

FreshwaterLife  
DRAFT Annual Report  
April 2005

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FreshwaterLife team.

[www.freshwaterlife.org](http://www.freshwaterlife.org)  
[www.freshwaterlife.info](http://www.freshwaterlife.info)

# FreshwaterLife DRAFT Annual Report

## April 2005

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## Introduction - background to FreshwaterLife

### *The Project*

FreshwaterLife is working collaboratively to create the first comprehensive source of freshwater information on the web, with an emphasis on developing common methodological approaches, developing standards for biological data, and offering access to information resources in a variety of formats. A key feature is to build on the existing informal networks and relationships which exist between freshwater specialists throughout the world.

FreshwaterLife provides the scientific and technical community and naturalists with tools to conduct their monitoring and research in a more effective and efficient way, and aims to strengthen networking and encourage collaboration and the sharing of information. It provides scientific support for devising and implementing policy. Information on FreshwaterLife, including the scoping study can be found at [www.freshwaterlife.org](http://www.freshwaterlife.org).

### *The Partners*

FreshwaterLife is an initiative of

- The Freshwater Biological Association (FBA), an independent international membership association founded in 1929 which promotes freshwater science.
- The Ponds Conservation Trust (PCT), now known as Ponds Conservation, a UK charity which conserves, restores and creates freshwater habitats with an underpinning of research activity.
- Syngenta, an international crop protection company with a long standing interest in minimising impacts on freshwater systems world wide, and in the sustainable development of products.

Principal collaborators include

- The Environment Agency for England and Wales (EA)
- WWF-UK
- National Biodiversity Network (NBN)
- United Nations Food and Agricultural Organisation (FAO)
- European Network for Biodiversity Information (ENBI)
- The Global Biodiversity Information Facility (GBIF), an international initiative promoting the sharing and exchange of biodiversity information sponsored by governments.
- The Catalogue of Life – A GBIF sponsored programme including partners such as Species2000 and Fauna Europaea. (These are taxonomic initiatives that aim to list species with synonyms, common names etc.) All contribute to the taxonomic basis of FreshwaterLife.
- FishBase, an international information service of 14 years standing, covering over 26,000 fish species
- The Expert Centre for Taxonomic Identification (ETI), an international organisation with a network of 1500 taxonomists world-wide,
- The FreshwaterLife Network – the many organisations around the world that will increasingly help to form FreshwaterLife's global base, in particular the FBA's sister organisations in many countries. The FreshwaterLife Network is a primary means by which the international community of freshwater specialists will be brought together through personal contact, virtual discussions and online conferences.

### *Time frames*

FreshwaterLife is being developed in several stages:

- Scoping study. Completed
- 2001 - 2003 Establishment phase. Completed. This stage established the FreshwaterLife website and built up working relationships with major players (principally Environment Agency, FishBase, FAO, ENBI, WWF etc.) and initiated the FreshwaterLife Network. A Prototype database following the FishBase model was created and the foundation laid for funding of future development.
- 2003-2004 Information Management and exchange System (IMS) established in collaboration with FAO, ENBI funding achieved and the project started.
- 2004-2005, Prove the concept of the FreshwaterLife Ecological Database Mark 1 having learned from the experience of the Prototype database and populate the IMS by recruiting editors in selected areas of expertise. Progress the Pilot Key to the *Ephemeroptera* larvae of Europe through the ENBI project, and progress the Pilot key to higher taxa of freshwater fauna and possible further keys.

The next stages:

- Populate the Ecological database, mainly by involving specialists within the FreshwaterLife Network and by establishing FreshwaterLife as the means of choice for storing retrieved ecological information from literature and original research.
- Completion of the Pilot Key to the *Ephemeroptera* larvae of Europe and other keys.

### ***FreshwaterLife team at March 2005;***

Manager – p/t Anne Powell  
Senior officer - f/t Kearon McNicol  
Officer - f/t Robert Holland  
Officer – f/t Colin Hearn  
IT specialist - p/t Ian Pettman  
Archive developer – p/t Diane Hewitt

Advisors/consultants;  
IT - Phil Heneghan  
Ecology - J Biggs, P Williams

### ***Volunteers and projects;***

Simon Pawley f/t volunteer  
Vicky Parr (f/t volunteer for 3 month)  
Hanna Lena Hartikainen (*Ephemeroptera* key/ ENBI)  
Lydia King (IMS species and groups)

## **A. Report on the year April 2004 to March 2005**

### **1. The year April 2004 to March 2005 – Main events / achievements**

For monthly reports of events and achievements (as presented to FBA) see Appendix 1

### **2. Computing**

FreshwaterLife is now operating a multiple domain address system to provide quicker access to different sections of FreshwaterLife:

<a href="http://www.freshwaterlife.info">http://www.freshwaterlife.info</a>	Main Home Page – emphasis on info.
<a href="http://www.freshwaterlife.org">http://www.freshwaterlife.org</a>	About the project/organisation
<a href="http://id.freshwaterlife.info">http://id.freshwaterlife.info</a>	ID keys home page
<a href="http://ecosearch.freshwaterlife.info">http://ecosearch.freshwaterlife.info</a>	Ecological database home page
<a href="http://help.freshwaterlife.info">http://help.freshwaterlife.info</a>	Help Files
<a href="http://images.freshwaterlife.info">http://images.freshwaterlife.info</a>	Image archive

Email addresses continue to follow the format of: [person@freshwaterlife.org](mailto:person@freshwaterlife.org), where ‘person’ consist of first initial and surname with no space or dot.

### **3. IMS System**

In 2004 FAO Fisheries Department made available an instance of the FAO CDS system which, as the FreshwaterLife Information Management System is now populated (564 topics and subtopics, 300 of which are geographic) is encouraging networking and attracting an average of 700 page views being accessed per month. FreshwaterLife has continued to build on the relationship with Rome, and twice this year FAO has provided developer time, for modest sums of money (£3,200 from FwL budget and £2000 from FBA) for upgrades.

### **4. Staffing/management**

#### a) Core group

The FreshwaterLife team is responsible to the Core Group which is made up of individuals representing the founding organisations of FreshwaterLife, major funding partners and FreshwaterLife staff. Ian Dunn (Hon Treasurer to FBA Council) acts as a conduit between FwL and the FBA Council. The Core Group, under the chairmanship of Steve Maund (Syngenta) consists of;

All FwL staff  
 J Biggs, P Williams (PCT)  
 Roger Sweeting (FBA)  
 Ian Dunn (FBA Council)  
 Lindsey Powell (EA)  
 A representative of WWF-UK  
 Phil Heneghan (Syngenta) – invited to attend

Core Group meetings have taken place on;  
 28<sup>th</sup> April 2004 Ferry House  
 29<sup>th</sup> -30<sup>th</sup> July 2004 – meeting in Basel  
 9<sup>th</sup> November 2004 – meeting in EA Warrington

17<sup>th</sup> January 2004 (teleconference)

5<sup>th</sup> – 6<sup>th</sup> April 2005 – strategy meeting at Ferry House

#### b) Staff

Colin Hearn was appointed (April 04) as IT Development Officer for FreshwaterLife. His focus is the development of the Ecological Database and accompanying Software tools.

Simon Pawley and Victoria Parr joined the FreshwaterLife team in June 2004 as volunteers. Their work initially focussed on developing topics within the IMS system. Victoria Parr then worked with Fiona Helmsley-Flint a post-graduate student at Oxford Brookes University sponsored by the Ordnance Survey to develop an ontology relating to river systems. Victoria Parr left FreshwaterLife in October. FwL continues its volunteer management policy which includes interviews, appraisals and giving advice to volunteers about the cvs.

Simon Pawley's work has focussed on developing digital keys. Since October he has worked principally on the ENBI Mayfly project and more recently on developing a key to aquatic macrophytes.

Diane Hewitt started work on the image archive for one day a week from mid-January.

The management balance was changed during the year to ensure adequate effort was directed towards to development and proof of concept work on the ontology-based database. This involved AP taking direct line management responsibility for RH and the volunteers and KMN setting up the IT development group consisting of CH, Ian Pettman (p/t) and Eddie Bland (p/t). This arrangement was reviewed at the end of October (as originally recorded in the minutes of a previous Core Group) and the decision taken to extend it to the end of the financial year. The intention is that the management of RH will revert to KNM at some future date. KNM has taken on the line management of Diane Hewitt (p/t) from January 05. The appraisal system introduced in 2004 has been implemented and KNM, RH, CH, and SP were appraised in February 2005. Vicky Parr had an exit interview prior to departure. The planned discussion with IP and EB did not take place. Arrangements have been made for Andrew Freeman to undertake AP's appraisal (after his further familiarisation with FwL eg attending the Strategy Meeting in April). Targets were discussed and agreed with each member of staff. Further refinement of the target system will take place in the near future when the work plan has been discussed

The appointment of an administrative officer (p/t) (as agreed in July 04) was delayed following discussion with senior management of the FBA who were reluctant to exceed the present staff compliment. Negotiation to increase the hours of present FBA support staff failed to resolve FwL problems. Agreement was obtained to appoint support on contract from an agency – but no suitable candidate was forthcoming. An in-house solution may now be possible.

## **5. Ecological Database**

Two workshops relating to the development of the ecological database (previously known as Mark 1) have been held. The first was in the April 2004 and involved the FwL staff as well as Phil Heneghan from Syngenta and Eddie Bland from the FBA. This meeting set the development strategy for the year.

The second workshop took place in January 2005 and involved FwL team, Phil Heneghan, Richard Hoad from the UN FAO and the Bioinformatics group of the University of Manchester. This meeting endorsed the proof of concept for the Ecological Database and produced a timetable for development over the next 12 months. See Appendix 2.

## 6. Keys

Simon Pawley created a PDF version of the FBA's Ephemeroptera key. Copies have been made available on CD to a number of individuals and have been well received.

The ENBI Mayfly project has made considerable progress with a number of experts in Scandinavian countries being successfully enlisted. Simon Pawley has worked closely with Craig Macadam the coordinator of the Ephemeroptera recording scheme in the UK to further develop the key. Consultation with CM has resulted in a new approach to the establishment of character states for the next stage of the development of the key.

Work has been undertaken on the high level key to invertebrates which was initially being developed in partnership with LUCID and Alan Donaldson. Drawings for character states and a first demo version have been produced.

FwL has started to produce an intermediate key to macrophytes and discussions have been held with a number of partners. Help has recently been promised by Nigel Holmes.

The FBA's fish key has been used to produce a preliminary key to the families of British freshwater fish.

Preliminary discussions have been held with organisations including the Natural History Museum, the Field Studies Council and the Environment Agency about collaborating in the production of a number of other keys.

A user group exercise with EA and Syngenta personnel is planned for the summer 2005 to compare some of the approaches developed by FwL to identification of aquatic invertebrates.

## 7. Network Development

The team has made great efforts to introduce FwL in a number of forums, including the SIL meeting in Lahti, the NW Freshwater Network, etc etc. An analysis of registered users has been completed and is attached as Appendix 3. Twenty editors have been recruited of which ten are active and have been populating FwL. Lessons have been learnt from this process and a number of recommendations for further development put together for the Core Group to discuss.

Approximately one hundred topic introductions have been completed, representing nearly half of the system and the re-writing of the help files has started. Some areas of particular interest have been populated, for example the education (16-18 year olds) section has been developed by the addition of a number of key concepts which are linked to websites and references in the IMS. This part of the IMS aims to assist A level students wishing to prepare themselves for the questions relating to freshwater science.

Two FwL newsletters have been produced, one in February and one in March. FwL has received some positive feedback from these and it is anticipated that newsletters in their present form will be continued for at least the next six months.

## 8. Progress with Organisations:

**UNESCO:** Anne Powell attended the Ecohydrology meeting at UNESCO's Intergovernmental Council. The outcomes of this were that FwL featured in a presentation as part of the ecohydrology forward plan and there was a discussion the "Water for Life" decade and the potential role of FwL.

**UN FAO:** Some progress has been made in the development of a proposal for a joint bid for funding to make data about the African Great Lakes available online. – to be re-phrased Robert and Anne

**NBN:** Attended launch of the NBN gateway. Anne Powell attended her first meeting as a member of the NBN council. Held discussion with Jim Munford and Trevor James at Ferry House about strengthening links between FBA/ FwL and the NBN.

**GBIF:** Developed a proposal with LUCID (at the University of Brisbane) for submission to GBIF. The aim of this was to raise FreshwaterLife's profile.

**Defra:** Meetings have taken place with Paul Leonard and John Roberts from Defra to introduce FwL. Strong interest was expressed in invasive (non endemic) organisms in freshwater and the problems likely to result from climate change.

**Environment Agency:** AP and KMN gave a presentation to the EMCAR board in late January 2005 about FwL developments to date.

John Murray-Bligh and Bill Brierly from the Environment Agency (independently) attended meetings at Ferry House to be updated on the development of both the IMS and the Mark 1 ecological database.

FwL met with Alastair Ferguson and Paul Logan to discuss the work of FwL over the last 12 months. This focussed on Mark 1 development, digital keys and the IMS system.

AP and KMN attended the Ecology and Conservation Seminar in March 2005 at Warwick University.. and gave a demonstration of FwL.

**Other country agencies.....**to be updated

**English Nature:** met with Stuart Clarke and Alastair Burn to discuss strengthening links between FwL/FBA and English Nature.

**Syngenta Foundation:** AP gave the Syngenta Lecture on March 22<sup>nd</sup> (World Water Day) in Basle which seemed to attract interest.

**FBA:** FwL has provided IT support for the FBA which has included making the FBA's library catalogue available online, web enabling the Fritsch collection, helping with the IT move to the Annexe. Refer to paper on relationship with FBA - TO BE COMPLETED AFTER STRATEGY MEETING.

## 9. Financial report for year 2004/2005

See spread sheet at Appendix 4.

Points of note:

- a) The cash flow issues during this year were less severe compared with the last 2 years but there were still delays in the arrival of the EA grant and invoicing. Unfortunately the financial state of FwL was misreported to FBA Council on 2 occasions during the year.
- b) The main expenditure is salaries. Spending on consultancy fees has been similar to last year (ie much lower than the year before). Most fees this year went to FAO to pay for changes and upgrades to the IMS software.
- c) This year the FBA contributed to an FAO upgrade to facilitate the image archive which will benefit FBA's collections of photographs etc.
- d) The "in kind" contribution made by the FBA to FreshwaterLife in the form of accommodation and financial services is considerable.
- e) No major funding bids were written involving consultancy time but three Environment Agency Form As, a draft proposal to FAO, a bid to the Aquarium of the Lakes for funding were completed by staff in the course of the year.
- f) Financial planning has progress in the course of the year by developing the FwL business plan. Various potential products were investigated and decision was made by the Core Group in July to major on e-publishing and the production of a paper from Freshwater Forum in an electronic format is the first step – the second will be the launching of a back number of Forum during the spring of 2005.

## **B. Forward look for 2004/5**

### **1. Main work areas for 05/06**

The start of the year 05/06 coincides with the move of the whole of the FBA from the main building (the Ferry hotel) into the annex and the changes to IT and services that this entails.

The work plan for the year is at Appendix 5. The main work for the year will be;

- a) Ecological database – following the successful proof of concept the aim for the year is to produce tools, ontology and content to enable a physical presence on the web by the end of the year.
- b) IMS and Network Development – to achieve 50 active editors, ? newsletters
- c) Keys – the ENBI – mayfly larval key, the family level key to invertebrates, key to plant families and complete and report upon a user exercise on different key formats.
- d) Image archive
- e) Business planning and management. This will involve the continuing building of funding and cooperative relationships at following levels;
  - i) Local
  - ii) National
  - iii) European
  - iv) Worldwide

### **2. Staffing 05/06**

The work plan anticipates some expansion in staff numbers during the year (? f/t staff and ? p/t staff by end of 05/06). This increase in staff reflects the increased amount of effort that will be put into content of the IMS and the database and the further requirement for specialist IT staff.

### **3. Financial projection**

See Appendix 6 budget for the 2005-2006

In addition to the figures shown other funds will be sought this year.

### **4. Acknowledgements**

FreshwaterLife would like to acknowledge the help and support throughout the year from the staff of the FBA, their colleagues on the FreshwaterLife Core Group, and the FreshwaterLife volunteers and Network members.

March 2005

AMP, KMN, IP, RH, CH, SP, DH

