

Stirling Graduates in Business

by Janet H Brown

No. 3 Bob Bawden MSc. 1994-1995 Pisces Engineering Ltd.

The so-called “curse” of “Hello” magazine is that happy couples featured showing off their beautiful homes and happy lives often reappear shortly afterwards in the tabloids as their divorce is reported.

Is there a converse to this? Does Aquaculture News have a “blessing” associated with some of its features? This is the third of my series, Stirling Graduates in Business. It will be interesting to see if it is merely coincidence that links being a subject in these articles and the subsequent successful selling of the business! David Scott and Sunil Kadri, subjects 1 and 2 respectively, both sold-on their businesses after being featured here. My 3rd subject might welcome such a development – provided the price is right – but then change is clearly not a thing that daunts Bob Bawden who has established the highly successful Pisces Engineering Ltd just 2½ years ago.

Like many Stirling MSc. graduates Bob showed an early interest in fish; catching them via various forms of angling and also rearing cichlids at home. If he had known he could work with fish from an earlier age maybe his career would have been more straightforward: but his mother, despairing of the likely poor outcome of his impending A level exams, only produced the book on careers that showed him he could work in fish farming too late to rectify the critical lack of interest that was the root of the problem.

So Bob came to the MSc course via the late entry, less academic credentials/ tons of experience route that gives Stirling University as a whole its leading standing in regard to one of the latest buzz words – “widening access”.

The “tons of experience” included 2



Bob Bawden at his development site near Kippen. In the background his patented flow meter can be seen

years of riverine work, one as river keeper on the Test in Hampshire and one working in fisheries management for Anglian Water which led to a place at Sparsholt to do a 2 year OND in fisheries management. Bob wisely used his holidays to gain more experience on the eel farm at Hinckley Point. My ears pricked up to hear this since my late uncle was very involved in the establishment of this farm some years earlier. This summer job led to the offer of the manager’s post for 3 years, in a classic poacher turned gamekeeper move; Bob having worked as a hand knowing all the tricks to be wary of as manager! They made great progress, particularly in increasing the survival of the elvers, getting from merely 30% up to 70% survival at a larger size through better hygiene and diets and even with the chance to return excess elvers back to the wild. Sadly, the change in management of the power station meant that the farm was no longer viable so Bob had to move on.

Trout and the North called – Bob bought a trout farm in Northumberland but ominously one with a known eye fluke

problem. In his first year, a combination of a dry winter and very warm spring had the cercaria at catastrophic levels leading to huge losses in the fish but this forced Bob to turn to engineering solutions to the problem. Bob constructed a deep interception pond for the inlet water to the farm to get the very buoyant cercaria to float to the surface, and by also engineering a long retention time to use up their energy so that they were less able to invade the fish, was able to get good fish survival. This came of course with a reduced carrying capacity which led to lower production and led to Bob diversifying into the smokery business. At this time Hydrotech produced their first drum filter screening down to 40µm so protecting against the cercaria became possible but after carrying out successful trials on his farm of the new system, Bob’s bank would not lend the additional funds to purchase the £20,000 farm saving equipment. Bob showed his problem solving skills by selling his knowledge to his competitor upstream who had the same problem on condition he was employed as manager – and having organised that safety net, immediately went to declare himself

bankrupt! He discharged his bankruptcy successfully running his erstwhile competitor's farm for 2.5 years. One 3am, on a cold windy sleety dawn, water seeping into waders as he got fish ready for market as required twice a week whatever the weather, was the moment when Bob realised he and farm managing had come to an end. But when Bob looked into other options he realised that the lack of a degree was actually holding him back from jobs that didn't involve such unfriendly working conditions (but many of us know that possession of a degree or two doesn't preclude such jobs either!) He thought of doing a degree via distance learning and rang Stirling to enquire into options, Stirling being the only place where a degree in aquaculture was possible. His call was directed to Don Macintosh, who suggested that with his OND and such a load of experience the Masters course might be just the thing. It had never occurred to Bob that this might be an option, nor that he would be able to get funding for the course so he was absolutely delighted.

So what did Bob get out of the course? A global view, especially he says since there were only two other UK students on the course, the rest were from Bangladesh, Chile, Colombia, France, Greece, Iceland, Iran, Maldives, Malaysia, Mexico, Thailand, Turkey and Zimbabwe! The other revelation to him was something that had actually been very much a pattern in his life up until that time – that he enjoyed the engineering and design side of things most. His MSc project was on evaluating different types of biological filter media. This project was loosely associated with Aquasystems; they supplied the filter media for the project but also his next five years employment!

Then 2½ years ago Bob set up his company, Pisces Engineering Ltd to work as consultant on finding solutions to aquaculture engineering problems. Ideas that have been successfully developed out on his site on the Carse of Stirling near Kippen (see picture) include “mini-silos” for use in the salmon industry, a new type of filter media and a simple flow meter that has now been patented. Pisces Engineering have received grants to assist in this work: the Small Company

Innovation Scheme helped with the development of the novel filter media and Stirling Council gave an Expert Help Grant for the development of the flow meter. Incidentally help in gaining both these grants was provided by Alan Stewart (MSc. 1980, PhD 1995)

The business however rapidly developed from just looking at specific problems into one of providing the solution as a complete package: installation was very much part of it. Now Pisces Engineering Ltd has 7 employees and can tackle any installation or engineering problem. Bob and his company now work on land or sea based installations in Scotland, Ireland and further afield. Two recent contracts have been in the Canary Islands and they have now developed and installed their own design of sea cages. The company has recently set up its first branch operation with a workshop and permanent engineer based in the Western Isles.

Pisces Engineering Ltd prides itself on producing hands-on solutions and works with many companies for routine installations or trouble shooting or modernising systems. They also have their own recirculation system at their facility on the Carse of Stirling where they can develop systems, and also give staff that come from engineering backgrounds hands on experience with fish. Bob is very careful to ensure that these days the alarm does not force him out of bed but he clearly enjoys all the other aspects of the work.

If you are a “Stirling graduate in business” who would like to be featured in this series please e mail me at j.h.brown@stir.ac.uk

THE FUTURE OF AQUACULTURE – WHERE IS IT HEADING IN YOUR COUNTRY/SECTOR?

Many Institute alumni must be key players in their country/sector by now, Aquaculture News would offer a great chance to voice your thoughts on current and future aquaculture as it relates to you.

MARINE AQUACULTURE CAGE PROJECT IN LIBYA

Since August 2001 STAQ has worked in conjunction with the cage and equipment manufacturers Farmocean International AB of Sweden, to supply management and training for staff at a new marine cage unit near the port of Khoms, Libya. The farm was built for the General Aquaculture Development Authority (GADA) a Government body tasked with the development of aquaculture and management of marine resources in Libya. The farm rearing facilities consist of HDPE circles (Powerrings) inshore and semi-submersible cages (Farmocean 4500) 7km offshore.

A multinational STAQ production team, drawn from UK, Malta, Germany, India, Egypt, Libya and Yugoslavia, provided the management and training inputs. After a comprehensive hands-on and lecture-based training programme, that included the production of translated operating manuals, training was recently concluded with instruction in mechanised harvesting and fish handling techniques. The production from this first cycle was mostly exported to neighbouring Tunisia. After the successful completion of the training programme, farm management is being passed to local counterparts, who have plans to double the on-growing capacity during 2003. STAQ now offers continuity of service with technical and supervisory support for GADA's management.

