

## Media briefs

Monday, 9 January 2023

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# IMAS hosts International Temperate Reefs Symposium this week

Marine scientists and students from around the world will gather at the University of Tasmania in Hobart from 8–12 January for the International Temperate Reefs Symposium (ITRS) hosted by the Institute for Marine and Antarctic Studies (IMAS).

ITRS is the premier conference for marine scientists whose research focuses on cooler (temperate) reefs – from estuaries, coastlines and kelp beds to deep-sea reef ecosystems.

IMAS ecologist and conference convenor, Professor Craig Johnson, said over 260 scientists and students from 19 countries will be attending the conference.

“The symposium covers natural rocky reefs, man-made structures, and biogenic surfaces which are hard structures created by marine organisms,” Prof Johnson said.

“While ecology is the key focus, we’ll also be exploring human links with temperate reefs, and how we might future-proof reef ecosystems in the face of a changing climate.

“Human impacts and global ecological change in the distribution and abundance of species is one of the symposium’s key themes,” he said.

## Grand challenges and glimmers of hope for our changing temperate reefs

Improving management responses to the impacts of climate change on temperate marine reefs is a challenge, but there is hope, according to University of Victoria (Canada) researcher Professor Amanda Bates.

“Climate change related threats to biodiversity are increasing, but our research shows that conservation efforts are more likely to succeed where human population density is lower, and will have better outcomes when plans are built on the knowledge of resilience in reef communities,” said Prof Bates, whose research spans marine community ecology and physiology.

“The success of conservation plans developed in collaboration with Indigenous Peoples and communities is inspiring, and gives us hope for oceans with a healthier future.”

Professor Bates holds the Impact Chair in Ocean Ecosystem Change and Conservation at the University of Victoria, and is a Pew Marine Fellow, and will give the Symposium’s opening plenary address on [Monday 9 January at 9.00 am.](#)

## Toolbox for our times: investigating marine species and ecosystem responses to environmental stress

Human activity has been the dominant influence on the environment in this current geological age, known as the Anthropocene. But how do we properly measure human-induced marine stressors and evaluate the layers and complexities of species and ecosystem responses?

“The solution is a multi-disciplinary toolbox for the Anthropocene,” said University of Liverpool Senior Lecturer, Dr Nova Mieszkowska, who leads an international research program focused on embedding small-scale, process-oriented experimental studies within larger-scale macroecological investigations.

Dr Mieszkowska is using rocky intertidal species across the UK and northern Europe as a test system, and emphasises the importance of ecological genetics to understand the ‘how and why’ of species-specific responses to multiple human stressors.

“Developing and applying new technologies in a genetics-to-ecosystem approach is essential to understand which factors are causing the observed shifts in population abundances and range limits of marine species,” she said.

Dr Mieszkowska will give the plenary address on Tuesday 10 January at 8.30 am

## Understanding change in marine communities

Marine seafloor communities are clearly responding to human activity, but scientists say effectively managing our important reef ecosystems relies on interpreting the complex dynamics of those changes.

“We’re living in a time of unprecedented human influence on marine ecosystems, and we’re seeing persistent shifts in marine community structure and dynamics,” IMAS researcher, Prof Craig Johnson said.

“There are three main challenges for ecologists and managers – how to interpret the observed changes, identifying the drivers and scale of these changes, and how variability in the system shapes our interpretation.”

Professor Johnson’s research focuses on finding solutions for these challenges. He will be speaking on Tuesday 10 January at 12.15 pm.

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The 2023 Symposium will be held at the Stanley Burbury Theatre, University of Tasmania, Sandy Bay Campus, from January 8–12. The [full program is available here](#).

*Prof Craig Johnson, Prof Amanda Bates and Dr Nova Mieszkowska are available for interview at the conference.*

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