

# Anne Magurran at the Centre for Biological Diversity, School of Biology, University of St Andrews writes about her work on biodiversity and fish

The award of a CBE for Biodiversity in the 2022 New Year Honours List came as a huge surprise. But it made me reflect on how lucky I have been to have worked on biodiversity for most of my career, and how important fish assemblages have been in that research. I have also been enormously fortunate in working with many great colleagues, and in a variety of fascinating places and ecosystems. I have learnt a lot from those I have worked with and am immensely grateful to everyone involved.

One place that keeps drawing me back is the Northern Range in Trinidad in the West Indies. This system was dubbed a natural experiment by Caryl Haskins for its capacity to shed light on evolution in action. The focal species – the Trinidadian guppy, *Poecilia reticulata* – has attracted fish biologists from all over the world and led to textbook examples of evolutionary change. Siân Griffiths, whose PhD was funded by FSBI, now at Cardiff University, conducted some clever field experiments to show that female guppies recognise and preferentially associate with familiar individuals, while Jennifer Kelley, presently based at the University of Western



Siân Griffiths

Australia, discovered that male guppies prefer to mate with females they have not previously encountered. Some of my work there, in collaboration with Gary Carvalho, the FSBI Past President, uncovered high levels of genetic differentiation amongst guppy populations, and paved the way for investigations of the evolution of reproductive isolation.

But the Trinidadian system is not just an exemplar of intraspecific biodiversity; it also provides an ideal setting within which to examine spatial and temporal variation in tropical freshwater fish assemblages. In the late 1990s Dawn Phillip undertook, as part of her PhD research, an extensive survey of



Gary Carvalho getting his feet wet!

freshwater fish diversity across the islands of Trinidad and Tobago. Her dataset provided new insights into the structure and composition of these assemblages and is proving a vital resource against which to benchmark subsequent changes in the diversity of these fish. Dawn, who went on to be a lecturer at the University of the West Indies (UWI) in Trinidad, died unexpectedly in 2017. She is still greatly missed, but left an enduring legacy, not just through her data but also in terms of her mentorship of the next generation of fish biologists in Trinidad and the wider Caribbean.

More recently, and in collaboration with Indar Ramnarine and myself, Amy Deacon (see ►

Colin Adam's article for a picture) led an intensive 5-year survey of fish biodiversity in 16 river sites in the Northern Range in Trinidad. These data have provided new information on the structural and compositional reorganisation of the assemblages over time and show that biodiversity change is complex and hard to predict. Amy now has a faculty position at UWI and is helping supervise FSBI student Ada Eslava, who is taking on the important challenge of understanding biodiversity change in fish communities in this and other tropical freshwater systems.

The Trinidadian river system is relatively well studied. In contrast, there are still large knowledge gaps about fish diversity in other tropical freshwaters, such as those in India, Thailand and Malaysia that Anuradha Bhat, Salinee Khachonpisitsak and Amir Ahmad have helped fill. And the Amazonian flooded forest must rank as one of the most interesting and challenging to work in. I have been fortunate to have visited there a number of times over the years. My earlier field trips included Bill (W.D) Hamilton, and Peter Henderson while more recently I have been working with Helder Queiroz. The Mamirauá Sustainable Development



Bill Hamilton and Anne in the Amazon



Investigating fish biodiversity in Trinidad's Northern Range Indar Ramnarine, Rajindra Mahabir

Institute, where the research is based, is a world-leading example of a conservation initiative that supports both people and nature.

All of this work is underpinned by the need to quantify biodiversity in ways that are both accurate and informative. This is an ongoing task, but in recent years new approaches have made it possible to measure taxonomic, functional and phylogenetic diversity in the same statistical framework. As a result, we continue to learn new things about the world's fish diversity. For example, Isaac Santos has recently used a combination of trait and taxonomic information to identify hotspots of marine fish rarity in the world's oceans. And finally, coming closer to home, my colleagues and I have documented rapid biotic homogenization in the seas to the west of Scotland while Faye Moyes is uncovering temporal change in the rarity of fish in the same system.

These are a few vignettes of the research that has kept me

occupied over the years. Looking ahead, there are many research questions that can now be answered with new data resources and techniques, while improved conservation planning is needed to secure the future of the most diverse vertebrate taxon on Earth. The FSBI will undoubtedly play an important role in supporting fish biologists as they tackle these pressing challenges.

# Editorial

Over the past few weeks, I have been reading *Floating coast. An environmental history of the Bering Strait* by Bathsheba Demuth which is much concerned with the history of whaling in the Beringia area of the north Pacific. The sad story tells of how both the US capitalist system of whale exploitation for profit and the communist system of the USSR, where exploitation was to work towards the ideal of a communist society, led to the overexploitation of the animals and more or less destroyed the way of life of the indigenous people on both sides of the Bering Strait. As Demuth makes clear, the indigenous people had developed a way of exploiting the whales that was low key and set in a context of stories and myths about how the animals offered themselves up to be killed. In contrast, the US whalers were only interested in making money and devoted little thought to the longer-term effects of their exploitation. Whales were only valuable in terms of money. On the Soviet side of the

Bering Strait the value of whale catches was in terms of reaching production targets that would be a contribution to the development of communism in the USSR. Again, there was no regard for the sustainability of their activities.

Times have changed and we now, mostly, see whales as valued members of the marine ecosystem and do our best to protect them. Their numbers have increased. In general, those of us living in the well-off part of the world can afford to make efforts to protect biodiversity in the ocean. An expression of this is the willingness of yacht people to take part voluntarily in a citizen science project created by Dr Richard Kirby and his collaborators (see <https://www.sailworldcruising.com/news/246051>). The project encourages yacht owners travelling the oceans to make and use a Secchi Disk to measure the depth at which the disk disappears so achieving an index of phytoplankton density in the water. Two papers published so far

have shown that the results from this study are comparable with the data on primary production gathered by satellite. The beauty of the study is that yachts go to areas of the world where not much scientific sampling takes place and the map of the locations where the disk has been used shows impressive coverage.

Of course, citizen science projects are now numerous, but they reflect the changing attitudes towards the natural world from one where exploitation was the important metric to a less invasive and we hope a more sustainable way of interacting with the environment. We still need to extract resources from the sea but the way we do this must also have regard for the effects of that extraction.

More details of the Secchi Disk project can be found at <http://www.secchidiskfoundation.org>.

Paul J B Hart  
Leicester, February 2022  
Next deadline: 1st May 2022



# Colin Adams, FSBI Honorary President, reports on the latest news from the FSBI Council

After such a long period of nothing but gloomy news, detailing all of the things that we in the science community cannot do because of national and international restrictions, it is a pleasure to be able to report some good news from FSBI council.

Meeting with other researchers in our field, sharing data, discussing ideas, indeed generating ideas, is a major driver of the innovation that is at the base of the scientific process. For the last two years, I, like many of you I am sure, have tried to replicate this process through the media of Zoom, Skype and Twitter. There is no-one that I have talked to that thinks that is a perfect substitute for face-to-face scientific interaction. The counter argument is that meeting through zoom has allowed engagement with people and groups that in many cases would not have been possible because of logistics, cost and opportunity. This is undoubtedly also true. The institute I work in for example has attracted talks from eminent and emerging scientific stars from across the world to our seminar series in a way that would have not been possible financially or logistically for a face-to-face seminar. It seems likely that the future of scientific talks will be some blend of the in-person and virtual formats.

It is thus a pleasure to be able to report that the 2022 FSBI symposium “Fish in a Dynamic World” on the 25th to the 29th July 2022, will be at Nottingham Trent University. This meeting will be the first of the annual FSBI meetings that will be hybrid in nature. The organising team, led by Iain Barber, are planning in-person attendance as well as providing a facility for remote access to the

talks and poster sessions. The call for abstracts has attracted a healthy response and a very broad range of research topics. Registration for the meeting will open very soon.

Every year the FSBI awards medals to individuals, or occasionally teams, for their contributions to research, conservation, training and public understanding of fish biology. The nominations are mostly made by FSBI members (although non-members can also nominate). Each year, FSBI council members have the difficult task of casting votes for nominees usually from amongst a very strong field of candidates. This year was no exception. It is a real pleasure to be able to announce the medal winners for 2022 here.

**The Beverton medal** is awarded to a distinguished scientist for a lifelong contribution groundbreaking research fish biology. The 2022 medal is to be conferred upon **Prof Katie Peichel**. Based at the University of Bern, Switzerland, Prof Peichel is an evolutionary geneticist interested in how change in the underlying genetic and genomic architecture of organisms leads to adaptation in nature and the emergence of new



species. Her research approach has been to link laboratory based molecular techniques, with ecological studies undertaken in the field, in particular using the stickleback as a model species. Her work is very highly cited and has been a major influence in this field over the last two decades.

**The Le Cren medal** is awarded to an individual (or a team) who has made a significant contribution fish biology, with a focus on conservation, training or public understanding of the discipline. The 2022 is awarded to **Dr Steven Cooke**. Working at Carlton University, in Ottawa,



his research covers a broad field including fish conservation, management, fisheries exploitation and physiological ecology. He is a prolific author on these topics. His published work also shows an enormous breadth of collaborations across a wide range of disciplines with insights to offer in the fish conservation and management. He is a founder of the Canadian Centre for Evidence-Based Conservation which is committed to synthesising data to ensuring conservation action is based on the best evidence possible. ➤

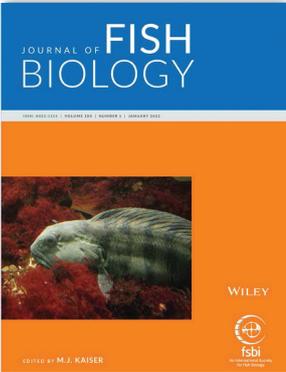
The **FSBI medal** is awarded to an early career scientist who has made an exceptional contribution to any aspect of fish biology. The medal for 2022 is to be presented to **Dr Amy Deacon** of the University of the West Indies. Dr Deacon has research interests that cover behavioural ecology, biodiversity, conservation and invasive species. She has published important papers on very applied topics such as remote sensing, conservation strategies and invasive species and well as



on fundamental questions such as the origins of biodiversity and the drivers of variation in reproductive strategies. In addition Dr Deacon has a strong commitment to outreach contributing extensively to popular media outlets on topics around fish biology.

Congratulations to all of this year's very worthy medal winners.

## The *Journal of Fish Biology*: Letter from the Editor



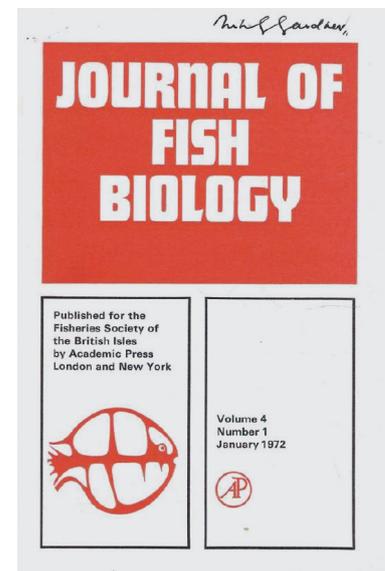
### Volume 100, Issue 1

Pages: 1-334  
January 2022

It gives me great pleasure to highlight that the January 2022 issue of the *Journal of Fish Biology* is the 100th volume published since the Journal was instigated over 50 years ago. Where were you when the first issue of the Journal was published? I was about 12 months old at the time. So this feels like a rather privileged moment. It remains a huge privilege to serve the FSBI as Editor of the flagship Journal and I would like to reiterate my thanks to the editors and board members. We are about to launch a recruitment drive to hire an additional 14 editorial board members. We are primarily looking to increase our diversity and inclusion. We

are light on editors from the Global South, in particular SE Asia, India, Japan, Africa. We will post an advert with specific requirements, but I am glad to invite interested individuals to email to express their interest. As a minimum we will require that any editor has published at least 5 first author papers in the last five years. We will preferentially select individuals from under-represented groups. Hence if you email me directly, please make these facts crystal clear. We want to hear from you.

This is also the first year that the Editorial Board will consider the award of the Huntingford medal for the best Early Career



Researcher paper. We have had 33 eligible papers submitted for consideration based on papers published or accepted in 2021. That is going to be an interesting challenge, but we are looking forward to it, and I hope to be at the FSBI conference in person to witness the presentation of the medal.

The latest news of the *Journal of Fish Biology* is that it is now 'free format' on submission so taking away the requirement for many of the tedious issues associated with submitting a paper to the journal

[My first paper, with Tony Pitcher, was in this volume shown in the picture so you can tell how old I was at the time! Ed.]

### The Acute Toxicity to Rainbow Trout of Fluctuating Concentrations and Mixtures of Ammonia, Phenol and Zinc

V. M. Brown, D. H. M. Jordan, B. A. Tiller

Pages: 1-9 | First Published: 01 January 1969

The first paper in the first volume of the Journal

# SECRETS OF THE BASKING SHARK

By Natasha Phillips of Swimming Head Productions

In late 2021, the FSBI awarded sponsorship to support the creation of a new feature documentary on basking sharks in UK and Irish waters. This film aims to follow part of the basking sharks' northerly migration route, speaking to conservationists, scientists and communities along the way. Starting in southern England, the sharks' journey passes key sites across Ireland, the Isle of Man and Scotland. Travelling between hotspots, we hear from a wide range of groups, including Cornwall Wildlife Trust, former shark hunters on Achill Island, members of the Irish Basking Shark Group, Trinity College Dublin, the Manx Basking Shark Watch, the University of Exeter and the Shark Trust. By exploring the sharks' world, alongside captivating interviews

with local experts, we gain new insight into these endangered giant fish, exploring their troubled history, exciting new research findings and ambitious plans for future protections.

The film was made by Natasha Phillips (a former FSBI supported PhD student who completed her PhD on ocean sunfish in 2018), and Lawrence Eagling (who completed his PhD on sustainable fisheries in 2016). After creating several series of short films to promote new biological research whilst working as post-docs, they launched Swimming Head Productions, a documentary film group that specialises in exploring natural history and showcasing new research findings.

The basking shark film is now ready for release and after an incredible public response,



The author of the article and maker of the film, Natasha Phillips

the digital premiere has already sold out of all 260 tickets. The initial screening in February will show the film online, followed by a live Q&A session with a panel of shark experts who feature in the film. The film will be made available online later in the year ([www.youtube.com/c/SwimmingHeadProductions](http://www.youtube.com/c/SwimmingHeadProductions)) and in the meantime, keep an eye on local film festivals! First up is the Achill Island Film Festival where the film will be screened in May 2022.

For more information on the film, with behind-the-scenes clips and full film trailer search for Swimming Head Productions on Twitter, Facebook and Instagram, or visit our website at [www.swimminghead.co.uk](http://www.swimminghead.co.uk)



# A sad farewell to two great colleagues

On Monday 31st January I received two emails with the sad news that two well known colleagues had departed this earth at an unexpectedly early age. The first message was that Sarah Kraak had succumbed to covid-19 whilst the second was of the sudden death of Jeff Hutchings.

Both of these have been part of my life for many years. Sarah was a postdoc with me from 1998-2001 and subsequent to that we have collaborated on joint work applying behavioural economic ideas to fishery management. I first met Jeff in October 1991 at a meeting on *The Behavioural Ecology of Fishes* organized by Felicity Huntingford at the Ettore Majorana Centre for Scientific Culture, Erice, Sicily. At that time Jeff was just beginning a postdoctoral position with Linda Partridge in Edinburgh. Since then we have often been in touch and nearly wrote a book together.

What follows are brief accounts of these two lives that have been cut short at such early ages (60 for Sarah and 63 for Jeff).



## **Sarah B M Kraak (1961–2022)**

Sarah born on the 13th May 1961 in Amsterdam, Holland. She was a true European and during her career she worked in Holland, Switzerland, Great Britain, Ireland and finally in Germany. Her parents were both academics with her mother being a biologist and

her father a linguist. She spoke several languages fluently and was someone who always said what she meant with no frills.

Sarah had a passion for science as an activity that defined her as a person. When she transferred from research for its own sake to the application of science in a fisheries context, she said that: "... it was extremely annoying that the quality standards of applied science were so much lower than those for fundamental science.

... As if science with an applied purpose has to be only cheap, efficient, and commercially viable, whereas fundamental science is a hobby, a vocation, a passion, a way of life. For the latter no quality standards are good enough."

Sarah did her first degree and PhD at the University of Groningen in the Netherlands. Her PhD (1994) was in the field of Behavioural Ecology, on female mate choice of a Mediterranean blenny. She then moved to Switzerland (Bern, 1995–1998) for postdoctoral studies on mate choice in sticklebacks and turned to Evolutionary Ecology for postdoctoral studies in the UK (Leicester, 1998-2001) on speciation of sticklebacks and the evolution of sex determination. Sarah briefly lectured on Animal Behaviour, Ecology, and Evolutionary Biology at the University of Nottingham in 2001-2002.

In 2002 Sarah began to focus her talents on the applied world of fisheries research when she joined the Netherlands Institute for Sea Research (RIVO), now Wageningen IMARES. Despite her misgivings about the standards normal in applied science, she soon began to make her mark. She was involved in advisory science on

fisheries management, nationally and internationally in ICES and with the EU Scientific, Technical and Economic Committee for Fisheries (STECF). She did stock assessments and management-strategy evaluations, concentrating on demersal mixed fisheries in the North Sea. Sarah also did research on fisheries-induced evolution of life-history traits in fish. Finding the applied side of fisheries research frustrating, in 2008 she took the opportunity to leave the advisory world and return once more to academia. She joined the Biological Sciences department at University College Cork (UCC) as a senior postdoctoral fellow with Dr Emer Rogan. Although she was employed by UCC, she was permanently stationed at the Marine Institute, Co. Galway, where she did research within the *SeaChange* project on management strategies for the rebuilding of fish stocks in the Irish waters.

During her time in Ireland, Sarah did some teaching at UCC and at Queen's University Belfast. In her research she became interested in developing innovative strategies of fisheries management, taking account of the human factor, especially by trying to find out how to align the interest of the individual (e.g. the fisher) with the interest of the group (e.g. all fishers, the society, etc.). As part of this work, Sarah organised a workshop at ICES convened to explore the relevance of behavioural economics to the development of fishery management strategies. This was part funded by the FSBI.

In 2015 Sarah moved to the Thünen Institute for Baltic Sea Fisheries in Rostock, Germany. Her work there continued along the lines of her Irish research with heavy involvement in the ICES community and serving as

an editor for the *ICES Journal of Marine Science*.

Sarah is survived by her husband Beat Mundwiler an artist and author.



### Jeffrey A Hutchings (1958–2022)

Jeffrey Hutchings was born in Orillia, Ontario, Canada on 11th September 1958. Orillia is a small town on the north shore of Lake Simcoe and is about 140 km north of Toronto. Jeff did his undergraduate degree at the University of Toronto before branching out and doing an MSc and PhD at Memorial University of Newfoundland. His early work was on the life history variation of salmon and although he continued with his interest in life history evolution, he is probably best known for his work on fisheries. Whilst at Memorial University, Jeff interacted with Ransom Myers at the Department of Fisheries and Oceans (DFO) who became instrumental in collecting a large data base on fish stock characteristics which is now extensively used in the form of the RAM data base.

Myers moved to Dalhousie University, Halifax in 1997 where Jeff had already been since 1995. The rest of Jeff's career was spent at Dalhousie although he had adjunct appointments in several European universities, namely Oslo, Agder, and the Institute for Marine Research, Norway and the University of Jyväskylä, Finland.

Jeff is best known outside of

academia for his papers exploring the causes of the collapse of the Newfoundland cod stock. He and Ram Myers showed that overfishing was the cause and this was taken by the DFO as a direct attack on their science. Jeff was subject to harassment from DFO who claimed he was wrong in his analysis of the science behind the assessment of the cod stock. Eventually DFO changed its attitude and the science that is now supplied by DFO to the government is more balanced and less subject to political interference.

Jeff continued to work on issues of societal importance by being Chair of the *Committee on the Status of Endangered Wildlife in Canada* (COSEWIC) and many other advisory groups convened by the Royal Society of Canada to which he was elected to its science academy as a fellow in 2015. He was also chair or co-chair of several Norwegian committees investigating aspects of biodiversity and conservation. In 2018 he was elected as a Foreign Fellow of the Norwegian Academy of Science and Letters.

Jeff was invited to give numerous keynote talks including two to the FSBI Summer Symposia, the first in 2001 in Leicester and the second in 2014 in Hull. He was also invited to give the J.C. Stevenson Memorial Lecture in 1996 and was awarded the Huntsman Medal for International Excellence in Marine Sciences by the *Royal Society of Canada* in 2017. These are the two most prestigious awards but he received numerous others.

Jeff's funeral took place on Monday 7th February and it was possible to attend online, the event can be watched at <https://event.forgetmenotceremonies.com/ceremony?c=c4024f26-8dc5-4bef-8721-004ffb95681b>

As we learnt at the funeral, Jeff was the eldest of five (three boys and two girls). At the funeral two of

Jeff's friends from his school days expanded on his talents outside of biology. At school and during the rest of his life, Jeff was a keen musician playing both the trumpet and piano and took part in school drama. He was also a keen reader and would trawl second-hand bookshops for significant books. Apparently, he also gave books to friends and students to either celebrate some milestone or thank them for a favour.

Despite all the accolades, Jeff remained a humble, positive and kind colleague. He was always ready to help if asked and would listen to what others had to say whatever their status might be.

Last year Jeff published with Oxford University Press *A primer of life histories. Ecology, evolution, and application*. The book was summarised by Jeff in the Autumn newsletter. At the end of the acknowledgements Jeff wrote that he owed his greatest thanks to his PhD supervisor Douglas Morris ‘... for impressing upon me the importance of intellectual honesty, academic integrity, respectful interactions with others, and asking questions of fundamental importance’. This could be taken as his own summary of his lasting contribution to science and to humanity. He followed his supervisor's advice to the letter.

Paul J B Hart  
Leicester, February 2022

# Wales Ecology and Evolution Network (WEEN) 2021

## A student-run conference for Welsh university postgraduates partially funded by the FSBI



Picture 1

One of the highlights of postgraduate life in Wales is the Welsh Ecology and Evolution Network (referred to as WEEN), an entirely student-run conference aimed at postgraduate students from the four biggest Welsh universities: Bangor, Cardiff, Aberystwyth, and Swansea. The conference presents an annual opportunity for masters, PhD and postdoctoral students to get together, network and present their ongoing research.

WEEN 2021 was a return to an in-person event following the fully virtual conference of WEEN 2020. As such, 39 delegates travelled to the Centre for Alternative Technology (CAT; see picture) in Powys, Wales for the weekend-long conference (December 3rd-5th). The event was partnered with the Low Carbon Energy & Environment Research Network,

with the theme of the conference matching that of CAT's main objective of energy efficiency and lowering carbon emissions. Other funders of the conference included the Genetics Society, the Bangor University students union, and the FSBI. The contribution of the FSBI in particular allowed for an entire presentation session to be dedicated to "Aquatic Ecology", alongside the other sessions on "Terrestrial Ecology", "Conservation" and "Genetics and Biogeography".

The very recent discovery of the new Omicron covid variant at the time of the conference presented some unique last-minute challenges for WEEN's organisation. Indeed, had it been held a week later, we would likely have had to shift the event to a virtual one following Omicron's rapid spread across the country.

To minimise the risk as much as possible, all delegates were required to take and present a negative lateral flow test prior to arrival and following departure. Furthermore, masks were required to be worn inside unless presenting.

Conferences are inspiring for early career researchers and can enormously influence the direction of their careers as they network and share their scientific projects. Therefore, as we continue to face these challenging times, the funding contributions of charitable scientific organisations becomes vital to allow networking events such as WEEN to happen. The FSBI's contribution not only allowed this meeting to happen in the first place but also provided all sorts of additional benefits for the delegates. In particular, delegates who are members

of the FSBI were able to present their research that the FSBI has actively supported; and those very members were given the opportunity to promote the many different ways the FSBI supports early career researchers such as those attending WEEN, be it via travel grants, bursaries, PhD studentships or even event sponsorships such as those that support WEEN. As such, the WEEN committee greatly thanks the FSBI for their continued support for this event.

### Event summary

All delegates arrived at CAT by the evening of Friday December 3rd; with all of the key events taking place in the Wales Institute for Sustainable Education (WISE) building (see Picture 1). This gorgeous building provides an open light environment for all presentations; and is surrounded by wildlife, including a curious robin that frequented many of the presentations (see Picture 2). Committee member Amy Gresham (Bangor University) opened the conference, which kicked off with an introduction to CAT and its key objectives in energy efficiency and sustainability. Following this, delegates were treated to a vegetarian dinner, a dietary theme continued throughout the entire conference. For the evening session, our keynote speaker Dr Line Cordes (Bangor University) presented her journey through her scientific career studying the links between movement and population ecology, including in aquatic biology (Picture 3). Finally, a pub quiz chaired by committee members Lucia Watts and Rachel Dolan (both Bangor University) was held in the bar, allowing delegates of different universities to mix and network.

Saturday December 4th began with the first session of presentations, the theme being “Terrestrial Ecology”. This session produced a wide range of talks, ➤



Picture 2



Picture 3



Picture 4

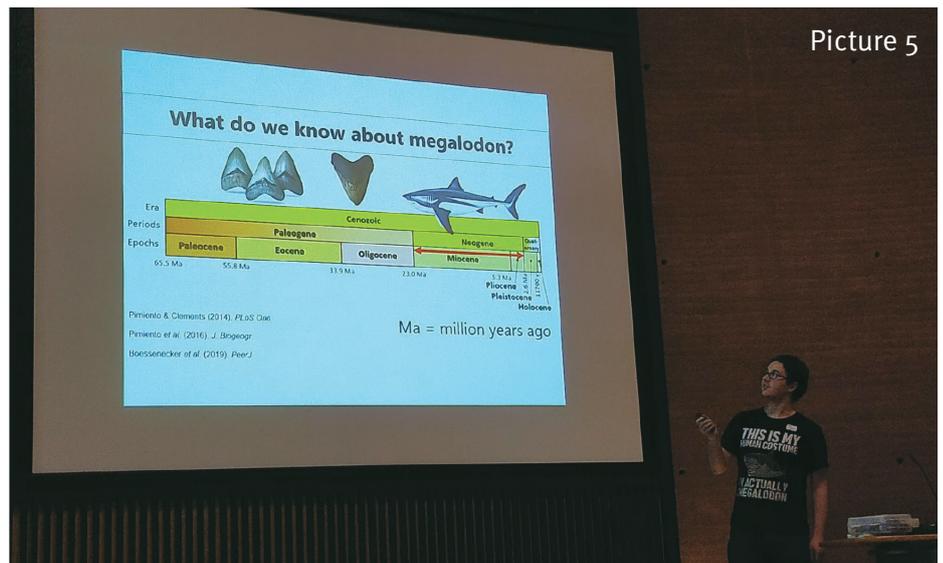
surrounding the likes of deer, bees, and birds. The second session that followed was based on “Aquatic Ecology” – with talks discussing seaweeds, cleaner fish, and even ancient sharks. The afternoon consisted of a tour of the CAT environment and facilities, as well as an inspiring workshop in which Dr Graeme Shannon, Dr Eleanor Warren-Thomas (both Bangor University) and our partners at the Low Carbon Energy & Environment Research Network discussed their different career paths and top tips for grant writing. Saturday’s activities finished with an AGM from the WEEN committee and a speed talk and poster session, with topics including river barriers and the monitoring of diseases in fish biology.

The final day of the conference (Sunday December 5th) began with a session on conservation. Talks here included invasive species in dunes and interactions between humans and wildlife. The final session of presentations which followed this covered genetics and biogeography and included talks on the genetics of otters and the study of reptile dispersal across oceans. Following a final vegetarian lunch, members of the committee presented information about various funding bodies. This included Sarah du Plessis (Cardiff University) thanking the Genetics Society; and Jack Cooper (Swansea University; and an active FSBI-sponsored PhD student) promoting the enormous array of opportunities provided to early career researchers by the FSBI (Picture 4). Such opportunities included grants, bursaries, and the chance to submit their manuscripts to the journal of fish biology.

The quality of presentations at WEEN continues to be outstanding every year, truly demonstrating the talent and scientific prowess displayed by early career researchers across Wales. This was especially true

of the aquatic ecology-based presentations, which included the talk voted as the best oral presentation of the conference. This was awarded to FSBI-PhD student Jack Cooper (Swansea University), who presented his work on the giant extinct shark *Otodus megalodon* – famously dubbed “The Meg” (Picture 5). The award of best poster presentation went to PhD student Hannah Vallin (Aberystwyth University) for her project in identifying herbivorous diets from DNA barcoding. Following these awards, Amy Gresham wrapped up the conference with closing remarks. Between the posters and the Aquatic Ecology session, 37% of all WEEN presentations this year were directly or indirectly related to fish biology, a theme strongly promoted by the FSBI.

This included the award-winning presentation from the student directly funded by the FSBI. The strong representation of fish biology, and the exceptionally high quality of these presentations, showcases both the diverse range and remarkable talent of projects that the FSBI directly supports for early career researchers. WEEN is indebted to the support received and hope to continue promoting the FSBI’s key messages and research for years to come.



Picture 5



Group photo

# Notices

## A CBE awarded to Professor Anne Magurran

As mentioned by Anne in her article, she was appointed a CBE (Commander of the British Empire) for her contribution to the understanding of biodiversity. Anne is a current council member and a recipient of the Beverton Medal (2006). Although she emphasises her work on biodiversity in her article, Anne has also done a significant amount of research on the social behaviour of fish.

(For those members outside the UK, the naming of the honour must seem rather quaint given that the UK no longer has an empire. Awards such as these, and there are several of a higher and lower rank than CBE, are awarded to people for all sorts of public service which can vary from raising large sums of money for charities, to writing best-selling novels, to doing significant research or to running a school dinner service. The history of these awards can be found at <https://honours.cabinetoffice.gov.uk/about/history/>).



Nottingham Trent University



## FSBI2022: Fish in a Dynamic World

Nottingham Trent University, UK

July 25<sup>th</sup> – 29<sup>th</sup> July 2022

**THEME: AQUATIC ENVIRONMENTS ACROSS THE GLOBE, AND THE FISH THAT LIVE IN THEM, ARE SUBJECT TO MYRIAD THREATS, INCLUDING THE INPUT OF ANTHROPOGENIC POLLUTANTS, OVER-EXPLOITATION, SPECIES INTRODUCTIONS, PHYSICAL BARRIERS TO MOVEMENT, THE MANIPULATION OF FLOW REGIMES AND GLOBAL CLIMATE CHANGE. FISH RESPOND TO THESE PERTURBATIONS AT ALL ORGANISATIONAL LEVELS, WITH CONSEQUENCES FOR GENE EXPRESSION, PHYSIOLOGY AND PATTERNS OF BEHAVIOUR. THE IMPACT OF THESE CHANGES ON POPULATIONS, COMMUNITIES AND ECOSYSTEM PROCESSES IS NOW BEGINNING TO BE REVEALED. THE SYMPOSIUM, RE-ARRANGED FROM 2020, WILL EXPLORE THE WAYS IN WHICH FISH ARE ABLE TO OCCUPY SUCH A BROAD RANGE OF NATURALLY DYNAMIC ENVIRONMENTS, THEIR CAPACITY TO ADAPT TO HABITAT LOSS AND DIRECTIONAL ENVIRONMENTAL CHANGE, AND THE EMERGING ECOSYSTEM CONSEQUENCES.**

**KEYNOTE SPEAKERS: WE ARE DELIGHTED TO ANNOUNCE OUR FIRST THREE KEYNOTE SPEAKERS...MORE TO BE ANNOUNCED SOON!**

**Tim Lamont**  
Lancaster, UK  
Learning to listen:  
acoustic ecology in  
a dynamic world



**Ulrika Candolin**  
Helsinki, Finland  
Impacts of environmental  
change on fish behavioural  
ecology



**Josefin Sundin**  
SLU, Sweden  
Fishy business: the  
importance of research  
integrity and transparency



**VENUE AND FORMAT: NTU'S STUNNING RURAL BRACKENHURST CAMPUS, CLOSE TO THE CATHEDRAL TOWN OF SOUTHWELL, WILL HOST THE SYMPOSIUM, WITH THE BANQUET AND MEDAL AWARDS CEREMONY TO BE HELD AT NTU'S CAMPUS IN THE CITY OF NOTTINGHAM. THE NEW LYTH BUILDING WILL HOUSE ALL SCIENTIFIC SESSIONS. THE SYMPOSIUM WILL BE HYBRID IN FORMAT; IT WILL RUN AS A FACE-TO-FACE, IN-PERSON EVENT BUT WILL ALSO OFFER THE OPPORTUNITY FOR DELEGATES TO ATTEND AND PARTICIPATE IN THE MEETING VIA AN ONLINE PLATFORM. WE LOOK FORWARD TO WELCOMING THE GLOBAL FISH AND FISHERIES COMMUNITY TO OUR FIRST FSBI SYMPOSIUM IN THREE YEARS.**

**ABSTRACT SUBMISSION: THE DEADLINE FOR ABSTRACT SUBMISSION DEADLINE FOR FULL TALKS HAS NOW PASSED, BUT ABSTRACT SUBMISSION WILL BE RE-OPENING FOR POSTERS AND SPEED-TALK CONTRIBUTIONS.**

**REGISTRATION: WE EXPECT REGISTRATION TO OPEN BY THE END OF FEBRUARY 2022, WITH OPTIONS FOR IN-PERSON (RESIDENTIAL) AND ONLINE ATTENDANCE, AND DISCOUNTS FOR FSBI MEMBERS AND STUDENTS. CHECK THE SYMPOSIUM WEBSITE [HTTPS://FSBI.ORG.UK/SYMPOSIUM-2022-NTU/](https://fsbi.org.uk/symposium-2022-ntu/) AND FOLLOW THE SYMPOSIUM ON TWITTER @FSBI2022 FOR THE LATEST INFORMATION AND UPDATES.**

**PUBLICATION: ALL SYMPOSIUM CONTRIBUTORS ARE INVITED TO SUBMIT MANUSCRIPTS FOR CONSIDERATION FOR INCLUSION IN THE SYMPOSIUM ISSUE OF THE JOURNAL OF FISH BIOLOGY.**

**SYMPOSIUM CONVENERS: IAIN BARBER AND ANDREW HIRST (NTU)**



# Information Desk

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