International Congress on Biological Invasions (ICBI2023), 1-4 May 2023

Day 1. Monday 1 May 2023

15.00	Congress Registration (CHCH Town Hall Entrance Foyer)
16.30	Congress Opening (CHCH Town Hall James Hay Theatre) MC: **Manpreet Dhami** • Mihi Whakatau: **Maaka Tau** / Ngāi Tūāhuriri • Opening Comments: **Joseph Hullen** / Ngāi Tūāhuriri • Response from First Nations • Welcome from Local Organising Committee Chair: **David Teulon** • Welcome to Christchurch: Councillor **Sara Templeton** • Honorary Address by previous ICBI host: **Fang-hao Wan** • Opening of Congress by Deputy Director General Biosecurity NZ: **Stuart Anderson** (video recording)
18.15-19.00	Congress Keynote: One Biosecurity: Building better responses to biological invasions in the wake of a global pandemic **Philip Hulme** James Hay Theatre
19.00	Short address by University of Canterbury DVC: **Ian Wright** Welcome reception with refreshments (CHCH Town Hall Foyer) Welcome reception sponsor: *University of Canterbury*

Day 2. Tuesday 2 May 2023

8.00	Registration in CHCH Town Hall Foyer			
8.30-9.15	Congress Keynote: Policy co-design: opportunities, challenges and risks for community, government and industry **Ruth Wallace** *Keynote sponsor: Plant Biosecurity Research Initiative* James Hay Theatre			
	Concurrent sessions			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	One Biosecurity Chair: Andy Sheppard	Trans-national collaboration Chair: Jo Luck	Māori in biosecurity Chair: Alby Marsh *Sponsor: B3*	Coconut rhinoceros beetle Chair: Sulav Paudel *Sponsor: AgResearch*
9.30-9.50	One Biosecurity: An aquatic invasions perspective **Jonathan Bray**	Strengthening phytosanitary research programming and collaboration: from European to global phytosanitary research coordination **Baldissera Giovani**	Bringing tikanga Māori (Māori values) into biosecurity research: Te Haere huihui tahi (A journey gathering together) **Teresa Waiariki**	The long history of *Oryctes rhinoceros* (CRB) invasion into the Pacific **Trevor Jackson**
9.50-10.10	One Biosecurity approach to research prioritisation **Cassandra Edmunds**	Transdisciplinary and transbounday partnerships: New models of collaboration for management of invasive alien species **Alison Watson**	Kaitiakitanga, science and better, border biosecurity **Waipaina Awarau-Morris**	Retrospective and future directions for management of coconut rhinoceros beetle in Hawai`i **Keith Weiser**
Session	Evaluation & optimisation of biosecurity systems Chair: Greg Chandler	Trans-national collaboration Chair: Jo Luck	Māori in biosecurity Chair: Alby Marsh	Coconut rhinoceros beetle Chair: Sulav Paudel
10.10-10.30	Darwin and the exploding trousers: assessing an existential risk after two centuries of biological invasions in New Zealand **John Kean**	Enhanced Pacific Biosecurity Partnership: A programme to protect plants from invasive pests and diseases **Disna Gunawardana**	Pests and pathogens of native plants from the Pacific: what risks for New Zealand taonga? **Kiryn Dobbie**	Progress towards improving pest management strategies against *Oryctes rhinoceros*, a re-emerging invasive pest in the Pacific **Sean Marshall**
10.30-10.50	A national approach to improving integration of invasive species and wildland fire management **Stas Burgiel**	Biosecurity and Antarctica – an overview of an international effort to protect a critical environment with global significance **Rachel Innes**	Culturally directed engagement with Māori on fall armyworm in Te Tai Tokerau/Northland **Jorden Pickering**	The incursion of the coconut rhinoceros beetle (CRB) into the Pacific Region and its management efforts **Sarlesh Kumar**
10.50-11.10	Morning tea/coffee in Foyer			

	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Evaluation & optimisation of biosecurity systems Chair: Greg Chandler	Semi-autonomous platforms Chair: Leigh Tait	Indigenous responses Chair: Waata Papali'i-Smith	Coconut rhinoceros beetle Chair: Sulav Paudel
11.10-11.30	Networked socioecological models for integrating agency-led and public-led invasive species incursion responses under climate change - a regional-scale analysis of *Nassella neesiana* **Chris Buddenhagen**	Leveraging technological advances in robotics and computer vision for management of marine pests **Leigh Tait**	Taonga Māori myrtaceae threatened by Myrtle rust (*Austropuccinia psidii*) **Alby Marsh**	Coconut rhinoceros beetle in Papua New Guinea: An ongoing threat **David Tenakanai**
11.30-11.50	Predicting the invasiveness of the global pathogen genus *Phytophthora* **Treena Burgess**	Cold PAWS: Exploring the effectiveness of label-efficient deep learning approaches in biosecurity applications **Nathaniel Bloomfield**	Potential impacts on rata vines (*Metrosideros* spp.) of myrtle rust caused by *Austropuccinia psidi*i **Hone Ropata**	CRB invasion genomics for biosecurity and management strategies **Wee Tek Tay**
11.50-12.10	Developing a mathematical model to evaluate biosecurity inspection policies at the border **Chris Baker**	Using artificial intelligence to detect submerged aquatic weeds to protect Aotearoa New Zealand's waterways **Daniel Clements**	Māori inclusive research programmes lead to greater science outcomes. **Beccy Ganley**	The Pacific Ecological Security Conference Strategic Action Plan for coconut rhinoceros beetle **Phil Andreozzi**
12.10-12.30	Modelling emerging biosecurity threats: choosing complexity is not so simple **Isobel Abell**	Real-time invasive marine species detection using computer vision deployed on remotely operated vehicles **Rose Pearson**	Te Whakahononga an approach that elevates mana whenua into the biosecurity and research system **Waitangi Wood**	Discussion
12.30-13.30	Lunch in Foyer			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Evaluation & optimisation of biosecurity systems Chair: John Kean	Semi-autonomous platforms & surveillance Chair: Leigh Tait	Risk assessment Chair: Phil Hulme	Aggregating & organising knowledge Chair: Andrew Robinson
13.30-13.50	A century of weed change in New Zealand's forage seed multiplication industry **Jesse Rubenstein**	Semi-automated surveillance using image segmentation of street-level urban trees **Paul Benden**	A sentry for the flock: An intelligence approach to forecasting biosecurity **Madeline Marshall**	Leveraging biodiversity infrastructure for biosecurity surveillance and analysis **Andrew Turley**
13.50-14.10	The application of adaptive resource management to reptile eradications: A case study for achieving functional eradication of brown tree snakes **Melia Nafus**	Automatic detection of contaminants on sea container exteriors to improve detection of unwanted exotic organisms **Rhys Fitzgerald**	Employing horizon scanning to prioritize invasive alien pests with the potential to threaten agriculture, biodiversity, and forestry in Africa **Joseph Mulema** (video)	Progress of the IAS1000 Project **Bo Liu for Wanqiang Qian** (reserve)
14.10-14.30	Early detection and eradication of invasive ants via New Zealand's national invasive ant surveillance programme (NIAS) **Lora Peacock**	Ultra violet lights and molecular diagnostics for wide area surveillance of recent invasive species establishments **Steve Pawson**	Risk analysis of alien fishes invasion in inland waters of Guangxi, China **Jiayang He**	Biosecurity research portal: connecting key questions to research **Les Kneebone**

14.30-14.50	Celebrating 20-years of a national marine pest surveillance programme **Abraham Growcott**	Determination of hourly distribution of *Tuta absoluta* using sex pheromones and ultraviolet-light traps in protected tomato crops **Gui-Fen Zhang**	Advancing quantitative pre-border risk assessment frameworks for forecasting invaders and invasions **Arman Pili**	Biological invasions in Australia's forests across space, time and the biosecurity continuum **Helen Nahrung**
14.50-15.10	Forest biosecurity in New Zealand – A plantation forestry perspective **Brendan Gould**	Towards passive traps for marine pest species using novel acoustic methods **Serena Cox** (video)	How many ways are there to manage the biosecurity risks from global trade?: A Menu of Measures for effective risk reduction **Rieks van Klinken**	Asserting status to marine species in oceanic islands: native vs non-native **Manuela Parente**
15.10-15.50	Afternoon tea/coffee in Foyer			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Evaluation & optimisation of biosecurity systems Chair: John Kean	Predator eradication Chair: Dan Tompkins Session reordered	Indigenous perspectives Chair: Simon Lambert *Sponsor: Te Tira Whakamātaki*	Insect/pathogen interactions Chair: Jo Luck
15.50-16.10	A systems approach to biosecurity pays off: a case study investigating introduction pathways and interceptions of non-indigenous species at a biosecurity border **Barbara Kachigunda**	Predator Free from mountains to sea **Melissa Brignall-Theyer**	Engaging with and learning from how Indigenous Rangers contribute to biosecurity in Northern Australian **Renae Todd**	From red-listed to rogue: current research on the biology and management of the native planthopper *Pentastiridius leporinus* that became an invasive vector of a new sugar beet disease syndrome **Michael Rostas**
16.10-16.30	Development of an integrated island biosecurity framework **Yang Liu**	The global contribution of invasive vertebrate eradication as a key island restoration tool **James Russell**	Indigenous perspectives and experiences of biological invasions **Simon Lambert**	The invasive plant virus (Tomato spotted wilt orthotospovirus) benefits its vector, the invasive *Frankliniella occidentalis*, due to metabolite re-arrangement in the host plant **Zhijun Zhang**
16.30-16.50	Optimal post-border surveillance against invasive pests to protect a valuable nature reserve and island asset **Tom Kompas**	How can we get people to care about invasive species management? Insights from recent social research in Australia **James Trezise**	The secret sauce in the fight against predators is Indigenous knowledge: how government and research can support, not capture **Tame Malcolm**	Suppression of vector immune response promotes the global invasion of tomato yellow leaf curl virus **Xiao-Wei Wang**
16.50-17.10	Valuing the biosecurity system – measuring the costs of invasives **Michael Ormsby**	Involving island communities in biosecurity – What will it take to keep our inhabited islands pest free? **Julie Alach**	Lessons learned from Indigenous communities who are protecting spaces and places of importance from biological invasions **Micheal Heimlick**	Preparing for a *Xylella* incursion: Presence and movement of spittlebugs in New Zealand landscapes **Jessica Vereijssen**
17.10-17.30	The value of New Zealand's biosecurity system **Julia Polak**	Tooling up for predator eradication **Olivia Rothwell**	Its our future: taking action to protect our environment and our communities, whilst driving innovative technologies **Marcus-Rongowhitiao Shadbolt**	Chemical communications mediates symbiosis invasion among pinewood nematodes, its vector beetle, associated microbes and pine trees **Lilin Zhao**

17.30-17.50	Prospect study for wild fishery or culture of non-native crustaceans **Yvonne Matthews**	The breakthrough science needed for Predator Free 2050 success **Dan Tompkins**	Remembering our future in order to protect the living web of the world **Melanie Mark-Shadbolt**	The immune homeostasis between pinewood nematodes and its vector beetle **Jiao Zhou**
18.15	Poster session (refreshments) CHCH Town Hall Foyer Entertainment: Music by *Ngā Reo Tīoriori* Poster abstracts can be found at bit.ly/3zyKYIM or by scanning the QR code Full link: https://www.scienceevents.co.nz/icbi2023/image/icbi-posters.pdf			

Day 3. Wednesday 3 May 2023

8.00	Registration in CHCH Town Hall Foyer			
8.30-9.15	Congress Keynote: Documenting and predicting future risk of biological invasions **Helen Roy** James Hay Theatre			
	Concurrent sessions			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Climate change Chair: Jessica Vereijssen *Sponsor: B3*	Quarantine treatments Chair: Kambiz Esfandi *Sponsor: B3*	Genomic mechanisms of invasion success Chair: Ang McGaughran	Behaviour change Chair: Susanna Finlay-Smits *Sponsor: Horticulture NZ*
9.20-9.50 **Session Keynote**	Response of invasive species to climate change and implications in agriculture and horticulture **Chun-Sen Ma**	Choosing the best stress: Using insect physiology to inform quarantine treatments and limit invasions **Leigh Boardman**	Genomic basis of adaptation in an invasive sea squirt (*Styela clava*) **Bo Dong**	Biosecurity and the Australian citrus industry: working across stakeholders to plant seeds of resilience **Jessica Lye**
9.50-10.10	Range reshuffling: climate change, invasive conifers, and the future of beech forests in Aotearoa New Zealand **Matt Larcombe**	Egg morphology of key insect pests as related to fumigation efficacy **Spencer Walse**	A new model system for investigating the key predictors of invasion success **Ang McGaughran**	The team of 4.7 million? Biosecurity perceptions and practices in and around the Port of Tauranga **Susanna Finlay-Smits**
10.10-10.30	Integrating biogeographic approach into the early warning and classical biological control of ragweeds (*Ambrosia* L.) under climate change **Haoxiang Zhao**	Heat stress responses of insects and their life stages: Implications for quarantine treatments and predictive models **Kambiz Esfandi**	Population genomics of invasive lantana and implications for improved biological control **Patricia Lu-Irving**	Funding biosecurity systems efficiently, fairly and sustainably **Susan Hester**
10.30-10.50	On the incorporation of insects' mitigation responses to climate change into prediction models **Gang Ma**	X-ray technology as a biosecurity treatment for New Zealand: current use, prospects & potential **Lisa Jamieson**	Genomic signals of local adaptation across the invasive ranges of the Queensland fruit fly, *Bactrocera tryoni* **Eli Parvizi**	Biosecurity alerts - early detection via Australia's largest biodiversity data infrastructure **Erin Roger**
10.50-11.10	Morning tea/coffee in Foyer			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Climate change Chair: Jessica Vereijssen	Quarantine treatments (KE) Chair: Kambiz Esfandi	Applying molecular tools Chair: Ang McGaughran	Building social partnerships Chair: Susanna Finlay-Smits
11.10-11.30	*Phytophthora cinnamomi* in a changing climate **Leann Vinson**	Development of the Comet Assay for diagnosis of irradiated insects and fruit in the phytosanitary treatments used to prevent establishment of exotic invasive species **Ela Hiszczynska-Sawicka**	Retracing the world-wide invasion of the pine bark beetle *Hylurgus ligniperda* **Eckehard Brockerhoff**	Developing a biosecurity system tool that encourages and supports inclusive, equitable and regenerative practices **Will Allen**

11.30-11.50	Prediction of the current and future distributions of the Hessian fly, *Mayetiola destructor*, under climatic change in the world **Hao Zhang**	Reducing risks on root crops from Pacific Island nations **Allan Woolf**	Giant African snail genomes provide insights into molluscan whole genome duplication (WGD) and aquatic-terrestrial transition **Conghui Liu**	Shared responsibility for biosecurity: Organisational challenges and opportunities **Vaughan Higgins**
11.50-12.10	Climate change will increase the global risk of Tephritidae pests **Yuan Zhang**	Exploring pest mitigation research and management associated with wood packaging in the international supply chain: what and where are the weak links? **Leigh Greenwood**	Components of *Sirex noctilio* and *Sirex nitobei* venoms and their parasitic nematodes **Zhengtong Wang**	Aotearoa New Zealand's Biosecurity System for the future **Ursula Torres**
12.10-12.30	Pre-adaptation to novel climates facilitates invasion of globally widespread weeds in New Zealand **Thomas Carlin**	From studies to applications: the development of invasion mechanism and key phytosanitary technology on agricultural insect pests in China **Zhihong Li**	Gene editing takes on the Spotted Wing Drosophila invasion **Ying Yan**	Enabling large scale community surveillance and action on invasive species **Andreas Glanznig**
12.30-13.30	Lunch in Foyer Early career and student only lunch with Congress Keynotes Convenor: **Maddie Marshall** Avon Room (collect food from Foyer)			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Adapting to climate Chair: Mark Bullians	Pacific biosecurity Chair: Mikayla Hyland-Wood *Session sponsor: Australian Centre for International Agricultural Research*	Applying molecular tools Chair: Henry Lane	Building social partnerships Chair: Andrew Robinson
13.30-13.50	Biosecurity challenges for New Zealand's activities in Antarctica **Rachel Innes** (reserve)	Strengthening Biosecurity in Hawaii and the Pacific **Leyla Kaufman**	MicroRNA regulation of distinct gene expression responses to thermal acclimation in Oriental fruit fly, *Bactrocera dorsalis* **Yan Zhao**	Co-designing UAV technologies and operational protocols for biosecurity: transdisciplinary approaches in biosecurity technology design **Andrea Grant**
13.50-14.10	**Withdrawn**	25 years of invasive alien species management in the islands of French Polynesia (South Pacific): successes…and failures **Jean-Yves Meyer**	ICE1 -demethylation mitigated cold-tolerance drives range expansion of *Ageratum conyzoide* in China **Xin Zhou**	Integrated Landscape Management for sustainable control of invasive non-native plants **Hariet Hinz**
14.10-14.30	Niche shifts and range expansions after the invasions of two major pests: Asian longhorned beetle and citrus longhorned beetle **Yuting Zhou**	Developing a biosecurity plan for the Papua New Guinea coconut industry **Sivapragasam Annamalai**	Comparative biochemical and transcriptome analyses in tomato and eggplant reveal their differential responses to *Tuta absoluta* infestation determines the host fitness of pests **Limin Chen for Youming Hou**	The complexity of biosecurity in aquaculture in New Zealand **Anjali Pande**

14.30-14.50	Temperature adaptation of the South American tomato pinworm, *Tuta absoluta*, a newly invaded pest in China **Xiao-wei Li**	New marine biosecurity toolkit for Pacific Island countries and territories **Kimberley Seaward**	Implementing molecular surveys for marine pests: addressing doubt **Marty Deveney**	What makes a good risk-based decision in biosecurity? **Melanie Newfield**
14.50-15.10	Disease climatic risk model interpretations at multiple spatial scales **Rebecca Campbell**	Addressing the threat of invasive species to deliver a resilient Pacific **Richard Griffiths**	Across land, islands, and sea: the power of metabarcoding for multiple biosecurity industries, targets, and environments **Francesco Martoni**	Russell lupin - a beautiful but harmful species; Harnessing the power of the tourism industry in the management of invasive weeds **Brent Lovelock**
15.10-15.50	Afternoon tea/coffee in Foyer			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Optimising biological control Chair: Barbara Barratt	Pacific biosecurity Chair: Mikayla Hyland-Wood	Improved diagnostics Chair: Marty Deveney	Building social partnerships Chair: Andrew Robinson
15.50-16.10	Biological control programmes for the global invader *Drosophila suzukii*, Spotted-wing Drosophila **Judith Stahl**	When will it end? On-going introduction of FAW and a lesson for a better Indo-Pacific biosecurity **Wee Tek Tay** (reserve)	Development of a LAMP method for the rapid detection of Hessian fly for quarantine and field application **Qi Ma**	Integrating biosecurity into the tourist experience: Prospects and issues **Kevin Moore**
16.10-16.30	The nectar resource plant buckwheat enhances the potential of the parasitoid *Eretmocerus hayati* in the augmentative biocontrol of the whitefly *Bemisia tabaci* **Yin-Quan Liu**	Policy development for biofouling management in the Pacific region. The GloFouling Partnerships initiative **Mohammed Zullah**	Rapid and accurate diagnostics of invasive species using CRISPR/Cas12a technology **Xiaoping Hu**	Elaborating on invasive species management: The influence of increasingly engaging communication on management acceptance **Ingrid Schneider**
16.30-16.50	The inducement and cytological mechanism of thelytoky and the comparative biological control potential of two strains of *Diglyphus wani* **Weijie Wan**	Enhancing biosecurity to sustain eradication outcomes in Palau **Loyola Darius**	Diagnostic test performance of visual assessment & soil bioassay for *Phytophthora agathidicida* to improve survey design & interpretation for kauri dieback in *Agathis australis* using Bayesian latent class analysis **Karyn Froud**	**** 1080 - Whanganui Pig Hunters and their thoughts about the use of 1080 **Claire Dowsett**
16.50-17.10	Pre-emptive classical biological control: a novel approach to increase preparedness for potential biosecurity threats **Gonzalo Avila**	Working towards strengthening the biosecurity capability in the Cook Islands **Pavai Taramai**	Growing rust fungi on artificial substrates – A step closer to studying infection in the laboratory without the use of plants **Sarah Sale**	Working together to address invasive species on islands **Salit Kark**
17.10-17.30	Using the PRONTI tool to select non-target scale species for prey-range testing with *Neoleucopis* n. sp. B **Jacqui Todd**	Natural Enemies – Natural Solutions for Invasive Weeds in the Pacific **Chris McGrannachan**	Rapid fingerprinting metabolomics: a new complementary tool for biosecurity and quarantine diagnostics **Alastair Ross**	Indigenous-led approaches to design and deliver effective biosecurity and invasive species management systems in Northern Australia **Andy Sheppard**
18.45	Congress dinner Dinner sponsor: *Murdoch University / Harry Butler Institute* Entertainment: Music by *Mirrors* Venue: Te Pae, Christchurch Convention Centre			

Day 4. Thursday 4 May 2023

8.00	Registration in CHCH Town Hall Foyer			
8.30-9.15	Congress Keynote: Parasites as lost baggage and unwelcome hitch hikers **Kevin Lafferty** James Hay Theatre			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Fall armyworm Chair: Scott Hardwick *Sponsor: Foundation for Arable Research*	Brown marmorated stink bug Chair: Lloyd Stringer *Sponsors: NZ horticultural industries*	*Ceratocystis* & Rapid 'Ōhi'a Death Chair: Virginia Maronni *Sponsor: Kiwifruit Vine Health*	New control technologies Chair: Grant Smith *Sponsor: Plant & Food Research*
9.20-9.50 **Session Keynote**	The ongoing challenge of managing fall armyworm: a west Australian perspective **Helen Spafford**	Brown marmorated stink bug biosurveillance, management & biological control: Progress made in managing this invasive pest & continued knowledge gaps **Tracy Leskey**	*Ceratocystis* diseases rising in South Africa – and elsewhere in the world **Irene Barnes**	Double-stranded RNA as a novel control for myrtle rust **Anne Sawyer**
9.50-10.10	Refined forecasting capabilities to diagnose trans-Tasman dispersal within Aotearoa/New Zealand, dispersal of fall army worm **Richard Turner**	3D-printing of the brown marmorated stink bug for community engagement **Joel Tregurtha**	Rapid 'Ōhi'a Death: Ongoing research to protect native forests in Hawai'i and the Pacific **Lisa Keith**	Next-generation and highly targeted pest control: using dsRNA for varroa mite control in beehives **Phil Lester**
10.10-10.30	Where in New Zealand can fall armyworm survive winter? **Craig Phillips**	Biological control research of *Halyomorpha halys* in kiwifruit in China **Jin-Ping Zhang**	Hawaiian forest mortality trajectories associated with Ceratocystis wilt of 'ōhi'a **Ryan Perroy**	Characterisation of the epiphytic microbiome of myrtaceous species and implications for infection by *Austropuccinia psidii* **Hayley Ridgway**
10.30-10.50	A cooperative response to fall armyworm in New Zealand: government and Industry working together **Scott Hardwick**	Inside the BMSB gut – biosecurity measures and pest management potential **Chandan Pal**	Mapping pan-Pacific distributions of *Metrosideros* species as potential *Ceratocystis* hosts: a fuzzy geographic approach given occurrence data uncertainty **Thomas Etherington**	A Māori perspective on new technologies for invasive species control, and their potential application on our whenua (lands) **Melanie Mark-Shadbolt**
10.50-11.10	Morning tea/coffee in Foyer			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Fall armyworm Chair: Scott Hardwick	Brown marmorated stink bug Chair: Lloyd Stringer	*Ceratocystis* & Rapid 'Ōhi'a Death Chair: Virginia Maronni	New control technologies Chair: Deborah Hofstra
11.10-11.30	Bacterial community structure in *Spodoptera frugiperda* and the prevalence of the endosymbiont *Wolbachia* **Yuan Liu**	The tunnel trap: Aerodynamic design principles for improved brown marmorated stink bug trapping **Rachael Horner**	Survey and monitoring techniques of 'Ōhi'a impacted by Ceratocystis wilt **Dustin Swan / Kepano Carvalho**	RNAi prospects to control invasive Ant species in Australia **Amol Ghodke**

11.30-11.50	A potential parasitoid *Microplitis prodeniae* with effective control of *Spodoptera frugiperda* larvae **Yaru Wang**	New Zealand's contribution to a global solution: collaborative research approaches to developing new tools for managing brown marmorated stink bug **Lloyd Stringer**	An extension program to protect forest health in Hawai'i **James Friday**	Delimitation and response to a novel marine pest incursion on Aotea/Great Barrier Island, New Zealand **Irene Middleton**
11.50-12.10	Development projects in SE Asia support biosecurity incursion responses and management of potential invasive insect pests in New Zealand and PICTs **Graham Walker**	A novel approach for assessing human-assisted spotted lanternfly dispersal on vehicles **Tracy Leskey** (reserve)	Haumana speak for 'Ōhi'a lehua and manu of the forest-engaging students to participate in Hawai'i's legislature to advocate for native species conservation **Kailee Lefebvre**	Technologies and tools for marine invasion control – innovation to underpin vector management, establishment prevention, and eradication **Patrick Cahill**
12.10-12.30	Including climate change impacts posed on ecological niche overlap of three Spodoptera species in China maize planting areas **Yanling Xu**	Modelling the potential for a gene drive to eradicate or suppress the invasive common wasp (*Vespula vulgaris* L.) in New Zealand **John Kean** (reserve)	Assessing the risk of establishment of rapid 'ōhi 'a death: using knowledge of *Ceratocystis* species already in New Zealand **Luna Hasna**	Potential dissolved oxygen impacts from hessian benthic barriers smothering *Lagarosiphon major* **Iñigo Zabarte-Maeztu**
12.30-13.30	Lunch in Foyer			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Environmental impacts Chair: Murray Fea	Understanding invasion processes Chair: Dan Tomkins	Pathway risk Chair: Graeme Inglis	Animal pathogens Chair: Axel Heiser Session sponsor: AgResearch Session reordered
13.30-13.50	Establishing a health baseline of the culturally significant bivalve pipi (*Paphies australis*) from Aotearoa New Zealand to improve disease investigations **Joanne Howells**	Global macroecology of historical insect invasions **Andrew Liebhold**	The threat of *Ceratocystis* species to the New Zealand Kiwifruit industry **Matt Dyck**	*Mycoplasma bovis*, past, present, future **Grant Matthews**
13.50-14.10	New Zealand's largest aquaculture export, green-lipped mussels, and an aquatic parasite *Perkinsus olseni*: An incidental or emerging relationship? **Henry Lane**	Exploring the behavioural mechanism for successful cryptic invasion of the black cocoa ant, *Dolichoderus thoracicus*, in Taiwan **Feng-Chuan Hsu**	Evaluation of the likelihood of establishing false codling moth (*Thaumatotibia leucotreta*) in Australia via the international cut flower market **Xingyu Li**	Mycoplasma bovis, past, present, future - continued **Grant Matthews**
14.10-14.30	How do plant communities respond following the removal of a landscape invader? **Elise Arnst**	Local and landscape-scale drivers of non-native plant richness and cover in New Zealand native shrublands **Laureline Rossignaud**	Vector ecology and management to combat disease spread in aquaculture **Bailey Lovett**	An interface between Government and the private veterinary profession. Lessons from the *Mycoplasma bovis* eradication programme in New Zealand **Richard Campbell**
14.30-14.50	Invasive weeds can disrupt chemical communication between native plants and insects **Andrea Clavijo McCormick**	Exploring the two-way relationships between fire and two Australian fire-adapted plant invaders to support ecosystem management **Joaquim Silva**	Developing the evidence base for effective biosecurity of aquatic invaders within raw water transfers **Zoe Cole**	Use of Whole Genome Sequencing (WGS) for improving understanding of linkages between livestock and wildlife *Mycobacterium bovis* infection in New Zealand **Marian Price-Carter**

14.50-15.10	Cage closed: the effects of introduced herbivores in forest regeneration in Isla de los Estados, Argentina **Amira Salom**	Host plant adaptation mechanisms of the South American tomato pinworm, *Tuta absoluta* **Yaobin Lu** (repositioned)	Is this "low risk" pathway truly low risk? A risk-based sampling approach **Thao Le**	Proteomic profiling of small extracellular vesicles isolated from an in vitro cell culture bioreactor simulating *Mycoplasma bovis* infection **Axel Heiser**
15.10-15.50	Afternoon tea/coffee in Foyer			
	James Hay Theatre	*Limes Room*	*Avon Room*	*Victoria Room*
Session	Environmental impacts Chair: Murray Fea	Understanding invasion processes Chair: Dan Tomkins	Pathway risk Chair: Graeme Inglis	Animal pathogens Chair: Axel Heiser
15.50-16.10	Species and distribution of exotic fishes invasion in inland waters of Guangxi **Hao Liu**	The mechanism of polyploidy-enhanced photosynthetic capacity endowing *Solidago canadensis* L. with heat tolerance **Zhongsai Tian**	Biosecurity and pathways into Aotearoa New Zealand: relating biosecurity detections to tourism **Andrew Robinson**	Bovine tuberculosis, an old problem that has relevance to emerging animal disease **Natalie Parlane**
16.10-16.30	Predation by invasive portunid crabs on functionally and culturally important bivalves in New Zealand **Michal Ferries**	Construction sand trade network topology shapes the patchy distribution pattern of an invasive plant, *Flaveria bidentis* **Rui Wang**	Biosecurity: A Systems Perspective, a new book on effective management across the biosecurity continuum **Sana Bau**	Enhancing Animal Health and Biosecurity through partnership in the Pacific region **Oliver Quinn**
16.30-16.50	Assessing the effect of Amazonian catfish (*Pterygoplicthyes* sp.) on the growth of the Indian major carps: a mesocosm-based study **Suman Mallick** (video)	Changing gut bacteria diversity using antibiotic suppressed the reproduction of *Bactrocera dorsalis* **Lijun Liu**	Anthropogenic risk pathways for marine disease in New Zealand **Anca Hanea**	Development of RPA based advanced molecular diagnostics assays with potential for in-field applications **Sandeep Gupta**
17.00	Student presentation & poster prizes. Convenor: **Hayley Ridgway** Student prize sponsors: *NZ Biological Heritage NSC, NZ Plant Protection Society, Manaaki Whenua Landcare Research* Next Congress Closing remarks			
18.30 19.00	Better Border Biosecurity (B3) Pre-dinner drinks – Foyer Better Border Biosecurity (B3) Dinner - Avon Room			