

The Grower

Newsletter for the Association of Scottish Shellfish Growers

December 2010



Conference off to great start



Willie Cowan (Head of Performance and Aquaculture, Marine Scotland) opened the ASSG conference getting it off to a rousing start by saying "it was a pleasure to deal with an industry that is going places" highlighting that aquaculture is growing and crucial to the economy. He made it clear that he is here to help and very impressed with the work of the Shellfish Forum. He also made it clear he wants to do everything he can to make things easier and is looking for ways to facilitate working together between bodies to help the shellfish farmers. For more on the conference and pictures see pages 2 and 3.

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Wishing all our readers a very happy Christmas and a prosperous New Year

Opportunities

Two training opportunities are on offer in this issue of the Grower. See Page 12 for information on a training course in identification of harmful phytoplankton offered at SAMS in January and page 7 for training opportunities for small businesses through Skills Development Scotland (SDS) with some financial help. This is being promoted through LANTRA.

What is a shellfish footprint?

Research has just got underway to determine the carbon footprint of our shellfish culture as measured at the farm gate. This will explore all the energy costs in shellfish production but also look to see where there could potentially be carbon credits; are shellfish sequestering carbon dioxide? Walter Speirs told the Grower that this project arose out of the claim some time ago that New Zealand lamb had a smaller carbon footprint than Scottish lamb production. The only way to counter such arguments is to know your own carbon footprint! Walter will be hoping for help from ASSG members since considerable information is needed but this could lead to benefits in the long term. See the Chairman's Column for more information.

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Disclaimer: Views expressed in this publication do not necessarily reflect the official view of the Association

ASSG annual conference

2-3rd November 2010

Janet H Brown reports

The change of date to early November meant some familiar faces were not present this year but there was still a good attendance for what was a highly informative conference. With the very positive opening to the first session, ably chaired by Michael Tait of North Atlantic Shellfish, from Willie Cowan giving a strong vote of confidence in the industry and the Scottish Government's intention to help this increasingly important contributor to the economy. One of the positives was the intention to introduce more sea food into the Scottish diet. Prof Laurence Mee (*right*) of



SAMS gave the keynote address 'the Ecosystem Approach; a New 'Big Picture'' detailing changes in our seas and potential for "designer ecosystems" and the challenges of conflicting uses and our changing expectations. Odd Lindahl from the University of Goteborg talked about food production and nutrient trading which becomes highly relevant when we are looking at the carbon footprint of shellfish; he was looking at the potential for selling the ability of shellfish to remove excess nitrogen from marine systems by farming mussels. The image that stays with me from this talk is of hens queuing to eat the feed made with mussel meal – producing poultry products with desirable fatty acid profiles. David



Scott (*right*) completed the morning with his report on the main findings from the University of Stirling study on "Prospects and opportunities for shellfish farming in Scotland". The summarised findings are accessible at www.scotland.gov.uk/topics/marine/science/publications/publicationslatest/other/ Shellfish growers can obtain the full report by writing to Mike.Watson@scotland.gs.gov.uk

Stefano Carboni (*facing page*) had the difficult after lunch slot, and what a lunch! How can it be difficult to get the Scottish people to eat more seafood when there are these delicious fresh oysters, hot mussels, prawn sandwiches smoked salmon – a veritable feast overseen by Nicki Holmyard (*right*). But his account of work at Ardtoe Marine laboratory on mainly native and Japanese oyster hatchery work but also on their work on rearing seaweed and sea urchins was well received. Guy Denon of the food retailer Delhaize



ASSG conference continued

gave a fascinating insight into the European retail perspective on mussels and oysters, not least for me because I had never heard of the company that has 792 stores,



17,000 associates and a revenue in Euros of 4.6 billion! This is not all shellfish.

Dr Stefan Kraan (left) of Ocean Harvest Technology sparked a lot of interest in sea weed culture and David Fraser of Marine Science Scotland brought everyone back to earth talking about the need for biosecurity plans in relation to EC legislation, and also presented the latest

shellfish farm survey results.

The second day, ably chaired by Roger Thwaites of Shian Fisheries also started with a speaker from Marine Scotland, this time Brian Dornan talking about the strategic framework for aquaculture. Andy MacLeod of Argyll and Bute Council talked about work they have done to safeguard shellfish markets from the presence of norovirus in shellfish. Shellfish are very much a minor source of the virus but since this virus is so hugely infectious the more that can be done to prevent infection with this the better. Another potential threat to the marine environment and shellfish installations is the invasive carpet seasquirt, *Didemnum vexillum*. David Donnan of SNH gave a talk on this in particular but also covered the background on invasive species.

Prof. Bruce Griffin presented information on the health benefits of shellfish; emphasising that the cholesterol in the diet is not reflected in the cholesterol in the body which contributes to the development of the plaques in the coronary artery, it is simply the saturated fat in the diet. He showed how well all shellfish



perform in terms of low levels of saturated fat compared to burgers or sausages.

The meeting concluded with the talk by Prof. Paul Tett of SAMS on estimating carrying capacity of lochs. All the presentations are available on the ASSG website with the exception at the time of writing of that of Andy MacLeod but we hope that that will be available shortly.



Pictured below; a Chinese delegation listened intently on the 2nd day of the conference. Other pictures show speakers, members of the audience and prize winners being presented with Richard Bramble original paintings Page 2 bottom left; Walter presenting prize for best native oyster to Rob Lamont of Loch Ryan oysters and bottom right Andy Abrahams of Colonsay Oysters, once again winner for best oyster. Douglas Wilson pictured below talking with Dave Attwood was also second time winner for best mussels. Facing page, Nicki Holmyard—once again most successful organiser Photos (mostly) Craig Burton of Seafood Scotland



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Notes from ‘Down Under’

Doug Macleod

These notes could be more accurately entitled ‘Back in the Northern Hemisphere’, as they reflect some thoughts resulting from my participation at a Conference in China in mid-October, the annual ‘Forum on Fishery Science and Technology’, organised by the Chinese Academy of Fishery Sciences (CAFS). This year one of the parallel sessions (at which I delivered a presentation) was entitled the ‘Sino-UK Seminar on Traceability of Aquatic Products’, an area with which I have become closely involved in the past couple of years.

There is an annual loss or waste within the worldwide trade of food products of an estimated US\$50 billion, which in light of the scale of world hunger adds a moral dimension to the clear economic driver to reduce losses in any possible way, and traceability can contribute to this process.

Traceability encompasses a number of facets, including not only the obvious ‘tracking’ element, but also food forensics, that is the evidence of provenance, ranging from geographical source, type of production, species, history of freezing to claims of status (organic, ethical, sustainable, etc). In addition traceability incorporates monitoring of shipments, including temperature and percussive (mishandling) experiences. The method of recording the relevant data and ensuring that the data pass along the logistics chain can be as simple as paper or as complex as RFID tags, while data capture can be reading by human or electronic means! However, credible traceability systems are essential in any effort to secure market access and to develop high value outlets.

There has been major investment by the European Commission and other European organisations in traceability projects over the past decade, from ‘TraceFood’ and ‘TraceFish’ through ‘SeafoodPlus’ and ‘FoodTrace’ to the recently completed Euro19 million

project ‘Trace’. As a result, Europe can justifiably claim to be at the cutting edge of this expertise, and the UK speakers at the Seminar expected to be presenting innovative systems and technology. However, we were all impressed by not only the knowledge of our hosts from CAFS but by the degree to which there is a ‘state of the art’ traceability mechanism in the final stages of development and implementation.



And there was a clear acknowledgement that this mechanism had two objectives – firstly to improve seafood safety for Chinese consumers as a reaction to the recent food contamination events, and secondly to access overseas markets for their fish and fisheries products.

I continue to believe that despite the scale of molluscan production in China there is only limited potential for significant export development (primarily scallop meats) - however, I now foresee a major development over the next few years of exports of Chinese fin fish products, ranging from fillets to prepared dishes. The processing and transportation technology has been in place for many years, applied to imported raw materials (mainly Alaskan Pollock and Norwegian salmon). The only development required is the substitution of domestic fish for imported raw materials, and with the implementation of a credible traceability mechanism such a substitution will be possible. As the world’s largest importer of seafood, the EU can expect to be a prime target for Chinese exports! And although it may not be a tsunami of imports, I suggest that they will soon form a significant volume for the European market.

Dates for your diary:

20th-21st January 2011

Identification of harmful
phytoplankton for shellfish industry—
SAMS, Oban

June 12th-17th, 2011

8th International Conference on
Molluscan Shellfish Safety
PEI Canada

23rd-27th August 2011

ICSR Conference
‘Shellfish our undervalued resource’
Stirling University

Stirling for ICSR 2011



Chairman's Column

Welcome to another edition of the Grower. I hope the recent cold weather has not been too challenging for you. At least the sea hasn't frozen yet!

Thank you to those of you who attended our annual conference in Oban. The figures are not yet completed, but it looks as though we have managed to cover our costs again, thankfully. It is always worrying in the lead up to the conference, when costs are being incurred, but very few people have committed to attending. However, I think it is a risk worth taking, given the positive feedback afterwards. Looking forward, I would very much welcome suggestions for topics and speakers we could consider for next year.

Following the second day of the conference we held our AGM, and the Minutes will be circulated shortly. Roger Thwaites stepped down from the Management Committee, after many years service. I would like to take this opportunity to thank Roger for all his help and support during my time as Chairman. We welcomed Cree McKenzie and Philippe Heiniger on to the Committee, and I look forward to their input at our next meeting. Two issues arose at the AGM which we will be discussing then. The first relates to the ongoing concern regarding funding, in this case specific to subscriptions. There was a feeling that we should again consider having a sliding scale of subscription, with larger producers paying more. The second was regarding the venue for our next Conference. It was suggested that it may be beneficial to attendance numbers if we were to consider Inverness as a venue. I will let you know the outcomes of these discussions in due course.

There are several issues I am engaged in on your behalf.

The most bizarre is the fact that we may all have to become Gangmasters! In fact, as the current interpretation of the law stands, we should already be licensed, and someone from the Gangmasters Licensing Authority could be knocking on your door sometime soon. Be aware that this applies to processors as well as farmers, and may well include the finfish sector. Currently the Scottish Government (SG) and the Scottish Salmon Producers Organisation are working with me on this, backing up all the efforts that the Shellfish Association of Great Britain has already put in. Let's hope common sense prevails, and together we can stop this legislation being applied to us.

The project to look at the carbon footprint of our industry is now underway, funded by ASSG, SG, The Crown Estate, and the Scottish Aquaculture Research Forum. The current terminology for what we are doing is seemingly a 'Whole Lifecycle Analysis'. The company contracted to do the work have previously done this type of thing before in other countries, which should be beneficial. I will be needing members to volunteer to take part in this study; I hope you will help if asked. On completion, we should know whether or not we can claim that our products could be used as carbon offsets, credits, or sequestration. It will also give a measure of our current footprint, enabling reduction



Walter Speirs, chairman of Association of Scottish Shellfish Growers

measures to be considered, in line with the desires of the various accreditation bodies.

ASSG is also engaged in an EU FP7 project, entitled MUSSELSALIVE, which is looking at development of best practice and new technology for grading, handling, transportation, conditioning and storage of mussels. The aim is really to decrease losses caused by mussels dying in the supply chain, by identifying the causes of the stress that makes this happen. Thanks to those of you who have already helped with this project. I will need some other willing growers to participate in the next stage, which involves putting small G-force detecting gizmos through the grading process along with the mussels, to find out what stresses are inflicted on the mussels during the operation.

The issue of Pacific (*Crassostre gigas*) oysters being on the invasive species red list, and how shellfish growing waters will be protected, once the Shellfish Growing Waters Directive is replaced by the Water Frame Work Directive, rumble on. The amount of work and breadth of communication surrounding both these issues is colossal. For an idea of this see page 8. I do hope we get resolution soon.

Relating to both of these issues, I am now gaining a much better understanding of how EU legislation is formed, by participating in the European Mollusc Producers Association (EMPA). Our European peers are far better at getting involved when legislation is being drafted than we are in the UK. Directives appear after long consultations, and if you cannot influence them at the early stages, it is too late once they are in place. Changes are very seldom made after that, as we know to our cost. SG cannot do this for us, as it is industry that is consulted at these early stages, not governments. I feel that it is absolutely crucial we retain our place round the EMPA table, but that depends on funds being available, from our 'core' funding, which is subscriptions.

One final point, congratulations go to Tom Pickerell and his wife Lynne, on the birth of their baby boy, who I believe has been named Alexander.

Best wishes for the forthcoming festive season,
Walter 9/12/10

Chairmans Report AGM 2010

Another year gone, and it's conference and AGM time again. I am obviously getting pretty old, because it has passed very quickly. So, now I have to do one of my least favourite jobs, which is trying to summarise all that has happened in the last twelve months in this report.

The most significant difference in this period has been the ability to engage much more with stakeholders and regulators, as part of the projects that we received funding for through EFF. The platform for much of this has been via the various aquaculture forums established by the Scottish Government as part of the programme known as "A Fresh Start: The renewed strategic framework for Scottish aquaculture". This whole process has been supported by all levels of Scottish Government, including Ministers. There is a real desire to see our industry flourish, which is really very encouraging. The report commissioned to look at the prospects and opportunities for shellfish farming is a sign of this support, as is the amount of EFF grant money that has been awarded to the shellfish sector in the recent awards.

Formalising our relationship with the Shellfish Association of Great Britain is another high point of the past year. We can now share workloads and information to our mutual benefit. This is particularly useful to us in Scotland, as we are not a Member State of the EU, and in the past have had limited ability to influence decision making at a UK level. Leading on from this we now have a UK Aquaculture Forum, which has been very useful, bringing together industry and regulators from all parts of the country, for the first time. I continue to work with the European Mollusc Producers Association, but if I am unable to attend I can give my vote to SAGB. Recently I agreed to sit on the Strategic Co-ordination Group for the Water Framework Directive Implementation Strategy as the European shellfish representative which oversees how member states are fulfilling their obligations under WFD. I have not attended a meeting yet, but feel that this is a very handy table to be sitting round, if we have any concerns regarding water quality.

Our own Shellfish Forum has been particularly useful, bringing all regulators and stakeholders round the table for the first time. We will be meeting again the day before the conference, so I will be able to update you on progress at the AGM.

I have been able to assist members with various problems over the year, mainly water quality and planning issues. As I have said many times, I can only address your concerns if I am aware of them, so please keep me updated as to your current challenges.

One problem I have is that I am often asked by Local Authorities and Government what the aspirations of our sector are, and I find that very difficult. There is no point in making planning applications easier, and generally trying to remove barriers to growth if there is no hunger for it. I really need you to help me with gaining an understanding of where you would like our industry to be in ten years time. Are there other obstacles than the ones I am currently working on, which are finance, available space, good water quality, less regulation and market growth? If so please make me aware of them.

Another feature of this year has been the amount of consultations I have had to respond to on your behalf. I do hope this will decrease, as it is not a task that I particularly enjoy, but is obviously necessary. There have been positive outcomes as a result of past work, so it is not something I can neglect.

The most challenging issue for our Association going forward has to be finance. The EFF award I mentioned earlier has helped in the short term, but is not something we can rely on for the future. Involvement in projects such as SPIES-DETOX and MUSSELSALIVE bring in a little money, but not without an attached workload. What are we to do when the EFF money runs out? Is the shellfish industry willing to fund a trade association or not? Is there anything else we can do to raise funds? I certainly cannot answer the second question on your behalf. I do hope you will attend the AGM and we can have a discussion about it. One option to consider is to revert back to a subscription based on size of company, but would the larger members be comfortable with that? What about a levy?

Still on finance, I hope we have a good turnout at our conference this year, to ensure costs are covered. We have lost our sponsorship income from both Highland and Argyll and Bute Councils due to the current economic situation, and whilst SNH have kindly sponsored us again this year, there is no certainty about that being the case for next year. I can explore other funding options, but it is not going to be easy. The best way would be to attract more delegates without increasing costs, but I need input from members as to how that can be achieved.

I would like to thank the Management Committee for their support over the last year, Janet Brown for editing the Grower, Tristan for all his work looking after our website, as well as everyone at the SG Aquaculture division. Roger Thwaites is standing down from the management committee, so nominations are needed; we have two places to fill. To date I have one nomination, Philippe Heiniger from Celtic Sea.

Look forward to seeing you at the conference and AGM.

Best wishes,
Walter Speirs

Editor's note; I have included the report prepared for the AGM for those not able to attend in person. As you will have read in Walter's column we were very glad to have Cree Mackenzie also sign up for the committee.

ICSR 13 “Looking back, moving forward”

Janet H Brown reports

The theme of the recent International Conference on Shellfish restoration held in Charleston November 17th-20th was “*Looking back- Moving forward*” and had the usual wide range of talks and posters covering shellfish resources, restoration and management and water quality and public health issues in shellfish restoration.

The elephant in the room for the visitor from the UK was the Deepwater Horizon disaster in the Gulf of Mexico but this was the main topic for one whole plenary session. It was also a main focus of a number of talks and the opening plenary speaker was Eric Schwaab, the assistant administrator for fisheries for NOAA, who after his excellent address was immediately faced with a question from a reporter from Reuters “Are the shellfish from the Gulf safe to eat?” He answered emphatically that they were. One of the constant



Pictured above ; Eric Schwaab of NOAA being questioned by Fritzi Cohen, oyster grower from Willapa Bay, while Rob (Skid) Rheault, Executive Director of Moonstone Oysters looks on at ICSR Charleston

concerns was how to manage such disasters and Leslie Sturmer, a shellfish aquaculture extension specialist from University of Florida gave a very practical account of precisely what they did in Cedar Key, Florida in anticipation of the oil reaching their shellfish beds. There were unexpected difficulties as explained by Earl Melancon who described how the oysters in his area were destroyed by an emergency diversion of freshwater from the Mississippi in an attempt to counteract encroaching threat of oil. The visitor from UK can only marvel at the resources that are made available for shellfish restoration and more especially of the way such efforts are made to harness the energy of the public to assist in this – this was particularly highlighted in the invited plenary talks on the final day from Gef Flimlin and Teri King. When Gef talks about training over 170 volunteers who go on in turn to raise \$75,000 for shellfish restoration and how the programme educated summer visitors and “sent kids home to be

“Clambassadors” we can see there is much we can learn.

All the talks will be available on line shortly. The conference final day included a pitch from me to stage the next conference in Scotland. As I explained why we planned to hold it in August I illustrated this with pictures of the Ryder Cup, held in Wales in October and it was only when I was flashing up pictures of Tiger Woods with rain dripping from his cap that I realised this was not perhaps the most diplomatic way to illustrate this to a largely American audience by a European visitor... one disadvantage of not being a keen golfer!

LANTRA

Raising skills, backing business

Develop employees’ skills with Flexible Training Opportunities

Skills Development Scotland (SDS), the body which plays a key role in delivering the Scottish Government’s skills strategy, is currently offering a training boost to small businesses. If your business has staff of 75 or less, SDS will refund 50% of the cost of up to 10 training courses – worth up to £500 per course. For example, if your training costs £1200, SDS will refund £500, if it costs £300, they will refund £150.

Lantra Sector Skills Council, who has been lobbying for some time on behalf of industry for funding for more flexible training, is helping to promote this opportunity. Ishbel Crawford, Lantra’s Regional Partnership Manager for Highlands and Islands said: “The benefits of training are invaluable for both businesses and employees, this is exactly the type of funding that Lantra and other Sector Skills Councils have been lobbying to secure. We frequently hear from businesses that they need funding to develop skills, but not necessarily through accredited learning. It may be a small shellfish grower who wants to learn to use Sage for their accounts or to develop their marketing skills, or perhaps a medium size fin-fish business with some staff who would benefit from training in containment issues, or office staff who need to learn to use some new software. Places are limited, so anyone that is interested should contact SDS as soon as possible.”

Anyone from sole traders to businesses with fewer than 75 employees can apply for up to £5000 towards training costs. If you want to find out more about the initiative, call SDS free on 0800 783 6000.

Workshop on the cupped oyster, *Crassostrea gigas* and code of practice for the aquaculture industry

Meeting held at Fishmongers' Hall, London: 22 September 2010

Paul Williams - *Seafish*, Chair

Sue Utting, James Bussell and Tom Pickerell chaired the breakout sessions.

Background

The Shellfish Association of Great Britain (SAGB), the Joint Nature Conservation Committee (JNCC) and the GB Non-native Species Secretariat organised the workshop on Pacific or cupped oysters (*C. gigas*) and the possibility for a code of practice for the shellfish aquaculture industry. The main aim of the workshop was to discuss and hopefully agree on the best way forward with respect to cupped oysters in GB and Ireland. This document outlines the main issues raised and the conclusions and actions arising from the workshop.

Morning Session on *C. gigas*

Key points from talks

Helen Stevens, Natural England

Statutory Nature Conservation Organisations (NE, CCW and SNH) are legally bound to ensure that the UK does not contravene the EU Habitats regulations. To do so could risk infraction from the EU at a cost of up to £100K per day.

If a site has been designated for a particular feature and this is allowed to alter significantly then this could be cause for infraction.

With *C. gigas* a key potential problem is the conversion of mudflats to reefs.

In Ireland 80% of aquaculture is in designated areas.

David Jarrad, Shellfish Association of Great Britain

C. gigas was first introduced to Britain in 1926.

Current production amounts to 1,290 tonnes, compared with 7,221 tonnes in Ireland and 115,000 tonnes in France (in comparison native oyster production in GB is circa 300 tonnes PA).

Release into the environment is not prohibited as the species is ordinarily resident and is not listed on Schedule 9 of the Wildlife and Countryside Act (1981).

The EU Alien Species Regulation includes *C. gigas* as a species that is excluded unless member states wish to include it.

Other EU member states are promoting *C. gigas* production in their Aquaculture strategies (as are Scotland and Wales)

The industry is dismayed and frustrated at the current position and believe efforts should be focussed on problem species such as *Didemnum*.

Jonathan King, Bangor University

Triploidy is never 100% successful.

Triploidy reverts to diploidy in some individuals as the oysters mature (in trials up to 43% after 2 years).

Growth rates of triploids are highly variable – they grow better than diploids in some areas but grow badly (if at all) in others.

The French market prefers triploid oysters and almost 50% of the oysters used in Ireland are triploids.

The potential for a negative consumer perception in the UK of triploid oysters is important to the industry.

Key questions/issues/points of agreement following the 3 breakout sessions

How much do we have to do to avoid infraction?

Triploids are largely ineffective but in some limited circumstances could be useful.

Wild harvesting could be beneficial in some situations – but we need to be aware of compliance with other regulations and the associated regulatory burdens (i.e. impact assessments).

Engagement of key stakeholders is vital to finding solutions as the issue of *C. gigas* oysters is taken forward.

There is the potential for a win/win – management for *C. gigas* may help conserve the native oyster.

What is the stance of country agencies in Continental Europe?

The production of an issues paper taking a balanced look at the *C. gigas* issue and exploring options to move forward – (prioritising the development of solutions to minimise spread into new areas).

Request a review of the red listing of *C. gigas* by the UKTAG to the WFD.

Suggested priority research areas

Further develop the model of habitat suitability.

Non-food uses for harvested feral stocks.

What factors influence wild settlement?

What is the extent of natural movement?

Locally- from farms in GB.

Longer-distance – from the near continent, especially France.

Summary of Conclusions

The main issue is about management of wild settlement (not eradication in an area) in different circumstances and what is appropriate for management in different situations [existing sites and new sites]. Solutions will vary according to location and circumstance (sites, areas, regions) with different levels of management needed in different areas. The general consensus is that triploidy is not a large-scale solution.

Actions

SAGB and Defra and NNSS to lead on securing resources to commission an issues paper (as detailed above).

Artificial light at night: good, bad or indifferent for shellfish growth?

Anthony A. Robson

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Blue mussels have light-sensitive eyes and thus, light intensity as a strong Zeitgeber, may have an effect on their behaviour. Indeed, periods of light and dark have been shown to reduce and increase feeding activity and/or growth in laboratory blue mussels. Further, independent of feeding time, laboratory mussels exposed to natural light and free from anthropogenic disturbance have recently been reported to increase their feeding activity at night. Together with reports of a significant increase in the activity of wild subtidal and intertidal mussels at night, it would appear that blue mussels can exhibit higher activity levels during the hours of darkness. Constant illumination at night of laboratory mussels has been found to produce a weak tendency for shell-gape to be greatest during the night time. Periodic or constant illumination at night may explain why some research did not report greater activity at night, in *in situ* subtidal mussels. These results raise questions about the ecological variables that affect the activity patterns of mussels and the differences between laboratory and field results. Beyond this, the extent and intensity of artificial lighting at night has generally increased around the coasts of the world to such an extent that it might have substantial effects on the biology and ecology of species such as mussels and oysters in the wild.

The information above raises questions which the shellfish industry could answer at a negligible cost: Is your shellfish farm affected by artificial light at night? Is artificial light at night: good, bad or indifferent for shellfish growth? Does artificial light at night around the coasts increase (phyto)plankton abundance (food for shellfish), or is another factor (e.g. nutrients) limiting their abundance (it probably varies with location and season)? How difficult is it to expose shellfish to natural light conditions (can the street lights shining on the water be turned off, or pointed away from the water)? Are shellfish truly wild when anthropogenic illumination at night alters natural light regimes in aquatic ecosystems around the world?

On a shellfish farm it may be easier to shine lights on shellfish at night, rather than expose them to constant darkness throughout the water column. However, the latter may be cheaper than the former and the best mussel growth has been reported in constant darkness. Recent work suggests that the analysis of mussel activity rhythms should be undertaken on data collected from at least a week after anthropogenic disturbance e.g. vibrations caused by experimental setups. In conclusion more research on the effect of daily light regime on shellfish growth is probably justified. However, exposing species to natural light conditions may be difficult, especially in urban areas.

Further reading: Robson AA, Garcia de Leaniz C, Wilson RP, Halsey LG (2010) Effect of anthropogenic feeding regimes on activity rhythms of laboratory mussels exposed to natural light. Hydrobiologia 655: 197-204

Antony pictured below making a final check that intertidal apparatus including loggers recording mussel gape and environmental data was ready for deployment in Swansea Bay, Wales, UK (on right).



Realising Value in Your Business Through Protected Food Names

In the first of two articles for The Grower, Scotland's Intellectual Assets Centre introduces take a look at the Protected Food Names scheme and how Scottish SMEs can use it to grow their business and remain competitive in their market place. The second article looking specifically at competitiveness and commercialisation through PFN will appear in the next edition of The Grower.

Scotland's national Food and Drink Policy, "Recipe for Success" states that Scotland should "Identify and pursue opportunities, provide advice and support for businesses that could benefit from the legal protection of protected food names". The Protected Food Names (PFN) scheme operates widely across Europe yet has very limited uptake in the United Kingdom. The Intellectual Assets Centre, therefore, undertook a study on behalf of the Scottish Government to identify the level of awareness of the scheme and its potential benefits to Scottish SMEs. The study confirmed that there was indeed a low level of awareness both of PFN and the scheme's benefits which needs to be addressed in order to allow Scottish businesses to make the most of their business development opportunities. The PFN scheme may not be applicable to all food and drink producers in Scotland but other protective measures may enable them to realise value in their business and businesses should be able to make informed decisions about their strategies.

PFNs form part of a suite of protective measures that businesses can use to both protect their products and services as well as to realise value to their business. That suite of protection includes Trade Marks, Certification Marks and Collective Marks as well as the Protected Designated Origin (PDO), Protected Geographic Indicator (PGI) and Traditional Seasonal Good (TSG) of the PFN scheme.

By volume and value, Scotland has some of the largest PFNs in the EU. However, in terms of number and range of products, uptake of the scheme is relatively low and currently there are only nine PFN registrations Scotland (1% of the total in Europe).

So, what does the PFN offer and why should companies consider this approach in their business development plans?

The PFN Scheme is a type of intellectual property protection available for foodstuffs and in some cases agricultural products for human consumption. The product must demonstrate a close link (quality, reputation or other characteristic) to their geographic region of production and must meet qualifying criteria in order to use a PFN. Protection is obtained through an application process through the Scottish Government which can take up to 3 years but when a PFN is registered it is open to any producer complying. Furthermore, unlike with Trade Mark where the defence of any infringement of the Mark is the responsibility of the Mark holder, where a PFN is infringed in any way it is a Government responsibility to defend that PFN. PFN

accreditation may be:

Protected Designation of Origin (PDO). Product must be produced and processed and prepared in the geographical area (e.g. Orkney Beef, Orkney Lamb, Shetland Lamb and Bonchester Cheese).

Protected Geographical Indicator (PGI) Product must be produced or processed or prepared in the geographical area (e.g. Arbroath Smokie, Scotch Beef, Scotch Lamb and Scottish Farmed Salmon)

Traditional Speciality Good (TSG) The name must be specific in itself or express the specific character of the foodstuff (e.g. Traditional Farm Fresh Turkeys).

The study identified that for companies interested in participating in PFN their motivation for participating in the scheme was:

Protection: Both legal protection and as a badge of origin

Prestige: Differentiation and establishing/maintaining it as a premium produce

Promotion: Raise awareness of product through media coverage of application

Passion: A drive to protect the culture and heritage of the product

Companies who progress to PFN accreditation identify that there is increased reputation and awareness for their product; it enables access to new marketing channels and the potential for increased sales as well as assisting the stability of business. In addition, a PFN allows companies to ensure product price premium (between 10% and 20% according to some research) and improves profitability. Finally, the PFN process can encourage industry collaboration for the benefit of all participants.

In supporting the raising of awareness across Scottish food and drink sector SMEs of the PFN process, the IA Centre will be offering a unique project for SMEs located within the HIE area to assist them in valuing their intellectual assets. The project, titled Project VIA, will commence in March 2011 and will consist of a series of linked Workshop and Masterclass events and direct 1:1 consultation with participating companies. This is a highly successful project which has been delivered to other industry sectors in the HIE area in 2008 and 2009 and has resulted in business growth, job creation and new business start-ups.

The IA Centre's "Scoping Consultation on the Business Case for Protected Food Name (PFN) Development in Scotland - Final Report" is available on the IA Centre's website www.ia-centre.org.uk or by calling 0141 243 4920.

Further information on Project VIA is available from the IA Centre's Projects in Partnership Manager, Mhairi Wardner, on 07919 281081 or mhairi.wardner@ia-centre.org.uk

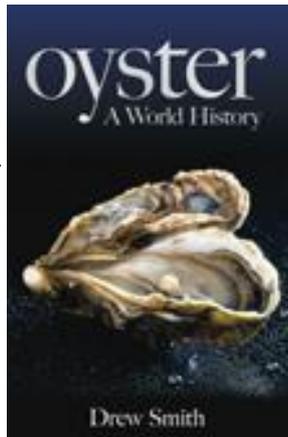
Book Review

Janet H Brown

Oyster A World History by Drew Smith

Published by The History Press
2010 £14.99

Any book on shellfish, particularly on the history is of considerable interest and this one is beautifully illustrated with the work of many old masters. Published by the History Press this book contains much fascinating history of the oyster, in relation to language, in aspects such as smuggling, in measurements and devices to keep the business within the family, and then moving on to oysters in other parts of the World. Drew Smith has also collected together a vast number of references to the oyster in literature and poetry and even popular songs so for any enthusiast it is a worthy read.



My major regret for this book was that his chapter on biology came too early on in the book. For a biologist reading the chapter on the biology of the oyster is a torment- to start with a hostage to fortune by saying that the oyster is set apart from other “creatures” because it is not symmetrical and has “no parallel in the universe”. The author needs to guard against statements that just do not pass easily across a scientist’s eye. “The oyster is one stable creature in an otherwise completely changing estuary environment” – well, it cannot move but is it that simple? The lack of consistency in the use of italics for the Latin names is also a bit difficult for the person who couldn’t bring herself to buy a beautiful Richard Bramble shellfish dish because the capitalisation on the species name was incorrect (now happily corrected) but this is a problem for the editor not the author.

The worrying thing to this reader was if the author was so careless with the scientific facts were the historic facts in fact correct? I cannot say but they are certainly of considerable interest. The book is also remarkably good value at just £14.99. But as Jonathan Porritt quoted on the fly leaf so succinctly says “Even if you are not an oyster lover, from a gastronomic point of view, you should still care about the fate of the oyster.....its chronic decline in the UK stands as a shocking indictment of our collective failure”.

ICSR 14 – Shellfish Our Undervalued Resource

International conference to be
hosted in Scotland

The Grower has carried a number of brief reports from the International Conference on Shellfish Restoration (ICSR) but in this issue we not only do that but also announce that in 2011 the conference will come for the first time to the United Kingdom.

The theme will be “Shellfish, our undervalued resource” because it is very clear from the different emphasis paid to shellfish resources in the USA in comparison to particularly the UK but maybe also Europe at large we have a lot to learn from them.

Planning for this conference is still at an early stage but it will be held at the University of Stirling from 23rd-27th August 2011. By holding it at the University we can offer a wide range of accommodation from the comparative luxury of the Stirling Management Centre, in the University campus, and Dunblane Hydro to ensuite student facilities and to student chalets which might be of interest to visitors wanting to bring their whole family to Stirling, the gateway to the Highlands!

The scientific programme so far planned includes sessions on shellfish restoration in the broader sense (i.e. in relation to restoring shellfish such as crabs also) evaluation of the ecological services of artificial reef habitats and mussel restoration. We hope to break the programme up with a field trip on the Thursday afternoon. We are actively seeking sponsorship for what should be a large international conference and we want to be able to showcase the best of UK shellfish. Unfortunately it will not be in the native oyster season but hopefully there will be plenty of other choicest Scottish seafood available.

On the last day we plan to hold an event which we hope will interest ASSG members and hope to get sponsorship particularly to help us with this. That is to have a special day on native oysters in general and what we can learn from American efforts at restoration. We will also have talks on how *Crassostrea gigas* can relate to the native oyster. Mark Luckenback of Virginia Institute of Marine Science is already signed up to attend this workshop. That day’s activity will end with a grand ceilidh, dancing to music of the band which rejoices in the name Ceilidh Minogue and we hope there will be plenty of kilts, both those hired by visitors or worn by Scottish shellfish growers!

Further details will be available shortly but please put this in your diary if you have any interest in shellfish.

August 26th
will be a special
day—
concentrating
on all aspects of
native oysters
including in
relation to the
cupped oyster



Identification of harmful phytoplankton – an introductory course with relevance to the shellfish industry

20-21st January 2011

This course will introduce students to the range of phytoplankton found in Scottish waters. Potentially harmful and toxin producing species will receive particular attention. Students will be introduced to

- the background biology of the phytoplankton
- links between phytoplankton in the water and accumulation of toxins in shellfish
- current progress with forecasting phytoplankton blooms
- water sampling and preparing material for microscopic examination
- identification of the key groups most likely to cause problems

The course will comprise a mixture of presentations and practical hands-on experience using microscopes. It will be ideally suited to shellfish producers wishing to understand the problems which can be caused by toxic algae; to undergraduate or post-graduate marine science and ecology students wishing to gain experience in this topic; those interested in the links between the marine environment and food production in Scottish waters.

The course will be taught at the Scottish Marine Institute, Dunstaffnage, Oban, PA37 1QA and begins with lunch and registration at 12:30 on Thursday 20th January finishing at 16:30 on Friday 21st January.

The course fee is £300 including VAT and covers lectures, hands-on microscope tuition, course notes and identification guides and lunch on both days. Delegates are responsible for arranging their own overnight accommodation if needed.

To book a place please e-mail SAMSCourses@sams.ac.uk

Judging shellfish

We all know what mussels hits the spot, tastes in oysters can be idiosyncratic; the guide to tasting oysters from the SAGB can maybe teach us all more of what to look for to increase our own appreciation of the subtleties of taste (see www.shellfish.org.uk/files/6723SAGB%20oyster%20guide%20final4.pdf)

But how to judge the good mussel, the best cup oyster, the finest native oyster – this is at the very least a 3 person task. In Australia they go further.....an interesting juxtaposition of photographs from the recent “Best shellfish in Scotland” competition and a competition run in Sydney in September. Our Australian correspondent, Doug McLeod was invited to participate at the annual ‘Sydney Royal Fine Food Show’ (one of a number of shows organised by the ‘Royal Agricultural society of New South Wales’) in the oyster section of the Aquaculture Competition – specifically in the September ‘Spring’ competition, which focuses on the native flat oyster, *Ostrea angasi* and Pacifics, *Crassostrea gigas*. The local oyster, the ‘Sydney Rock Oyster’, *Saccostrea glomerata*, is judged in April, reflecting the different seasonality of the species. Doug told the Grower that this was grading oysters on a comprehensive portfolio of 10 specific criteria, with quite a complex set of differential weightings applied to each criterion, ending up with a total score out of 100, and a quality ranking between the entries, with potentially Gold (90.0 – 100.0), Silver (82.0 – 89.9) and Bronze (74.0 – 81.9) medal winners.

The scoring criteria are divided into Taste, with a total of 60 points, and Appearance, which is further sub-divided in External and Internal Appearance, with 20 points per category. Within External Appearance the criteria are Uniformity (8), Shape (8) and Presence of foreign material on the shell (4), while for Internal Appearance points are sub-divided between Condition (12), Colour (4) and Meat Fullness (4). Scoring for Taste is split between the criteria of Flavour (20), Richness (10), Length of Flavour/Aftertaste (10) and Texture/Firmness (20) and a team of 5 judges came up with these assessments.

Meanwhile, in Oban our noble judges were from left, Alex Needham (chef/manager of Waterfront Restaurant) John Ogden – restaurateur, (Shellfish Shack and Seafood Temple) and Guy Denon, (Head of fish category, Delhaize supermarkets). Picture on the right shows the behind the scenes of getting the shellfish ready for the judges -high tension with Roger Thwaites, and Hugo Vajk!

