

Annual Meeting of the New Zealand Marine Sciences Society

Te Hunga Matai Moana O Aotearoa

26-28 June 2023, Wellington

Schedule of Talks & Poster Presentations















Presentation Guidelines

- **Oral session time slots are 15min** (talks should be 12min max, allowing 3 min for questions/changeover). Format to standard PowerPoint presentation sizes.
- **Speakers should bring talks on USB drives** and upload these directly to PCs in the session rooms (either RHLT1, RHLT2, or RHMZ03 see following schedule) in the 15 minutes immediately preceding their session—session chairs will be on-hand to assist.
- Poster presenters will be provided freestanding pinboards and pins for attaching posters.
 Pinable area measures 900mm wide by 1800mm high for most pinboards, with a smaller number of pinboards that are slightly larger (i.e., all pinboards can easily accommodate standard A0 poster sizes in portrait orientation). Posters can be put up immediately on arrival (after registration). Sufficient poster boards will be supplied, spaces are unassigned, positions on first come-first served basis, pins will be supplied (but feel free to bring your own supplies for different methods of attachment). Formal Poster Session is scheduled from 4:00-6:00PM on Tuesday 27th of June. Poster presenters should plan to attend their posters at this time, and refreshments will be served. Posters may be displayed for the duration of the conference, but please remove posters at the end of the conference.
- Social media. We encourage sharing of conference activity on social media platforms. We'll use the hashtag #nzmss2023 Presenters: if your presentation includes sensitive content that you do not wish to have shared, please indicate this clearly to your audience.

Date: Monday	26th June		
Room	RHLT1		
Time	Opening		
9:00 to 9:05	Jeff Shima Chair of Conference Organising Committee (Housekeeping)		
9:05 to 9:30	Lee Rauhina-August and Mark Fenwick, Taranaki Whānui ki Te Upoko o Te Ika		
9:30 to 9:45	Minister for Oceans and Fish	eries, Hon Rachel Brooking	5
9:45 to 10	Prof Louise Dixson Dean of S	cience, Te Herenga Waka	-
10:00 to 10:15	Lee Rauhina-August and Ma	rk Fenwick, Taranaki Whān	ui ki Te Upoko o Te Ika
10:15 to 11:00	Morning tea		
Room	RHLT1	RHLT2	RHMZ03
Session title and chair	Anthropogenic impacts Becky Shanahan	Seaweed Francois Thoral and Christopher Cornwall	Aquaculture and mussel biology Pete Wilson
11:00 to 11:15	Keeler, Serena Towards passive traps for marine pest species using novel acoustic methods	Battershill, Chris Toka ākau toitu Kaitiakitanga – building a sustainable future for coastal reef ecosystems	McMullin, Rebecca Environmental Health Measures for Open Ocean Aquaculture
11:15 to 11:30	Wardle, Joshua Aquatic incursion investigation in a changing world	Dunmore, Robyn Seeing Red, and the decline of large brown seaweeds in southern New Zealand	Camara, Mark Genotype- by-environment interaction in yellowtail kingfish grown in recirculating and flow- through aquaculture systems
11:30 to 11:45	Martinez, E Estimation of plastic pollution from littered single-use facemasks during the Covid-19 pandemic	Falconer, Thomas Post- earthquake reorganization of intertidal algal communities along the Kaikōura coastline	Heaphy, Ash Fatter snapper in shellfish farms say its all mussel
11:45 to 12:00	Shanahan, Becky Mass die- off on the Hawke's Bay coastline February 2023	Thoral, Francois Connecting land-use, sediment flows and macroalgal productivity around Aotearoa New Zealand's reefs	Douglas, Emily Understanding the effects of mussel aquaculture on benthic nitrogen cycling
12:00 to 1:00	Lunch	·	
Room	RHLT1	RHLT2	RHMZ03
Session title and chair	Blue Carbon Rebecca McLeod (Special session)	Seaweed ecology and physiology Francois Thoral and Christopher Cornwall	Aquaculture and mussel biology Pete Wilson
1:00 to 1:15	Bulmer, Richard Carbon sequestration and greenhouse gas emissions	Stone, Jessica Early Life History Demographics of Rimurapa/Southern Bull Kelp in Kaikōura	Alder, Al Between rocks and a not-so-hard place: comparing remnant and restored mussel reefs

	from blue carbon habitats		
	in Aotearoa New Zealand		
1:15 to 1:30	Stewart-Sinclair, Phoebe	Bunting, Imogen	Burnham, Katherine
	Spatial opportunity for	Impacts of marine	Lessons from the wild:
	coastal blue carbon in	heatwaves on juvenile	what remnant reefs reveal
	Aotearoa New Zealand	giant kelp	about green-lipped mussel
1:30 to 1:45	Mary Chris Carbon Storage	Communall Christopher	recruitment
1.30 10 1.45	Moy, Chris Carbon Storage in Aotearoa's Fjords	Cornwall, Christopher Response of important	
		understory seaweed to	
		multiple drivers of	
		anthropogenic change	
1:45 to 2:00	Beagley, Jackson Synthesis	Howarth, Leigh	
	of geophysical and	Monitoring multiple	
	sediment core data	effluents using seaweed	
	enhances understanding of	bioindicators	
	blue carbon in		
	Tamatea/Dusky Sound and		
	leads to insights on the		
	paleoenvironment		
	evolution of the fjord		
2:00 to 2:15	Maier, Katherine Kaikoura-	Chin, Caroline Through	
2.00 10 2.15	Hikurangi submarine	the looking glass:	
	canyon-channel as a deep-	imaging methods for	
	sea organic carbon conduit	research in the hadal	
	and sink	zone CANCELLED	
2:15 to 2:30	Deinhart, Mari		
	Quantification of kelp		
	contributions to deep-sea		
	carbon sequestration using blue carbon biomarkers		
	blue carbon biomarkers		
2:30 to 3:00	Afternoon tea		
Room	RHLT1	RHLT2	RHMZ03
Session title	Blue Carbon Rebecca	Marine heatwaves and	Oceanography Erik
and chair	McLeod (Special session)	temperature stress	Behrens and Charine
		Shinae Montie and	Collins
		Mads Thomsen	
3:00 to 3:15	Nodder, Scott Importance	Virgin, Spencer	Bury, Sarah Combining
	of near-bed lateral fluxes in	Behavioural	multiple stable isotope
	carbon cycling, Aotearoa	thermoregulation	methods elucidates
	New Zealand	underpins population resilience to extreme	Southern Ocean
		heat in intertidal grazers	hydrographic processes and ecogeochemistry
3:15 to 3:30	McLeod, Rebecca A	Thomsen, Mads	Behrens, Erik The
5.15 (0 5.50	scientist's take on the	Cascading habitat-	Response of the
		formation increases	Subtropical Front to
L			Sastropicarrioneto

3:30 to 3:45	policy pathway for blue carbon opportunities Law, Cliff Accounting for marine Carbon Dioxide Removal (mCDR)	biodiversity but are altered by disturbances and heatwaves Montie, Shinae Facilitation of epifauna by 3D printed biogenic habitat during extreme marine heatwaves	Changes in the Southern Hemisphere Westerly Winds—Evidence From Models and Observations Rickard, Graham Future Physical and Biogeochemical Oceanic States for the NZ EEZ
3:45 to 4:00	Turnbull, Jocelyn Integration of carbon cycle science into policy: a greenhouse gas research perspective	Shellem, Claire Documenting the 2018 Marine Heatwave in Doubtful Sound	Collins, Charine The dynamics of freshwater plumes in Hawke Bay
4:00 to 4:15	Discussion So, how do we go about realising blue carbon opportunities for NZ? A facilitated discussion	Spyksma, Arie The 2022 marine heatwave: a literal but deadly sponge bath	de Verneil, Alain Upper ocean response to cyclone Fili (2022) observed by an ocean glider-RESCHEDULED TO WEDNESDAY
4:15 to 4:30		Moffitt, Jessica A Snapshot into Future warming: insights from an <i>in situ</i> experiment	MacDonald, Helen Biophysical dynamics on the northeast self of Aotearoa, New Zealand
4:30 to 4:45			Plew, David Chambers or Eddy Covariance: how to measure benthic oxygen fluxes in situ?
4:45 to 5:00	Depart for Icebreaker		Chen, Zheng Simulation of plastic retention in a well- mixed estuary

Date: Tuesday 27 June			
Room	RHLT1		
9:00 to 10:00	Plenary: Linda Faulkner Aote	aroa New Zealand and the	UN Decade of Ocean Science
10 to 10:30	Morning Tea		
Room	RHLT1	RHLT2	RHMZ03
Session title and chair	Moana Joao Souza	Fish and fisheries David Schiel and Shawn Gerrity	Marine management and habitat classification Megan Oliver
10:30 to 10:45	Souza, Joao Moana Project	Cryer, Martin Progressing an ecosystem approach in the Hauraki Gulf via fisheries plans	Reti, Howard and Carpenter, Robert A hāpu perspective – kaitiakitanga, mātauranga and working with marine scientists
10:45 to 11:00	Felsing, Malene Monitoring research impact – the Moana Project experience	Davis, Jean Climate Change and Fisheries Management in New Zealand	
11:00 to 11:15	Mendiola, Michael Fine- Scale Genetic Structure and patterns of connectivity in the New Zealand Greenlipped mussel in Bay of Plenty	Kim, Kyuhan Evaluating the pollock <i>Gadus</i> <i>chalcogrammus</i> restocking programme in Korea	Field, Karen Achieving no- take Marine Protected Areas in the Northland Regional Plan- CANCELLED
11:15 to 11:30	Montaño, Mireya Hydrodynamic and behaviour parametrization effects on modelled coastal connectivity	McGregor, Vidette The effect of climate change on future catch limits: Case study of the Chatham Rise explored through ecosystem modelling	McLeod, Rebecca Managing Fiordland's Marine Area for Future Generations
11:30 to 11:45	Wu, Wenjie Mussel sentinels tell you how well trace metals can track larval travels.	Pinkerton, Matt Rethinking natural mortality: the effects of size and senescence on sustainable harvesting	Hanns, Benn Small sacrifice, big reward: Impacts of greater protection in the Hauraki Gulf
11:45 to 12:00	Thomson, Tessa I aha ki ngā toheroa nō Horowhenua: What's happened to the toheroa in the Horowhenua?	Leduc, Daniel Cyclone Gabrielle impacts on seabed ecosystems off Te Matau-a-Māui and Tairāwhiti	Geange, Shane Development of a seafloor bioregionlaisation for New Zealand
12:00 to 1:00	Lunch (NZMSS AGM in RHLT	1)	I
	RHLT1	RHLT2	RHMZ03

Session title	Sustainable seas, risk and	Fish and fisheries David	Marine management and
and chair	uncertainty Judi Hewitt and Joanne Ellis (*Special session sponsored by Sustainable Seas)	Schiel and Shawn Gerrity	habitat classification Shane Geange
1:00 to 1:15	Jordan-Smith, Laura Building cumulative effects visualization tools to facilitate Ecosystem-Based Management	Schiel, David Allocations, quota and pāua fishery management: the Tragedy of the commons revisited	Davidson, Sam Benthic Terrain Modelling of the South-western Hauraki Gulf: Habitat Identification and Human Impacts
1:15 to 1:30	Giles, Hilke Supporting cumulative effects management through decision-support tools	Gerrity, Shawn Fishing or mining? Where life histories, habitats and recreational overfishing collide in managing the New Zealand pāua fishery	Tablada, Jordi A maintenance framework for the New Zealand Seafloor Community Classification
1:30 to 1:45	Stephenson, Fabrice* Accounting for different sources of uncertainty in marine ecosystem service predictions	Ross, Phil Understanding Fisheries New Zealand's science processes and opportunities to increase the impact of your research in Fisheries Management	Crockett, Vanessa Connectivity of biogenic habitats in the Hauraki Gulf Marine Park
1:45 to 2:00	Lundquist, Carolyn* Understanding sensitivity of marine spatial planning scenarios to uncertainty	Wieczorek, A. A comparison of acoustic, catch and video data to investigate grenadier abundance in the Ross Sea	Melidonis, Megan Mapping our Taonga – High biodiversity marine habitats in the Wellington region
2:00 to 2:15	Craig, Tony * Upholding the value of Pāua Quota		Oliver, Megan and Wilson, Pete Developing technical guidance for marine

			offsetting and
2 45 1 2 20			compensation in NZ
2:15 to 2:30	Bulmer, Richard*		
	Embracing uncertainty to		
	inform shellfish restoration		
	efforts		
2:30 to 3:00	Afternoon tea		
Room	RHLT1	RHLT2	RHMZ03
Session title and chair	Sustainable seas, risk and uncertainty Judi Hewitt and Joanne Ellis (*Special session sponsored by Sustainable Seas)	Tropical ecosystems Alice Rogers	Sea urchin ecology and kelp restoration Ohad Peleg
3:00 to 3:15	Hewitt, Judi* Using ecological and stressor principles to consider the success of management actions	Beese, Chelsey Small- scale habitat complexity preserves ecosystem services on coral reefs	Miller, Kelsey Large-scale kina removal: is it an effective tool for kelp forest restoration?
3:15 to 3:30	Ellis, Joanne* Risk assessment frameworks to guide ecosystem-based management	Bongaerts, Pim Reefscape genomics: leveraging 3D-imaging to assess fine-scale genomic variation on coral reefs	Shears, Nick When, where and how can sea urchin removal be used as a tool for kelp forest restoration?
3:30 to 3:45	Discussion*	Sabadel, Amandine An invitation to join our research voyage to the western South Pacific	Balemi, Celia Grazing in the dark: impacts of <i>Centrostephanus rodgersii</i> on sessile encrusting invertebrates
3:45 to 4:00			
5.45 10 4.00			

	RHLT1		
9:00 to 10:00			and microplastics on
10:00 to 10:30	Morning Tea		
Room	RHLT1	RHLT2	RHMZ03
Session title and chair	Deep sea ecosystems Ashley Rowden and Katie Bigham	Microalgal research and biological oceanography lan Blixt	Marine mammals and seabirds TBA
10:30 to 10:45	Anderson, Owen Identification of protected coral hotspots using species distribution modelling	Blixt, Ian Shedding Light on Sea Ice Microbes	Bennett, Jerusha Parasites of concern in our coastal seabirds
10:45 to 11:00	Beaumont, J Reproductive mode, larval settlement and development of a deep-sea coral, <i>Goniocorella dumosa</i>	de Verneil, Alain Upper ocean response to cyclone Fili (2022) observed by an ocean glider [rescheduled]Hayward, Alexander-Drifting through time and space: Modelling the biomass of key phytoplankton groups in the Southern Ocean-CANCELLED	Hall, Alasdair Post- earthquake reconstruction: impacts and mitigation opportunities for New Zealand pinniped population.
11:00 to 11:15	Bilewitch, Jaret Documenting protected octocoral diversity in Aotearoa New Zealand using fisheries bycatch	Sorensen, Stine Particle drift prediction tool to assist marine ecological studies	
11:15 to 11:30	Rauhina-August, Lee and Davis, Ashley Ahakoa iti te pipi o tōku kāinga, he wāiu tangata tonu: Collaboration with Tangata Whenua		Wickman, Lindsay Updated estimates of survival rate for Hector's dolphins at Banks Peninsula
		Diving health and safety Daniel McNaughtan	
11:30 to 11:45	Davis, Ashley Reconstructing last millennium marine biogeochemistry using New Zealand deep-sea black corals	Worksafe	Casano-Bally, Deborah Banned but not forgotten: Legacy contaminants in Hector's dolphin (<i>Cephalorhynchus hectori</i>) reveal no decline.

11:45 to 12:00	Sinclair, Daniel Trace Elements in Black Corals – Investigating Potential New Palaeoceanographic Proxies	Science Diving NZ	
12:00 to 1:00	Lunch		
Room	RHLT1	RHLT2	RHMZ03
Session title and chair	Deep sea ecosystems Ashley Rowden and Katie Bigham	Genetics and taxonomy Pete Ritchie	Soft sediment ecosystems and estuaries Emily Douglas
1:00 to 1:15	Bigham, Katie Kaikōura Canyon provides insights into the impact of turbidity flows on deep-sea benthic communities	Foote, Imogen Whole- genome analysis to resolve genetic structure of Antipodean and Gibson's albatross populations	Crossett, Dan Investigations into seed and shoot-based seagrass restoration in Aotearoa
1:15 to 1:30	Hale, Rachel Faunal- mediated ecosystem functioning in a benthic community recovering from severe substrate disturbance	Sweatman, Jenny Genomic diversity and connectivity of small giant clams across the Cook Islands	Lohrer, Drew Suspended sediment gradients, subtidal seafloor primary production, and macroinvertebrate community change.
1:30 to 1:45	Kaikkonen, Laura Predicting impacts of human activities on deep seafloor ecosystems with probabilistic tools	Walton, Kerry Diversity is our strength: how molluscs can reveal drivers of biodiversity	Hill-Moana, Tyla Geostatistical models to assess cockle Austrovenus stutchburyi population trends
1:45 to 2:00	Morrison, Mark Revealing the biodiversity of New Zealand's deep reefs (50– 300 metres depth)	Schnabel, Karen Twenty years on: updating the marine biota of Aotearoa New Zealand	Lam-Gordillo, Orlando Effects of multiple- stressors on New Zealand estuarine macrobenthic fauna
2:00 to 2:15	Linley, Thomas Fostering a personal connection to the deep sea.	Schnabel, Karen Twenty years on: updating the inventory of New Zealand Crustacea	De Silva, Nuwan Estuary attributes for ecosystem health in Southland Region
2:15 to 2:30	Linley, Thomas New hadal snailfish species represents an independent radiation of vertebrates into the hadal zone.		Baxter, Thomas Crab burrows mediate impacts of heating in soft sediments.

Room	RHLT1	RHLT2	RHMZ03
Session title and chair	Deep sea ecosystems Ashley Rowden and Katie Bigham	Genetics and taxonomy Pete Ritchie	Soft sediment ecosystems and estuaries Emily Douglas
3:00 to 3:15	Stewart, Andrew The world turned upside down	Che, Alexandre Assessing the release and decay of nucleic acids from Aotearoa New Zealand eels.	Crosbie, Caleb Consequences of shellfish die offs on seafloor biodiversity
3:15 to 3:30	Broadribb, Manon Temporal stability in mesophotic communities supports the Deep Reef Refuge Hypothesis	Nelson, Wendy Revealing the identity of the carrageenophyte red alga Sarcothalia radula (Gigartinaceae, Rhodophyta)	
3:45 to 4:00	Awards		
4:00 to 4:15	Conference closing with kara	akia and poroporoaki	

Poster presentations

Date/Time:	Poster session 27th June 4:00-6:00PM, and up for conference duration.
	RH Mezzanine
Poster Presenter	Poster Title
Beagley, Jackson	Characteristics and drivers of deep-water renewals in Patea/Doubtful Sound
Bennion, Matt	Understanding spatial and taxonomic gaps for the generation of robust spatial models.
Berbece, Denisa	Acclimatization and Acclimation of Coralline Algae to Ocean Acidification and Ocean Warming
Bornemann Santamaria, Laura	Interactive effects of light and temperature on growth and physiology of Fucales
Brown, J	Improving analytical methods to trace sediment sources and transport pathways
Collina, Matteo	3D Mapping and Virtual Reality as tools for underwater heritage protection
Cook, Katie	A framework for evaluating land-based cumulative effects on coastal and estuarine ecosystems
D'Archino, Roberta	Macroalgae of Rangitāhua Kermadec Islands
Delgado, Josette	Stable isotope methods development applications for ecological and palaeoclimate research
Deppeler, Stacy	Enhanced size and biovolume calculations for particle imaging instruments
Everth, Marie	DOC Marine Reserve Ranger network – Connect with us on projects and opportunities!
Finn, Carla	Developing genomic resources for selective breeding of <i>Seriola lalandi</i> (haku) to support Māori-led Aquaculture in the Bay of Plenty.
Geange, Shane	DOCs Marine Data Portal
Guo, Jinchen	Microbiome Patterns Observed among Thermally Stressed Abalone at Cook Strait, New Zealand
Hamer, Tessa	Protogynous sex change in sexually immature spotty wrasse (Notolabrus celidotus)
Howard, R	Retinal pigment migration in <i>Gonatus onyx</i> : Biological sunglasses for a deep- sea squid
Howells, Joanne	Unravelling the link between environmental factors and bacteria in bivalve mortalities
Khatoon, Anisha	Seasonal variation in vegetation and seabird abundance and diversity on Raine Island, Great Barrier Reef, Australia

Poster Presenter	Poster Title
Koch, Holly	Mechanisms regulating responses of coralline algae to climate change
Kok, Yun Yi	Love Rimurimu: Restoring Seaweed forests in Wellington Harbour.
Leunissen, Eva	Key habitats for blue cod (<i>Parapercis colias</i>) in Motunau fisheries area
Maranzana, Marina	Preliminary investigations into deep-sea squid microbiomes
Marinovich, Jessica	Snapper Snacks: Rocky reef snapper (<i>Chrysophrys auratus</i>) diet in northeastern New Zealand
Marshall, A.	Subaqueous Volcanoes: A Multidisciplinary Study of Emissions, Hazards, Deposits, and Environmental Interactions.
Mason, Josie	Contribution of subtidal kelp forests to carbon and nutrient cycling in the face of localised anthropogenic stressors
Mayer, Kathleen	Home sweet scar: <i>Centrostephanus rodgersii</i> movement and condition in invertebrate-dominated rockwall habitats
Miller, Nicole	Documenting kelp forests ecosystem shifts in Wellington Harbour
Pan, Shunqi	Centrostephanus rodgersii are not fussy eaters !
Parada, Roberto	Genetic analysis of the green-lipped mussel confirms discontinuity below the Cook Strait
Pierotti, Miriam	Ecology and resilience of the endemic New Zealand black coral Antipathella fiordensis
Pine, Matthew	Using edge machine learning for real-time monitoring of cetaceans.
Pinkerton, Matt	Satellite observations track change in New Zealand oceans and coasts
Plew, David	Sediment oxygen dynamics response to organic farm waste: A patchy footprint
Resende, Anna	Temperature and sedimentation effects on abundance, growth and diet of <i>Forsterygion lapillum</i>
Rodgers, Kirsten	Marine heatwaves devastate Durvillaea bull kelp beds
Scarrott, Jessie	Introduced Caulerpa on Aotea (Great Barrier Island), New Zealand
Sperlich, Peter	The Fiordland atmospheric CO ₂ sink is not explained by surface water uptake.
	1

Poster Presenter	Poster Title
Sterup, Kathleen	Modelling spatial and temporal trends in New Zealand coastal night-time light pollution
Tassell, Sarah	Why Voucher Specimens are Important
Wolf, Lisa	Nutritional Interactions in a Cnidarian - Phaeophycean Symbiosis
Yogesh, Nidhi	Geospatial tools to support decision-making with respect to cumulative effects
Zoura, Elianna	Benthic chambers: What's your stirrer setting?