



ARC CENTRE OF EXCELLENCE
Coral Reef Studies

FREE ENTRY

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Coral Reef Futures



PUBLIC FORUM

Date: Thursday, 19th July 2018
Time: 6.00pm to 7.00pm
Refreshments from 5.30pm
Venue: Gallery of Modern Art, Brisbane

For further information: www.coralcoe.org.au

Do the numbers add up for the future of coral reefs? 1.5, 2, 11, 93? Can fish adapt? How to take the pressure off sharks? What's in the twilight zone of reefs? Does seagrass matter? Find out and ask questions in this forum hosted by popular media personality Adam Spencer with 5 internationally renowned scientists. Please join us for a lively discussion.

HOST



Adam Spencer

Adam Spencer is probably best known as a popular media presenter, the quirky intellectual host of ABC's enormously successful 702 Breakfast radio show from 2006 until early 2014. In February 2014, Adam was appointed as the University of Sydney's Mathematics and Science Ambassador, the first time such a role has been created at an Australian university. Adam's goal is to inspire students to realise both the enjoyment and opportunities maths offers. He is highly intellectual and highly engaging, with a quick wit and down-to-earth style that appeals to a broad range of audiences.

#CORAL18

PRESENTERS

**TARYN LAUBENSTEIN**

Taryn was the audience choice of Queensland FameLab, the leading science communication competition. Taryn graduated magna cum laude from Yale University in 2014 with a Bachelor of Science in Ecology and Evolutionary Biology. She moved to Townsville in 2015 to commence her PhD, where she is investigating the relationship between behavioural and physiological responses to climate change conditions in marine fish.

Tail of 2 fishes

The world's oceans are becoming warmer and more acidic due to the burning of fossil fuels. This creates an environment that is harmful to fish, affecting their behaviour and physical condition. But the effects of climate change can vary depending on the fish and its habitat. How do these differences affect fish's ability to adapt to future conditions? Taryn's research seeks to answer these questions and more.

**ASSOCIATE PROFESSOR JODIE RUMMER**

Jodie is a Principal Research Fellow at the ARC Centre of Excellence for Coral Reef Studies. Her research investigates physiological "athletic" performance in fish, including sharks and rays, and specifically how they respond to human-induced stress, like climate change, and their capacity for acclimation and adaptation over time. Jodie also emphasizes in her work the importance of leadership, being a good role model, and communication – especially with young girls and minorities.

11 safe havens for baby sharks?

Marine protected areas provide some of the 'best case scenarios' for sharks. Today, nearly 16 million square kilometres of the oceans are designated shark sanctuaries, critical because at least 50% of shark and ray species are overexploited, threatened, or facing extinction. But even the best-managed marine protected areas, like the Great Barrier Reef, are not immune to climate change. How do reef sharks cope with climate change and other stressors?

**DR ALANA GRECH**

Alana is Assistant Director of the ARC Centre of Excellence for Coral Reef Studies. She has a broad interest in the development and application of spatial technologies in conservation decision making. Specifically, Alana's research develops new methodologies for cumulative impact assessment (CIA), and explores the implications of CIA in environmental decision-making, policy and practice in the Great Barrier Reef and Torres Strait.

The special relationship between seagrass and the number 2

Seagrass meadows in the Great Barrier Reef often bounce back after major disasters, such as cyclones and flooding. How do they recover? In this talk, Alana will reveal the complex oceanographic and biological processes that support seagrass recovery. It's a lot more smellier than you might think!

**DR TOM BRIDGE**

Tom is the Senior Curator of Corals at the Queensland Museum and a Senior Fellow in the ARC Centre. He completed his PhD research on the benthic ecology of mesophotic coral ecosystems on the Great Barrier Reef. Tom has a broad interest in the biodiversity and biogeography of corals reefs across multiple spatial and temporal scales, particularly on understanding coral reef biodiversity in deeper waters beyond conventional SCUBA diving depths.

The other 93%: exploring Queensland's twilight zone reefs

We typically think of the Great Barrier Reef as sunny, shallow coral reef environments. However, shallow reefs occupy only 7% of the Great Barrier Reef World Heritage Area. I will discuss some of the fascinating and diverse habitats included in 'the other 93%' of the Great Barrier Reef Marine Park. I will focus on the 'twilight zone,' reefs that occur in low light but support a high diversity of unique and interesting species.

**OVE HOEGH-GULDBERG**

Ove is a Deputy Director in the ARC Centre of Excellence for Coral Reef Studies, Director of the Global Change Institute at the University of Queensland, and an Australian Laureate Fellow. He has published over 330 scientific papers on a broad range of topics including the physiology and ecology of plant-animal symbioses, co-evolution, coral bleaching and climate change. More recently, Ove has been a coordinating lead author for the UN Intergovernmental Panel on Climate Change (IPCC).

Why should we care about 1.5 degrees?

There is a number that is fast becoming most important to everything we do. It is a number which, if exceeded, will have enormous implications for ecosystems and economies. That number is 1.5° Celsius and is the temperature beyond the Pre-Industrial Period above which we lose the opportunity to stabilise the climate and avoid a planetary disaster. While daunting, the good news is that we have time to avert this disaster – but only if we take the extraordinary measure to reduce greenhouse gas emissions to zero within the next 3 decades. Possible?