



OUR CHANGING OCEANS

2 - 5 JULY 2019 - DUNEDIN

NZ MARINE SCIENCES

SOCIETY CONFERENCE

CONFERENCE HANDBOOK

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DESIGN



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LEASE

MARINE SCIENCE AND DATA COLLECTION SOLUTIONS

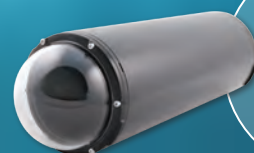
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Port Otago's
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Otago Harbour

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Harbour
seagrass
Bathymetric

STUDIES:

Rocky shore
Wave & current
modelling
Offshore biology
In harbour
ecology

MONITORING:

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Harbour & offshore
turbidity
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NIWA

Taihoru Nukurangi

NIWA – New Zealand's leading marine science provider

NIWA is the country's largest marine science organisation with 260 marine specialists who contribute to some \$67 million of coast and ocean, fisheries and aquaculture science carried out each year.

Their work is supported by the research vessel Tangaroa; a range of smaller vessels; specialist on-board, remote and at-base analysis equipment; the country's only high-performance computing facility; and the Northland Marine Research Centre.

NIWA'S RESEARCH AND APPLIED SCIENCE SERVICES:

- explore New Zealand's marine resources and ecosystem services
- understand and demonstrate their value
- evaluate natural and man-made threats to the marine environment
- support sustainable use of our marine resources and management of the marine environment, now and into the future.

WE SUPPORT YOUR INTERESTS AND GOALS:

- assessing environmental impacts
- helping planning decisions by determining coastal erosion rates
- predicting climate change impacts on marine environments
- monitoring estuaries and coasts
- modelling of hydrodynamics, dispersion and sediment transport, water quality and larval distribution
- habitat mapping and swath bathymetry of coastal environments
- marine biosecurity surveillance and pest management.

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TURNING KNOWLEDGE INTO ACTION FOR LIVING OCEANS

MEET OUR EXPERTS



LUCY JACOB

*Ocean Programme
Manager*

WWF-New Zealand

Bringing expertise from the
Pacific and Aotearoa to
ocean protection



SHERIDAN WAITAI

*Founder, Taiātea:
Ocean Gathering*

Ngāti Kuri

Placing tangata whenua
at the heart of sustainable
ocean solutions



AMANDA LEATHERS

*Research and Policy
Manager*

WWF-New Zealand

Building partnerships to
protect endangered marine
species



BUBBA COOK

*Pacific Tuna
Programme Manager*

WWF-New Zealand

Enabling tuna traceability
from bait to plate using
blockchain



NEW ZEALAND MARINE SCIENCES SOCIETY

Kia ora and welcome to this year's New Zealand Marine Sciences Society and Oceania Chondrichthyan Society 2019 conference! We hope to see you in Dunedin on 3-5 July, where we will hold the conference at the University of Otago, New Zealand's oldest university.

Worldwide, our human footprint on the marine environment is escalating year by year. This year's theme "Our Changing Oceans" reflects the need to understand how our oceans are responding to anthropogenic impacts, and how best to manage such impacts. By bringing scientists and managers together from many different backgrounds, we will highlight the role of science in unravelling the changes that our coasts and oceans are experiencing and in informing evidence-based decisions while underlining the key role of management in safeguarding the future of our oceans.

We have an exciting line up of guest speakers and anticipate an excellent programme on a wide variety of topics. The social functions will also be a great opportunity to connect with new colleagues, stimulate discussion and collaboration, and catch up with old friends.

We look forward to a productive few days of learning, sharing, thinking and discussing while enjoying the fun times and beautiful sights Dunedin has to offer!

CONFERENCE COMMITTEE

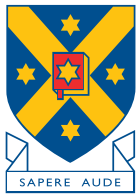
- Liz Slooten (University of Otago)
- Kim Currie (NIWA/University of Otago)
- Will Rayment (University of Otago)
- Sam Thomas (University of Otago)
- Ani Kainamu-Murchie (NIWA)
- Rob Lewis (University of Otago)
- Marta Guerra (University of Otago)
- Brendan Flack (Kāti Huirapa ki Puketeraki)
- Jerusha Bennett (University of Otago)



CONFERENCE VENUE

UNIVERSITY OF OTAGO

362 Leith Street,
Dunedin, NZ



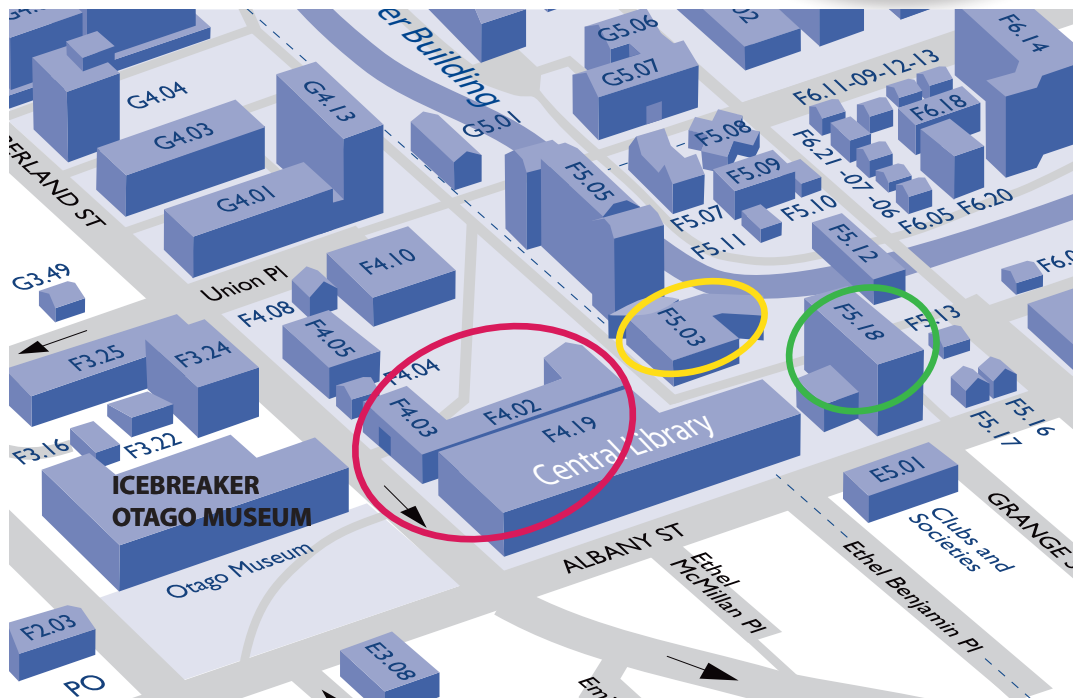
UNIVERSITY
of
OTAGO

Te Whare Wānanga o Ōtāgo
NEW ZEALAND

1869-2019



150
YEARS



VENUES:

Welcome Function Tuesday - Otago Museum

Registration, Exhibition and Posters - The Link

Parents room available, room G03 - The Link

Conference Dinner - University Union

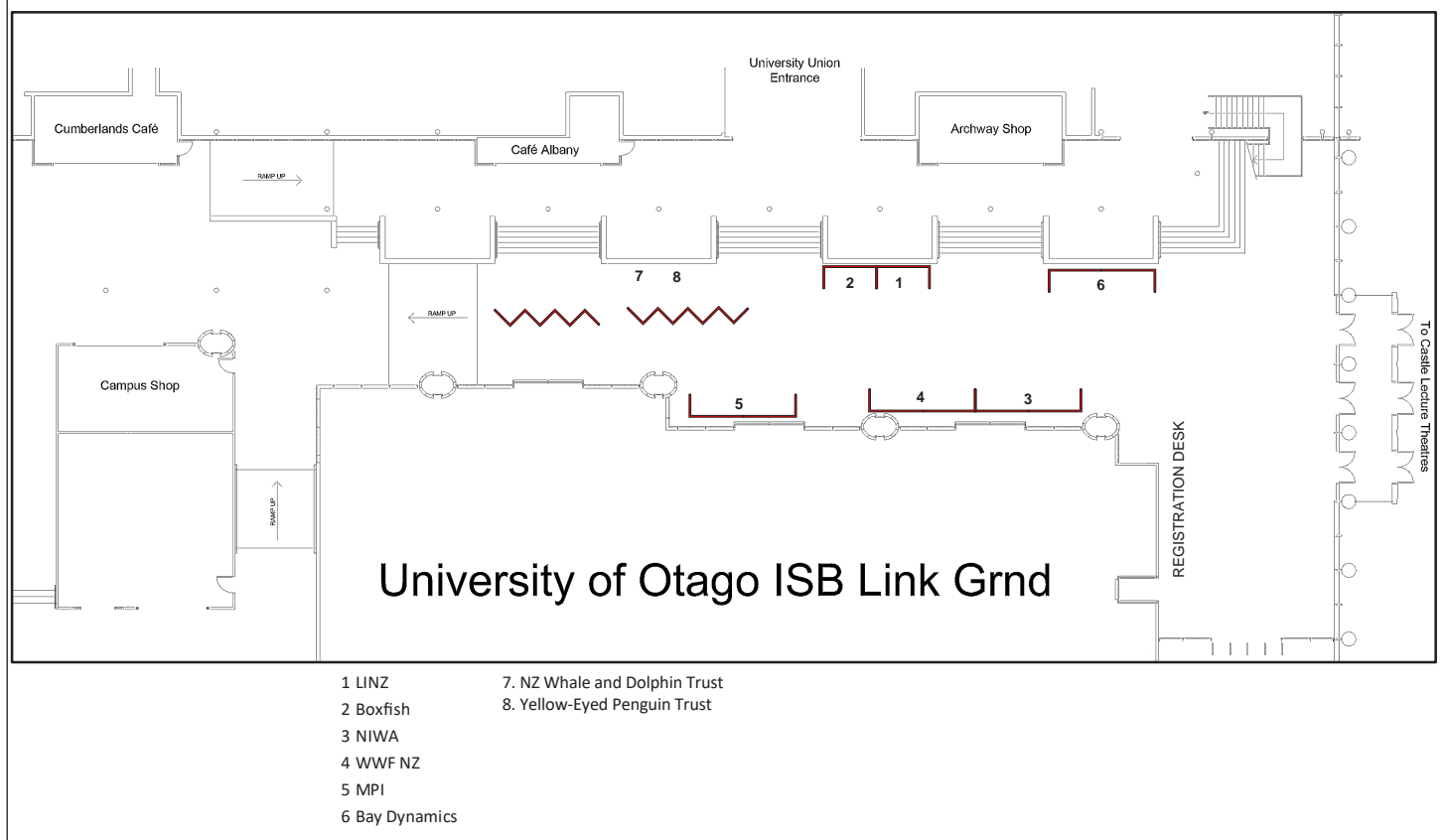
Plenary Session and Sessions - Castle 1 and Castle seminar D

Sessions - Burns 1 & 2

LINK FLOOR PLAN

[Click here for an online campus map](#)

Use the search bar to find Castle Lecture Theatres and Burns building



GENERAL INFORMATION



REGISTRATION DESK

If you require any assistance throughout the conference please see the conference organisers at the Registration Desk in the foyer.

A Conference Notice Board will be placed at the Registration Desk and will be used to display conference information, programme changes, announcements and messages. Please check the board regularly.



INTERNET & PASSWORD

If you are visiting the University of Otago and only require Internet access you can use our UO_Guest network:

To log in or create a UO_Guest account:

1. Connect to the UO_Guest wireless network (SSID) on your device.
2. If the UO_Guest portal does not appear, open a web browser and browse to an Internet website. You will be re-directed to the UO_Guest portal page.
3. If you already have a UO_Guest account, you can log into it here. Otherwise click on the 'Don't have an account?' link.
4. Fill out the details with your Username (you can create your own), First name, Last name, plus a valid email address, then click 'Register'.
5. Your login details will be displayed on screen. Please write these down or take a snapshot for your later reference. An email with your login details is also sent to the email address you have supplied.
6. Click 'Sign on' and agree to the Acceptable Use Policy to complete your login process.

A UO_Guest account provides access to the Internet for up to:

- two weeks (14 days)
- 500MB per day
- two devices at a time

Your UO_Guest account expires after either the two weeks from creation or seven

consecutive days of no activity.

You can then create a new one if needed.

Note: If your device has logged in to another University network using a University username (staff, student or external), you will not be able to access the UO_Guest network on that device.



NAME BADGES

Delegates are requested to wear their name badges to all sessions and social functions.



CELL PHONES

Please ensure that cell phones and/or pagers are turned off, or silent, during all presentations.



PARKING

Car parking is limited to public parking on Cumberland St and surrounding areas, car parking fees will apply.



NO SMOKING

There is no smoking allowed inside the venue.



CONTACT NUMBER

For assistance during the conference please call Lea from On-Cue Conferences on 021 117 0916



MEALS

All catering will be in the exhibition area. If you have advised us of your special dietary requirements, these have been forwarded to the caterers and will be available on a separate table individually marked.

At the Conference Dinner, please make yourself known to the waiting staff and they will make the necessary arrangements for your special meal. If you have any dietary requirements that we are not aware of, please see the Conference Organisers at the Registration Desk on arrival at the conference.

GENERAL INFORMATION



LOADING PRESENTATIONS

Please load your presentation at the Registration Desk – this should be done at least two sessions prior to your scheduled presentation session time.



POSTER PRESENTERS

Posters must be displayed before 10am on Wednesday 3 July. Poster boards are in the The Link – velcro dots will be provided. Please ensure you are at the poster session by 5:15pm on Wednesday afternoon.



SESSION CHAIRS

Please can all session chairs be in their room at least 10 minutes prior to the start of the session. Please familiarise yourself with the AV equipment. If you have any questions, locate the student helper or AV technician, who will be close by. It is very important that presentations do not run over their allocated total of 20 minutes so please ensure presenters start and finish on time. If people want to move rooms during sessions they should do so at the start of the 3-minute question/discussion part of the presentation.

PARENTS ROOM

A parents room is available, room G03, accessible from the Link.

OFFSET YOUR TRAVEL MILES AND RESTORE NATIVE HABITAT BY PLANTING A TREE!

In an attempt to make this year's NZMSS conference as sustainable as possible, we are offering delegates the opportunity to offset their travel-related carbon emissions by planting a tree at a local coastal reserve. We have partnered with the Yellow-eyed Penguin Trust (YEPT), a conservation charity based in Dunedin, whose principal aim is to protect our endemic yellow-eyed penguins | hoiho and their habitat. YEPT has its own nursery, established in 1988, which propagates native trees and shrubs sourced from local seed. These are planted in suitable habitat to provide shelter and nesting sites required by penguins. A donation of \$10 allows for the propagation of a tree in the nursery, planting in a YEPT reserve, and maintenance to ensure that the plantings thrive. Your donation will therefore soak up carbon dioxide, and help restore the healthy coastal habitat that endangered yellow-eyed penguins rely on. YEPT staff will be on hand during each lunch break at their stand in the Link.

TAKE YOUR \$10 DONATION TO YEPT STALL AT THE LINK



DUNEDIN INFORMATION

GETTING AROUND

[Supershuttle](#) is a quick, easy and reliable option for getting to and from Dunedin Airport and around town.

Dunedin [buses](#) provide affordable transportation options for visitors to get around the city.

As distances to places of interest in Dunedin are not great, [taxis](#) are reasonably cheap by New Zealand standards. They provide transport to most destinations and most companies offering wheelchair taxi transport.

For transport around the City and to/from the airport, here are a couple of companies:

- Dunedin Taxis - +64 3 477 777
- Green Cabs - 0800 464 7336
- City United Taxis - +64 3 477 1771



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DUNEDIN INFORMATION

CITY MAP

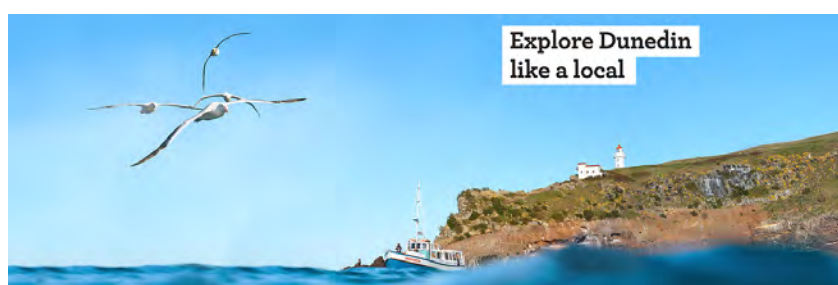


EMERGENCY CONTACTS

Dunedin Hospital - 201 Great King Street
Dunedin Urgent Doctors & Accident Centre - 18 Filleul Street
Dunedin City Pharmacy - 22 Princess Street

THINGS TO DO

Dunedin Botanic Garden - 12 Opoho Road, North Dunedin
Larnach Castle & Gardens - 145 Camp Rd
Dunedin Railway Station - 22 Anzac Ave
Speight's Brewery - 200 Rattray Street
Otago Museum - 419 Great King Street



DISCOUNTED WILDLIFE ATTRACTIONS

Make the most of the world-class wildlife viewing opportunities.

Royal Albatross Tours - Visit the only mainland breeding colony of royal albatross anywhere in the world. The Royal Albatross Centre is offering two for the price of one tours to NZMSS delegates. Phone 03 478 0499 to book, making sure to mention that you are a conference attendee.

Monarch Wildlife Cruises & Tours

Choose a one hour cruise around Taiaroa Head, or a half-day Otago Peninsula Wildlife Tour. For a 20% discount, book online or call free on 0800 666 272, using the code "DEAL20".

TUESDAY 2 JULY				
6.00-8.00pm	Welcome Function (Otago Museum): pre-registration / kapa haka / drinks and canapes			
DAY ONE: WEDNESDAY 3 JULY				
7:30	Registration Desk Opens (at the Link)			
Venue	Castle 1			
8:30	Welcome: Mihi			
8:50	Edward Ellison - Ngāi Tahu, NZ Conservation Chair "Te Ao Maori" Eugenie Sage - Minister of Conservation “Marine Conservation”			
9.50	Welcome from NZMSS – Nick Shears and OCS – Andrew Chin			
10:00	BREAK			
Venue	Castle 1	Burns 1	Burns 2	Castle Seminar D
Session	Our Changing Oceans: species and ecosystems response	Indigenous knowledge and management practices	Genetics	Special Session: Marine Biosecurity
Chair	Shane Geange	Sally Carson	Ceridwen Fraser	Kathy Walls
10:30	Linking traits across ecological scales determines functional resilience to disturbance Rebecca Gladstone-Gallagher <i>University of Auckland</i>	Investigating mātauranga Māori approaches to enhancing the environmental performance of commercial NZ fisheries Shaun Ogilvie <i>Eco Research Associates Ltd</i>	Multispecies analysis of genetic diversity: emergent patterns across the Indo-Pacific Ocean and initiating a collaborative research network in New Zealand Libby Liggins <i>Massey University Auckland</i>	Biosecurity 2025 – progress and updates Andrew Bell <i>MPI</i>
10:45	Assessing changes in health of shallow urban reef ecosystems: results from 12 years of monitoring Ohad Peleg <i>University of Auckland</i>	Tohu: Using traditional Māori environmental indicators or signs and signals of the natural world to assist contemporary marine research Kura Paul-Burke <i>NIWA</i>	Genomic and epigenomic monitoring of Māui and Hector’s dolphins Rochelle Constantine <i>University of Auckland</i>	The Craft Risk Management Standard for Biofouling: Insights from one year of biofouling regulation Katie Lubarsky <i>MPI</i>
11:00	A big, muddy problem: Using in situ measurements to evaluate how intertidal flats respond to increasing sediment deposition Amanda Vieillard <i>University of Auckland</i>	Ko mātou te moana, ko te moana mātou: We are the ocean, the ocean is us Jacinta Forde <i>University of Waikato</i>	Seasonal and spatial variations in bacterial communities in the New Zealand clam <i>Paphies australis</i> , an insight into the source of tetrodotoxin Laura Biessy <i>Cawthron Institute</i>	Invasion flux: what the national Marine High Risk Site Surveillance (MHRSS) uncovers Chris Woods <i>NIWA</i>
11:15	Can the “Death Assemblage” detect historic changes to the benthos at Separation Point? Sean Handley <i>NIWA</i>	A transformational approach achieves long-term benefits for community and environmental wellbeing Sheridan Waitai <i>Ngati Kuri</i>	Restorative rafting: a case study from an earthquake-uplifted intertidal community Johnette Peters <i>The Australian National University</i>	Predicting future patterns of spread of invasive species in New Zealand waters Samik Datta <i>NIWA</i>
11:30	Marine ecosystem function and regime shifts in New Zealand’s Sub-Antarctic region Jim Roberts <i>NIWA</i>	Facilitating conversation between Scientists and Communities Lucy Coyle <i>University of Otago</i>	Using genetics to estimate the number of breeders as a tool for population monitoring; a case study using the eastern Australian population of white shark Danielle Davenport <i>The University of Queensland</i>	A call for caution in sequence-based biosecurity surveillance Anastasija Zaiko <i>Cawthron Institute</i>
11:45	Marine non-parasitic rates of description outpace marine parasites Thomas Morris <i>University of Auckland</i>	Hooking into Matau (bone fishing hooks) Richard De Hamel <i>University of Otago</i>	Epigenetic regulation of sex change in the protogynous wrasse, <i>Notolabrus celidotus</i> Holly Robertson <i>University of Waikato</i>	CONTINUED... A call for caution in sequence-based biosecurity surveillance Anastasija Zaiko <i>Cawthron Institute</i>
12:00	Resilience of algal communities and loss of ecological infrastructure following the Kaikoura earthquake of 2016 David Schiel <i>Canterbury University</i>	The evidence for a long history of toheroa translocation Phil Ross <i>University of Waikato</i>	Speed talk: Ancient earthquake uplift leaves a genetic legacy in coastal marine biota: Elahe Parvizi <i>University of Otago</i>	What lurks in the West? Samantha Happy <i>Auckland Council Biosecurity</i>

12:15	LUNCH – Sponsored by Cawthron Institute			
12:35	Castle 1 – Sustainable Seas National Science Challenge: Phase II update to interested researchers and stakeholders			
Venue	Castle 1	Burns 1	Burns 2	Castle Seminar D
Session	Our Changing Oceans: species and ecosystems response	Governance and Management	Aquaculture	Special Session: Marine Biosecurity
Chair	Nick Shears	Rich Ford	Ben Knight	Andrew Bell
1:15	Identifying changes in trophic structure of coastal fish species through time using stable isotope analysis and archaeological remains Alex Connolly <i>University of Otago</i>	A pathway to effective marine protection in Aotearoa New Zealand Lucy Jacob <i>WWF</i>	Using passive acoustic monitoring to assess the overlap between Hector’s dolphins (<i>Cephalorhynchus hectori hectori</i>) and mussel farms in the Banks Peninsula Marine Mammal Sanctuary Maria Jesus Valdes <i>University of Otago</i>	Invasion of the Japanese Mantis Shrimp (<i>Oratosquilla oratoria</i>) in New Zealand Hayley Nessia <i>University of Auckland</i>
1:30	Conservation management of yellow-eyed penguin hoiho in a changing marine environment Trudi Webster <i>Yellow-eyed Penguin Trust</i>	Bridging the gap – government shark policy & community sentiment Marcel Green <i>NSW Department Of Primary Industries - Fisheries</i>	Mussels, models, and microchemistry – Larval dispersal of green lipped mussels in the Firth of Thames Craig Norrie <i>University of Auckland</i>	The invasive Mediterranean fanworm, <i>Sabella spallanzanii</i> , in the context of mussel farms in the Coromandel Sarah Brand <i>University of Auckland</i>
1:45	Genetic and environmental trends of fledgling survival in a declining population of the Yellow-eyed penguin Stefan Meyer <i>Abacusbio Ltd.</i>	A data-informed approach for identifying candidate move-on thresholds for vulnerable marine ecosystem indicator taxa Shane Geange <i>Department Of Conservation</i>	New Zealand Rickettsia-like organism: investigating the association of this bacteria with mortalities in farmed Chinook salmon in New Zealand. Cara Brosnahan <i>MPI</i>	Tracing Marine Biosecurity Risks Using Multi-Region Input-Output (MRIO) Analysis Mimi Tzeng <i>University of Auckland</i>
2:00	Inter-annual variability in abundance of sperm whales at Kaikōura in relation to ocean conditions Marta Guerra <i>University of Otago</i>	Cephalopod biodiversity of the Kermadec Islands: implications for conservation Kat Bolstad <i>AUT Lab For Cephalopod Ecology & Systematics</i>	Artificial world – new insights on octopus eggs rearing and larval feeding behaviour Stefan Spreitzenbarth <i>University of Auckland</i>	Comparing the competitive and allelopathic abilities between indigenous and non-indigenous bryozoan species in-situ Yanika Reiter <i>University of Waikato</i>
2:15	Modelling effects of long-term environmental variability and climate on fished populations: implications for on stock assessment advice Philipp Neubauer <i>Dragonfly Data Science</i>	Using decision-support tools to develop spatial management options for the high seas around New Zealand Fabrice Stephenson <i>NIWA</i>	Radiographic development of spinal curvatures in farmed New Zealand king salmon (<i>Oncorhynchus tshawytscha</i>) throughout seawater production Bailey Lovett <i>The University of Auckland</i>	Bacteria, shellfish, and their environment. Henry Lane <i>MPI</i>
2:30		The importance of keeping the big ones: harvest slot limits and marine protected areas for the management of the Caribbean spiny lobster Gaya Gnanalingam <i>ODU/University of Otago</i>	The fecundity and early life stages of the New Zealand scampi (<i>Metanephrops challengeri</i>) Kevin Heasman <i>Cawthron Institute</i>	Risky is as risky does: profiling vessel biofouling in a biosecurity context Daniel Kluza <i>MPI</i>
2:45		Quantifying multifunctionality trade-offs from varying levels of nitrogen using Bayesian Belief Networks Ewa Siwicka <i>Auckland University</i>		Improving national surveillance effort for marine pests based on predicted pathway risks Abraham Growcott <i>MPI</i>
3:00	BREAK			

Session	Our Changing Oceans: species and ecosystems response	Governance and Management	Pollution and marine plastics	Special Session: Munida Time Series
Chair	Leigh Tait	Dana Clark	Phil Ross	Kim Currie
3:30	Crustaceans as indicators of marine environmental change (CAIME) - equipping a biomonitoring toolbox for New Zealand Kareen Schnabel <i>NIWA</i>	How can your science influence Fisheries New Zealand? Rich Ford <i>Fisheries New Zealand</i>	The effects of increasing microplastic concentrations on the functioning of soft sediment ecosystems: Interactions between microphytobenthos, infauna and microplastics. Julie Hope <i>University of Auckland</i>	Munida Time Series – A Window into the Subantarctic Marine Carbon Cycle Kim Currie <i>NIWA</i>
3:45	pH plumes and benthic communities surrounding vents at Te Puia o Whakaari/ White Island Caitlin Blain <i>University of Auckland</i>	No Longer Fishing for Information: The Role of Emerging Technologies in Fisheries Data Collection - Bubba Cook <i>WWF NZ</i>	Large scale temporal and spatial patterns of microplastic pollution between New Zealand and the Ross Sea Caitlyn Shannon <i>Victoria University Of Wellington</i>	Seasonality and connectivity of the surface and deep ocean's prokaryotic communities Jess Wenley <i>University of Otago</i>
4:00	What affects your growth? Assessment of subtidal germling and juvenile macroalgae growth along the Kaikoura Coast post-earthquake Dan Crossett <i>Cawthron Institute</i>	Bridging the science to policy divide Gemma Couzens <i>Environmental Protection Authority</i>	The impacts of microplastic pollution on the anti-predator behaviour of coral reef fish Bridie Allan <i>University of Otago</i>	Our first look at zooplankton distribution along the Munida Transect Morgan Meyers <i>University of Otago</i>
4:15	Crustose Coralline Algae recruitment: effects of seawater pH and irradiance Anna Kluibenschedl <i>University of Otago</i>	Coming ready or not! Decision making, Science, and Uncertainty in the EEZ Jack O'Carroll (presented by Gemma Couzens) <i>Environmental Protection Authority</i>	Contaminants in urban stingrays Helen Cadwallader <i>University of Waikato</i>	Globally consistent taxonomic and spatiotemporal dynamics in marine microbial phosphonate-cycling genes Scott Lockwood <i>University of Otago</i>
4:30	Risks and opportunities for the New Zealand seafood sector under climate change, ocean acidification and environmental variability Vonda Cummings <i>NIWA</i>	Trans-Tasman Cumulative Effects Management: A Comparative Study Andrew Allison <i>NIWA</i>	Attributes of intertidal gastropod, <i>Amphibola crenata</i> population as indicators of coastal contaminants Nuwan De Silva <i>Environment Southland</i>	Phytoplankton community distribution along the Munida Transect Linn Hoffmann <i>University of Otago</i>
4:45	Large Benthic Foraminifera: Morphology and growth of <i>Marginopora vertebralis</i> and <i>Amphistegina lobifera</i> in a laboratory culture Roselyn Naidu <i>University of Auckland</i>		The Litter Intelligence programme: A Citizen Science Case Study Ben Knight <i>Sustainable Coastlines</i>	Drivers of Carbon Cycle Variability in the Southwest Pacific Ocean Jesse Vance <i>University of Otago</i>
5:15	Sustainable Seas presentation (the Link)			
5:30	Poster session (the Link)			
6:30	Day One Concludes			

DAY TWO: THURSDAY 4 JULY

Venue	Castle 1			
9:00	Housekeeping			
9:10	Keynote: Judi Hewitt – NIWA “Research and management in a multiple stressors world; causation and complications”			
10:00	BREAK			
Venue	Castle 1	Burns 1	Burns 2	Castle Seminar D
Session	Biology and Behaviour	Oceanography	Marine Taxonomy	Special Session: Engagement between marine science and government agencies - climate change mitigation
Chair	Bridie Allan	Kim Currie	TBC	Lian Butcher
10:30	Light and balanced growth in <i>Ulva pertusa</i> Rigoberto Sanchez-Medina <i>University of Auckland</i>	The Physics of New Zealand/ Aotearoa Shelf Seas – not looking backwards (too hard), in order to go forward Craig Stevens <i>NIWA / University of Auckland</i>	A description of two new species of Dysidea (Demospongiae: Dysideidae) from Tauranga Harbour, Bay of Plenty, New Zealand Samuel Mc Cormack <i>University of Waikato</i>	<i>MfE marine climate change responsibilities and project update</i> Constance Nutsford <i>Ministry for the Environment</i> *CANCELLED*
10:45	Attracting scampi: Investigating the chemosensory behaviour of New Zealand scampi Rob Major <i>Cawthron Institute</i>	Meridional oceanic heat transport influences marine heatwaves in the Tasman Sea Erik Behrens <i>NIWA</i>	Biodiversity, biogeography and vulnerability of hydrothermal vents: a case study using bathymodioline mussels Kerry Walton <i>University of Otago</i>	DOC’s marine climate change project team and wider work Helen Kettles <i>Department of Conservation</i>
11:00	When sharks are away, rays will play: effects of top predator removal on coral reef ecosystems Samantha Sherman <i>James Cook University</i>	A new high resolution model for the Marlborough Sounds for use in coastal connectivity studies Ben Knight <i>Cawthron</i>	Long-billed extinct <i>Platydyptes</i> penguins from ancient shallow shelf settings of Zealandia Katie Matts <i>University of Otago</i>	Climate change and information needs for sustainable fisheries in New Zealand Mary Livingston <i>Fisheries NZ</i>
11:15	The Social Lives of Long-finned Pilot Whales Catherine Meyer <i>University of Auckland</i>	The Nippon Foundation-GEBCO Seabed 2030 project: Contribution of the South and West Pacific Ocean regional data centre to the 2019 bathymetric grid release Evgenia Bazhenova <i>NIWA</i>	Unusual tusked dolphins of New Zealand’s late Oligocene - where do they belong? Ambre Coste <i>University of Otago</i>	Coastal management in a changing world – a CSIG perspective Oliver Wade <i>Marlborough District Council</i>
11:30	AGM (NZMSS – Castle 1; OCS – Burns 2)			
12:30	LUNCH			

Venue	Castle 1	Burns 1	Burns 2	Castle Seminar D
Session	Habitat use and animal distributions	Quantitative methods and technology	Fisheries	Special Session (con'd): Engagement between marine science and government agencies - climate change mitigation
Chair	Malcolm Francis	Steve Dawson	TBC	Lian Butcher
1:30	Penguins in Paradise? How a versatile marine life-style enables Fiordland penguins/tawaki to cope with environmental perturbations Thomas Mattern <i>Global Penguin Society</i>	NSW Shark Management Strategy – using SMART drumlines, drones and ‘real time’ detection buoys to catch and track white sharks Paul Butcher <i>NSW DPI</i>	The effects of shellfish diseases on population dynamics, an example from the Foveaux Strait oyster fishery Keith Michael <i>NIWA</i>	Māori Climate Change Commissioner’s role and a Māori world view on climate change Donna Awatere Huata <i>A Māori world view</i>
1:45	How do rig sharks behave when using a New Zealand estuary? Warrick Lyon <i>NIWA</i>	The right size: Using drone-based photogrammetry to measure condition in a recovering population of right whales David Johnston <i>University of Otago</i>	Multiplex ddPCR for biosecurity and stock assessment: detection, discrimination and quantification of two Bonamia infections in New Zealand oyster populations Jaret Bilewicz <i>NIWA</i>	How the Forum of Chief Science Advisors are working together to deliver cross agency outcomes Alison Collins <i>Chief Science Advisor, Ministry for the Environment</i>
2:00	Cleaning stations as a driver of aggregative behaviour by the reef manta ray, <i>Mobula alfredi</i> Asia Armstrong <i>University of Queensland</i>	Aerial photogrammetry and size structure analysis of sperm whales at Kaikōura, New Zealand Toby Dickson <i>University of Otago</i>	Challenges and Opportunities for the Southern Scallop Fishery Hannah Charan-Dixon <i>MPI</i>	30min panel Q&A session, moderated by Lian Butcher <i>Director, Aquatic Unit DOC</i>
2:15	Are mangroves important to sharks and rays?: A review Shiori Kanno <i>James Cook University</i>	Recommendations for estimating the proportion of identifiable individuals in photo-ID research on cetaceans – how do you get estimates up to the mark? Lindsay Wickman <i>University of Otago</i>	Whitebait and Bergmann’s rule: size and age of whitebait entering New Zealand rivers Mike Hickford <i>University of Canterbury</i>	
2:30	Fine-scale movements of juvenile blacktip reef sharks in a shallow nearshore nursery Lachlan George <i>James Cook University</i>	Quantifying Species Interactions and Coexistence in Marine Fouling Communities Michelle Marraffini <i>University of Canterbury</i>	Developing a National Blue Cod Strategy Courtney Burn <i>Ministry for Primary Industries</i>	
2:45	Quantifying habitat selection by broadnose sevengill sharks <i>Notorynchus cepedianus</i> in Paterson Inlet, Stewart Island, New Zealand Rosa Edwards <i>University of Otago</i>	Seagrass monitoring from remote sensing: a novel approach with machine learning and sentinel-2 data Thang Ha <i>The University of Waikato</i>	Captive breeding of Blue Cod Denham Cook <i>Plant and Food</i>	
3:00	Sharks in the forest: relationships between kelp physical-complexity attributes and egg deposition sites of the red-spotted catshark José Trujillo <i>University of Otago</i>	Spatially Explicit Fisheries Risk Assessment (SEFRA) applied to Maui and Hector’s dolphins Ben Sharp <i>MPI</i>	Comparative Ecology of Four Species of the Flatfish Genus <i>Peltorhamphus</i> from New Zealand waters Tom Munroe <i>National Systematics Laboratory, NMFS/NOAA</i>	
3:15	BREAK			

Venue	Castle 1	Burns 1	Burns 2
Session	Habitat use and animal distributions	Climate Change	Fisheries
Chair	Tom Brough	Debbie Freeman	Denham Cook
3:45	A Telemetric Study of the Megamouth Shark (<i>Megachasma pelagios</i>) Paul Clerkin <i>Deep Blue Research Foundation</i>	Is the intensity and frequency of marine heatwaves increasing in New Zealand's coastal waters? Nick Shears <i>University of Auckland</i>	Methods for developing precautionary buffer zones to account for spatial uncertainty in the distribution of highly endangered species Amanda Leathers <i>WWF New Zealand</i>
4:00	Improving distributional knowledge of deepwater sharks using VAST Brit Finucci <i>NIWA</i>	Cascading effects of seismic uplift and heatwaves on southern bull kelp, <i>Durvillaea</i> spp. Mads Thomsen <i>University of Canterbury</i>	Selectivity of inshore commercial trawls in New Zealand - use of a predictive selectivity estimation tool Emma Jones <i>NIWA</i>
4:15	The importance of prey data in models to explain distribution of bottlenose dolphins in Doubtful Sound Steph Bennington <i>University of Otago</i>	Multiple scales of remote sensing to manage the impacts of local and global stressors on coastal ecosystems Leigh Tait <i>NIWA</i>	Gillnet size selectivity of shark species from Queensland, Australia Lindsey Leathers <i>James Cook University</i>
4:30	Distribution of New Zealand fur seals over the Otago submarine canyons Will Rayment <i>University of Otago</i>	Effects of stressors on the physiology and growth of pāua (<i>Haliotis iris</i>) Thuy Nguyen Thi <i>University of Canterbury</i>	Do mako and silky sharks die after being released alive from tuna longlines? Malcolm Francis <i>NIWA</i>
4:45	Leopard seal occurrence in predictable locations around New Zealand: A preliminary analysis of sightings and photo-identification reveal local residency Krista Hupman <i>NIWA</i>	Temaiku Land and Urban Development – The Marine Environment Anthony Kubale <i>Jacobs New Zealand</i>	The first three steps for assessing vulnerability risk of population reduction of elasmobranchs from fishing and climate change Karla Garces <i>The University of Melbourne</i>
5:30	Student Function at the Lone Star		
8:30	Day Two Concludes		

DAY THREE: FRIDAY 5 JULY

Venue	Castle 1		
9:00	Housekeeping		
9:10	Keynote: Madi Green - <i>University of Tasmania</i> "Rethinking how we undertake, collaborate and communicate science"		
9:35	Keynote: Irene Middleton - <i>Massey University</i> "The contribution of subtropical reef fishes to marine biodiversity in Northeast New Zealand"		
10:00	BREAK – Sponsored by 4 Sight Consulting		
Venue	Castle 1	Burns 1	Burns 2
Session	Marine Conservation	Marine Ecosystems	Benthic Ecology
Chair	Brit Finnucci	Matt Pinkerton	Drew Lohrer
10:30	Parks for sharks: human exclusion areas outperform no-take marine reserves - Justin Rizzari <i>Deakin University</i>	Seabirds as marine indicators: what can procellariiform ecophysiology tell us about ocean conditions? Brendon Dunphy <i>The University of Auckland</i>	Sediment-effect thresholds for the New Zealand seagrass <i>Zostera muelleri</i> : a case study in Porirua Harbour, NZ Inigo Zabarte <i>University of Waikato; NIWA</i>
10:45	Parks for sharks: conceptual frameworks and key questions for assessing how marine protected areas contribute to shark and ray conservation Andrew Chin <i>James Cook University</i>	Assessment of regional trace metal concentrations in arrow squid from New Zealand waters – a multidisciplinary approach Alexandra Lischka <i>Auckland University of Technology</i>	A national approach to monitoring estuarine health based on multivariate analysis Dana Clark <i>Cawthron Institute</i>
11:00	Investigating the effect of marine reserves on coastal elasmobranchs in southern New Zealand Michael Heldsinger <i>University of Otago</i>	Propagating a cellular stress into the environment: Revealing hydrogen peroxide as an external stressor in coastal ecosystems. Isla Twigg <i>University of Otago</i>	Shining light on the importance of intertidal benthic primary productivity to estuarine ecosystem function Steph Mangan <i>University of Waikato</i>
11:15	Sevengill sharks, BRUVS and citizen science Robert Lewis <i>University of Otago</i>	Glimpsing an ancient, shallow marine food web – fossil vertebrates from Cosy Dell, Southland, New Zealand Marcus Richards <i>University of Otago</i>	Life in a dimming world: Effect of light availability on intertidal benthic primary production Georgina Flowers <i>University of Waikato</i>
11:30	Fishy Web Cam, linking the Southern Ocean with the community Sally Carson <i>University of Otago</i>	Natural and assisted recovery of intertidal habitat-forming macroalgae following the 2016 Kaikōura earthquake Tommaso Alestra <i>University of Canterbury</i>	Nutrient enrichment effects on biomass and primary productivity of estuarine microphytobenthos Yuriy Malakhov <i>University of Canterbury</i>
11:45	Where are those Maui dolphins? Elisabeth Slooten <i>University of Otago</i>	Habitat mapping to inform customary fisheries management Matt Desmond <i>University of Otago</i>	Changes in benthic ecosystem functioning along an estuarine eutrophication gradient Kit Squires <i>University of Waikato</i>
12:00	Birds vs. Clams Lolita Vallyon <i>University of Waikato</i>	Speed talks: (1) Habitat mapping of <i>Macrocystis pyrifera</i> in nearshore coastal southern Otago Madeline Glover <i>University of Otago</i> (2) Depth and location influence prokaryotic and eukaryotic microbial community structure in New Zealand fjords Sven Tobias-Hunefeldt <i>University of Otago</i>	Effects of anthropogenic and natural disturbances on estuarine communities of Te Ihutai Islay Marsden <i>University of Canterbury</i>
12:15	LUNCH		

Venue	Castle 1	Burns 1	Burns 2
Session	Marine Conservation	Food webs	Benthic Ecology
Chair	Debbie Freeman	Judi Hewitt	Islay Marsden
1:15	The varied effects of protection on reef fish assemblages in three New Zealand marine reserves Henry Allard <i>University of Auckland</i>	Regional differences in supply of organic matter from kelp forests drive trophodynamics of temperate reef fish - Stephen Wing <i>University of Otago</i>	Role of spatial and temporal heterogeneity in moderating benthic faunal activity and temperate shelf sea carbon and macronutrient stocks Rachel Hale <i>NIWA</i>
1:30	Using baited underwater video to monitor MPAs and investigate species-habitat relationships at Banks Peninsula Tom Brough <i>University of Otago</i>	Community contributions to modelling trophic interactions around Kapiti marine reserve Monique Ladds <i>Department Of Conservation</i>	The impact of restored New Zealand Green Lipped mussels on ecosystem functioning Jenny Hillman <i>University of Auckland</i>
1:45	Disease in a threatened New Zealand surf clam Matthew Bennion <i>University of Waikato</i>	The lobsters' tail of their lavish lunch Aimee Van Der Reis <i>University of Auckland</i>	Denitrification Rates in Restored Mussel Beds of the Hauraki Gulf Mallory Sea <i>University of Auckland (IMS)</i>
2:00	Recovery and restoration of juvenile abalone populations following widespread mortality and habitat loss due to earthquake uplift Shawn Gerrity <i>University of Canterbury</i>	Gut Instinct: feeding eco-physiology of the spiny lobster, <i>Jasus edwardsii</i> Ashley Flood <i>University of Auckland</i>	Regional patterns of macrofaunal diversity and abundance determined by antagonistic ecosystem engineers in soft-sediment intertidal habitats Katrin Berkenbusch <i>Dragonfly Data Science</i>
2:15	Two too-small marine reserves and a disappearing lobster population Benn Hanns <i>University of Auckland</i>	Parasites that travel using elasmobranch feeding links Jerusha Bennett <i>University of Otago</i>	Does <i>Macomona liliانا</i> density alter sediment stability along a wave exposure gradient? Hazel Needham <i>University of Waikato</i>
2:30	Managed realignment in the upper Bay of Fundy, Canada: community dynamics during salt marsh restoration over 8 years in a megatidal and ice-influenced environment Spencer Virgin <i>University of Canterbury</i>	Using stable isotopes to reduce ambiguity in food-web models Matt Pinkerton <i>NIWA</i>	Random drug screening: why marine invaders are the usual suspects Christopher Battershill <i>University of Waikato</i>
2:45	BREAK		
Session	Marine Conservation	Stable Isotope Analysis	Benthic Ecology
Chair	Nick Shears	Amandine Sabadel	Rebecca Gladstone-Gallagher
3:15	Gulf-to-Gulf: Bridging Lessons Learned in Large-Scale Marine Habitat Restoration Alex Alder <i>University of Auckland</i>	Uptake of organic waste from salmon farms in wild fish and horse mussels collected from nearby reefs in the Marlborough Sounds – Rebecca McMullin <i>University of Otago</i>	Does sedimentary gradients and nutrient addition influence microbial extracellular enzyme activity and do macrofauna influence this relationship? Sam Thomas <i>University of Otago</i>
3:30	Building an information base for science-based marine protection Debbie Freeman <i>Department Of Conservation</i>	How to see into the past: a new method to access bulk and amino acid isotopic signatures on preserved fish specimens Leonardo Durante <i>University of Otago</i>	Quantification of ecosystem services provided by infaunal shellfish in temperate estuaries Vera Rullens <i>University of Waikato</i>
3:45	Preliminary results on the science underpinning the Ross Sea Region Marine Protected Area Joshua Van Lier <i>Ministry For Primary Industries</i>	Seasonal habitat use and trophic ecology of bronze whaler sharks in New Zealand Melissa Kellett <i>University of Waikato</i>	Spatial variability in nitrogen processing capacity of soft sediments at the land-sea interface Emily Douglas <i>NIWA</i>
4:00	Can a Gradient Forest classification of New Zealand's EEZ function as an effective framework for marine conservation planning? Fabrice Stephenson <i>NIWA</i>		Using eddy covariance to extend the spatial and temporal scales of oxygen flux quantification Drew Lohrer <i>NIWA</i>
4:30	Presentation of NZMSS Award and John Morton Medal		
5:00	Conference Closing		
6:45	Conference Dinner and Awards Ceremony at the University Union		

KEYNOTE SPEAKERS



EDWARD ELLISON

Wednesday 3 July 9:00am

A sheep farmer on the Otago Peninsula, an active member of Otakou marae and former Deputy Kaiwhakahaere of Te Rūnanga o Ngāi Tahu

Edward Ellison - a sheep farmer on the Otago Peninsula, an active member of Otakou marae and former Deputy Kaiwhakahaere of Te Rūnanga o Ngāi Tahu, with experience in cultural advocacy, Treaty of Waitangi Claims negotiations, environmental management, policy development and governance. He is current Chairperson of the New Zealand Conservation Authority and has previously served on the South-East Otago Marine Protection Forum, Otago Conservation Board, QEII National Trust Board and the Otago University Council.

He is a qualified and independent RMA Hearings Commissioner with experience in policy, plan change and resource consent hearings for councils across the South Island. He is the chairperson of Otago based environmental consultancy Aukaha and the Te Rūnanga o Ngāi Tahu HSNO Committee and holds advisory roles with the South Island High Country Forum (LINZ), the NZ Biodiversity Strategy (DOC) review and the Kāhui Kaumātua (EPA).

Te Ao Maori

Any actions that will impact on our environment the world of our ancestors becomes an important reference point, a world of demigods and reciprocal relationships, and lore that govern the actions of tangatawhenua. Legislative tools and authorities set in place a marine management regime including commodification of the oceans natural resources, over fishing led to a quota system. The introduction of fisheries quota triggered the granting of a percentage of all fisheries quota to Maori.

The Marine Reserves Act 1971, set up to preserve areas of sea and foreshore in their natural state as the habitat for marine life for scientific study. Off the Otago coast, marine reserve proposals pitted tangata whenua into an uneven and adversary role against a department or NGO's.

SEMPF (2015) was a model for community to assess and identify values and places to apply protection or management tools. Marine reserves still alienate iwi, and do not reflect the changing nature of the ocean, eg; climate change, sedimentation from land or quota shortcomings.

For iwi co-management and generational reviews were a requirement. To maintain connectedness, matauranga, while each generation has a role to review a marine reserves effectiveness.

KEYNOTE SPEAKERS



HON EUGENIE SAGE

Wednesday 3 July 9:00am

Minister of Conservation
Minister for Land Information
Associate Minister for the Environment

Hon Eugenie Sage's passion for nature and a healthy environment has driven her work as a Green MP and now Minister. As Greens' water spokesperson 2011-2014, she launched and led the party's swimmable rivers campaign, which helped make water an election issue in 2017. Eugenie was a member of the Local Government and Environment select committee from 2011-September 2017; and deputy chair from 2011-2014. She is a former Environment Canterbury regional councillor from 2007-2010. The restoration of regional democracy in Canterbury is one of her priorities this term.

Eugenie worked for Forest and Bird for 13 years and played a key role in the Society's campaigns to protect West Coast forests and South Island high country, and in its RMA advocacy to protect indigenous biodiversity. She has degrees in law and history and a diploma in journalism.

"As a child growing up in Tāmaki Makaurau/Auckland I was able to climb trees, play in a stream, and swim at the beach. I want nature to thrive and all children and New Zealanders to be able to enjoy wild and natural places close to where they live. It's part of what makes us New Zealanders."

KEYNOTE SPEAKERS



DR JUDI HEWITT

Thursday 4 July 9:10am

Principal Scientist - Marine Ecology
Programme Leader - Managing Marine Stressors
NIWA

Judi Hewitt is a statistical ecologist who uses fundamental understandings of how marine ecosystems function to predict how they respond to human activities. She leads the NIWA Coasts and Ocean Centre program on Managing Marine Ecosystem and is a professor in the Statistics Department and the University of Auckland. For the last 4 years, she has been a programme leader in the National Science Challenge 'Sustainable Seas'.

Research and management in a multiple stressors world; causation and complications

Marine ecosystems today are under immense pressure from growing populations wanting higher standards of living. From food provision to cultural and recreational opportunities, it all translates into more use and (to date) more waste and pollution. It is rare for any marine area to be affected by a single human activity and local activities are overlain on larger scale activities and changing global processes. In this presentation I discuss the likely changes this requires to the research we do (both fundamental and applied) and the management-knowledge interface. I briefly summarise what we know and don't know about the cumulative effects of multiple stressors, and the relationship between uncertainty and decision making. Finally, I discuss some likely pitfalls and ways forward.

KEYNOTE SPEAKERS



DR MADELINE GREEN

Friday 5 July 9:10am

Researcher - Institute for Marine and Antarctic Studies, University of Tasmania
Senior project leader - Otlet

Madeline Green is a molecular ecologist, shark scientist and entrepreneur who has recently completed her PhD at the University of Tasmania in Hobart, Australia. Madeline's recent research works to understand the movement and breeding behaviour of shark species in the Indo-Pacific Ocean. Her research estimates biological stocks, parentage & kinship, providing important information for commercial and small-scale fisheries. While formally trained as a tropical marine biologist, Madeline's diverse research career has led her to spend extensive time in Antarctica and the Southern Ocean. Madeline also runs the biological sample-sharing database; Otlet, helping scientist's share, source and request biological samples from research institutes globally. Madeline's work has been recognised with a number of awards, the most recent being the Foundation for Young Australians 2018 Environmental fellow.

Rethinking how we undertake, collaborate and communicate science

Increases in the capacity and demand of technology are driving large-scale changes to how scientists operate and collaborate. In the field of population genetics, novel whole genome approaches have critically changed how we understand movement and kinship for many species. How we as scientists use technology to our advantage and how we communicate our findings is rapidly changing. Moreover, the need for interdisciplinary collaboration and multiple analytical approaches to solve scientific problems is higher than ever. With this in mind, I will reflect as an early career researcher on different processes of problem-solving by taking advantage of technological innovations and communication tools.

KEYNOTE SPEAKERS



IRENE MIDDLETON

Friday 5 July 9:35am

NZMSS Student Research Grant winner 2017
Massey University

Irene is a practising applied scientist with over 10 years' experience in the fields of marine biosecurity, aquaculture, taxonomy and community engagement. She has previously worked for NIWA, DOC and Northland Regional Council, and has participated in several marine biodiversity expeditions with the Auckland Museum. Irene has now chosen to embark on a PhD to extend her research skills and has been fortunate to receive support from NZMSS through a student assistance grant.

Irene's PhD research is interested in the subtropical, tropical and rare fishes in New Zealand waters, that may serve as indicators of change in our marine environment. Irene has been observing, photographing, and recording new fishes and invertebrate species in northeastern New Zealand waters over several years. During her PhD, she hopes to build on these observations. Her research has involved collating historical records of subtropical, tropical and rare fishes found in New Zealand, setting up a citizen-science platform to help capture sightings, and undertaking quantitative surveys of marine debris and flotsam that may form an important vector of dispersal for organisms arriving from beyond New Zealand's shorelines.

ICE BREAKER WELCOME FUNCTION

Tuesday 2 July 2019

6:00 PM - 8:00 PM

Venue: Otago Museum - 419 Great King Street, North Dunedin

Dress: Casual

Tickets: Included with full registration - Day delegates and guests \$35

This is a great opportunity to catch up with colleagues and meet new friends. There will be a kapa haka group performance, a welcome from the organising committee as well as drinks and canapes to get the conference started. Delegates will also be able to explore The Tūhura Otago Community Trust Science Centre which has over 45 hands-on interactives, including a giant DNA-inspired helical slide.

SUSTAINABLE SEAS PRESENTATION

Wednesday 3 July 2019

5:15 PM - 5:30 PM

Venue: Link, Otago University

Tickets: Included with full registration - Day delegates and guests \$25

Hear about the Sustainable Seas programme and enjoy a free drink, followed by a cash bar, and canapes. This short presentation will be followed by the poster session at the same venue.



STUDENT NETWORKING FUNCTION

Thursday 4 July 2019

5:30 PM

Venue: Lone Star - 484 George Street, North Dunedin

Dress: Casual

Tickets: Included with full registration - open to students only

This is a great opportunity to catch up with other students and meet new friends in the marine science profession.

CONFERENCE DINNER & AWARDS CEREMONY

Friday 5 July 2019

6:30 PM

Venue: University Union

Dress: Smart Casual

Tickets: Included with full registration / Day delegates and guests \$105

Celebrate with colleagues and enjoy a buffet dinner at the University Union, followed by presentation of student prizes and dancing to local band Livewire. Prizes available for the best costume and best dancing!

ATTENDEE LIST

LAST NAME	FIRST NAME	ORGANISATION
Clare	Adams	University of Otago
Alex	Alder	University of Auckland
Tommaso	Alestra	University of Canterbury
Bridie	Allan	Department of Marine Science, University of Otago
Henry	Allard	University of Auckland
Andrew	Allison	NIWA Hamilton
Asia	Armstrong	Project Manta
Mareike	Babuder	University of Canterbury
Lauren	Bartram	Royal Society Te Apārangi
James	Bassett	Bay Dynamics
Chris	Battershill	Waikato University
Evgenia	Bazhenova	NIWA
Mike	Beentjes	NIWA
Erik	Behrens	NIWA
Andrew	Bell	Ministry For Primary Industries
Peter	Bell	Plant and Food Research
Jerusha	Bennett	University of Otago
Steph	Bennington	University of Otago
Matthew	Bennion	University of Waikato
Katrin	Berkenbusch	Dragonfly Data Science
Laura	Biessy	Cawthron Institute
Jaret	Bilewitch	NIWA
Caitlin	Blain	University of Auckland
Kat	Bolstad	AUT Lab For Cephalopod Ecology & Systematics
Sarah	Brand	University of Auckland
Dana	Briscoe	NIWA
Cara	Brosnahan	Ministry For Primary Industries
Tom	Brough	University of Otago
Courtney	Burn	Ministry for Primary Industries
Lian	Butcher	Department of Conservation
Paul	Butcher	Nsw Fisheries
Helen	Cadwallader	University of Waikato
Sally	Carson	NZ Marine Studies Centre, University of Otago
Hannah	Charan-Dixon	Fisheries New Zealand
Maria	Charry	Pce
Denise	Chen	Department of Chemistry, University of Otago
Andrew	Chin	James Cook University
Daisy	Church	University of Waikato
Dana	Clark	Cawthron Insitute
Isabella	Clere	University of Otago
Paul	Clerkin	Deep Blue Research Foundation
Alex	Connolly	Marine Science Dept, University of Otago
Rochelle	Constantine	University of Auckland

Bubba	Cook	World Wide Fund For Nature (WWF-NZ)
Denham	Cook	Plant & Food Research
Chloe	Corne	Department of Conservation
Amber	Coste	University of Otago
Gemma	Couzens	Environmental Protection Authority
Lucy	Coyle	University of Otago
Josie	Crawshaw	Bay of Plenty Regional Council
Dan	Crossett	Cawthron Institute/Univeristy of Canterbury
David	Culliford	University of Waikato Coastal Marine Field Station
Kim	Currie	NIWA
Samik	Datta	NIWA
Danielle	Davenport	The Univeristy of Queensland
Kate	Davies	NIWA
Richard	De Hamel	Nz Marine Studies Centre, Univ of Otago
Nuwan	De Silva	Environment Southland
Matthew	Desmond	University of Otago
Toby	Dickson	University of Otago
Wayne	Dillon	University of Otago
Emily	Douglas	NIWA
Robyn	Dunmore	Cawthron
Brendon	Dunphy	The Uni of Auckland
Leonardo	Durante	University of Otago
Rosa	Edwards	University of Otago
Brit	Finucci	NIWA
Ashley	Flood	University of Auckland
Georgina	Flowers	University of Waikato
Becky	Focht	Hawke's Bay Regional Council
Giverny	Forbes	University of Otago
Rich	Ford	Fisheries New Zealand
Jacinta	Forde	University of Waikato
Malcolm	Francis	NIWA
Ceridwen	Fraser	University of Otago
Sam	Fraser-Baxter	NIWA
Debbie	Freeman	Department of Conservation
Greig	Funnell	Dept Conservation
Rachel	Gabara	Land Information NZ
Karla	Garces	The University of Melbourne
Shane	Geange	Department of Conservation
Lachlan	George	James Cook University
shawn	Gerrity	Univ. of Canterbury School of Biological Sciences
Rebecca	Gladstone-gallagher	University of Auckland
Madeline	Glover	University of Otago
Gaya	Gnanalingam	University of Otago
Adrienne	Gooden	
Ken	Graham	Australian Museum, Sydney

Madeline	Green	University of Tasmania & Otlet
Marcel	Green	Nsw Dpi Fisheries
Abraham	Growcott	Biosecurity New Zealand
Marta	Guerra	University of Otago
Thang	Ha	Faculty of Science, Waikato University
Rachel	Hale	NIWA
Julie	Hall	Sustainable Seas
Sean	Handley	NIWA Nelson
Benn	Hanns	University of Auckland
Samantha	Happy	Auckland Council Biosecurity
Seyedehhabibeh	Hashemi	Otago University
Barb	Hayden	NIWA
Kevin	Heasman	Cawthron Institute
Michael	Heldsinger	University of Otago
Hannah	Hendriks	Department of Conservation
Judi	Hewitt	NIWA, University of Auckland
Hanneloor	Heynderickx	Otago University
Mike	Hickford	University of Canterbury
Robert	Hickman	
Jenny	Hillman	University of Auckland
Bethany	Hinton	Massey University
Linn	Hoffmann	University of Otago
Monique	Holmes	Victoria University of Wellington
Julie	Hope	Institute of Marine Science, University of Auckland
Hamish	Howard	Victoria University of Wellington
Timothy	Howarth	Otago University
Stephen	Hunt	Waikato Regional Council
Krista	Hupman	NIWA
Krista	Hupman	NIWA
Graeme	Inglis	NIWA
Lucy	Jacob	WWF-NZ
Ashleigh	Johnston (née Watts)	Tonkin & Taylor
David	Johnston	University of Otago
Emma	Jones	NIWA
Hannah	Jones	Waikato Regional Council
Ani	Kainamu - Murchie	NIWA
Janine	Kamke	Waikato Regional Council
Shiori	Kanno	James Cook University
Melissa	Kellett	University of Waikato
Vince	Kerr	
Gustav	Kessel	Victoria University of Wellington
Helen	Kettles	Department of Conservation
Richard	Kinsey	Doc
Daniel	Kluza	Ministry For Primary Industries
Ben	Knight	Sustainable Coastlines

Ben	Knight	Cawthron
Anthony	Kubale	Jacobs New Zealand
Monique	Ladds	Doc
Dallas	Lafont	University of Auckland
Henry	Lane	Ministry For Primary Industries
Hamish	Lass	Bay of Plenty Regional Council
Duong	Le	Department of Marine Science, University of Otago
Amanda	Leathers	WWF New Zealand
Lindsey	Leathers	James Cook University
Robert	Lewis	University of Otago
Libby	Liggins	Massey University Auckland
Alexandra	Lischka	Aut
Mary	Livingston	
Scott	Lockwood	University of Otago
Drew	Lohrer	NIWA
Bailey	Lovett	The University of Auckland
Katie	Lubarsky	Ministry For Primary Industries
Dave	Lundquist	Department of Conservation
Warrick	Lyon	NIWA / University of Auckland
Anna	Madarasz-smith	Hawke's Bay Regional Council
Robert	Major	Cawthron Institute
Yuriy	Malakhov	University of Canterbury
Steph	Mangan	University of Waikato
Islay	Marsden	University of Canterbury
Thomas	Mattern	Nz Penguin Initiative
Katie	Matts	University of Otago
Samuel	Mc Cormack	University of Waikato
Tom	McCowan	Paua Industry Council Ltd.
Rebecca	McGrouther	Port Otago
Jan	McKenzie	University of Canterbury
Rebecca	Mcleod	Fiordland Marine Guardians
Rebecca	McMullin	University of Otago
Anna	Meissner	LINZ
Catherine	Meyer	University of Auckland
Stefan	Meyer	Abacusbio Ltd.
Morgan	Meyers	University of Otago
Keith	Michael	NIWA
Irene	Middleton	Massey University, Auckland
Matt	Mooney	Bay Dynamics Ltd
Sophie	Mormede	Pce
Thomas	Morris	University of Auckland
Tom	Munroe	National Systematics Laboratory, NMFS/NOAA
Fletcher	Munsterman	University of Otago
ROSELYN	Naidu	University of Auckland
Hazel	Needham	University of Waikato
Hayley	Nessia	University of Auckland

Philipp	Neubauer	Dragonfly Data Science
Thuy	Nguyen Thi	School of Biological Sciences, University of Canterbury
Patrick	Niccol	Boxfish Research
Craig	Norrie	University of Auckland - Institute of Marine Science
Ali	Northern	Wwf
Constance	Nutsford	Mfe
Sorrel	O'Connell-Milne	Environment Southland
Shaun	Ogilvie	Cawthron Institute
Pamela	Olmedo-Rojas	University of Otago
Emily	Palmer	Massey University
Elahe	Parvizi	University of Otago
Samantha	Patterson	Cephalopod Systematics and Ecology Lab
Kura	Paul-Burke	NIWA
Rachael	Peart	NIWA
Ohad	Peleg	University of Auckland
Johnette	Peters	Australian National University
Matt	Pinkerton	NIWA
Mark	Preece	Nz King Salmon Company
Daniel	Pritchard	Te Rūnanga o Ngāi Tahu
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Jimmy	Rapson	University of Auckland
Will	Rayment	University of Otago
Yanika	Reiter	The University of Waikato
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Peter	Ritchie	Victoria University of Wellington
Justin	Rizzari	Deakin University
Keryn	Roberts	Environment Southland
Holly	Robertson	University of Waikato
Genevieve	Robinson	
Phil	Ross	University of Waikato
Vera	Rullens	University of Waikato
Amandine	Sabadel	University of Otago
Nichola	Salmond	University of Otago
Rigoberto	Sanchez-medina	University of Auckland
Jaever	Santos	Auckland University of Technology
David	Schiel	UC
Clara	Schlieman	University of Otago
Kareen	Schnabel	NIWA
Hendrik	Schultz	Department of Conservation
Mallory	Sea	University of Auckland
Chanelle	Seabrook	Victoria University of Wellington
Caitlyn	Shannon	Victoria University of Wellington
Nick	Shears	University of Auckland
Samantha	Sherman	James Cook University
Katherine	Short	Terra Moana
Ewa	Siwicka	Auckland University

Elisabeth	Slooten	Otago University
Matt	Smith	NIWA
Trecia	Smith	Ministry For Primary Industries
Stefan	Spreitzenbarth	University of Auckland
Kit	Squires	University of Waikato
Fabrice	Stephenson	NIWA
Craig	Stevens	NIWA/uoakl
Tristan	Strange	
Leigh	Tait	NIWA
Rick	Tate	Southern Cross University, National Marine Science Centre
Sam	Thomas	University of Otago
Mads	Thomsen	University of Canterbury
Sven	Tobias-hunefeldt	University of Otago
Michael	Townsend	Waikato Regional Council
Brittany	Trask	University of Auckland
Tom	Trnski	Auckland War Memorial Museum
Isla	Twigg	University of Otago
Mimi	Tzeng	University of Auckland
Maria Jesus	Valdes	University of Otago
Lolita	Vallyon	University of Waikato
Aimee	Van Der Reis	University of Auckland
Joshua	Van Lier	Fisheries New Zealand
Jesse	Vance	University of Otago
Amanda	Vieillard	University of Auckland Institute of Marine Science
Spencer	Virgin	University of Canterbury
Oliver	Wade	Marlborough District Council
Sheridan	Waitai	Ngati Kuri
Kathy	Walls	Biosecurity New Zealand - MPI
Kerry	Walton	University of Otago
Shannon	Weaver	Department of Conservation
Trudi	Webster	Yellow-eyed Penguin Trust
Amy	Weir	University of Auckland
Jess	Wenley	University of Otago
Lindsay	Wickman	University of Otago
James	Wilson	Mbie
Pete	Wilson	4Sight Consulting
Shaun	Wilson	University of Otago
Robert	Win	Environment Southland
Stephen	Wing	University of Otago
Chris	Woods	NIWA
Tim	Young	Auckland University of Technology
Inigo	Zabarte	University of Waikato And NIWA
Anastasija	Zaiko	Cawthron Institute