

# Final Schedule: 13th annual NZOAC Conference

## 17 - 18 February 2020, Victoria University of Wellington

### Monday, February 17, 2020

8:00 - 8:45	Registration opens
8:45 - 9:00	Welcome and introductions (Christopher Cornwall)

#### 9:00 - 10:15 **Session 1: Carbonate chemistry: past and present** Chair: Jenn Jury

9:00 - 9:25	Helen Bostock	The spatial and seasonal variability of ocean acidification in the Firth of Thames/Hauraki Gulf - CARIM
9:25 - 9:50	Helen Macdonald	Physical - biogeochemical modelling of the Hauraki Gulf: introducing the carbon chemistry components
9:50 - 10:15	Oliver Knebel	Ocean acidification in the industrial era: Boron isotope-pH proxy records from Pacific microatolls

#### 10:15 - 10:45 **Morning tea**

#### 10:45 - 12:05 **Session 2: Ocean Acidification in New Zealand** Chair: Monique Ladds

10:45 - 11:10	Constance Nutsford and Rebecca Martel	Environmental Reporting and the Ocean Acidification Action Plan
11:10 - 11:35	Cliff Law	Informing national policy and action on ocean acidification
11:35 - 12:00	Lily Hurley	Sea-weeding Out Methane: A cost-benefit analysis of how introducing seaweed to New Zealand's dairy cattle diets could mitigate ocean acidification
12:00 - 12:10	Panel discussion	

#### 12:10 - 1:15 **Lunch**

#### 1:15 - 2:40 **Session 3: Monitoring Ocean Acidification in New Zealand** Chair: Monique Ladds

1:15 - 1:40	Kim Currie	Working with stakeholders and local communities to monitor ocean acidification in New Zealand coastal waters
1:40 - 2:05	Jesse Vance	NZOA-ON: The New Zealand Ocean Acidification Observing Network
2:05 - 2:30	John Zeldis	Hypoxia, acidification and gross primary production in the Firth of Thames: insights from long-term mooring data
2:30 - 3:40	Panel discussion	

#### 2:40 - 3:10 **Afternoon tea**

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3:10 - 5:00 **Session 4: Appreciating complexity: multiple drivers, time scales and life stages**

Chair: Christina McGraw

3:10 - 4:00 **Jon Havenhand**

**Plenary The Gordian Knot of Marine Climate Science: Multiple Drivers on Multiple Timescales**

4:00 - 4:25 Norman Ragg

Integrated life cycle effects of ocean acidification on the Greenshell mussel, *Perna canaliculus*

4:25 - 4:50 Christopher Cornwall

Reef-building taxa gain tolerance to ocean acidification after multiple generations of exposure

4:50 - 5:00 Poster summaries

5:00 - 6:30 **Poster session**

Maria Byrne

Coastal acidification impacts on shell structure of bivalve molluscs.

Wayne Dillon

Variability of  $[Ca^{2+}]$  in coastal waters: required parameter for coastal OA monitoring?

Grace Frontin-Rollet

Using pH-controlled sediment leaching experiments to assess the biotoxic impacts of ocean acidification: a proof of concept

Seyedehhabibeh Hashemi

Autonomous field deployable device for quantification of dimethylsulfide in seawater

Hanneloor Heynderickx

Does pH variability in NZ kelp forests impact biofilm composition?

Erik Krieger

Tolerance of marine calcifiers to the changes of the ocean's carbonate system

Francisco Márquez-Borrás

Is the endemic brittle star *Ophionereis fasciata* being affected by a changing ocean?

Maserota Ofoia

Inexpensive and deployable device for understanding natural variability and detecting extreme pH events

Alexia Saint Macary

Will ocean acidification and warming affect DMS emissions from coastal waters?

Aleluia Taise

Macroalgal responses to climate change stressors: effects of ocean acidification on *Caulerpa* species

Jesse Vance

Modeling Inorganic Carbon Dynamics on the Otago Shelf

Nadjedja Espinel Velasco

To settle or not to settle: Seawater pH alters marine biofilms and influences larval settlement success in the serpulid polychaete

7:30

**Conference Dinner**

**Tuesday, February 18, 2020**

8:30 - 9:00 Registration opens  
9:00 - 9:10 Welcome (Chris Cornwall)

**9:10 - 10:30 Session 5: Sediments and mineralogy**  
Chair: Jess Ericson

9:10 - 9:35 Abby Smith Blue Shell Science: composition and resilience of pāua shell (*Haliotis iris* Gmelin, 1791)  
9:35 - 10:00 Alexis Marshall Acidification Response of Marine Sediments (ARMS)  
10:00 - 10:25 Shelly Brandt Microbial Communities in Benthic Coastal Sediments Respond to Ocean Acidification Under Sustained pH Regimes  
10:25 - 10:30 Metrohm Demonstration

**10:30 - 11:00 Metrohm morning tea**

**11:00 - 12:15 Session 6: New methods**  
Chair: Wayne Dillon

11:00 - 11:25 Christina McGraw Aligning multiple driver research through MEDDLE (Multiple Environmental Driver Design Lab for Experiments)  
11:25 - 11:50 Peter Dillingham Split-plot global ocean change experiments, model-averaging, and effective sample size  
11:50 - 12:15 Denise Chen Optical fibre pH sensor for studying the impact of ocean acidification to the marine environment

**12:15 - 1:30 Lunch**

**1:30 - 3:10 Session 7: Organism and community responses**  
Chair: Jesse Vance

1:30 - 1:55 Caitlin Blain Heterogeneity around CO<sub>2</sub> vents blurs the effects of ocean acidification on shallow reef communities  
1:55 - 2:20 Jenn Jury Do genetic source and maternal provisioning play a role in resilience to future OA in early-stage NZ Green-Lipped mussel, *Perna canaliculus*?  
2:20 - 2:45 Hannah Heynderickx In situ effect of Ocean Acidification on prokaryotic biofilms at volcanic CO<sub>2</sub> sites  
2:45 - 3:10 Jess Ericson Effects of shell enrichment on seawater carbonate buffering and development of larval *Perna canaliculus* exposed to near-future ocean acidification

**3:10 - 3:35 Afternoon tea**

3:35 - 3:55 Session 7: Annual NZOAC update

3:55 - 4:00

**Conference close**























