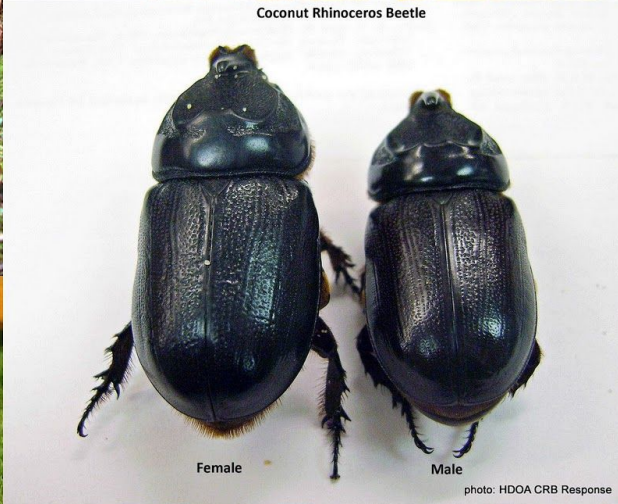


Biosecurity Journey

Hawai`i Conservation Conference 2017



Why Biosecurity?

As stated in the Biosecurity Journey of the IUCN's World Conservation Conference, held here last September: *"As global transportation networks expand and shift, invasive species have become a primary threat to ecosystem integrity and a leading cause of decline in biodiversity and ecosystem services. Due to their unique species assemblages, island systems like Hawaii are at the forefront of the invasive species issue, both in terms of experiencing the negative impacts of invasives as well as developing innovative tools and processes to minimize these impacts. We use the term **biosecurity** to encompass the set of pre-border, border, and post-border actions and policies utilized to minimize the impacts of invasive species on natural resources, agriculture, economy, human health and culture."*

Biosecurity in Hawai`i: Lighting the Path for Future Generations

Join us in exploring the challenges, opportunities and other issues surrounding the theme of Biosecurity in Hawai`i with some of Hawai`i's leaders in biosecurity planning, policy, research and day-to-day operations in the Forums and Session presentations listed in the schedule below:

Schedule of Biosecurity Events

Forum: The Mālama Honua Worldwide Voyage's Promise to Pae'Āina o Hawai'i

Tuesday, July 18th, 2017, 10:30am - 12:00pm

311 Pavilion

1-1 The Mālama Honua Worldwide Voyage's Promise to Pae'Āina o Hawai'i

4 Eric Co^{*1,2}, Eva Schemmel^{*3}, Manuel Mejia^{4,1}, Jean Tanimoto⁵, Elia Herman⁶, Kevin Chang⁷, Elizabeth Fischer⁷

¹Polynesian Voyaging Society, USA, ²Harold KL Castle Foundation, USA,

³Conservation International, USA, ⁴The Nature Conservancy, USA, ⁵NOAA Office

for Coastal Management, USA, ⁶Department of Land and Natural Resources, USA,

⁷Kuaaina Ulu Auamo, USA, ⁸U.S. Department of Transportation Federal Highway Administration, USA

Session: Nā Meaulu Kāhihi 'Āina - Invasive Plants

Tuesday, July 18th, 2017, 10:30am - 12:00pm

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- 1-8 Where Are They Now? Keeping Track of Hawai'i's Invasive Plants and New Introductions
Jacob Gross*, Alison Ainsworth
NPS Inventory & Monitoring, USA
- 1-9 The Bedrocks of Botany: Using Herbaria to Inform Early Detection and Prioritization of Invasive Plants in Hawai'i
Kelsey Brock
Kauai Invasive Species Committee, USA
- 1-1 Proving Utility of an Innovative Technology through Action Research in Invasive Plant Species Management
James Leary^{*1}, Brooke Mahnken², Chris Wada³, Kimberly Burnett³
¹Department of Natural Resources and Environmental Management, University of Hawaii at Manoa, USA, ²Maui Invasive Species Committee, University of Hawaii at Manoa, USA, ³University of Hawaii Economic Research Organization, University of Hawaii at Manoa, USA
- 1-1 Living Shorelines of Change in Hawaiian Estuaries
1 Kimberly Peyton^{*1}, Troy Sakihara²
¹DLNR DAR, USA, ²DLNR DAR, USA
- 1-1 Albizia Biological Control - the First Steps
2 Kenneth Puliafico^{*1}, Tracy Johnson¹, Purnama Hidayat², Audrey Leatemia³, Warea Orapa⁴, Yendra Prarama², Sri Rahayu⁵
¹US Forest Service - IPIF, USA, ²Bogor Agricultural University, Indonesia, ³Pattimura University, Indonesia, ⁴National Agricultural Quarantine Inspection Authority, Papua New Guinea, ⁵Universitas Gadjah Mada, Indonesia
- 1-1 Impacts of Non-native Ungulate Removal on Fuel Loading and Wildfire in Insular Terrestrial Ecosystems
3 Timothy Zhu^{*1}, Creighton Litton¹, Christian Giardina^{*2}
¹University of Hawaii-Manoa, USA, ²Institute of Pacific Islands Forestry, USA

Session: Ka Pale Ola Pae'āina - Biosecurity

Tuesday, July 18th, 2017, 1:00PM - 3:00PM

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- 2-2 Hawaii's Interagency Biosecurity Plan 2017-2027: Pivoting from Planning to Implementation
Joshua Atwood
Hawaii Invasive Species Council, USA
- 2-3 What Biosecurity Risk Assessment Tools are Being Considered for Aquatic Invasive Stowaways in Ballast Tanks and Attached to Ship Hulls?
Brett Higgins^{*1,2}, Julie Kuo¹
¹*Department of Land and Natural Resources (Division of Aquatic Resources), USA*, ²*KUPU, USA*,
³*AmeriCorps, USA*, ⁴*HISC, USA*, ⁵*USFWS, USA*, ⁶*PCSU, USA*
- 2-4 Vessel Biofouling: International Ocean Law and Hawaii's Fight Against Aquatic Invasive Species
Andrew Porter
Coordinating Group on Alien Pest Species, USA
- 2-5 E-manifesting and Inspection Facilities: Increasing Efficiency Through Risk-Based Inspections
Jonathan Ho
Hawaii Department of Agriculture Plant Quarantine Branch, USA
- 2-6 Researching the Efficacy and Efficiency of a Low-cost and Lay-tech, Small Unmanned Aerial System for Detecting Multiple Invasive Species Targets
Timo Sullivan^{1,2}
¹*BIISC, USA*, ²*UH Hilo, TCBS, USA*
- 2-7 Integrating global and regional species distribution models to improve biosecurity and invasive species management in Hawai'i
Lauren Kaiser^{*1}, Lucas Fortini^{2,3}, Jim Jacobi², Adam Vorsino⁴
¹*HCSU, USA*, ²*USGS Pacific Island Ecosystems Research Center, USA*, ³*Pacific Islands Climate Change Cooperative, USA*, ⁴*US FWS, Strategic Habitat Conservation Division, Pacific Islands Office, USA*
- 2-8 Responding Hard and Fast On Soft Money, Or, How Stable Relationships Killed the Drama and 10,000 Invasive Plants
Springer Kaye^{*1}, Flint Hughes²
¹*Big Island Invasive Species Committee, Pacific Cooperative Studies Unit, University of Hawaii, Manoa, USA*, ²*Institute for Pacific Islands Forestry, USDA Forest Service, USA*
- 2-9 Steps to Control Mosquito-Vectored Avian Diseases in Hawaii
Jolene Sutton
University of Hawai'i at Mānoa, USA

Lunch Session: Rapid 'Ōhi'a Death

Wednesday, July 19th, 2017, 12:00pm - 1:00pm

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Chair: Ric Lopez

Symposium: Pathology, Genetics, and Biology of Rapid 'Ōhi'a Death

Wednesday, July 19th, 2017, 1:00pm - 2:00pm

316 B/C

5-1 Introduction and overview of Rapid 'Ōhi'a Death

James Friday

University of Hawai'i at Mānoa College of Tropical Agriculture and Human Resources, Cooperative Extension Service, USA

5-2 Two New Pathogenic Fungi as the Cause of Rapid 'Ōhi'a Death

Lisa Keith^{*1}, Lionel Sugiyama¹, Flint Hughes², JB Friday³

¹USDA ARS, USA, ²USDA FS, USA, ³University of Hawaii at Manoa Cooperative Extension, USA

5-3 Infection biology of the *Ceratocystis* fungi involved in Rapid 'Ōhi'a Death: Growth, Morphology, and Differential Host Resistance

Marc Hughes^{*1,2}, Blaine Luiz^{*3,2}, Lisa Keith², J.B. Friday¹, Elizabeth Stacy⁵, Flint Hughes⁴, Patrick Hart³, Rebecca Ostertag³

¹University of Hawai'i at Manoa, College of Tropical Agriculture and Human Resources, USA, ²USDA ARS Daniel K. Inouye Pacific Basin Agriculture Research Center, USA, ³University of Hawai'i Hilo, Tropical Conservation Biology and Environmental Science, USA, ⁴US Forest Service, Institute of Pacific Island Forestry, USA, ⁵University of Las Vegas, USA

5-4 Molecular detection of *Ceratocystis* species infecting 'ōhi'a:

Wade Heller^{*1}, Carter Atkinson^{*3}, Lisa Keith², William Watcher-Weatherwax⁴, Kylene Roy³

¹University of Hawai'i at Manoa, College of Tropical Agriculture and Human Resources, USA, ²USDA-ARS, Daniel K. Inouye U.S. Pacific Basin Agricultural Research Center, USA, ³U.S. Geological Survey, USA, ⁴Hawaii Cooperative Studies Unit, University of Hawai'i at Hilo, USA

Symposium: Ecology and management of Rapid 'Ōhi'a Death

Wednesday, July 19th, 2017, 2:00pm - 3:00pm

316 B/C

5-2 Role of insects in transmitting Rapid 'Ōhi'a Death

4 Curtis Ewing^{*1}, Gordon Bennett^{*2}

¹UH Manoa, Plant and Environmental Protection Sciences, USA, ²UH Manoa, Plant and Environmental Protection Sciences, USA

5-2 Influences of Rapid 'Ōhi'a Death on the current and future status of Hawaii's 'Ōhi'a forests.

5 R. Flint Hughes^{*1}, Travis Sowards¹, James B. Friday³, Leif Mortensen⁴, Lisa Keith²

¹USDA Forest Service, USA, ²USDA Agricultural Research Service, USA, ³University of Hawaii at Manoa, USA, ⁴USDA Forest Service, USA

5-2 Management of Forests Affected by Rapid 'Ōhi'a Death

6 Steven Bergfeld^{*1}, William Buckley^{*2}, Springer Kaye²

¹Hawai'i Division of Forestry and Wildlife, USA, ²Big Island Invasive Species Committee, Pacific Cooperative Studies Unit, University of Hawaii, Manoa, USA

5-2 Fostering Partnerships to Balance Science, Culture, and Urgency in Rapid 'Ōhi'a Death Outreach -It's a

7 Kākou Effort

Corie Yanger^{*1}, Anya Tagawa², Christy Martin³, Ardena Saarinen⁴, Kainana Francisco⁵, Evelyn Wight⁶, J.B. Friday¹

¹University of Hawaii-College of Tropical Agriculture and Human Resources, Cooperative Extension Service, USA, ²Department of Land and Natural Resources -Natural Area Reserves System, USA, ³Coordinating Group on Alien Pest Species, USA, ⁴KUPU Americorps -USDA Forest Service, USA, ⁵USDA Forest Service, USA, ⁶The Nature Conservancy-Hawaii, USA

Symposium: Hawaii's Feral Cats Session 1: The Impact of Feral Cats on Hawaii's Native Fauna and Challenges for Management

Wednesday, July 19th, 2017, 2:00pm - 3:00pm

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5-20 The Impact Feral Cats on Endangered Seabirds on Kaua'i and the Challenges for Managing the Threat

Andre Raine^{*1}, Kyle Pias^{2,3}, Alexandria Dutcher^{2,3}

¹Kauai Endangered Seabird Recovery Project, USA, ²NEPM, USA, ³Hono O Na Pali Seabird Mitigation Project, USA

5-21 Toxoplasma gondii Infections in Hawaii's Marine Mammals

Michelle Barbieri^{*1}, Charles Littnan¹, Kristi West², Angela Amlin³

¹National Oceanic and Atmospheric Administration, Pacific Islands Fisheries Science Center, Protected Species Division, Hawaiian Monk Seal Research Program, USA, ²University of Hawaii at Manoa, Hawaii Institute of Marine Biology, USA, ³National Oceanic and Atmospheric Administration, Pacific Islands Regional Office, Protected Resources Division, USA

5-22 Toxoplasma Gondii in Hawai'i Kills Native Birds and is Widespread

Thierry Work

USGS-NWHC-HFS, USA

5-23 Free-roaming Outdoor Cats as a Human-made Species and the Challenge of Integrating Conflicting Stakeholder Views Into Effective Management Policy

Kirsten Leong^{*1}, Chris Lepczyk²

¹NOAA Fisheries, USA, ²Auburn University, USA

Forum: Hawaii's feral cats session 2 panel discussion: What are pathways for success in effectively managing Hawaii's feral cat dilemma?

Wednesday, July 19th, 2017, 3:15pm - 5:15pm

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Chair: Peter Adler

6-1 Hawaii's Feral Cats Session 2 - Panel Discussion: What are pathways for success in effectively managing Hawaii's feral cat dilemma?

2

Chris Lepczyk^{*1}, Grant Sizemore^{*2}, Kate Atema³, Kirsten Leong⁴, Joshua Atwood⁵, Pam Burns⁶, Justin Gruenstein⁷

¹Auburn University, USA, ²American Bird Conservancy, USA, ³International Fund for Animal Welfare, USA, ⁴NOAA, -, ⁵DLNR, USA, ⁶Hawaiian Humane Society, USA, ⁷City and County of Honolulu, USA

Forum: IUCN World Conservation Congress legacy: Lasting outcomes & next steps for Hawai'i

Thursday, July 20th, 2017, 11:00 AM - 12:00 PM

316 B/C

7- IUCN World Conservation Congress Legacy: Lasting Outcomes & Next Steps for Hawai'i

1 Celeste Connors^{*1,3}, Neil Hannahs^{*5,3}, Chipper Wichman^{4,2}, John DeFries^{6,2}

¹Hawaii Green Growth, USA, ²IUCN National Host Committee, USA, ³IUCN National Legacy Committee, USA,

⁴National Tropical Botanical Gardens, USA, ⁵Hookele Strategies, USA, ⁶Native Sun Business Group Inc, USA

Session: Nā Meahulu 'Ae'a - Invasive Animals

Thursday, July 20th, 2017, 1:00pm - 3:00pm

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8-2 Evaluating the Airsoft Electric Gun for Control of Invasive Reptiles: Ballistic Tests and Impact on Brown Treesnakes

Adam Knox^{*1,3}, Bjorn Lardner², Amy Yackel Adams³, Robert Reed³

¹Maui Invasive Species Committee, USA, ²Department of Fish, Wildlife, and Conservation Biology, Colorado State University, USA, ³US Geological Survey, Fort Collins Science Center, USA

8-3 Manipulating Soil Nutrient Availability to Promote Native Species Following Nonnative Ungulate Removal

Creighton Litton¹, Amanda Knauf¹, Rebecca Cole¹, Jed Sparks^{*2}, Christian Giardina³

¹Department of Natural Resources and Environmental Management, University of Hawaii at Manoa, USA, ²Department of Ecology and Evolutionary Biology, Cornell University, USA, ³Institute of Pacific Islands Forestry, USDA Forest Service, USA

8-4 Predator Control in The Nature Conservancy's Waikamoi Preserve

Laura Berthold^{*1,2}, Chris Warren^{*1,2}, Hanna Mounce^{1,2}, Alison Cohan³

¹Maui Forest Bird Recovery Project, USA, ²Pacific Cooperative Studies Unit, USA, ³The Nature Conservancy, USA

Research and development track toward a toxic bait for management of invasive small Indian mongooses: current work and future needs

Cynthia Payne^{*1}, Robert Sugihara¹, Are Berentsen², Shane Siers¹, William Pitt³

¹USDA APHIS Wildlife Services National Wildlife Research Center, Hawai'i Field Station, USA, ²USDA APHIS Wildlife Services National Wildlife Research Center, USA, ³Smithsonian Conservation Biology Institute, National Zoological Park, USA

Assessment of a Hand-Broadcast Rodenticide Bait Trial to Control Rats in the Waianae Mountains, Oahu

Tyler Bogardus^{*1}, Aaron Shiels²

¹Oahu Army Natural Resources Program, Pacific International Center for High Technology Research, USA, ²United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, National Wildlife Research Center, USA

Laboratory testing of a non-toxic reproductive inhibitor for non-lethal suppression of rat populations

Israel Leinbach^{*1}, Brandy Pyzyna², Robert Sugihara¹, Shane Siers¹

¹USDA APHIS Wildlife Services National Wildlife Research Center, Hawai'i Field Station, USA, ²SenesTech Inc., USA

What We Know And What We Need To Know About The Invasive Mullet, Kanda (*Mugil engeli*) in Hawaiian Estuaries

Eva Schemmel^{*1}, Keith Kamikawa², Troy Sakihara³, Troy Shimoda³, Kim Peyton³

¹Conservation International, USA, ²University of Hawaii, USA, ³Division of Aquatic Resources, USA

New Tools for Invasive Species Practitioners

643PEST.org - Stop by the invasive species partners' booth in the exhibition hall and learn about the new 643pest app available at the App Store or at Google Play or...



Scan to download the 643pest App QR for both iOS and Android below:

