fsbi
An International Society for Fish Biology
Winter 2025

Joris Philip, University of Glasgow, the PhD Representative on council reports on the FSBI PhD student's symposium held alongside Loch Lomond on the 21st and 22nd of August 2025

There is genuinely something special about being part of the Fisheries Society of the British Isles. This is even more heartfelt within the cohort of PhD students funded through the society. At first sight, we might well share the same passion for fish biology, but this is rapidly overwhelmed by a real sentiment of amiability, friendship, and support. The FSBI PhD studentship is undeniably one of the most prestigious within the UK. We are trusted with our own creativity and critical thinking from the application process all the way to the viva. Unlike many other studentships, we are not constrained to undertake a Doctoral Training Programme, which leaves us with more freedom and control over our own research. However, the FSBI council is willing to support our cohort and encourage us to organise our own symposium.

Indeed, on the 21st and 22nd of August 2025, the second FSBI PhD Symposium took place on Loch Lomond at the Scottish Centre for Ecology and the Natural Environment (SCENE). It was for Mar Pineda and me, a pleasure to welcome our peers, local FSBI members and prestigious keynotes speakers, at the iconic University of Glasgow field station for a two-day workshop and discussion, exclusively at the benefit of the current cohort of FSBI PhD Students.

The so-called gate to the Scottish Highland is a far stretch for people based at the Universities of Hull, East Anglia and Bristol, but we were delighted to see everyone arriving on time and early in the morning in Glasgow to catch the minibus with destination SCENE. At the field station, on a warm summer day, the native rain forest was in full bloom. There, we were welcomed by Prof. Colin Adams, its main founder and former director, professor of freshwater ecology and who also happens to be a ➤

former president of the society as well as the latest Beverton medallist.

At first, Colin opened the meeting with an introduction to the FSBI studentship and why it is so valuable. Among important details, it was most notably mentioned that within our cohort we could benefit from fast-track revisions when submitting a review paper to the Society's own *Journal of Fish Biology*. Subsequently, Colin gave a fantastic keynote lecture on the changing selection pressures on the marine migration of Atlantic salmon (*Salmo salar*). Following this lecture, Mar Pineda co-host of the meeting, took the stage and expertly went through her PhD research on investigating capture vulnerability and trait-based selection in ornamental Amazonian fishes. The talks were not limited in time, which gave us the opportunity to explain our research in detail, but also gave time to receiving and providing constructive feedback, and to stimulate discussion. Next was Maisie Evans from the University of East-Anglia, Maisie talked us through an elegant presentation on Tope Sharks, she specifically described how to establish body size and sex to estimate better habitat suitability models.

Colin Adams.

It was an honour to have Prof. Neil Metcalfe as our second keynote speaker. Neil is professor of behavioural ecology at the University of Glasgow, and he was the first recipient of the FSBI Medal which he received 1999, for exceptional advances by a scientist in the earlier stages of his career. Twenty years later Neil was awarded the Beverton medal, for his lifelong contribution to all aspects of the study of fish biology. On this day, we had in the room two Beverton and FSBI medallists as Prof. Shaun Killen was also present as a local member of council.

Neil Metcalfe.

While we were appreciated these remarkable achievements, and the presence of many other notable scientists, prior to delivering his keynote lecture, Prof. Neil Metcalfe reminded us of the fragility of time and the importance of remembering those who were once colleagues and collaborators. Neil's keynote presentation was dedicated to Dr. Agnieszka Magierecka a former FSBI PhD Student who died on the 7th of April 2024

Agnieszka Magierecka.

of a very rare, incurable and aggressive cancerous tumour on her spine. Agnieszka was a young and brilliant scientist that we will all remember as part of our community (She was also an ultramarathon runner, see https://statistik.d-uv.org/getresultperson.php?runner=1282548). Afterward, Neil gave us a brilliant lecture on the ecological relevance of individual variation in metabolic rate and mitochondrial efficiency.

To conclude the first part of the symposium, we had three presentations on evolutionary ecology. At first, Rebecca Frances Bentley gave a fascinating talk on the functional morphology of Loricariid catfishes (see separate article). Next in line, was Claudio Silva De Freitas on the effect of the light environment on the adaptive vision of Cichlids. Finally, it was my turn to conclude the meeting by a presentation on the genetic basis of ecological speciation in Arctic charr (*Salvelinus alpinus*). The rest of the morning was dedicated to informal science, one-on-one or small group discussions with our keynote speakers. We allocated the whole afternoon to discussions between just the FSBI PhD Students. This gave us the opportunity to gather everyone's opinions, requests or any important matters that should be relayed to the Society's council. Furthermore, beyond an

administrative discussion, we push forward the idea to co-author an opinion piece in the *Journal of Fish Biology* on our experience in successfully obtaining the FSBI studentship. As night fell, we enjoyed observing the local wildlife of the Loch Lomond National Park and spotted an elusive pine marten.

Though we enjoy a little a bit of terrestrial wildlife, the next day armed with punctured waders and midge nets we were accompanied by Dr. Hannele Honkanen and Phoebe Kaiser-Wilks for a workshop demonstration on fish population assessment using electrofishing. Not only did we enjoy it, but we actively participated in real data collection for an FSBI internship project on the status of the fish population in the Ross Burn, Loch Lomond. Apart from brown trout we were lucky to catch and appreciate many Loch Lomond native brook lampreys. Afterward, everyone was still a long way from home, but we hope to visit the home institution of one of us next year, for what will be the third FSBI PhD Symposium.

Editorial

It is hard to escape discussions about artificial intelligence (AI). To many it has become an important aid to their lives whilst others deplore its intrusion. In the publishing world AI creates problems for editors as it is essential to decide whether an AI generated manuscript is a valid contribution, or little more than fraud. In the wider world AI is touted as a way to improve medical diagnoses, to generate new molecules that would take years to discover by any other method, or to write computer code to tackle particular problems.

Some members will have discovered that Adobe now has an AI component that allows the reader of a document to ask questions of the article or to obtain a summary. I tested this AI aid by asking it to write a summary of one of my own papers. Knowing what it contained it was gratifying to see that the summary produced was to the point and accurate.

Returning to the use of AI in publishing Itamar Ashkenazi, and Howard I. Browman have just published an article 'What's the point of generative artificial intelligence in science and scientific publishing? *ICES Journal of Marine Science*, 2025, Vol. 82, Issue 10, fsaf179 https://doi.org/10.1093/icesjms/fsaf179'. (Howard Broman is Editor in Chief of the ICES journal).

Here's how (with tongue in cheek) the Acrobat AI aid summarises the article (I use a different font to distinguish between my text and AI text:

The document is an editorial from the ICES Journal of Marine Science discussing the role and implications of generative artificial intelligence (AI) in science and scholarly publishing. It highlights the ethical, creative, and accountability challenges posed by the use of AI in producing scholarly work. The authors, Itamar Ashkenazi and Howard I. Browman, present two contrasting worldviews:

1. **Utilitarianism**: This perspective values the content of a manuscript over its creator.

It argues that as long as the content is robust, transparent, and beneficial to readers, AI-generated work can be considered legitimate, provided authors are accountable for the content.

2. **Creativity**: This view emphasizes the importance of the scholar's intellectual contribution and creativity. It argues that AI-generated work undermines the essence of scholarly authorship and should not be considered legitimate, even if the authors are transparent about AI use.

The editorial explores key issues, including:

- **Accountability**: Authors cannot claim accountability for AI-generated content unless they reproduce and verify it themselves, which raises concerns about the reliability of such work.
- **Authorship**: Current guidelines do not recognize AI as an author, as it lacks intellectual contribution and accountability. The authors suggest either relaxing authorship criteria or categorizing AI-generated work differently.
- **Scholarly Value**: The greater the AI-generated content, the lower the perceived scholarly value, as it diminishes intellectual curiosity, creativity, and the pursuit of advancing knowledge.

Another question I asked is 'How can authors evaluate AI-generated outputs?' Here's the answer:

The authors conclude that while AI use in scholarly publishing is inevitable, it challenges the fundamental principles of transparency, accountability, and intellectual contribution. They call for a re-evaluation of how AI-generated content is integrated into scholarly communication to maintain trust and integrity in the academic record.

According to the document, authors can evaluate AI-generated outputs by reproducing the work through human-led processes. This involves verifying the AI's output to ensure its accuracy and reliability. However, the editorial highlights that the process through which AI generates content is inherently non-transparent, making it difficult for authors to fully oversee or validate the results.

If authors fail to reproduce the AI-generated work themselves, they cannot claim accountability for its content. This accountability deficit is particularly problematic when authors lack expertise in the subject matter, as they may not be able to assess the validity of the AI-generated content.

The document also warns against relying on AI to revise work based on reviewer feedback, as this further distances authors from their accountability obligations. Ultimately, the editorial suggests that the extent of AI-generated content inversely affects both accountability and scholarly value.

And finally 'Why can't AI be considered a legitimate author?'

AI cannot be considered a legitimate author because it lacks accountability and intellectual contribution, which are essential criteria for authorship in scholarly work. The document explains the following reasons:

1. **Accountability**: AI cannot be held morally responsible for the integrity and reliability of the published work. Accountability requires authors to ensure the correctness of the content, which AI cannot fulfill due to the non-transparent nature of its processes.
2. **Intellectual Contribution**: AI generates content through technical processes, such as remixing and evaluating associations within large datasets. While the output may appear intellectual, it is not developed through genuine intellectual effort or creativity. This technical contribution does not meet the standards of intellectual authorship.
3. **Current Guidelines**: Existing guidelines from organizations like COPE, ICMJE, and others explicitly state that AI cannot be credited as an author because it cannot take responsibility for the work.

The editorial suggests that AI's role in scholarly publishing should be categorized differently, as its contributions are technical rather than intellectual, and it cannot fulfil the ethical and creative expectations of authorship.

I come down on the side that considers AI generated manuscripts as illegitimate. No doubt many will disagree with me but if we allow AI to write papers how can we hold authors to account for what they have produced? Plagiarism causes enough problems already but they are an order of magnitude less that the issues raised by the use of AI.

Paul J B Hart
Leicester, November 2025
Next deadline: 1st February 2026

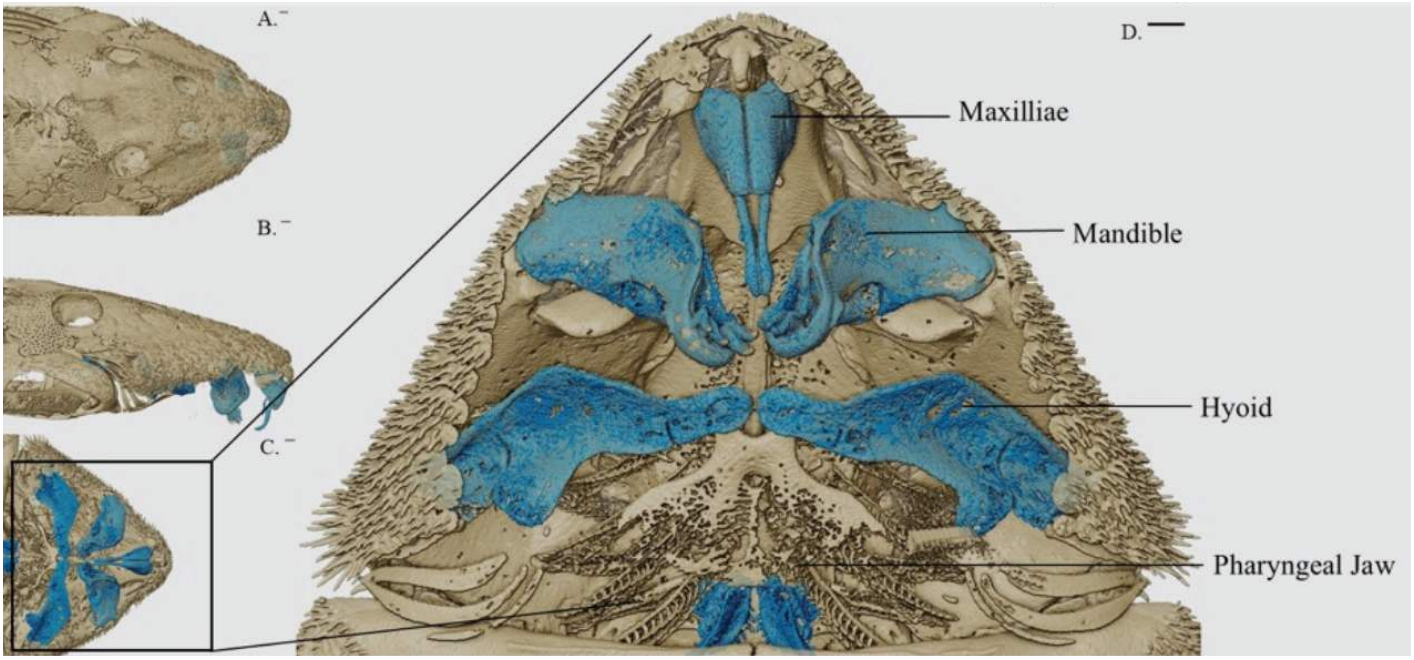
Rebecca Bentley, an FSBI PhD student, writes about her project based at the University of Bristol

Large radiations provide vital information for how species diversify to fill a variety of niches. Popular groups in evolutionary research have been Cichlids of the African Rift Valley and stickleback although studying different clades can identify novel adaptations and links to different ecological niches. My research focuses on Loricariidae (armoured catfishes), a freshwater and largely riverine clade endemic to Central and South America. Loricariidae represents over 1,070 species, yet many more are currently undescribed and the majority of the research into this family focuses on their systematics.

Somewhat uniquely Loricariids feed using their oral disc (sometimes referred to as a suckermouth) with strong jaws to feed in a rasping motion breaking down the food before it enters the oral cavity meaning the majority are not gape limited. A secondary pair of jaws, the pharyngeal jaws are also present to further process food items. While the majority of Loricariids are algivores or detritivores a diversity of dietary niches are exploited and these are reflected in a range of ecomorphologies.

My research is funded by an FSBI PhD studentship award and supervised by Professor Martin Genner at the University of Bristol. During this project I aim to identify the range of morphological disparity in Loricariidae, the extent this morphology is functional and related to divergent gene expression. The extensive collection of Loricariids from the Natural History Museum, London contain extensive spirit collections containing many representatives of species and types across fishes. I was able to loan a wide range of genera to identify and isolate the diversity of jaw morphologies using computerized tomography (CT) scanning. I was able to scan over 70 species across the radiation and 64 species could be mapped across a phylogeny produced from sequences extracted from the NCBI (National Centre for Biotechnology Information) database. CT scanning has allowed me to produce clear 3D images of internal anatomy from specimens that I wouldn't have been able to dissect or stain. I also incorporated CT scans that I had conducted of two genera at the Natural History Museum during my masters and three specimens obtained through Morphosource, an open access CT scan database. This means that the method can be used as a non-destructive method for museum specimens, particularly valuable type specimens or those species rare in collections and whose integrity needs to be retained.

Using diet data from the scientific literature I have been able to identify a link between the dietary niche and both oral and pharyngeal jaw shape. As the majority of Loricariids feed on detritus and algae their ecological niche occupies the lower trophic levels and can be informative on morphological adaptations to herbivory and ecological shifts to carnivory. This link between jaw shape and diet has not previously been identified when ➤



A CT scan of *Leporacanthicus heterodon* showing the jaw.

studies have focused on oral jaws. Regardless of there being a large number of algivores and detritivores, the family Loricariidae contains numerous carnivorous lineages with various associated morphologies associated with short jaws and a few, usually gracile, teeth. There are also specialisms in detritivory such as extracting the fungi and microorganisms from wood associated particularly with spoon shaped teeth.

With two separate pairs of jaws in loricariids, as with many fishes investigators have interpreted oral jaws being for food capture and pharyngeal for processing the food items so allowing a partitioning of feeding tasks. These jaws are often co-evolving and linked as illustrated by loricariids. I was able to identify a wide range of diversity in oral and pharyngeal jaw shapes

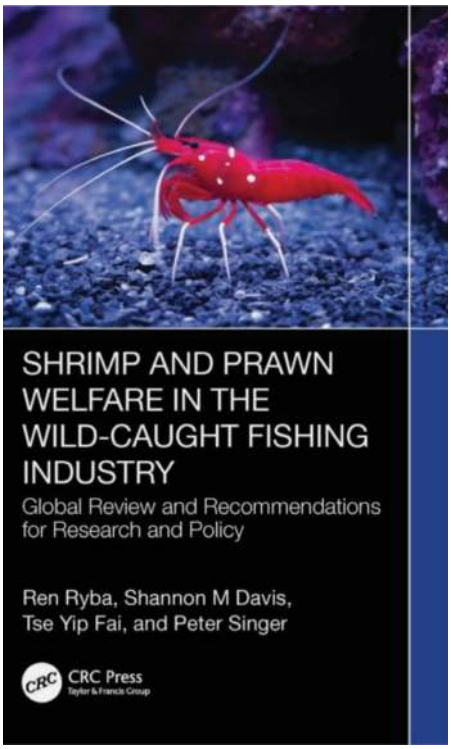
Feeding trials were used to identify the functionality of Loricariid jaws from six representative species from the two largest subfamilies with a variety of dietary niches. Simple trials using snails were used to identify durophagy in one species linked with convergent morphology seen in the durophagous cichlidae. This durophagous ecological niche is associated with robust jaws. Other trials involving a variety of surfaces have yet to be fully analyzed to identify clear trends.

While the range of morphological differences and consequent ecological diversity is more easily studied the full extent of this diversity has not yet been fully explored. Little is known about how gene expression differs between the different clades and jaw morphologies. As I have only recently sent off the RNA extractions for sequencing I do not have any results to discuss at this point.

Loricariidae provide a large and diverse opportunity to study the evolution of ecology. They are valuable to both the aquarium business but also to where they are endemically found as a food resource. Potentially this family provides a useful model to understand herbivory in fishes and how it diversifies given many species can be found within the same locality.

Rebecca has also contributed a YouTube video of her project, assisted by Will Perry and this can be found by downloading the QR code.

Book review



R. Ryba, S. M. Davis, Tse Yip Fai and P. Singer (2026). *Shrimp and prawn welfare in the wild-caught fishing industry. Global review and recommendations for research and policy*. CRC Press. Taylor and Francis Group. ISBN 978-1-032-90722-2 (hbk), ISBN 978-1-032-90145-9 (pbk). GBP 49.99 (pbk), GBP 119.00 (hbk), USD 66.99 (pbk), USD 180.00 (hbk).

This book is not about fish but it raises issues that are relevant to fish biology and fisheries. There is an increasing literature that examines whether fish and crustaceans are conscious and can suffer from pain. This book summarises the views on this for shrimps and prawns and is fair in expressing the tentative nature of the field so far. Given that neutrality, the book then evaluates the size of the global fisheries for these animals and discusses ways in which pain and suffering in these species (if they exist) can be mitigated. The book is readable despite being very technical and is a useful guide to the extent of the fisheries in question.

Paul J B Hart

You are what you eat – and sometimes, that means a new species. Kirthana Pillay, a post doctoral researcher at the University of Bournmouth, outlines aspects of her FSBI funded PhD

Cichlid fish are one of the most iconic model systems for speciation research. In particular, the highly diverse species assemblages endemic to African lakes, which provide excellent natural laboratories for studying evolutionary processes. *Astatotilapia calliptera* (pictured) is a maternal mouth-brooding cichlid fish that occupies littoral regions of Lake Malawi and is also found more widely in the region, inhabiting rivers, swamps, ponds and shallow lakes. *Astatotilapia calliptera* has colonised at least six small crater lakes to the north of Lake Malawi, including Lake Masoko (which has been nicknamed "Darwin's puddle") which formed approximately 50,000 years ago.

Kirthana Pillay.

Whole genome sequencing has shown that ~10,000 years ago, *A. calliptera* individuals from nearby riverine systems colonised shallow littoral habitats of the lake and extended their range into deeper benthic waters about 1,000 years ago. Two ecotypes of this species exist in this lake; blue deepwater males and yellow shallow-water males, and the system is hailed as a prime example of sympatric speciation in action. Stable isotope analysis of carbon and nitrogen shows dietary differentiation between *A. calliptera* ecotypes, but only at broad taxonomic levels.

Our recent study, which was conducted as part of my FSBI funded PhD, aimed to investigate dietary partitioning between the ecotypes using dietary metabarcoding. Large proportions of Arthropoda (dipterans and copepod) were found in both ecotypes, indicating some food sources were common to both microhabitats. However, gut contents of benthic *A. calliptera* individuals were characterised by an abundance of annelids and diatoms. Conversely, Lepidoptera, mayflies, fungi, freshwater mussels and bivalves were common in littoral ecotypes. The variation observed in the dietary contents of the ecotypes indicate clear divergence in the diets of the benthic and littoral ecotypes, facilitating adaptation to unique feeding strategies, and potentially contributing to the divergence of these two ecotypes/species in sympatry

See https://staffprofiles.bournemouth.ac.uk/display/kpillay for more information.

Pillay, K. *et al.* 2025. Dietary differentiation between sympatric ecotypes of *Astatotilapia calliptera* From Lake Masoko (Kisiba), Tanzania revealed by metabarcoding. *Environmental DNA* 7(4), article number: e70146. (10.1002/edn3.70146)

Travel Grant Reports

Zara-Louise Cowan based at the Department of Biological & Environmental Sciences, University of Gothenburg, Sweden reports.

Thanks to a Travel Grant from the Fisheries Society of the British Isles, I was able to attend the Society for Experimental Biology Annual Conference in Antwerp, Belgium (8–11 July 2025). The theme of the conference was 'The impact of experimental biology to tackle global challenges', and I presented my postdoctoral research on the ontogenetic vulnerability of Atlantic salmon to climate warming, which measured thermal tolerance across all major life stages to identify whether there are particularly sensitive periods that may limit the resilience of this species to climate warming. In addition to presenting, I co-organised a session on the vulnerability and adaptations of early life stages to environmental stressors, and an associated networking event for our invited speakers and those participating in our session. The conference was a great opportunity for learning, networking, sharing my research with the global academic community, as well as allowing me to contribute to the scientific community. Many thanks to the FSBI for the award of this Travel Grant!

Margaret Poulos, School of Sustainability, Stanford University, USA.

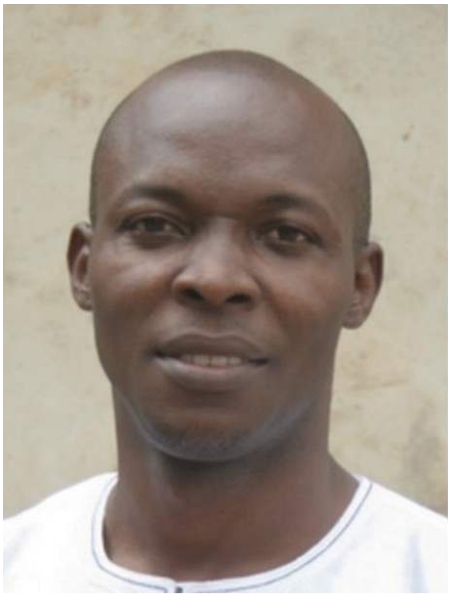
With the support of the Fisheries Society of the British Isles (FSBI), I had the incredible opportunity to travel to two conferences that were relevant to my academic work and professional aspirations. I attended the Western Indian Ocean Marine Science Association (WIOMSA) Scientific Symposium in Mombasa, Kenya, followed by the Land, Life, and Society Conference at the University of the Western Cape in Cape Town, South Africa, the very next week. As a PhD student working on marine social science in East Africa, I was able to share my ongoing work, connect with experts and academics in the field, and learn more about fisheries governance from practitioners and policymakers. Given that my future field work will be based out of Mombasa with local partners, it was also a unique opportunity to connect with them and plan my future research. At the WIOMSA conference, I presented in an interactive mini symposium alongside a Stanford faculty member and other Stanford PhD students. The theme was about the significance of weaving cultural heritage into ocean science research, and I presented on the importance of integrating local values into fisheries governance. At the second conference, I presented in a panel with other ocean academics and activists on the relevance of critical ocean studies for designing blue justice futures. Without the support of FSBI, and given funding cuts that are underway, I would not have been able to participate in these conferences. I am grateful for FSBI's support in sharing my academic work, connecting with other students and experts, and growing my professional network for my future career.

Maryane Gradito, a PhD student at Deakin University, Geelong, Australia reports on a trip to Europe.

I travelled from Australia to participate in a collaborative research project with 25 scientists at the Kristineberg Marine Station, Sweden, from June 12 to July 6, 2025. I also had the opportunity to present my research to the annual conference for the Society for Experimental Biology in Antwerp. With the support of the FSBI, I had the opportunity to travel from Australia, where I am currently enrolled for my PhD at Deakin University, to Sweden and Belgium. In Sweden, I visited Prof. Fredrik Jutfelt, at the Kristineberg Marine Station. During my stay, I collaborated with over 25 fish

physiologists, where we conducted many projects on marine species. To name a few projects: we investigated the interaction between copper exposure and immune response in wrasses; we measured the metabolic rates of eggs, larvae and adults black gobies at different temperatures to better understand the influence of the life stage on metabolism; we investigated the specific dynamic action (SDA, digestion process) of Atlantic cod on the long-term; we measured the thermal tolerance of multiple marine species (fish, crabs, shrimps...) using a Critical Thermal Maximum experiment (CTmax). All these projects, and more, will eventually be valuable publications for my early academic career. I also learned many new techniques that will be useful for the rest of my PhD. Following this, we all travelled to Antwerp, Belgium, for the annual conference of the Society for Experimental Biology. There, I had the opportunity to present my recent work on fish behaviour, and the impact of helminth infections. I was able to connect and receive advice for my work by lead experts in my field.

Professor Prince Emeka Ndimele, Department of Fisheries, Lagos State University, Lagos, Nigeria reports on a visit to the US funded by an FSBI travel grant.



Professor Ndimele visited the US to attend two conferences and to visit the University of Maryland. The first conference was the 110th Meeting of the Ecological Society of America at the Baltimore Convention Center, Baltimore, Maryland, USA. He gave a paper with the title 'Assessing the Impacts of Flooding on the Livelihood and Health of Coastal Communities in Lagos State, Nigeria'. The second conference attended was the 155th Annual Meeting of the American Fisheries Society in the San Antonio Marriott Rivercenter, San Antonio, Texas, United States of America. At the conference he gave a paper entitled 'Effects of Saltwater Intrusion on the Fisheries of Lagos Lagoon Complex, Lagos, Nigeria'. Finally, Professor Ndimele visited the School of Agricultural and Natural Sciences (SANS), University of Maryland Eastern Shore, Maryland, where he gave a talk 'Multi-metric ecosystem health assessment of three inland water bodies in Southwest, Nigeria, with varying levels of sand mining activities and heavy metal pollution'.

Olatunji Oluwatobi Stephen used a travel grant to attend the annual conference of the Association of Nigerian Scientists (ANIFS)

I am excited to report on my participation at the 6th Annual Conference of the Association of Nigerian Fisheries Scientists (ANIFS), held at the University of Abuja (July 14 to 18, 2025). Attending the conference is a great contribution towards my academic and professional development. The Conference brought together leading researchers, professionals, and students to deliberate on key issues shaping the future of fisheries in Nigeria, and I had the opportunity to interact, learn and share my insights.

I had the opportunity to present my research work on the "The Dietary Effects of Black Soldier Fly Larvae Meal on the Zootechnical Performance of Hybrid African Catfish" to a wider audience. I also engaged in several sessions that covered diverse topics aimed at transforming fisheries for increased productivity. I attended training sessions on research methodologies and approaches which are valuable for me as a researcher.

The conference gave me a platform to interact with seasoned professionals, early-career scientists, and industry practitioners. These interactions broadened my academic network and helped my understanding of the practical realities of fisheries and aquaculture development.

Attending the conference had a profound impact on me. It was an opportunity to share my research findings, learn and contribute to the ongoing conversation about Nigeria's fisheries future and gain meaningful connections.

I am especially grateful to The Fisheries Society of British Isles (FSBI) for the generous sponsorship of my attendance at the ANIFS conference. This is a great contribution towards my professional development.

Omoyajowo John Oluwadarasimi, based at the Federal University of Technology Akure used an FSBI travel grant to attend the 6th annual conference of the Association of Nigeria fisheries scientists (ANIFS) 14th to 18th July 2025. ➤

The conference was remarkable, focusing on addressing major challenges in Nigeria's fisheries management. It provided a solid foundation in fisheries research and innovation, featuring topics on; Advancing productivity in fisheries through science driven and scalable innovation and Integrating innovation and inclusive policies for sustainable aquatic resources management in Nigeria. These sessions significantly enhanced my knowledge on leveraging innovation and technology to enhance fisheries productivity. I gained essential skills in research methodology, data analysis, and grant writing, which will enable me to contribute to sustainable fisheries management and research in Nigeria. The conference fostered a collaborative environment, encouraging a life-long learning mindset. I am confident that the knowledge and skills I gained will have a significant impact on my career, and I am better equipped to tackle complex challenges in fisheries. I am also eager to apply my knowledge and skills to make a positive impact in the fisheries sector, contributing to the advancement of the field and the sustainable management of Nigeria's aquatic resources. The conference was a valuable experience that has prepared me for future challenges in fisheries research and management, and I am excited to stay updated with the latest advancements in the field.

Ludovic Toisoul, Department of Biology University of Turku, Finland used his travel grant to attend the 11th International Stickleback Conference, at the Bamfield Marine Station, Vancouver Island, British Columbia, Canada.

Thanks to the FSBI travel grant, I was able to attend and present my latest results at the 11th International Conference on Stickleback Behavior and Evolution, held at the beautiful Bamfield Marine Sciences Centre on the west coast of Vancouver Island, Canada, from July 27 to August 1, 2025. The location, with its stunning scenery, provided a fantastic opportunity to share my research outside Europe. This conference came at the perfect time for my PhD, as I am entering my final year, making it an excellent chance to showcase my work and expand my network for future collaborations. What made this conference especially valuable is its focus on the model species at the center of my research. This triennial meeting brings together an international community of researchers using the three-spined stickleback to study key questions in evolutionary biology, ecology, and behavior. I presented my results in the physiology session with my talk, *"Resilience in a hypoxic world: Behavioral and metabolic responses of stickleback populations exposed to multigenerational*

fluctuating hypoxia," in front of 80 researchers from around the world. My presentation sparked lively discussion and provided useful feedback for future work. Each day ended with special lectures on the history and recent advances in stickleback research. Led by experts, these talks gave insights into the development of stickleback science, both in theory and methods, and highlighted its importance for evolutionary and ecological biology. Overall, I greatly enjoyed this conference, learning new things, strengthening connections in my field, and expanding my knowledge on sticklebacks and the wide range of research questions this fish allows us to address.

Chloé Souques, University of Lyon, France, used a travel grant to attend the Society for Experimental Biology (SEB) annual conference in Antwerp, Belgium, in July 2025.

I had the chance to attend the SEB conference and to present two posters highlighting complementary aspects of my PhD research in freshwater fish. One study examined how different

patterns of thermal variability (cyclic *versus* stochastic) affected the energy budget of the European chub (*Squalius cephalus*), and the other explored whether there were specific physiological and behavioural signatures associated to range expansion in the invasive round goby (*Neogobius melanostomus*). Presenting these findings for the first time allowed me to engage in valuable discussions that not only deepened my understanding of the results but also provided critical feedback from a multidisciplinary audience. The conference programme offered a comprehensive overview of the latest advances in my research fields (thermal biology and energetics, behaviour, invasion biology) and methodological approaches, particularly focusing on the question of how animals cope with changing environments. In addition, the fish biology community was strongly represented, offering a valuable opportunity to refine my knowledge of my model species. Thus, this experience enabled me to gain insights and connect with inspiring researchers and students, significantly strengthening my network within the behavioural and ecophysiological research communities. Attending this conference has been one of the highlights of my PhD to date and will likely play an important role in shaping my decisions about future postdoctoral applications – which is especially valuable now that I am entering the final year of my PhD this September. I am sincerely grateful to the FSBI for their generous support, which made this opportunity possible.

Maximiliano Canepa, based at Blue Economy CRC / IMAS, University of Tasmania reports on his visit to Puerto Varas, Chile to attend the LACQUA25 aquaculture conference.

With support from the FSBI Travel Grant, I attended LACQUA25, the annual meeting of the World Aquaculture Society (WAS) Latin American and Caribbean Chapter, held for the first time in Chile, one of the world's leading aquaculture producers. The conference provided a valuable opportunity to engage with international researchers and industry stakeholders, particularly in salmonid aquaculture.

I presented our research entitled "Tasmanian Salmon Aquaculture Under Suboptimum Conditions: Fish Coping Mechanisms and Adaptive Production Strategies", which explored physiological and transcriptomic responses of Atlantic salmon exposed to elevated temperature and reduced dissolved oxygen, conditions increasingly common in the Tasmanian summer. Our findings highlighted size-dependent vulnerability and recovery potential, with molecular insights supporting adaptive strategies for farmed salmon under climate stress.

Importantly, I engaged with local researchers from the Chilean salmon industry, exchanging perspectives on shared challenges and approaches to managing environmental stressors in salmon farming. These interactions were highly valuable for fostering international collaboration and contextualising Tasmanian research within a global framework.

I am grateful to FSBI for enabling this experience and for supporting early-career researchers in building international networks.

Notices

We are pleased to invite you to a forthcoming symposium on Fish Mating Systems. In 2026, it will be the 60th anniversary of the publication of *Modes of Reproduction in Fishes* by Charles Breder and Donn Rosen. This monumental treatise, describing the astonishing range of fish reproductive styles, has proven an invaluable resource for researchers on fish mating systems.

Our goal in convening this symposium is to create a platform for researchers to explore genetic, physiological, behavioural, ecological, evolutionary, and applied perspectives on fish mating systems, thereby furthering our understanding of fish mating system evolution.

We are delighted to announce the participation of three outstanding plenary speakers: **Suzanne Alonzo, John Fitzpatrick**, and **Chiara Benvenuto**.

The symposium will take place in Brno (Czech Republic), a conveniently located university town that is a 2-hour journey from Vienna Airport and well-connected to numerous international destinations. The meeting will be held on the Masaryk University campus, close to the Augustinian abbey, where Gregor Mendel conducted his ground-breaking genetic research. We anticipate 60-100 participants. The symposium will have no parallel sessions to foster a friendly atmosphere and discussion.

The symposium website for registration is here: https://fish.ivb.cz

Information Desk

For all membership enquires please contact the FSBI office at:

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