

The Faunal Richness of Headwater Streams

Progress Report for the Period  
September 1993 - December 1993

M.T. Furse  
N.J. Grieve  
R.J.M. Gunn  
K.L. Symes  
J.M. Winder  
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Institute of Freshwater Ecology

January 1994

Progress Report 242/11/Y



**NRA**

*National Rivers Authority*



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## 1. INTRODUCTION

This project is in four stages:-

- A review of existing data.
- Catchment studies.
- An evaluation of the impact of agricultural activities.
- The development of a catchment strategy.

Stage 1 is complete and has been fully documented in previous reports. Production of the final draft of the Stage 2 report was completed during the current reporting period.

The principal work undertaken during the reporting period has been the sorting of the Stage 3 samples.

## **2. TECHNICAL PROGRESS**

### **2.1 Objectives**

The overall and specific objectives of each stage are detailed in the Project Investment Appraisal (PIA) which is Schedule 2 of the Memorandum of Agreement for Research Contract (ref:54015000) between the National Rivers authority (NRA) and the Institute of Freshwater Ecology (IFE)

### **2.2 Work programme**

Stage 3 activities outlined in Schedule 2 of the PIA comprise:-

- Establish which agricultural practices have not been sufficiently well covered by the catchment studies for a range of geological and geographical catchments.
- Consult the NRA and other sources of land use/pollution information and in consultation with the project leader establish further headwater stream sites to fill these gaps.
- Utilise the same field methodologies as Stage 2 in order to obtain biological, land cover and river corridor data for these sites.
- Analyse the data as appropriate.
- Identify taxa which may be used as indicators of environmental damage due to agricultural activity.
- Produce an R&D note reporting on this stage of the work.

In earlier discussions between the Project Leader (NRA) and the Project Manager (IFE) an agreed interpretation of the first two elements of the work programme was formulated. This is detailed in the previous report.

In summary a stratified random selection process was devised in order to ensure an adequate coverage of all major agricultural practices in each of the four study catchments. The strata were five major aggregate land cover types. The selection matrix was the national OS 1km square grid of Great Britain. Further details are given in Appendix I.

## **2.3    Progress achieved**

### **2.3.1    Stage 2**

In the previous progress report it was noted that further hydrogeological data were required to complete the final revision of the Stage 2 report. This was requested from the individual NRA regions

Provision of the requested data was completed on November 18th. The third revision of the main report was then drafted and forwarded to the Project Leader and Research co-ordinator on December 10th for final comment and technical advice. A revised copy of the appendix volume was forwarded shortly afterwards on the December 13th. Replies are awaited.

### **2.3.2    Stage 3**

Sorting Stage 3 samples has continued and some identification has been undertaken

### **2.3.2    General and administrative**

The project Leader and Project Manager have liaised, as necessary, throughout the reporting period.

### **3. INTERIM RESULTS**

#### **3.1 River Cam**

Seven samples were sorted and one identified.

#### **3.2 River Derwent**

Sixteen samples were sorted and nine identified during the reporting period. This brought the total number sorted to 26. None had previously been identified.

#### **3.3 River Lugg**

No samples have yet been sorted or identified for the Lugg system.

#### **3.4 River Stour**

Five samples were sorted but none identified.

### **4. WORK PROGRAMME FOR THE NEXT REPORTING PERIOD**

#### **4.1 Stage 2**

- The R&D Note be completed and bound as stipulated by the NRA.
- Sixty copies of Volume 1 and 15 of Volume 2 will be supplied to the NRA.

#### **4.2 Stage 3**

- Sorting and identification of biological samples will continue.
- Liaison with the Project Leader will be maintained and progress with the project will be reported to the NRA.

## **5. COST OF WORK DURING THE REPORTING PERIOD**

The cost of the work during the reporting period is likely to be generally in line with cost-base adjusted budget in the Memorandum of Agreement.

Detailed costings will be made available to the NRA, via the IFE Finance Office.

## **6. ESTIMATE OF THE TOTAL COSTS OF THE WORK**

The total cost of the work is likely to be generally in line with the cost-adjusted budget listed in Section 10 of the PIA and Schedule 8 of the project contract.

Two exceptions referred to in the previous Progress Report still apply. The first concerns the additional costs of the use of colour in the principal project reports, as requested by the NRA. Following discussions between IFE and NRA, an additional sum of £2,100 is to be sought from NRA to meet the extra costs generated by this request, and the provision of extra copies of the final overall project report.

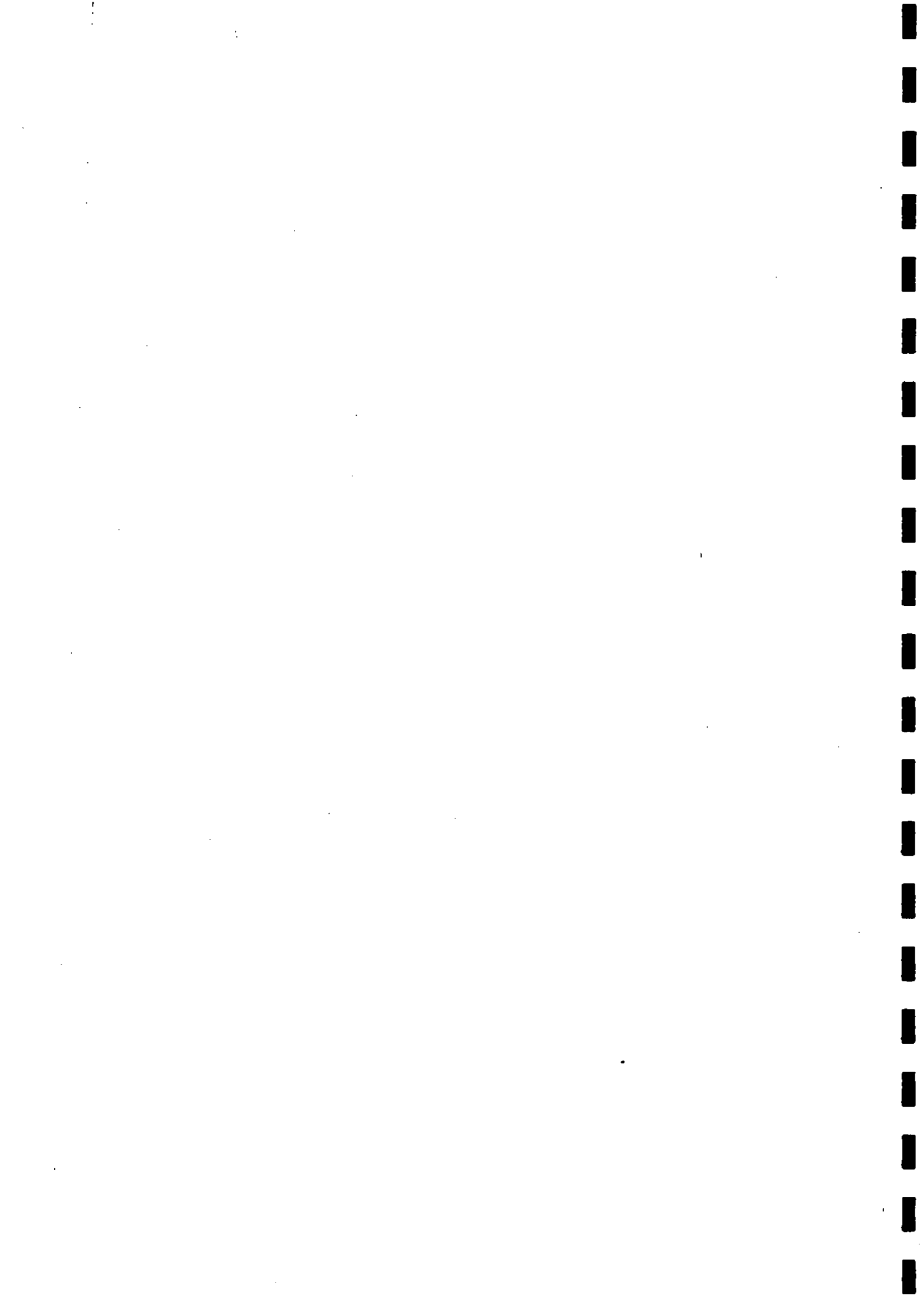
A second possible source of additional costs is the licence fees payable to Ordnance Survey for digitizing their base-maps, as used for land cover surveys in this study. The potential costs involved here have yet to be quantified.

## **7. ESTIMATE OF COSTS FOR THE NEXT REPORTING PERIOD**

Stage 3 data acquisition and processing remains on schedule and costs for the next three months will be in line with expectation.

## **8. FACTORS LIKELY TO AFFECT THE SATISFACTORY COMPLETION OF THE WORK**

With the exception of the Stage 2 R&D Note the work is currently on schedule and completion of the work within the stipulated contract period is still anticipated.



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