Marine Biological Association

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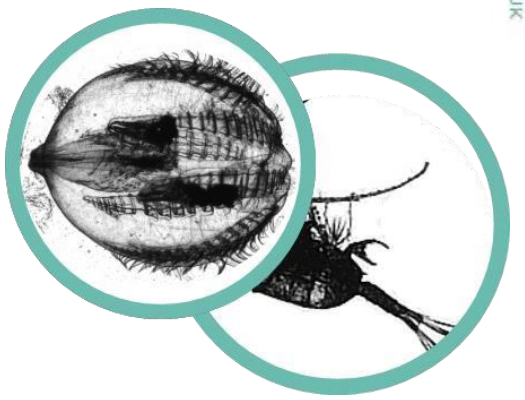
Welcome to the

Young Marine Biologist Summit

Marine Biological Association

HIDDEN OCEAN

Event Guide



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Your Hosts

Dr Helen Scales

Marine Biologist and Writer

Rory Crawford

By-Catch Programme Manager and Radio & Children's TV Presenter, RSPB/Birdlife International

Time UK	Speaker	Title
10:00	James Lea (Save our Seas) and MBA President Gill Rider	Introduction To The Summit, Meet The Hosts, And Find Out About The Day
10:15	Karen Lloyd	Mysterious Life In Earth's Crust
10:27	Michael Cunliffe	Fantastic Marine Yeasts And Where To Find Them
10:39	David Johns	Small But Mighty - Studying Plankton In Our Oceans
10:51	What's Next	
11:00	**Break**	
11:10	Welcome Back	
11:15	Mike Allen	Seaweed Problem? No! See (Weed) Opportunity!
11:27	Cher Chow	The Secret Life Of Recovering Corals
11:40	Colleen Cavanaugh	Deep-Sea Hydrothermal Vents, Sulfur Springs, And Symbiosis
11:52	Yasmin Meeda	No Brain, No Problem: Diatoms And Their Environment
12:05	What's Next	
12:10	**Break**	
12:30	Welcome Back	
12:35	Sally Warring	Microbial Metropolis - Movies Of Microorganisms
12:50	Cordelia Roberts	Poop And Death: Where Microbes Thrive?
13:05	Fabiana Neves	Virome Diversity And Composition In Elasmobranchs
13:20	Dr Russell Arnott	Why Are Plankton Different Shapes?
13:35	What's Next	
13:40	**Break**	
13:55	Welcome Back	SLSD Rules
14:00	**Sea Life Show-Down** *Meet the Competitors*	Jasmine Nirody
		Marianne (Maz) Wotton
		Alosha Samaraarachchi
		Victoria Huber
14:10	**Sea Life Show-Down Competition Time!**	
14:25	Launch Poll	
14:30	**Break**	
14:40	Sea Life Show-Down Results	
14:50	Jeffrey Marlow	Methane Eating Microbes In The Deep Sea
15:05	Dr Jeanette Davis (Dr Ocean)	Searching The Ocean For New Medicines
15:20	Karen Lloyd	Q & A
15:25	Mini Career Panel	
15:50	MBA Director Willie Wilson	Closing Statement
16:00	**Finish**	

Speakers A-Z

Seaweed Problem? No! See (Weed) Opportunity!

Professor Mike Allen

Associate Professor/ Chief Scientific Officer, Exeter University/ Seaweed Generation

Mike will talk about his work turning problematic seaweed blooms in the Caribbean region into solutions that can both generate economic returns and help combat climate change.

Why Are Plankton Different Shapes?

Dr Russell Arnott

Educational Director, Incredible Oceans

Phytoplankton are just little green balls, right? WRONG! Phytoplankton come in a variety of shapes, sizes and colours and have tricks up their sleeves that help them survive in all kinds of conditions. Here, Russell showcases some of his favourite phytoplankton and their amazing abilities.

Deep-Sea Hydrothermal Vents, Sulfur Springs, and Symbiosis

Colleen M. Cavanaugh

Professor at Harvard University

Colleen will introduce deep-sea hydrothermal vents, the discovery of chemosynthetic symbioses at vents and subsequently in coastal sediments. The amazing diversity of marine invertebrate hosts and their symbionts, and recent discoveries, will be discussed.

The Secret Life of Recovering Corals

Cher Chow

PhD Candidate, Centre for Biological Diversity, University of St Andrews

After massive bleaching events and storms, damaged coral reefs can look bare and desolate. However, the process of coral recovery hides in plain sight. What makes or breaks a coral juvenile's (or recruit) chances of success happens on a very small scale, and it could involve the different ways fish bite around a coral. By tracking the same coral reefs over time with 3D mapping, we can see the reef recovery results of growing corals from these processes.

Fantastic Marine Yeasts and Where to Find Them

Michael Cunliffe

Senior Research Fellow and Associate Professor in Marine Microbiology, *Marine Biological Association and University Of Plymouth*

Yeasts are small single-celled fungi. Many thrive in the marine environment. The marine environment is a challenging place to live and marine yeasts have developed specific adaptations to survive. I will show examples of the fantastic yeasts we have recently found in different marine ecosystems, from 'shapeshifters' that change their shape and size to live more efficiently in the open ocean, to the 'copepod killer' that attacks marine invertebrates in coastal waters, and the 'sub-zero survivors' that are adapted to thrive in frozen polar sea ice.

Searching the Ocean for New Medicines

Dr Jeanette Davis/ Dr Ocean

Marine Microbiologist , Science Is Everywhere, LLC

The ocean is the largest and oldest habitat on the planet. Many organisms produce chemicals in the ocean environment for communication, nutrients, structural development, protection, and adaptation. These chemicals are not only key to survival in the sea, they can also be a source medicines for humans. Through an intricate symbiosis, a marine bacterium lives on an algae that is high-jacked by a Hawaiian sea slug for chemical defense and serves as an anticancer compound. This serves as one example of how marine organisms can use chemicals for adaptation and be a valuable resource for drug discovery.

Small but Mighty - Studying Plankton in our Ocean

David Johns

Head of CPR Survey, Marine Biological Association

How do you study some of the smallest, but probably the most important, lifeforms in our ocean? With a continuous plankton recorder that's how. How does it work, where and when have we been running our surveys, and what have we found? And why are plankton so vital to everything in the ocean?

Mysterious Life in Earth's Crust

Karen Lloyd

Associate Professor, University of Tennessee

Have you ever thought about what life is like deep within Earth's crust? It's tiny, different from what we find at Earth's surface, and vitally important for the planet. By combining drilling into permafrost, climbing into volcanoes, and diving in submarines with some heavy duty computer work, we are discovering what life is really like on this planet.

Virome Diversity and Composition in Elasmobranchs

Fabiana Marisa Vieir A Das Neves

Post-Doc Researcher, Cibio, Universidade Do Porto, Portugal

Here, we present the first results of an ongoing effort to provide a first baseline of DNA virome composition and diversity across Chondrichthyan hosts. We extracted and sequenced viral DNA from muscle samples of two oceanic pelagic sharks (blue shark *Prionace glauca* and mako shark *Isurus oxyrinchus*) and two coastal benthic rays (*Raja clavata* and *R. undulata*). These results are an important first step to understand how viral pathogen composition and diversity vary among different Chondrichthyan hosts and with different ecologies. These results will also bring valuable insights on the evolution of immunity genes associated with viral infections, and the dynamics of hostpathogen co-evolution.

Methane Eating Microbes in the Deep Sea

Jeffrey Marlow

Assistant Professor of Biology, Boston University

Methane is a strong greenhouse gas that plays a big role in global warming. Amazingly, there are symbiotic microbes in the deep sea that eat methane and prevent it from getting into the atmosphere. This talk will go on a journey to several deep-sea methane seeps to see how these microbes work and investigate the rich ecosystems they form.

No Brain, No Problem: Diatoms and Their Environment

Yasmin Meeda

PhD Student, The Marine Biological Association, University of Exeter

Diatoms are tiny plant-like algae that take up carbon dioxide from the atmosphere and produce oxygen through the process known as photosynthesis. These algae can be under stress due to the changing ocean environment and we are looking at understanding how they can sense these changes and respond to them. As diatoms are more closely related to plants than animals, they do not have a brain - this means they don't have a nervous system that can help them detect and respond to environmental changes. In this talk, I will discuss their biology and the important molecules they use instead of a brain.

Poop and Death: Where Microbes Thrive?

Cordelia Roberts

Aries PhD Researcher, University of Plymouth, Marine Biological

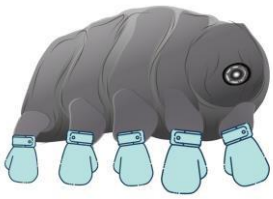
The ocean plays a crucial role in storing carbon produced into the atmosphere, but have you ever considered the role that poop and dying animals play in this? Listen in to this talk if you want to find out more on the variety of material that sinks from the surface ocean to the deep abyssal plains, and how despite the doom and gloom of this dead material and poop, how the secret live of microbes not only survive but thrive!

Microbial Metropolis - Movies of Microorganisms

Sally Warring

Post Doctoral Scientist, Earlham Institute

Unicellular organisms inhabit the soil, air, and water all around us. Some even reside within our own bodies. These unicellular organisms are intrinsically fascinating and visually stunning; they are architects, builders, travellers, parasites, hunters, scavengers, and prey; they have sex lives and mating rituals; they build communities and they go it alone. They are as complex in terms of behaviour and lifestyle as any plant or animal, yet they do it all within the confines of a single cell.



And introducing our Sealife showdown!

W HIC H ORGAN IS M W I LL YOU VOTE FOR?

Don 't decide yet, come along and see our speakers battle it out to convince you their chosen species should win !

FEATURING:

JASMINE NIRODY
- TARDIGRADES

Independent Postdoctoral Fellow, All Souls College, University of Oxford Association, Aries DTP

VS

ALOSHA SAMARAARACHCHI
- SEA SPARKLE

Ambassador, Global Youth Shark, Youth Ambassador

VS

MARIANNE (MAZ) WOOTTON
- CALANUS

Senior Plankton Analyst, CPR Survey, Marine Biological Association

VS

VICTORIA HUBER
- CYANOBACTERIA

Ambassador, Marine Conservation Network and Earth Echo Water Challenge

Become a Young Marine Biologist!

Can't wait another year till the next summit?

As a Young Marine Biologist member of The Marine Biological Association, you will have exclusive access to a **free online club** once a month.

These **interactive sessions** will be led by professionals in the field of marine biology from researchers to illustrators.

All of our clubs will be Hidden Ocean themed leading up to the event and recorded so you can re-watch!

Why else should I join?

For just £15 a year (less than £2 a month) you can join our young marine biologist community and access this exclusive club as well as the following benefits:

- Get bi-weekly general bulletins as well as an exclusive YMB monthly bulletin
- Receive online access to The Marine Biologist magazine, with opportunities to write and review books etc.
- Discounts on books and other goodies
- Free entry to the National Marine Aquarium, Plymouth, UK

Plus much more …

JOIN TODAY

Contact Us

The Marine Biological Association

Website: https://www.mba.ac.uk/
Telephone: +44 01752 426493 **Email:**
- events@mba.ac.uk
- membership@mba.ac.uk

Event Calendar: https://mymba.mba.ac.uk/member-homepage/events.html
Join our Membership: https://www.mba.ac.uk/our-membership/

Our Sponsor:

Save our Seas Foundation

In the effort to protect our oceans, the Save Our Seas Foundation funds and supports research, conservation and education projects worldwide, focusing primarily on charismatic threatened wildlife and their habitats.

Website: https://saveourseas.com/
Email: contact@saveourseas.com

Want to host a viewing party?

While we love the fact that online events allow us to connect with people all across the world, we also understand the importance of meeting up in person. The connections you can make, the shared experiences and the fun you can have.

So this year we are encouraging people to get together, watch and interact with the Young Marine Biologist Summit in their own venues.

That could be your local aquarium, scout hut, school classroom or even in your own home! What's important is that it's a space you can gather together to learn about the Ocean.

To help we've put together this handy guide which is aimed at anyone interested in organising a Young Marine Biologist viewing party.

Every situation will be different and so depending on who you are, where in the world you are and who you are planning to invite you might need to consider some other things but this should be a start.

The venue

- Where are you going to have it?
- Do you need to ask permission from the owners?
- Do you have appropriate insurance if you need it?
- How many people can you fit?
- How will you show it and will everyone be able to see and hear it?

The company

Who are you going to invite?

- Is it friends and family?
- Members of the public?
- People from an organised group you run?
- Your class at school?

Depending on who you invite you might need to consider the following.

- How will you keep people safe, physically, emotionally and socially?
- Do you need insurance?
- Do you have enough people to look after everyone?

Making the most?

How will you make the most of the day? Will you have other activities planned? Do people need to bring anything? How will you keep people engaged? How will people ask questions?* If people don't know each other before they arrive how will they get to know each other?

Get social and shout outs

If you hosting a viewing party then why not shout about it, take some pictures (make sure you have permission) and get posting on social media, if you tag us @thembauk on all platforms with the #YMBSummit2022, we might even reshare your post!

If you would like the event hosts to give your group a shout out please e-mail events@mba.ac.uk with as much information as possible or pop a comment in the event chat on the day! We will do as many as we have time for so do let us know!

Suggested games to get people talking

1. Get everyone to stand in a circle, and get a soft ball or beanbag.
2. One person starts by saying their name and the name of something that lives in the ocean which begins with the same letter as their name e.g. Sara the Shark
3. They then throw the item to the next person and they do the same thing before passing it on.
4. Then once everyone has had a turn you either return it to the first person and finish or keep going and see if people can say the name and sea creature of the person they are throwing it to.

*asking questions on the day will be done through the chat, as anyone can access the page this can be done on a mobile device but you might like to collate questions and get everyone to vote on their favourite organism during the Sealife Showdown.