

They say "a change is as good as a rest" so the summer of 2003 for Stirling University Library is a very restful time.

Many of you will remember the BIDS ISI service, which turned into the Web of Science service. This has gone through a further transformation! To now access the ISI Web of Science Service (for access to the online version of the *Science Citation Index*) and ISI Proceedings, you have to go through the **Web of Knowledge** platform at <http://wok.mimas.ac.uk>. Searching has improved so that instead of typing in your search all at once, you can now type in a search step by step and then combine several ideas together by "anding" the searches, i.e., #1 and #2 and #3. An Athens username and password are still required to use the service.

Another change is that from 1 July in order to access the Geobase database (for geographical and ecological information) you now have to go via the ARC2 service available directly at <http://are.uk.ovid.com>. The major difference in this service is that now an Athens username and password are required whether you are on campus or not.

As well as the above external changes, we are currently changing the whole Library system. The new Library catalogue will have a different look and feel but it will have significantly more features. To connect directly to the new catalogue go to <http://libcat.stir.ac.uk>, although you will be automatically re-directed to this new address from the old address of <http://webpac.stir.ac.uk>.

Lisa Haddow
Clare Allan

And News from an old friend.....!!

The last piece I wrote for this publication was in 1996 when I let you all know that I was moving on from the University Library to concentrate on Staff Development. I'm grateful now for the opportunity to share my good news with the many staff and students in Aquaculture I have worked with over the years (mainly 1979-1995). I am fortunate to have achieved my long-planned ideal of perfect work-life management - retirement! I am retiring

from the University after over 24 years. My entire professional career has been devoted to working in higher education, and I have enjoyed the opportunity and privilege of working with so many wonderful people, from so many different cultures and countries, that have greatly enriched my own life.

I am looking forward to having more time to pursue many of the activities I particularly enjoy, such as sports (badminton, swimming, skiing), and in particular golf. I have in recent years become a keen golfer with a lifelong ambition to play as many of the courses in Scotland as possible. Current status 60 played, over 440 to go! I'm a keen gardener, cook, handworker, and an avid reader, so I'm going to have to bring all my time and personal management skills into play if I'm going to have time for it all And for people too, of course - nothing I like better than chatting to people! Some habits die hard and I will be continuing my commitment to life-long learning, in all sorts of ways.

So I'd like to end with wishing you all success in whatever you set out to do ... and thank you for enriching my life, personally and professionally.

Hilary Duggua
July 2003



Hilary and Lisa at graduation.

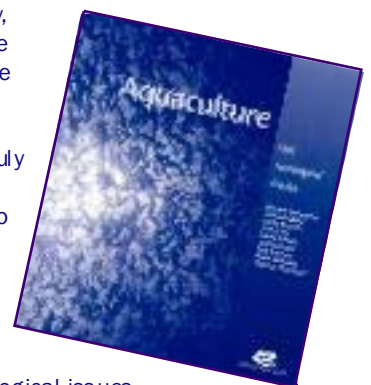
Book Reviews

Trevor Telfer comments on: **Aquaculture: the Ecological Issues.**

A British Ecological Society publication by John Davenport, Kenneth Black, Gavin Burnell, Tom Cross, Sarah Culloty, Suki Ekaratne, Bob Furness, Maire Mulcahy and Helmut Thetmeyer. Published by Blackwell Science Limited, Oxford, UK. 89 pages.

Overall, as the title suggests, the book provides a good introduction to the ecological issues surrounding aquaculture. This has already proven useful for undergraduate courses in the University. It is good that the book provides a global perspective too, including issues in tropical aquaculture and sustainability. However, there is a question about its potential as an 'authoritative text' as some of the data used are out of date and presented in a way that seems to perpetuate the negative myths about aquaculture that abound in the popular press.

In summary, although the authors have missed the chance to provide a truly balanced view, they do take the opportunity to introduce many of the critical ecological issues relating to aquaculture. The glossary is handy and we know already that undergraduate students find an interesting and accessible text.



Live Feeds in Marine Aquaculture.

Edited by Josianne G. Støttrup and Leslie A. McEvoy. Published by Blackwell Publishing. ISBN 0-632-05495-6. Price £79.50

Review by Janet H Brown

Live Feeds in Marine Aquaculture is a book perfectly targeted to fill an important gap in education and research in a specialism that has grown hugely over recent years. The nutritional difficulties of rearing marine fish larvae are well known. Of the potential solutions (diets based on *Artemia* and/or rotifers, or copepods, fully artificial diets or



combinations between any of these), emphasis has been seen to veer towards copepods with their more optimal nutritional characteristics. However, current practice seems to be reverting back to *Artemia* with its "off the shelf" properties and possibly lower disease risk - provided its nutritional failings can be doctored. It therefore seems particularly appropriate that this book appears at such a time covering all aspects of the live feeds side of the argument so keeping all possible solutions open for as long as possible.

The historical perspective is so often overlooked and it is important that references not yet accessible online are included, especially when the book is specifically aimed at advanced undergraduates and postgraduates. The wide-ranging historical context setting of the first chapter very much sets the tone for the rest of the book with every chapter also taking in the long view. Much of this historic information (this is historic in scientific terms) would not be easily accessible from any other source and yet has governed so much of what has actually happened. It is arguable that without periodic acute shortages of *Artemia*, for example, many new avenues of research would never have been stimulated. It is useful for students to be aware of outside influences and how they are not necessarily isolated occurrences, but can happen again. The more recent and current research findings are very clearly introduced and would make this book the first requirement for anyone wanting any information on any aspect of live feeds. The chapters cover a general overview of marine aquaculture with its requirement for live feeds, and proceeds to chapters on production and nutritional value of rotifers, chapters on *Artemia* in general and one on production of *Artemia* from natural lakes and similar approaches for copepods and microalgae.

It is quite striking the expectation expressed by many of the contributors that artificial diets will improve to the level where they will increasingly supply all the larval fish requirements. Even if this is so, it is hard to imagine that much of these eventual diets will not depend to a large degree for their ingredients from live cultures originally. What will certainly not be in doubt is that any such diets will owe a huge debt to the research carried out on live feeds and this research is admirably covered in this volume. I would recommend this book most highly for anyone interested in marine aquaculture.

MSc in Sustainable Development

Sustainable development can be defined as "meeting the needs of the present generation without sacrificing the potential of future generations" (WCED, 1987). The concept has captured the imagination of world leaders and the public alike and, as such, has emerged as the guiding idea in policy and application from local to international levels. Refined and signed up under the auspices of the UN's Commission for Environment and Development conferences in Rio (1992) and S.Africa (2002) sustainable development is no longer an idealistic dream, but increasingly a practical reality.

It is in recognition of its importance and poignancy for today's society, that the University of Stirling has developed a new MSc course to cover many aspects of this interesting topic. It intends to provide skills to a new cadre of committed people, capable of making significant contributions across society locally, nationally and internationally. The challenges thrown down in making development sustainable encompass historical and philosophical approaches as well as biotechnical, economic, social, institutional and policy related perspectives. The course is designed to apply this unique mix of theory and practice and will lead to a valuable qualification enabling participants to engage in a wide variety of sectors.

As sustainable development is a new disciplinary area, it requires a multidisciplinary set of tools and understanding and this approach is drawn from across the University. The two primary departments involved are the Department of Environmental Science and the Institute of Aquaculture, although other departments and external experts have inputs where relevant. The Institute of Aquaculture has developed case studies intended to give all students, regardless of their backgrounds, an insight into the aquatic aspects of environmental degradation, and sustainable planning for the future. These case studies include, the US-Vietnam catfish trade disputes, the pesticide use/misuse issues as highlighted by current research, and aspects of 'sustainable' shrimp culture and mangrove utilisation in both South America and Asia. We have also explored the precautionary principle with Professor Andrew Watterson from the Faculty of Human Sciences and applied these principles to real life aquatic scenarios.

These case studies have been presented to course participants, not always from scientific backgrounds, and used as forums on which to draw from their wide variety of personal and professional experience.

Due to the direct relevance of this course to the future of our societies and the environment, a wide variety of students have been attracted and will continue to be attracted to this subject and the issues it raises.

The overall structure of the course can be given as follows, although some modules are provided as electives:

Autumn

Principles and Challenges of Sustainable Development
Information Technology
Environmental Techniques and Assessment
Environmental Policy and Management
Environmental and Ecological Systems
Environmental Economics

Spring

International Development: Sustainability and Livelihoods.
Advanced Sustainable Development Communities and Processes: Measures and Methodologies
Legal Aspects of Sustainable Dev.
GIS and Remote Sensing for Environmental management
River Conservation and Management
Biodiversity
Pollution Control
Business Strategy and Sustainability.

Summer

An Independent Dissertation
We expect that students will be offered places on research/ development projects overseas, for their final dissertations.

A student's motivation

A few words from one of the current students on the course, Anna Fraser, age 21, from Black Isle, Scotland. My first degree was Animal Biology, but it was my experience volunteering in primary health care provision and education in Africa and Asia that led to me choosing the SD MSc. My main interest in sustainable development is to assess current issues and conflicts between environmental and human requirements. In the future I hope to be involved in rural policy development or public education.