

President's message; one year on ...



Following this year's AGM held on 29 July virtually for the first time, and one year into my 2-year term of office as President, I would like to reflect on progress and plans. What follows are edited highlights of my report to the AGM, with some additional details on perceived priorities during the current Covid-19 outbreak and beyond. I thank the 46 or so participants who joined us during the AGM, and for their contributions. Full minutes and action points arising from the AGM will be soon be available. As a framework, I refer to progress in relation to the original President's Strategy Plan, published in July 2019.

FSBI and COVID-19 strategy

It is important to confirm and update our strategy during the current pandemic. This has been and remains a commitment to support our activities wherever possible, including funding

decisions, publication of the *Journal of Fish Biology*, PhD studentships and postdoctoral appointments, Council activities and symposia planning. Our uppermost priority has been to secure the health and safety of our funded members and students, which has meant the cancelation of schemes that are currently untenable, such as travel and research grants. For those currently funded on any scheme, we exercise flexibility on deadlines and reporting on an individual basis, which also applies to our students. In the UK, while there remains ongoing uncertainty about regional and international travel restrictions, we retain the next call for Travel and Research Grant applications but have delayed the submission deadline from 1 September to **1 October 2020**, (see FSBI website). Similarly, our expectation is that our two new FSBI PhD students, alongside our existing students, will commence or continue their research in the new university session at the end of September, but this may have to change depending upon government guidelines. Please do check the FSBI website where updates on all FSBI activities and deadlines are posted in relation to the COVID-19 pandemic.

Interactions with international Fisheries and Aquatic societies

Even though the FSBI has members in 36 nations, we remain committed to fostering and developing the

internationalisation of the Society. In that regard, we were delighted to welcome as guests to the AGM, the respective Presidents of the American Fisheries Society (AFS) and Japanese Society of Fisheries Science (JSFS), Professor Scott Bonar (below) and Professor



Toyoji Kaneko (above). The FSBI has a formal partnership agreement with both societies for a range of interactions, including exchange of PhD students and ➤

Officers at respective annual symposia, and our ongoing joint membership of the World Council of Fisheries Societies (WCFS). AFS and JSFS Presidents delivered brief addresses, and outlined the impact of the recent global pandemic, as well as ongoing priorities and plans. I draw your attention to the AFS 2020 virtual annual meeting, 14th-25th of September. The symposium will allow participation from across the globe, currently with more than 800 on-demand papers and posters in 40 symposia and contributed paper sessions with convenient 24/7 access. There will also be 10 days of live programming to secure exchanges with colleagues across North America and around the world. While the autumn meeting of the JSFS has been cancelled, discussions are underway to decide on the format of the JSFS 2021 Spring meeting. Further details available on our website in due course.

For those less familiar with the WCFS, it is a non-profit, nongovernmental membership organization that aims to promote international cooperation in fisheries science, conservation and management. Objectives include encouragement of sustainable management practices, excellence in fisheries research, and the wise use of fishery resources. Alongside the FSBI, members include the AFS, JSFS, Australian Society for Fish Biology, Canadian aquatic resource section of the AFS, Indian Society of Fisheries Professionals, Korean Society of Fisheries and Aquatic Sciences, the World Sturgeon Conservation Society, and Zoological Society of Pakistan. It is chaired by the coordinators of the World Fisheries Congress, currently the Australian Society of Fish Biology, which provides a forum for the gathering of representatives across the membership. The postponed World Fisheries

Congress, originally planned for October 2020, Adelaide, has now been rescheduled for 20th-24th September 2021. An FSBI-sponsored session forms part of the programme, *Harnessing genomic data at all scales into ecosystem based fisheries management*, and a call for abstracts will be released in the autumn. Attendance can be supported in part by the FSBI travel Grants.

In the past year, our FSBI student representative, William Perry, attended and contributed to the AFS annual meeting in Reno, October 2019, and we were due to welcome to the postponed FSBI annual symposium at Nottingham Trent University (NTU), the AFS PhD student representative Chris Schwinghamer. Chris plans to join us at the FSBI annual symposium in Leuven, in July 2021. Similarly, the JSFS appointed Hibiki Kimura as the JSFS exchange PhD student, was originally due to attend the 2019 NTU symposium. Finally, the 2020 FSBI-AFS exchange student, Chris Payne, will be presenting at the AFS virtual annual meeting, and has been invited to carry over his invitation to the 2021 AFS conference. An additional international activity will be the next FSBI annual symposium to be held in Leuven, Belgium, 5th-9th July 2021, convened by Filip Volckaert and colleagues. The he symposium topic is *Fish, Fisheries and Ecosystems in the Anthropocene* (see the FSBI website for details). The FSBI has pledged to provide additional funding and support for PhD students and postdoctoral researchers. As usual, the symposium special issue, in the *Journal of Fish Biology*, will be published in December 2021, with a call for abstracts from 8 October 2020. Following the earlier announcement of the 2020 medallists, I can confirm that Beth Fulton (Beverton Medal), Herman Wanningen (Le Cren Medal) and

Julian Cucherousset a (FSBI Medal) plan to attend the FSBI Leuven meeting award ceremony with an opportunity to present a talk. We are therefore likely to welcome six medallists at the Leuven meeting, with the call for 2021 medallists recently announced. I would like to encourage all members to nominate individuals for our three medals. The 2021 medallists will be announced following the December 2020 Council meeting, allowing additional lead-in time for attendance at the Leuven symposium. Finally, we were pleased to recruit our first FSBI postdoctoral travelling fellows (see the May Newsletter), who will start their travels when restrictions are lifted. Despite the ongoing travel uncertainty, we plan to announce the second round of applications, in January 2021.

Society Membership priorities

We conducted recently a membership survey (see the May Newsletter). Part of the ambition was to seek guidance on how we can tailor our activities more in line with member preferences and demand. Foremost among the membership suggestions was to enhance training opportunities, the range of symposia and workshops, the instigation of specialist groups and the promotion, both online and in person, for networking across the fish and fisheries communities. These are currently within the remit of the FSBI Communications committee and plans to develop a more bespoke and coherent training programme are underway. Topics that scored highly in terms of member demand, included, research methods in fish biology, scientific communication, field techniques, fisheries statistical software, and fisheries stock assessment. We plan a combination of dedicated support for participation in salient events, with linkages to other

organisations and societies who currently offer such programs. We will report following our December Council meeting on further plans to redesign aspects of our membership services and website including a user-friendly interface for management of subscriptions, as well as ready access and engagement with Society and external activities.

External engagement

In addition to our partnerships with the AFS and JSFS, we continue to foster engagement with other organisations. For example, the FSBI is an affiliate member of the Royal Society of Biology, providing FSBI members with access to research and training events across a plethora of science areas. The FSBI is also a partner member of the RSB Outreach and Engagement working group that promotes external engagement and access to joint meetings, workshops and training events, including public understanding of science. We continue to explore a partnership with the Institute of Fisheries Management (IFM), dedicated to advancement of sustainable fisheries management, and is also a major provider of fish and fisheries training. While the FSBI focuses on generating evidence in support of policy, management and conservation, the IFM has strong engagement with industry and agencies aimed at implementing policy. Such complementarity with the IFM provides additional opportunities both in training, as well as outlets for scientific findings, including manuscripts published in the *Journal of Fish Biology*. Discussions are underway with the Chairman, David Bunt to identify new opportunities for an FSBI-IFM partnership, including joint benefits for members, training opportunities, and access to a wider network of fish and fisheries scientists.

Finally, an ambition was to secure appropriate forward

planning of the FSBI annual symposia, with a minimum of a 2-year lead in. We can confirm that the postponed NTU 2019 symposium, *Fish in a Dynamic World*, has now been moved to 25th-29th July, 2022. The original programme received over 100 abstracts across 24 nations. The rescheduled 2022 symposium will be a mix of 2020 contributions and a new call for abstracts. We are also pleased to confirm that due to an underspend on planned FSBI funding we have committed additional resources in support of participation by early career researchers.

Ongoing priorities

We will continue to manage proactively the implications of the Covid-19 outbreak. Member queries should be sent in the first instance, to the FSBI Administrator, Jane Smith (j.p.smith@bangor.ac.uk). Over the coming 12 months, among our priorities will be:

1. Further streamline our membership engagement and services, including website development, membership management and renewals. We will also consider the establishment of specialist groups to enhance networking;
2. Establish a programme of support for training, in line with membership feedback, including a consideration of on-line engagement;
3. Continue the development of external interactions with cognate societies and organisations, especially the Royal Society of Biology and Institute of Fisheries Management;
4. Review and develop a new portfolio of publicity and communication tools, including digital options, to increase awareness and membership of the FSBI, and to improve external interactions.

Finally, I would like to thank the contributions and support of all Council members, Guests of Council and our Administrator, Jane Smith, over the past 12 months, and their strong commitment to progressing our mission and range of activities, especially during the current challenges. In accordance with the fixed term of Council members, I would like to record our particular thanks to outgoing colleagues, Darren Croft, Ioanna Katsiadaki, Eduarda Santos, Martin Taylor, and Guest of Council, Brian Hayden. To balance the emigration, we welcome warmly five new Council members, as outlined elsewhere in the Newsletter. Within our new recruits, we continue to encourage representation across a range of organisations thereby drawing on a breadth of expertise and experience. Since the previous AGM, we also welcome, two new Guests of Council, Christopher Brodie, website design consultant, and William Perry, publicity and social media officer. We continue to be indebted to our Charity Administrators (Brabners), Stephen Claus (legal matters) and Shirley Robinson (membership support).

Editorial

The invasion of Covid-19 has changed our lives and this has had an effect that is more evident than it was when I put the last Newsletter together. The President's report is threaded through with changes that the Society has had to make to accommodate the restrictions on movements. The reports by Sarah Helyar and William Perry illustrate how innovative people have become in fulfilling their obligations in a time when face-to-face contact is not possible (Thinking up titles for their pieces I couldn't resist the riff on the title of Gabriel Garcia Marquez's novel *Love in the time of cholera!*).

Much comment has been made in the media of the potential for permanent change in the way we work as a result of the pandemic. The activity that has provoked the most discussion is whether working from home will now become the new normal. Many

jobs cannot be done 'from home' but for those who mostly sit at a desk and work on a computer, working from home can be just as effective as working in an office and it saves all the time, money spent and CO₂ getting to and from the office. It is also evident that human institutions develop ways of working that are hard to change significantly under normal circumstances. I suppose the most dramatic illustration of this would be the role revolutions have had in changing the way a country is governed. Covid-19 and the social changes that have resulted could be a sufficient shock to change the way many activities are executed.

As William Perry points out in his account of his online viva, this approach saves on travel with all its environmental costs and this at a time when the effects on the environment of our activities are so in need of change. As Sarah Helyar describes, an online field course (a bit of an oxymoron) has advantages such as giving disabled people an equal chance

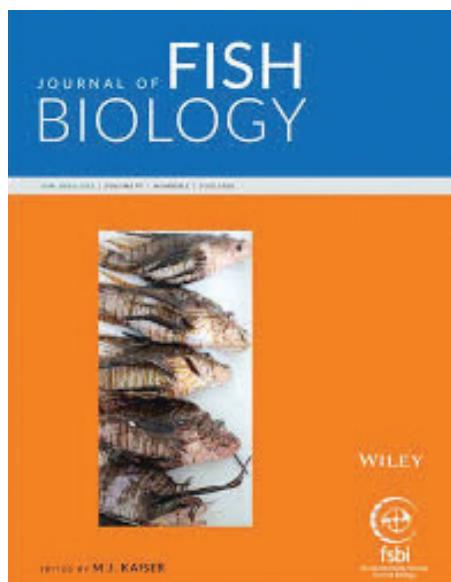
and perhaps reducing the need for field courses in foreign parts which involve lots of travel.

The virus is not going to go away in a hurry and the main way in which it can be beaten is by the deployment of a yet to be produced vaccine. This may mean that until the vaccine is available the stimulus for institutional change will persist although we hope that life will not be as restricted as it has been over the last five months. I suspect that changes induced will be less drastic than a revolution but will still stimulate institutions to revise the way they work in ways that will benefit both the people who work in them and the environment on which we all depend.

Finally, if any member reading this is stimulated to write an article for the Newsletter then please get in touch at newsletter@fsbi.org.uk. Articles can be up to 1000 words and pictures are always welcome.

Paul J B Hart
Leicester, August 2020
Next deadline: 1st November 2020

A fish eye's view: from the *Journal of Fish Biology*'s Editor in Chief, Michel Kaiser



I'm pleased to report that since my last update, the editorial board of the *Journal of Fish Biology* held its first 'virtual' annual meeting to discuss the journal and various developments on which I reported last time. The board has increased in size considerably and now stands at 43 members. We welcomed a new member of the board from China, Professor Tang Yi who is a fisheries expert. My aim is to invite further members from China and other under-represented parts of the globe over the next few months. We also welcomed Dr Carol Bucking and Dr William Perry to the board. William is spearheading the promotion of the journal and its articles through the FSBI website, and to facilitate this we will be encouraging authors to submit suggestions for 'tweets' in the twitter-sphere which can be used to promote the journal.

The between the covers articles continue to be well received by the authors whose papers we feature and some of the images we have received have greatly enhanced the journal cover. I would like to remind FSBI members that the journal is the society's window to the world, and I would encourage you to consider submitting ideas for special issues or opinion articles that you might like to initiate. An opinion piece that focused on some of the issues associated with the Covid19 pandemic and how this has impacted either fish communities or fisheries science would be topical. I would encourage anyone to email me (journal.fishbiology@btopenworld.com) with your ideas so that I can engage with you and help you fashion them into impactful articles.

New members of Council



Dr Rita Castilho, University of Algarve / CCMAR. Expertise: Fish phylogeography, fish population genetics.



Dr Sophy McCully Phillips, CEFAS. Expertise: Elasmobranchs; trawl surveys; European marine fish.



Professor Anne E Magurran, School of Biology, Sir Harold Mitchell Building, Greenside Place, St Andrews, United Kingdom. Expertise: The evolution and ecology of biodiversity; behavioural ecology; ecology and evolution of tropical fishes; impact of the Anthropocene on freshwater fishes.



Dr Nigel Milner, APEM Ltd and Bangor University, MEGL (Honorary Lecturer). Expertise: Salmonid ecology, migration, population dynamics and life history analysis; habitat modelling; hydroecology; environmental impact assessment; mangrove fish communities and trophic webs.



Dr Andy Nunn, University of Hull. Expertise: Particular interest in freshwater fish. His research covers various aspects of ecology, conservation, climate change, alien species, habitat restoration and resource management in aquatic ecosystems. Wide experience with applied fish ecology projects under contract to various organisations.

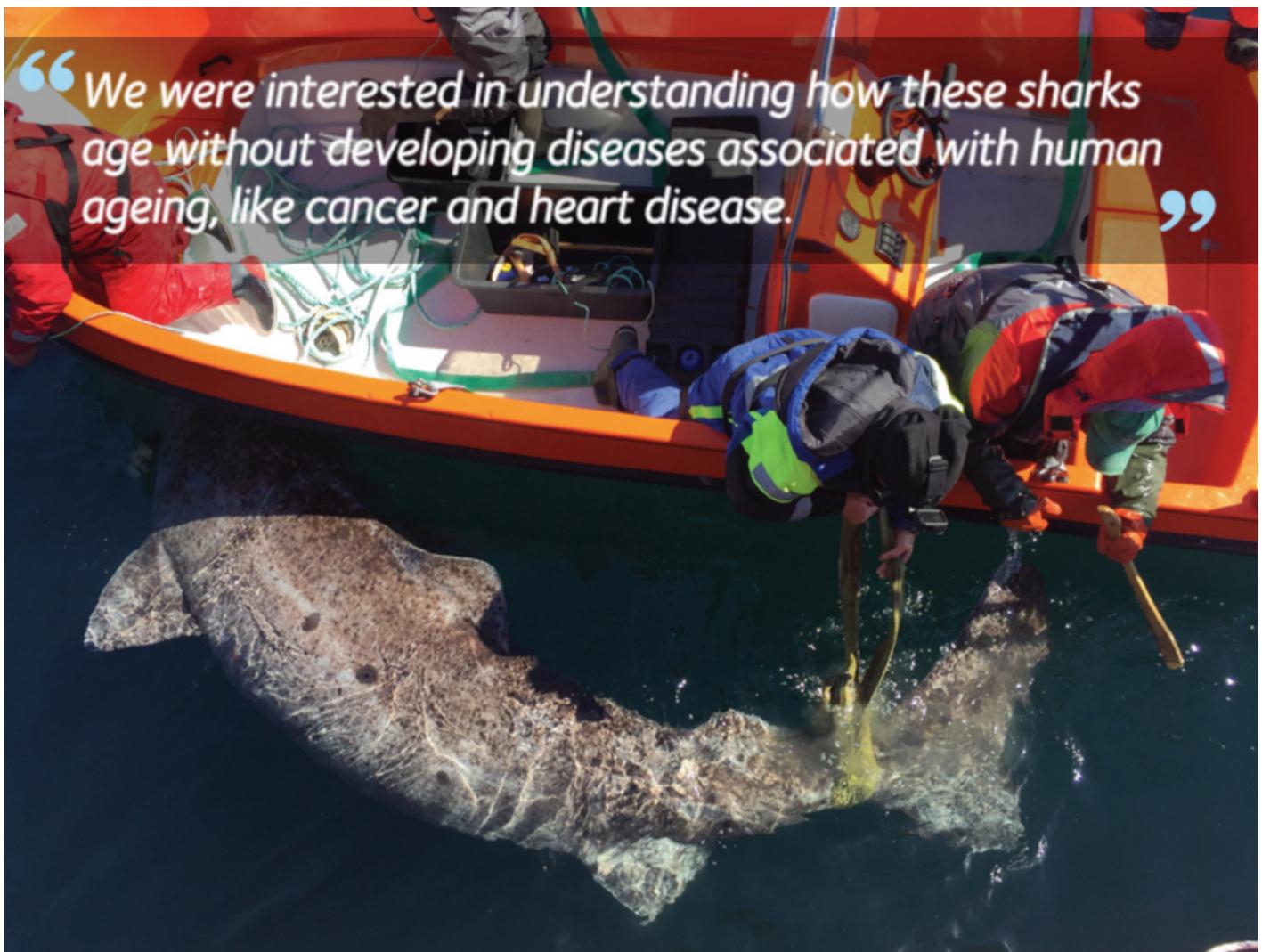
Research Grant Reports

Holly Shiels, from the University of Manchester, UK received an FSBI Research Grant to help with a study to ask “How do Greenland sharks live for 270+ years?”.



The life span of the Greenland shark (*Somniosis microcephalus*, see picture) is at least 272 years and may be as long as 500 years making fish the longest living vertebrate on the planet. This extreme longevity is particularly interesting with respect to the heart, because heart disease is synonymous with aging in mammals. The overall objective of this grant was to determine the cardiac structures and mechanisms that permit long life in the Greenland shark with specific focus on: (1) Regeneration; (2) DNA Damage and Repair; (3) Coronary Arteries. Fisheries Society of the British Isles funding was requested to help with the travel, accommodation and equipment shipment to conduct

research at the University of Copenhagen's Arctic Research Station, Disko Island, Greenland in the summer of 2019 as part of an Arctic expedition led by Prof John Fleng Steffensen. Sharks were caught by longline at sea with many tagged and released. Animals who would not survive release were euthanised and body tissues were sampled. Some studies were conducted at the Arctic Station, whilst others were carried out back at the University of Manchester, UK, on the tissue collected during the expedition. Data analysis is ongoing and further expeditions will be required to elucidate mechanisms. However, findings to date are as follows: (1) The regenerative study revealed a far greater number



Picture of team working from a small boat to tag a Greenland shark. Photo credit, H.A. Shiels.



of nuclei stained positive for a marker for DNA replication in the Greenland shark heart than the mouse heart which is suggestive of proliferative/regeneration potential; (2) The DNA damage and repair study was not successful but lessons were learnt such that we will be in a better position to explore these processes should we have the chance to return to Greenland again; (3) The coronary vasculature of the Greenland shark showed no age related changes in vessel morphology or composition indicating the absence of phenotypes associated with coronary artery disease in human elderly. Thus, although incomplete, collectively, current state of discovery suggests the Greenland shark heart does reflect an aged phenotype despite living for hundreds of years.

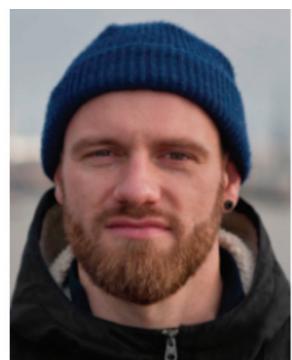
We are grateful to the FSBI for funding our involvement in this the Greenland Shark Project. More information can be found at <http://bioold.science.ku.dk/jfsteffensen/OldAndCold/> and at <http://shiels.lab.manchester.ac.uk/>.

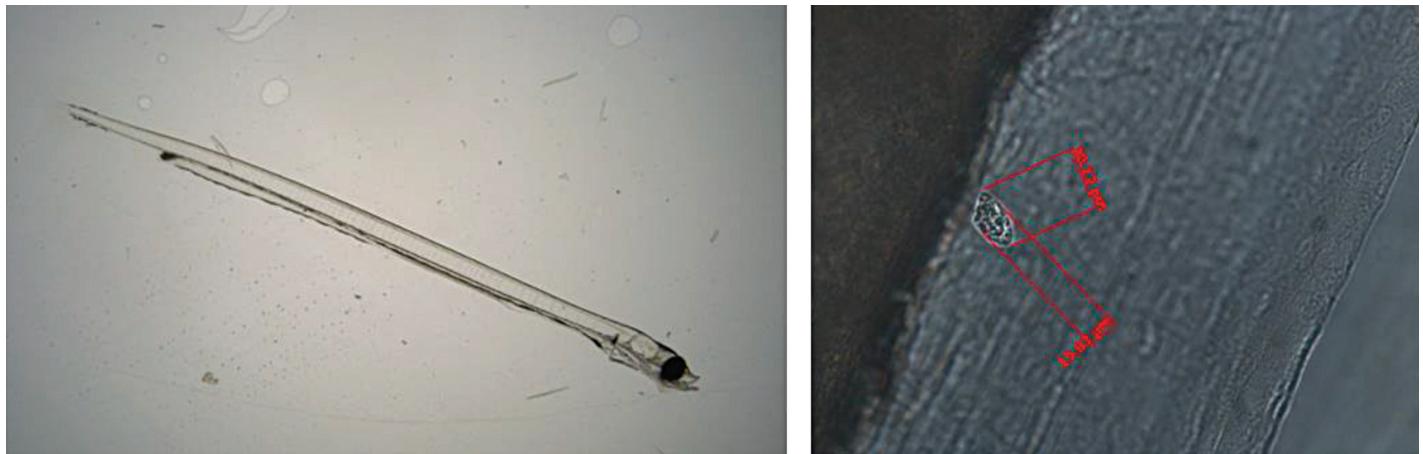
Marta Moyano, Gregor Börner and Douwe Maat report on an FSBI Research Grant that helped with a project entitled “Towards quantifying the role of protists in larval fish diets: a case study using Atlantic herring”.

The authors are based at the Institute of Marine Ecosystem and Fisheries Science, University of Hamburg, Germany and at the Department of Biological Oceanography, NIOZ-Royal Netherland Institute for Sea Research, Den Burg, The Netherlands. Marta is now at the Centre for Coastal Research, University of Agder, Kristiansand, Norway.

Year class strength in fish population is generally set during the early life stages. This is case for Atlantic herring in the North Sea, where recruitment is fixed during the first month of life. The ultimate cause(s) behind recruitment variability in North Sea herring is (are) not yet known but finding the right food during this delicate stage is essential for life cycle closure. In fact, changes in larval survival rates likely result from changes in prey availability and composition / quality. Understanding the trophic dynamics of early life stages of commercially important fish is essential to predict population changes under a changing climate, so then these resources can be managed. Protists, unicellular eukaryotes such as phytoplankton and ciliates, may play a key role in larval growth and survival during the low production season (e.g. North Sea herring and plaice during winter), and thus there is an urgent need to quantify this trophic link and explore its relevance for ecosystem-based management.

Copepods have traditionally been considered the major food source for larval fish, and the role of smaller prey, such as protists, has generally been neglected. Autotrophic and heterotrophic protists are part of larval herring diets, but microscopic observations have undoubtedly underestimated its role as essential food, especially for first feeding larvae. Laboratory and modelling studies have confirmed that protists support early





Larval herring (left) and detail of an *Oxyrrhys marina* cell in a larval gut (right).

feeding and faster growth in herring larvae, but investigating this relationship in the field has proven difficult due to fast digestion rates and the lack of good preservation techniques.

Molecular methods are promising tools to investigate foraging in the marine environment. They have been successfully applied to different taxa from copepods and krill to fish. However, they have not yet been applied (nor tailored) to protists in larval fish guts. The FSBI funds allowed us to 1) run a set of laboratory experiments to measure protist feeding and digestion rates in herring larvae, and 2) perform gut content analysis in field-caught herring larvae. We are deeply grateful to the FSBI for its support.

Aquaculture study findings shed light on lumpfish welfare

New research from aquaculture experts at the University of Stirling could help improve the welfare of farmed lumpfish – a species vital to tackling the problem of sea lice in salmon. The new study – led by the University’s Institute of Aquaculture and research institute Fiskaaling, in the Faroe Islands – found that liver colour is an important indicator of general welfare in lumpfish, which are increasingly being used by the salmon industry to naturally remove parasites. The research – published in *Nature Scientific Reports* – identified

correlations between liver colour and the nutritional, welfare and health status of the species, as well as other commonly used indices including fin damage and skin lesions. The team sampled lumpfish for welfare indicators, liver colour and stomach contents, and collected lumpfish liver samples, at a number of sea farms. Posterior nutritional and histopathological analysis of the samples was carried out at the Institute of Aquaculture.

Dr Sonia Rey Planellas, who led the University of Stirling’s contribution to the study, said: “Our study found that lumpfish are predominantly generalists and opportunistic feeders when in cages – and this is impacting on their health and welfare. “We were able to identify different liver colours that correlate with their health and welfare status. This technique could be used by the industry to identify any issues, and



to modify husbandry and feeding – such as supplementing lumpfish feeds with essential nutrients and pigments, as necessary.

“Ultimately, this study will help to improve the development of the fish in hatcheries and when they are deployed in sea farms with the salmon – which is important because their welfare must be maintained to enable them to remain efficient and eat the sea lice from salmon.” The project was conducted in the Faroe Islands, in collaboration with Dr Kirstin Eliasen, of Fiskaaling, and Esbern Patursson, of salmon farming company HiddenFjord. Stirling masters student Enrique Pino Martinez, and Institute of Aquaculture staff Dr Monica Betancor, Dr Johanna Baily, Dr Bruce McAdam, and Dr Bernat Morro Cortes also provided support.

The study – Liver colour scoring index, carotenoids and lipid content assessment as a proxy for lumpfish (*Cyclopterus lumpus* L.) health and welfare condition – was funded by Fiskaaling, HiddenFjord, the **Fisheries Society of the British Isles**, and the Scottish Aquaculture Innovation Centre.

Field courses in the time of Covid-19. Not quite ‘business as usual’ on our field course’ by Sarah Helyar, Queen’s University, Belfast



Easter is definitely the highlight of 2nd year for the Marine Zoology students at Queen’s University in Belfast. In a normal year we go on a week-long residential field course at the Portaferry Marine Lab overlooking Strangford Lough MCZ, designated due to the Horse mussel reefs, seagrass beds, and amazingly diverse marine life within the Lough. But this year was a bit different. As February turned into March, we were having conversations not about the list of field kit that the students needed to bring, but if we could move the practical sessions over to Belfast, so the trip was no longer residential. As we got further into March it became evident that we wouldn’t even be able to do that. On the 11th March the WHO declared a global pandemic; on the 23rd March the UK followed many other countries into lockdown and the university closed. Our field course was due to start on the 5th April, with the aim of giving the students real experience of sampling techniques and statistical methods; we couldn’t just scrap it, as it forms the core assessment for the



module, so there was no option but to go virtual: and we had just 2 weeks to do it!

Due to unexpectedly early paternity leave, there were just 2 of us to get the field course up and running. There followed a flurry of activity ranging from getting police permission to go to the beach for filming, editing videos, finding data sets that could be analysed, and replicating as many elements of the real field course as we could. Due to the lockdown there was no scope for anything other

than improvising, so rocky shore transects were filmed on a phone with my 2 kids helping collect the samples. Although definitely not at a professional standard, we certainly gave it the personal touch!

We ended up with what we thought was a good mix of recorded field videos, live Q&A sessions, online quizzes and how-to statistics sessions, all embedded into our online teaching platform. Each passive activity like reading or watching a video was kept to a maximum of 10 minutes, with more active tasks interspersed; the students developed their own field guides, analysed real world data, and experienced the joys of online team work. While I learnt some great new tricks for sharing field work and enabling students to remotely explore.

While the students didn’t get quite the same experience of plankton tows in the rain, discovering amazing nudibranchs in the kelp, or trying to catch a butterfish, in some ways it was fairer as all the material, questions and discussions were online and available to all. The feedback we’ve had from the students emphasised other aspects too. The statistics sessions were more useful because they could watch them alongside analysing their own data; and the online discussion groups were less intimidating for many than asking questions in class. While many of them were sceptical and anxious ➤



to start with, by the end there were mostly smiling faces in the team chats.

I'm a huge believer in the power of hands-on science to inspire students, and field work has always been the bit I love most (even though I'm a molecular ecologist!). Taking undergraduates onto a rocky shore or out in a boat will always be a key element to how we help them to find their passion in science. But this spring has taught me a lot about the techniques we can use to combine the virtual and real worlds to prepare students and support field work, and this can make their experience of field work even more valuable and expand their learning.

We can also use it to improve access, as not everyone can afford

those overseas field courses, and disabilities may limit the ability to get onto a rocky shore, but we can do a better job at sharing these experiences and inspiring all our students.

Next year I really hope that we are back to our field sites around Portaferry, as nothing beats real field work, but some of those online sessions are definitely going to stay.



New books of interest?

Three new books that are worth reading.

Daniel Pauly (2019) Gasping fish and panting squids. Oxygen, temperaqture and the growth of water-breathing animals. 2nd Edition. International Ecology Institute, Oldendorf/Luhe, Germany.

Since moving to Vancouver in the mid-1990s, Daniel Pauly's work has mostly been on improving data on the demise of the marine environment. Although valuable, this more recent work is, in my estimation, not his greatest contribution to fish biology. This book develops and extends his ideas on the physiological limits to fish growth which were originated whilst he was doing his PhD in Germany. At a time when there is increasing water temperatures and the reduction of oxygen in sea water, a better understanding of how these variables influence fish growth is essential and this book

provides an innovative analysis that will be essential to future work.

Ray Hilborn and Ulrike Hilborn (2019). Ocean recovery. A sustainable future for global fisheries. Oxford University Press, Oxford, UK.

Written for the non-specialist this book discusses all aspects of the fishing business, from the biology of the stocks, to the assessment of their state to how people can be persuaded through certification schemes to choose sustainably caught fish to eat. Ray Hilborn describes in the preface that he wrote the first draft and then Ulrike Hilborn turned his text into a version that is jargon free and easy to read. In contrast to Daniel Pauly, just north of the US/Canada border, Hilborn is an optimist arguing that the state of exploited fish populations is not as universally bad as many think and that fishing provides protein

to millions of people and which could not be supplied by land based agriculture without severe environmental disruption.

Michael Fogarty and Jeremy Collie (2020). Fishery ecosystem dynamics. Oxford University Press, Oxford.

Unlike the previous two books this is intended as a route into the modelling and analysis of the dynamics of fish and the ecosystems in which they are embedded. The authors have aimed the book at the next generation of fishery scientists who will have to grapple with the complexities of ecosystem-based fisheries management. It is particularly concerned with how fisheries science is embedded in the science of ecology and that this connection cannot be ignored if ecosystems are to be effectively taken into account in the management of fisheries.

Vivas in the time of Covid-19 – William Perry reports



I actually found the video viva a very positive experience. The fact that I could not see my examiners in the flesh was not as big a problem as I thought it was going to be. The biggest worry for me was that I would not be able to read the room; however, on the day, I did not find this a problem at all. I think this was largely due to my fantastic examiners Prof James McDonald and Prof Matthew Gage who made me feel at ease with a format that will also have been fairly new to them. I know it sounds cliché, however, I would say to those doing a video viva to keep calm, take your time, and most of all, enjoy the experience. The discussion should be stimulating and enjoyable, and you will be the expert in the room!

One of the main drawbacks of the video viva for me was that I could not go for a drink with my examiners afterwards. I think that the discussions that went on within the viva could have

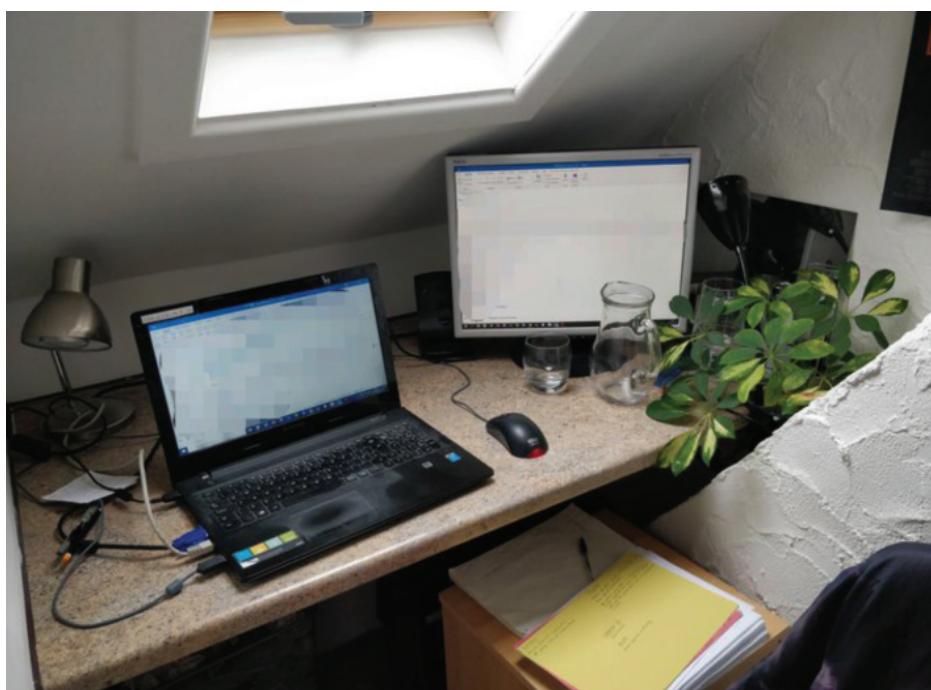
been a lot more candid and free flowing after a few beers in the pub afterwards. However, it does make The FSBI 2021 conference in Leuven even more anticipated, as it will hopefully provide an opportunity for a post viva pub trip with my examiners.

Similarly, the other negative was that I could not properly celebrate with my supervisors after the viva. We had a video celebration afterwards, but I am definitely looking forward to the celebration with my supervisors and the rest of the lab in future! On the flip side, I was able to celebrate with my family and partner immediately after the viva, which was a really lovely way to end the PhD after all the support they had given me.

I think there is also a lot to be said for doing your viva in a familiar environment, i.e. from your home (see picture). It certainly helped me relax and remain calm; not having to worry about logistics such as what room in the University I was going to. It was also very humanising to see the

examiners in their home setting, which also helped calm my nerves.

Finally, I think there is something to be said about the environmental benefits of video vivas. In a world where the effects of global warming are becoming ever more apparent, drastic lifestyle changes will have to be made to combat one of humanities greatest problems. In the UK, travelling via plane is not necessarily an issue, as many examiners travel by train; but international examiners to the UK would have to travel by plane. I think that face to face vivas do provide an extra level of intimacy to discussions, and are therefore extremely valuable, arguably more than the environmental offset. None the less, it brings into focus reasons for travel, and I think those who have undertaken video vivas can be proud of their sacrifice.



Notices

FSBI MEDALS: CALL FOR 2021 NOMINATIONS

Deadline for Nominations: 15 October 2020

Information and on-line forms for nomination: <https://www.fsb.org.uk/about/medals/>

ALL FSBI Members can nominate a medallist, and also it is not necessary for nominees to be current members of the FSBI.



The Beverton Medal is awarded to a distinguished individual scientist for a lifelong contribution to any aspect

or aspects of fish biology and/or fisheries science, with a focus on ground-breaking research.

It was named after its first recipient (see picture), who was not only a great fisheries scientist

but also a President of the Society in the 1980s. He is of course best known for his book written with Sidney Holt *On the dynamics of exploited fish populations* published in 1957. Holt was awarded the Beverton medal in 2017. In some ways this typifies the relationship between the two as Holt always appeared to be the partner less recognised by the establishment.

The FSBI Medal is awarded to an individual early career scientist who has made an exceptional contribution to any aspect or aspects of fish biology and/or fisheries science. Individuals are eligible for nomination if their PhD was awarded less than 15 years before the closing date of nominations, although an allowance will be made for any career breaks taken during this period.

The Le Cren Medal is awarded to an individual or team who have made a significant contribution to any aspects of the study of fish biology and/or fisheries science,

with a focus on conservation, training or public understanding of the discipline.

The medal is named after David Le Cren (see picture) who was director of the Freshwater Biological Association's Windermere Laboratory. He was also very active in the UKs Ecological Society and wrote its history. He was a good friend of Jack Jones and attended the Coarse Fish Conferences held in the 1960s and which were the precursors of the founding the Society in 1969.

Details of 2020 medallists. Please note that currently the plan is that medallists from 2020 and 2021 will attend the FSBI 2021 symposium in Belgium.

Any questions concerning either the nomination process or any aspect relating to the FSBI medals, please contact the Honorary Secretary, Dr Ian Winfield (ianjwinfield@icloud.com).

Information Desk

For all membership enquires (except subscription payments), including grant application submissions, please contact the FSBI office at:

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