE NRA09		LBT01E	
A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE		BMWP FAMILIES NOT FOUND BY IFE None		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i) 1 (ii) 1	SAMPLE ferences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Glossiphoniidae 2 Nemouridae 3 Psychomyiidae	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 3 OMISSIONS 0 NOTES: 1 Glossiphonia complanata 1 only 2 Amphinemura standfussi 3 Tinodes unicolor 1 only						

REC	GION	Wessex	RIVER	Maiđe	n Bradley Brook	
DATE		10.5.94	SITE	Highc:	roft Farm	
SORTER		АВ	CODE	NRA09	SFR09E	
A	i) I	VIAL Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i) F	SAMPLE Eerences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no	ADDITIONAL FAMILIES FOUND BY IFE 1 Polycentropodidae	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 1 OMISSIONS 0 NOTES: 1 Cyrnus trimaculatus 1 only						

REGI	ON Wessex	RIVER	Wellow	w Brook		
DA	TE 13.5.94	SITE	Radsto	ock East		
SORT	ER AB	CODE	NRA09	MID03E		
A	VIAL	BMWP FAMILIES NOT FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	Differences between: i) BMWP families listed on sample data sheet and i) BMWP families found in VIAL by IFE	None		None		
в		BMWP FAMILIES NOT FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	SAMPLE Differences between: i) BMWP families listed on sample data sheet and i) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)		1 Sphaeriidae		
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)						
NET LOSSES 0 NET GAINS 1 OMISSIONS 0						
1 Sphaerium sp. 1 only						

REGION	Wessex	RIVER	Frome			
DATE	11.7.94	SITE	Frampton			
SORTER	вјј	CODE				
i) :	VIAL ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE				
SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE		BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	2 Valvatidae 2 Valvatidae 3 Physidae no 4 Caenidae dd 5 Calopterygidae			
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 1 NET GAINS 7 OMISSIONS 0 NOTES: 2 Valvata piscinalis 1 only 3 Physa fontinalis 1 only 4 Caenis luctuosa/macrura 1 only 5 Calopteryx splendens 1 only 6 Indet Corixid (nymph) 1 only 7 Athripsodes albifrons 1 only 8 Dicranota sp., Tipula montium group						

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REGION		Wessex	RIVER	Frome		
I	DATE	30.8.94	SITE	u/s E	vershot	
SORTER		PRH	CODE			
A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE		BMWP FAMILIES NOT FOUND BY IFE None		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i) E (ii) E	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no ed	ADDITIONAL FAMILIES FOUND BY IFE 1 Ancylidae 2 Sphaeriidae 3 Piscicolidae 4 Baetidae 5 Dytiscidae 6 Polycentropodidae 7 Beraeidae	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 7 OMISSIONS 0 NOTES: 1 Ancylus fluviatilis 1 only 2 Pisidium sp. 3 Piscicola geometra 4 Baetis rhodani 5 Platambus maculatus, Agabus sp. (larvae) 6 Plectrocnemia sp. (juvenile) 1 only 7 Beraea pullata 1 only						

REGION		Wessex	RIVER	Frome	Frome		
DA	TE	30.8.94	SITE	Police	College		
SORT	ER	PRH	CODE				
į	i) I	VIAL Eerences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None		
	i) E	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no d	ADDITIONAL FAMILIES FOUND BY IFE 1 Planariidae 2 Lymnaeidae 3 Ancylidae 4 Sphaeriidae 5 Hydropsychidae 6 Goeridae 7 Sericostomatidae		
NOT 1 2 3 4 5 6	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 7 OMISSIONS 0 NOTES: 1 Polycelis felina 1 only 2 Lymnaea peregra 1 only 3 Ancylus fluviatilis 4 Pisidium sp. 5 Hydropsyche siltalai 6 Silo pallipes 7 Sericostoma personatum 1 only						

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REGION Wessex		Wessex	RIVER	Caund	le Brook	
	DATE	22.8.94	SITE	Black	moor Ford Bridge	
so	RTER	PR	CODE			
A		VIAL	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE	
	i) 1	ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	1 Ancylidae*	İ	None	
_						
В		SAMPLE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE	
		SAMPLE			2 Ancylidae*	
		Terences between:	(This box is onl		3 Glossiphoniidae	
	_, -	on sample data sheet	completed when no vial is supplied		4 Asellidae 5 Leuctridae	
	ii) E	and BMWP families found	with the sample	•)	6 Goeridae 7 Tipulidae	
		n SAMPLE by IFE				
					·	
		,				
		recorded on data shee	et but absent fro	m vial	and found by I.F.E.	
N	NET LOSSES 0 NET GAINS 5 OMISSIONS 1					
		impty Acroloxus shell	in vial, Ancylus	fluvia	tilis 1 only in	
	sampl	.e ossiphonia complanata	1 only			
	4 Asellus aquaticus 1 only					
		ctra fusca 1 only ora pilosa				
		ranota sp.				

REC	GION Wessex	RIVER Pidd	le				
I	DATE 25.7.94	SITE Turn	ers Puddle				
SOI	RTER PR	CODE					
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				
В	SAMPLE	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE				
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)	1 Planariidae 2 Oligochaeta 3 Hydroptilidae				
	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)						
NO							

REC	GION	Wessex	RIVER	Key B	rook		
I	DATE	11.8.94	SITE	Blynf	ield Farm		
SOI	RTER	вјј	CODE				
A	i) 1	VIAL ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFF 1 Planorbidae		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) 1 (ii) 1	SAMPLE Eerences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 2 Hydrobiidae 3 Erpobdellidae		
ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 1 NET GAINS 2 OMISSIONS 0 NOTES: 1 Terrestrial snail in vial 2 Potamopyrgus jenkinsi 3 Indet Erpobdellids						

REC	HON	Wessex	RIVER	Piddle	3	
I	DATE	18.7.94	SITE	West 1	/ills	
SOF	RTER	PR	CODE			
A		VIAL	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE	
	i) 1	Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	1 Leptophlebiidae		2 Sialidae	
					,	
В	i) 1	SAMPLE Ferences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFF (This box is onl completed when vial is supplie with the sample	Y no ed	ADDITIONAL FAMILIES FOUND BY IFE 3 Polycentropodidae 4 Goeridae 5 Brachycentridae	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 1 NET GAINS 4 OMISSIONS 0						
	2 Sialis lutaria 3 Polycentropus flavomaculatus 1 only 4 Goera pilosa 5 Brachycentrus subnubilus 1 only					

REC	GION Wessex	RIVER	Sydling Water		
1	DATE 13.7.94	SITE	Shear Place Mill		
SOF	RTER PR	CODE			
A	VIAL	BMWP FAMILIES NO FOUND BY IFE	OT 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		
В	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NO FOUND BY IFE (This box is only completed when no vial is supplied with the sample)	FOUND BY IFE 1 Valvatidae 2 Asellidae		
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 4 OMISSIONS 0 NOTES:					
ı	1 Valvata piscinalis I only 2 Asellus aquaticus 1 only 3 Lype sp. 1 only 4 Silo nigricornis 1 only				

		<u> </u>	1		
RE	GION	Wessex	RIVER	Cam	
1	DATE	18.8.94	SITE	Holne	st Church
soi	RTER	PR	CODE		
A	i)	VIAL Eerences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None
В	i) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Lymnaeidae 2 Erpobdellidae 3 Haliplidae 4 Dytiscidae 5 Tipulidae
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 5 OMISSIONS 0 NOTES: 1 Lymnaea peregra 1 only 2 Trocheta subviridis 3 Haliplus lineatocollis, H.ruficollis (adults + larvae) 4 Ilybius sp. (larvae) 5 Phylidorea sp. (pupa) 1 only					

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RE	GION	Wessex	RIVER	Mappor	wder Watercourse
1	DATE	31.8.94	SITE	Mappov	wder
SO	RTER	PR	CODE		
A	i) 1	VIAL Serences between: SMWP families listed on sample data sheet and SMWP families found on VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None
В	i) I (SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	EMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	FE FOUND BY IFE 1 Baetidae 2 Hydrophilidae 1 no 3 Hydropsychidae .ed 4 Beraeidae	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 5 OMISSIONS 0 NOTES: 1 Baetis rhodani 2 Hydraena rufipes (adult) 1 only 3 Hydropsyche siltalai 1 only 4 Beraeodes minutus 5 Dicranota sp.					

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REC	GION Wessex	RIVER	Crane		
I	DATE 29.6.94	SITE	d/s L	essers Outfall	
SOF	RTER BJJ	CODE			
A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None	
В	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Hydroptilidae 2 Brachycentridae	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 2 OMISSIONS 0 NOTES: 1 Ithytrichia sp. 2 Brachycentrus subnubilus BJJ is recorded as sorter on sample label and data sheet, PRH is written on the sample pot.					

REG	SION Wessex	RIVER	Frome	Carrier		
I	DATE 4.8.94	SITE	Waddoc	k Cross		
SOR	RTER PR	CODE				
A	VIAL	BMWP FAMILIES 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		
В	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no d	ADDITIONAL FAMILIES FOUND BY IFE 1 Piscicolidae 2 Elmidae 3 Rhyacophilidae 4 Tipulidae		
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 4 OMISSIONS 0 NOTES:						
	1 Piscicola geometra 1 only 2 Elmis aenea (adult), Oulimnius sp. (larva) 3 Rhyacophila dorsalis 4 Antocha vitripennis 1 only					

REC	SION	Wessex	RIVER	Marcon	mbe Lake Stream	
r	DATE	19.7.94	SITE	Trace	Bridge	
SOI	RTER	LK	CODE	NRA09	TON32B	
A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found		BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None	
		in VIAL by IFE				
В	i) 1 (ii) 1	SAMPLE Ferences between: SMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE None	
ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 0 OMISSIONS 0 NOTES:					

REGION Wessex		Wessex	RIVER	Crofo	rd Watercourse	
Ι	ATE	24.8.94	SITE	Ford		
SOR	RTER	LK	CODE	NRA09	TON19B	
A	i) 1 (ii) 1	VIAL Eerences between: BMWP families listed on sample data sheet and BMWP families found In VIAL by IFE	BMWP FAMILIES FOUND BY IFE None		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	FE FOUND BY IFE 1 Planariidae 1 Planariidae 1 No 3 Haliplidae 2 Asellidae 4 Psychomyiidae		
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 4 OMISSIONS 0 NOTES: 1 Polycelis felina 2 Asellus aquaticus 1 only 3 Haliplus sp. (larva) 1 only 4 Lype sp. 1 only						

REGION Wessex		Wessex	RIVER	Bristol Frome			
r	ATE	27.7.94	SITE	Staple	eton		
SOF	RTER	JF	CODE	NRA09	BFR07E		
A	i) 1	VIAL ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFF 1 Valvatidae*		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) 1 (ii) 1	SAMPLE Errences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 2 Valvatidae* 3 Lymnaeidae 4 Baetidae 5 Gerridae 6 Hydrometridae		
in NO	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 4 OMISSIONS 1 NOTES: 2 Valvata cristata, V.piscinalis 3 Lymnaea peregra 1 only 4 Centroptilum luteolum 1 only 5 Gerris sp. (nymph) 1 only 6 Hydrometra stagnorum (nymphs)						

REGION Wessex		Wessex	RIVER	Trym			
I	DATE	27.7.94	SITE	Comb 1	Dingle		
SOF	RTER	JF	CODE	NRA09	LBT18E		
A		VIAL	BMWP FAMILIES FOUND BY IFF		ADDITIONAL FAMILIES FOUND BY IFE		
	i)	erences between: MWP families listed on sample data sheet and MWP families found n VIAL by IFE	None		None		
в			BMWP FAMILIES 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 FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		no d	None			
	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)						
NO	NET LOSSES 0 NET GAINS 0 OMISSIONS 0						

REGION Wessex		Wessex	RIVER	Tone			
Γ	ATE	10.8.94	SITE	Bishop	ps Hull		
SOR	RTER	LK	CODE	NRA09	TON06B		
A	i) I	VIAL Eerences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE None		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 0 OMISSIONS 0 NOTES:						

REGION Wessex		RIVER	Brislington Brook			
DATE	27.7.94	SITE	St.Ann	nes Park		
SORTER	JF	CODE	NRA09	LBT15E		
i) 1 (ii) 1	VIAL ferences between: SMWP families listed on sample data sheet and SMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE 1 Lymnaeidae		ADDITIONAL FAMILIES FOUND BY IFE 2 Limnephilidae		
i) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 3 Tipulidae		
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 1 NET GAINS 2 OMISSIONS 0 NOTES: 1 Oxylema pfeifferi? (Succineidae) in vial 2 Micropterna sequax 3 Pedicia (Trichyphona) sp. 1 only						

REGION Wessex		Wessex	RIVER	Prist	ston Stream		
1	DATE	9.8.94	SITE	Prist	on		
			1				
SOI	RTER	JF	CODE	NRA09	LBT07E		
A		VIAL	BMWP FAMILIES FOUND BY IFF		ADDITIONAL FAMILIES FOUND BY IFE		
	i) 1	ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	None		None		
¬	1						
В			BMWP FAMILIES		ADDITIONAL FAMILIES		
		SAMPLE	FOUND BY IFE	· · · · · · · · · · · · · · · · · · ·	FOUND BY IFE		
	i) 1 (ii) 1	Ferences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)		1 Glossiphoniidae 2 Scirtidae		
		recorded on data shee	or but absent fro	m vial	and found by I.F.E.		
	_	-					
NO	NET LOSSES 0 NET GAINS 2 OMISSIONS 0						
	1 Glossiphonia complanata 1 only 2 Elodes sp. (larva) 1 only						
					1		

REGION Wessex		Wessex	RIVER	Alham			
I	ATE	26.7.94	SITE	Alhamj	pton		
SOF	RTER	AB	CODE	NRA09	BRU11C		
A	i) 1	VIAL Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) 1	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no d	ADDITIONAL FAMILIES FOUND BY IFE None		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 0 OMISSIONS 0 NOTES:						

REG	SION	Wessex	RIVER	Chew			
E	ATE	17.8.94	SITE [Littor	1		
SOR	RTER	AB	CODE	NRA09	CHE01E		
A	i) I	VIAL Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES I FOUND BY IFE None	TON	ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) I	SAMPLE Ferences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES I FOUND BY IFE (This box is only completed when r vial is supplied with the sample)	7 10	ADDITIONAL FAMILIES FOUND BY IFE 1 Gyrinidae		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 1 OMISSIONS 0 NOTES: 1 Orectochilus villosus (larva) 1 only						

REC	HON	Wessex	RIVER	Lydder	1		
I	DATE	6.9.94	SITE	Cannin	ngs Court		
SOF	RTER	PR	CODE				
A		VIAL	BMWP FAMILIES 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		
		`	1				
B			BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE		(This box is only completed when no vial is supplied with the sample)		1 Scirtidae 2 Sialidae		
	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)						
NO	TES:	NET LOS	SES 0 NET GA	INS 2	OMISSIONS 0		
	1 Elc	des sp. (larva) 1 onl lis lutaria 1 only	Y				

REC	GION Wessex	RIVER Pid	dle			
1	DATE 7.9.94	SITE Pid	dlehinton			
son	RTER PR	CODE				
A	VIAL Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE 1 Aphelocheiridae 2 Leptoceridae	ADDITIONAL FAMILIES FOUND BY IFE 3 Caenidae			
В	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)	ADDITIONAL FAMILIES FOUND BY IFE 4 Ancylidae 5 Asellidae 6 Heptageniidae 7 Leptophlebiidae 8 Ephemeridae 9 Leuctridae 10 Gyrinidae 11 Hydropsychidae 12 Tipulidae 13 Simuliidae			
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 2 NET GAINS 11 OMISSIONS 0						
	NOTES: 1 Terrestrial bug in vial 1					

REGION [Wessex	RIVER	Piddle	3		
I	DATE	7.9.94	SITE	South	House		
SOF	RTER	JFP	CODE				
A	i) 1 (ii) 1	VIAL Ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE 1 Oligochaeta*		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) I	SAMPLE Eerences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 2 Oligochaeta* 3 Leptophlebiidae		
ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 1 OMISSIONS 1 NOTES: 2 Indet Lumbriculidae 3 Paraleptophlebia sp. 1 only						

REC	GION	Wessex	RIVER	Lydder	1	
1	DATE	29.11.94	SITE	Bagber	r Bridge	
SOI	RTER	PR	CODE			
A	i) 1	VIAL Eerences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFF		ADDITIONAL FAMILIES FOUND BY IFE None	
B	i) I (ii) I	SAMPLE Ferences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	Y no	ADDITIONAL FAMILIES FOUND BY IFE 1 Asellidae 2 Heptageniidae 3 Limnephilidae	
ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 3 OMISSIONS 0 NOTES: 1 Asellus aquaticus 1 only 2 Ecdyonurus sp. 1 only 3 Anabolia nervosa 1 only					

REG	ON	Wessex	RIVER	RIVER Crane			
I	ATE	19.10.94	SITE	Does 1	Hatch		
SOF	TER	JFP	CODE				
A	i) 1	VIAL Serences between: SMWP families listed on sample data sheet and SMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) 1	SAMPLE Eerences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no id	ADDITIONAL FAMILIES FOUND BY IFE 1 Hydroptilidae		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 1 OMISSIONS 0 NOTES: 1 Hydroptila sp. 1 only						

REGION		Wessex	RIVER	Lyddei	n Tributary		
I	ATE	13.12.94	SITE	Bagber	r		
SOR	RTER	PR	CODE				
A	i) I	VIAL ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) E	SAMPLE Eerences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onlowing the completed when vial is supplied with the sample)	y no ed	ADDITIONAL FAMILIES FOUND BY IFE None		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 0 OMISSIONS 0 NOTES:						

REC	SION	Wessex	RIVER	Manger	rton Brook	
I	DATE	16.11.94	SITE	West N	Milton	
SOF	RTER	JFP	CODE			
A		VIAL	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE	
	i) I (ii) I	ferences between: SMWP families listed on sample data sheet and SMWP families found in VIAL by IFE	None		None	
В	i) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no	ADDITIONAL FAMILIES FOUND BY IFE None	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 0 OMISSIONS 0 NOTES:						

RE	GION	Wessex	RIVER	Lydder	1		
;	DATE	13.12.94	SITE	Twofor	rds Bridge		
so	RTER	PR	CODE				
A		VIAL	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	i) I	ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	1 Baetidae		None		
В			BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE		
	i) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	(This box is only completed when no vial is supplied with the sample)		2 Asellidae 3 Taeniopterygidae 4 Hydropsychidae		
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)							
N	NET LOSSES 1 NET GAINS 3 OMISSIONS 0						
	1 Abdomen only in vial. IFE instructed not to include posterior ends for purposes of audit. 2 Asellus aquaticus 3 Brachyptera risi 1 only 4 Hydropsyche pellucidula 1 only						
	Note on data sheet that Gyrinidae "not found in vial". Not found by IFE in vial or sample.						

REC	SION	Wessex	RIVER	Cale	
1	OATE	7.11.94	SITE	Burton	ns Mill Farm
SOI	RTER	вјј	CODE		
A	i) 1	VIAL Ferences between: BMWP families listed	BMWP FAMILIES FOUND BY IFI		ADDITIONAL FAMILIES FOUND BY IFE
	ii) 1	on sample data sheet and BMWP families found in VIAL by IFE			
В	i) I	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFF (This box is onloompleted when vial is supplied with the sample)	Ly no ed	ADDITIONAL FAMILIES FOUND BY IFE None
ir		recorded on data shee ole (omissions) NET LOS			

REGION		Wessex	RIVER	Park (Gate Watercourse			
I	DATE	22.11.94	SITE	Wonsto	on			
SOI	RTER	BJJ	CODE					
_								
A		VIAL	BMWP FAMILIES FOUND BY IFE	-	ADDITIONAL FAMILIES FOUND BY IFE			
	i) I	erences between: BMWP families listed on sample data sheet and BMWP families found	1 Leptoceridae		2 Beraeidae			
		in VIAL by IFE						
В			BMWP FAMILIES FOUND BY IFE	-	ADDITIONAL FAMILIES FOUND BY IFE			
	SAMPLE Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE		(This box is only completed when no vial is supplied with the sample)		3 Gyrinidae 4 Tipulidae			
	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)							
NO	TES:	NET LOS	SSES 1 NET GA	INS 3	OMISSIONS 0			
	2 Beraeodes minutus 3 Gyrinus substriatus (adult) 1 only 4 Pilaria (Pilaria) sp. 1 only							

REC	HOIE	Wessex	RIVER	Crane			
1	DATE	19.10.94	SITE	u/s Ro	omford Bridge		
son	RTER	PRH	CODE				
A	i) 1 (ii) 1	VIAL Ferences between: SMWP families listed on sample data sheet and SMWP families found In VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no	ADDITIONAL FAMILIES FOUND BY IFE 1 Physidae 2 Erpobdellidae 3 Caenidae		
ir	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 3 OMISSIONS 0 NOTES: 1 Physa fontinalis 1 only 2 Indet Erpobdellids 3 Caenis rivulorum						

REG	HON	Wessex	RIVER	Mappor	wder Watercourse	
Ι	ATE	22.11.94	SITE	Mappo	wder	
SOR	RTER	вјј	CODE			
A		VIAL	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE	
	i) 1	Ferences between: SMWP families listed on sample data sheet and SMWP families found in VIAL by IFE	None		1 Beraeidae	
В		SAMPLE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE	
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE		(This box is only completed when no vial is supplied with the sample)		2 Hydrobiidae 3 Lymnaeidae 4 Elmidae 5 Limnephilidae	
					·	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions)						
NO	NET LOSSES 0 NET GAINS 5 OMISSIONS 0					
	1 Beraeodes minutus 2 Potamopyrgus jenkinsi 3 Lymnaea peregra 1 only 4 Elmis aenea, Oulimnius sp. (larvae) 5 Indet Limnephilids (juveniles)					

REGION Wes		Wessex	RIVER	Haydn	Stream		
I	ATE	5.12.94	SITE	Caund1	le Marsh		
SOF	RTER	вјј	CODE				
A	i) ii)	VIAL ferences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFF		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) :	SAMPLE ferences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES FOUND BY IFE (This box is onl completed when vial is supplie with the sample	y no od	ADDITIONAL FAMILIES FOUND BY IFE None		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 0 OMISSIONS 0 NOTES:						

REC	SION	Wessex	RIVER	Crane		
1	DATE	19.10.94	SITE	d/s Le	essers Outfall	
soi	RTER	PRH	CODE			
A	i) 1	VIAL Serences between: SMWP families listed on sample data sheet and SMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None	
В	i) 1 (ii) 1	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found in SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE 1 Calopterygidae 2 Leptoceridae	
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 2 OMISSIONS 0 NOTES: 1 Calopteryx sp. (juvenile) 1 only 2 Oecetis testacea 1 only						

REGI	ON Wessex	RIVER	Hele Stream			
DA'	TE 28.10.94	SITE	Middle Stoford			
SORTI	ER LK	CODE	NRA09 TON17B			
	VIAL Differences between: () BMWP families listed on sample data sheet and	BMWP FAMILIES N FOUND BY IFE 1 Planorbidae	ADDITIONAL FAMILIES FOUND BY IFE None			
11) BMWP families found in VIAL by IFE					
i	SAMPLE Differences between: BMWP families listed on sample data sheet and BMWP families found in SAMPLE by IFE	BMWP FAMILIES N FOUND BY IFE (This box is only completed when n vial is supplied with the sample)	FOUND BY IFE None			
* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 1 NET GAINS 0 OMISSIONS 0 NOTES: 1 Empty shells in vial and sample						

REGION		Wessex	RIVER	Back S	Stream		
I	ATE	3.11.94	SITE	Langfo	ord		
SOF	RTER	LK	CODE	NRA09	TON27B		
A	i) I	VIAL Eerences between: BMWP families listed on sample data sheet and BMWP families found in VIAL by IFE	BMWP FAMILIES FOUND BY IFE		ADDITIONAL FAMILIES FOUND BY IFE None		
В	i) F	SAMPLE Serences between: SMWP families listed on sample data sheet and SMWP families found on SAMPLE by IFE	BMWP FAMILIES NOT FOUND BY IFE (This box is only completed when no vial is supplied with the sample)		ADDITIONAL FAMILIES FOUND BY IFE None		
in	* Taxa recorded on data sheet but absent from vial and found by I.F.E. in sample (omissions) NET LOSSES 0 NET GAINS 0 OMISSIONS 0 NOTES:						

