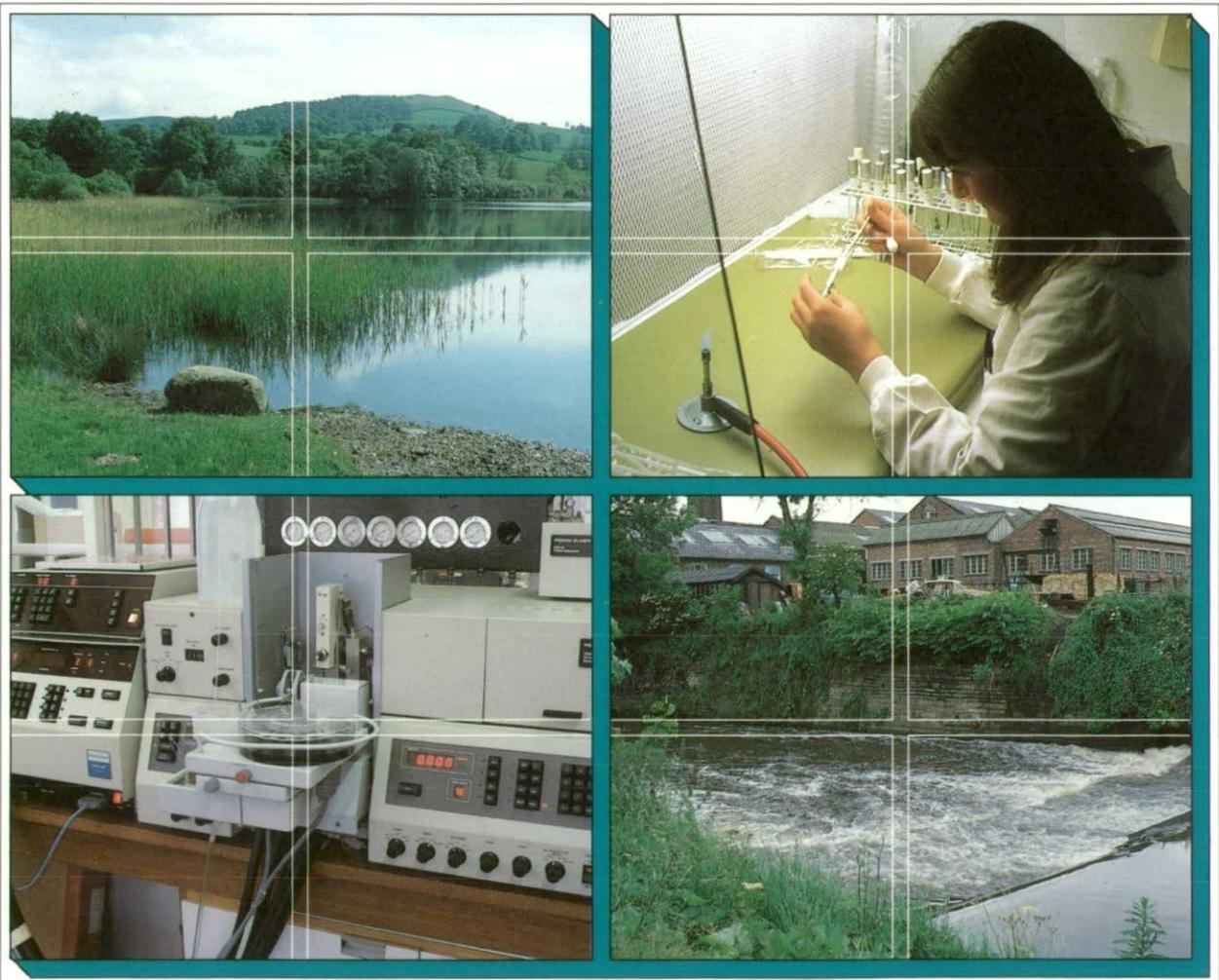




Institute of  
Freshwater  
Ecology

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

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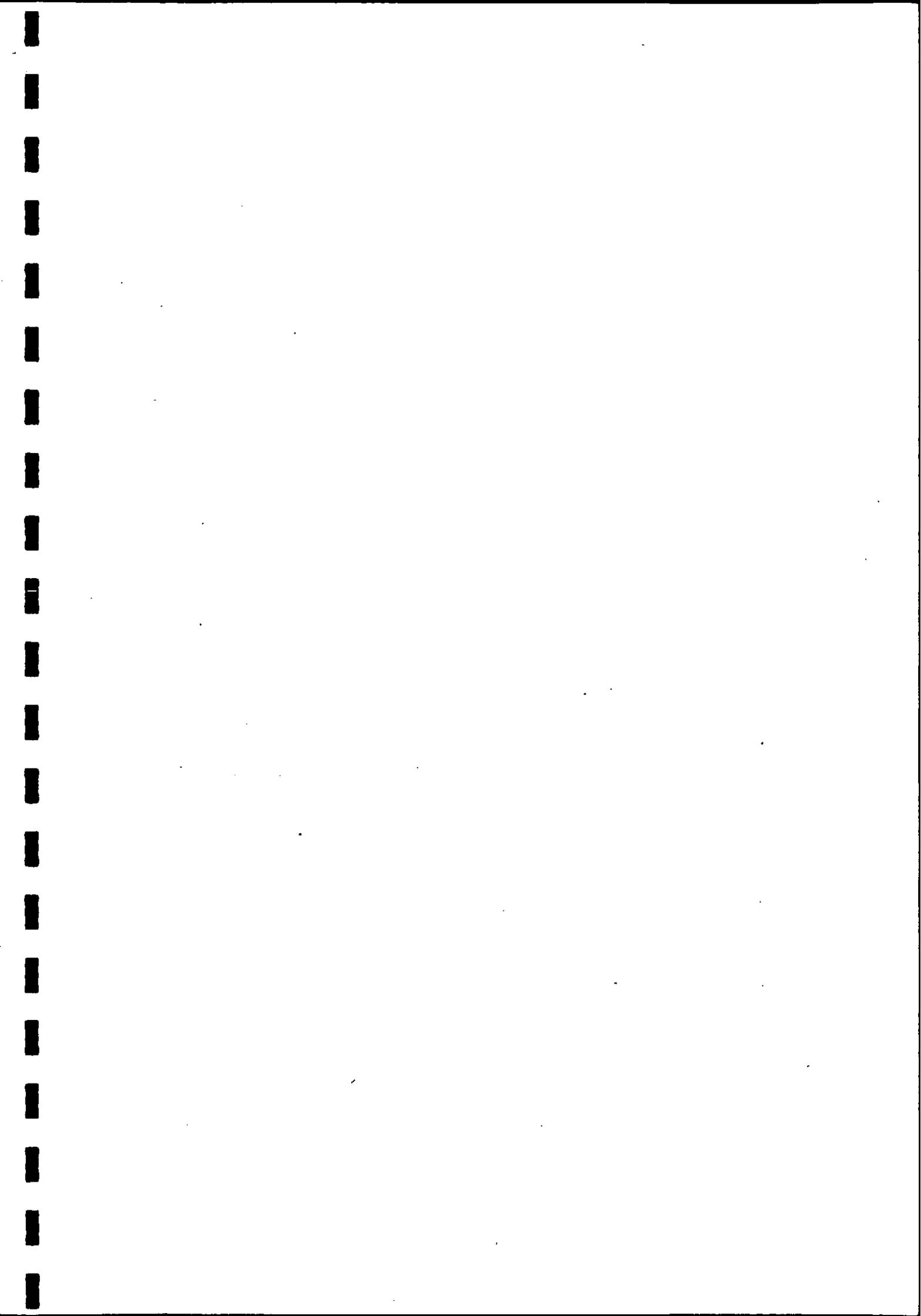
**An audit of performance in the processing  
of macro-invertebrate samples in 1991.**  
**NRA Yorkshire Region**

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

Project leader:	J.F. Wright
Report date:	May 1992
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The Institute of Freshwater Ecology is part of the Terrestrial and Freshwater Sciences Directorate of the Natural Environment Research Council.



## 1. INTRODUCTION

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

The majority of sites were sampled in spring, summer and autumn. Standard collection procedures, as used in the 1990 River Quality Survey, were retained and the sampling strategy was therefore compatible with RIVPACS (River InVertebrate Prediction And Classification System), which has been developed by the Institute of Freshwater Ecology (IFE). For a variety of reasons, a few locations were sampled in just one or two seasons.

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

In view of the number of staff involved and the variability of sample processing techniques, it was recognised that an independent quality control exercise was necessary to promote a consistently high level of reliability. As in 1990, the IFE was contracted to undertake an audit of the sample sorting and identification performance of each NRA region, several RPBs and the DED. This report presents the results of 60 samples audited for Yorkshire Region of the NRA. The IFE was not required to perform any statistical analyses nor interpretation of the results of the audit.

## 2. SAMPLE SELECTION

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

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

## 3. SAMPLE PROCESSING

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

- i) a list of the BMWP FAMILIES FOUND IN THE SAMPLE
- ii) a vial containing representatives from each family
- iii) the preserved sample

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

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

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

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

#### 4. REPORTING

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

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

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

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

#### **ACKNOWLEDGEMENTS**

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

TABLE 1. The IFE Report form

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION <input style="width: 100%;" type="text"/>	RIVER <input style="width: 100%;" type="text"/>
DATE <input style="width: 100%;" type="text"/>	SITE <input style="width: 100%;" type="text"/>
SORTER <input style="width: 100%;" type="text"/>	SAMPLE CODE <input style="width: 100%;" type="text"/>

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

		LOSSES	GAINS
<b>A</b>	<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>B</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 20 spring samples audited for Yorkshire Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'

River	Site	Sorter	Losses	Gains	Omissions
Calder	Lydgate	FC	1	1	0
Kyle	Alne	RM	1	1	0
Holme	Holmbridge	JBS	0	2	0
Wharfe	Castley	FC	0	1	0
Cover	Middleham	FN	0	0	0
Hawke Brook	Shuttlewood	VH	0	1	0
Ure	Wensley	LM	0	0	0
Little Don	D/s Langsett WTW	RPC	1	0	0
Ure	Aysgarth	CG	0	2	0
Dove	Darfield	SAL	0	1	1
Marske Beck	Marske	CG	0	1	0
Don	Dunford Bridge	JBS	0	0	1
Eller Beck	Long Dam	LMB	1	4	0
Dearne	Adwick-upon-Dearne	SAL	0	1	0
Calder	Copley	VH	0	2	0
Cod Beck	Borrowby	EA	1	0	0
Crimple	Follifoot	EA	1	2	0
Nidd	Ornamental Bridge	FN	0	1	0
Derwent	Low Hutton	RM	0	3	0
Stonegate Beck	Glaisdale	CG	0	7	0

TABLE 3. The 20 summer samples audited for Yorkshire Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'

River	Site	Sorter	Losses	Gains	Omissions
Billingley Dike	B6273 Bridge	SGT	0	2	0
Little Beck	U/s Woundales Beck	FN	0	2	0
Spinksburn Beck	Wydra	JBS	0	1	0
Sand Beck	U/s Badger Beck	RM	0	1	0
Wharfe	Tadcaster	SGT	1	0	1
Wharfe	Hubberholme	JCP	0	2	0
Cover	Braidley	EA	0	0	0
Fleemis Gill	Gammersgill	FN	0	3	0
Sutherland Beck	U/s Little Beck	EA	0	3	0
Smelt Mill Beck	Near Hartforth	EA	0	3	0
Silkstone Beck	Pothouse Bridge	SAL	0	1	0
Dearne	Marles Bridge	JCP	0	0	0
Carlesmoor Beck	Carlesmoor	FN	0	1	0
Capelshaw Beck	Dukes Hill	RPC	1	0	1
Linton Beck	Bow Bridge	JCP	0	1	0
Wharfe	U/s Pool Paper Mill	RPC	0	1	0
Wharfe	Ilkley	VH	0	1	0
Ouse	Acaster Malbis	FN	0	0	0
Upland Stell	Near Wath	FN	0	0	0
Barney Beck	Redmire	EA	0	0	0

TABLE 4. The 20 autumn samples audited for Yorkshire Region, with sample sorter initials and numbers of taxa 'lost', 'gained' and 'omitted'

River	Site	Sorter	Losses	Gains	Omissions
Ouse	Acaster Malbis	FN	0	0	0
Ottringham Drain	Far Marsh Farm	JM	0	1	0
Knoll Beck	Old Moor Bridge	SAL	0	2	0
Kex Beck	Beamsley	JK	0	0	0
Lumbutts Clough	D/s Tip leachates	FC	0	0	2
Wood Gutter	Redhouse Wood	JM	0	1	0
Went Beck	U/s Hessle Beck	SAL	0	0	0
Carr Close Beck	Near Murton	FN	0	0	0
Alcomden Water	U/s Graining Water	VH	0	2	1
White Beck	East Newton	RM	2	2	0
Frodingham Beck	Emmotland	RM	1	0	0
Don	Springvale	RPC	0	0	0
Lul Beck	Near Ramsgill	RM	0	2	0
Hew Beck	U/s Double Dike	JM	0	0	1
Wharfe	Barden Bridge	JK	1	1	0
Stonesdale Beck	Near West Stonesdale	JM	0	3	0
Ramsden Clough	Holmbridge	SGT	0	3	1
Huby Burn	D/s STW Burn Hall	EA	0	0	0
Hebden Water	U/s Grimsworth Dean	FC	1	0	0
Manywells Beck	U/s Harden Beck	SGT	0	2	0

**APPENDIX**

**Results of individual sample audits**

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Calder

DATE 11.4.91

SITE Lydgate

SORTER FC

SAMPLE CODE NRA10 0060

AQC OF BMWP FAMILIES    A. IN VIAL    +

B. IN SAMPLE    +

		LOSSES	GAINS
<b>A</b>	<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 Simuliidae	2 Leuctridae

<b>B</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 1

NET GAINS 1

**NOTES**

1 *Leuctra inermis*

Simuliidae entered on data sheet as abundance category A. Although box not ticked, it appears to be included in the total of 10 taxa. Not found in vial or sample.

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Kyle

DATE 12.3.91

SITE Alne

SORTER RM

SAMPLE CODE NRA10 0193

AQC OF BMWP FAMILIES    A. IN VIAL +

B. IN SAMPLE +

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

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

NET LOSSES 1

NET GAINS 1

NOTES

1 Empty Potamopyrgus jenkinsi shell in vial  
2 Gyraulus albus 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Holme
DATE	24.4.91	SITE	Holmbridge
SORTER	JBS	SAMPLE CODE	NRA10 0182

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

		LOSSES	GAINS
<b>A</b>	<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>B</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 Perlodidae 2 Polycentropodidae

NET LOSSES        NET GAINS   

NOTES

1 Isoperla grammatica 1 only  
2 Polycentropus flavomaculatus

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Wharfe

DATE 13.5.91

SITE Castley

SORTER FC

SAMPLE CODE NRA10 0337

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
<b>A</b>	<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

<b>B</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 1

NOTES

1 EphemereLLa ignita 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Cover
DATE	26.3.91	SITE	Middleham
SORTER	FN	SAMPLE CODE	NRA10 0086

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

		LOSSES	GAINS
<b>A</b>	<p><u>VIAL</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in VIAL by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <hr/> <p>None</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <hr/> <p>None</p>
<b>B</b>	<p><u>SAMPLE</u></p> <p>Differences between:</p> <p>i) BMWP families listed on sample data sheet and</p> <p>ii) BMWP families found in SAMPLE by IFE</p>	<p>BMWP FAMILIES NOT FOUND BY IFE</p> <hr/> <p>(This box only completed when no vial supplied with sample)</p>	<p>ADDITIONAL FAMILIES FOUND BY IFE</p> <hr/> <p>None</p>

NET LOSSES        NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Hawke Brook
DATE	30.4.91	SITE	Shuttlewood
SORTER	VH	SAMPLE CODE	NRA10 0171

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

		LOSSES	GAINS
<b>A</b>	<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>B</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 Dytiscidae

NET LOSSES        NET GAINS   

NOTES    1 Agabus sp. (larva) 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Ure
DATE	26.3.90	SITE	Wensley
SORTER	LM	SAMPLE CODE	NRA10 0314

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

		LOSSES	GAINS
<b>A</b>	<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>B</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>
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NET LOSSES        NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION <input style="width: 100%;" type="text" value="Yorkshire"/>	RIVER <input style="width: 100%;" type="text" value="Little Don"/>
DATE <input style="width: 100%;" type="text" value="3.4.91"/>	SITE <input style="width: 100%;" type="text" value="D/s Langsett WTW"/>
SORTER <input style="width: 100%;" type="text" value="RPC"/>	SAMPLE CODE <input style="width: 100%;" type="text" value="NRA10 0199"/>

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

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

<b>B</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
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NET LOSSES                     NET GAINS

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Ure

DATE 11.4.91

SITE Aysgarth

SORTER CG

SAMPLE CODE NRA10 0322

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
<b>A</b>	<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>B</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 Taeniopterygidae 2 Limnephilidae

NET LOSSES 0

NET GAINS 2

NOTES

1 Brachyptera sp.  
2 Halesus sp.

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Dove

DATE 23.4.91

SITE Darfield

SORTER SAL

SAMPLE CODE NRA10 0126

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

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

<b>B</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 Limnephilidae

NET LOSSES 0

NET GAINS 1

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Marske Beck
DATE	9.4.91	SITE	Marske
SORTER	CG	SAMPLE CODE	NRA10 0208

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

		LOSSES	GAINS
<b>A</b>	<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-weight: bold;">None</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center; font-weight: bold;">None</p>

<b>B</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; font-weight: bold;">1 Hydroptilidae</p>
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NET LOSSES        NET GAINS   

NOTES    1 Ithytrichia sp. 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Don
DATE	3.4.91	SITE	Dunford Bridge
SORTER	JBS	SAMPLE CODE	NRA10 0118
AQC OF BMWP FAMILIES		A. IN VIAL	+
		B. IN SAMPLE	+

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

NET LOSSES	0	NET GAINS	0
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NOTES	2 Crangonyx pseudogracilis
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# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Eller Beck
DATE	8.4.91	SITE	Long Dam
SORTER	LMB	SAMPLE CODE	NRA10 0141

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

		LOSSES	GAINS
<b>A</b>	<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 <i>Lymnaeidae</i>	2 <i>Tipulidae</i>

<b>B</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 <i>Planorbidae</i> 4 <i>Heptageniidae</i> 5 <i>Gyrinidae</i>

NET LOSSES        NET GAINS   

NOTES

2 *Tipula montium* group  
 3 *Anisus vortex*  
 4 *Rhithrogena* sp.  
 5 *Orectochilus villosus*

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Dearne
DATE	9.5.91	SITE	Adwick-Upon-Dearne
SORTER	SAL	SAMPLE CODE	NRA10 0094

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

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

NET LOSSES        NET GAINS   

NOTES    1 Planorbis carinatus 1 only

# 1991. RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Calder
DATE	3.4.91	SITE	Copley
SORTER	VH	SAMPLE CODE	NRA10 0065

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

		LOSSES	GAINS
<b>A</b>	<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-weight: bold;">None</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center; font-weight: bold;">None</p>
<b>B</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; font-weight: bold;">1 Hydrobiidae 2 Elmidae</p>

NET LOSSES        NET GAINS   

NOTES

1 Potamopyrgus jenkinsi 1 only  
 2 Elmis aenea (larva) 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Cod Beck
DATE	17.4.91	SITE	Borrowby
SORTER	EA	SAMPLE CODE	NRA10 0073

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

		LOSSES	GAINS
<b>A</b>	<p style="text-align: center;"><u>VIAL</u></p> <p>Differences between:                      i) BMWP families listed on sample data sheet and                      ii) BMWP families found in VIAL by IFE</p>	<p style="text-align: center;">BMWP FAMILIES NOT FOUND BY IFE</p> <p style="text-align: center;">1 Hydrophilidae</p>	<p style="text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</p> <p style="text-align: center;">None</p>

<b>B</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;">None</p>
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NET LOSSES     NET GAINS

NOTES

1 Terrestrial beetle (Nitidulidae) in vial

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Crimple
DATE	11.4.91	SITE	Follifoot
SORTER	EA	SAMPLE CODE	NRA10 0404

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

		LOSSES	GAINS
<b>A</b>	<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 Hydrophilidae	None
<b>B</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 Hydropsychidae

NET LOSSES        NET GAINS   

NOTES

1 Terrestrial beetle (Nitidulidae) in vial  
 2 Pisidium sp. 1 only  
 3 Hydropsyche sp. 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Nidd
DATE	11.4.91	SITE	Ornamental Bridge
SORTER	FN	SAMPLE CODE	NRA10 0218

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

		LOSSES	GAINS
<b>A</b>	<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>B</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; font-size: 1.2em;">1 Hydrobiidae</p>

NET LOSSES        NET GAINS   

NOTES    1 Potamopyrgus jenkinsi

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Derwent
DATE	23.4.91	SITE	Low Hutton
SORTER	RM	SAMPLE CODE	NRA10 0102

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

		LOSSES	GAINS
<b>A</b>	<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>B</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 Caenidae 3 Psychomyiidae

NET LOSSES        NET GAINS   

NOTES

1 Planaria torva, Polycelis nigra/tenuis  
 2 Caenis horaria 1 only  
 3 Lype sp. 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

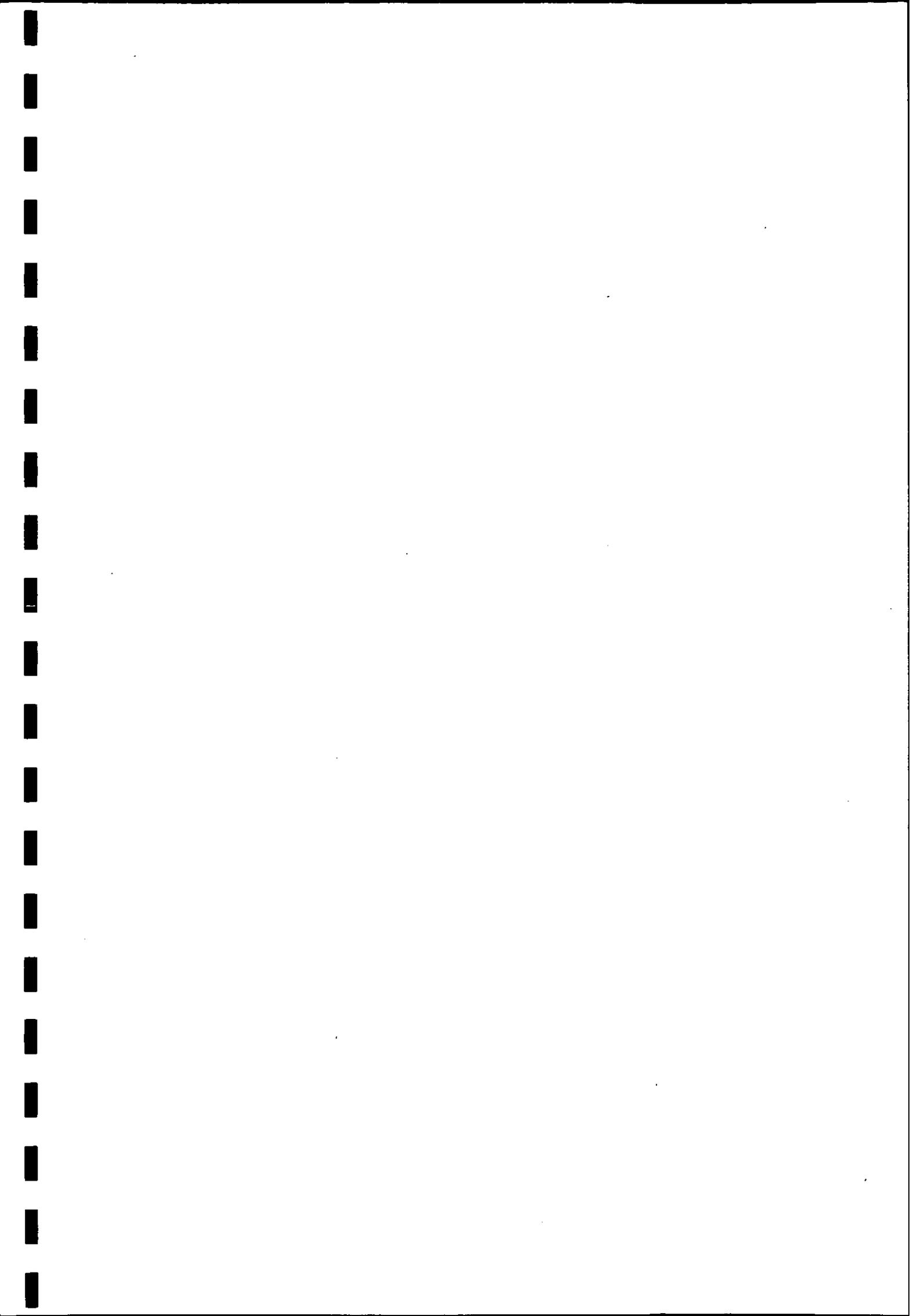
REGION	Yorkshire	RIVER	Stonegate Beck
DATE	24.4.91	SITE	Glaisdale
SORTER	CG	SAMPLE CODE	NRA10 0287

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

		LOSSES	GAINS
<b>A</b>	<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 Polycentropodidae
<b>B</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 Sphaeriidae 4 Caenidae 5 Scirtidae 6 Limnephilidae 7 Goeridae

NET LOSSES        NET GAINS   

- NOTES
- |  |
|--|
| <ul style="list-style-type: none"> <li>1 <i>Polycentropus flavomaculatus</i></li> <li>2 <i>Polycelis felina</i> 1 only</li> <li>3 <i>Pisidium</i> sp.</li> <li>4 <i>Caenis rivulorum</i> 1 only</li> <li>5 <i>Elodes</i> sp. (larvae)</li> <li>6 <i>Drusus annulatus</i>, <i>Ecclisopteryx guttulata</i></li> <li>7 <i>Silo</i> sp. (juvenile) 1 only</li> </ul> |
|--|



# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Billingley Dike

DATE 17.7.91

SITE B6273 Bridge

SORTER SGT

SAMPLE CODE NRA10 2066

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
<b>A</b>	<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>B</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 Hydrobiidæ 2 Haliplidae

NET LOSSES 0

NET GAINS 2

**NOTES**

1 Potamopyrgus jenkinsi 1 only  
2 Haliplus sp. (adult + larvac)

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Little Beck
DATE	15.7.91	SITE	U/s Woundales Beck
SORTER	FN	SAMPLE CODE	NRA10 0658

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 Lymnaeidae 2 Leptoceridae

NET LOSSES        NET GAINS   

NOTES

1 Lymnaea peregra 1 only  
2 Athripsodes cinereus, A.albifrons/bilineatus

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION <input style="width: 80%;" type="text" value="Yorkshire"/>	RIVER <input style="width: 80%;" type="text" value="Spinksburn Beck"/>
DATE <input style="width: 80%;" type="text" value="11.6.91"/>	SITE <input style="width: 80%;" type="text" value="Wydra"/>
SORTER <input style="width: 80%;" type="text" value="JBS"/>	SAMPLE CODE <input style="width: 80%;" type="text" value="NRA10 2022"/>

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

	LOSSES	GAINS								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;"><b>A</b></td> <td style="width: 30%; text-align: center;"><u>VIAL</u></td> <td style="width: 30%; text-align: center;">BMWP FAMILIES NOT FOUND BY IFE</td> <td style="width: 35%; text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</td> </tr> <tr> <td></td> <td style="vertical-align: top;">                     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; vertical-align: middle;">None</td> <td style="text-align: center; vertical-align: middle;">None</td> </tr> </table>	<b>A</b>	<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>A</b>	<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 border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;"><b>B</b></td> <td style="width: 30%; text-align: center;"><u>SAMPLE</u></td> <td style="width: 30%; text-align: center;">BMWP FAMILIES NOT FOUND BY IFE</td> <td style="width: 35%; text-align: center;">ADDITIONAL FAMILIES FOUND BY IFE</td> </tr> <tr> <td></td> <td style="vertical-align: top;">                     Differences between:                      i) BMWP families listed on sample data sheet and                      ii) BMWP families found in SAMPLE by IFE                 </td> <td style="vertical-align: top;">                     (This box only completed when no vial supplied with sample)                 </td> <td style="vertical-align: top;">                     1 Leptophlebiidae                 </td> </tr> </table>	<b>B</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 Leptophlebiidae		
<b>B</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 Leptophlebiidae							

NET LOSSES        NET GAINS   

NOTES 
 1 Paraleptophlebia sp. 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Sand Beck
DATE	6.8.91	SITE	u/s Badger Beck
SORTER	RM	SAMPLE CODE	NRA10 0697

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 Caenidae

NET LOSSES        NET GAINS   

NOTES

1 Caenis rivulorum 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Wharfe
DATE	23.7.91	SITE	Tadcaster
SORTER	SGT	SAMPLE CODE	NRA10 0345

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

	LOSSES	GAINS
<b>A</b>	<b>VIAL</b>	<b>ADDITIONAL FAMILIES FOUND BY IFE</b>
Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE  1 Tipulidae* 2 Viviparidae	None

<b>B</b>	<b>SAMPLE</b>	<b>ADDITIONAL FAMILIES FOUND BY IFE</b>
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)	3 Tipulidae*

NET LOSSES        NET GAINS   

NOTES

1,3 Atherix ibis in vial, Antocha vitripennis in sample

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION <span style="float: right;">Yorkshire</span>	RIVER <span style="float: right;">Wharfe</span>
DATE <span style="float: right;">29.7.91</span>	SITE <span style="float: right;">Ilubberholme</span>
SORTER <span style="float: right;">JCP</span>	SAMPLE CODE <span style="float: right;">NRA10 0336</span>

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

	LOSSES	GAINS
<b>A</b> <u>VIAL</u>  Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE  None	ADDITIONAL FAMILIES FOUND BY IFE  1 Rhyacophilidae 2 Limnephilidae

<b>B</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

1,2 Pupae.

Comments section of NRA form suggests that these two families were identified but not added to BMWP list.  
 Sericostomatidae pupa not found in vial.

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Cover
DATE	21.6.91	SITE	Braidley
SORTER	EA	SAMPLE CODE	NRA10 0630

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

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

B	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES        NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION <span style="border: 1px solid black; padding: 2px;">Yorkshire</span>	RIVER <span style="border: 1px solid black; padding: 2px;">Fleemis Gill</span>
DATE <span style="border: 1px solid black; padding: 2px;">21.6.91</span>	SITE <span style="border: 1px solid black; padding: 2px;">Gammersgill</span>
SORTER <span style="border: 1px solid black; padding: 2px;">FN</span>	SAMPLE CODE <span style="border: 1px solid black; padding: 2px;">NRA10 0629</span>

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

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

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

NET LOSSES 0                    NET GAINS 3

**NOTES**

1 Lumbricidae (including Eiseniella tetraedra).  
 Noted in Comments section of NRA form but not added to BMWP list.  
 2 Odontocerum albicorne  
 3 Athripsodes aterrimus 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Sutherland Beck

DATE 24.7.91

SITE U/s Little Beck

SORTER EA

SAMPLE CODE NRA10 0679

AQC OF BMWP FAMILIES    A. IN VIAL   

B. IN SAMPLE   

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	1 Planorbidae 2 Glossiphoniidae 3 Leptoceridae

NET LOSSES 0

NET GAINS 3

**NOTES**

1 Indet Planorbid (decalcified) 1 only  
 2 Helobdella stagnalis 1 only  
 3 Mystacides azurea (pupa) 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Smelt Mill Beck

DATE 14.8.91

SITE Near Hartforth

SORTER EA

SAMPLE CODE NRA10 0710

AQC OF BMWP FAMILIES    A. IN VIAL     +

B. IN SAMPLE     +

		LOSSES	GAINS
<b>A</b>	<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>B</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 Nemouridae 2 Scirtidae 3 Psychomyiidae

NET LOSSES 0

NET GAINS 3

**NOTES**

1 Nemoura avicularis 1 only  
2 Elodes sp. (larva) 1 only  
3 Tinodes waeneri 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Silkstone Beck

DATE 26.7.91

SITE Pothouse Bridge

SORTER SAL

SAMPLE CODE NRA10 2082

AQC OF BMWP FAMILIES    A. IN VIAL    +

B. IN SAMPLE    +

		LOSSES	GAINS
<b>A</b>	<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>B</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 Glossiphoniidae

NET LOSSES 0

NET GAINS 1

**NOTES**

1 Glossiphonia complanata 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Dearne

DATE 17.7.91

SITE Marle's Bridge

SORTER JCP

SAMPLE CODE NRA10 2073

AQC OF BMWP FAMILIES    A. IN VIAL   

B. IN SAMPLE   

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES

NET GAINS

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Carlesmoor Beck
DATE	6.6.91	SITE	Carlesmoor
SORTER	FN	SAMPLE CODE	NRA10 0608

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

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

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

NET LOSSES        NET GAINS   

NOTES

1 Baetis sp. (head + thorax) 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Capelshaw Beck
DATE	11.6.91	SITE	Dukes Hill
SORTER	RPC	SAMPLE CODE	NRA10 2020

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

		LOSSES	GAINS
<b>A</b>	<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 Scirtidae 2 Glossiphoniidae*	None

<b>B</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 Glossiphoniidae*

NET LOSSES        NET GAINS   

NOTES

1 Cast skin in vial  
3 Glossiphonia complanata

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION <input style="width: 80%;" type="text" value="Yorkshire"/>	RIVER <input style="width: 80%;" type="text" value="Linton Beck"/>
DATE <input style="width: 80%;" type="text" value="18.6.91"/>	SITE <input style="width: 80%;" type="text" value="Bow Bridge"/>
SORTER <input style="width: 80%;" type="text" value="JCP"/>	SAMPLE CODE <input style="width: 80%;" type="text" value="NRA10 2043"/>

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 Sericostomatidae

NET LOSSES     NET GAINS

NOTES

1 Sericostoma personatum 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Wharfe
DATE	17.7.91	SITE	U/s Pool Paper Mill
SORTER	RPC	SAMPLE CODE	NRA10 0338

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 Hydropsychidae

NET LOSSES        NET GAINS   

NOTES

1 Hydropsyche siltalai (pupae)

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Wharfe
DATE	29.7.91	SITE	Ilkley
SORTER	VH	SAMPLE CODE	NRA10 2086

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

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Ouse
DATE	8.8.91	SITE	Acaster Malbis
SORTER	FN	SAMPLE CODE	NRA10 0236

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

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES        NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION

RIVER

DATE

SITE

SORTER

SAMPLE CODE

AQC OF BMWP FAMILIES A. IN VIAL

B. IN SAMPLE

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES

NET GAINS

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Barney Beck
DATE	7.6.91	SITE	Redmire
SORTER	EA	SAMPLE CODE	NRA10 0599

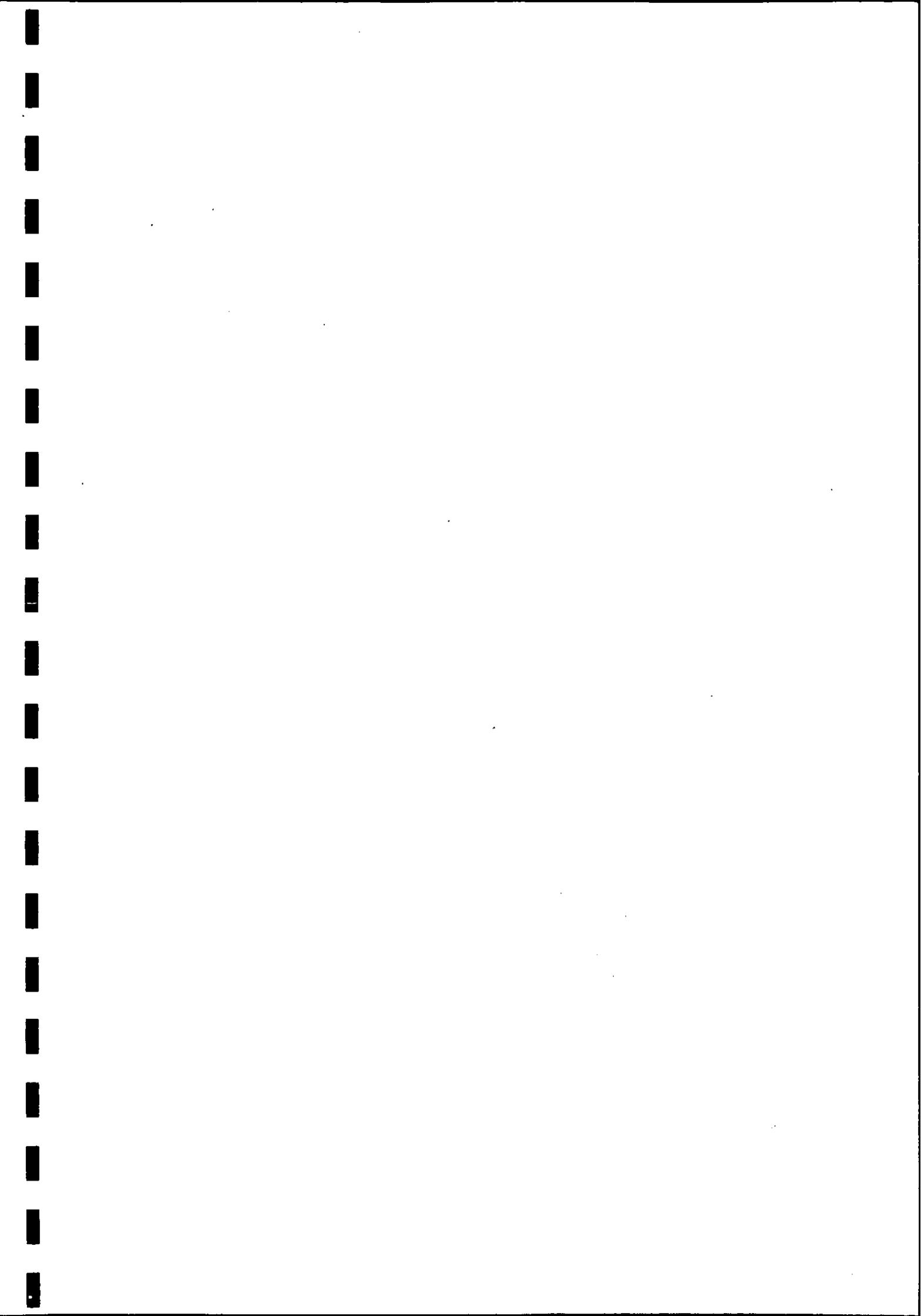
AQC OF BMWP FAMILIES    A. IN VIAL        B. IN SAMPLE   

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

B	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES        NET GAINS   

NOTES



# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION

RIVER

DATE

SITE

SORTER

SAMPLE CODE

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

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES

NET GAINS

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Ottringham Drain
DATE	6.11.91		SITE	Far Marsh Farm
SORTER	JM		SAMPLE CODE	NRA10 0886

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

		LOSSES	GAINS
<b>A</b>	<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>B</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

NET LOSSES        NET GAINS   

NOTES    1 Potamopyrgus jenkinsi

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Knoll Beck

DATE 11.11.91

SITE Old Moor Bridge

SORTER SAL

SAMPLE CODE NRA10 0457

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

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

NET LOSSES 0

NET GAINS 2

NOTES

1 *Armiger crista*, *Planorbis carinatus*  
2 *Pisidium* sp.

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Kex Beck
DATE	17.10.91		SITE	Beamsley
SORTER	JK		SAMPLE CODE	NRA10 0190

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

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES        NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Lumbutts Clough
DATE	16.10.91		SITE	D/s Tip Leachates
SORTER	FC		SAMPLE CODE	NRA10 2254

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

		LOSSES	GAINS
A	<u>VIAL</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	1 Planariidae* 2 Sphaeriidae*	None

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

NET LOSSES        NET GAINS   

NOTES

3 Polycelis nigra/tenuis  
4 Pisidium sp.

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Wood Gutter
DATE	3.10.91		SITE	Redhouse Wood
SORTER	JM		SAMPLE CODE	NRA10 0805

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

		LOSSES	GAINS
<b>A</b>	<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 Asellidae
<b>B</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 Asellus meridianus

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Went Beck
DATE	1.10.91		SITE	U/s Hesse Beck
SORTER	SAL		SAMPLE CODE	NRA10 2135

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

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES   

NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION

RIVER

DATE

SITE

SORTER

SAMPLE CODE

AQC OF BMWP FAMILIES    A. IN VIAL   

B. IN SAMPLE   

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES

NET GAINS

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Alcomden Water

DATE 7.10.91

SITE U/s Graining Water

SORTER VH

SAMPLE CODE NRA10 2238

AQC OF BMWP FAMILIES    A. IN VIAL    +

B. IN SAMPLE    +

		LOSSES	GAINS
<b>A</b>	<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 Oligochaeta*	2 Leptoceridae

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

NET LOSSES    0

NET GAINS    2

NOTES

- 2 Athripsodes sp. (juvenile)
- 3 Pisidium sp 1 only
- 4 Lumbriculus variegatus, Stylodrilus heringianus

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER White Beck

DATE 9.10.91

SITE East Newton

SORTER RM

SAMPLE CODE NRA10 0766

AQC OF BMWP FAMILIES    A. IN VIAL    +

B. IN SAMPLE    +

		LOSSES	GAINS
<b>A</b>	<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 Aeshnidae 2 Goeridae	3 Libellulidae
<b>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	4 Nemouridae

NET LOSSES    2

NET GAINS    2

NOTES

2 Empty pupal case in vial  
3 *Sympetrum nigrescens/striolatum*  
4 *Nemoura avicularis*

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Frodingham Beck

DATE 19.11.91

SITE Emmotland

SORTER RM

SAMPLE CODE NRA10 0903

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
<b>A</b>	<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 Caenidae	None

<b>B</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

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Don
DATE	4.11.91		SITE	Springvale
SORTER	RPC		SAMPLE CODE	NRA10 2105

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

		LOSSES	GAINS
<b>A</b>	<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>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE		(This box only completed when no vial supplied with sample)	None

NET LOSSES   

NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire	RIVER	Lul Beck
DATE	10.10.91	SITE	Nr Ramsgill
SORTER	RM	SAMPLE CODE	NRA10 0822

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 Leptophlebiidae

NET LOSSES        NET GAINS   

NOTES

1 Polycelis felina  
2 Paraleptophlebia submarginata 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Hew Beck
DATE	29.10.91		SITE	U/s Double Dike
SORTER	JM		SAMPLE CODE	NRA10 0892

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

		LOSSES	GAINS
A	<u>VIAL</u>  Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in VIAL by IFE	BMWP FAMILIES NOT FOUND BY IFE  1 Hydrobiidae*	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  2 Hydrobiidae*
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NET LOSSES   

NET GAINS   

NOTES

1,2 Empty shell in vial, Potamopyrgus jenkinsi in sample

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Wharfe
DATE	9.10.91		SITE	Barden Bridge
SORTER	JK		SAMPLE CODE	NRA10 0346

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

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

NET LOSSES        NET GAINS   

NOTES

1 Terrestrial beetle (Aphodius sp, adult) in vial

2 Acroloxus lacustris

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Stonesdale Beck
DATE	26.9.91		SITE	Nr West Stonesdale
SORTER	JM		SAMPLE CODE	NRA10 0790

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

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

NET LOSSES   

NET GAINS   

NOTES

- 1 Paraleptophlebia submarginata
- 2 Platambus maculatus (larva) 1 only
- 3 Ecclisopteryx guttulata 1 only

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION Yorkshire

RIVER Ramsden Clough

DATE 23.10.91

SITE Holmbridge

SORTER SGT

SAMPLE CODE NRA10 2279

AQC OF BMWP FAMILIES A. IN VIAL +

B. IN SAMPLE +

		LOSSES	GAINS
<b>A</b>	<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 Limnephilidae*	2 Lymnaeidae
<b>B</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 Asellidae 4 Hydroptilidae 5 Limnephilidae*

NET LOSSES 0

NET GAINS 3

NOTES

- 2 Lymnaea peregra
- 3 Asellus aquaticus 1 only
- 4 Oxyethira sp. 1 only
- 5 Indet limnephilids (juveniles)

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Huby Burn
DATE	3.10.91		SITE	D/s STW Burn Hall
SORTER	EA		SAMPLE CODE	NRA10 0802

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
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NET LOSSES        NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Hebden Water
DATE	7.10.91		SITE	U/s Grimsworth Dean
SORTER	FC		SAMPLE CODE	NRA10 2240

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

		LOSSES	GAINS
<b>A</b>	<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 <i>Limnephilidae</i>	None

<b>B</b>	<u>SAMPLE</u>	BMWP FAMILIES NOT FOUND BY IFE	ADDITIONAL FAMILIES FOUND BY IFE
	Differences between: i) BMWP families listed on sample data sheet and ii) BMWP families found in SAMPLE by IFE	(This box only completed when no vial supplied with sample)	None

NET LOSSES        NET GAINS   

NOTES

# 1991 RIVER QUALITY SURVEY

## AQC - BIOLOGICAL SAMPLES

REGION	Yorkshire		RIVER	Manywells Beck
DATE	26.9.91		SITE	U/s Harden Beck
SORTER	SGT		SAMPLE CODE	NRA10 2201

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

		LOSSES	GAINS
<b>A</b>	<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>B</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 Polycentropodidae

NET LOSSES        NET GAINS   

NOTES

1 Polycelis felina  
 2 Plectrocnemia sp. (juvenile) 1 only