European Coral Reef Symposium

Oxford, 2017

V.2.

Reef Conservation UK

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Welcome

Dear Delegates,

Welcome to the European Coral Reef Symposium!

We, the Reef Conservation UK (RCUK) committee, were invited by the International Society of Reef Studies to host a European coral reef meeting in 2017 in celebration of twenty years of RCUK. Almost a year later and over 500 coral reef nerds are descending on a very festive Oxford!

The interest in the conference has been overwhelming, it has pulled us out of our traditional (yet smaller) home at ZSL London Zoo and into something rather more prestigious. The friendly and relaxed atmosphere of our annual gatherings is at the heart of RCUK and we hope this has travelled with us to Oxford.

We have strived to make ECRS2017 as sustainable, environmentally friendly and family friendly as possible. Please join us on the band wagon by bringing along your refillable water bottle and downloading the conference App.

We look forward to seeing you all and hope you enjoy three days of sharing science!

The ECRS/RCUK committee

#ECRS2017
@ReefConsUK

ecrs@zsl.org
www.reefconservationuk.co.uk/ecrs

20 years of Reef Conservation UK (RCUK)

Founding RCUK committee
Kristian Teleki, Heather Koldewey, Alastair Harborne, Dorie Smith, Jan Smith, Damon Stanwell-Smith, Elizabeth Wood

Evolving out of the UK committee for the International Year of the Reef, RCUK was founded in 1997 and aimed to maximize communication between coral reef enthusiasts based within the UK, whilst minimizing time and money required to gather together. The first RCUK conference was held in 1998 and attracted a great mix of students, academics and professionals, all who shared an enthusiasm in promoting reef awareness with the first ever conference programme stating;

“We hope this is the beginning of a sustained and continued effort to ensure that RCUK and the UK reef community maintain an active role in promoting conservation, public awareness and education about coral reefs”

Twenty years later our annual RCUK meeting at the Zoological Society of London has continued to grow, with last year being our first sell-out event! Each year fosters a welcoming atmosphere and has developed some great traditions - most notably Guylian chocolate bars and (warm) beers in the aquarium!

Brought to you by

Reef Conservation UK (RCUK) is an informal committee founded in 1997 and made up of coral reef enthusiasts from across the UK (and slightly further afield) who lend their time to organising and hosting an annual one-day conference at ZSL London Zoo.

The International Society for Reef Studies (ISRS) was founded in 1980 and is the principal learned society to which reef scientists and managers from across the world belong.
The main objective of the Society is to promote the production and dissemination of scientific knowledge and understanding of coral reefs.

As the oldest university in the English-speaking world, Oxford is a unique and historic institution. Oxford has a distinctive collegiate structure. Students and academics benefit from belonging both to the University, a large, internationally-renowned institution, and to a college or hall, a small, interdisciplinary academic community.
The central University is made up of many different sections, including academic and administrative departments, libraries and museums.

Founded in 1826, the Zoological Society of London (ZSL) is an international scientific, conservation and educational charity whose mission is to promote and achieve the worldwide conservation of animals and their habitats.
Realised through our groundbreaking science and active conservation projects in more than 50 countries, and two Zoos, ZSL London Zoo and ZSL Whipsnade Zoo.

ECRS / RCUK Committee

Rebecca Short
Zoological Society of London /
Imperial College London

Kirsty Richards
Zoological Society of London

Bryan Wilson
University of Bergen

Catherine Head
University of Oxford

Robert Yarlett
University of Exeter

David Curnick
Zoological Society of London

Dom Andradi-Brown
WWF

Victoria Jeffers
Blue Ventures

Mike Sweet
University of Derby

@ReefConsUK #ECRS2017

ECRS Volunteers

Rather than having to plough through a hefty conference programme to find the information you need, our ECRS volunteers and committee members will be on hand (and easy to spot) throughout the conference to answer any questions, point you in the right direction or just have a chat with!

Joanna Bluemel, CEFAS
Steven Carrion
Hannah Gilchrist
Catriona Glendinning
Kirstie Skinner, ZSL Whipsnade
Emma Levy, Zoological Society of London
Sophia Castello, University of Oxford
Lucy Jupe, University of Plymouth
Christina Hunt, University of Oxford
Dan Bayley, University College London / Zoological Society of London
Laura Stoltenberg, Southern Cross University
Rebekah Trehern, University of Exeter
Eslam Osman, University of Essex
Amy Sing Wong, University of Essex

A BIG thank you goes out to all of our volunteers!

Family friendly conference

We understand that childcare can be a major challenge when attending a conference or symposium. To take on that challenge the ECRS committee have teamed up with Lemonjelly Childcare (www.lemonjellychildcaresolutions.co.uk) who will provide safe on-site childcare for attendees who have let us know that they will children in tow.

There are limits on capacity, please contact us prior to bringing along the little ones.

Two certified nannies equipped with toys will be based in the Family Room (Room 10) throughout the conference. The room also provides a quite space for baby feeding. Changing facilities are located opposite Room 8.

@ReefConsUK #ECRS2017

A sustainable conference?
What does that look like?

Conferences.
Great for learning, networking and forming new collaborations. All with the intention of advancing our fields and generating innovative ideas for protecting our oceans and our planet. But attracting an international audience can come at a cost, and at the expense of the environments that we are working hard to protect. As a reef conservation committee, we, with the help of our venues and partners, have been trying to make ECRS 2017 as environmentally friendly as possible, and we'd love you guys to do your bit too!

Bring your own re-usable water bottles!
ZSL's One Less team are here and we're taking up the challenge to ditch, not just single-use plastic water bottles, but single-use plastic all together! Jugs of water will be available during each of the breaks and at lunch times and there are water fountains all around the venue, therefore please think ahead and bring along your own reusable and refillable water bottle.

Desperate for that morning coffee on the go?
Not to worry! A little something will be in your conference bag enabling you to carry around your caffeine fix all day, just rinse, refill and reuse.

Do you really need to print that?
Our full programme will only be available as an e-programme that you can save on your device or view using the conference App. We will be keeping printing to a minimum - TV screens and signs will keep you up to date with what's happening when. If you have any questions and can't access the full programme, we have a team of dedicated volunteers who will be around to help.

Ditch the paper & download the App!
We have teamed up with Whova to bring you an all singing, all dancing conference App. Everything from the low-down of presenters within each session, full abstracts and the complete list of delegates will be at your fingertips. Details will be coming to an inbox near you soon!

Charge your phone and burn some calories!
We have teamed up with Pedal Emporium to promote cycling and sustainability! Have your legs seized up sitting and listening to gripping talks all morning? Has the conference App drained all your phone battery? We've got you covered. Don't worry about bringing your phone charger to ECRS, just your legs! And yes, we have offset the carbon emitted to get the bikes to Oxford!

Lets offset some Carbon!
We have teamed up with the World Land Trust who will be attending ECRS on Thursday 14th to help us offset our carbon emissions. We will be offsetting the carbon emissions for the general running of the conference, as well as all conference associated travel we've done as a committee. Attendees are also encouraged to offset their own carbon emissions for their travel to ECRS, and can do so at the World Land Trust stand.

Conference Catering
To limit our carbon footprint we have opted for a fully vegetarian menu. Our venue caterers are committed to delivering excellent, ethical and local food including; free-range eggs, 100% Fairtrade coffee, wholegrain, wholemeal bread, Fairtrade juices and Red Tractor Certified suppliers.

The venues

Conference Venue

The University of Oxford's Grade II listed Examination Schools building was designed by Sir Thomas Jackson (1835–1924) and was completed in 1882, in Clipsham stone.

It is one of the largest buildings owned by the University, and as the name suggests, the main purpose of the Schools is for the organisation and administration of the university's examinations. It also provides a major lecturing facility for the University and is used as a meeting and conference venue outside term time.

During the two World Wars the Examination Schools was used as a military hospital and in the basement of the building signs to the "resuscitation room" can still be seen today.

Drinks Reception

The Oxford University Museum of Natural History displays many of the University's natural history specimens. The neo-Gothic building was designed by the Irish architects Thomas Newenham Deane and Benjamin Woodward and was completed in 1860.

It consists of a large square court with a glass roof, supported by cast iron pillars, which divide the court into three aisles. Statues of eminent men of science stand around the ground floor of the court—from Aristotle and Bacon through to Darwin and Linnaeus. Although the University paid for the construction of the building, the ornamentation was funded by public subscription.

RCUK 20th Anniversary Conference Dinner

Somerville Hall was founded in 1879, and named in honour of the Scottish scientist Mary Somerville. There were just twelve students when it began, but in singling out Mary Somerville, a public intellectual in an age against women pursuing academic careers, the founders made clear the hopes they had for the women who attended.

In 1920, following the work of Somerville Principal Emily Penrose, the University of Oxford granted women the right to matriculation to all degrees, and presented its first candidates in October of that year.

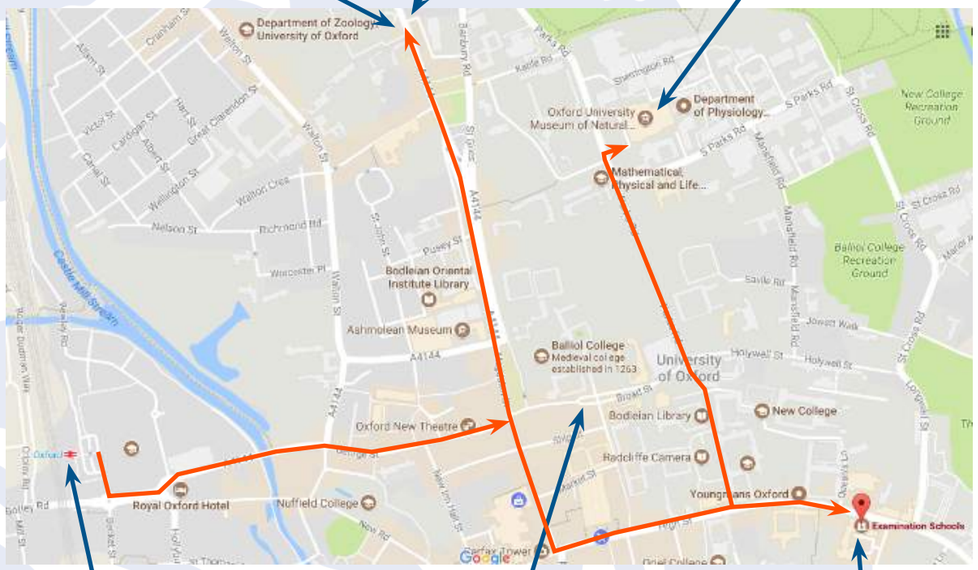
The years that followed brought great scientists, novelists and politicians alike through Somerville's doors: Vera Britain, Dorothy Sayers, Dorothy Hodgkin, Indira Gandhi and Margaret Thatcher all studied at Somerville. In 1994 the College voted to accept men for the first time.

Moving between venues

Somerville College, Woodstock Road, OX2 6HD
Conference Dinner 8pm, Thurs 14th

Royal Oak Pub, Woodstock Rd, OX2 6HD
Student drinks from 7pm, Tues 12th

Museum of Natural History, Parks Rd, OX1 3PW
Drinks reception 6pm, Wed 13th



Oxford Train Station OX1 1HS

Oxford Christmas Market, Broad Street

Examination Schools, High Street, OX1 1BG

Walking between venues

Train station to Examination Schools = 0.9 miles, 19 minutes
Examination Schools to Museum of Natural History = 0.7 miles, 15 minutes
Examination Schools to Sommerville College = 0.9 miles, 17 minutes

Inside the venue

What's happening where?

Session rooms:

South School - our main plenary, and largest session room with a maximum capacity of 440
East School - our second largest room (capacity 160) and overflow room for our plenary presentations (a live video link will be set up).
Rooms 6, 11 & 15 - further session rooms on the ground floor.
Due to fire regulations, no standing is allowed in any of the session rooms.
If you are keen to attend a certain session - please arrive early to ensure you get a seat!
ECRS Volunteers & Committee members will be on hand to ensure rooms don't breach their maximum capacity.

Workshop rooms

Rooms 6, 11, 14 & 15 - These rooms will be used for workshops during each day's lunch break.

Catering spaces

Head to the following spots to grab a coffee in the breaks and something warm and hearty for lunch
North Hall - one of two main catering spaces and where our trade stands will be based
The Quad Marquee - the second main catering space with large round tables
1st & 2nd Squares - two smaller catering spaces and where drinks will be served during our poster session on Thursday.

Other spots

The Great Hall - The place to sign in and pick up your name badge
Rooms 7, 8 & 9 - Our dedicated poster rooms. Posters will be on display here throughout the conference. Have a browse during the breaks, or wait until our dedicated poster evening on Thursday.
Room 10 - Family room - space for those with little ones to enjoy
Room 12 - The AV room. All presenters to head here well before their presentation slot to upload
Room 13 - The quiet room - for those who need to have 5 minutes to themselves

What else is happening?

Mentor lunches - Quad marquee, Thursday & Friday lunchtimes

An opportunity to meet established and emerging coral reef scientists during the lunch break. Students must register in advance; you'll find the sign up sheet at the ISRS trade stand in the North Hall. Places are limited and available on a first come, first served basis.
Grab you lunch and pull up a pew with a Prof!

Twitter wall, North Hall

Join the discussions on Twitter by following @ReefConsUK and using the hash-tag **#ECRS2017.** See your tweets pop up live on our HUGE Twitter wall in North Hall.

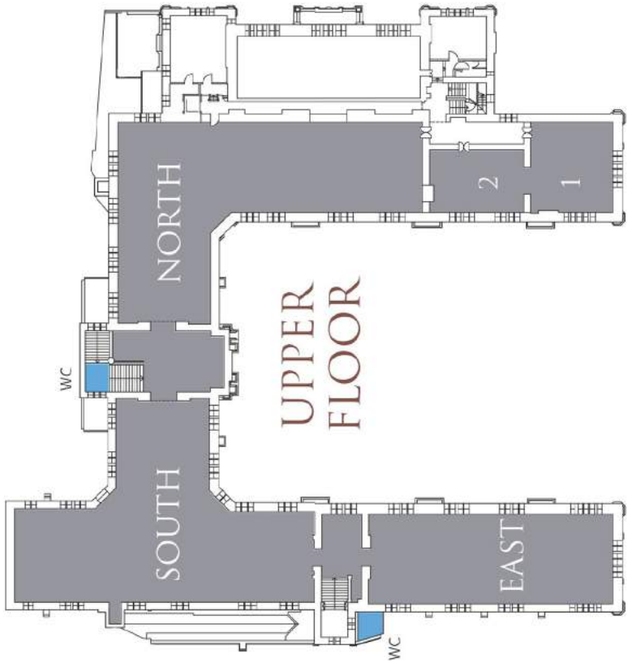
Phone battery died? Forgot your charger?

Not to worry! Head to North school during the breaks, jump on a bike, work up a sweat & charge your phone - all at the same time. Prize for the furthest cycled!

Friday 15th is Christmas Jumper Day!

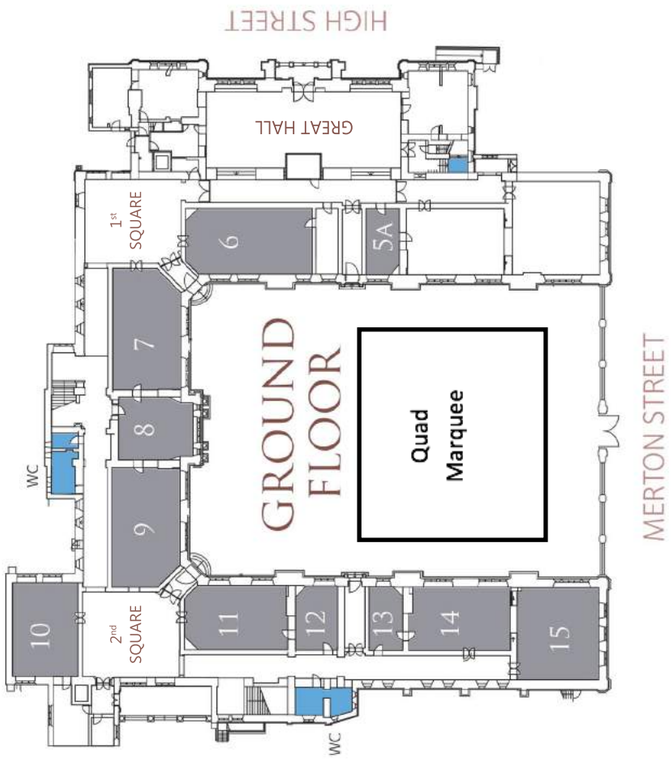
With Christmas just 10 days away join us in donning your favourite/ugliest Christmas jumper for our last day and get into the festive spirit!

EXAMINATION SCHOOLS
75-81 High Street, Oxford, OX1 4BG
Tel: 01865 276905
conferences@exams.ox.ac.uk
www.venues.ox.ac.uk
@OxUniVenues
Oxford University Event Venues



UNIVERSITY OF OXFORD

EXAMINATION Schools



Our plenary speakers

Heather Koldewey

Zoological Society of London

Heather started working for the Zoological Society of London (ZSL) in 1995, initially as a post-doctoral research scientist, then as curator of the ZSL London Zoo Aquarium and currently as Head of Marine and Freshwater Conservation.

Her work aims to find solutions through interdisciplinary research and conservation action at the interface between communities and environment. Examples include a) co-founding Project Seahorse, the world's leading authority on seahorses (which has helped supply RCUKers with chocolate bars each year through their partnership with Guylian); b) developing Net-Works, an award-winning project that has initiated a novel community-based supply chain for discarded fishing nets that are recycled into carpet tiles; and c) co-ordinating the Bertarelli Programme of Marine Science, an interdisciplinary study of large marine reserves, focused on the Chagos Archipelago.

Heather uses collaborative approaches to communicate and engage people in marine conservation, including One Less, a campaign to build a more ocean-friendly society through working to make London the first capital city to stop using single-use plastic bottles. Heather spends any free time enjoying Cornwall with her family, especially kite surfing and paddle boarding.

Barbara Brown

Newcastle University

After graduating and completing a PhD at Queen Mary College, London, Barbara moved to the University of Cambridge as a Junior Research Fellow. It was here that her interest in the tropical seas began with expeditionary work in Papua New Guinea and the British Virgin Islands. After moving to a lectureship at the University of Newcastle her reef interests extended to Thailand, Indonesia and the Maldives through numerous research projects that continue in Thailand to the present day.

She was a co-founder of the International Society for Reef Studies (ISRS) and was the first Secretary and later Vice President of the Society as well as Environmental Editor and Editor in Chief of Coral Reefs. In 2014 she was awarded the inaugural ISRS Eminence in Research Award and also a Leverhulme Emeritus Fellowship to study senescence in reef corals.

Her research interests have encompassed the bleaching physiology of corals; the roles of environmental factors eliciting the bleaching response; acclimatisation of corals to irradiance and elevated temperature; and long-term patterns of coral growth-studies which have largely arisen from the detailed monitoring of corals over the last 40 years in the Andaman Sea, Indian Ocean.

Madeleine van Oppen

University of Melbourne / Australian Institute of Marine Science

Madeleine was originally trained in marine ecology, and began to study corals in 1997. Her microbial studies were initially limited to the dinoflagellate endosymbionts of corals, but in the past 5+ years she has ventured into the study of other microbial groups that inhabit corals, including prokaryotes, viruses, and most recently, fungi.

Madeleine completed her PhD on the molecular biogeography of seaweeds at the University of Groningen (Netherlands) in 1995, and subsequently conducted postdoctoral positions at the University of East Anglia, UK, and James Cook University, Australia. In 2001, she took up a position at the Australian Institute of Marine Science (AIMS), Townsville. She commenced as a professor in the School of BioSciences, University of Melbourne, in 2015, while still maintaining a part-time position as Senior Principal Research Scientist at AIMS.

Madeleine's current research focuses on the field of coral reef restoration, in particular the development of coral stock better able to cope with disturbed environments and predicted future ocean conditions. This includes the manipulation of microbial communities associated with corals, laboratory evolution of algal endosymbionts, selective breeding of corals, and the conditioning (i.e., transgenerational acclimation) of corals to predicted future ocean conditions (i.e., assisted evolution). She is now also exploring synthetic biology as an approach to increase climate resilience of corals.

Info for presenters

Oral Presentations

Please keep talks within the time limits allocated below. We will be running five parallel sessions, and many delegates may wish to move between rooms to hear talks at specific times. If your talk overruns, the session organisers will stop you, and ask that you concisely summarise any remaining key points and finish your talk.

Standard Session Talks (Sessions 1 to 24 and 26):

Oral presentations should be no longer than **12 minutes** (followed by a maximum of 3 minutes for questions). Please arrive a few minutes before the start of the session that you are presenting in to introduce yourself to the session organisers and to nab yourself a seat!

Speed Talks (Session 25 - Reefs in the Anthropocene):

Speed talks should be no longer than 5 minutes (there will be no time allocated for questions).

Preparing your presentation

Please prepare your presentations in PowerPoint with slides set to an aspect ratio of 4:3.
We recommend that videos embedded in presentations are in WMV format.

Room 13 - the AV room

All oral presenters will need to upload their slides with our AV staff in Room 13 at least 2 hours before the start of the session you are presenting in.
Please be aware this room will get very busy, therefore we encourage you to upload your talks as soon as possible!
Please come ready with your presentation on a memory stick, and inform the member of staff of your name, what day, what session and what room you are presenting in.
Personal computers cannot be used.

Poster Presentations

Posters should be A1 portrait, Velcro will be provided.
If you wish to, you are able to come to the venue between 15:30 - 17:00 on Tuesday to place your poster. Otherwise, please arrive early on the Wednesday morning and remember to take them home with you on Friday afternoon.
Rooms 7, 8 and 9 will be home to all posters, please follow instructions from the ECRS committee & volunteers on where to place your poster.
The dedicated poster session takes place on Thursday 14th from 17:30 - 19:30, please make sure you grab a drink, pop yourself by your poster and be ready to chat!

@ReefConsUK #ECRS2017

The schedule

Tuesday 12th December

Early registration Examination Schools	
15:30 - 17:00	In Oxford on Tuesday afternoon? Avoid the Wednesday morning crowds by popping into the Examination Schools' Great Hall to pick up your name badge and conference bag.
Student Pre-conference drinks The Royal Oak Pub	
From 19:00	Kick off the conference with an informal drink and chat with the new ISRS student committee. They'll be discussing opportunities to get involved with the committee agenda and will welcome ideas and input.

European launch of the International Year of the Reef 2018 (IYOR)

The third IYOR will take place in 2018 with the support of the International Coral Reef Initiative and, for the launch activities, funding from the Government of Sweden. The hope is to raise the plight of reefs up the political agenda globally, and scaling up awareness to reach a tipping point for real positive action. The European Coral Reef Symposium is an opportunity to promote the key messages for reefs and to hold a brainstorming session to identify innovative and inspiring ideas to take forward.

Come along to the IYOR Workshop in South Hall, Weds 13th at 13:15 to share your thoughts about how, in 2018, we can really turn things round for coral reefs. This workshop will also feature the 6 minute documentary on the Great Barrier Reef "Voices from the reef" created by James Nikitine.

@ReefConsUK #ECRS2017

Wednesday 13th December

08:30 - 09:45	**Registration**				
09:45 - 11:00	**South Hall (440 seats)**			**East Hall (160 seats - overflow live link)**	
	Opening plenary - Heather Koldewey, Zoological Society of London				
11:00 - 11:30	**Morning break**				
Session 1 11:30 - 13:00	**South Hall (440 seats)**	**East Hall (160 seats)**	**Room 6 (100 seats)**	**Room 15 (75 seats)**	**Room 11 (70 seats)**
	13A.Quantifying sucessess and failures in coral reef conservation	5A. Functional microbial ecology in coral reef ecosystems	2. Mechanistic insights into coral calcification in a context of global environmental change	9A. Drivers of coral reef ecosystem state, recovery and reorganisation	17. Reefs in three dimensions
13:00 - 14:00	**Lunch & workshops**				
13:15 -13:50	**South Hall**	**Room 6**		**Room 14**	**Room 15**
	W6. Intl. Year of the Reef 2018 & Documentary: Voices from the Reef (6 mins)	*W11. The Homeward Bound Program, 2018*		*W12. National Geographic Society Grants*	*W4. Creating and analysing 3D models of shallow coral reefs*
Session 2 14:00 - 15:30	**South Hall**	**East Hall**	**Room 6**	**Room 15**	**Room 11**
	13B. *Continued* Quantifying sucessess and failures...	5B. *Continued* Functional microbial ecology...	22A. Mesophotic coral ecosystems	9B. *Continued* Drivers of coral reef ecosystem...	11A. Coral reef research in European outer most regions, overseas countries & territories
15:30 - 16:00	**Afternoon break**				
Session 3 16:00 - 17:30	**South Hall**	**East Hall**	**Room 6**	**Room 15**	**Room 11**
	13C. *Continued* Quantifying sucessess and failures...	5C. *Continued* Functional microbial ecology...	22B. *Continued* Mesophotic coral ecosystems	9C. *Continued* Drivers of coral reef ecosystem...	11B. *Continued* Coral reef research in European...
18:00 - 21:00	**Drinks Reception - Oxford University Museum of National History**				

Thursday 14th December

08:30 - 09:00	**Tea & Coffee**				
09:00 - 10:00	**South Hall (440 seats)**			**East Hall (160 seats - overflow live link)**	
	Opening plenary - Barbara Brown, Newcastle University				
10:00 - 10:30	**Morning break**				
Session 1 10:30 - 12:30	**South Hall (440 seats)**	**East Hall (160 seats)**	**Room 6 (100 seats)**	**Room 15 (75 seats)**	**Room 11 (70 seats)**
	18A. Climate induced shifts in the structure of coral reef assemblages	3A. Emerging techniques in reef studies: molecular tools, biophysical modelling & beyond	6. Cold-water corals in a changing ocean	16. Proximate & evolutionary causes and consequences of larval dispersal in coral reef seascapes	21. Coral reef food-web structures in space and time
12:30 - 14:00	**Lunch & workshops**				
12:50 -13:50		**Room 6**	**Room 11**	**Room 14**	**Room 15**
		W7. From cell to colony: Imaging techniques in coral research	*W1. Delving into the depths: what do we study on mesophotic reefs?*	*W8. What are the advances in citizen science for coral reef research?*	*W2. Reef geonomics and bioinformatics*
Session 2 14:00 - 15:30	**South Hall**	**East Hall**	**Room 6**	**Room 15**	**Room 11**
	18B. *Continued* Climate induced shifts...	3B. *Continued* Emerging techniques in reef studies...	23A. Diversity and function of coral symbionts of the genus Symbiodinium	8A. Species, traits and reef processes	25A. Reefs in the Anthropocene
15:30 - 16:00	**Afternoon break**				
Session 3 16:00 - 17:30	**South Hall**	**East Hall**	**Room 6**	**Room 15**	**Room 11**
	18C. *Continued* Climate induced shifts...		23B. *Continued* Diversity and function of coral symbionts...	8B. *Continued* Species, traits and reef processes	25B. *Continued* Reefs in the Anthropocene
17:30 - 19:30	**Poster session & drinks reception**				
19:00 - 22:00	**RCUK 20th Anniversary Conference Dinner, Somerville College** ***Pre-booking required*** **Prosecco reception from 19:00, dinner served at 20:00**				

Christmas jumper day!

Friday 15th December

Christmas jumper day!

08:30 - 09:00	**Tea & Coffee**				
Session1 09:00 - 10:30	**South Hall (440 seats)**	**East Hall (160 seats)**	**Room 6 (100 seats)**	**Room 15 (75 seats)**	**Room 11 (70 seats)**
	4A. The capacity of corals to adapt or acclimatise to climate change in the Anthropocene	19A. Coral reef restoration: long-term studies, recent advances & scaling up	1A. Coral reef building & break-down: habitat construction, erosion, and structural complexity	15A. Nutrient physiology and ecology of coral reefs	10. Biogeochemical response of coral reefs to ocean variability
10:30 - 11:00	**Morning break**				
Session 2 11:00 - 12:30	**South Hall**	**East Hall**	**Room 6**	**Room 15**	**Room 11**
	4B. *Continued* The capacity of corals to adapt...	19B. *Continued* Coral reef restoration...	1B. *Continued* Coral reef building & breakdown...	15B. *Continued* Nutrient physiology and ecology...	7. Can volunteers bridge the knowledge gap in reef conservation research?
12:30 - 14:00	**Lunch & workshops**				
12:50-13:50		**Room 6**	**Room 11**	**Room 14**	**Room 15**
		W5. Red Listing assessment initiative for scleractinian corals	*W9. Can citizen science bridge the knowledge gap? Lessons from the field*	*W10. Current advances in octocoral research*	*W3. Compiling evidence for the effectiveness of interventions to protect & manage coral reef diversity*
Session 3 14:00 - 15:30	**South Hall**	**East Hall**	**Room 6**	**Room 15**	**Room 11**
	4C. *Continued* The capacity of corals to adapt...	26. Reef associates	14. Coral reef epigenetics	20. Reef research at the model-data boundary: improving collaboration	24. Coral reef engineers in a changing ocean
15:30 - 16:00	**Afternoon break**				
16:00 - 17:30	**South Hall (440 seats)**			**East Hall (160 seats - overflow & live link)**	
	Closing plenary - Madeleine van Oppen, University of Melbourne & Australian Institute of Marine Science				

Session line-ups

Fri 15th Room 6

1. Coral reef building & breakdown: Habitat construction, erosion and structural complexity

	Title	Presenter	Institution
1A. 09:00 - 10:30	Changing dynamics of reef carbonate budgets: Regional trends and implications for reef growth potential under future sea-level rise	**Session Plenary (15 mins):** Chris Perry	University of Exeter
	Reef flat cores preserve records of Holocene reef accretion and the effects of terrestrial sedimentation and cyclones	Emma Ryan	University of Auckland
	Carbonate cycling and reef building, past, present and future: Lessons from the Holocene and recent history	Dennis Hubbard	Oberlin College
	Coralline algae role in carbonate budgets on the Great Barrier Reef	Emma Kennedy	University of Queensland
	Factors controlling biogenic dissolution due to microborers in corals: Contributions from six years in situ experiments and laboratory cell cultures	Julie Grange	UPMC
Morning Break			
1B. 11:00 - 12:30	Impact of habitat type on reef-scale rates of parrotfish bioerosion and sediment production	Robert Yarlett	University of Exeter
	Temporal variation in sediment dissolution rates under ambient and elevated pCO2 in a shallow coral reef lagoon	Laura Stoltenberg	Southern Cross University
	Tropical up-welling and coral reef dynamics	Claire Reymond	Leibniz Centre for Tropical Research
	Effects of bleaching-associated mass coral mortality on the structural complexity of coral reef ecosystems	Jennifer Magel	University of Victoria
	Coral reef establishment through free-living stabilization	Sebastian Hennige	University of Edinburgh

Session hosts:

Emma Kennedy, University of Queensland
Gary Murphy, University of Exeter

Wed 13th Room 6

2. Mechanistic insights into coral calcification in a context of global environmental change

	Title	Presenter	Institution
2. 11:30 - 13:00	The geochemistry of skeletal nucleation and growth in coral	**Session Plenary (15 mins):** Alexander Gagnon	University of Washington
	Tracking the early events of mineral formation during coral development	Maayan Neder	University of Haifa, Israel
	Microscope-guided characterization of pH, CO32- and Ca2+ in the calcifying medium of *Stylophora pistillata* microcolonies, a combined methodological approach	Sevgi Sevilgen Duygu	Centre Scientific De Monaco
	The roles of temperature and calcification site pH in corals: Calcification response to ocean acidification	Louise Cameron	Northeastern University
	Effects of protons and dissolved inorganic carbon on corals and coralline algae physiology and calcifying fluid composition	Steeve Comeau	University of Western Australia
	Coral biomineralization: Going beyond Scleractinians	Nicola Conci	Ludwig Maximilian University of Munich

Session hosts:

Sylvie Tambutte, Centre Scientific De Monaco
Alexander Venn, Centre Scientific De Monaco
Tali Mass, University of Halifa
Nicola Allison, University of St. Andrews

3. Emerging techniques in reef studies: Molecular tools, biophysical modelling and beyond

Thurs 14th East School

	Title	Presenter	Institution
3A. 10:30 - 12:30	Phylogeography and evolution of coral reef fauna in the Indo-West Pacific	Marc Kochzius	Vrije Universiteit Brussel
	Genomic consequences of the Indo-Pacific Vicariance in coral reef benthic organisms	Nina Yasuda	University of Miyazaki
	High self-recruitment and export of recruits from a marine protected area in a coral reef fish	Filip Huyghe	University of Brussels
	Habitat availability determine genetic structure in coral reef fish population between Persian Gulf and Red Sea	Felipe Torquato	University of Copenhagen
	Delimiting coral species using haplowebs and conspecificity matrices	Jean-François Flot	Université libre de Bruxelles
	Species delimitation and hybrid detection in tropical Acropora coral species	Catalina Ramírez-Portilla	Université libre de Bruxelles
	A genome and transcriptome based phylogenomic study of Scleractinian corals	David Combosch	University of Guam
	Sterol transport, Hedgehog signaling, and endocrine disruption: Are there linkages?	Michael Morgan	Berry College
Lunch			
3B. 14:00 - 15:30	Drivers of reef microbiome community structure: Next-generation sequencing, microbial source tracking, gene flow, and physical habitat	Lewis Gramer	University of Miami, CIMAS
	Assessing adaptation of Pocilloporid corals in the Red Sea using a population genomics approach	Carol Buitrago-López	KAUST
	How corals tell time by the moon: Lunar control of transcription in reef building corals	Peter Vize	University of Calgary
	Environmental extremes are associated with unique diets in Arabian Gulf reef fishes	Rasha Shraim	NYU Abu Dabi & LMU
	Contrasting patterns of genetic connectivity in two northeast Atlantic octocorals	Tom Jenkins	University of Exeter
	Genetic diversity and population structure of the mesophotic *Paramuricea macrospina* in the Menorca Channel	Federica Costantini	University of Bologna

Session hosts:
Lewis J. Gramer, University of Miami & CIMAS
Marc Kochzius, Vrije Universiteit Brussel

4. The capacity of corals to adapt or acclimatise to Climate Change in the Anthropocene

Fri 15th South Hall

	Title	Presenter	Institution
4A. 09:00 - 10:30	The future of coral assemblages in extreme environments: Potential scenarios based on community and recruitment patterns in Qatar, Persian/Arabian Gulf	Jessica Bouwmeester	Qatar University
	Coral bleaching refugia of the northern Red Sea	Eslam Osman	University of Essex
	High salinity environments: A potential piece to understand the coral thermotolerance puzzle?	Hagen Magnus Gegner	KAUST
	Corals in the Gulf of Aqaba are pre-adapted for climate change: Transgenerational effects upon early life history physiology	Jessica Bellworthy	Bar-Ilan University
	Genetic isolation and local adaptation in Palau's warmest and most acidic reefs	Hanny Rivera	MIT & Woods Hole Oceanographic Institution
	Bacterial community dynamics are linked to patterns of coral heat tolerance	Christian Voolstra	KAUST
Morning Break			
4B. 11:00 - 12:30	Effects of partial mortality associated with white syndromes on growth, reproduction and energy budgets in the coral *Acropora palmata*	Victor Piñon	National Autonomous University of Mexico
	Cryptic Symbiodinium may be key to survival in a changing climate where recurrent hyperthermal events are affecting Florida's Pillar Coral	Mauricio Rodriguez-Lanetty	Florida International University
	Potential for transgenerational and developmental acclimation in corals	Joana Figueiredo	Nova Southeastern University
	Development of thermally tolerant Symbiodinium through experimental evolution	Leela Chakravarti	Australian Institute of Marine Science
	The adaptive capacity of naturally thermal-tolerant corals from the extreme macrotidal Kimberley region of NW Australia	Steven Carrion	The University of Edinburgh
	Intra and trans-generational acclimation of the tropical coral Porites astreoides to thermal disturbances	Kevin Wong	University of Rhode Island
Lunch			
4C. 14:00 - 15:00	History of bleaching of enhances adult and offspring performance in *Montipora capitata*	Hollie Putnam	University of Rhode Island
	The capacity of the cnidarian host in determining thermal resilience through antioxidant mechanisms	Maha Joana Cziesielski	KAUST
	Molecular and photo-physiological responses of *Pocillopora acuta* to elevated temperature and sediments exposure	Rosa Celia Du	National University of Singapore
	The role of floridoside in coral osmoadaptation: An osmolyte and more?	Till Röthig	Swire Institute of Marine Science
	The role of metabolomics in the elucidation of stress tolerance mechanisms in symbiotic corals	Cathryn Quick	University of Southampton
	Transcriptomic Resilience of a Coral Holobiont to Low pH	Gert Wörheide	Ludwig Maximilian University of Munich

Session hosts:
James Guest, Newcastle University
David Smith, University of Essex

5. Functional Microbial Ecology in Coral Reef Ecosystems

Wed 13th East Hall

	Title	Presenter	Institution
5A. 11:30 - 13:00	Let's go viral on the model metaorganism Aiptasia	Jan David Brüwer	KAUST
	Bacterial DMSP transformation and its contribution to Symbiodinium oxidative stress tolerance	Anny Cardenas	KAUST
	Microbiome manipulation: Reversing dysbiosis to protect corals against bleaching	Raquel Peixoto	Federal University of Rio de Janeiro
	Disassembling a metaorganism: Expanding the coral model Aiptasia for functional microbiome studies	Ruben Costa	KAUST
	Symbiodinium-bacteria interactions support microbial calcification and symbiolite formation	Matthew Nitschke	University of Aveiro
	To settle, or not to settle, that is the question...	Bry Wilson	University of Bergen
Morning Break			
5B. 14:00 - 15:30	Differential microbiome restructuring in coral species upon adverse environmental conditions provides insight into holobiont flexibility	Carsten Grupstra	Rice University
	Bacteriophage strategies promoting microbial dominance in coral reefs	Cynthia Silveira	San Diego State University
	Predation, nutrient pollution, and high temperatures destabilize the coral microbiome	Rebecca Maher	Oregon State University
	Coral microbiomes and viromes reflect host phylogeny and disease susceptibility	Rebecca Vega Thurber	Oregon State University
	When the Grey Death Strikes!	Michael Sweet	University of Derby
	Microencapsulation of potential biocontrol agents for controlling of BBD coral diseases	Agus Sabdono	Diponegoro University
Lunch			
5C. 16:00 - 17:30	A unique perspective of coral disease: Infection dynamics and metabolic interactions at the (sub-) cellular level	Emma Gibbin	EPFL ENAC IIE LGB
	Shifts in core bacterial microbiome of a gorgonian coral affected by necrotic-patch disease: Confinement of the pathobiome may facilitate recovery	Elena Quintanilla	Universidad de los Andes
	Characterization of bacterial strains involved in several episodes of massive fish kill in La Reunion (Western Indian Ocean)	Mathieu Séré	Institut pour la recherche et le développement
	Species-specific coral-associated microbial community shifts in response to invasion and bleaching at Palmyra Atoll	Amanda Carter	Scripps Institution of Oceanography
	Support for an autoendolithic phase in the life-history of Symbiodinium from field-based and laboratory studies	Jörg Frommlet	University of Aveiro

Session hosts:

Michael Sweet, ECRS committee / University of Derby
Christian Voolstra, KAUST

6. Cold-water corals in a changing ocean

Thurs 14th Room 6

	Title	Presenter	Institution
6. 10:30 - 12:30	Octocorals of Mauritania: a taxonomic upgrade	Iris Sampaio da Costa	University of the Azores
	Pristine populations of habitat forming species on the Antarctic continental shelf	Stefano Ambroso	Institut de Ciencies del Mar
	Cold-Water Coral assemblages on the Cabliers Mound (Alboran Sea, western Mediterranean): diversity and structure	Guillem Corbeta Pascual	University of Southampton
	The hidden cold-water coral communities of the Ormonde sea-mount (Gorringe Bank): a world to explore, a world to discover	Covadonga Orejas	Instituto Espanol De Oceanografia
	Connectivity of deep-sea corals across the Mediterranean and NE Atlantic	Joana Boavida	IFREMER
	Physiological responses of two cold water corals species (*Dendrophyllia cornigera* and *Dendrophyllia ramea*) to a wide range of temperature.	Stéphanie Reynaud	Center Scientific De Monaco
	The impact of plastic debris on the health status of cold-water corals	Franck Lartaud	Pierre & Marie Curie University Paris
	Evaluating the impact of drilling wastes on the cold-water coral Lophelia pertus: laboratory experiments	Thierry Baussant	International Research Institute of Stavanger

Session hosts:

Covadonga Orejas Saco del Valle, Instituto Espanol De Oceanografia
Christine Ferrier-Pages & Stephanie Reynaud, Center Scientific De Monaco

7. Can volunteers bridge the knowledge gap in reef conservation and research? Lessons from the field

Fri 15th Room 11

	Title	Presenter	Institution
7. 11:00 - 12:30	Successful Use of Citizen Science in Long-term Coral Reef Research	John Rollino	AECOM
	The role of conservation volunteers in the detection, monitoring and management of invasive alien lionfish	Henry Duffy	Blue Ventures
	Community based evidence for managing Marine Conservation Zones in the South West of the U.K.	Mark Parry	National Marine Aquarium
	Course-Based Undergraduate Research Experiences (CUREs) as drivers of local reef conservation efforts: Where citizen science and applied research intersect	James Hewlett	Finger Lakes Community College
	21st century education: supporting reef conservation and research through experiential and service learning in Borneo, Palau and China	Alan Yeung	Nature Pacific Foundation
	Through all the gloom, signs of resilience in Maldives reefs	Jean-Luc Solandt	Marine Conservation Society

Session hosts:

Ans Vercammen, Imperial College London
Vanessa Lovenburg, Operation Wallacea

8. Species, traits and reef processes

Thurs 14th Room 15

	Title	Presenter	Institution
8A. 14:00 - 15:30	Variation in growth rates of branching corals along Australia's Great Barrier Reef	Kristen Anderson King	James Cook University
	Functional trait composition affects community-level productivity and calcification in experimentally controlled coral assemblages	Michael McWilliam	James Cook University
	Coral life-history strategies: A predictive framework for the long-term viability of subtropical corals	James Cant	University of Leeds
	Beyond brooders and spawners: Intermediate coral mating strategies require new nomenclature	Kristen Marhaver	CARMABI
	Some aspects of the trophic ecology of two Caribbean octocorals: autotrophic and heterotrophic seasonal trends	Sergio Rossi	Universita di Salento, Italy
	Recruitment potential of the brooding coral, Porites astreoides, from shallow to mesophotic reefs	Gretchen Good-body-Gringley	Bermuda Institute of Ocean Sciences
Afternoon Break			
8B. 16:00 - 17:30	The role of cryptobenthic fishes on coral reefs	Christopher Goatley	University of New England, Australia
	Not all herbivores are herbivores: sediments reveal disparate ecosystem roles of similar reef fishes	Sterling Tebbett	James Cook University
	Species diversity and functional richness: a scale-dependent relationship across global fish assemblages	Jeremiah Plass-Johnson	University of Denmark
	Coral reproduction and ecology along a large depth gradient (0-60 m): Why deep coral reefs may be more fragile than conceived?	Tom Shlesinger	Tel-Aviv University
	The hidden environmental variability of coral reefs: linking traits to environmental niches	Viviana Brambilla	University of St Andrews
	Reef fish assemblage biogeography of the Florida Reef Tract	Cory Ames	Nova Southeastern University

Session hosts:

Kristen Anderson, Laura Richardson & Michael McWilliam, James Cook University

9. Drivers of coral reef ecosystem state, recovery and reorganisation

Wed 13th Room 15

	Title	Presenter	Institution
9A. 11:30 - 13:00	The functional backstop of reef fisheries conservation	**Session Plenary (30 mins):** Aaron MacNeil	Dalhousie University
	Local versus systemic resilience of the Great Barrier Reef	Peter Mumby	University of Queensland
	Basin-scale oceanography reflected in coral reef landscapes	Gareth Williams	Bangor University
	The changing role of MPAs in a warming climate	Nick Graham	Lancaster Environment Centre
	Relative loss of low- and high-quality micro-habitat as a mechanism of fish population decline on coral reefs	Graham Forrester	University of Rhode Island
Morning Break			
9B. 14:00 - 15:30	Overfishing and eutrophication promote relative success of invasive ascidians in Eastern Tropical Pacific coral reefs	Christian Wild	University of Bremen
	Experimental Support for Multiple Attractors on Coral Reefs	Russell Schmitt	University of California, Santa Barbara
	An Inconvenient Hump: re-visiting the species richness gradient over depth in reef-building corals	Thomas Roberts	James Cook University
	Reconstructing coral communities through time to determine the effect of human influence on the inshore Great Barrier Reef	Hannah Markham	University of Queensland
	Impact, resilience and recovery trajectories of reefs under different management regimes in the Maldives	Steve Newman	Banyan Tree, Maldives
	Coral species composition shapes habitats, reef fish assemblages, and the response of coral reefs to severe thermal stress	Laura Richardson	James Cook University
Lunch			
9C. 16:00 - 17:30	Local human impacts influence predictability of global stressor effects on Pacific Island coral reef assemblages	Amanda Ford	Leibniz Centre for Tropical Research
	Feedbacks and drivers of resilience in Cordelia Bank MPA and the Mesoamerican Reef	Angela Randazzo	CINVESTAV Merida
	Cross-scale habitat requirements for successful juvenile coral recruitment	Jan Dajka	Lancaster University
	Identifying causes of temporal changes in *Acropora cervicornis* cover and the potential for recovery	Elizabeth Goergen	Nova Southeastern University
	30 years later: A reassessment of *Diadema antillarum* populations in the Caribbean	Kelly Latijnhouwers	SECORE International
	Biological Signals of the Island Mass Effect in the Mesopelagic Zone of a Coral Reef Island	Bethanie Francis	Bangor University

Session hosts:

Gareth Williams, Bangor University

Nick Graham, Lancaster Environment Centre

10. Biogeochemical response of coral reefs to ocean variability

Fri 15th Room 11

	Title	Presenter	Institution
10. 09:00 - 10:30	Insights into the health of tropical coral reefs from coupled boron and carbon isotopes in coral skeletons	Sara Fowell	Marine Conservation Philippines
	Influences on coral skeleton-bound d15N under incomplete surface nitrate consumption: A case study on Jarvis Island, central equatorial Pacific	Victoria Luu	Princeton University
	Cycling of biogenic volatile organic compounds in tropical coastal seas	Michael Steinke	University of Essex
	The Volatile Fingerprint of Corals and their Algal Endosymbionts (Symbiodinium spp.)	Caitlin Lawson	University of Technology, Sydney
	Physiological responses of the branching coralline alga Lithophyllum pygmaeum to increased CO2, irradiance and nutrients	Bonnie Lewis	University of Glasgow
	A novel free-ocean CO2 enrichment (FOCE) experiment on a coral reef in French Polynesia	Nick Roden	University of Washington

Session hosts:

Heidi Burdett, Lyell Centre for Earth & Marine Science and Technology
Dan Exton, Operation Wallacea
Nick Kamenos, University of Glasgow

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11. Coral reef research in European outermost regions, overseas countries and territories

Wed 13th Room 11

	Title	Presenter	Institution
11A. 14:00 - 15:30	Decadal trends in community structure of the coral reefs of the Chagos Archipelago	John Turner	Bangor University
	Using Fastloc-GPS telemetry to identify green turtle foraging grounds in remote seagrass and coral reef habitat in the Indian Ocean	Nicole Esteban	Swansea University
	Extensive partial mortality events recorded in 20th century coral skeletons from the Chagos	Rebecca Summerfield	University of Bristol
	The Bertarelli Programme of Marine Science - a four year programme of research in the British Indian Ocean Territory MPA	Rachel Jones	Zoological Society of London
	Alcyonacean biodiversity of the Îles Éparses in the Mozambique channel: a regional perspective	Michael Schleyer	Oceanographic Research Institute
	Mapping the benthic habitat in St Vincent and the Grenadines: the importance of context for predicting reef and seagrass distributions	Peter Mitchell	CEFAS
Afternoon Break			
11B. 16:00 - 17:30	Biodiversity research on Dutch Caribbean coral reefs	Bert Hoeksema	Naturalis Biodiversity Center
	A year-long Lagrangian drifter study of currents at a Fish Spawning Aggregation site, Cayman Islands, British Caribbean	Croy McCoy	Dept. of Environment. Cayman Islands Gov.
	The coral reefs of the Pitcairn Islands (central South Pacific): remoteness, resilience & rarity	Terence Dawson	King's College London
	The challenging life of Polynesian corals: finding solutions in a changing world	Laetitia Hedouin	CRIOBE
	The nutrient limitation status of benthic reef macroalgae (Phaeophyceae) in Moorea, French Polynesia	Hannah Scarlett	Leibniz Centre for Tropical Research
	Collective Aggressiveness of Fish Social Groups Contributes to Variation in Coral Replenishment	Sally Holbrook	University of California, Santa Barbara

Session hosts:

Neil Davies, University of California, Berkeley
John Turner, Bangor University
Serge Planes, CNRS
Catherine Head, ECRS committee / University of Oxford

13. Quantifying sucesses and failures in coral reef conservation

Wed 13th South Hall

	Title	Presenter	Institution
13A. 11:30 - 13:00	Using impact evaluation techniques to generate novel insights into marine protected area effectiveness	Dominic Andradi-Brown	WWF
	Community versus government led processes for establishing marine protected areas: What works and why? A case study from Rodrigues	Emily Hardman	Shoals Rodrigues
	Sudan's Marine Protected Areas and Red Sea's first UNESCO Marine World Heritage site: Tale of perseverance, patience and lateral thinking	Rebecca Klaus	Freelance
	Thirty years later: what can we learn from Panamanian marine management strategies?	Jessica Savage	University of Southampton
	The role of conservation incentives in promoting reef health and socio-economic well-being: a case study from Malaysia	Elizabeth Wood	Marine Conservation Society
	Evaluation of Ecosystem Health and Management Effectiveness on a Regional Scale with the Healthy Reefs Framework	Melanie McField	Smithsonian
Lunch			
13B. 14:00 - 15:30	The role of coral reef diving representatives in reducing ecological impacts and influencing diver attitudes	Ronan Roche	Bangor University
	Enhancing survival of ex situ reared sexual recruits of *Acropora palmata* for reef rehabilitation	Miriam Schutter	The Bureau Waardenburg
	Coral Transplantation in Suboptimal Marine Habitats	Anwar Khan	HDR EOC
	Dredging and coral-reef conservation	Ross Jones	Australian Institute of Marine Science
	Accounting for environmental uncertainty in the management of dredging impacts using probabilistic dose-response relationships and thresholds	Rebecca Fisher	Australian Institute of Marine Science
Afternoon Break			
13C. 16:00 - 17:30	Is connectivity important in spatial conservation planning for coral reefs?	Maria Beger	University of Leeds
	Marine protected areas do not increase the resilience of coral communities to global stressors	John Bruno	University of Carolina
	Coral reefs and Sustainable Development Goals: Formulating coral reef measures and action plans in the context of the 2030 development agenda	Hazel Thornton	UN World Conservation Monitoring Centre
	A vulnerability-based approach to foster synergies in the management of coral-reef fisheries as social-ecological systems	Lauric Thiault	CRIOBE
	Social Drivers Forewarn Marine Regime Shifts	Christina Hicks	Lancaster Environment Centre

Session hosts:

Maria Beger, University of Leeds
Ans Vercammen, Imperial College London
Sue Wells, ISRS

14. Coral Reef Epigenetics

Fri 15th Room 6

	Title	Presenter	Institution
14. 14:00 - 15:30	Epigenome-associated phenotypic acclimatization to ocean acidification in a reef-building coral	Manuel Aranda Lastra	KAUST
	Population-specific epigenome influences the acclimation capacity of reef fish to ocean warming	Timothy Ravasi	KAUST
	Epigenetic modifications and differential gene expressions in *Acropora digitifera* during heat acclimation	Sarah Lemer	University of Guam
	DNA methylation changes in response to a long term increased thermal environment in *Exaiptasia pallida*	Sebastian Schmidt-Roach	KAUST
	Changes in methylation landscapes across developmental stages of *Platygyra daedalea*	Yi Jin Liew	KAUST

Session hosts:

Manuel Aranda & Timothy Ravasi, KAUST, Yi Jin Liew, Red Sea Research Centre

15. Nutrient physiology and ecology of coral reefs

Fri 15h Room 15

	Title	Presenter	Institution
15A. 09:00 - 10:30	Antagonistic effect of nutrient enrichment and seawater pH on the growth of the stony coral *Porites porites*	Ronald Osinga	Wageningen University
	Nutrient Stress and Coral Reefs	Jörg Wiedenmann	University of Southampton
	Investigating how eutrophication disrupts coral host and symbiont metabolism through stable isotope analyses in Palau	Austin Yeung	Nature Pacific Foundation
	Coral fluorescence shows response to nutrient stress	Elena Bollati	University of Southampton
	Eutrophication effects on the physiology of the temperate scleractinian coral *Cladocora caespitosa*	Louis Hadjioannou	University of Cyprus
	Histological changes in radial polyps of *Acropora longicyathus* after long-term exposure to experimentally-elevated nutrient concentration reveal mechanisms for synergistic impacts	Daniel Bucher	Southern Cross University
Morning Break			
	Impact of nutrient pollution on coral bleaching, coral mortality, and coral recovery on Moorea coral reefs	Leila Ezzat	University of California, Santa Barbara
15B. 11:00 - 12:30	Effects of feeding on the radiative energy budget of the coral *Pocillopora damicornis* during thermal stress	Niclas Lyndby	University of Copenhagen
	When neighbours become competitors - Autotrophic assimilation rates of individual symbionts depend on local density when *Stylophora pistillata* is regularly fed	Thomas Krueger	EPFL
	Importance of the symbiont genotype in carbon and nitrogen acquisition by the scleractinian coral *Stylophora pistillata*	Renaud Grover	Center Scientific De Monaco
	Understanding coral bleaching in the light of holobiont nutrient cycling	Nils Rädecker	Aarhus University
	Thermal stress and the major role of diazotrophs for temperate corals in the Mediterranean Sea	Vanessa Bednarz	Center Scientific De Monaco

Session hosts:

Jörg Wiedenmann & Cecilia D'Angelo, University of Southampton
Christine Ferrier-Pagès, Center Scientific De Monaco

16. Proximate and evolutionary causes and consequences of larval dispersal in coral reef seascapes

Thurs 14th Room 15	Title	Presenter	Institution
16. 10:30 - 12:00	Local and geographic factors structuring coral settlement patterns along the Mozambique coastline	David Glassom	UKZN
	Stony coral *Seriatopora hystrix* shows high levels of genetic subdivision along the East African coast	Rosa van der Ven	Vriue Universiteit Brussle
	Settlement site selection by coral reef fishes: the role of chemical cues	Zara-Louise Cowan	University of Delaware
	The role of marine protected areas in the replenishment of local fisheries	Hugo Harrison	James Cook University
	High-resolution coral marine connectivity modelling in the Great Barrier Reef	Antoine Saint-Amand	UC Louvain
	From spawning to settlement: Identifying fine-scale connectivity in the Convict Tang, *Acanthurus triostegus*, across Oahu	Richard Coleman	Hawaii Institute of Marine Biology
	Wave-driven flow as a potential retention mechanism in coral reefs and lagoons	Daniel Holstein	Duke University Marine Lab
	Considering Reefscape Configuration and Composition in Biophysical Models Advance Seascape Genetics	Simon Van Wynsberge	IRD

Session host:
Gerrit Nanninga, Cambridge University

17. Reefs in three dimensions

Wed 13th Room 11	Title	Presenter	Institution
17. 11:30 - 13:00	Using micro-CT to quantify historical coral calcification rates: Standardising standards	Erica Hendy	University of Bristol
	Caribbean reef health insights from 3D models	Grace Young	University of Oxford
	Assessing the efficacy of small scale MPAs for restoring reef biodiversity, structure and function	Daniel Bayley	University College London / ZSL
	Using commercial drone for mapping ecological phase shifts on the coral reefs of Southern Faafu atoll, Maldives	Luca Fallati	University of Milano-Bicocca
	3D reconstruction of coral reef morphology using UAV, echosounder and VHR satellite images: interests and limits of an integrated approach	Samuel Etienne	PSL Research University, EPHE Paris

Session hosts:
Kenneth Johnson, Dan Bayley & Rebecca Summerfield, Natural History Museum
Erica Hendy, University of Bristol

18. Climate induced shifts in the structure of coral reef assemblages

Thurs 14th South Hall	Title	Presenter	Institution
18A. 10:30 - 12:30	Unusually high coral recruitment during the 2016 El-Niño in Moorea, French Polynesia	Peter Edmunds	CSUN
	Demographic mechanisms of coral community degradation due to repetitive mass mortality	Bernhard Riegl	Nova Southeastern University
	The effect of 2016 mass bleaching event on multi-decadal coral assemblages shifts in Central Maldivian Archipelago	Chiara Pisapia	California State University of Northridge
	Heat stress shapes long term trends in coral communities of the granitic Seychelles	Shaun Wilson	Dept. Biodiversity, Conservation & Attractions. Australian Gov
	The future is now: Coral responses to unprecedented heat stress from the epicentre of the 2015-2016 El Niño	Julia Baum	National University of Singapore
	Contrasting shifts in the structure of coral assemblages based on the frequency versus severity of mass-bleaching events	Morgan Pratchett	James Cook University
	Are higher latitude reefs a potential refuge for coral reef communities under climate change?	Nicholas Jones	Nova Southeastern University
Lunch			
18B. 14:00 - 15:30	Contrasting responses to warming: Unravelling the winners and losers in Mediterranean temperate reefs under climate change	Daniel Gomez Gras	Institut de Ciències del Mar
	A common coral-algal interaction under the influence of climate change and ocean acidification	Lena Rölfer	Centre for Tropical Marine Research
	The response of benthic assemblages to recent bleaching events in the Chagos Archipelago, a remote Archipelago in central Indian Ocean	Catherine Head	University of Oxford
	Ecological connectivity patterns of cryptic fauna in coral reefs along the Saudi Arabian coast of the Red Sea	Rodrigo Villalobos	KAUST
	Environment drives rapid divergence in tropical marine populations	Leontine Becking	
	Shifts to algal dominance in coral reefs affect biogeochemical functioning: evidence from multi-parameter in situ experiments in the Red Sea	Florian Roth	KAUST
Afternoon Break			
18C. 16:00 - 17:30	Coral reef degradation alters the abundance and foraging patterns of herbivorous reef fishes	Andrew Hoey	James Cook University
	Seasonal variation in reef fish communities in the environmentally extreme southern Arabian Gulf	Grace Vaughan	New York University
	Ecological versatility in structuring success in marginal reefs	David Feary	University of Nottingham
	Coping with extreme environments: the influence of thermal variation on fish behavioural ecology	Daniele D'Agostino	
	Large predatory reef fish moderate feeding and activity patterns in response to seasonal and latitudinal temperature variation	Molly Scott	James Cook University
	Changes in dietary preference following coral bleaching in corallivorous butterflyfishes	Andrew Baird	James Cook University

Session hosts:
Morgan Pratchett, James Cook University
Catherine Head, ECRS committee / University of Oxford
Shaun Wilson, Dept. Biodiversity, Conservation & Attractions, Australian Gov.
David Feary, University of Nottingham

19. Coral reef restoration: Long-term studies, recent advances and scaling up to meaningful ecological scales

Fri 15th East Hall

	Title	Presenter	Institution
19A. 09:00 - 10:30	Reef restoration: current state of the art	James Guest	Newcastle University
	Creating resiliency through coral restoration	Stephanie Schopmeyer	University of Miami
	Using sexual propagation techniques to restore a reef: benefits and limitations	Suchana Chavanich	Chulalongkorn University
	Four research directions to upscale sexual coral restoration efforts	Valérie Chamberland	SECORE International, Inc
	Reef restoration in the Mexican Caribbean: projections for up-scaling	Sergio Guendulain	
Morning Break			
19B. 11:00 - 12:30	Scaling up mass coral larval supply and recruitment for reef restoration	Peter Harrison	Southern Cross University
	The Coral Engine: A gift that keeps on giving	Remment ter Hofstede	Van Oord DMC
	16 years of extensive Coral Propagation and monitoring in conjunction with an Ultra-Luxury Hotel: Best Practices and Techniques	Sara Welsh	Reefscapers, Four Seasons Maldives
	Large-scale ecological restoration of deep gorgonian populations on the Mediterranean continental shelf	Maria Montseny Cusco	Institut de Ciències del Mar
	Developing land-based coral facilities to stimulate multiple ex-situ broadcast spawning events per year for reef restoration	Jamie Craggs	University of Derby / Horniman Museum

Session hosts:
Anastazia Banaszak, Universidad Nacional Autonoma de Mexico
Alasdair Edwards, Newcastle University, Valerie Chamberlans, SECORE International

20. Reef research at the model-data boundary: Improving collaboration between modellers and empirical scientists

Fri 15th Room 15

	Title	Presenter	Institution
20. 14:00 - 15:30	Corals in space! (or high resolution spatial distribution of Scleractinian corals on a reef)	Maria Dornelas	University of St Andrews
	Species Distribution Models: a look at the present, past, and future distribution of tropical coral reefs	Elena Couce	CEFAS
	How isolated are vulnerable eastern Pacific reefs?	Sally Wood	University of Bristol
	Stochastic spatio-temporal model of coral cover as a function of herbivorous grazers, water quality, and coral demographics	Rosanna Neuhausler	University of California, Berkeley
	Small data for big models: biotic interactions through space	Sally Keith	Lancaster Environment Centre

Session hosts:
Erica Hendy & Sally Wood, University of Bristol
Sonke Hohn, Leibniz Centre for Tropical Marine Research

21. Coral reef food-web structures in space and time

Thurs 14th Room 11

	Title	Presenter	Institution
21. 10:30 - 12:30	Bulk and amino acid stable isotopes elucidate complex coral reef food web structures in the central Red Sea	Benjamin Kuerten	KAUST
	Insights from compound-specific isotope analysis into the functional redundancy of herbivorous reef fishes	Matthew Tietbohl	KAUST
	Assessing trophic relationships between shallow-water black corals (Hexacorallia: Antipatharia) and their symbionts using stable isotopes	Lucas Terrana	University of Mons, Belgium
	Role of apex predators in tropical ecosystems connectivity	Christina Skinner	Newcastle University
	Energy pathways of coral reef fish in the Maldives	Yiou Zhu	Newcastle University
	Reef sponges facilitate the transfer of coral-derived organic matter to associated fauna via the sponge loop	Malik Naumann	University of Bremen
	Effect of Shark Abundance and MPA Status on Biomass of Other Fish Functional Groups in the Cayman Islands	Rupert Ormond	Heriot-Watt University
	Drivers of reef fish assemblages in the Indian Ocean	Melita Samoilys	CORDIO / University of Oxford

Session hosts:
Nicholas Polunin, Newcastle University & Benjamin Kürten, KAUST

22. Mesophotic coral ecosystems

Wed 13th Room 6

	Title	Presenter	Institution
22A. 14:00 - 15:30	Mesophotic coral ecosystems: towards a comprehensive understanding	**Session Plenary (30 mins):** Pim Bongaerts	University of Queensland
	The Mesophotic Coral Ecosystems of Eilat	Gal Eyal	Tel Aviv University
	Characterizing mesophotic coral euphyllia paradivisa holobiont under heat-stress: Associated microbial communities and host gene expression of symbiotic and apo-symbiotic colonies	Oren Levy	Center Scientific De Monaco
	Composition, Connectivity, and Symbiosis on Mesophotic Coral Reefs in the Gulf of Mexico and Northwestern Caribbean	Joshua Voss	FAU Harbor Branch Oceanographic Institute
Afternoon Break			
22B. 16:00 - 17:30	Between a rock and a hard place; remote sensing techniques identify mesophotic community locations	Joe Turner	University of Western Australia
	Murky reefs are the past and the future of the Coral Triangle	Nadia Santodomingo	Natural History Museum
	Search for mesophotic octocorals (Cnidaria, Anthozoa) and their phylogeny	Yehuda Benayahu	Tel Aviv University
	Ecology of Mediterranean gorgonians in mesophotic ecosystems	Andrea Gori	Institut de Ciències del Mar
	Jewels of the Mesophotic: a Mexican Black Coral Perspective	Erika Gress	Nekton Foundation

Session hosts:
Dom Andradi-Brown, ECRS committee / WWF, Gal Eyal, Tel Aviv University,
Joe Turner, University of Western Australia & Andrea Gori, Institut de Ciències del Mar

23. Diversity and function of coral symbionts of the genus Symbiodinium: Sentinels of coral resilience

Thurs 14th Room6

	Title	Presenter	Institution
23A. 14:00 - 15:30	SymPortal: A web-based platform for automated ITS2-type profiling for next-generation sequencing data of coral symbionts	Benjamin Hume	KAUST
	Characterisation of Symbiodinium communities from the marginal reefs of Singapore	Edward Smith	New York University
	Host utilisation of the Symbiodinium reservoir	Alyssa Bell	University of Glasgow
	Coral symbiosis and survival during the 2015/2016 El Niño event	Danielle Claar	University of Victoria
	Influence of Symbiodinium vertical transmission in the early development of the sea anemone, *Anemonia viridis*	Paola Furla	University of Nice Sophia Antipolis
	The photoacclimation proteome of Symbiodinium	Victor Emanuel Urrutia Figueroa	University of Southampton
Afternoon Break			
23B. 16:00 - 17:30	Response of diverse Symbiodinium spp. to iron stress	Hannah Reich	Pennsylvania State University
	Assessing the intricate interplay of oxidative stress and photosynthetic performance in Symbiodinium spp.	Verena Schrameyer	University of Copenhagen
	The influence of Symbiodinium type on the host proteome in a model cnidarian-dinoflagellate symbiosis	Simon Davy	Victoria University of Wellington
	Symbiosis alters the proteomic profile of *Exaiptasia pallida* in a symbiont-specific manner	Mauricio Rodriguez-Lanetty	Florida International University
	Genome comparison of free-living and symbiotic Symbiodinium reveals signatures of evolutionary transition to symbiosis	Raul Gonzalez-Pech	University of Queensland

Session hosts:
Christian Voolstra & Ben Hume, KAUST
Ed Smith, New York University, Abu Dhabi

24. Coral reef engineers in a changing ocean: Implications for ecosystem functions and services

Fri 15th Room 11

	Title	Presenter	Institution
24. 14:00 - 15:30	Telomere dynamics and stress integration in Corals	Alice Rouan	IRCAN
	Can macroalgae modify seawater conditions to mitigate the effects of ocean acidification on downstream coral communities?	Dorothea Bender-Champ	University of Queensland
	Habitat modulation by octocoral communities in Caribbean coral reefs	Georgios Tsounis	California State University Northrich
	Characterization of *Xestospongia muta* (giant barrel sponge) on Southeast Florida Reefs	Alanna Waldman	Nova Southeastern University
	The thermal and salinity tolerance of coral reef engineers benthic foraminifera from extremely warm reefs in the Persian Gulf	Christiane Schmidt	University of Bremen

Session hosts:
Christian Wild, University of Bremen
Florian Roth, Nils Radecker, KAUST

25A. Reefs in the Anthropocene - Speed talks

Thurs 14th Room 11

	Title	Presenter	Institution
25A. 14:00 - 15:30	Staghorn coral (*Acropora cervicornis*) genetic diversity and transcriptomic response to nursery environments in the Dutch Caribbean	Pamela Engelberts	University of Amsterdam
	Recent developments in law and policy for the conservation of cold water corals	Matthew Gianni	Deep Sea Conservation Coalition
	Genomic insights into a sympatric Caribbean brain coral population with two non-overlapping reproductive cohorts, *Diploria labyrinthiformis* (Scleractinia: Mussidae)	Matías Gómez	Universidad de los Andes
	Tissue-specific transcriptome analysis reveals the central role of ammonium in Aiptasia-Symbiodinium symbiosis	Guoxin Cui	KAUST
	A depth of differences? Transplants and transcriptomic analyses of shallow and mesophotic corals	Michael Studivan	FAU Harbor Branch Oceanographic Inst.
	Mucus as a key of cnidarian immunology	Jacqueline Rivera Ortega	UASA Puerto Morelos, UNAM
	Diel CO2 cycles reduce severity of behavioural abnormalities in coral reef fish under ocean acidification	Michael Jarrold	James Cook University
	Methodology to screen chemicals for their potential bleaching effects on corals: Application to UV filters	Marc Leonard	L'OREAL
	Differential responses under future ocean acidification between populations of Balanophyllia elegans corals from different up-welling environments	Joanna Griffiths	Louisiana State University
	Fire coral clones demonstrate phenotypic plasticity among reef habitats: Variation in morphologies and microbial communities	Caroline Dubé	
	Updates on marginal coral community ecology in Oman: considering environmental drivers	Louise Anderson	University of Leeds
	The effect of proximity to macroalgae on early life stages of corals in the back reef of Mo'orea, French Polynesia	Arien Widrick	CSUN

Session 25 continues...

25B. Reefs in the Anthropocene - Speed talks

Thurs 14th Room 11

25B. 16:00 - 17:30

Title	Presenter	Institution
New insights into starfish corallivory: The case of Culcita spp. in the Republic of Maldives	Enrico Montalbetti	University of Milano-Bicocca
New strategy to control the outbreaks of the crown of thorns starfish *Acantahster planci*	Paolo Galli	University of Milano-Bicocca
Are we Making a Difference? An Assessment of the Status of the Invasive Lionfish (*Pterois volitans*) in the Cayman Islands in Relation to Management Efforts	Rachel Gunn	Bangor University
Contribution of parrotfishes to coral reef resilience: viability and infection potential of Symbiodinium dispersed by the stoplight parrotfish *Sparisoma viride*	Trigal Magala Velasquez Rodriguez	Universidad de los Andes
Accretional status of the reefs of the Persian-Arabian Gulf: Comparisons with control sites of the Indo-Pacific	Reem Al mealla	University of Essex
The hidden biodiversity of mesophotic reefs	Nikolaos Schizas	University of Puerto Rico Mayaguez
Mesophotic Coral Ecosystems (MCEs) from Green Island, Taiwan: Diversity in scleractinian corals and their symbiotic algae (genus Symbiodinium)	Stephane De Palmas	Academia Sinica
Seeking Survivors: Coral health in a World Heritage Site (ACG, Costa Rica) during an extreme climate event	Caroline Palmer	Guanacaste Dry Forest Conservation Fund
How does timing of spawning alter the isolation of coral reefs?	Roisin Loughnane	University of Bristol
Corals at the extreme: Partitioning the response of coral holobionts to marginal habitats	Bethan Greenwood	University of Essex
Gardening corals of opportunity: the solution to Philippine reef decline?	Giannina Nicole Feliciano	University of the Philippines Diliman
Mapping Aldabra atoll's reefs for marine protected area expansion	Philip Haupt	Rhodes University
Coral hosting symbiotic hydrozoans are less susceptible to predation and disease	Simone Montano	University of Milano-Bicocca
Ecological characterization of a Mediterranean shelf-dwelling gorgonian assemblage: from in situ ROV surveys to ex situ laboratory analyses & aquaria experiments	Carlos Dominguez-Carrió	Institut de Ciencies del Mar

Session hosts:
David Curnick, ECRS Committee / ZSL
Bry Wilson, ECRS Committee / University of Bergen

26. Reef Associates

Fri 15th East Hall

26. 14:00 - 15:30

Title	Presenter	Institution
Exploring the diversity of tropical symbiotic hydrozoans	Davide Maggioni	University of Milano - Bicocca
Whale Shark (*Rhincodon typus*) Habitat Use at an Inshore Reef in the Saudi Arabian Red Sea	Royale Hardenstine	KAUST
Striding towards improved management of the Maldives grouper fishery: The first comprehensive assessment of a grouper spawning aggregation site	Vivienne Evans	Blue Marine Foundation
Integrative taxonomy of copepod crustaceans associated with scleractinian corals of the genus Galaxea from the Maldivian archipelago	Viatchslav Ivanenko	Lomonosov Moscow State University
Depth is more potent for structuring reef crab assemblages than latitude, geography, or human impacts across the Hawaiian Archipelago	Kaleonani Hurley	Hawaii Institute of Marine Biology

Session host:
David Curnick, ECRS Committee / ZSL

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Workshops

Wednesday 13th 13:15 - 13:50

Title	Host	Location
W6. European launch of the International Year of the Reef 2018, Feat. Documentary: Voices from the Reef (6 mins), James Nikitine	Sue Wells & Francis Staub	South Hall
At the 31st General Meeting (November 2016 in Paris, France), the International Coral Reef Initiative declared 2018 as the third International Year of the Reef. The aims of IYOR3 are to: strengthen awareness globally about the value of, and threats to, coral reefs and associated ecosystems; promote partnerships between governments, the private sector, academia and civil society on the management of coral reefs; identify and implement effective management strategies for conservation, increased resiliency and sustainable use of these ecosystems and promoting best practices; and share information on best practices in relation to sustainable coral reef management. IYOR3 will build on the experiences of the last IYOR held in 2008, when over 630 events were organized in over 65 countries and territories around the world. ECRS provides an ideal opportunity to bring scientists and conservation practitioners in Europe into the process and encourage them to participate in the new initiative.		
W11. The Homeward Bound Program, 2018	Adriana Humanes	Room 6
Facing our future: why gender equality is critical to tackling climate change Homeward Bound is a groundbreaking leadership, strategic and science initiative and outreach for women, set against the backdrop of Antarctica. The initiative aims to heighten the influence and impact of women with a science background in order to influence policy and decision making as it shapes our planet. Launched in 2016, Homeward Bound gathered the first 76 women from around the world to undertake a year-long state-of-the-art program using science to build conviction around the importance of their voices. The inaugural program culminated in the largest-ever female expedition to Antarctica, in December 2016, with a focus on the leadership of women and the state of the world. The second cohort of women are currently undertaking their year-long leadership program and depart for Antarctica in February 2018. Come along to find out more about the Program and how to get involved.		
W12. National Geographic Society Grants	Helen Fox	Room 14
This workshop will provide an opportunity to learn more about National Geographic grants, which support bold people and transformative ideas in the fields of conservation, education, research, storytelling, and technology. We are currently open for applications to our Early Career and Standard Grants, welcoming applications from around the world, and specifically encouraging applications from outside the United States. Projects should aim to advance our knowledge and seek solutions to challenges reefs currently face develop technology to advance ocean exploration or protection; or effect changes in policy or behaviour, including through community-based projects.		
W4. Creating and analysing 3D models of shallow coral reefs	Grace C. Young	Room 15
We will show the potential of 3D models of coral reefs by over-viewing existing and yet-to-be-published results. We will then delve into the methods for creating such models and answer any audience questions, including pointing them to the most relevant resources. We will demonstrate how to create and analyse 3D models from underwater footage. Many researchers still shy away from applying the technology, despite its vast potential, because it may seem complicated, but in the workshop we'd aim to demystify the process and show how straightforwardly methods could be applied.		

Thursday 14th 12:50 - 13:50

Title	Host	Location
W7. From cell to colony: Imaging techniques in coral research	Philippe Laissue, Sophie Stephenson & David Smith	Room 6
Imaging is an important component to add to the interdisciplinary tool kit for the study of coral physiology, pathophysiology, behaviour and growth. This workshop will promote the use of affordable, sustainable bioimaging solutions in coral research. Advancements in bioimaging have provided outstanding insights into the development, anatomy and physiology in model organisms ranging from Drosophila to zebrafish. However, to make full use of bioimaging in coral research, methods need to be adapted and promoted. This workshop will introduce participants to the application of imaging in coral research, covering affordable imaging approaches specifically adapted for the observation of reef-building corals. We will emphasize low-cost imaging solutions and first-hand practical advice.		
W1. Delving into the depths: What do we study on mesophotic reefs?	Joe Turner, Dominic Andradi-Brown, Gal Eyal & Andrea Gori	Room 11
Mesophotic coral ecosystems (MCEs) lie at depths beyond those typically associated with coral reefs. MCEs harbour diverse assemblages of corals, fish and other invertebrates, including some species that are highly endemic to these systems. Similarly, diverse coral-dominated ecosystems are also present in the twilight zone of temperate seas, such as the Mediterranean. Challenges associated with data collection in deep water has resulted in many key MCE questions remaining unanswered. This workshop invites all those working on mesophotic ecosystems to help identify the key questions currently limiting this field. We seek to identify the major knowledge gaps hindering understanding of MCE processes, and preventing broader integration into reef management plans. Research prioritization exercises have proved to be useful tools for emerging scientific disciplines and have been utilised in conservation-related fields.		
W8. What are the advances in citizen science for coral reef research?	Debbie Winton & David Smith	Room 14
Citizen science is contributing a wealth of vital data on how ecosystems are changing in response to man-made threats. Through Earthwatch, more than 100,000 volunteers have given 11 million hours of their time on 3,000 scientific research projects. Some of this research has been specifically focused on coral reefs. In the Seychelles, in partnership with the University of Essex and volunteers from the Mitsubishi Corporation, 12,420 hours of research has been undertaken. This research has led to new advances in the field of coral reef research. The data have shown how coral reefs can become more resilient to extreme environmental conditions. Coral reefs inspire considerable public interest and are thus an ideal habitat for citizen science activities. However, in-water citizen science also presents specific training, safety and quality assurance needs which have been addressed by Earthwatch and the University of Essex. These insights will be shared as part of the workshop.		
W2. Reef geonomics and bioinformatics	Bry Wilson, Manuel Aranda & Hollie Putnam	Room 15
Next-generation sequencing technologies are revolutionising the way that we investigate the bewildering complexity of coral reef ecosystems. In this workshop, we shall give a brief overview of the genomic and bioinformatic tools available and discuss best practices for harnessing the power of these cutting edge techniques in hypothesis-driven research. The focus of the workshop will be to educate and inform but, also to troubleshoot existing issues and highlight areas of this new field in need of improvement. These techniques are at the forefront of biological research and as the technologies have become more affordable, their accessibility to researchers has increased.		

Friday 15th 12:50 - 13:50

Title	Host	Location
W5. Red Listing assessment initiative for scleractinian corals	David Obura & Paul Pearce-Kelly	Room 6
This symposium provides an ideal opportunity for participants to be briefed on, and actively contribute to an urgent and ambitious Red Listing assessment initiative for scleratinian corals. IUCN Coral Specialist Group Chair David Obura will summarise assessment rationale, methodology and progress to date. Symposium colleagues are invited to discuss and actively contribute to this species and ecosystem level assessment process.		
W9. Can citizen science bridge the knowledge gap? Lessons from the field	Ans Vercammen, Karsten Shein & Max Bodmer	Room 11
Public participation in scientific or conservation activities can greatly expand their scope, foster increased public interest and awareness of the work's importance, and is often looked upon favourably by granting organs seeking to engage the public on topics aligned with their mission. But designing and implementing a citizen science component to one's research or conservation goals, and ensuring scientifically robust outcomes also carries challenges, which if unaddressed may imperil success. Participants are invited to share their citizen science ambitions and real-world experiences, both successes and challenges, in a collaborative setting of meaningful dialogue. Outcomes will help advance best practice for citizen science in coral reef research and conservation.		
W10. Current advances in octocoral research	Götz B. Reinicke & Y. Benayahu	Room 14
Octocorals (Coelenterata) are researched by a small network of colleagues worldwide, which handle subjects of taxonomy, phylogenetics, physiological and ecological studies. The focus of this workshop will be on current working issues, communication, exchange and possible project cooperation. Octocorals can be prominent elements of benthic coral reef communities, sometimes significantly competing with scleractinian corals, thus influencing if not impeding reef development. Their complicated taxonomy, however, often hinders research consideration of octocoral populations - which requires active exchange of the specialists with the coral reef researching networks.		
W3. Compiling evidence for the effectiveness of interventions to protect & manage coral reef diversity	Sue Wells, William Sutherland, David Gill & Helen Fox	Room 15
There is a long history of coral reef conservation, management and restoration work, much of which has been documented but the evidence from these past initiatives is widely scattered and difficult to access. The Conservation Evidence project, based at the University of Cambridge, provides an opportunity to bring together evidence on the maintenance and restoration of biodiversity, summarize it, use expert panels to assess the effectiveness of each action, and make it freely available to anyone needing information to support decision-making. The purpose of this workshop will be to review progress towards the production of a synopsis of evidence for coral reef ecosystems following the Conservation Evidence format. The workshop will also finalize and refine if necessary the list of the conservation and management interventions for coral habitats that will be assessed within this synopsis of evidence.		

Student Grant winners

We received a huge number (over 120) applications for our student travel grants, kindly funded by the International Society for Reef Studies. After a tough review process, the winners were;

Alice Tagliati, PhD Student, Heriot Watt University
Claudio Alexandre Tabaio Brandao, PhD Researcher, University of Aveiro
Erika Gress, Researcher, Nekton Foundation
Gal Eyal, PhD Student, Tel Aviv University
Jennifer Magel, Graduate Student, University of Victoria
Joseph Turner, PhD Student, University of Western Australia
Louise Anderson, PhD Student, University of Leeds
Marleen Stuhr, PhD Student, Leibniz Centre for Tropical Marine Research
Mikhael Clotilde S. Tañedo, Student, University of the Philippines
Rebecca Summerfield, PhD Student, University of Bristol
Tanya Singh, Student, University of the Ryukyus

Well done to you all!

Student presentation prizes

ISRS Sponsored Student Oral Presentations

The International Society of Reef Studies is kindly funding 4 Student Awards for the best oral presentations.
Can't remember if you signed up?? Many months ago, when submitting your ECRS abstract there was a little box, if that box was ticked - you're in the running! Alternatively pop along to the ISRS stand to double check.

Diversity Sponsored Student Poster Prizes

Open access biodiversity journal Diversity, have kindly donated funds for two best student poster prizes. Those students who opted in when submitting their abstract will have their posters judged during the conference, with the lucky winners announced on Friday afternoon.

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Posters

Posters will be on display in conjoining rooms 7, 8 and 9 with a dedicated poster session on Thursday evening 17:30 - 19:30.

Session Affiliation	Title	Presenter	Institution
1	Calcium carbonate production and diversity in relation to coral reef management practices: a case study from Zanzibar, Tanzania	Natalia Herrán	Leibniz Centre for Tropical Marine Research
2	Predicting organismal to community-level effects of ocean acidification on coral reefs	Steve Doo	California State University, Northridge
2	The impact of temperature on mechanisms driving coral calcification	Coralie Bernardet	Centre Scientifique de Monaco
2	Transcriptome specific expression of the calcifying tissues in *Corallium rubrum* highlights alternative processes for calcification.	Philippe GANOT	Centre Scientifique de Monaco
3	Introgressive hybridization of Indian and Pacific Culcita spp. in the secondary contact zone	Yukihiro Higashimura	University of Miyazaki
3	Dealing with Complex Coral Hologenomes: Performance of Binning in Host Genome Reconstruction	Juan Sebastián Celis Melo	Justus Liebig University
4	Temperature-dependent rate of respiratory acclimation in the stony coral, *Pocillopora damicornis*	Ashley Potter	California State University, Northridge
4	Testing the influence of water motion and light on coral and coralline algal responses to ocean acidification	Cinzia Alessi	University of Western Australia
4	Anthropogenic climate change and transitional distribution ranges of reef-building corals: insights from the last Pleistocene interglacial	Lewis Jones	Imperial College London
4	The transcriptomic analysis of juvenile *Acropora gemmifera* in response to ocean acidification	Tao Yuan	South China Sea Institute of Oceanology
5	The curious case of Endozoicomonas: deciphering the role of an enigmatic coral bacterial symbiont	Nils Radecker	KAUST
5	Pathobiomes associated with diseased coralline algae in the Pacific Ocean	Gaelle Quere	Institut de Recherche pour le Développement
5	Bacterial communities and the adaptive radiation in the Pacifigorgia sea fans (Octocorallia: Gorgoniidae)	Stephanie Colmenares-Garcia	Universidad de los Andes
5	Stability and functionality of the microbial communities associated with temperate gorgonians and the precious red coral *Corallium rubrum*	Jeroen van de Water	Centre Scientifique de Monaco
5	Coral Toll-like receptors	Sarah Stiffel	University of Oxford
6	Characterization of the bacterial associates of the cold-water corals Primnoa and Paragorgia from the Gulf of Maine	Bradley Weiler	Memorial University of Newfoundland
6	Warm-water tolerance of the deep-water gorgonian coral *Adelogorgia phyllosclera* with implications the 2015-2016 El Niño event	Elizabeth Gugliotti	College of Charleston
6	Experience of the Spanish Oceanographic Institute research on the deep-sea corals in the Northwest Atlantic high-seas (NAFO Regulatory Area)	Ana García-Alegre	Instituto Espanol De Oceanografia
6	Seasonal growth and skeletal composition of the cold-water coral *Desmophyllum dianthus* along an in situ aragonite saturation gradient	Kristina Beck	University of Bremen
6	Local adaptation in thermal performance: exploring the climate change resilience of the temperate coral *Astrangia poculata*	Hannah Aichelman	Old Dominion University
7	The engagement and empowerment of local community-based citizen scientists in the operations of a non-profit research institute in northeast Tobago	Neil Cook	Environmental Research Institute Charlotteville
7	Can local community members and volunteers effectively monitor marine resources?	Jessica Savage	University of Southampton
8	The reproduction of the Red Sea coral *S. pistillata* from Eilat: four decades later	Dor Shefy	Ben Gurion Univrsity
8	Fluorescent proteins in the gonads of a stony coral, *Euphyllia ancora*	Yi-Ling Chiu	National Taiwan Ocean University
8	Role of environment on population dynamics of Acropora with different colony morphology	Tanya Singh	University of the Ryukyus
8	Light-use-efficiency of reef corals and algae and its implication for remote sensing	Yvonne Sawall	BIOS Bermuda Institute of Ocean Sciences
8	Functional implications of variation in coral pigmentation - Linking structural, optical, and functional descriptors	Tim Scheufen	Universidad Nacional Autónoma de México
9	HISTORY OF CORAL BLEACHING AND RESILIENCE IN ANDAMAN AND NICOBAR ISLANDS, INDIA	Tamal Mondal	Zoological Survey of India
9	Coral recruitment in subtropical and temperate coral communities in Japan: implications for community sustainability	Masako Nakamura	Tokai University
9	A coral reef socio-ecological system through the Driver-Pressure-State-Impact-Response (DPSIR) framework: a case of study on a MPA in Cozumel, Mexico	Abigail Martinez-Rendis	
9	Return from the brink: coral recruitment on Kiritimati Atoll following the 2015-2016 El Niño	Kristina Tietjen	University of Victoria
10	Sr/Ca coral paleothermometry from the Maldives	Heather Baxter	University of Glasgow
10	Modeling the Biogeochemistry of Coral Ecosystems under Ocean Acidification and Global Warming	Deniz Dişa	ETH Zurich
11	Coral reef fish biomass and trophic structure: An indicator of the effectiveness of the Cayman Island MPA system	Benjamin Hughes	

Session Affiliation	Title	Presenter	Institution
13	Potential new avenues for expediting recovery of long-dead *Acropora palmata* skeletons	Noah van Hartesveldt	Mississippi State University
15	Morphological plasticity of the gorgonian *Eunicella singularis* as a response to population density and environmental conditions	Patricia Baena Cabrera	Institut de Ciències del Mar
15	Phylogeny and Function of a Newly-Discovered Coral Parasite within Candidatus Marinoinvertebrata	J. Grace Klinges	Oregon State University
15	Effect of feeding and light on the growth of juvenile colonies of the Atlantic coral *Porites astreoides*	Samantha de Putron	Bermuda Institute of Ocean Sciences
16	Different reproductive timing as a cause of cryptic speciation of blue coral (*Heliopora coerulea*, Pallas 1766) with limited larval dispersal potential	Hiroki Taninaka	University of Miyazaki
16	How does timing of spawning alter the isolation of coral reefs?	Roisin Loughnane	University of Bristol
17	The power of infinity using 3D fractal dimension analyses for comparative shape and structural complexity assessments of stony coral	Jessica Reichert	Justus Liebig University Giessen, Germany
18	Warming drives shifts in reproductive phenology and hinders reproductive success in a temperate gorgonian	Núria Viladrich Canudas	Institut de Ciences del Mar
18	Coral bleaching induced changes in coral community structure at Mu Ko Surin National Park, the Andaman Sea	Thamasak Yeemin	Ramkhamhaeng University
18	Continuation or culmination? An update on stony coral mortality associated with the disease outbreak along the southeast Florida Reef Tract	Nicole Hayes	Nova Southeastern University
18	Effects of Ocean Acidification on Recruitment of the Coral *Acropora digitifera*	Dwi Haryanti	University of the Ryukyus
18	Differential impacts of ocean warming and overharvesting on the stochastic dynamics and structural complexity of an iconic temperate coral	Ignasi Montero Serra	
19	THE RESPONSE OF CARIBBEAN CORAL REEF COMMUNITIES TO THE RESTORATION OF ACROPORA CORALS	Sandra Schleier	University of Rhode Island
19	Coral Restoration Foundation Bonaire: opportunities for studying the effectiveness of Acropora spp. restoration projects in the Caribbean Netherlands	Jeremy Brown	Coral Restoration Foundation Bonaire
19	Establishment of a management plan for Acropora recovery in the Mexican Caribbean	Anastazia Banaszak	Universidad Nacional Autónoma de México
19	Survival and growth of *Acropora palmata* sexual recruits for restoration of degraded reefs	Sandra Mendoza Quiroz	

Session Affiliation	Title	Presenter	Institution
22	The oldest mesophotic reefs from the Devonian of the Holy Cross Mountains, Poland	Mikoaj Zapalski	University of Warsaw
22	Light quality affects coral community structure and spatial distribution in the Gulf of Aqaba/Eilat (GOA/E)	Raz Tamir	Tel-Aviv University
22	Modular demography of a long lived, highly exploited, mesophotic gorgonian coral	Maria Carla Benedetti	University of Pisa
22	Experimental evidence for reduced mortality on a mesophotic reef	Jack Laverick	University of Oxford
22	Genetic variation of the mesophotic coral Leptoseris	Maximilian Schweinsberg	Ruhr University Bochum
23	Transcriptome analysis of Symbiodinium trenchii: comparing in symbio and free-living responses to hyperthermal stress	Anthony Bellantuono	Florida International University
23	Effects of titanium dioxide nanoparticle sunscreen formulations on coral symbionts, Symbiodinium spp., and their combined toxicity with global warming	Alice Tagliati	Heriot Watt University
23	Host specificity and geographic structuring in Symbiodinium thermophilum	John Burt	New York University Abu Dhabi
23	Small-scale variability of optical properties and photosynthesis across & between fluorescent & non-fluorescent coral colonies	Zoe Pearson	University of Southampton
23	Fine-scale variation in the Symbiodinium community composition between *Galaxea fascicularis* colonies	Patricia Wepfer	OIST
24	Influence of reefs on hydrodynamic pattern at Pau Amarelo Beach, Northeast of Brazil	Karoline Angélica Martins	Federal University of Pernambuco
24	Sea Surface Temperature Anomalies and Status of Coral Reefs at the Kayts and Karainagar Islands of Jaffna Peninsula, Sri Lanka	Ashani Arulananthan	University of Peradeniya, Sri Lanka
26	Predator-Induced Phenotypic Plasticity Between Sea Ribbons (Octocorallia: Pterogorgia) And Flamingo Tongue Snail (*Cyphoma gibbosum*)	Diana Carolina Vergara Florez	Universidad De Los Andes
26	Divergence through species interactions: The role of the sponge *Clathria oxeota* in ecological speciation of the octocoral *Briareum asbestinum*	Lina Gutierrez-Cala	Universidad de los Andes
	Holobiont algal-microbial partnership strengthens the adaptive capacity of corals in Hong Kong	Haoya Tong	Hong Kong University of Science & Technology
	Then importance of microtopography and its role in coral reef Carbonate production	Jennie Mallela	

Trade stands

Trade stands will be set up within the North Hall from Wednesday morning until Friday afternoon.

#OneLess – led by ZSL and partners in the Marine CoLABoration – is a movement of pioneering individuals, communities, businesses, NGOs and policymakers, collaboratively striving to reduce the number of single-use plastic water bottles entering the ocean from the city of London. Londoners are among the highest users of bottled water in the UK. The average London adult buys 3.37 plastic water bottles every week – that's 175 every year per person, and over a billion per year on a city level. Sadly, many of these end up in the River Thames and flow out to the ocean. Together they are championing and enabling a new refill culture, where using a refillable water bottle is the new norm and where throwaway, single-use bottled water is a thing of the past.
Swing by their stand, chat to the team, take the #OneLess pledge and see how your work place can ditch single-use plastic water bottles.

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World Land Trust (WLT) is an international conservation charity, which protects the world's most biologically important and threatened habitats acre by acre. Since its foundation in 1989, WLT has funded partner organisations around the world to create reserves, and give permanent protection to habitats and wildlife.
Head to their stand to offset the carbon from your trip to ECRS. The money raised will go towards the REDD+ (Reducing Emissions by Deforestation and Forest Degradation) Project for Caribbean Guatemala: The Conservation Coast. This project protects tropical rainforests and prevents the conversion of forests to cropland and pasture, and has achieved certification from the Verified Carbon Standard (VCS) and Climate, Community and Biodiversity Alliance Standard (CCBA), meaning it can produce Verified Carbon Units (VCUs), which are certified emission reductions.

Founded in 1996 by Dr. Amanda Vincent and Dr. Heather Koldewey, Project Seahorse is a marine conservation group dedicated to securing a world where marine ecosystems are healthy and well-managed. They begin with cutting-edge research and turn findings into highly effective conservation action, in collaboration with governments, local communities, and other stakeholders.
As the IUCN global authority on seahorses and their relatives, they work to protect seahorses, and through seahorses, they also support marine conservation more broadly. Their home institutions are The University of British Columbia's Institute for the Oceans and Fisheries and the Zoological Society of London. Guylian Belgian Chocolate and John G. Shedd Aquarium are our major partners.

Guylian Belgian Chocolate is one of Project Seahorse's major sustaining sponsors of research and conservation projects and it's commitment to marine conservation is matched only by the excellence of its chocolates.
We (the RCUK committee and delegates) also have to thank Guylian and Project Seahorse for the tradition of supplying each year's RCUK conference with chocolate!

Frontiers in Marine Science has teamed up with the European Coral Reef Symposium to collate a series of articles focused around 'Coral Reefs in the Anthropocene'. This Research Topic is available to all attendees of the conference to submit to and will act as the conferences proceedings. To find out more, stop by our booth.

Blue Ventures is a marine conservation organisation which works with coastal communities to rebuild tropical fisheries. As well as community-led fisheries management, our work spans areas including community health, mangrove conservation and supporting alternative livelihoods such as aquaculture.
The communities we work with are at the heart of what we do - come by the stand to learn more about our work. We'll also be selling jewellery made from the fins and spines of invasive lionfish caught in Belize - all proceeds go to Belioness, a Belizean women's group Blue Ventures supports which utilises lionfish to provide participants with an additional source of income.

Visit the International Society for Reef Studies' stand to catch up on the latest news from reefs around the world, find out about the International Year of the Reef and sign up for Mentor lunches! The newly formed ISRS Student Committee will also be here to chat to about what they're up to and how to get involved

The Society for Conservation Biology (SCB) is an international professional organization dedicated to promoting the scientific study of the phenomena that affect the maintenance, loss, and restoration of biological diversity.

Understanding what is happening inside your aquarium is vital to ensuring that the aquatic life remains healthy. The team behind this revolutionary water monitoring device will be here to discuss how it allows you to continuously track the changes in the water parameters, alerting you to the problems before they affect the fish.

Ecotone develops and delivers real-world environmental survey solutions based on modern research. We are a spin-off from NTNU, and partly owned by NTNU Technology Transfer. As a leading partner in R&D projects worldwide, we are in a unique position to constantly improve our core technology and its applications. At their stand they will be demonstrating solutions for mapping and monitoring of coral reefs and benthic fauna.

HyperSurvey is a spin-off company from the Max Planck Institute in Bremen, Germany. It has a unique technology at its disposal in the form of the diver-operated 'HyperDiver'. The HyperDiver technology rapidly creates large-scale sea floor maps, which visualise the effects of, for example, climate change. Where traditional technologies take weeks to months to complete and report on surveys, our technology reduces the same effort spent to days.
Our technology is objective, and therefore anyone can use this technology to produce accurate sea floor maps, not only experts/scientists. The HyperDiver technology is suitable to any aquatic ecosystem. At our trade stand, we would be happy to demonstrate the HyperDiver to you, and explain more about this technology.

ECRS Conference proceedings

We have teamed up with the Journal 'Frontiers in Marine Sciences' to collate a series of reviews and original articles focused around 'Coral Reefs in the Anthropocene'.

This research topic will be available to any attendees of the conference and will act as the conferences proceedings. As such a discounted article processing charge has been agreed and assistance is available further to those from developing countries. A small article processing charge is still needed as the proceeding will be fully open access, which we (the ECRS committee) felt was a very important part of Symposiums outputs and assistance will be provided by the Frontiers marketing team in disseminating your articles ensuring wide reach.

If you have any questions please contact Dr Michael Sweet (m.sweet@derby.ac.uk) - ECRS Committee Member and Associate Editor for Coral Reef Research for the Journal.

Coral Reefs in the Anthropocene

The term 'Anthropocene' has been suggested as the next epoch (denoting the current geological age), and is viewed as the period where human activity is the dominant influence on climate and the environment. Arguably, the most prevalent and visible effects of this anthropogenic activity are manifest at the poles and the tropics. With regard to the tropics, observed anthropogenic impacts on coral reef ecosystems are particularly alarming and coral reefs have often been referred to as 'canaries in the coal mine' for the marine biome. Recent increases in mass bleaching events brought about by the effects of El Nino and elevated sea surface temperatures highlight a worrying trend. In fact, studies now suggest that some reefs may begin to experience annual severe bleaching episodes as early as 2043.

For this topic, we seek to compile a broad range of manuscripts which both detail the responses of corals and other reef associated organisms to the multitude of stressors to which they are increasingly exposed and strategies to promote their survival in the twenty-first century and beyond.

We welcome contributions that address or explore:

- Documented responses of corals and coral reef associated organisms to variations in contemporary environmental conditions;
- Experimental manipulations simulating future climate scenarios;
- Modelling efforts (forecasting and/or hindcasting) that provide insights into future trends or past episodes;
- Ecological investigations that provide new insights into mechanisms and processes that underlie coral reef resistance and resilience to both pulse and press disturbances;
- Microbiome, pathobiome, genetic, transcriptomic, proteomic, metabolomics studies;
- Conservation strategies - either those being currently employed, or future plans to manage and mitigate such effects (reef restoration, human-assisted evolution, coral probiotics, etc.);
- Social-economic studies focusing on the continued use of reefs in the 21st century

To submit an abstract and/or article please see
http://journal.frontiersin.org/researchtopic/6185/coral-reefs-in-the-anthropocene

In & around Oxford

Oxford is full of history and our venue for ECRS, the University of Oxford, is the oldest university in the English-speaking world. The city is famed for its 'dreaming spires', and is set on the banks of two rivers, the Cherwell and Isis. If you have the chance to extend your stay in Oxford, there is plenty to see and do in and around the city, especially at this time of year.

University Colleges

The university has 38 colleges spread across the city. Many of the colleges have been featured in TV shows and films, including Christchurch and New college which feature in the Harry Potter films. Most colleges charge a small entrance fee. Links to all the college websites can be found here:
www.ox.ac.uk/about/colleges

Libraries & Museums

Oxford University has several museums including the Museum of Natural History (where we'll be having our Wednesday evening drinks reception!), the Pitt Rivers Museum (anthropology and archaeology) and the Ashmolean (art and archaeology). All museums have free admission. For opening times and further details, see: www.museums.ox.ac.uk.
Many of the historic libraries offer guided tours. For more details, see:
www.bodleian.ox.ac.uk/whatson/visit/tours

Tours of the city

Walking tours. www.oxfordwalkingtours.com
Open top bus tour. www.citysightseeingoxford.com

Oxford Christmas Market

www.oxfordchristmasmarket.co.uk
Broad Street, OX1 3AS
Sun to Wed - 10am - 7pm & Thurs to Sat - 10am - 8pm
"The city of dreaming spires will again be filled with festive joy as the Oxford Christmas Market returns to the heart of the city on beautiful and historic Broad Street"

With the sound of choirs singing Christmas carols, market traders offering unusual and handmade gifts, colourful decorations brightening wooden stalls and the aroma of mulled wine and cinnamon drifting in the air - a visit to the Oxford Christmas Market is a truly magical Christmas experience.

The Covered Market

OX1 3DY
Mon to Sat 09.00 – 17.30, Sunday 10.00 – 16.00
The Market was officially opened in 1774 and has a unique and wonderful atmosphere. It provides its visitors with the wonderful aromas of fresh fruit, coffee and fresh baking and to a feast of sights and sounds.

Christmas at Blenheim Palace

www.blenheimpalace.com
"Follow the festive trail along winding paths, tranquil waters and extraordinary Parkland landscaped by 'Capability' Brown. Explore Mistletoe Moment and the Tunnel of Light adorned with thousands of twinkling fairy lights. Walk beneath glowing lanterns and larger-than-life snowflakes and baubles, all set against the backdrop of glittering ancient woodland drenched in Christmas hues"